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THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

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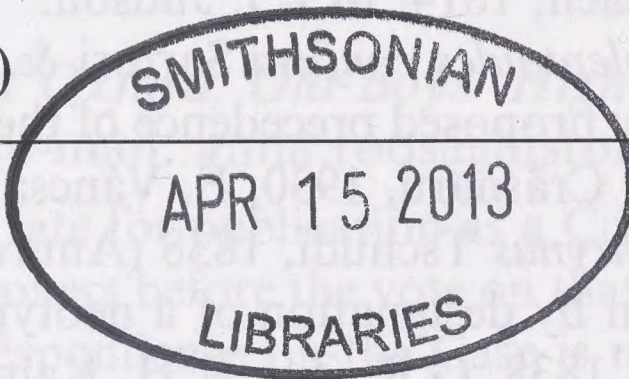
Abstracts of Applications and Opinions, Comments in full and details of the names published in the *Official Lists and Indexes of Names and Works in Zoology* are posted on the Commission's website (<http://iczn.org>)

Cover image: *Rhacophorus nigropalmatus* Boulenger, 1895, known as Wallace's flying frog was discovered by Alfred Russel Wallace in Sarawak, Borneo in 1865. The holotype (female) was collected by Charles Hose and is housed in the Natural History Museum, London. Wallace wrote in his book *The Malay Archipelago* (1869, pp. 59–61): 'One of the most curious and interesting reptiles which I met with in Borneo was a large tree-frog, which was brought me by one of the Chinese workmen. He assured me that he had seen it come down in a slanting direction from a high tree, as if it flew. On examining it, I found the toes very long and fully webbed to their very extremity. . . . This is, I believe, the first instance known of a "flying frog," and it is very interesting to Darwinians as showing that the variability of the toes which have been already modified for purposes of swimming and adhesive climbing, have been taken advantage of to enable an allied species to pass through the air like the flying lizard.' This watercolour was painted by Wallace and was used as the basis for the woodcut illustration of this species in *The Malay Archipelago* (p. 60). This year marks the 100th anniversary of Wallace's death. (© scan of the original drawing – A.R. Wallace Memorial Fund).

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**Notices**

(1) Applications and correspondence relating to applications to the Commission should be sent to the Executive Secretary at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at <http://iczn.org/content/guidelines-case-preparation>) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should be sent by e-mail to 'iczn@nhm.ac.uk' where possible.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at <http://iczn.org/content/instructions-comments>).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at <http://list.afriherp.org/mailman/listinfo/iczn-list>.

(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to the Executive Secretary.

New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 69, part 4, 20 December 2012) went to press. Under Article 82 of the Code, the prevailing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3614: *Raja batis* Linnaeus, 1758 and *Raia intermedia* Parnell, 1837 (currently confused under the single name *Dipturus batis*; Chondrichthyes, BATOIDEA, RAJIDAE): proposed conservation by designation of neotypes for both species. S.P. Iglésias.

CASE 3615: *Polybothris* Dupont, 1833 (Insecta, Coleoptera): proposed conservation as the correct original spelling. P. Bouchard, Y. Bousquet, V. Kubáň & S. Bílý.

CASE 3616: *Neobisium* Chamberlin, 1930, NEOBISIIDAE Chamberlin, 1930 and NEOBISIOIDEA Chamberlin, 1930 (Arachnida, Pseudoscorpiones, Chelonethi): proposed conservation by designation of *Obisium muscorum* Leach, 1817 as the type species of *Obisium* Leach, 1814. M.L.I. Judson.

CASE 3617: *Habroleptoides confusa* Sartori & Jacob, 1986 (Insecta, Ephemeroptera, LEPTOPHLEBIIDAE): proposed precedence of the specific name over *Habroleptoides carpatica* Bogoescu & Crăsnaru, 1930. É. Vánca & M. Sartori.

CASE 3618: *Kalophrynus* Tschudi, 1838 (Anura, MICROHYLIDAE, KALOPHRYNINAE): proposed conservation by designation of a neotype for its type species *Kalophrynus pleurostigma* Tschudi, 1838. G.R. Zug & H. Kaiser.

CASE 3619: *Thisbemys brevicrista* Ostrander, 1986 (Rodentia, ISCHYROMYIDAE): replacement of the holotype by the designation of a neotype. D.K. Anderson.

CASE 3620: *Ticinella primula* Luterbacher, 1963 (Foraminifera, Globigerinida, ROTALIPORACEA): proposed conservation of usage of the specific name. A. Ando.

The International Trust For Zoological Nomenclature

The International Trust For Zoological Nomenclature (the Trust) was founded in 1947 to manage the Commission's financial matters. It is a registered charity, based in the U.K. (No. 211944). At present, the Trust consists of 24 members from 12 countries. Discussion of the Trust's activities can be found in BZN 60: supplement, pp. 1–12 (March 2003).

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The history of science and nomenclature debates: Case 3463 and the Aldabra tortoise

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[Note: this article was received too late for publication as a Comment on Case 3463 but was submitted to the Commissioners before the vote on that Case. It is published here for the record, although correspondence on the Case is now closed; given the general relevance of the observations and arguments to nomenclatural considerations, the Secretariat feels that this warrants consideration as a general article]

My involvement with the discussion about the name of the Aldabra tortoise began when I was asked to provide sources of detailed information about published works attributed to James Petiver, some of which were cited by J.E. Gray and Linnaeus. Later I also provided advice, from a historian's point of view, about interpreting abbreviations and other details from 17th and 18th century publications that have been discussed in relation to the Aldabra tortoise (see Frazier & Matyot, 2010). While my experience with tortoises is limited, I am well aware of the critical role that scientific names play in the advance of science, and the central role that history plays in these considerations. I have, for example, analysed the development of pre-Linnaean taxonomic conventions in the late seventeenth century in my biography of the conchologist and arachnologist, Dr Martin Lister (1639–1712) (Roos 2011). With the help of colleagues, I also have made species identifications in the correspondence of Lister, particularly with the naturalist, John Ray, for a forthcoming edition (Roos, [2014–17] in prep.).

As a historian of science, my reasoning is based on close examination of the primary sources and a careful weighing of evidence. Suppositions are used only very sparingly, and then only when adequate primary evidence provides a foundation for making testable assumptions.

In that spirit, looking at several comments from March 2010 I note the following, which serve as examples of arguments that would be suspect to a historian of science:

1. Bour, Pritchard & Iverson (BZN 67: 73–77) state: 'The Code must not be taken apart; it must be understood, accepted, and followed.' This is a rhetorical technique called the 'fallacy of the slippery slope', or the assertion that some event must inevitably follow from another. It is sometimes called 'the camel's nose': once a camel has managed to place its nose within a tent, the rest of the camel will inevitably follow. In this context, the statement by Bour, Pritchard & Iverson indicates that conservation of the name *Testudo gigantea* will mean the nomenclatural Code will be taken apart. So perhaps we will re-term this technique the 'tortoise's nose fallacy'.

2. The same authors state: 'Finally, why should we reject the name *Testudo dussumieri*, which honours the memory of Jean-Jacques Dussumier, the first traveller who brought back an Aldabra tortoise with its precise locality and offered it to science? If one operates by the letter of the law (Code), as we have, and not by passion or emotion, it is clear that the first valid name for the Aldabra tortoise is *Testudo dussumieri*.' This is an example of the appeal to emotion or *pathos*, which Aristotle

mentions in his work on rhetoric, as it appeals to our respect for the memory of Dussumier. In the same issue of the *Bulletin*, Dubois, Ohler and Brygoo made the point about these sorts of arguments being irrelevant.

Nonetheless, Bour, Pritchard, and Iverson's statements do bring us to some more substantive questions.

1. Did Dussumier ever visit Aldabra, or collect any specimens from there? Thus far, the sources cannot verify that he did. Cheke 67: 79–81 rightly noted that the historical evidence does not support Dussumier's visiting Aldabra, and he presented some interesting and well-considered suppositions that Dussumier could have obtained an Aldabra tortoise via merchant networks. Nonetheless, there is a complete absence of historical evidence that shows this definitely and, interesting as they are, his suppositions are suppositions, not evidence.

2. Another area that historians examine is the validity of primary source documents, and two different examples can illustrate this. The speculations about the origin of the lectotype of *Testudo dussumieri* seem particularly to centre upon the primary source evidence of Gray's note and the old label on RMNH 3231. We also, in Cheke's most recent (BZN 68: 294–297) communication, have reference to the work of Luis Ceríaco and his claim that taxidermy of the specimen regarded as the holotype of *Testudo gigantea* demonstrates that it was done in Portugal.

(a) Gray's note: It seems that the most critical component of what Gray wrote about the new species description was 'Schlegel MSS (v. Mus Leyd).' I would interpret this as saying: 'Schlegel manuscripts, (see Museum Leyden)'. Gray's note could thus suggest a few things: First, it is quite probable Gray was referring to manuscripts by Schlegel. 'v.' indeed usually stands for 'vide', Latin in the imperative case 'to see'. But, what 'v. Mus Leyd' means is very open to question. It could mean 'see a particular specimen at the Museum', it could mean 'see a label on a specimen at the Museum', or it could mean 'see the Schlegel manuscripts at the Leyden museum'. We don't know. In this respect, it worth noting that two former curators at the Leyden museum, Hoogmoed and Smeenk, gave slightly different interpretations of this same passage.

(b) The Label: Now we come to the old label associated with RMNH 3231: The pencil annotations on the label are different from the secretary hand, which was clearly the original script on this particular label. Pencil annotations were added later. What seems nearly impossible to know is *when* the annotations were made, who made them, when the information was entered in the register and why the specimen was identified as a different species, *Testudo nigrata* replacing the earlier *Testudo elephantina*.

Nonetheless, in his comment Hoogmoed (BZN 68: 72–77) notes (p. 74) that 'Temminck & Schlegel (1834) made the published, printed statement about name, collector, locality and specimen on the basis of documentation (in whichever form) they had received from Paris with the specimen concerned. Hubrecht (1881) did the same, basing himself on the register and data on the label fixed to the bottle in which RMNH 3231 was (and still is) kept. In the RMNH it always has been good practice to trust the data provided with material, until the contrary is proven. In this case there was no reason for any doubt, and Gray (1831b) was of the same opinion.'

The problem is that there *is* reason for doubt about this label, as well as Hoogmoed's statement that 'it always has been good practice to trust the data provided with material'. First, supposing that something has always been done in a particular manner is not the same thing as knowing that for a fact. Hoogmoed even admits: 'The collection of the RMNH was established in 1820. About the early history of its management we know little and it even is not quite certain when the present numbering system for reptiles and amphibians jointly was started.' His admission thus makes his following statement a bit puzzling:

'As to the labels and other paper concerning RMNH 3231 there have been some unfortunate statements and mistakes in transcribing handwritten texts. Grünewald (2009, p. 139, upper figure) showed an old label on the outside of the jar in which RMNH 3231 is kept and gave as a legend 'Het oorspronkelijke label van RMNH 3231, geschreven door John Edward Gray zelf' [The original label of RMNH 3231, written by John Edward Gray himself]. This statement led Frazier & Matyot (2010) to several wrong conclusions, even after Grünewald explained to them that his text should have included 'possibly'. There is no reason at all for such a statement, because the RMNH never let (foreign) visitors write labels that were attached to bottles etc.'

If the RMNH does not precisely know the early history of the management of its collection, how would it be possible for researchers to know who was writing the labels and what was allowable procedure? It seems that the earliest procedures for documenting and cataloguing specimens at Leiden were not precisely known, because, at least from what Hoogmoed has written regarding the herpetological collections, no one has yet done the systematic, detailed historical research to find this out (which would be a valuable project indeed). Holthuis (1995), for example, did a fine overview of the history of the Leiden Museum from 1820 to 1958, reconstructing its institutional structure and identifying key personnel. If there were examples of the handwriting of the different officials at the museum in the relevant time period to identify who was entering what information, doing a paleographic analysis of the work of these key personnel would be the place to start to reconstruct these procedures. Paleographic analysis to reconstruct working practice is a common technique; telltale scripts by scribes or clerks can date material, as can marginalia. For example, I analysed the monograms of copperplate engravers, signatures and sketchbooks to reconstruct how Lister's *Historiae Conchyliorum* was created and published (Roos, 2012).

Another point to consider is that a secretary hand usually indicates the script of a clerk, who routinely just copied what was put in front of him, without much understanding. Usually, the nicer the handwriting, the more lowly the writer. (This conclusion is based on hundreds of hours studying archival material in the Royal Society, London). It is entirely possible that the label in question was a clerk's copy of an earlier label, which might explain the absence of diacritical marks in the French phrase: 'Testudo elephantina Jav. Test. indica Ile Aldabra, pres de Madagascar / Dussumieri'. From Gray's note and the label evidence, it would be quite dangerous to assume that Gray saw the original French label with Dussumier's name on it. From a historical point of view, the primary source evidence to make such an assumption is just not there. In this regard, after having asserted that the old label was the original that accompanied the specimen from Paris, Hoogmoed later

admitted ‘Thus, there is a good chance that the old label on the bottle of RMNH 3231 is not the ‘original’ label as stated by Hoogmoed et al. (2010), and that it possibly stems from after 1835 as suggested by Frazier & Matyot (2010).’ This example emphasises the importance of paying close attention to identifying true primary sources.

The second example of the importance of paying close attention to the primary source deals with a detail of taxidermy. Cheke mentions a communication from Luis Ceríaco, who, it turns out, has written articles on oral tradition and Portuguese geckos as an independent scholar. Dr. Ceríaco thought the taxidermy of the purported type specimen of *Testudo gigantea* (MNHN 9554) was specifically Portuguese. In this context it should be noted that the French naturalist Pierre Belon wrote the earliest known instructions for taxidermic procedures in 1555. While in the eighteenth century, there were certainly specific regional trade secrets in taxidermy (for instance Jean-Baptiste Bécoeur’s use of arsenical soap to stop insect infestation of bird skins), by the nineteenth century, many of these secrets had been disseminated quite widely in manuals where they became standardized (Rookmaaker et. al., 2006). Thus, from a historical point of view it would be helpful to know in some more detail what Dr Ceríaco’s basis is for detecting time-specific or distinctive regional variations in taxidermic practice.

[In the interim between my initial submission of these comments on 6 July 2012 and their publication, Dr. Ceríaco and Professor Bour published another paper with more details about the taxidermy of *Testudo gigantea*. (2012). Their abstract is as follows:]

‘The work *Prodromus Monographiae Cheloniorum*, published by Schweigger in 1812, has recently been the subject of several studies. One result of these studies—the rediscovery of the *Testudo gigantea* Schweigger, 1812 holotype—triggered an intense debate in the Bulletin of Zoological Nomenclature, where, among other issues in dispute, the identity and nature of the specimen indicated as the holotype for the species is put in question. Using historical sources, mostly unpublished, and analysis and comparison of taxidermic characteristics of the specimen with other specimens of the same nature, we can clearly trace its origin to the extinct Royal Cabinet of Natural History of Ajuda in Lisbon, from the ‘*philosophical journey*’ of Alexandre Rodrigues Ferreira to the specimens transported to Paris by Geoffroy Saint-Hilaire in 1808, thus helping dispel any doubts regarding the identity and nature of what is being identified as the *Testudo gigantea* holotype, along with other chelonian specimens. This information is of great importance in the current taxonomic debate as well as in recognizing the historic importance of the Royal Cabinet of Natural History of Ajuda and Geoffroy Saint-Hilaire’s 1808 mission to Lisbon.’

The authors also conclude:

‘The doubts raised by Frazier (2006, 2009) and his supporters in comments on the Case 3463 (see Appendix) about the origin and nature of specimen 9554, the *Testudo gigantea* holotype as claimed by Bour (2006b), are definitely clarified with

the present historical and material data, and it is objectively proven that specimen 9554 originated from the Royal Cabinet of Natural History of Ajuda, as already inferred by Schweigger (1812).’

Let us examine these claims systematically. First, to my understanding, the status and veracity of the holotype is not central to the petition, the petition invoked Article 75.8 to set aside all previous type material. Thus, while I would agree that the authors’ archival research establishes the historic importance of the Royal Cabinet of Ajuda, particularly for the history of natural history, I would be far more cautious about the importance and relevance of their findings to Case 3463.

In their paper, Ceríaco and Bour claim that fibre analysis in the stuffing of specimens and the distinctive style of eyes in turtle specimens from the cabinet ‘prove’ that specimen 9554 originated from the Royal Cabinet of Natural History of Ajuda. The wooden eyes in the specimen are certainly distinctive empirically in Ajuda specimens. I may have been more convinced that the evidence was definitive by the application of relevant archaeological techniques to the type of paint utilised and the age of the wood; in studies of material culture in the history of science and conservation, archaeological analysis is employed as a matter of course in cases which need further clarification. Hesitation also extends to the fibre analysis. Fibre analysis extends far beyond the use of a binocular magnifier employed by Ceríaco and Bour. I would refer the authors to Appleyard & Wildman (1970), Bisbing (2002), Eyerin & Gaudette (2005) and Rowe (2010) for a discussion of the relevant techniques in forensic hair and fibre examinations.

It seems, looking at the written and material evidence regarding Case 3463 from a historical point of view, that there is inadequate evidence to do more than speculate on several critical points. Given that the lectotype of *Testudo dussumieri* has been proposed as the ‘name bearing type’ of the Aldabra tortoise, this seems to create a situation of unnecessary risk. Whilst I would not indulge in the ‘tortoise’s nose fallacy’ and claim that the use of *Testudo dussumieri* would cause the nomenclature of tortoises to fall apart, it seems its use will continue to promote a situation of unstable nomenclature and ongoing debate.

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Case 3609***Bulimus cylindricus* Menke, 1828 (Gastropoda, Stylommatophora, ENIDAE): proposed conservation of the specific name**

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Abstract. The purpose of this application, under Article 23.9.5 of the Code, is to conserve the specific name of the terrestrial snail *Bulimus cylindricus* Menke, 1828 (currently *Brephulopsis cylindrica*, ENIDAE), originally published as a junior primary homonym of *Bulimus cylindricus* Gray, 1825 (currently classified in the genus *Macroceramus*, UROCOPTIDAE) by ruling under the plenary power to disregard their primary homonymy.

Keywords. Nomenclature; taxonomy; Gastropoda; Stylommatophora; ENIDAE; UROCOPTIDAE; *Bulimus*; *Brephulopsis*; *Macroceramus*; *Bulimus cylindricus*; *Brephulopsis cylindrica*; terrestrial snail; Caribbean; Europe.

1. *Bulimus cylindricus* Gray, 1825 (p. 414), established for a Caribbean gastropod species of UROCOPTIDAE and *Bulimus cylindricus* Menke, 1828 (p. 77) (currently *Brephulopsis cylindrica*; ENIDAE) established for a gastropod from Europe, are primary homonyms (Articles 53.3, 57.2 of the Code). The identity of Menke's name is not disputed. The Caribbean *Macroceramus* species are poorly studied. Gourdon (1907, p. 131) used Gray's name. In the last compilation of the genus, Richardson (1991) classified *B. cylindricus* Gray, 1825 with *Macroceramus formosus* (Wood, 1828, original combination *Turbo formosus*), and assumed incorrectly that Gray's name was a nomen nudum. This could probably be corrected in a future taxonomic study which should also involve studying the type specimens of *B. cylindricus* deposited in 1825 in the British Museum (Gray, 1825). A study of this group is beyond the scope of this application, which is focused on maintaining the usage of Menke's name for the European species.

2. Menke (1828, p. 77) established two names *B. cylindricus* and *Bulimus fusiformis* Menke, 1828. These taxa are currently regarded as conspecific. Retowski (1883, p. 13) and Clessin (1883, p. 48) both selected *cylindricus* acting as First Revisers. This means that if *B. cylindricus* Menke, 1828 cannot be used, *B. fusiformis* Menke, 1828 would be the next available name for the European species.

3. *Brephulopsis cylindrica* (Menke, 1828) is a well-established name and based on a brief survey by ourselves has been used by at least by 43 authors in 110 publications, mostly in the last 20 years (about half of them were listed by Sverlova et al., 2006). In Ukraine the biology of this species (variability, reproduction, dispersal, behaviour,

parasites, etc.) has been intensively studied in the last 20 years. The original range of the species was in the Crimea; recently it has been introduced to many other regions in Ukraine, to Moldova, Abkhazia, south-western Russia and Belarus (Sysoev & Schileyko, 2009; Rabchuk & Zemoglyadchuk, 2011). Many papers have been written on this one species and its name is often used in titles of works (Kramarenko, 1997; Vychalkovskaya & Kramarenko, 2006; Kramarenko, 2009; Rabchuk & Zemoglyadchuk, 2011).

4. The two species under consideration have not been considered as congeneric after 1899. Krynicky (1837) placed *B. cylindricus* Menke, 1828 in *Chondrus* Cuvier, 1816 and after that, this name was not listed in *Bulimus*. Since Herrmannsen (1847) *B. cylindricus* Gray, 1825 has only been placed in *Macroceramus* Guilding, 1828. These two species belong to remote pulmonate groups: *Brephulopsis* Lindholm, 1925 is classified in the Palearctic family ENIDAE, while *Macroceramus* is classified in the Neotropical family UROCOPTIDAE. *Macroceramus* lives only in Mexico, Central America and the Caribbean. The native range of *Brephulopsis* is considered to be within the Crimean peninsula in Ukraine.

5. Nomenclatural stability in this case would be best achieved by disregarding the primary homonymy.

6. As an alternative solution, we could suggest suppression of *Bulimus cylindricus* Gray, 1825 as a rarely used name in accordance with Article 23.9.3 of the Code. Since we are not involved in the study of Caribbean urocoptid species we prefer not to take any action in this respect. We see ourselves guided by Article 23.9.5 to ask the Commission to maintain the usage for the Ukrainian name, but if possible we would prefer not to interfere in the Caribbean urocoptid nomenclature. This is why we would prefer not to ask to place *B. cylindricus* Gray, 1825 on the Official List. The name was used in 1907, but it has not been used recently and placing it on the Official List would have the potential to disrupt Caribbean urocoptid taxonomy, which would not be our intention.

7. Using the name *Bulimus fusiformis* Menke, 1828 for the Ukrainian species would be a possible solution, but since *B. cylindricus* Menke, 1828 has very frequently been used in the recent literature, we would prefer to conserve its usage.

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that the name *cylindricus* Menke, 1828, as published in the binomen *Bulimus cylindricus*, is not invalid by reason of being a junior primary homonym of *cylindricus* Gray, 1825, as published in the binomen *Bulimus cylindricus*;
- (2) to place on the Official List of Specific Names in Zoology the name *cylindricus* Menke, 1828, as published in the binomen *Bulimus cylindricus*, with the endorsement that it shall not be invalid by reason of being a junior primary homonym of *cylindricus* Gray, 1825, as published in the binomen *Bulimus cylindricus*.

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Case 3610

***Phelister* Marseul, 1853 (Insecta, Coleoptera, HISTERIDAE): proposed conservation of usage**

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Abstract. The purpose of this application, under Article 70.2 of the Code, is to conserve the current usage of the generic name *Phelister* Marseul, 1853 for a well-established genus of histerid beetles. Modern authors cite either *Phelister haemorrhous* Marseul, 1853 (designated by Kryzhanovskij & Reichardt, 1976) or *Paromalus rouzeti* Fairmaire 1850 (designated by Mazur, 1984) as the type species of *Phelister*. However, the correct, long-overlooked type species is *Platysoma venustum* LeConte, 1844, which is currently recognized as a valid species of *Baconia* Lewis, 1885. Acceptance of *Platysoma venustum* as the type species of *Phelister* would change the current concept of that genus to that of *Baconia*, and the species currently included in *Phelister* would require a new genus-group name as there are no junior synonyms from which to choose the next available name. To avoid the nomenclatural instability that would result from following the Principle of Priority, it is proposed that all type fixations for *Phelister* Marseul, 1853 preceding that of *Phelister haemorrhous* Marseul, 1853 by Kryzhanovskij & Reichardt (1976) be set aside.

Keywords. Nomenclature; taxonomy; Insecta; Coleoptera; HISTERIDAE; *Phelister*; *Baconia*; *Phelister haemorrhous*; *Paromalus rouzeti*; *Platysoma venustum*, clown beetles; Neotropical region.

1. Marseul (1853, p. 462) proposed the generic name *Phelister* to contain 20 species, six of them previously described (*Platysoma venustum* LeConte, 1844; *Hister vernus* Say, 1825; *Hister parvulus* Erichson, 1834; *Hister pusio* Erichson, 1847; *Hister subrotundus* Say 1825, *Paromalus rouzeti* Fairmaire, 1850), and 14 of them newly described (*Phelister violaceus*, *P. cumanensis*, *P. quadripunctulus*, *P. circulifrons*, *P. bovinus*, *P. acoposternus*, *P. haemorrhous*, *P. rubens*, *P. egenus*, *P. sanguinipennis*, *P. teapensis*, *P. globiformis*, *P. bipulvinatus* and *P. brevistrius*.) No type species was designated.

2. Lewis (1885, p. 462) described the genus *Baconia* for two newly described species, *B. loricata* and *B. patula*. No type species was designated.

3. Lewis (1889, p. 46) inadvertently fixed the type species of *Phelister* as *Platysoma venustum* LeConte, 1844. In describing the species *Phelister simoni* he remarked ‘The *Phelister simoni* noticed here is a most remarkable species and one which I only place in the genus with doubt. As, however, I have given an outline of the sternal structure (which differs so much from the structure in *Phelister venustus* Leconte [sic], the type of the genus), those who study the family will be able to form an idea of its

peculiarities and to judge whether or not I have assigned it rightly to *Phelister*.' This type designation, valid under Article 69.1.1, has been overlooked by all subsequent authors.

4. Bickhardt (1917, p. 163) explicitly fixed the type species of *Baconia* as *Baconia loricata* Lewis, 1885, one of the originally included species. Despite a general thoroughness of listing or designating type species in his *Genera Insectorum* fascicle on HISTERIDAE, Bickhardt (1917) did not mention a type species for the genus *Phelister*.

5. Kryzhanovskij & Reichardt (1976, p. 296) listed the type species of *Phelister* as *Phelister haemorrhous* Marseul, 1853 (p. 476) evidently intending to designate a type where none had been previously. This type designation has been noted and cited as valid by some modern authors (e.g. Bousquet & Laplante, 1999, 2006).

6. Mazur (1984, p. 281) cited Jacquelin du Val (1858, p. 102) as having designated the type species of *Phelister* as *Paromalus rouzeti* Fairmaire, 1850. However, it is clear from the subtitle of Jacquelin du Val (1858), 'et plus de treize cents types representant un ou plusieurs insectes de chaque genre' ('and more than thirteen hundred types representing one or more insects of every genus') that strict designation of unique type species was not his intent.

7. Mazur (1984, p. 281) moved *Phelister venusta* [sic] (LeConte) into the genus *Baconia*.

8. Mazur (1997, p. 26), apparently recognizing his error in citing Jacquelin du Val's designation of the type of *Phelister* as *Paromalus rouzeti*, then cited his own (1984) citation of *P. rouzeti* as having been the first valid type designation.

9. *Phelister* currently contains 100 described species (Mazur, 2011, p. 29). *Baconia* currently contains 27 described species. Specimens of both genera are commonly collected, well known, highly distinct from each other, and universally accepted as currently circumscribed. A list of 61 references that cite either *Phelister* or *Baconia* in the senses that we advocate has been sent to the Secretariat. Indeed, subsequent to Bickhardt's designation of the type of *Baconia*, we know of no references inconsistent with this usage.

10. Accepting *Platysoma venustum* LeConte as the type of *Phelister* would require the synonymy of *Baconia* under *Phelister*, and because the species currently contained in *Phelister* are not closely related to *Baconia*, and because *Phelister* has no junior synonyms that might be recognized as valid, a new genus-group name would be required to contain the species currently in *Phelister*. The nearly 130 new combinations that would result would cause substantial instability and confusion. The references sent to the Secretariat attest to the wide use of these names in their currently accepted senses.

11. We are currently revising the genera *Phelister* and *Baconia*, describing many dozens of new species in both, and wish to solidify the generic nomenclature before publishing any new binomials under either name. Hence we propose that the type designation by Kryzhanovskij & Reichardt (1976) of *Phelister haemorrhous* Marseul, 1853 would be the best choice to stabilize the meaning of *Phelister* and prevent confusion.

12. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all type species fixations for the nominal genus-group taxon *Phelister* Marseul, 1853 (gender: masculine) before that of

- Phelister haemorrhous* Marseul, 1853 by Kryzhanovskij & Reichardt (1976);
- (2) to place on the Official List of Generic Names in Zoology the name *Phelister* Marseul, 1853, type species *Phelister haemorrhous* Marseul, 1853 by subsequent designation by Kryzhanovskij & Reichardt (1976), as ruled in (1) above;
- (3) to place on the Official List of Specific Names in Zoology the name *haemorrhous* Marseul, 1853, as published in the binomen *Phelister haemorrhous* (specific name of the type species of *Phelister* Marseul, 1853, as ruled in (1) above).

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Case 3612***Onitis aeruginosus* Klug, 1855 (Insecta, Coleoptera, SCARABAEIDAE):
proposed conservation of the specific name**

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Abstract. The purpose of this application, under Articles 23.9.3, 23.9.5 and 81.2.1 of the Code, is to conserve the specific name *Onitis aeruginosus* Klug, 1855. Although *Onitis aeruginosus* Perty, 1830 and *Onitis aeruginosus* Klug, 1855 are primary homonyms, both names are in use today and have not been considered congeneric since 1859, when the senior homonym was transferred to the genus *Gromphas* Brullé, 1837. As the probability of these being considered congeneric in the future is very small, it is proposed that *Onitis aeruginosus* Klug, 1855 be conserved by ruling that it is not invalid by reason of being a primary junior homonym of *Onitis aeruginosus* Perty, 1830. A third homonym, *Onitis aeruginosus* Gistel, 1831, also has priority over *Onitis aeruginosus* Klug, 1855, but cannot be fixed to any species; therefore, it should be considered a nomen dubium and totally suppressed for the purposes of the Principle of Priority and of the Principle of Homonymy.

Keywords. Nomenclature; taxonomy; Insecta; Coleoptera; SCARABAEIDAE; *Onitis*; *Gromphas*; *Onitis aeruginosus*; *Gromphas aeruginosa*; dung beetles; Neotropical region; Afrotropical region.

1. Fabricius (1798, pp. 2, 25) established *Onitis* for eight species. Perty (1830, pp. 39, 40) studied the material collected by the naturalists Johann Baptist von Spix and Karl Friedrich Philipp von Martius in their long expedition through Brazil and described two new species for the genus: *O. aeruginosus* and *O. chalcomelas*, both from the current Brazilian states of São Paulo and Minas Gerais. Lacordaire (1856, p. 105, footnote) considered the two species distinct from other *Onitis* and suggested that both should be transferred to a new genus related to *Gromphas* Brullé, 1837. Harold (1859, pp. 198, 199) followed Lacordaire and removed these species from *Onitis*, but transferred each to a different New World genus: *O. chalcomelas* to *Phanaeus* MacLeay, 1819 and *O. aeruginosus* to *Gromphas*. After Harold's action, no author has returned either of these two South American species to the genus *Onitis*. *Gromphas aeruginosa* (Perty, 1830) is a common species, but the type locality in southeastern Brazil cited by Perty is certainly incorrect since this species is exclusively found in the Amazon region. The lectotype of *O. aeruginosus* was designated by Scherer (1983, p. 298) and is deposited in Zoologische Staatssammlung München (ZSMC), Munich, Germany (Michael Balke, pers. comm.).

2. Gistel (1831, p. 306) described a new species named *Onitis aeruginosus* from Brazil. However, his description is too vague and, albeit consistent with *Gromphas*

aeruginosa (Perty), it also fits equally well several other South American species of SCARABAEINAE. Also, the whereabouts of the type specimen of *O. aeruginosus* Gistel is unknown. It is possible that portions of the Gistel collection are scattered throughout several other collections; some specimens were located in ZSMC and in the Hope Entomological Collections, University Museum, Oxford, U.K. (OXUM) (Evenhuis, 1997, p. 304). Nevertheless, the type specimen of *O. aeruginosus* Klug is certainly not housed in either of these collections (Darren Mann, OXUM, pers. comm.; Scherer, 1982, p. 59, 1992, p. 64) or in any other known location. For this reason, it is impossible to refer the name *Onitis aeruginosus* Gistel, 1831 to any species and the name is here considered a nomen dubium. It has not been cited by any author since 1831. (In the literature, both spellings “Gistel” and “Gistl” appear. Here, the orthography ‘Gistel’ is adopted following Evenhuis (1997, p. 303)).

3. Klug (1855, p. 651) described four new African species of *Onitis*: *O. lycophron*, *O. uncinatus*, *O. fulgidus* and *O. aeruginosus*. Seven years later, Klug (1862, pp. 222–224) redescribed these species in more detail. Although a primary junior homonym of *O. aeruginosus* Perty, 1830, the name *O. aeruginosus* Klug, 1855 has always been regarded as valid, including in the revision of the Sub-Saharan species of *Onitis* by Ferreira (1978, p. 207). *Onitis aeruginosus* Klug, 1855 is found in the Afrotropical region, with records from Ethiopia, Democratic Republic of the Congo and Mozambique (Ferreira, 1978, p. 209). The type locality is Sena, Mozambique (Klug, 1855, p. 651; 1862, p. 224). The holotype is deposited in Museum für Naturkunde (ZMHB), Berlin, Germany (Joachim Willers, pers. communication).

4. Although originally described in the same genus, *Onitis aeruginosus* Perty and *O. aeruginosus* Klug were considered congeneric for only four years between 1855 and 1859. Today, their respective genera are classified into distinct tribes (*Gromphas* in PHANAEINI and *Onitis* in ONITINI) and occur in distinct biogeographic regions (*Gromphas* in the Neotropical region and *Onitis* in the Palearctic, Afrotropical and Oriental regions). Also phylogenetic studies indicate a great distance between these two genera (Philips et al., 2004). Hence the possibility of their being regarded as congeneric again in the future is extremely small. *Onitis aeruginosus* Klug, the primary junior homonym, has no known available synonym and thus there is no pre-existing name to replace it. In order to maintain stability, under Article 23.9.5 of the Code, it is preferable to maintain both names as they are used today rather than to propose a replacement name for *Onitis aeruginosus* Klug.

5. *Onitis aeruginosus* Gistel, 1831 also has priority over *Onitis aeruginosus* Klug, 1855. Article 23.9.1 of the Code cannot be invoked in this case, because whereas the conditions of Article 23.9.1.1 have been met (*Onitis aeruginosus* Gistel was not cited after 1831), those of Article 23.9.1.2 have not. A possible alternative would be to designate the lectotype of *O. aeruginosus* Perty as neotype of *O. aeruginosus* Gistel and thus make the latter name as junior objective synonym of the former. However, this action is not appropriate and should not be taken because *O. aeruginosus* Perty and *O. aeruginosus* Gistel are only distantly related and there is nothing besides the homonymy that connects them, and especially because *Gromphas* (the current genus of Perty’s species) already has many nomenclatural problems (some of which were first pointed out by Figueroa et al. (2012, p. 2) and are under my current scrutiny) and this synonymy would just add one more unnecessary problem. Thus, in order to

maintain stability and avoid any confusion, the name *O. aeruginosus* Gistel, 1831 should be suppressed under Articles 23.9.3 and 81.2.1 of the Code.

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to rule that the name *Onitis aeruginosus* Klug, 1855 is not invalid by reason of being a junior primary homonym of *Onitis aeruginosus* Perty, 1830;
- (2) to use its plenary powers to suppress the name *Onitis aeruginosus* Gistel, 1831 for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *aeruginosus* Klug, 1855, as published in the binomen *Onitis aeruginosus*, with the endorsement that it is not invalid by reason of being a junior primary homonym of *Onitis aeruginosus* Perty, 1830;
 - (b) *aeruginosus* Perty, 1830, as published in the binomen *Onitis aeruginosus*;
- (4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *aeruginosus* Gistel, 1831, as published in the binomen *Onitis aeruginosus* and as suppressed in (2) above.

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Case 3615

Polybothris Dupont, 1833 (Insecta, Coleoptera; BUPRESTIDAE): proposed conservation as the correct original spelling

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Abstract. The purpose of this application, under Article 81 of the Code, is the conservation of the spelling of the buprestid genus name *Polybothris*. The name was originally published as *Polybotris* but the spelling *Polybothris* has been in prevailing usage since 1900. Reversal of precedence cannot be used to suppress *Polybotris* since the spelling has been used in a small number of publications after 1899.

Keywords. Nomenclature; Coleoptera; *Polybothris*; *Polybotris*; *Polybothris croesus*; BUPRESTIDAE; Africa.

1. Dejean (1833, p. 78) was the first to use the buprestid genus name *Polybothris*. He did not provide a description or definition of the taxon. He included three species-group names from Madagascar under it, *P. quadrifoveolata*, *P. madagascariensis* and *P. stigmatipennis*. These species-group names were not available at the time of Dejean's publication because they had not been described and Dejean did not provide a description or definition in his publication. Therefore, *Polybothris* Dejean, 1833 is not available.

2. Dupont (1833, pl. 77) described the species *croesus* from Madagascar under the genus-group name *Polybotris*. Therefore *Polybotris* was made available for the first time in this publication and *croesus* is the type species by monotypy. This species is currently included in the nominotypical subgenus of *Polybothris* and is considered a junior synonym of *Buprestis sumptuosa* Klug, 1833 (Bellamy 2008, p. 888) - in all publications seen since 1837, including the recent catalogues of Bellamy (2006, p. 147; 2008, p. 888).

3. Dejean (1836, p. 88) listed 17 species-group names under the genus *Polybothris*, all from Madagascar. The following seven species were previously described by Klug (1833) and were available: *Buprestis zivetta* Klug, 1833, *Buprestis cassidea* Klug,

1833, *Buprestis flesus* Klug, 1833, *Buprestis solea* Klug, 1833, *Buprestis platessa* Klug, 1833, *Buprestis chalcocrysea* Klug, 1833 and *Buprestis aeneomaculata* Klug, 1833.

4. Spinola (1837, p. 115) described the genus *Polybothris* for the first time and listed 17 available species from Madagascar, including all seven available in Dejean (1836). The other available species in Spinola (1837) were: *Buprestis sumptuosa* Klug, 1833; *Polybotris craesus* Dupont, 1833; *Buprestis carcharias* Klug, 1833; *Polybothris ancora* Spinola, 1837; *Buprestis colliciata* Guérin-Méneville, 1832; *Polybothris sexfoveolata* Spinola, 1837; *Buprestis complanata* Guérin-Méneville, 1832; *Buprestis cassidoides* Guérin-Méneville, 1832; *Buprestis rhombus* Klug, 1833; *Buprestis rotundata* Guérin-Méneville, 1832.

5. This genus is attributed to Spinola, 1837 under the spelling *Polybothris* in nearly all publications seen since 1900, including Kerremans (1903, p. 97; 1911, p. 314), Théry (1905, p. 176), Obenberger (1926, p. 181), Kurosawa (1993, p. 577), Bellamy (2003, p. 47; 2006, p. 87; 2008, p. 848) and Bouchard et al. (2011, p. 281). A search through the online version of the Zoological Record from 1864 to date yielded 34 hits for *Polybothris* and none for *Polybotris*. Nevertheless, it should be noted that the spelling *Polybotris* has been used a few times in non-taxonomic publications in the 20th Century. The genus includes 225 species from Madagascar and Comoro Islands with one species from South Africa (Bellamy, 2008).

6. *Polybothris*, as used by Spinola (1837), could be considered an incorrect subsequent spelling of *Polybotris* Dupont (1833) since the sole species included by Dupont in his genus *Polybotris* is also listed by Spinola (1837) in the genus *Polybothris*. The spelling *Polybothris* is in prevailing usage but not attributed to the author and date of the original spelling. Therefore Article 33.3.1 of the Code cannot be used to preserve the spelling *Polybothris*. Nevertheless we believe that the spelling *Polybothris* should be conserved to promote stability but with the name credited to Dupont (1833) since he made it available for the first time. A change in authorship would not affect the taxonomic concept of the genus because the type species currently recognized for *Polybothris* (*Buprestis sumptuosa* Klug) and the only species included by Dupont (*Polybotris croesus*) are synonyms.

7. The International Commission on Zoological Nomenclature is accordingly asked:
- (1) to use its plenary power to rule that the correct original spelling of the generic name *Polybotris* Dupont, 1833 is *Polybothris*;
 - (2) to place on the Official List of Generic Names in Zoology the name *Polybothris* Dupont, 1833 (gender feminine), type species by monotypy *Polybothris croesus* Dupont, 1833;
 - (3) to place on the Official List of Specific Names in Zoology the name *croesus* Dupont, 1833, as published in the binomen *Polybotris croesus* (specific name of the type species of *Polybothris* Dupont, 1833);
 - (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Polybotris* Dupont, 1833 (ruled in (1) above to be an incorrect original spelling of *Polybothris* Dupont, 1833).

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Case 3605

PHYCINAE Lyneborg, 1976 (Insecta, Diptera, THEREVIDAE): proposed emendation of spelling to PHYCUSINAE to remove homonymy with PHYCINAE Swainson, 1838 (Osteichthyes, Gadiformes, PHYCIDAE); and *Phycis* Walbaum, 1792 (Osteichthyes, Gadiformes, PHYCIDAE): proposed conservation of usage by designation of *Blennius phycis* Linnaeus, 1766 as the type species

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Abstract. The purpose of this application, under Articles 29 and 55.3 of the Code, is to remove homonymy between the family-group names PHYCINAE Swainson, 1838 (Osteichthyes, Gadiformes, PHYCIDAE) and PHYCINAE Lyneborg, 1976 (Insecta, Diptera, THEREVIDAE). It is proposed that the stem of the genus-group name *Phycus* Walker, 1850, on which the insect family-group name is based, be emended to change the family-group name to PHYCUSINAE, leaving the fish family-group name, based on *Phycis* Walbaum, 1792, unaltered. An issue regarding the type-species of *Phycis* Walbaum, 1792, came to light in this process, namely that the previously assumed type species, *Tinca marina* (attributed to Walbaum (1792) and considered a junior synonym of *Blennius phycis* Linnaeus, 1766), is a nomen nudum. So, an additional purpose of this application, under Articles 78.1 and 81.1 of the Code, is to maintain the prevailing usage of *Blennius phycis* Linnaeus, 1766 as the de facto type species of *Phycis* Walbaum, 1792 by setting aside all previous type species designations and designating *Blennius phycis* Linnaeus, 1766 as the type species.

Keywords. Nomenclature; taxonomy; Insecta; Osteichthyes; Diptera; Gadiformes; Lepidoptera; PHYCIDAE; PYRALIDAE; THEREVIDAE; PHYCINAE; PHYCUSINAE; PHYCITINAE; *Phycus*; *Phycis*; *Phycita*; *Blennius phycis*; *Xylophagus canescens*; *Phycus brunneus*; stiletto flies; moths; hakes; terrestrial; marine; Atlantic.

1. Artedi (1738a, p. 84; 1738b, p. 111) was the first modern author to use the name *Phycis*. This pre-Linnaean work was published posthumously by Linnaeus (for the history of the publication see Pietsch, 2010). In his *Synonymia*, Artedi (1738b, p. 111) listed the sources of the name, including the $\phi\upsilon\kappa\acute{\iota}\varsigma$ of Aristoteles (1619, originally published in the 4th century B.C.), the *Phycis* of Rondelet (1554, p. 186; misspelled as *Physis* by Artedi, 1738b), the *Phuca* sive *Phycis* of Salviani (1558, p. 228), and the *Tinca marina* of Salviani (1558, p. 93, pl. opposite p. 230). These are unavailable

names, but Linnaeus (1766, p. 442) described his *Blennius phycis* based on the *Blennius* of Goüan in a manuscript prior to Goüan (1770, p. 123) (i.e. 'B. naribus subcristatis, cirro labii inferioris, dorio bipenni. Gouan.'), and on the *Phycis* of Artedi (1738b). The current usage of that species as *Phycis phycis* (Linnaeus, 1766) is summarised by Eschmeyer (2013).

2. Walbaum (1792, p. 575) (sometimes referred to as 'Walbaum [ex Artedi]' or 'Artedi in Walbaum') established the fish genus *Phycis*. The type species is not *Tinca marina* Salviani, 1558 as assumed by recent authors including Cohen (1971, p. 327), Svetovidov (1973, p. 314) and Eschmeyer (1990, p. 313; 1998, p. 2075; 2013). Walbaum's heading is '*PHYCIS* Art. Syn. 111 seu *Tinca marina*', meaning '*Phycis* of Artedi or *Tinca marina* of other authors'; the latter name is not an available name, but a nomen nudum which was cited as a reference to Artedi (1738b), who included the *Phycis* (φυκίς) of Aristoteles (1619) and Rondelet (1554), and the *Tinca marina* of Salviani (1558) and later authors under his heading of *Phycis*. Before Cohen (1971), many ichthyological authors ignored Walbaum's work (see Parenti, 2002: 309); therefore, the genus *Phycis* was incorrectly attributed to authors other than Walbaum, 1792, with various type species treatments. For example, Günther (1862, p. 351) and Goode & Bean (1896, p. 356) dated *Phycis* to Bloch & Schneider (1801, p. 56), with the type species *Phycis tinca* Bloch & Schneider, 1801, p. 56 (which is currently treated as having been a new replacement name for *Blennius phycis* Linnaeus, 1766); Jordan (1917, p. 51) dated *Phycis* to Röse (1793, p. 111) with *Phycis tinca* Bloch & Schneider, 1801 as the type species (but as a synonym of *Phycis blennoides* Brünnich, 1768, p. 24); Fowler (1936, p. 473) dated *Phycis* to Röse (1793) and listed *Gadus phycis* 'Linnaeus, 1758' as the type species (there is no species *Gadus phycis* described in Linnaeus, 1758). By monotypy, the type species of *Phycis* Walbaum, 1792 is *Gadus bifurcus* Walbaum, 1792, p. 137, which is mentioned as the only species of the genus *Phycis* in the footnote of Walbaum (1792, p. 576); this footnote was missed by Cohen (1971), who had also attributed the first usage of *Tinca marina* to Aldrovandi (1638, p. 291) and not to Salviani (1558). *Gadus bifurcus* was described by Walbaum (1792) based on the Forked Hake of Pennant (1776, p. 193, pl. 31), and *Tinca marina* Cetti, 1777, p. 101, which appeared without description and is another nomen nudum. Pennant's Forked Hake was based on Artedi's *Phycis* and several other historical sources, which were referring to both *Blennius phycis* Linnaeus, 1766 and *Gadus blennoides* Brünnich, 1768, p. 24. Günther (1862, p. 352) acted as the First Reviser of this case, treating *Gadus bifurcus* Walbaum, 1792 as a junior subjective synonym of *Phycis blennoides* (Brünnich, 1768). This interpretation of the type species, however, threatens stability of nomenclature, as the previously and long assumed type species *Tinca marina* Walbaum, 1792 has been treated as a junior synonym of *Phycis phycis* (Linnaeus, 1766) by recent authors including Cohen (1971), Svetovidov (1973), Cohen et al. (1990, p. 68) and Eschmeyer (1998, p. 1022; 2013). It would be ill-advised to change the currently recognized type species of the genus, because in future the two species may be classified in separate genera; in that case, retaining *Phycis blennoides* (Brünnich, 1768) as the type species of *Phycis* Walbaum, 1792 would threaten stability of nomenclature by changing the generic affiliations of both *Phycis phycis* (Linnaeus, 1758) and *Phycis chesteri* Goode & Bean, 1878. As *Tinca marina* Walbaum, 1792 must be considered as a nomen nudum and *Gadus bifurcus* Walbaum, 1792 is considered a junior synonym of a different species,

a ruling of the Commission is needed to settle this confusion and maintain the prevailing usage of the genus-group name *Phycis* Walbaum, 1792 with its type species *Blennius phycis* Linnaeus, 1766.

3. Fabricius (1798, p. 420) established the moth genus *Phycis*. Curtis (1828, p. 233) established the new replacement name *Phycita* for this genus, due to the homonymy with the fish genus *Phycis* (i.e. 'Phycis having been long employed to designate a group of fishes'). The type species is *Tinea spissicella* Fabricius, 1777, p. 295, by subsequent designation relative to *Phycis*, but original designation relative to *Phycita*, by Curtis (1828, p. 233), who used the incorrect subsequent spelling *spicicella*. Interestingly, both Lepindex (Beccaloni et al., 2003) and Fletcher & Nye (1984, p. 119) refer to the type species as having been described in Fabricius (1794, p. 289). For the former record, the physical Lepidoptera index card in the Natural History Museum (London) correctly indicates Fabricius (1777) for the species name, but the associated Lepindex database record indicates Fabricius (1794). Looking at both papers (Fabricius, 1777 and 1794), it is clear that the 1794 record for this species is subsequent usage, as the descriptive text is identical apart from the added line in 1794: 'Statura oblonga T. sociellae', seemingly adding a comparative characteristic between this species and *Tinea sociella* Linnaeus, 1758, p. 534. In any case, this species is considered a junior synonym of *Tinea roborella* Denis & Schiffermüller, 1775, p. 138, currently *Phycita roborella*.

4. Swainson (1838, p. 321) established the family-group name PHYCINAE, as a subfamily of GADIDAE, for fishes of the genus *Phycis* Walbaum, 1792. In the same work, Swainson (1838, p. 322) misspelled the genus name as *Physis* in one instance (also spelling it correctly several times on the same page). In Volume II of the same work, Swainson (1839) misspelled the genus as *Physis* on pages 188 and 301, in appendix pages 391 and 392, and in the index page 452; the subfamily name was misspelled as PHYSINAE on page 188, but spelled correctly on page 301. This family-group name has been used extensively in the fish literature (see Cohen et al., 1990; Nelson, 1994, 2006; Roa-Varón & Orti, 2009; Eschmeyer 1990, 2013); it is currently used as valid for the family PHYCIDAE in the order Gadiformes, following Cohen (1984, p. 265). This family includes two valid genera and 11 valid species (Eschmeyer, 2013; Eschmeyer & Fong, 2013); most species are of commercial importance for the fishing industry.

5. Zeller (1839, p. 175) established the family-group name PHYCIDAE (as PHYCIDEEN), based on the moth genus *Phycis* Fabricius, 1798, apparently not realizing or not accepting the new replacement name *Phycita* Curtis, 1828. Although many authors subsequent to Curtis (1828) used the name *Phycita*, others persisted in the use of *Phycis*, but the family-group name was only replaced by PHYCITINAE more than 50 years later by Ragonot (1885, p. 20), and has been the accepted name for a subfamily of PYRALIDAE (or as its own family) since that time, although even some later authors persisted in the use of *Phycis* and the family-group name derived from it (e.g. Bethune-Baker, 1894), and Lord Walsingham (1914, p. 357) even went so far as to explain his rejection of the replacement name of Curtis (1828). The homonymy of PHYCIDAE Zeller, 1839 and PHYCIDAE Swainson, 1838 has already been removed by the action of Ragonot (1885) replacing the name PHYCIDAE Zeller with PHYCITINAE, subsequent to Curtis (1828) replacing the name *Phycis* Fabricius with *Phycita*, and so does not affect the current application.

6. Walker (1850, p. 2) established the fly genus *Phycus*. The type species is *Xylophagus canescens* Walker, 1848, p. 129, by monotypy. Lyneborg (1975, p. 91) synonymized this species under *Xylophagus brunneus* Wiedemann, 1824, p. 19, which Wulp (1896, p. 69) had previously placed in *Phycus*.

7. Lyneborg (1976, p. 197) established the family-group name PHYCINAE, as a subfamily of THEREVIDAE (Insecta, Diptera), for the fly genus *Phycus* Walker, 1850. Currently, this subfamily contains 12 valid, extant genera and 4 valid, fossil genera. Among the works using this family-group name are Lyneborg (1978, 1983, 1987, 1988, 1989a, 1989b), Irwin and Lyneborg (1981a, 1981b); Irwin (1983); Webb & Irwin (1989), Hauser & Webb (2007), Gaimari & Webb (2009).

8. PHYCINAE Lyneborg, 1976 is a junior homonym of PHYCINAE Swainson, 1838, although the two family-group names are based on non-homonymous type genera, *Phycus* Walker, 1850 and *Phycis* Walbaum, 1792. As such, under Article 55.3.1 of the Code, the homonymy between the two family-group names must be referred to the Commission. We propose that the entire generic name *Phycus* Walker, 1850 be adopted as the grammatical stem, so the family-group name of Lyneborg (1976) will become PHYCUSINAE and the homonymy will be removed.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:

(a) to rule that for the purposes of Article 29 of the Code the stem of the generic name *Phycus* Walker, 1850, is *Phycus-*;

(b) to set aside all previous type species fixations for the generic name *Phycis* Walbaum, 1792 and designate *Blennius phycis* Linnaeus, 1766 as the type species;

(2) to place on the Official List of Generic Names in Zoology the following names:

(a) *Phycus* Walker, 1850 (gender: masculine), type species *Xylophagus canescens* Walker, 1848, by monotypy (Insecta, Diptera);

(b) *Phycis* Walbaum, 1792, type species *Blennius phycis* Linnaeus, 1766 (Osteichthyes, Gadiformes), as ruled in (1) above;

(3) to place on the Official List of Specific Names in Zoology the following names:

(a) *canescens* Walker, 1848, as published in the binomen *Xylophagus canescens* (specific name of the type species of *Phycus* Walker, 1850) (Insecta, Diptera);

(b) *phycis* Linnaeus, 1766, as published in the binomen *Blennius phycis* (specific name of the type species of *Phycis* Walbaum, 1792) (Osteichthyes, Gadiformes), as ruled in (1) above;

(4) to place on the Official List of Family-Group Names in Zoology the name PHYCUSINAE Lyneborg, 1976, type genus *Phycus* Walker, 1850 (spelling emended by the ruling in (1) above) (Insecta, Diptera);

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name PHYCINAE Lyneborg, 1976 (an incorrect original spelling of PHYCUSINAE, as ruled in (1) above) (Insecta, Diptera).

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Case 3613***Nyctimystes cheesmani* Tyler 1964 (Amphibia, Anura, HYLIDAE):
request for setting aside the name in favour of *Nyctimystes
cheesmanae* Tyler 1964**

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Abstract. The purpose of this application, under Article 33.2.3 of the Code, is to correct the spelling *cheesmani* to *cheesmanae* for a tree frog named after Evelyn Cheesman. Following the finding that *Hyla montana* Peters & Doria, 1878 was in reality a member of the genus *Nyctimystes* Stejneger, *N. montana* Parker, 1936 became a secondary homonym. The replacement name, *N. cheesmani* Tyler, 1964, was given a masculine suffix, in error. Following the emendation to the feminine *cheesmanae* by Menzies (1976), there has been argument about whether the emendation was justified or not. To resolve the matter the Commission is here asked to rule that the emendation was justified and to place *N. cheesmanae* on the Official List of Specific Names in Zoology.

Keywords. Nomenclature; taxonomy; Amphibia; Anura; HYLIDAE; *Hyla*; *Nyctimystes*; *Nyctimystes montana*; *Nyctimystes cheesmanae*; New Guinea; tree frog.

1. Peters & Doria (1878, p. 103) described *Hyla montana*, a tree frog from the Arfak Mountains of western (Indonesian) New Guinea. Parker (1936, p. 80) described *Nyctimystes montana*, a new species of tree frog from Mondo in eastern New Guinea. Tyler (1964, 266) demonstrated that *Hyla montana* Peters & Doria, 1878 exhibits features of the genus *Nyctimystes* Stejneger, 1916 and transferred it to that genus. As a consequence, *Nyctimystes montana* Parker, 1936 became a secondary homonym of *Nyctimystes montana* Peters & Doria, 1878. In 1963 M.J. Tyler approached H.W. Parker (in accordance with Recommendation 3 in Appendix A of the International Code of Zoological Nomenclature, 1961, First Edition, then in effect) seeking that he (Parker) propose a replacement name. Parker responded that he was unfamiliar with the current literature and accordingly suggested that Tyler coin and publish a replacement name. Because the holotype of *Nyctimystes montana* Parker lacked any distinctive features, the specific epithet *cheesmani* (genitive masculine) was proposed in recognition of the collector Evelyn Cheesman (Tyler, 1964, p. 268) although this derivation was not specifically stated in Tyler's paper. Tyler and Parker both knew that Evelyn Cheesman was a woman and Parker had

already named several frog and lizard species in her honour, e.g. *Lipinia cheesmanae*, *Platymantis cheesmanae*, *Barygenys cheesmanae* and *Cophixalus cheesmanae*. Tyler admits that he made a mistake and that the species name should have been *Nyctimystes cheesmanae*. Tyler has never acknowledged the mistake directly in print, but his acceptance of the mistake was implicit in that he used the emended name *cheesmanae* in his paper (Tyler & Davies, 1979, p. 79). This is further made clear in the footnote on page 160 of Menzies's (2006) 'Frogs of New Guinea and the Solomon Islands.' Menzies wrote '... the author (Tyler) tells me that the masculine termination was a genuine error ...'.

2. Menzies (1976, p. 45) emended the name to *Nyctimystes cheesmanae* because he considered that such an emendation was justified under Article 32.5 of the Code. Tyler's error was certainly inadvertent as both he and Parker knew that Evelyn Cheesman was a woman.

3. Zweifel (1980, p. 400) expressed the opinion that Menzies' (1976) emendation was unjustified and used the masculine form, but usage has varied among authors since 1976. For instance, Tyler & Davies (1979, p. 765) and Zweifel & Tyler (1982, pp. 764, 781) used *cheesmanae*; Zweifel (1983, p. 15), Frost (1985) and Richards (2003) used *cheesmani*; Tyler (1999, p. 561), Richards (2007, pp. 108, 115), Frost (2006, p. 362) and Menzies (2006, p. 160) all used *cheesmanae*; Rosauer et al. (2009), Wiens et al. (2010) and Kraus (2012) used *cheesmani*. This is an unsatisfactory situation causing confusion. We therefore request a Commission's ruling under Article 33.2.3.1 of the Code.

4. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that *cheesmanae* Tyler, 1964, as published in the binomen *Nyctimystes cheesmani* Tyler, 1964 and emended by Menzies (1976), is a justified emendation;
- (2) to place on the Official List of Specific Names in Zoology the name *cheesmanae* Tyler, 1964, as published in the binomen *Nyctimystes cheesmani* Tyler, 1964 and as emended by Menzies (1976);
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *cheesmani* Tyler, 1964 as published in the binomen *Nyctimystes cheesmani*.

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Case 3587***Podocnemis unifilis* Troschel, 1848 (Reptilia, Testudines): proposed precedence over *Emys cayennensis* Schweigger, 1812**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name *Podocnemis unifilis* Troschel, 1848, for a widely distributed species of Amazonian turtle (family *PODOCNEMIDIDAE*) of both economic and conservation importance, by giving it precedence over its infrequently used senior synonym *Podocnemis cayennensis* (Schweigger, 1812). This species, the Yellow-spotted River Turtle, has long been referred to as *P. unifilis* by the IUCN Red List and CITES, as well as in at least 200 scientific publications over more than a century, whereas the name *P. cayennensis* has only been applied to this species in very few recent publications. Prior to 1974, the name *cayennensis* had usually been used incorrectly for another species, the Red-headed River Turtle, *Podocnemis erythrocephala* (Spix, 1824), as noted and corrected by Mittermeier & Wilson (1974) and Pritchard & Trebbau (1984). The conservation of the binomen *P. unifilis* will stabilize the use of a name that has been in general use for this species in the vast majority of the scientific publications, government documents, endangered species lists, and the general literature for over 100 years. Giving precedence to the older name (*cayennensis*) would be counter to usage, and would create much confusion in the literature.

Keywords. Nomenclature; taxonomy; Reptilia; Testudines; *PODOCNEMIDIDAE*; *Podocnemis*; *Podocnemis unifilis*; *Podocnemis cayennensis*; Yellow-spotted River Turtle; Amazon; South America.

1. For over a 100 years (e.g. Williams, 1954), the name *Emys cayennensis* Schweigger, 1812 (p. 298) (currently *Podocnemis cayennensis*) was applied incorrectly to what is now known as *Podocnemis erythrocephala* (Spix, 1824, p. 9). Mittermeier & Wilson (1974) suspected, as was later demonstrated by Pritchard & Trebbau (1984) and David (1994), that *Emys cayennensis* actually refers to the species known by most authors as *Podocnemis unifilis* Troschel, 1848 (p. 647). Although *Podocnemis cayennensis* has not been in common use (but see David, 1994; Bonin et al., 1996, 2006; Bour, 2006) and its species identification has at times been confused (reviewed by Pritchard & Trebbau, 1984, and Bour, 2006), it must be recognized that the oldest valid name for this taxon is *Emys cayennensis* Schweigger, 1812, as confirmed by the lectotype designated by Bour (2006).

2. The synonymy for *Podocnemis unifilis* presented below is based on van Dijk et al. (2012), Schneider et al. (2012), Rhodin et al. (2010), and Fritz & Havas (2007), but with some more recent updates:

Emys cayennensis Schweigger, 1812, p. 298. Type locality: 'Cayenna' [= Cayenne, French Guiana]. Holotype: not designated, but three syntypes are mentioned. Lectotype designated by Bour (2006): MNHN 8359 (Muséum National d'Histoire Naturelle, Paris; see Pritchard & Trebbau, 1984, and Bour, 2006, for justification); a juvenile dry specimen with head and shell separated; photographed in colour by Bour (2006); collected by L.C.M. Richard between 1781 and 1789 (not examined by authors);

Testudo Terekay Humboldt, 1819, p. 243. Type locality: 'Haut-Orénoque, . . . l'Apure, l'Uritucu, la Guarico et . . . les Llanos de Caracas' (= Upper Orinoco, Apure, Uritucu, Guarico, and llanos of Caracas [Venezuela]). No type specimens known;

Chelys (Hydraspis) Cayennensis (Schweigger); Gray, 1830, p. 17;

Chelys (Hydraspis) Lata Bell in Gray, 1830, p. 17. Type locality 'Demerara', Guyana;

Hydraspis Cayennensis (Schweigger); Gray 1831, p. 42;

Emys terekay (Humboldt); Schinz, 1833, p. 41;

Podocnemis dumeriliana (Schweigger); Duméril & Bibron, 1835, p. 387 (in error);

Podocnemis unifilis Troschel, 1848, p. 647. Type locality, 'Rupununi und Takutu', Guyana. Syntypes: Museum für Naturkunde, Berlin (ZMB) 142 (two specimens in alcohol, collected by R. Schomburgk in 1840–44 and photographed and measured by the ZMB for this paper (not physically examined by authors, but existence has been confirmed by Fritz et al., 1994);

Podocnemis tracaya Coutinho, 1868, p. 149. Type locality, 'Amazone';

Chelonemys dumeriliana (Schweigger); Gray, 1870, p. 83 (in error);

Podocnemis cayennensis (Schweigger, 1812): Siebenrock, 1902, p. 162.

3. The name *Testudo terekay* Humboldt, 1819 is a forgotten name, with no known type specimens, never used in modern literature since Gray (1831) and Schinz (1833). It meets the conditions of Article 23.9.1.1 of the Code, while its junior synonym *Podocnemis unifilis* Troschel, 1848, meets the conditions of Article 23.9.1.2 of the Code (see para. 7 below). We therefore declare the name *Testudo terekay* Humboldt, 1819 a nomen oblitum under Article 23.9.2 of the Code whenever it is considered conspecific with *Podocnemis unifilis*.

4. The name *Chelys (Hydraspis) lata* Bell in Gray, 1830, is a forgotten name never used in modern literature, as noted by Rhodin et al. (2008), who declared it informally a nomen oblitum. It meets the criteria of Article 23.9.1.1, and its junior synonym, *Podocnemis unifilis* Troschel, 1848, meets the criteria of Article 23.9.1.2 of

the Code (as shown in para. 7 below), and we therefore declare *Chelys (Hydraspis) lata* a nomen oblitum under Article 23.9.2 whenever it is considered conspecific with *Podocnemis unifilis*.

5. The name *Emys dumeriliana* Schweigger, 1812 was of uncertain usage for a while during the 19th century, being used erroneously at times for the Yellow-headed River Turtle, *Podocnemis unifilis* (e.g. Duméril & Bibron, 1835; Gray, 1870, 1871), but has for all of the 20th century been correctly used for the Big-headed Sideneck Turtle (either as *Podocnemis dumeriliana* or *Peltocephalus dumerilianus*), which was also correctly described by Schweigger (1812), and a neotype (MNHN 8364) for that species was designated by Bour (2006).

6. During the same period of time the name *Podocnemis unifilis* Troschel, 1848, has been applied in its currently accepted and frequently-used form. The name is based on two specimens (ZMB 142, 49415) collected by R. Schomburgk that were described by Troschel (1848). The latter specimen was renumbered from ZMB 142 for the purposes of this paper, and we hereby designate ZMB 142 (Figs. 1, 2) as the lectotype for *Podocnemis unifilis*, a juvenile specimen (carapace length 46 mm) in the Museum für Naturkunde, Berlin (ZMB).

7. The name *Podocnemis unifilis* has been used for more than 100 years in over 200 publications by numerous authors, and as such, fulfils the requirements of Article 23.9.1.2 of the Code. These include the following 40 examples from ecology and conservation (Fiasson, 1945; Vanzolini, 1977; Foote, 1979; Pritchard & Trebbau, 1984; Almeida & Garcia, 1986; Obst, 1986; Ernst & Barbour, 1989; Souza & Vogt, 1994; Vogt, 2001; Ferreira-Junior & Castro, 2006; Fachin-Terán & Vogt, 2007; Rueda-Almonacid et al., 2007), systematics and morphology (Siebenrock, 1909; Williams, 1954; Wermuth & Mertens, 1961; Medem, 1964; Pritchard, 1967; Mittermeier & Wilson, 1974; Albrecht, 1976; Wermuth & Mertens, 1977; Pritchard, 1979; King & Burke, 1989; Iverson, 1992; Fritz & Havas, 2007; Abdala et al., 2008; Rhodin et al., 2008, 2010; van Dijk et al., 2012; Schneider et al., 2012 [with an extensive bibliography for the species]), genetics (Ayres et al., 1969; Frair et al., 1978; Rhodin et al., 1978; Bock et al., 1998; Fantin et al., 2007) and management (Honegger et al., 1985; Bayley et al., 1992; Baillie & Groombridge, 1996; Hernandez & Espin, 2003; CITES, 2012; IUCN, 2012).

8. The name *Podocnemis cayennensis*, originally *Emys cayennensis* and based on the lectotype MNHN 8359, as designated by Bour (2006), over a similar period was for the most part mistakenly applied to the species now known as the Red-headed Amazon River Turtle, *Podocnemis erythrocephala* (as first noted by Mittermeier & Wilson, 1974). Since this time, the name *cayennensis* has recently been used for the Yellow-headed River Turtle in three systematics papers (Fretey, 1977; David, 1994; Bour 2006), the first of which is an unpublished thesis, and four more popular works (Bonin et al., 1996, 2006; Artner, 2005, 2008).

9. It is the view of the authors that the resurrection and use of the name *P. cayennensis* would be disruptive and confusing within the current literature. The name was erroneously applied for much of its use to *P. erythrocephala*; its junior synonym and preferred name *P. unifilis* has been used in the majority of the literature.

10. The International Commission on Zoological Nomenclature is accordingly asked: (1) to use its plenary power to give the name *unifilis* Troschel, 1848, as published in the binomen *Podocnemis unifilis*, precedence over the name *cayennensis*

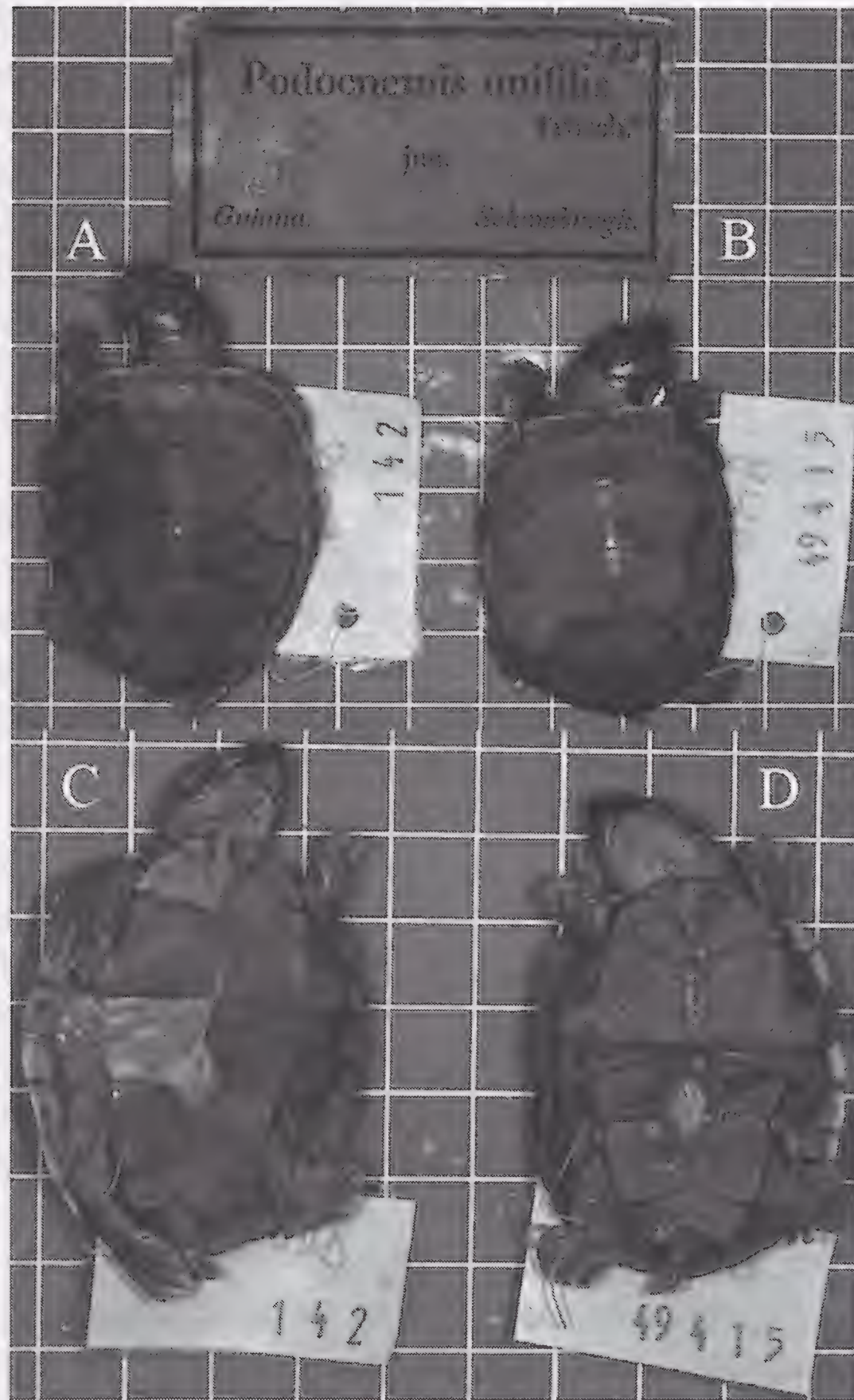


Figure 1. Photographs of the types of *P. unifilis*. A. Dorsal view of the lectotype ZMB 142. B. Dorsal view of the paralectotype ZMB 49415. C. Ventral view of the lectotype ZMB 142. D. Ventral view of the paralectotype ZMB 49415. Also showing the original museum label for the type series.

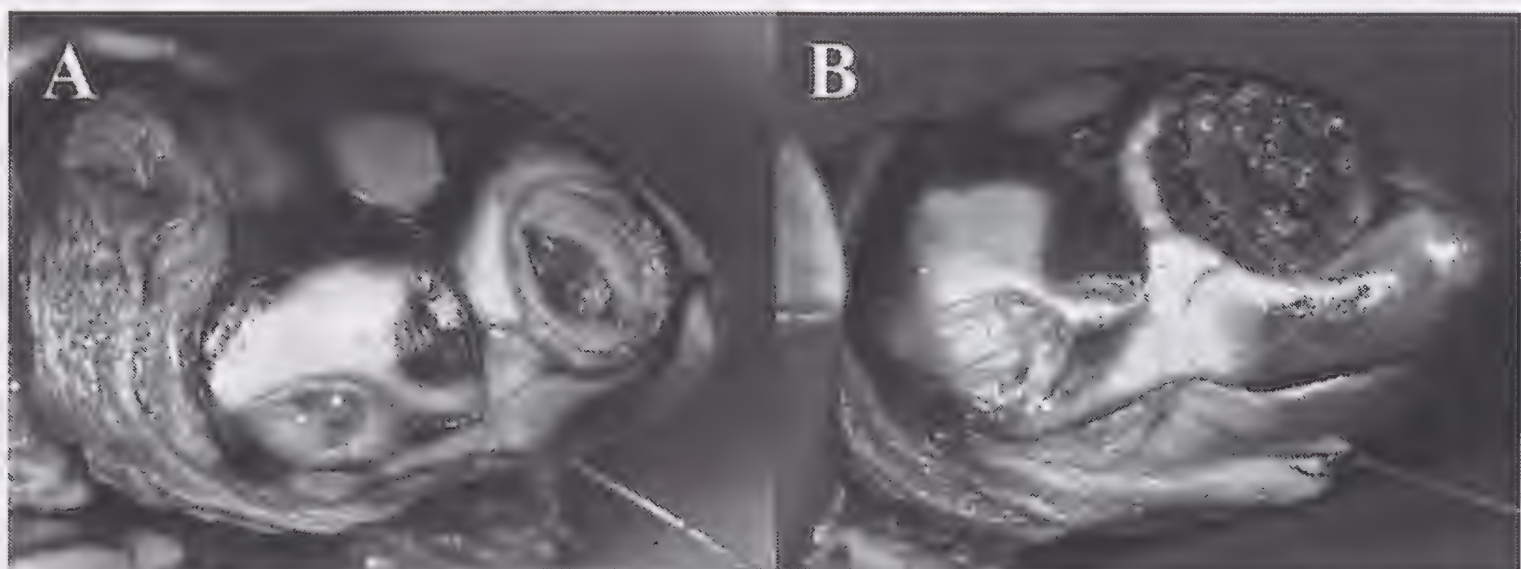


Figure 2. Lateral views of the heads of the types of *P. unifilis*. A. Lectotype ZMB 142. B. Paralectotype ZMB 49415.

Schweigger, 1812, as published in the binomen *Emys cayennensis*, whenever the two are considered to be synonyms;

- (2) to place on the Official List of Specific Names in Zoology the following names:
- (a) *unifilis* Troschel, 1848, as published in the binomen *Podocnemis unifilis*, with the endorsement that it is to be given precedence over *cayennensis* Schweigger, 1812, as published in the binomen *Emys cayennensis*, whenever the two are considered to be synonyms;
 - (b) *cayennensis* Schweigger, 1812, as published in the binomen *Emys cayennensis*, with the endorsement that it is not to be given priority over the name *unifilis* Troschel, 1848, as published in the binomen *Podocnemis unifilis*, whenever the two are considered to be synonyms.

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Acknowledgement of receipt of this application was published in BZN **69**: 84.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comment on *Lychnorhiza lucerna* Haeckel, 1880 (Cnidaria, Scyphozoa, Rhizostomeae): proposed conservation of generic and specific names (Case 3485; see BZN 66: 242–246)

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The jellyfish involved in Case 3485 do not appear to be of very high profile in such areas as research for fisheries, and the number of cited works concerning them is not very large. I therefore suggest that the author withdraw his proposals and instead designate the extant holotype of *Lychnorhiza lucerna* Haeckel, 1880 as the neotype of *Rhizostoma cruciatum* (sic; see below) Lesson, 1830 and assign all the involved nominal species to this genus in accordance with the Code, with no involvement of the Commission. This will result in the permanent replacement of the name *Lychnorhiza lucerna* by *Rhacopilus cruciatus*. Although this is contrary to the author's intent, he has provided little documentation of the use of *Lychnorhiza* for nominal species other than *L. lucerna*, only mentioning two such species in paragraph 9. Although currently a nomen dubium, *cruciatum* (-us, -a) is far from being a nomen oblitum, so it might as well be conserved; its definition and assignment to genus will be fixed by the suggested neotypification.

The International Commission on Zoological Nomenclature is therefore asked, in the event Case 3485 fails to gain a two-thirds-majority favourable vote from the Commission, to use its specific powers under Articles 78.2.3 and 83 of the Code to

(1) designate the extant holotype of *Lychnorhiza lucerna* Haeckel, 1880 (ZBM CN1 1170) as the neotype of *Rhizostoma cruciatum* Lesson, 1830; and

(2) place *cruciatum* Lesson, 1830, originally proposed as *Rhizostoma cruciata* (an adjective, also rendered in French by Lesson as *croisee*, corrected for gender herein) and defined by the neotype designated in (1) above, on the Official List of Specific Names in Zoology.

As for other concerns, a clear statement should have been included to the effect that Mayer's (1910) synonymisation of Haeckel's (1880) *L. lucerna* and *Cramborhiza flagellata* constituted a First Reviser action assigning priority to the former; also, line 4 of paragraph 11 would have been much clearer with 'Goy's record' in place of 'the record'.

Finally, the corrigendum (BZN 66: 379) changing 'nomen nudum' to 'nomen oblitum', is partly erroneous; the indicated change must be made to the last sentence of paragraph 3, not that of paragraph 14 as stated.

**Comment on *Cornu* Born, 1778 (Mollusca, Gastropoda, Pulmonata, HELICIDAE):
request for a ruling on the availability of the generic name**

(Case 3518; see BZN 68: 97–104, 282–292; 69: 124–127, 219–221)

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We are thankful to our colleague Ruud Bank for having communicated the manuscript of his comment in the *Cornu* case, enabling us to respond directly, as this will save time. Whenever we spoke of 'correct names' in this journal, we always did this in the sense of nomenclaturally correct names, never in the sense of taxonomically correct names. We do not believe the term 'correct' is appropriate in a taxonomic context. Taxonomy depends on personal judgements and there is no eternal truth dictating a certain classification. We are experts specialising in European pulmonates ourselves, and two of us (F. W.-S. and C. Aud.) classify *aspersa* in the genus *Helix*, as was done in a recently published identification guide on 2150 species of European molluscs (Welter-Schultes, 2012, p. 610). Those who do this can have various reasons for such a classification and take advantage of the freedom of science. Those who classify *aspersa* in a separate genus (e.g. C. Alt.) also have various reasons and also take advantage of the freedom of science.

R. Bank's statement 'it is now clear that *aspersa* is not a *Helix*' is not in line with the usual form of scientific arguments that are brought forward (ordinarily one would say 'the results suggest that *aspersa* is not a *Helix*'). The term 'a *Helix*' ignores the fact that the concept of a genus and the number of species included is never mandatorily fixed, and the definite use of '*aspersa*' in this statement leads us to highlight another important detail that has been ignored in the previous discussion: the precise identities of some of the taxa involved. One problem is that the type of *Cornu* Born, 1778 is not *aspersa*, but *copiae*. And we see no evidence that *Helix aspersa* Müller, 1774 is based on a name-bearing type. Probably it is not.

Another problem is that the taxonomy of what we currently call *aspersa* is not fully understood and still remains to be studied in detail. We only partly agree with Cowie's (2011) statement that there are no doubts about *copiae* and *aspersa* being synonyms. This is only the current state of research, and not based on results of appropriately designed studies. Recently Italian researchers have speculated that the Italian *aspersa* populations may consist of a variety of different taxa, possibly several different species (F. Liberto, pers. comm., 2012). This must be seen in the light of recent results in Sicily, published by Colomba et al. (2011) who suggested the

presence of three separate local species of the *Helix mazzullii* complex. Again this is a lecture of scientific progress.

These forms have long been classified as varieties of *Helix aspersa*, more recently as a very closely related but separate species *H. mazzullii* and finally, with more detailed knowledge, Colomba et al. (2011) suggested classifying them in a separate genus *Erctella* Monterosato, 1894. Nobody can currently exclude that something similar may not happen to the *aspersa/copiae* complex in the future, if Italian and non-Italian *aspersa* populations are studied more closely.

The name-bearing type of *Cornu copiae* Born, 1778 seems to have come from Spain (BZN 68: 287); the type locality of *aspersa* could be anywhere in Italy (Müller, 1774, p. 59). The two cannot be made objective synonyms.

Just declaring *aspersa* on the Official List as the valid name for *copiae*, as proposed in Cowie's (BZN 68: 97) third request, without knowing the exact identity of Müller's name *aspersa*, is not an ideal procedure. It is not well equipped for the future because such an entry could become meaningless with new insights, and the disputes could start again.

It would be desirable to have a stable genus-group name for *aspersa*, robust against changes in classification due to scientific progress, a genus-group name that is immune to nomenclatural or taxonomic disputes. The type species of *Cryptomphalus* Charpentier, 1837 is *Helix aspersa* (as already said by Cowie, BZN 68: 100), so this would be a stable name for *aspersa*. The three co-authors of this comment have different taxonomic views, but we would see *Cryptomphalus* as the better choice. If any future study came to the conclusion that *C. copiae* did not belong to *H. aspersa*, but perhaps to a surprisingly distantly related form, the genus *Cornu* could once again come into dispute. Setting *Cornu* on the Official Index would exclude such an undesirable situation.

We consider it a good idea of Cowie (BZN 68: 97) to ask the Commission for help in this disputed case. We would appreciate a definite decision – either by setting *Cornu* on the Official List or on the Official Index, but not an unclear or intermediate solution.

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Comment on *Turbo bidens* Linnaeus, 1758 (Gastropoda, CLAUSILIIDAE): request for setting aside the neotype

(Case 3581; see BZN 69: 85–87, 213–218, 280)

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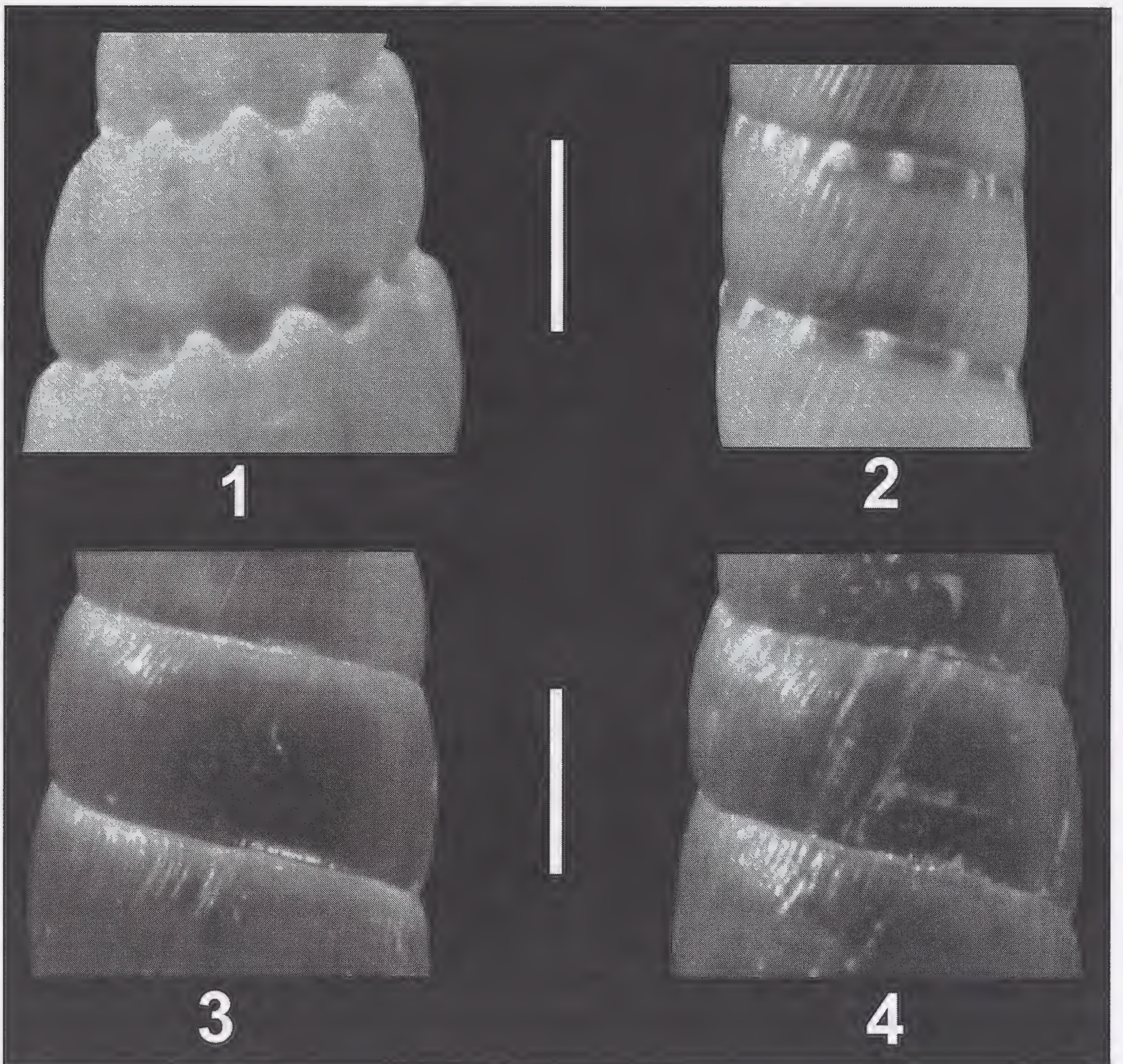
Forcart (1965, p. 122) was of the opinion that *Turbo bidens* Linnaeus, 1758 was only based on the cited illustration of Gualtieri (pl. 4, fig. C). Because this figure allegedly was one of *Cochlodina laminata* (Montagu, 1803), he thought that the name was not available for *T. bidens*; therefore the species should be named *Helix papillaris* O.F. Müller, 1774. However, *T. bidens* was not only based on that illustration, but was also accompanied by a diagnosis.

Falkner et al. (2002, p. 113) emphasized that Linnaeus' diagnosis ('sutura subcrenata') did not correspond with the illustration of Gualtieri, pl. 4, fig. C, but with the illustrations pl. 4, figs. D and E (which had already been noticed by Schröter, who revised Linnaeus's work). So they called the species *Papillifera bidens* (Linnaeus) and designated the specimen figured by Gualtieri (pl. 4, fig. E) as its neotype. This was a mistake, because a specimen designated as the neotype should be accessible for the study of the species characters (Article 75 of the Code, Recommendation B).

The Commission (2007, p. 195) decided that the name *Helix papillaris* O.F. Müller, 1774 was not to be maintained and put the name *Turbo bidens* Linnaeus, 1758 on the Official List of Specific Names in Zoology instead. However, they neither gave a comment on the problems with the use of the species name nor on the neotype designation of Falkner et al. This gave Kadolsky (2009) an opportunity, following previous statements of Giusti & Manganelli, to designate a neotype for *Turbo bidens*, which was said to correspond with Linnaeus' diagnosis as well as with Gualtieri's illustration pl. 4, fig. C, which is a specimen of *Cochlodina incisa* (Küster, 1876). For that he gave the reason that it was *C. incisa* which had been characterized by Linnaeus as having a 'sutura subcrenata' because it exhibited, in contrast to *C. laminata*, a 'faint crenellation of the suture'.

All clausiliid species which have ever been named *crenata* or *subcrenata* have sutural papillae and belong to the tribe DELIMINI; no author has ever had the idea of diagnosing *Cochlodina* species like *C. laminata* and *C. incisa*, in which at best growth lines are visible at the suture, as 'sutura subcrenata'. Besides, the shells of the two *Cochlodina* species mentioned are so similar that, for example, Giusti (1971, pp. 497–507) was unable to distinguish the two species in Italy. As is shown by a comparative illustration of the lower whorls of both species (Figs. 3–4), there are no differences in the development of the suture. The morphological statements, on which Kadolsky's neotype designation is based, are therefore incorrect and for this reason the designation is unacceptable and arguably invalid.

Kadolsky did not discuss the most probable possibility that Linnaeus made a mistake when he cited the illustration of Gualtieri. Both the name of the species ('bidens') and the diagnosis with 'sutura subcrenata' and 'apertura . . . bidentata' are inconsistent with Gualtieri's pl. 4, fig. C, which shows neither a weakly notched suture, nor an aperture with two 'teeth', but instead correspond with Gualtieri's pl.



Figures 1–4. SMF (Senckenberg Museum Frankfurt am Main); H shell height (mm). 1. *Opalia crenata*, Canary Islands, ex SMF, H 15.9; 2. *Papillifera bidens*, Italy, Tuscany, Firenze (outside of town), ex SMF 232184, H 14.2; 3. *Cochlodina incisa*, Italy, Abruzzi, Vado di Sole between Castel del Monte and Farindola (1640 m), ex SMF 334472, H 18.0. 4. *Cochlodina laminata*, same locality, ex SMF 334471, H 18.0.

4, fig. D in which both characters are clearly visible. What Linnaeus referred to as crenata and consequently as sub-crenata, can be seen on the shell of *Turbo crenatus* = *Opalia crenata* (Linnaeus, 1758) (Prosobranchia, EPITONIIDAE), diagnosed by Linnaeus as ‘anfractibus . . . supra crenatis’. This species has prominent notches at the suture (Fig. 1). Thus ‘sutura subcrenata’ means weaker notches at the suture, which is exactly what sutural papillae are, like those of *Papillifera bidens* (Fig. 2). The weak ‘crenulations’ at the suture of *Cochlodina incisa* which can be seen in Kadolsky’s figures as well as in Fig. 3 (and Fig. 4) of this comment are the ends of striae not much stronger than growth-lines at the suture which are present in several *Cochlodina* species. In shell descriptions those species are therefore described as ‘smooth’ (not considered in species names). They are much different from the small white knobs at the suture named sutural papillae which are present e.g. in DELIMINI species like *Papillifera bidens*. In shell descriptions DELIMINI species are therefore

described as provided with ‘papillae’ (considered in species names like *crenata*, *crenulata*, *subcrenata*, but also *papillaris*, *albopustulata*, *alboguttulata*, and in the genus name *Papillifera*). Besides, in the second edition of his *Systema Naturae*, Linnaeus (1767, p. 1240) added to his description of *Turbo bidens* an illustration of Buonanni (fig. 41) and thus made clear his opinion of that species. So the authors following Linnaeus, Schröter and Gmelin, were right in referring Linnaeus’s *T. bidens* to the species named *Clausilia bidens* by L. Pfeiffer (i.e. *Papillifera papillaris*) and later authors, and there is no doubt that the application of the name *P. bidens* to this species is correct.

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Comment on a proposal to reinstate as available the species-group names proposed for Devonian ammonoids (Mollusca, Cephalopoda) by Sobolew (1914a, 1914b) (Case 3600; see BZN 69: 170–177)

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The Case of the two Ammonoidea publications of Sobolew (1914a, b) – in 1956 placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature (Direction 32, following Opinion 132) – was a priori a serious and inexcusable mistake by the ICZN. According to the application the decision of 1936 dealing only with the generic names of Sobolew did not cover his specific names; therefore these were seen to be valid by all subsequent ammonoid workers up to present times.

A comparable incorrect decision in Opinion 946 (1971) ruled that the Rugosa/Tabulata (Anthozoa) publication of Ludwig (1865–1866) was suppressed for the purposes of the Principle of Priority and was placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature. This invalidation followed the application of Scrutton (1969). Just as in the case of Sobolew (1914), the majority

of Ludwig's generic names were interpreted as formulae, but there was no reason to also reject the specific names which were partially classified into traditional genera (*Amplexus*, *Hallia*, *Hadrophyllum*, *Aulacophyllum*, *Zaphrentis*, *Cyathaxonia*). A comment by Birenheide (1969) to retain one already revised species *Cyathophyllum* (*Peripaedium*) *planum* (Ludwig, 1866) remained unmentioned; in spite of that Birenheide (1978) regarded the Ludwig species as valid.

Case 3600 for making available all the Sobolew (1914) species-group names of Ammonoidea is fully supported.

Additional references

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Comments on *Scarabaeus* Linnaeus, 1758, *Dynastes* MacLeay, 1819, CARABAEINAE Latreille, 1802, and DYNASTINAE MacLeay, 1819 (Insecta, Coleoptera, SCARABAEOIDEA): proposed conservation of usage
(Case 3590; see BZN 69: 182–190, 293–295)

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I wish to register my strong support for conservation of the current usage of *Scarabaeus* and *Dynastes* and their associated higher taxa as proposed in Case 3590, but also wish to help clarify the matter of authorship of type designations in Jolyclerc (1807a, 1807b). Having obtained a copy of the original 1807 two-volume set, I have been researching this work and compiling a list of type designations in it and unfortunately misled the authors of this application when I advised them that the preface (page iii) had the information as to the authorship of Lamarck for the insect entries.

Hans Fery (BZN 69: 294) recently published a comment to this application pointing out that the authorship of the type designation for *Scarabaeus* might really be Jolyclerc himself. The title page of the second edition of this work cited by Fery (i.e. Jolyclerc, 1822), differs from the original 1807 title page and the wording that is there is immaterial to the current application; however, the preface and, as far as I can see, the remainder of the text of the 1822 work, are exactly the same as the 1807 version. Because the wording in the preface is equivocal as to any explicit authorship of the material by the specialists listed on p. iii of the preface, I conclude that the authorship of any zoological nomenclatural acts in the *Dictionnaire* should be Jolyclerc's alone.

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Concerning the genus-name *Scarabaeus* Linnaeus, 1758, it may be interesting to ask the question: are there Linnaean principles to support a decision about which species (*hercules* or *sacer*) is more legitimate as a type-species for this genus? The answer is yes, and we shall see that the more appropriate type, for Linnaeus, might have been *Scarabaeus sacer*.

In the Linnaean corpus, the largest collection of principles dealing with systematics is found in his *Philosophia Botanica* (Linnaeus, 1751). In spite of its title, the work does not deal only with plants but takes some of its arguments from the animal kingdom, for example in '§ 153. Dispositio Vegetabilium (Arrangement of Vegetables): (. . .) 'Naturalis instinctus docet nosse primum proxima & ultimo minutissima, e. gr. Homines, Quadrupedia, Aves, Pisces, Insecta, Acaros. . . ' (Natural instinct teaches to know first the closest and last the most minute, e.g. Men, Quadrupeds, Birds, Fishes, Insects, Mites. . .'). Therefore, it is likely that the principles developed in *Philosophia Botanica* can be applied to animals as well. When we read in this work, '§ 246: Si Genus receptum, secundum jus naturae & artis, in plura dirimi debet, tum nomen antea commune manebit vulgatissimae et officinali plantae' (If a received genus, according to the right of nature and art, must be divided into several [genera], then the name formerly common will remain to the most vulgar and officinal plant), we feel free to use this principle for animals, in general, and for insects in particular. Consequently, in respect of the question asked, we have to make a proposal as to which one, of the two *Scarabaeus* (in the Linnaean sense), *hercules* or *sacer*, must be considered as the most vulgar and officinal.

The 'most vulgar' species, i.e. the most common of the two, the most well-known, is surely *Scarabaeus sacer*, a species which has been known in Europe and the Mediterranean countries since the Egyptians and Romans: the Romans used to bring Egyptian obelisks to Rome, and Linnaeus takes care to acknowledge it in his diagnosis of this species (Linnaeus, 1758, p. 347): 'Hic in columnis antiquis Romæ exsculptus ab Ægyptiis' ('This [species was] engraved by Egyptians on ancient columns in Rome'). For this species, and contrary to most other ones, Linnaeus did not provide bibliographical data: he probably thought the species was well known enough ('vulgatissima') and did not need additional references. On the other hand, 'Scarabaeus Hercules', although large and remarkable, is an American species which was not known by European scholars before the seventeenth century; the first reference given by Linnaeus is Georg Marcgraf's *Historia Naturalis Brasiliae* of 1648 (Linnaeus, 1758, p. 345). Even in the eighteenth century, the species was a rare curio, to be found only in princely cabinets; nothing 'vulgar' in it!

As for 'officinal', in his *Historia Naturalis*, Pliny explained that Egyptian scarabs have a number of medicinal virtues. But the 'officinal' of Linnaeus is to be looked for more appropriately in the seventeenth and eighteenth century books referred to as 'materia medica' or 'pharmacopœia'. Johann Schröder's *Pharmacopœia Medico-Chymica* of 1641 stated that the 'Scarabaeus pilaris', or 'pilularius' (= *Scarabaeus* in the current sense) had various uses in the cures of troubles of ear or eye and also of anus (hemorrhoids), appropriately for a dung beetle (Schröder, 1644, p. 324).

‘*Scarabaeus Hercules*’, on the other hand, was too precious and expensive to be prescribed by physicians and apothecaries; it is not mentioned in Schröder’s book nor in the more modern pharmacopoeia of James (1747).

As a conclusion, if we divide the former genus *Scarabaeus* in two genera according to Linnaeus’s own principles, then *Scarabaeus* (s.s.) should still include the species *sacer*, which is more vulgar and officinal. The species *hercules* should be placed in the other genus.

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Schröder, J. 1644. *Pharmacopœia medico-chymica, sive thesaurus pharmacologicus, quo composita quæque celebriora...* 596 pp. Ed. 2. Johannes Gerlinus, Ulmæ (original edition: 1641).

Comment on the proposed conservation of usage of the specific name *Scarabaeus fimetarius* Linnaeus, 1758 (currently *Aphodius fimetarius*; Insecta, Coleoptera, SCARABAEIDAE) by designation of a neotype
(Case 3579; see BZN 69: 29–36, 128–140, 221–229, 284–293)

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Since the publication of Case 3579 in December 2011, fifteen comments on the Case have been published. One might believe that all has been said; however, the recent comment by Krell & Angus (BZN 69: 285–290) contains a number of inaccuracies, some of which should certainly be challenged.

Krell & Angus devote about one quarter of their comment to show that *Aphodius fimetarius* (Linnaeus, 1758) as understood by almost all authors was a composite species, however, this is only half of the truth: the ‘other species’ was already described as distinct in 1892 (*Aphodius cardinalis* Reitter), after a short period disregarded as a species, but until recently often treated as an aberratio or morph or even an ‘eventual geographical race’ (e.g. Baraud 1977, 1985). It is not unusual that a species split into two species had been treated before that split as a composite species. It is, however, unusual and confusing that the two taxa should have names which were treated as synonyms for almost 250 years and for both of which the existing type material (paralectotypes of *Scarabaeus fimetarius* Linnaeus, 1758, and lecto- and paralectotypes of *Scarabaeus pedellus* De Geer, 1774) undoubtedly belongs to one and the same species. The confusion would be complete if the senior name (*fimetarius* Linnaeus, 1758) were attributed to the species that was described as distinct 130 years later (*cardinalis* Reitter, 1892), and the junior synonym (*pedellus* De Geer, 1774) were attributed to the species which was described as the first one (*fimetarius* Linnaeus, 1758).

Krell & Angus give as an example that ‘Fery himself labelled his proposed neotype of *Aphodius cardinalis* Reitter originally as *A. fimetarius* L.’ But which other name

should I have selected in 1984 when nobody believed in the existence of two species under that name? Additionally, it must be stated that in Fery (BZN 69: 128–136) a neotype for *A. cardinalis* Reitter was not ‘proposed’ but designated. Krell & Angus remark that ‘a hasty neotype designation is inappropriate’. My designation of the neotype of *A. cardinalis* was by no means hasty since all institutions which come into consideration as depositories of Reitter’s type material (Horn et al., 1990) had been contacted—except one which, unfortunately, had been overlooked: the Slezské Zemské Muzeum in Opava, Czech Republic. In January 2013, however, I was informed that no such type material is kept in the collections of that museum (pers. communication by curator J. Roháček). There is no evidence that any other institutions have material which can be undoubtedly attributed to Reitter.

Krell & Angus cite Barclay (BZN 69: 139–140) that ‘authors are likely to think of the typical *A. fimetarius* as the species usual in their geographical areas’ and give as an example that Bunalski (1999) illustrated the parameres from typical Central European specimens (with red elytra) while Paulian (1959) did so from French specimens (i.e. those with yellowish-red elytra). Krell & Angus must be granted that one can easily fall victim to an optical illusion if such figures are not properly oriented. However, a careful comparison with Rößner’s (unpublished) results shows that Paulian’s illustrations also belong to the species with the more gently downturned apices (i.e. the one with red elytra). Krell & Angus cite also Costessèque (2005) who is supposed to have figured ‘the aedeagus of *A. fimetarius* as abruptly downturned, rather typical for the light coloured species’. Costessèque gives the colour of the elytra as red (adding some darker variants) and reproduces the figure of the parameres from Baraud (1977) (reproduced also in Paulian & Baraud, 1982). A careful comparison with Rößner’s results shows again that Baraud’s/Costessèque’s figure (although rather schematic) also represents the species with the more gently downturned apices (i.e. the one with red elytra).

In addition to these works, there are several others which have influenced and formed the principal understanding of *A. fimetarius* sensu Rößner (2012) and Fery (BZN 69(2)): Baguena Corella (1967), Baraud (1977, 1985, 1992), G. Dellacasa (1983), G. Dellacasa et al. (2001), G. Dellacasa & M. Dellacasa (2006), M. Dellacasa (1988, 2004), Janssens (1951), Machatschke (1969), Paulian & Baraud (1982), and Reitter (1909). All these authors give the colour of the elytra as red, reddish-brown or dark red; only Janssens (1951) and Paulian (1959) add yellowish-red as a second or third possibility. Yellowish red elytra are given in Paulian & Baraud (1982) for the ‘ab. *subluteus* Muls.’ which is, however, specified as immature. G. Dellacasa & M. Dellacasa (2006) is the only work in which the parameres of the yellowish-red species are illustrated; the figures in all other works agree with Rößner’s results for the species with red elytra. *A. cardinalis* is the only taxon which is mentioned explicitly in all works of the more ‘southern’ authors except G. Dellacasa et al. (2001); it is either called ‘aberratio’ or ‘morph’ and considered also as an eventual geographical race by Baraud, and differentiated by the shape of the elytral intervals from the ‘normal form’ with red elytra. These differences between ‘normal’ *fimetarius* and the ‘morph’ *cardinalis* are even figured in G. Dellacasa (1983, figs. 304, 305).

All these works are widely read and not only known to students of any particular nationality. Hollande & Théron (1999) are the only authors known to me who describe the elytral colour only as yellowish-red and that for specimens from

Northern Africa. However, they illustrate habitus and parameres typical for the species with red elytra. Machatschke (1969, p. 320) who in 'Die Käfer Mitteleuropas' (a work well-known in large parts of Europe) described *A. fimetarius* as a species with red or reddish-brown elytra and called lighter specimens immature. He also illustrated the parameres of *A. fimetarius* with more gently downturned apices and these are typical of the species with red elytra. Krell (1992, p. 228) in a supplement to Machatschke, did not correct this understanding of *A. fimetarius*, but added a character (matt elytral apices) attributed today to *A. cardinalis*, the species with yellowish-red elytra (see also Rößner, 2012).

Krell & Angus (BZN 69: 287) try to discredit Reitter's style of working and his species concept and therefore the value of his *cardinalis*. Reitter's *Fauna Germanica* (1908–1916) was a standard work in coleopteran entomology for more than half a century in large parts of Europe; also Sprague (1875, p. 373 ff.) devoted two pages to the quality of Randall's working style and the value of his species, including 'Randall's descriptions, when viewed with our present knowledge, are short, and not to the point; quite often color, and those parts that have no specific value, being all we have to depend upon. The beetles known as Randall's species, have long been a thorn in the side of the thorough and systematic entomological student.'

The remarks on Reitter's working style and business as insect merchant are irrelevant. Randall's, Mulsant's and Reitter's names are available—this is all we need to know. All are possible names for the yellowish-red species, because the descriptions include terms like 'bright reddish', 'jaune-rouge' or 'heller gelbroth'. The type localities of all taxa are known (U.S.A.; France (at least in part); Syria, Algiers, Andalusia). Except for elytral coloration, nothing more is known about *Aphodius nodifrons* Randall and *Aphodius subluteus* Mulsant to help distinguish them from the darker species. Randall states only that 'this insect is the counterpart of the *A. fimetarius* of Europe' (Randall, 1838, p. 20). Reitter, on the other hand, gives three further characters besides elytral coloration to separate both species (length and shape in cross-section of the intervals at the tip of the elytra, shape of the cheeks (the latter character was already discussed by Fery (BZN 69(4))), and thus provides a comparatively complete description. Krell & Angus cite Müller (1902, p. 446) who recorded a strong variability in the length of the intervals and thus considered both species identical. Müller's entire text on both species reveals, however, that he only studied this sole character and he gives not a single hint as to whether he had in fact studied both species or only one. According to Rößner (2012) both elytral characters can be used to separate the two species in most cases.

These considerations show that Reitter's taxon is the only one we can be sure is identical with the yellowish-red species (or the 'lighter species', *A. fimetarius* sensu Krell & Angus), and the designation of a neotype for *A. cardinalis*, together with the proposed suppression of Randall's and Mulsant's names, as well as the selection of a neotype for *S. fimetarius* by the Commission from the remaining paralectotypes is the best way to stop nomenclatural confusion.

Krell & Angus (BZN 69: 287) give four new references in which the species under consideration are named in their sense. In the time span since Case 3579 was submitted several papers have been published in which the name *A. fimetarius* is treated as it was before Wilson (2001) and at least two others in which this name is used in my sense: Číla & Král (2012) and Rößner (2012); the latter author also uses

the name *A. cardinalis* for the yellowish-red species (a list of all the references will be sent to the Secretariat). Contrary to the assertion of Krell & Angus, the respective distributions given by M. Dellacasa & G. Dellacasa (2006) show that their interpretation of Wilson's (2001) results is not in fact correct.

Krell & Angus argue again that parts of northern Germany belonged to Sweden at Linnaeus's time. However, it is extremely unlikely that Linnaeus studied material of the yellowish-red species from there because this species—except on one single occasion—has never been recorded in that region (Rößner 2012).

Krell & Angus express their surprise that 'the assignment of the names *A. fimetarius* and *A. pedellus* to the two species in question has not been criticised for a decade' and that only 'now that [they] initiated correction of the type selection for *A. fimetarius* . . . suddenly protests emerge'. The answer is simple: it took some time until a few dung-beetle specialists became aware of Wilson's work; then it was far from clear what consequences Wilson's type designations might have because in her work neither the elytral colour nor a clear distribution pattern of each species is recognisable; and then when a few specialists understood what had happened, they did not see a possibility of changing anything because the lectotypes had already been designated.

Finally, I want to refer to the last section of my comment in BZN 69(4), the content of which I still consider the only satisfying solution for this nomenclatural problem.

Additional references

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Comments on the proposed precedence of *Maculinea* Eecke, 1915 over *Phengaris* Doherty, 1891 (Lepidoptera, LYCAENIDAE)

(Case 3508; see BZN 67: 129–132, 245, 315–319; 68: 292–293)

(1) J. Paclt

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This comment is in support of Case 3508 to conserve the junior synonym *Maculinea* Eecke, 1915 for the Large Blue butterfly. The historical use of the two synonyms, *Maculinea* Eecke, 1915 and *Phengaris* Doherty, 1891 is summarized by Paclt (2012), with *Maculinea* shown to be very widely used and *Phengaris* very little used, almost solely by, or following, the authors of the comment opposing the case. Article 23.2 of the Code (the Principle of Priority) is to be used to promote stability, and not to upset a long-accepted name in its accustomed usage by introducing a little-used senior synonym as was done by Fric et al. (2007). The genus *Phengaris* was introduced in 1891, and since then has been the subject of very few publications, while *Maculinea* was used in all catalogues, field guides and educational posters and has been the subject of numerous behavioural, ecological and conservation studies. The Commission is formally asked for a ruling in support of Case 3508 and for conservation of the junior synonym *Maculinea*, which is a classical case of common usage vs priority, as described in Article 23.9.3 of the Code.

Additional reference

Paclt, J. 2012. In defence of the accustomed generic name *Maculinea* Eecke (Lepidoptera, Lycaenidae), *Deutsche Entomologische Zeitschrift*, **59**(2): 317–320.

(2) J.W. Phillips

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I support the recent application by Balleto et al. (BZN 67: 129–132), reinforced by the response of Morris et al. (BZN 68: 292–293) which under Article 23.9.3 of the Code seeks to conserve the widely used generic name *Maculinea* van Eecke, 1915 in its accustomed usage while being threatened by its senior synonym *Phengaris* Doherty, 1891; the proposal being that *Maculinea* be given precedence over *Phengaris* whenever the two are considered to be synonyms.

Whilst accepting that *Phengaris* should take precedence one could argue that this is far from being a normal case and that other considerations should be allowed to apply.

Previous submissions mentioned above have adequately covered the taxonomic aspect of the argument, however, speaking as an amateur lepidopterist, the genus *Maculinea* and in particular *M. arion*, the Large Blue, represents to many people an iconic and flagship group of species which has, thanks to the pioneering efforts of many dedicated environmental specialists, spearheaded the invertebrate conservation movement, and is identified and recognised as such in the eyes of the general public as well as all invertebrate zoologists.

To erase *Maculinea* from current literature would, I suggest, not only be confusing but also counter-productive.

(3) D.J. Simcox

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I support the application by Balletto et al. (2010) to give precedence to *Maculinea* van Eecke, 1915 over *Phengaris* Doherty, 1891.

I have worked on *Maculinea* butterflies in the United Kingdom and across Europe for 30 years. My work has encompassed both academic research and, as the Project Manager of the U.K. re-introduction programme since 1999, delivering evidence-based conservation which involves advising, training and liaising with a wide range of conservation professionals, statutory authorities, NGOs, expert amateurs, volunteers and the general public. Successful delivery of the project depends on being able to communicate a complex ecological story in an accessible manner not helped in any way by the *Maculinea*/*Glaucopsyche*/*Phengaris* debate.

In practice virtually everyone, and all essential organisations, involved in the project have historically used, and continue to use, the generic name *Maculinea*.

(4) P.R. Eeles

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I support the application by Balletto et al. (BZN 67: 129–132) to give precedence to *Maculinea* van Eecke, 1915, over *Phengaris* Doherty, 1891.

My position on this matter has arisen through working with many Butterfly Conservation staff over the years, as well as running the U.K. Butterflies website (www.ukbutterflies.co.uk) for over a decade. It is a simple fact that the 'lingua franca' when referring to the genus of the 'Large Blue' group is *Maculinea*. This name has been in practical use for as long as I can remember and is commonly used by the U.K. Butterflies membership (2253 members as of 1st March 2013).

My position, however, has not arisen out of a personal desire to see the commonly-used name stand, but in view of the upset that using any name other than *Maculinea* would cause in relation to real conservation issues. Aside from confusing the general public, I feel that a change in name would also cause confusion among those undertaking site surveys (and corresponding research) when planning applications are put forward. In essence, gathering pertinent information in relation to *Maculinea* will become unnecessarily convoluted. In this case I believe that the welfare of such a threatened group of butterflies should outweigh the naming precedence.

OPINION 2314 (Case 3546)***Praeradiolites* Douvillé, 1903 (Bivalvia, RADIOLITIDAE): designation of *Sphaerulites ponsiana* d'Archiac, 1837 as the type species**

Abstract. The Commission has conserved the usage of the generic name *Praeradiolites* Douvillé, 1903 by designation of *Sphaerulites ponsiana* d'Archiac, 1837 as the type species.

Keywords. Nomenclature; taxonomy; Bivalvia; RADIOLITIDAE; *Praeradiolites*; *Eoradiolites*; *Sphaerulites*; *fleuriausus*; *ponsiana*; Cretaceous; Tethys.

Ruling

- (1) Under the plenary power the Commission has set aside all previous type fixations for the genus *Praeradiolites* Douvillé, 1903 and designated *Sphaerulites ponsiana* d'Archiac, 1837 as the type species.
- (2) The entry on the Official List of Generic Names in Zoology for the name *Praeradiolites* Douvillé, 1903 (gender: masculine), has been emended to record that its type species is *Sphaerulites ponsiana* d'Archiac, 1837, and not *Radiolites fleuriausus* d'Orbigny, 1842, as ruled in (1) above.
- (3) The name *ponsiana* d'Archiac, 1837, as published in the binomen *Sphaerulites ponsiana* (the type species of *Praeradiolites* Douvillé, 1903, as ruled in (1) above) has been placed on the Official List of Specific Names in Zoology.
- (4) The entry on the Official List of Generic Names in Zoology for the name *Praeradiolites* Douvillé has been emended to record that its correct publication date is 1903 and not 1902.
- (5) The entry on the Official List of Specific Names in Zoology for the name *fleuriausus* d'Orbigny, 1842, as published in the binomen *Radiolites fleuriausa* has been emended to record that it is not the type species of *Praeradiolites* Douvillé, 1903, as ruled in (1) above, and that its correct original spelling is *fleuriausus* and not *fleuriausi*.

History of Case 3546

An application to conserve the usage of the generic name *Praeradiolites* Douvillé, 1903 by designation of *Sphaerulites ponsiana* d'Archiac, 1837 as the type species, was received from J. Jose Maria Pons and Enric Vicens (*Universitat Autònoma de Barcelona, Barcelona, Spain*) on 17 December 2010. After correspondence the case was published in BZN 68: 105–108 (2011). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this Case.

Decision of the Commission

On 1 September 2012 the members of the Commission were invited to vote on the proposals published in BZN 68: 107. At the close of the voting period on 1 December 2012 the votes were as follows:

Affirmative votes – 21: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Krell, Kottelat, Kullander, Minelli, Ng, Patterson, Rosenberg, Štys, Winston, Yanega, Zhang and Zhou.

Negative votes – 4: Kojima, Lamas, Pape, and van Tol.

Pyle was on leave of absence. No vote was received from Lim.

Voting FOR, Alonso-Zarazaga said that he considered it was correct to use *Sphaerulites* as feminine and *Radiolites* as masculine, since the only species epithet attached originally to it, *angeiodes* (from Greek adjective *αγγειωδες*, hollow like a vessel), became invariable when latinized. All names ending in *-ites* must follow Article 30.1.4.4, so it was necessary to check the original descriptions one by one. He added that *ponsiana* was a toponymic adjective and must agree in gender with the genus with which it is combined.

Also voting FOR, Grygier commented that the argument for the type-species change was clear, assuming that rudist workers continued to regard both nominal genera involved as valid. However, the background information given seemed to indicate that *Eoradiolites* was paraphyletic with respect to *Praeradiolites*. If so, in any cladistic classification the two genera would be merged as *Praeradiolites*, and no change in type species would be needed. Grygier said he was not entirely comfortable with changing the type species when the need for this might disappear with a change in taxonomic practice, but the Commission could not dictate that practice. In any case, the proposed Official Corrections to the Official Lists were necessary and must be instituted whatever the outcome of the vote. Also voting FOR, Ng said he saw this as the best option rather than to create new names.

Also voting FOR, Štys said the generic classification would undoubtedly be changed by those following cladistic principles, but a future taxonomic change did not have any bearing on the present nomenclatural problem.

Voting AGAINST, Kojima said he thought that the proposal did not explicitly state the reason(s) why *Eoradiolites* Douville, 1909 should not be regarded as a synonym of *Praeradiolites* Douville, 1903. *Eoradiolites* was said to be a group consisting of primitive species in *Eoradiolites* + *Praeradiolites*, thus *Eoradiolites* could be a paraphyletic group in terms of *Praeradiolites* in the sense of currently prevailing usage. If *Radiolites fleuriausius* d'Orbigny, 1842, the type species of *Praeradiolites*, possessed the characters of *Eoradiolites* in the current usage, then *Eoradiolites* could be synonymized under *Praeradiolites*.

Also voting AGAINST, Lamas said that paraphrasing Sabrosky's comment on Opinion 856 (see BZN 25: 87), he too would like to say that he found no indication in the application (i.e. Case 3546) . . . that the Principle of Priority should be suspended in order to accommodate the taxonomic hypotheses favoured by the authors of the application. Also voting AGAINST, Pape explained that *Praeradiolites* of current usage had been based on insufficient studies of its type species *Radiolites fleuriausius* d'Orbigny, 1842. Bringing the usage of *Praeradiolites* Douvillé, 1903 in agreement with its type species would result in a junior subjective synonymy (*Eoradiolites* under *Praeradiolites*) and the proposal of a new generic name for the species currently ascribed to *Praeradiolites*. This was not an uncommon situation in zoology, and the application did not quantify how a strict adherence to the Code would 'seriously undermine stability', except for mentioning the changes resulting

directly from the new insight gained on the type species (i.e. the subjective synonymy, the new generic name and the number of species affected).

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

- Praeradiolites Douvillé*, 1903, *Bulletin de la Société Géologique de France*, (4)2: 469.
ponsiana, *Sphaerulites*, d'Archiac, 1837, *Mémoires de la Société Géologique de France*, 2(7): 182.
fleuriausius, *Radiolites*, d'Orbigny, 1842, *Annales de Sciences Naturelles*, (2)17: 181.

OPINION 2315 (Case 3351)***Chelodina rugosa* Ogilby, 1890 (currently *Macrochelodina rugosa*; Reptilia, Testudines): precedence not granted over *Chelodina oblonga* Gray, 1841**

Abstract. The Commission did not support an application to give precedence to the name *Chelodina rugosa* Ogilby, 1890 (currently *Macrochelodina rugosa*) for the northern long-necked turtle from northern Australia over *Chelodina oblonga* whenever the two are considered to be synonyms, nor to set aside all previous designations of a type specimen for *Chelodina oblonga* Gray, 1841 and to designate as its neotype the lectotype of *Chelodina colliei* Gray, 1856.

Keywords. Nomenclature; taxonomy; Reptilia; Testudines; CHELIDAE; *Macrochelodina*; *Chelodina*; *Chelodina oblonga*; *Chelodina rugosa*; *Chelodina colliei*; Australia; side-necked turtles; northern long-necked turtle.

Ruling

- (1) A proposal to give the name *rugosa* Ogilby, 1890, as published in the binomen *Chelodina rugosa*, precedence over the name *oblonga* Gray, 1841, as published in the binomen *Chelodina oblonga*, whenever the two are considered to be synonyms, was not approved.
- (2) A proposal to set aside all previous designations of a type specimen for *Chelodina oblonga* Gray, 1841 and to designate as its neotype BMNH 1947.3.5.91, the lectotype of *Chelodina colliei* Gray, 1856, was not approved.
- (3) No names are placed on Official Lists or Indexes.

History of Case 3351

An application to give precedence to the name *Chelodina rugosa* Ogilby, 1890 (currently *Macrochelodina rugosa*) for the northern long-necked turtle from northern Australia over *Chelodina oblonga* whenever the two are considered to be synonyms, was received from S.A. Thomson (then *University of Canberra, Canberra, Australia*) on 11 May 2005. After correspondence the case was published in BZN 63: 187–193 (September 2006). The title, abstract and keywords of the case were published on the Commission's website. An adverse comment, with an alternative set of proposals, was published in BZN 64: 68; an additional comment by the author of the application was published in BZN 64: 127–128; supportive comments were published in BZN 65: 62; 66: 79–80; 66: 273.

Decision of the Commission

The Case was originally sent for vote on 1 June 2008. A majority of Commissioners voted FOR the Case (9 For, 8 Against), but it failed to meet the two-thirds majority required for approval by Article 12 of the Constitution. In accordance with bylaws 24–27, the case was sent for a revote on 1 December 2008, with the alternative set of

proposals set out by J. Savage in BZN 65: 68. However, the revote was cancelled on 16 March 2009 under bylaws 24, 25 and 26, as a new Comment was received with information that could affect consideration of the Case. In 2010 the author of the Case published a paper including a taxonomic review of the taxa covered in the Case (Georges, A. & Thomson, S. 2010. *Zootaxa* 2496: 1–37).

On 1 March 2011 the members of the Commission were invited to vote on the original set of proposals published in BZN 63: 189–190 and the alternative set of proposals in BZN 64: 68. At the close of the voting period on 1 June 2011 the votes were as follows:

Original proposals:

Affirmative votes – 5: Brothers, Fautin, Pape, Winston and Yanega.

Negative votes – 18: Ballerio, Bogutskaya, Bouchet, Grygier, Halliday, Kojima, Kottelat, Kullander, Lamas, Minelli, Ng, Papp, Patterson, Rosenberg, Štys, van Tol, Zhang and Zhou.

Harvey split his vote, voting AGAINST proposal (1); FOR proposal (2) and did not support all of proposal (3). Krell ABSTAINED.

Alternative proposals:

Affirmative votes – 5: Bouchet, Krell, Papp, Patterson and Zhou.

Negative votes – 20: Ballerio, Bogutskaya, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Kullander, Lamas, Minelli, Ng, Pape, Rosenberg, Štys, van Tol, Winston, Yanega and Zhang.

Alonso-Zarazaga, Lim and Pyle were on leave of absence.

Voting AGAINST both the original and alternative proposals, Grygier observed that part of the problem with this Case, as was evident in the comments from earlier rounds, was whether the type locality of *C. oblonga* was Western Australia or Port Essington, as contradictorily stated or implied in different parts of the application. On Grygier's advice, the Secretariat verified the label data for the type specimen of *C. oblonga*, housed in the Natural History Museum, London as stating 'loc. W. Australia, Coll. J. Gould, *Chelodina oblonga* (type)' and having two numbers because the specimen was re-registered after the war as '40.12.9.81' (in which 40 indicates 1840) and '1947.3.5.89'. However, the Accession Register for the Life Sciences Department gave only 'Australasia' as the origin of this specimen. Ng, also voting AGAINST both the original and alternative proposals, said that his feeling about this case was simple. He agreed with the applicants that the books and papers by Wells & Wellington had done a great disservice to taxonomy. They had created huge problems, and Ng explicitly echoed Bouchet's view that this matter should have been dealt with years earlier. That said, however, he felt there would probably be more name changes in the near future as more work was done on the turtles in question. The authors had made it clear that taxonomic work on this group was growing and changing. In this landscape, Ng saw no good reason to make the requested rulings. He said the types were extant, and whatever they were, the names would then fall into line, and science would move on. He still felt this was the cleanest way to proceed in the present circumstances. Štys, voting AGAINST both the original and alternative proposals, commented that he felt, at least for the time being, that the Principle of Priority should be followed for names of taxa and identity of the name-bearing type species and mandatory type specimens. In his view the taxonomy was still too fluid

to benefit from any nomenclatural intervention. Also voting AGAINST both the original and alternative proposals, van Tol too noted that the taxonomic status of the nominal taxa was still unresolved. Under these circumstances any nomenclatural action was premature. Similarly, voting AGAINST both the original and alternative proposals, Zhang said he felt the issues were unresolved and it was best that the Commission did not take plenary action.

Bouchet, voting AGAINST the original proposals and FOR the alternative proposals, said that long-serving Commissioners will recall Case 2531, published in 1987, which sought to suppress three works by Wells and Wellington because their acceptance 'would cause massive and long-lasting instability and confusion in the nomenclature of the Australian herpetofauna'. This generated a heated debate in- and outside the Commission, and the Case was left without a vote. Bouchet said it was clear from his paper in *Zootaxa* that the applicant was resurrecting this battle. In doing so, Bouchet felt the applicant was misinterpreting the role of the Commission, which was to regulate the availability and validity of zoological names, and not to regulate how taxonomy was or should be done, or should be evaluated, or who was entitled to carry out taxonomic research.

Krell, who ABSTAINED from the original proposals and voted FOR the alternative proposals, explained that he felt that transferring an established name from one species to another was probably the most disruptive nomenclatural practice. He suggested that this should be avoided in any Case. Here, *Chelodina oblonga* had always been associated with Western Australian populations, even erroneously, by the original author. Without studying the type, nobody would have had a chance to interpret *Chelodina oblonga* correctly, i.e. in the sense of the type. Now this had been studied, and it had turned out not to be from the place that the original author had thought, and was of a different species from the one that occurred at the locus typicus. In such a situation only two solutions should be considered, either suppression of the confused name (as in the original proposal), or re-definition by a neotype designation (as in the alternative proposal). The original proposal would have re-established an unused name. Krell saw no disadvantage in the alternative proposal, in fact, he considered it an elegant solution. Considering the information available, he did not see the taxonomy of these focal taxa in a worse state than in most other groups, nor did he think the Case in any way premature.

Harvey, voting SPLIT for the original proposals and AGAINST the alternative proposals, explained his split vote AGAINST proposal (1) (but FOR proposal (2)) of the original set of proposals saying there was compelling evidence that the systematic status of the northern Australian species was unresolved and that taxonomic changes would be required when their status was resolved. Nomenclatural solutions should be put into effect only after as many taxonomic issues as possible were settled. The application of the Principle of Priority was the simplest avenue right now, albeit with some inconvenience, as some relatively well-known Australian freshwater turtles would have name changes.

Additional comments made in the first rounds of voting when different or additional to the above are provided here. Alonso-Zarazaga explained that in his opinion, application of the Principle of Priority led to easier solutions and was further consolidated by Thomson's comment (2006; BZN 63: 188–189, para. 12) that the taxonomic status of the northern species of *Chelodina* (or *Macrochelodina*) was still

doubtful. In this Case, he considered that the Commission should only confirm the identity of the extant types, not by allowing any modification of their status but just by confirming that the type species of *Macrochelodina* was *Chelodina rugosa* Ogilby, 1890. He felt that this was another premature request to apply nomenclature before a sound taxonomic basis had been attained, missing the goal of nomenclature, i.e. naming animals after a taxonomic hypothesis had been clarified. Alonso-Zarazaga said he could not see this in either set of proposals.

In the second round of voting Halliday commented that there were three available names for turtles from northern Australia and Papua New Guinea – *oblonga*, *rugosa* and *siebenrocki*. The taxonomic relationships among these populations were clearly unresolved, and it seemed likely that the interpretations of these names would be revised as new taxonomic information became available. It was quite possible that all three of these names would be required in the future. It would be prudent for the Commission to take no nomenclatural action at all for the moment, until taxonomic research had run its course and determined how many taxa were present. Halliday supported Grygier's observation that the Case was damaged by the internal discrepancy over the type locality of *oblonga* (Western Australia or Port Essington). Halliday also voted AGAINST the alternative proposal of Savage (BZN 64: 68). The name *colliei* Gray 1856 was the valid name of the species from southwestern Australia, and was supported by a lectotype, despite the misidentifications beginning with Burbidge (1967). He felt that to designate this specimen as the neotype of *oblonga* as suggested by Savage would add to the confusion, not help to resolve it.

OPINION 2316 (Case 3463)

***Testudo gigantea* Schweigger, 1812 (currently *Geochelone (Aldabrachelys) gigantea*; Reptilia, Testudines): usage of the specific name conserved by maintenance of a designated neotype, and suppression of *Testudo dussumieri* Gray, 1831 (currently *Dipsochelys dussumieri*)**

Abstract. The Commission has conserved the specific name *Testudo gigantea* Schweigger, 1812 (family TESTUDINIDAE) in its customary usage for the giant land tortoise found on Aldabra Atoll in the western Indian Ocean, by affirmation of the neotype designation of 2006 and suppression of *T. dussumieri* Gray, 1831.

Keywords. Nomenclature; taxonomy; Testudines; TESTUDINIDAE; *Aldabrachelys*; *Testudo*; *Geochelone*; *Chelonoidis*; *Dipsochelys*; *Testudo carbonaria*; *Testudo elephantina*; *Testudo denticulata*; *Testudo dussumieri*; *Testudo gigantea*; land tortoises; Aldabra Atoll.

Ruling

- (1) Under the plenary power, the Commission has ruled that:
 - (a) all previous type fixations for the nominal species *Testudo gigantea* Schweigger, 1812 are hereby set aside and neotype USNM 269962 in the National Museum of Natural History, Smithsonian Institution, is hereby retained as designated and described by Frazier (2006), as name-bearing type;
 - (b) the name *dussumieri* Gray, 1831, as published in the binomen *Testudo dussumieri*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.
- (2) The name *Aldabrachelys* Loveridge & Williams, 1957, type species by original designation *Testudo gigantea* Schweigger, 1812, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *gigantea*, Schweigger, 1812, as published in the binomen *Testudo gigantea* and as defined by the neotype designated in (1)(a) above, the specific name of the type species of *Aldabrachelys* Loveridge & Williams, 1957, is hereby placed on the Official List of Specific Names in Zoology.
- (4) The name *dussumieri* Gray, 1831, as published in the binomen *Testudo dussumieri* and as suppressed in (1)(b) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 3463

An application to conserve the specific name *Testudo gigantea* Schweigger, 1812 (family TESTUDINIDAE) in its customary usage for the giant land tortoise found on Aldabra Atoll in the western Indian Ocean, by affirmation of the neotype designation of 2006 and suppression of *T. dussumieri* Gray, 1831, was received from J. Frazier

(Conservation and Research Center, National Zoological Park, Smithsonian Institution, Front Royal, VA, U.S.A.) on 17 April 2008. After correspondence the case was published in BZN 66: 34–50 (2009). The title, abstract and keywords of the case were published on the Commission's website. Comments were published in BZN 66: 80–87, 169–186, 274–290, 352–357; 67: 71–90, 170–178, 246–254, 319–331; 68: 72–77, 140–143, 294–300. With 83 published comments, this represents the most extensive correspondence received by the Commission on a Case to date.

Decision of the Commission

On 1 September 2012 the members of the Commission were invited to vote on the proposals published in BZN 66: 43–44. At the close of the voting period on 1 December 2012 the votes were as follows:

Affirmative votes – 19: Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Krell, Kottelat, Kullander, Lamas, Minelli, Ng, Pape, Rosenberg, Winston, Yanega, Zhang and Zhou.

Negative votes – 4: Alonso-Zarazaga, Kojima, Štys and van Tol.

Harvey split his vote – FOR proposals 1(a), 2, 3; and AGAINST proposals 1(b), 4.

Patterson abstained. Pyle was on leave of absence. No vote was received from Lim.

Voting FOR, Bouchet observed that he voted in favour of the conservation of the name *Testudo gigantea* because it was a well-known name for an iconic animal. However, (1) he regretted and rejected the negative personal comments on the work of Roger Bour, which had been aired at various times in the discussion of this Case. If Bouchet did not follow Bour's proposals, this was not because he was sceptical about the historical and nomenclatural facts as presented by him, but because he believed stability was best met by conserving the name *gigantea*; (2) he regretted that the occasion was lost to robustly link nomenclature and 21st century systematics by selecting a neotype that had associated molecular markers. The Commission was not to be blamed for it, but he regretted that the biological and conservation communities had shown that they could spend four years vehemently discussing the Case without ever referring to the modern functions of a name-bearing type. Also voting FOR, Brothers said that the very extensive correspondence on this Case made it clear that a decision by the Commission was essential and it was also obvious that whatever decision was made would not please everyone. He said he was convinced that approving the application was the most effective way to stabilise the situation; a vote against would merely perpetuate the current confusion. All of the arguments about the validity/identity/status of holotype/lectotype/provenance merely reinforced the scope of disagreement and the need for a decision that would fix the application of the names unambiguously. Only a vote in favour would accomplish this. Brothers said it was to be hoped that the opponents of the application would honour the Code (which they defended so vigorously), which provides for the use of the plenary power by the Commission, should the application be approved by the required majority of votes. Also voting FOR, Grygier commented that Bour should be commended on his efforts to demonstrate the true story and address its nomenclatural implications. However, particularly with regard to legislation in force pertaining to the conservation of the Aldabra tortoise, the need for stability in nomenclature seemed to outweigh the desirability of maintaining strict priority. Grygier felt that Frazier's was

not the most elegant possible solution, but it was the simplest and would leave no room for further controversy. Inasmuch as some specialists seemed sceptical about the validity of certain of Bour's actions, a negative vote on Frazier's proposals would continue to leave more than one option open for the valid names of the genus and species. Such an outcome would also be awkward in light of Article 81.2.4 of the Code, which instructs the Commission to specify the name(s) to be used if use of the plenary power is refused. To ensure stability in such a case, a fully thought-out alternative plan should have been formally proposed. The briefly outlined alternative proposals made by Cheke (BZN 66: 175, BZN 68: 296) and Dubois et al. (BZN 67: 88) would have been inadequate to settle the matter even if they had been submitted to the Commission for a vote. One possible route might have been to use the plenary power to suppress all previous type designations for *T. gigantea* and designate the purported holotype in Paris as its neotype. In combination with Frazier's proposal to suppress *dussumieri*, this would leave *Dipsochelys elephantina* as the only potentially valid name for the Aldabra tortoise (*Aldabrachelys* having become a synonym of *Chelonoidis* as a result of the neotype designation). As another possibility, in an e-mail to the Commission, Commissioner Alonso-Zarazaga suggested conserving *gigantea* under Duméril & Bibron's (1835) authorship with their specimen as neotype and giving it precedence over supposed synonyms. Either of these two alternatives could have served as the basis for further proposals if Frazier's plan had failed to gain a 2/3 majority of the vote. Kottelat explained that he voted FOR only for two reasons: (1) to bring the debate to a close; and (2) because of the conservational/bureaucratic argument. For the rest, he felt that the tone of many comments was unpleasant and he was disappointed that what he saw as very negative and personal perspectives were included in comments; he felt they added nothing to the Case. He said that fluctuations in taxonomic interpretation might be a problem for non-specialists, but it was not 'chaos'; it reflected the evolution of taxonomic research. Also voting FOR, Krell explained that he always found it painful from a scholarly perspective to disregard historical facts and intentions of authors. He thought that Bour was diligent and historically correct, and he hated to annul good work, but in this case, with the species in question being of high conservation and even political interest, he felt there was more at stake. Here we had a user group larger than usual, and the comments suggested that the user group would much prefer to go along with the solution presented in the original Case. Although he found the suggestion from Alonso-Zarazaga (above) the most elegant solution, a neotype had already been proposed. Going along with this was probably the most parsimonious solution, so he voted for the Case. Also voting FOR, Kullander said he agreed that *gigantea* was the best option for a name. Yet, he did not feel that the documentation reflected complete objectivity, and it was obvious that the preparation of the Case should have pointed to other options, as suggested by other Commissioners. Nevertheless, he felt it was better to have a decision than to let this issue be debated forever. Voting FOR, Ng said he felt the issue here remained as divided and messy as when it started, despite its long time in discussion. He said that, much as some of his colleagues argued for changes to the application or more time to deliberate, he was of the opinion that this divisive issue must be resolved – and this must be done via a vote. To be caught up in a 'historical log-jam' just for a name was not productive. For science to move ahead and for the species to be saved, which

remained his priority, he felt we needed to move beyond the name, whatever it was to be. The views of the proponents of this case were known and, to a great degree, he supported their views. However, he felt that the views of the opponents were also salient as they argued from their considerable collective experience and wisdom. He felt he was not able to say definitively who was right and who wrong in this situation. He said that the historical evidence and data were not completely convincing for either side; there were only high probabilities of likelihood in the submissions of both proponents and opponents. In such a conundrum, he took counsel from the comments by historian A.M. Roos (submitted to the Commission with voting papers, published herein) – there remained just too many ‘ifs’ and ‘maybes’. Ng felt that the Commissioners’ job, when faced with such a dilemma, was to make a clinical decision, and forge ahead regardless. The decision fixed the name for an animal that needed conservation, regardless of what its originators may have wished or intended, regardless of ‘historical authenticity’, regardless of sentiment which remained rife. He felt that the best way to do this was to fix a neotype that was unambiguous and clear-cut, and move on. Voting FOR, Rosenberg said he would have preferred that the name *Testudo gigantea* be attributed to Duméril & Bibron (1835) by setting aside Article 49 (regarding misidentification) and outlined other nomenclatural steps that might have accompanied that approach. Voting FOR, Yanega commented that, as in other recent cases, this reduced to the essential question as to whether familiarity and stability of a name were worth maintaining when scholarship and the Code opposed it; this was precisely why the Commission had the plenary power, and this was the kind of case where that power could best be put to use. There might be alternatives, but Yanega said that Frazier’s was the alternative put before the Commission, and it served the intended purpose.

Voting AGAINST, Štys said he found the arguments provided by Frazier (2009; BZN 66: 44–50) nomenclaturally unsupportable. Štys felt this also applied to most comments favouring Frazier’s proposal: some of them showed lack of knowledge of the provisions of the Code and lack of understanding of its spirit, ignored the relevant historical literature, and the very process of scientific study. He said it was counterproductive for emotions to replace scientific discussion, and that some zoologists had explicitly or implicitly expressed disbelief to scientists of MNHN in Paris while not having examined the historical (type) specimens involved. Since the Case evoked great interest among the general public he believed that it was the duty of the Commission to suggest its own alternative solutions and vote upon them, though he acknowledged that probably nobody would be fully satisfied with the outcome.

Splitting his vote, Harvey observed that this interesting but heated debate had no simple solution that would satisfy all parties. After much deliberation, his vote FOR the majority of the proposals was based on the urgent need to stabilise the specific name of the Aldabra tortoise. The rediscovery of a specimen thought to be the holotype of *Testudo gigantea* seemed to be incontrovertible, but straight application of the Code would result in the resurrection of a name that had been much less applied to the Aldabra tortoise than the specific name *gigantea*. Voting AGAINST the request to suppress the name *T. dussumieri*, he noted that there seemed little doubt that this name was simply a junior synonym of *T. gigantea*, as applied in 1(a), and no further action was necessary. Harvey noted that the stabilisation of the name

T. gigantea also conveniently stabilised the name *Aldabrachelys*, which had been frequently used for the Aldabra tortoise and its allies.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Aldabrachelys Loveridge & Williams, 1957, *Bulletin of the Museum of Comparative Zoology, Harvard*, **115**(6): 225.

dussumieri, *Testudo*, Gray, 1831, *Synopsis Reptilium; or short descriptions of the species of reptiles. Pt. I. Cataphracta, tortoises, crocodiles, and enaliosaurians*. viii, Treuttel, Wurtz & Co., London, p. 3.

gigantea, *Testudo*, Schweigger, 1812, *Königsberger Archiv Naturwissenschaft und Mathematik*, **1**: 327, 362.

The following is the reference for the description of the neotype:

Frazier, J. 2006. *Herpetological Review*, **37**(3): 275–280.

Official Correction: *Canis cinereoargenteus* Schreber, 1775 (currently *Urocyon cinereoargenteus*; Mammalia, Carnivora): the publication date amended

A letter was received from Anthea Gentry at 'Littlewood', Copyhold Lane, Cuckfield, Haywards Heath, West Sussex RH17 5EB, U.K. in October 2012 requesting an amendment to the entry on the Official List of Specific Names in Zoology for *Canis cinereoargenteus* Schreber, 1775 to record that the correct publication date is 1775 and not 1776 as stated on the Official List and in Opinion 384 (Opinions and Declarations: 12: 71–190, April 1956).

Anthea Gentry provided the following information:

1. The publication of Schreber's work *Die Säugethiere in Abbildungen nach der Natur mit Beschreibungen* was complicated with portions of text and plates appearing at different times. The publication dates were worked out and published by Sherborn (1891).

2. The text in which the grey fox from Central and North America and the northern part of South America was described, and the name *Canis argenteus* published, was on page 361 of Schreber's work. Sherborn gives the date for this as 1776. The fox was illustrated on plate 92 and the name *C. cinerereargenteus* was used. Sherborn gives the date for this plate as 1775. The name *cinereoargenteus* is available from the plate by indication (Article 12 of the Code). Schreber himself ascribes the name *cinereoargenteus* on the plate to Brisson but Brisson's (1762) *Regnum Animale* is incompletely binominal and was rejected for nomenclatural purposes in Opinion 1894 (BZN 55: 64–71, March 1998) except for the conservation of 11 mammal generic names in use (one generic name, *Odobenus* Brisson, 1762 had already been conserved in Opinion 467, Opinions and Declarations: 16: 73–88, May 1957).

3. Another illustration of a fox, titled *Canis virginianus*, was published on plate 92B by Schreber. Sherborn gives the date for this as 1776. The name was also used on p. 361 but appeared there as a vernacular name only. Elliot (1901) designated *C. virginianus* as the type species of the genus *Urocyon* Baird, 1857 (pp. 121, 138). *Canis cinereoargenteus* and *C. virginianus* have long been synonymised (see Opinion 384).

4. The composition of the relevant parts of Schreber's work, as set out by Sherborn (1891), are:

(a) Theil 2, Heft 13, pages 223–230, plates 81–92; 1775

(b) Theil 3, Heft 21, pages 353–376, plates 92B, 139–145; 1776.

5. The name *Canis cinereoargenteus* Schreber was placed on the Official List of Specific Names in Zoology as the valid name for the type species of *Urocyon* Baird, 1857 in Opinion 384 (April 1956). It was incorrectly given the date 1776.

6. The specific name of *Canis cinereoargenteus* has been used in the literature with the correct authorship and date of Schreber (1775). Publications include Clutton-Brock, Corbet & Hills (1976, p. 159), Fritzell & Haroldson (1982, p. 1) and Wozencraft (2005, p. 582).

In accordance with Article 80.4 of the Code, which states that the Commission can publish an Official Correction of an error or omission in an Opinion without further vote when the correction does not negate the Opinion or its consequences, notice is hereby given that entry of the name *cinereoargenteus*, *Canis*, Schreber on the Official

List of Specific Names in Zoology is corrected to read: *cinereoargenteus*, *Canis*, Schreber, [1775], *Die Säugthiere*, 3: 360, pl. 92 (valid name at the date of Opinion 384 of the type species of *Urocyon* Baird, 1857) (Mammalia). Op. 384. Official Correction BZN 70, March 2013, and the entry on the Official List of Generic Names in Zoology is amended to read: *Urocyon* Baird, 1857, *Mamm. N. Amer.*: 121, 138 (gender: masculine) (type species, by designation by Elliot, [March] 1901 (*Field. Mus. Publ. (Zool.)*, 2: 307): *Canis virginianus* Schreber, [1776], *Die Säugthiere*, 3: 361, pl. 92B, valid name: *Canis cinereoargenteus* Schreber, [1775]) (Mammalia). Op. 384. Official Correction BZN 70, March 2013.

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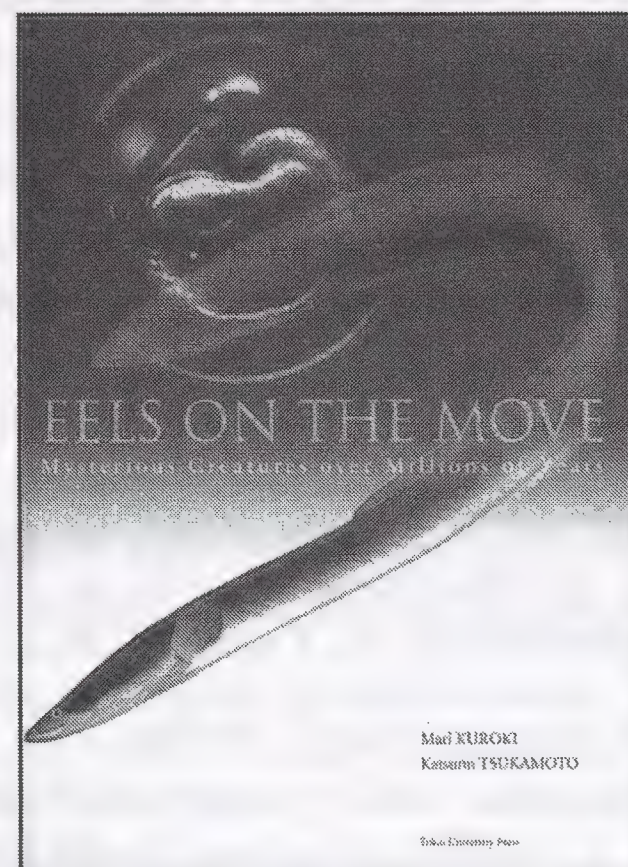
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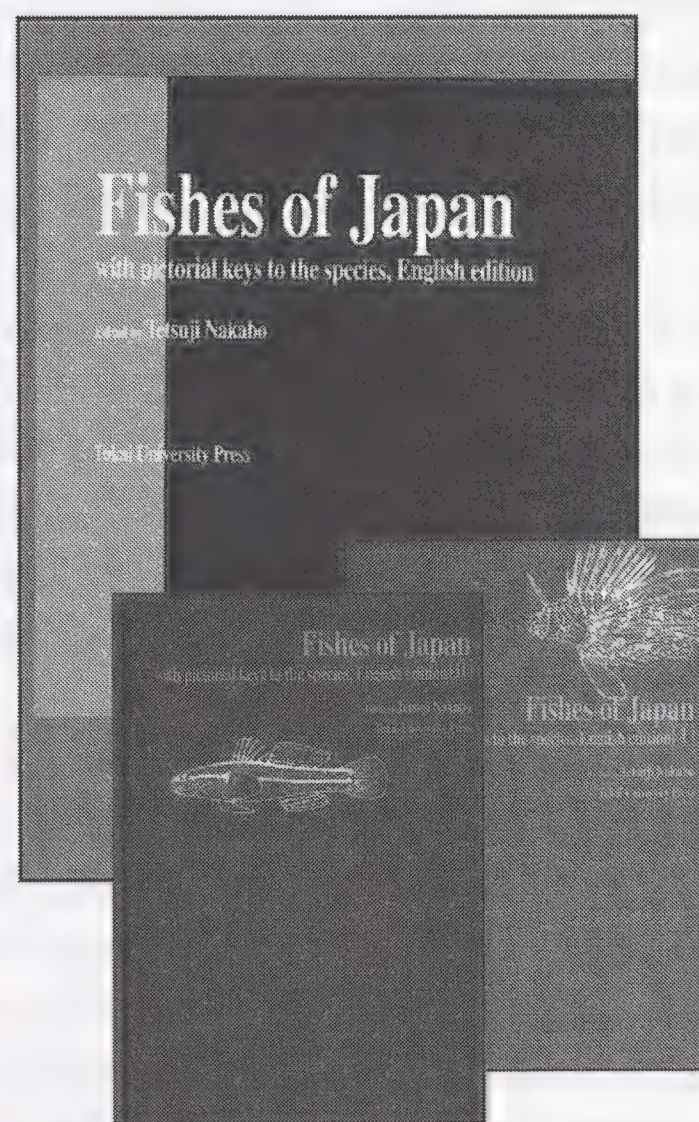
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Cover image: *Rhacophorus nigropalmatus* Boulenger, 1895, known as Wallace's flying frog was discovered by Alfred Russel Wallace in Sarawak, Borneo in 1865. The holotype (female) was collected by Charles Hose and is housed in the Natural History Museum, London. Wallace wrote in his book *The Malay Archipelago* (1869, pp. 59–61): 'One of the most curious and interesting reptiles which I met with in Borneo was a large tree-frog, which was brought me by one of the Chinese workmen. He assured me that he had seen it come down in a slanting direction from a high tree, as if it flew. On examining it, I found the toes very long and fully webbed to their very extremity. . . . This is, I believe, the first instance known of a "flying frog," and it is very interesting to Darwinians as showing that the variability of the toes which have been already modified for purposes of swimming and adhesive climbing, have been taken advantage of to enable an allied species to pass through the air like the flying lizard.' This watercolour was painted by Wallace and was used as the basis for the woodcut illustration of this species in *The Malay Archipelago* (p. 60). This year marks the 100th anniversary of Wallace's death. (© scan of the original drawing – A.R. Wallace Memorial Fund).

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 70, part 2 (pp. 69–150)

30 June 2013

Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the Executive Secretary at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at <http://iczn.org/content/guidelines-case-preparation>) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should be sent by e-mail to 'iczn@nhm.ac.uk' where possible.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at <http://iczn.org/content/instructions-comments>).

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(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to the Executive Secretary.

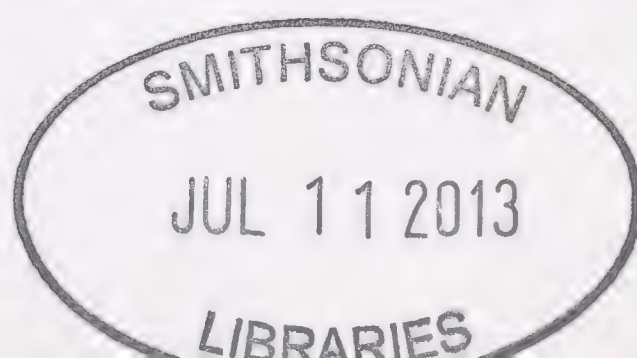
New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 70, part 1, 31 March 2013) went to press. Under Article 82 of the Code, the prevailing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3621: Proposed use of the plenary power to designate the type species of *Dhosaites* Spath, 1924 in accordance with the author's original intentions (Mollusca, Cephalopoda, Ammonoidea, MACROCEPHALITIDAE). M.K. Howarth.

CASE 3622: Proposal to reverse the ruling of the ICZN (Case 2899) on the names *Dodecaceria fimbriata* and *D. concharum* (Annelida, Polychaeta, CIRRATULIDAE) on the basis of new evidence. P.H. Gibson.

CASE 3623: *Grallaria fenwickorum* Barrera et al. 2010 (Aves, FORMICARIIDAE): proposed replacement of an indeterminate holotype and nomen dubium by a neotype. A.T. Peterson.



CASE 3624: A proposal for the rejection of 48 names in ANTHICIDAE (Insecta, Coleoptera). M.A. Alonso-Zarazaga.

CASE 3625: Request for suppression of *Kinosternon chimalhuaca* Rogner, 1996 (Reptilia, Testudines). M. Rogner, J.B. Iverson, J.F. Berry, M.E. Seidel & A.G.J. Rhodin.

CASE 3626: *Phoronis* Wright, 1856 (Phoronida): proposed precedence over *Actinotrocha* Müller, 1846; and *Phoronis muelleri* Selys Longchamps, 1903: proposed precedence over *Actinotrocha branchiata* Müller, 1846. C. Nielsen.

CASE 3627: Request for a ruling on the validity of lectotype designations for fish taxa by C.H. Eigenmann between 1908 and 1927. J.L.O. Birindelli, A.L. Netto-Ferreira & M.H. Sabaj-Pérez.

CASE 3628: *Terrapene putnami* Hay, 1906 (Testudines, EMYDIDAE): replacement of the holotype by the designation of a neotype. D.J. Ehret, J.R. Bourque & R.C. Hulbert, Jr.

CASE 3629: *Vipera latasti* Boscá 1878 (Reptilia, Serpentes, VIPERIDAE): request for setting aside the name in favour of *Vipera latastei* Boscá 1878. A. Salvador, S.D. Busack, R. McDiarmid, I. Ineich & J.C. Brito.

CASE 3630: CORCORACIDAE Mathews, 1927 (Aves): proposed conservation of usage by conditional suppression of the senior synonym STRUTHIDEIDAE Mathews, 1924. R. Schodde, W. Boles, L. Christidis, P. Horton, R. Johnstone, L. Joseph & W. Longmore.

CASE 3631: *Phalacrocorax atra* Lesson, 1831 (Aves, PHALACROCORACIDAE): proposed conservation of usage. J.J.F.J. Jansen.

CASE 3632: *Anathyris monstrum* Khalfin, 1933 (currently *Anathyrella monstrum*; Brachiopoda, Athyridida): proposed conservation of the specific name. F. Alvarez & T.L. Modzalevskaya.

Case 3620***Ticinella primula* Luterbacher, 1963 (Foraminifera, Globigerinida, ROTALIPOROIDEA, ROTALIPORIDAE): proposed conservation of the specific name**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the name *Ticinella primula* Luterbacher, 1963, which is in prevailing use for a species of Early Cretaceous (Albian) planktonic foraminifera of the superfamily ROTALIPOROIDEA Sigal, 1958 (nom. correct. ex ROTALIPORACEA). Since the middle 1960s this specific name has been extensively used as a zonal marker of the standard planktonic foraminiferal biochronology, in academic micropalaeontology and economic palaeontology, as well as various disciplines in Cretaceous palaeoenvironmental study. It is threatened by its senior subjective synonym *Hedbergella yezoana* Takayanagi & Iwamoto, 1962. For nomenclatural stability, the junior name *primula* should be conserved by suppressing the senior name *yezoana*.

Keywords. Nomenclature; taxonomy; Foraminifera; Globigerinida; ROTALIPOROIDEA; ROTALIPORIDAE; *Ticinella*; *Ticinella primula*; *Hedbergella yezoana*; planktonic foraminifera; Albian; Early Cretaceous.

1. Takayanagi & Iwamoto (1962, pp. 191, 192) described a fossil subspecies of planktonic foraminifera *Hedbergella trocoidea yezoana* from the Lower Cretaceous (Albian) marine strata in Hokkaido, Japan. As a microfossil taxon first discovered with limited preservation from the surface outcrop and illustrated before the era of scanning electron microscopy (SEM), its fine-scale taxonomic characters were not adequately addressed in the original description and hand-drawing. As can be understood by its placement under the genus *Hedbergella*, the subspecies *yezoana* was considered to be one of the globular-chambered, unornamented hedbergellid taxa that are often difficult to classify because of their morphological simplicity. Nonetheless, this local taxon has received continued if not significant attention, probably because of its many-chambered morphology (7–8 chambers in the final whorl) that is not common in the coeval simple hedbergellids. Since the work of Miles & Orr (1980), this name has been raised to the species rank as *Hedbergella yezoana*.

2. Luterbacher (1963, in Renz et al., pp. 1085, 1086) described the Albian planktonic foraminiferal species *Ticinella primula* from the Le Maley well, Switzerland. It was clearly recognized that the well-preserved holotype, with seven chambers in the final whorl, possesses supplementary apertures and a porticus (one kind of apertural modification), which are relatively small but diagnostic characters at the genus and species levels, respectively. Shortly after its erection, this taxon was chosen as the

middle Albian index species in the then emerging biozonation schemes of Cretaceous planktonic foraminifera in the Mediterranean realm (Moullade, 1966; Sigal, 1977). As new information accumulated, in particular through scientific deep-sea drilling, it had become clear by the 1980s that *T. primula* is a cosmopolitan species occurring across all ocean basins in the low to middle latitudes (for summary, see Caron, 1985, figs. 5, 6). The *T. primula* Interval Zone has since been adopted in all major publications of the standard Cretaceous planktonic foraminiferal biochronology (e.g. Caron, 1985; Bralower et al., 1995; Hardenbol et al., 1998; Ogg & Hinnov, 2012). The name is therefore an important term of common interest not only for academic micropalaeontologists but also for ‘users’ in economic palaeontology (natural resource exploration) and in the broad Cretaceous palaeoenvironmental disciplines such as evolutionary palaeoecology, palaeoceanography, and palaeoclimatology. It is noteworthy that *T. primula* has long tracked an exceptionally stable taxonomic history with no marked emendation.

3. Ando (2012) was the first to pursue the taxonomic identity of *Hd. yezoana* by means of SEM study (uncoated) of the primary types and new type-locality material. Taking account of supportive information from the topotypes/type-locality assemblage, it was concluded that the holotype was synonymous with *T. primula*, possessing uneven wall surface (diagenetically-affected macroperforate, reticulate wall of *Ticinella*) and a porticus-like structure, and presenting other consistent morphological features. Nonetheless, the holotype of *yezoana* was confirmed to be poorly preserved, with its supplementary apertures and wall perforation being obscured.

4. From aforementioned new information, a nomenclatural question emerges as to whether the subjective senior name *Ticinella yezoana* (Takayanagi & Iwamoto, 1962) should be used over *Ticinella primula* Luterbacher, 1963 based on one year of priority. It may be held that the designation of a neotype for *yezoana* based on a well-preserved topotype, if located, would help establish the senior status of *T. yezoana* under Article 75.5 of the Code, yet this is also an unsettling taxonomic approach considering the highly prevailing usage of *T. primula*. It should be emphasized that Ando (2012) confirmed, after processing large quantities of unweathered type-locality samples, that preservational limitation would not allow for collection of much better preserved topotypes for *T. yezoana*. Unarguably, conservation of the junior name *T. primula* is most desirable, and the current priority problem should be best addressed under Article 23.9.3 (Reversal of Precedence), in which provisions are made to moderate the Principle of Priority.

5. The junior synonym *T. primula* easily meets the conditions of Article 23.9.1.2. Ando (2012, p. 282) provided a list of total 20 citations by 15 authors/author groups who properly identified and illustrated *T. primula* and used this name as valid in the last 50 years. The following are additional such works that more recently came to my attention: Magniez-Jannin (1975, p. 262–265, pl. 20, figs. 1–15, pl. 21, figs. 1–4 [Aube, France]); Price (1976, pp. 637, 640, pl. 2, figs. 5–7 [Bemerode, NW Germany]); Robaszynski et al. (1980, pl. 12, figs. 5, 6 [Boulonnais, France]); Blau et al. (1992, p. 199, figs. 5.3, 6.8 [Neiva subbasin, Colombia]); and Nishi et al. (2003, fig. 10.1 [Hokkaido, Japan]). By including Ando (2012, p. 282, figs. 4.1–4.3 [Hokkaido, Japan], 7.2, 7.3 [IODP Site U1349, Shatsky Rise, NW Pacific], 7.4, 7.5 [DSDP Site 392 off Florida]), a total of 26 publications by 20 authors can be listed as the

taxonomic/biostratigraphic works that properly identified and illustrated *T. primula*, and they constitute the uninterrupted citation record from the middle 1960s until today. Several other taxonomic works included illustrations of specimens identified as *T. primula* that are difficult to evaluate because of poor preservation, inappropriate illustration, or misidentification. Furthermore, works that simply cited the taxon name *primula*, both by specialists and non-specialists, have been extensively disseminated over the Cretaceous academic/industrial fields. Their large number makes it impractical to count them.

6. In the case of the senior name, *T. yezoana* does not strictly comply with the conditions of Article 23.9.1.1. To the best of my knowledge, specimens identified as *T. yezoana*, apart from the original description, were so far illustrated five times after 1899 by four authors/author groups (G.A. Miles; D.W. Haig; M.D. Georgescu; B.T. Huber) (see Ando, 2012, p. 281). Oddly, as pointed out by Ando (2012), those figured specimens were all fewer chambered forms ($5\frac{1}{2}$ – $6\frac{1}{2}$ in the final whorl) that do not possess the key many-chambered character of *T. yezoana* (= *T. primula*), so as to contrast strongly with the original *yezoana* description. Works that simply mention the taxon name *yezoana* do exist, but they are limited to specialized taxonomic studies. Nonetheless, the name *yezoana* has actually been mentioned, and so it cannot be considered a truly forgotten name (nomen oblitum as per Article 23.9.2). Therefore, it is necessary to request a ruling under the plenary power, as specified in Recommendation 23A and Article 23.9.3.

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the specific name *yezoana* Takayanagi & Iwamoto, 1962, as published in the trinomen *Hedbergella trocoidea yezoana*, for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the specific name *primula* Luterbacher, 1963, as published in the binomen *Ticinella primula*;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the specific name *yezoana* Takayanagi & Iwamoto, 1962, as published in the trinomen *Hedbergella trocoidea yezoana* and as suppressed in (1) above.

Acknowledgements

I am grateful to Paul L. Brenckle (editor of the Journal of Foraminiferal Research) for advising on an earlier paper (Ando, 2012) upon which this case is based.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3616

***Neobisium* Chamberlin, 1930, NEOBISIOIDEA Chamberlin, 1930, NEOBISIIDAE Chamberlin, 1930 and NEOBISIINAE Chamberlin, 1930, (Arachnida, Pseudoscorpiones, Chelonethi): proposed conservation by designation of *Obisium muscorum* Leach, 1817 as the type species of *Obisium* Leach, 1814**

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Abstract. The purpose of this application, under Articles 65.2.1 and 65.2.2 of the Code, is to conserve the usage of the widely used generic name *Neobisium* Chamberlin, 1930 and of the family-group names NEOBISIINAE Chamberlin, 1930, NEOBISIIDAE Chamberlin, 1930 and NEOBISIOIDEA Chamberlin, 1930. These names are threatened by an overlooked fixation (by monotypy) of *Chelifer trombidoides* Latreille, 1804 as the type species of *Obisium* Leach, 1814 (a junior homonym of *Obisium* Illiger in Kugelann and Illiger, 1798) and hence of its replacement, *Neobisium*. *Chelifer trombidoides* is a senior objective synonym of *Obisium orthodactylum* Leach, 1817, the type species of *Chthonius* C.L. Koch, 1843 by subsequent designation of Simon (1879), which makes *Neobisium* a junior objective synonym of *Chthonius*. Consequently, family-group names based on *Neobisium* (currently in use up to superfamilial level) would become junior objective synonyms of those based on *Chthonius*. In order to maintain current usage of the names concerned, it is proposed that *Obisium muscorum* Leach, 1817 be designated as the type species of *Obisium* Leach, 1814.

Keywords. Nomenclature; taxonomy; Arachnida; Chelonethi; NEOBISIOIDEA; NEOBISIIDAE; NEOBISIINAE; *Obisium*; *Neobisium*; *Chelifer trombidoides*; *Chthonius ischnocheles*; *Neobisium carcinoides*; *Obisium muscorum*; pseudoscorpions.

1. The generic name *Obisium* was first proposed by Illiger (in Kugelann & Illiger, 1798, p. 501) for the pseudoscorpion species *Acarus cancroides* Linnaeus, 1758 (as *Scorpio cancroides*) and *Scorpio cimicoides* Fabricius, 1793 (as '*S. cimicoïdes* Fabr.'). Under Article 12.2.5 of the Code, *Obisium* Illiger in Kugelann & Illiger, 1798 is an available name. *Acarus cancroides* was later designated as the type species by Westwood (1836, p. 10), making *Obisium* Illiger a junior objective synonym of *Chelifer* Geoffroy, 1762, which has the same type species (by subsequent designation by Latreille, 1810; see Opinions 11 (Opinions and Declarations 1C: 15–34, May 1955) and 136 (Opinions and Declarations 2: 13–20 August 1939)). Illiger (1807, p. 221) indicated that *Obisium* was a misspelling of *Opisium*, but since there is no internal evidence of an error in Kugelann & Illiger (1798), *Opisium* Illiger, 1807 is an

unjustified emendation (Article 33.2.3 of the Code). The name *Obisium* Illiger in Kugelann and Illiger, 1798 was placed on the Official List of Rejected and Invalid Generic Names in Zoology by Opinion 1542 (BZN 46: 143–144, June 1989) as a junior objective synonym of the conserved name *Chelififer* Geoffroy, 1762, but it remains available for purposes of the Principle of Homonymy.

2. Leach (1814, p. 429) adopted the name *Obisium* for a different generic concept, including only *Chelififer trombidoides* Latreille, 1804. Most authors have attributed *Obisium* to Leach (1817), although Kew (1911, p. 52) attributed it to Leach (1816a), which he incorrectly dated as 1815. Later, Kew (1916, p. 122) noted the use of the combination *Obisium trombidoides* in Leach (1814).

3. Sundevall (1833, p. 33) proposed the family OBISIIDAE (in the Latin plural form ‘OBISIDES’) for ‘*Obisium* Ill. Leach. Herm’ and ‘*Chelififer* Geoff. Leach. Herm.’. Because Sundevall (1833, p. 33) recognized *Chelififer* and *Obisium* as separate genera, the type genus is *Obisium* Leach, 1814. Because they did not recognize *Obisium* Leach, 1814 as a distinct nominotypical taxon, Harvey & Mahnert (2011, p. 49) considered *Obisium* Illiger to be the type genus of OBISIIDAE, which led them to treat the latter as an objective synonym of CHELIFERIDAE Risso, 1827 (Judson, 2012, pp. 26–27; M.S. Harvey and V. Mahnert, in litt.). Authorship of CHELIFERIDAE was attributed to Westwood (1838) in the Official List of Family-Group Names in Zoology by Opinion 1542, but Harvey (1991, p. 482) later attributed it to ‘Risso 1826’ (published 22 September 1827: see Forrest 1958, p. 474, footnote), based on the assumption that ‘Cheliferides’ as used in that work was a Latin plural (M.S. Harvey, in litt.). Judson (2012, p. 26) showed, from internal evidence, that Risso (1827, p. 157) had employed *Cheliferides* solely as a French vernacular form. Judson (2012, p. 26) did not accept the attribution of the name to Risso on the grounds that it contravened Article 79.4.1 of the Code, but this interpretation is fallacious because Article 79.4.1 only governs names placed on a List of Available Names in Zoology; it does not apply to names placed on the Official List of Family-Group Names in Zoology. Because CHELIFERIDAE has otherwise been attributed to Risso [1827] by all authors since 1991 (ignoring an erroneous attribution to Hagen, 1879), a request is made in this application to emend the authorship of CHELIFERIDAE in the Official List of Family-Group Names in Zoology to Risso [1827], on the grounds that this usage satisfies the requirements of Article 11.7.2. In support of this request, a list of 30 works published since 1991 in which authorship of CHELIFERIDAE OR CHELIFEROIDEA has been attributed to Risso [1827] has been forwarded to the Commission.

4. The genus *Chthonius* C.L. Koch, 1843 was erected for *Chelififer trombidoides* Latreille, 1804 and *Obisium orthodactylum* Leach, 1817 by Koch (1843, p. 76). The type species of *Chthonius* was subsequently designated as *O. orthodactylum* by Simon (1879, p. 69). Although Koch (1843) and Simon (1879) treated them as separate species, *O. orthodactylum* Leach, 1817 (p. 51) was introduced as an unnecessary replacement name for *C. trombidoides* Latreille, 1804 (which Leach listed as a synonym of *orthodactylum*), which makes them objective synonyms (Article 72.7 of the Code) (Judson, 1997, p. 2; 2012, p. 25). This in turn means that *Chthonius* C.L. Koch, 1843 is a junior objective synonym of *Obisium* Leach, 1814 (Article 61.3.3 of the Code).

5. Simon (1879, p. 51, footnote) wrongly considered *Obisium* Illiger to be a nomen nudum and attributed its first valid use to Leach (1817), overlooking Leach’s earlier papers (1814, 1816a, 1816b). Simon (1879, p. 51) designated *Obisium muscorum*

Leach, 1817 (currently a junior subjective synonym of *Neobisium carcinoides* (Hermann, 1804)) as the type species of *Obisium*, which was consistent with usage following Koch (1843), but invalid according to the Code because *O. muscorum* was not an originally included species (Article 67.2).

6. The subfamily CHTHONIINAE Daday, 1889 was erected by Daday (1889a, p. 133, 1889b, p. 189) for the genus *Chthonius* C.L. Koch, 1843. Coordinate family-group names are currently in use up to the superfamilial level.

7. Chamberlin proposed *Neobisium* Chamberlin, 1930 (p. 11) as a replacement name ('nom. nov.') for *Obisium* Leach, along with the replacement family-group names ('nom. nov.') NEOBISIIDAE Chamberlin, 1930 (p. 9), for 'OBISIIDAE Hansen, 1894', and NEOBISIINAE Chamberlin, 1930 (p. 9), for 'OBISIINAE Simon, 1879'. Chamberlin (1930) did not mention the older name OBISIIDAE Sundevall, 1833. The superfamily name NEOBISIOIDEA Chamberlin, 1930 was proposed as new (p. 9), rather than as a replacement, since Chamberlin was not aware of any prior use of OBISIOIDEA [it had in fact been employed by Kishida (1929), but Chamberlin never referred to this work] and the principle of coordination did not apply at that time. Chamberlin stated (p. 12) that 'The adoption of the name [*Obisium*] by Leach for use in connection with the species *muscorum* cannot be sustained. A new name therefore becomes necessary for the present group, which, in spite of the very evident synonymy [of *Obisium* Illiger in Kugelann and Illiger, 1798 with *Chelifer* Geoffroy, 1762], has gone under the name of *Obisium* ever since Leach's time.' Chamberlin (1930, p. 11) overlooked Leach (1814) and attributed *Obisium* to Leach (1817). Chamberlin (1930) accordingly treated *O. muscorum* Leach, 1817 as the type species of *Neobisium*, explicitly stating (p. 11) that it had been 'designated by Simon [1879]'. Following Simon (1879), those authors who have treated *Obisium* Leach as an available name have consistently considered *O. muscorum* to be its type species. All authors have treated *O. muscorum* as the type species of *Neobisium*, either because of its designation as the type species of *Obisium* Leach by Simon (1879) or by its supposed designation by Chamberlin (1930). Both rationales are incorrect because a replacement generic name has the same type species as that of the name it replaces (Article 67.8 of the Code), which in this case is *Chelifer trombidoides*.

8. In their application to the Commission to give *Neobisium* precedence over *Blothrus* Schiödt, 1847 (Case 3533), Harvey & Mahnert (2011) did not recognize *Obisium* Leach as a nominal taxon separate from *Obisium* Illiger. They therefore treated *Neobisium* as having been proposed as a new genus by Chamberlin (1930), with *O. muscorum* as its type species 'by original designation'. According to their interpretation, Chamberlin (1930) would have erred in attributing the designation of the type species to Simon (1879) and in presenting *Neobisium*, NEOBISIINAE and NEOBISIIDAE as replacement names.

9. Judson (2012) provided a detailed account of the complex nomenclatural history of *Obisium* Leach, 1814 and argued (pp. 24–25) that Leach's (1814, 1816a, 1816b, 1817) use of the name *Obisium* for a genus distinct from that previously denoted by *Obisium* Illiger in Kugelann and Illiger, 1798 was deliberate and in keeping with the contemporary nomenclatural rules of Linnaeus (1751) and Fabricius (1778). The first worker to note the previously overlooked fixation by monotypy in Leach (1814) of *Chelifer trombidoides* as the type species of *Obisium* Leach, 1814, was Judson (2012, p. 23), who discussed its implications (pp. 25–26).

10. Opinion 2304 (BZN 69: 235–236) placed *Neobisium* Chamberlin, 1930 on the Official List of Generic Names in Zoology, with *Obisium muscorum* Leach, 1817 as its type species ‘by original designation’. In taking this action, the Commission was unaware of the original designation of *Chelifer trombidioides* Latreille, 1804 as the type species of *Obisium* Leach, 1814 and incorrectly treated *Neobisium* as having been proposed by Chamberlin (1930) as a new genus (as opposed to a replacement name for *Obisium* Leach).

11. Maintaining *Chelifer trombidioides* Latreille, 1804 as the type species of *Obisium* Leach, in strict adherence to the Code, would have the following consequences:

- (a) *Obisium* Leach, 1814 and its replacement, *Neobisium* Chamberlin, 1930, would become junior objective synonyms of *Chthonius* C.L. Koch, 1843. The large number (over 232) of valid species currently assigned to *Neobisium* Chamberlin, 1930 (Harvey, 2011) would consequently have to be transferred to its synonym, *Blothrus* Schiödte, 1847, which is precisely what Opinion 2304 sought to avoid.
- (b) If the subgeneric classification of the genus *Neobisium* were to be maintained in its current state, the species now assigned to *Neobisium* (*Neobisium*) Chamberlin, 1930 would have to be placed in a new subgenus, since no junior synonyms are recognized at present (Harvey, 2011). However, such a name would probably prove to be superfluous, since the current subgeneric classification is highly artificial and several existing genus-group names may be synonymous with *Neobisium* (*Neobisium*) in its current sense (Ćurčić, 1984; Dashdamirov, 2012), including *Neobisium* (*Blothrus*).
- (c) The synonymy of *Neobisium* with *Chthonius* would entail the synonymy of the family-group names based on these names (Judson, 2012, p. 26). Thus the widely employed names NEOBISIINAE Chamberlin, 1930, NEOBISIIDAE Chamberlin, 1930 and NEOBISIOIDEA Chamberlin, 1930 would respectively become junior objective synonyms of CHTHONIINAE Daday, 1889, CHTHONIIDAE Daday, 1889 and CHTHONIOIDEA Daday, 1889.
- (d) The taxa currently referred to as NEOBISIIDAE and NEOBISIOIDEA would have to be renamed using coordinate names based on MICROCREAGRINAE Balzan, 1891 (p. 543) (Judson, 2012, p. 26; publication date of MICROCREAGRINAE corrected following Mahnert, 2013, p. 20).
- (e) The current subfamily NEOBISIINAE, comprising 12 genera (Harvey, 2011), would have to be given a new name (if recognized: the separation of NEOBISIINAE and MICROCREAGRINAE, as currently defined, is artificial), since it has no junior synonyms (Harvey, 2011).

12. The changes listed above would be highly disruptive and confusing. It is very unlikely that they would be accepted by those working on the group, particularly as the sole cause would be an overlooked type designation for an invalid generic name. Thus there is ample justification for invoking the use of the plenary powers under Articles 65.2.1 and 65.2.2. The simplest way to resolve the problem would be for the Commission to rule that *O. muscorum* Leach, 1817 is the type species of *Obisium* Leach, 1814. This solution, which was recommended by Judson (2012), would conform to previous usage of both *Obisium* Leach and *Neobisium*, by eliminating the possibility of synonymy with *Chthonius*, and allow the continued use of the

universally accepted family-group names NEOBISIIDAE and NEOBISIOIDEA. The alternatives of suppressing *Obisium* Leach or ruling that it never existed as a nominal taxon separate from *Obisium* Illiger would not reflect the usage of this name between 1843 and 1930, or that of OBISIIDAE and coordinate names between 1833 and 1930. They would also contradict Chamberlin's (1930) explicit treatment of the names he proposed as being replacement names, as well as his attribution of the type species designation to Simon (1879). Some of these difficulties could be avoided by instead ruling that *Obisium* Leach was first made available by Leach (1817), as opposed to Leach (1814), Leach (1816a) or Leach (1816b), in each of which it was treated as a monotypic genus. However, the disadvantages are that this would not be in accordance with Leach's original intentions and it would leave open the possibility that a valid designation of a type species for *Obisium* Leach prior to that of Simon (1879) might be discovered in future.

13. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all fixations of type species for the nominal genus *Obisium* Leach, 1814 before the designation of *Obisium muscorum* Leach, 1817 by Simon (1879) as the type species;
- (2) to emend the entry for *Neobisium* Chamberlin, 1930 in the Official List of Generic Names in Zoology to record that it was introduced as a replacement name for *Obisium* Leach, 1814 (due to homonymy with *Obisium* Illiger in Kugelann and Illiger, 1798) and that its type species is consequently *Obisium muscorum* Leach, 1817, as ruled in (1) above;
- (3) to place on the Official Index of Rejected and Invalid Generic Names in Zoology *Obisium* Leach, 1814 (a junior homonym of *Obisium* Illiger in Kugelann and Illiger, 1798), type species *Obisium muscorum* Leach, 1817, as ruled in (1) above;
- (4) to emend the entry on the Official List of Family-Group Names in Zoology for CHELIFERIDAE to record that its author is Risso [1827].

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Case 3617***Habroleptoides confusa* Sartori & Jacob, 1986 (Insecta, Ephemeroptera, LEPTOPHLEBIIDAE): proposed precedence over *Habroleptoides carpatica* Bogoescu & Crăsnaru, 1930**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name *Habroleptoides confusa* Sartori & Jacob, 1986 for a well-known European mayfly (family LEPTOPHLEBIIDAE). A recent study has shown that the name is threatened by the senior subjective synonym *Habroleptoides carpatica* Bogoescu & Crăsnaru, 1930, which has been seldom used since its first publication, while the junior synonym is very widely used. Therefore, precedence of the name *Habroleptoides confusa* Sartori & Jacob, 1986 is requested.

Keywords. Nomenclature; taxonomy; Ephemeroptera; LEPTOPHLEBIIDAE; *Habroleptoides confusa*, *Habroleptoides carpatica*; Romania; Europe; mayflies.

1. *Habroleptoides carpatica* was described by Bogoescu & Crăsnaru (1930, pp. 190–194) from the type locality Valea Căşăriei brook, close to the Zoological Research Station of Sinaia, Bucegi Mountains, Southern Carpathians, Romania. The species was differentiated from the widespread European species *Habroleptoides modesta* (Hagen, 1864) by characters both at the imaginal stage (e.g. number of crossveins in the hind wings, shape of the male genitalia, shape of the subanal plate of the female), and at the larval stage (number of segments in the labial and maxillary palps).

2. In their revision of the genus *Habroleptoides* Schönemund, 1929, Sartori & Jacob (1986, pp. 683–691) redescribed *H. modesta* from its type area (Corsica Island). They showed that all continental records of this species were erroneous, and proposed the name *Habroleptoides confusa* Sartori & Jacob (1986, p. 687) (for *Habroleptoides modesta* sensu auct., nec *Potamanthus modestus* Hagen, 1864). The type locality for *H. confusa* is the Orbe River, Vallorbe, canton of Vaud, Switzerland. Sartori & Jacob (1986) mentioned that the differentiating characters of the *H. carpatica* adults as given in the original description (Bogoescu & Crăsnaru, 1930) and in subsequent additional information (Bogoescu, 1958, p. 86) seem to fall within the intraspecific variation of *H. confusa*. However, the type material of *H. carpatica* is lost, and since no topotypic material was known to exist, the taxonomy of *H. carpatica* could not be clarified.

3. Recently, *Habroleptoides* larvae were reared from the type locality of *H. carpatica* and their morphology was studied (Vánčsa et al., 2013). The study confirmed that the morphological characters analysed fall within the intraspecific variability of *H. confusa* and that the structure of the larval mouthparts of *H. carpatica* was based on a misinterpretation by Bogoescu & Crăsnaru, 1930. Thus, both species should be considered as subjective synonyms.

4. The species name *H. carpatica* has seldom been used since its publication, mainly by Bogoescu (1932, 1958). The species has also been reported from Serbia (Filipović, 1979) and Bosnia-Herzegovina (Tanasijević, 1970), without diagnosis. However, the conditions of Article 23.9.1.1 of the Code (Reversal of Precedence) are not met.

5. On the contrary, the same species is well known under the name *Habroleptoides confusa* (or as *H. modesta* auct. before 1986). Widespread in Europe (except the British Isles, Fennoscandia and Mediterranean Islands) the species has been mentioned in more than 250 studies, including ca. 150 since 1986 by more than 60 authors (e.g. Grimm, 1987; Vinçon & Thomas, 1987; Bauernfeind, 1990; Hefti & Tomka, 1991; Kluge, 1994; Gaino & Reboria, 1995; Kukula, 1995; Moog et al., 1997; Kriska et al., 1998; Thomas, 1998; Weichselbaumer & Bauernfeind, 1999; Haybach & Malzacher, 2003; Kovács & Bauernfeind, 2003; Brulin, 2007; Willkommen & Hornschemeyer, 2007; Buffagni et al., 2009; Lubini et al., 2012). Hence the conditions of Article 23.9.1.2 of the Code are met. The species name is also widely used in European legislation and projects such as AQEM (www.aqem.de), STAR (www.eu-star.at), Euro-limpacs (www.eurolimpacs.ucl.ac.uk), WISER (www.wiser.eu), REFRESH (www.refresh.ucl.ac.uk) or BioFresh (www.freshwaterbiodiversity.eu).

6. Because the usage of the name *H. carpatica* would cause confusion and instability in nomenclature and ecology, we propose that the specific name *H. confusa* be given precedence over the name *H. carpatica*, whenever the two are considered as synonyms.

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to give the name *confusa* Sartori & Jacob, 1986, as published in the binomen *Habroleptoides confusa*, precedence over the name *carpatica* Bogoescu & Crăsnaru, 1930, as published in the binomen *Habroleptoides carpatica*, whenever the two are considered to be synonyms;
- (2) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *confusa* Sartori & Jacob, 1986, as published in the binomen *Habroleptoides confusa*, with the endorsement that it is to be given precedence over the name *carpatica* Bogoescu & Crăsnaru, 1930, as published in the binomen *Habroleptoides carpatica*, whenever the two are considered to be synonyms;
 - (b) *carpatica* Bogoescu & Crăsnaru, 1930, as published in the binomen *Habroleptoides carpatica*, with the endorsement that it is not to be given priority over the name *confusa* Sartori & Jacob, 1986, as published in the binomen *Habroleptoides confusa*, whenever the two are considered to be synonyms.

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Case 3618***Kalophrynus* Tschudi, 1838 (Amphibia Anura, MICROHYLIDAE):
proposed conservation by designation of a neotype for its type species
Kalophrynus pleurostigma Tschudi, 1838**

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Abstract. The purpose of this application, under Article 75.5 of the Code, is to conserve the usage of the genus *Kalophrynus* Tschudi, 1838, as defined by its type species *Kalophrynus pleurostigma* Tschudi, 1838, for the sticky frogs of Sumatra, Indonesia. The current paradigm of the genus *Kalophrynus* is threatened by the poor condition of the holotype of *K. pleurostigma*. In order to properly root the genus to a type specimen, the assignment of a neotype for the species is proposed, which will safeguard the prevailing usage of the genus *Kalophrynus*.

Keywords. Nomenclature; taxonomy; Amphibia; Anura; MICROHYLIDAE; KALOPHRYNINAE *Kalophrynus*; *Kalophrynus pleurostigma*; sticky frogs; Sumatra; Southeast Asia; Greater Sunda Islands; Philippines.

1. Tschudi (1838, pp. 48, 86) recognized the uniqueness of the sticky frogs with the erection of a new genus, *Kalophrynus*. Simultaneously, he described *Kalophrynus pleurostigma* from a single specimen derived from Sumatra, one of the Greater Sunda Islands of present-day Indonesia, thereby establishing this taxon as the type species of *Kalophrynus*.

2. The Sumatran origin has not been questioned, although few Sumatran specimens are available to allow a thorough examination of variation of topotypic *K. pleurostigma* in the broadest sense of all Sumatran populations. Owing to the near absence of specimens of Sumatran *K. pleurostigma*, the characterization of *K. pleurostigma* has been based largely on the morphology of specimens from Thailand and Peninsular Malaysia.

3. Since its first description, the *K. pleurostigma* paradigm has expanded slowly to include populations from Southeast Asia, southwestern China, the Greater Sunda Islands, and the Philippine Islands. In part due to its widespread occurrence, the taxonomy of the species *K. pleurostigma* as well as the definition of species boundaries in the genus *Kalophrynus* are still being worked out. During the past two decades, systematists have recognized that multiple species are hidden under the name *K. pleurostigma*. This has already resulted in the description of new species

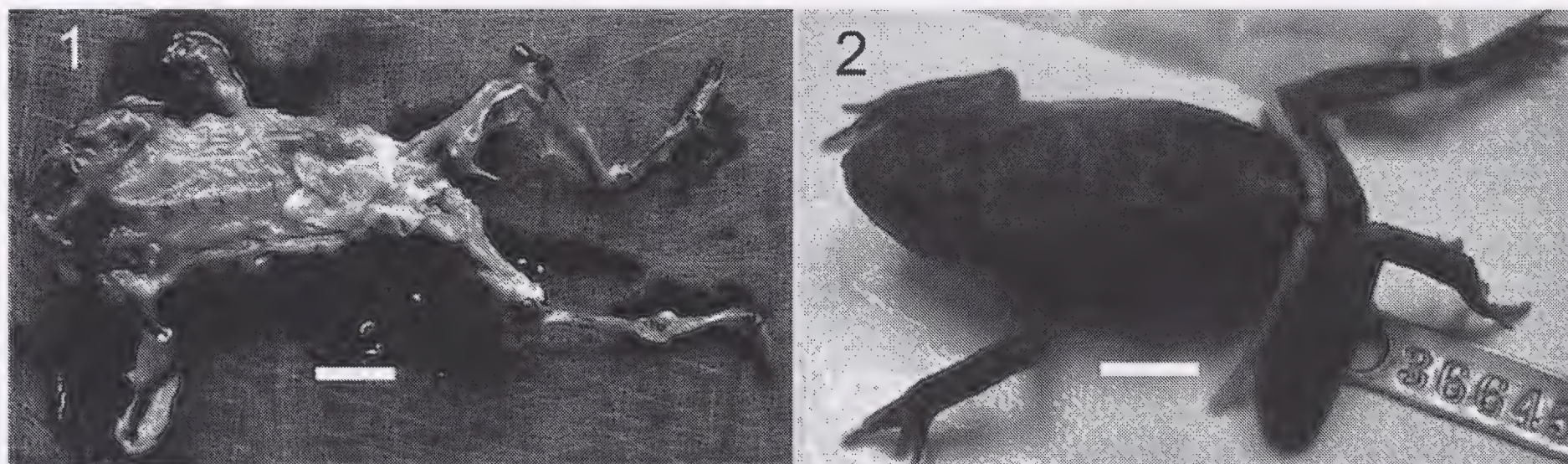


Figure 1. (1) holotype of *Kalophrynus pleurostigma*, RMNH 2279; (2) neotype of *Kalophrynus pleurostigma*, USNM 36645. Scale bar = 5 mm.

(*Kalophrynus orangensis* Dutta, Ahmed & Das, 2000; Assam, India) and some earlier synonyms have been proposed for resurrection (e.g. *Calophrynus pleurostigma* var. *sinensis* Peters, 1867, for Philippine populations; Ohler & Grosjean, 2005). However, no one has examined the type specimen in this context to define/describe the characteristics of the Sumatran population, *K. pleurostigma* sensu stricto.

4. Recent examination of the holotype (specimen 2279 in the Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands [now renamed 'Naturalis'; RMNH]) of *Kalophrynus pleurostigma* to study the physical evidence for the characterization of the genus *Kalophrynus* revealed that the specimen is a badly decomposed, nearly fleshless skeleton (Fig. 1). Gassó Miracle et al. (2007, p. 47) reported that the specimen was 'in very poor condition, [...] dried out and therefore fragile'. It appears that an attempt at rehydration failed and allowed further decay.

5. Because of the physical deterioration of the currently recognized type specimen (RMNH 2279) it is no longer possible to determine unequivocally that the specimen represents *Kalophrynus pleurostigma*, thereby threatening the stability and universality of the genus *Kalophrynus* as well as the species *K. pleurostigma*. In this paper we propose a neotype allowing unambiguous identification and consistent with the original description and prevailing usage. The proposed neotype is specimen USNM 36645, an adult female (34.5 mm SVL) from 'Aru Bay, East Sumatra' (approx. 98°15'E 4°10'N, Sumatera Utar province) collected by Dr. W.L. Abbott on 9 December 1905; well preserved, slightly darkened and colour pattern faint.

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *Kalophrynus pleurostigma* Tschudi, 1838 and to designate specimen 36645 in the National Museum of Natural History, Smithsonian Institution, Washington, DC, U.S.A. (USNM), as the neotype;
- (2) to place on the Official List of Generic Names in Zoology the name *Kalophrynus* Tschudi, 1838 (gender: masculine), type species by monotypy *Kalophrynus pleurostigma* Tschudi, 1838;
- (3) to place on the Official List of Specific Names in Zoology the name *pleurostigma* Tschudi (the specific name of the type species of *Kalophrynus* Tschudi, 1838), as published in the binomen *Kalophrynus pleurostigma* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3599***Coluber irregularis* Leach in Bowdich, 1819 (currently *Philothamnus irregularis*; Reptilia, Squamata): proposed conservation**

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Abstract. The purpose of this application, under Article 23.9.5 of the Code, is to conserve the specific name *Coluber irregularis* Leach in Bowdich, 1819 (currently *Philothamnus irregularis*) for the African northern green bush snake. The name was placed on the Official List by a ruling in Opinion 328. This name is a junior primary homonym of *Coluber irregularis* Bechstein, 1802 (currently *Boiga irregularis*), used for the brown tree snake, known from Indonesia, Australia, Papua New Guinea and Melanesia, and infamous for its invasive colonization of Guam. Both names are in use and are not considered congeneric. It is proposed that the name *Coluber irregularis* Leach in Bowdich, 1819 be conserved by ruling that it is not invalid by reason of being a junior primary homonym. In order to conserve the name *Coluber irregularis* Leach in Bowdich, 1819, Opinion 328 suppressed the senior synonym *Coluber caesius* Cloquet, 1818. In that action, the name *Coluber azureus* Bonnaterre, 1790 (a senior objective synonym of *Coluber caesius* Cloquet, 1818) was overlooked. In this paper, *Coluber azureus* Bonnaterre, 1790 is declared a nomen oblitum under Article 23.9.2 of the Code.

Keywords. Nomenclature; taxonomy; Reptilia; Squamata; COLUBRIDAE; *Coluber*; *Coluber azureus*; *Philothamnus irregularis*; *Boiga irregularis*; green bush snake; brown tree snake; Africa; Indonesia; Australia; Papua New Guinea; Melanesia.

1. The name *Coluber irregularis* Leach in Bowdich, 1819 (p. 494) was placed on the Official List of Specific Names in Zoology by a ruling in Opinion 328 (Opinions and Declarations 9: 299–308, January 1955). This African species, also known as the common bush snake, green tree snake, irregular green snake and northern green bush snake, has a wide distribution throughout Western and Central Africa, from Senegal to Chad and the Central African Republic. Hughes (1985, p. 515) restricted the distribution of *Philothamnus irregularis* to Western Africa, and (as in Rasmussen, 1981, p. 176 and Hughes, 1983, p. 320) treated *P. irregularis battersbyi* Loveridge, 1951 from eastern Africa as a full species. Separation of *irregularis* from *battersbyi* is based on the dark pigmentation of the interior of the mouth in *irregularis*, unique within the genus (Dunger, 1973, p. 162). *Philothamnus bequaerti* (A. Smith, 1923) was treated as an aberrant form of *P. heterolepidotus* (Günther, 1863) by Loveridge (1958, p. 103), as a subspecies of *irregularis* by Meirte (1992, p. 73) and LeBreton (1999, p. 89) and as a full species by Joger (1990, pp. 96–97), Trape & Roux-Estève (1990, pp. 378–379) and later by many others, e.g. Chippaux (2001, p. 123), Spawls et al. (2002, p. 354), Chirio & Ineich (2006, p. 51) and Chirio

& LeBreton (2007, p. 514). The last authors, however, included Democratic Republic of the Congo and Uganda in the distribution of *P. irregularis*. In a recent IUCN list (Rödel & Schmitz, 2010), Gabon and Tanzania are also included in the distribution of *P. irregularis*, but the Democratic Republic of the Congo is not. It appears that IUCN listing of this species in Ethiopia, Namibia, Zambia and Zimbabwe among the 'native countries' as they are called on the IUCN list, is probably based on poorly annotated literature records. Brogard (2005, p. 140) added southern Sudan, northern Zaïre and Ethiopia. The Ethiopian records in fact apply to *Philothamnus battersbyi*, although *P. bequaerti* is also present there, as pointed out by Largen & Rasmussen (1993, p. 356). Since its first assignment to the genus *Philothamnus* A. Smith, 1847 by Buchholz & Peters (in Peters, 1876, p. 199), *irregularis* has been assigned to the genus *Chlorophis* Hallowell, 1857 (Boulenger, 1891, p. 306; 1894, p. 96; 1897a, p. 278; 1897b, p. 801), but never again to *Coluber* Linnaeus, 1758, now considered a monospecific genus restricted to the Nearctic species *Coluber constrictor* Linnaeus, 1758 (for a full discussion see Meirte, 1992, pp. 94–95). *Philothamnus irregularis* (Leach in Bowdich, 1819) has been the name most in use since the work of Loveridge (1951); only Laurent (1964, p. 105) and Roux-Estève (1969, p. 105) have recently used *Chlorophis* at the generic level. For a synonymy list see Loveridge (1958, pp. 85–91), FitzSimons (1962, p. 144) and Chippaux (2006, p. 128). The original description of *Coluber irregularis* (Leach in Bowdich, 1819, p. 494) gives the type locality 'Fantee', but no type indication. Boulenger (1894, p. 97) listed two type specimens (a female and a head) from Ashantee. The types were collected in Fantee country, Ghana by the Bowdich Expedition to Ashantee (Hughes 1985, p. 515) and are in the Natural History Museum, London (BMNH 1965.641).

2. *Coluber irregularis* Bechstein, 1802 was placed on the Official List of Specific Names in Zoology in Opinion 1374 (BZN 43: 25–26, April 1986) where it was indicated as the type species by subsequent designation by Cope (1860, p. 264) for the genus *Boiga* Fitzinger, 1826. This species commonly known as the brown tree snake or brown cat snake, has a broad distribution from Indonesia and Australia to Papua New Guinea and Melanesia, and is infamous for its invasive colonization of Guam (see e.g. Fritts & Rodda, 1998 and Rodda & Savidge, 2007). It has been placed in the genera *Dipsas* Laurenti, 1768 (by Boie, 1827, p. 549 and by Fischer, 1884, p. 49), *Triglyphodon* Duméril et al., 1854 (p. 1072), *Dipsadomorphus* Fitzinger, 1843 (by Boulenger, 1896, p. 75), *Gonyodipsas* Fitzinger, 1843 (p. 27) and mistakenly in *Hurria* Daudin, 1803 by Cogger et al. (1983, p. 209). Cogger et al. cited the name *Coluber irregularis* Bechstein as having been previously used by Wall (1924) in a subsequent type designation for *Boiga* Fitzinger, 1826. However, Wall (1924, p. 873) actually attributed *Coluber irregularis* to Merrem in his type species designation. *Coluber irregularis* Bechstein, 1802 was assigned to *Boiga* by Barbour (1912, p. 126), but never to *Coluber*, *Philothamnus* or *Dendrophis*. The attribution of *Coluber irregularis* to Merrem in Bechstein (1802) as given by Boulenger (1986, p. 75), Cogger et al. (1983, p. 209) and Rasmussen & Stimpson (1983, p. 209), or to Merrem by earlier authors (e.g. Duméril et al., 1854, p. 1072; de Rooij, 1917, p. 201; Wall, 1924, p. 873) was not accepted in Opinion 1374 (BZN 43: 25–26, April 1986), and it was stated that Bechstein alone was responsible both for the name and for satisfying the criteria of availability. The taxonomic status of the species *Boiga irregularis* (Bechstein, 1802)

was discussed by Rasmussen & Stimpson (1983, p. 209), while Cogger et al. (1983, pp. 209–210) discussed its nomenclature. Boulenger (1896, p. 75) gave additional information on its placement in other genera.

3. Although both original names have already been treated by the Commission, the fact that *Coluber irregularis* Leach in Bowdich, 1819 is a junior primary homonym of *Coluber irregularis* Bechstein, 1802 was never discussed. The situation is complicated by the fact that both taxa have junior synonyms. According to Article 23.3.5 of the Code a primary junior homonym needs to be replaced by the next (oldest) available name from among its synonyms unless the provisions of Article 23.9.5 apply.

4. Bechstein (1802, p. 239) referred his *Coluber irregularis* to Merrem's 'Beytr. zur Naturgesch. der Amph. III S. 25. Fig. 4'. (The volume should be corrected to 'II'). But in that work, Merrem (1790) did not use any Latin binomen for the taxon illustrated in Fig. 4. Daudin (1803a, p. 277, footnote; pl. LXVI) used the name *Hurria pseudoboiga* for the same species of snake, referring to the same illustration by Merrem (1790, Fig. 4). Cogger et al. (1983, p. 209) erroneously interpreted Daudin's name as a replacement name, but in fact *Hurria pseudoboiga* is a junior objective synonym of *Coluber irregularis* Bechstein.

5. Loveridge (1955, p. 88) listed *Coluber caesius* Cloquet, 1818 as a senior synonym of *Philothamnus irregularis* Leach in Bowdich, 1819. *C. caesius* was originally proposed by Cloquet (1818, p. 201) as a replacement name for '*Coluber caeruleus* Lacépède', which appeared to be preoccupied by *C. caeruleus* Linnaeus, 1758 (p. 227), type locality 'Habitat in Indiis' (the change to 'Habitat in America australi et India' made by Gmelin, 1788, p. 1119 is rather surprising). *Coluber caeruleus* 'Lacépède' was in fact proposed by Daudin (1803b, p. 54) for 'L'azurée' of Lacépède. Loveridge (1958, p. 85) regarded *Coluber caeruleus* Daudin, 1803 as a replacement name for *Coluber caeruleus* Lacépède, 1789 which was preoccupied by *Coluber caeruleus* Linnaeus, 1758 (p. 218) with 'Habitat in America', confirmed by Gmelin (1788, p. 1093). Lönnberg (1896, p. 7) stated that specimen no. 23 (now UUZM # 149), listed as the type specimen of *Coluber caeruleus*, did not correspond to *C. caeruleus* Linnaeus but rather to *C. viridissimus* Linnaeus (currently *Philodryas viridissimus*). A similar statement can be found in Wallin's catalogue of Linnaean type specimens in the Uppsala Museum (Wallin, 2001, p. 123). Kullander (1997) linked the name *caeruleus* to specimen NRM cat. no. 36 in the Swedish Museum of Natural History, but Anderson (1898, p. 26) thought the type-specimen was among the four lost specimens of the five that were in the Museum Drottningholmense. Anyway, the ventral and subcaudal scales counts given by Linnaeus (215 and 170, respectively) do not correspond to the known variation for *Philothamnus irregularis* of 151–186 ventrals and 93–145 subcaudals (Hughes, 1985, pp. 526–527; Meirte, 1992, p. 298; Chippaux, 2006, p. 129).

6. The Commission ruled in Opinion 1463 (BZN 44: 256–267, December 1987) that all editions of 'de Lacépède, 1788–1789, Histoire naturelle des Serpens and later editions' (1790, 1799a, b, 1825, 1834, 1836) are unavailable works, i.e. rejected as not being entirely binominal. Only a few names (*Crotalus piscivorus* and *Coluber triangulum*) were excepted. By this action, the confusing use of both *caeruleus* and *caeruleus* (which can often be referred to the Linnaean taxa, but not always) in these works of Lacépède was solved. The name *Coluber caesius* Cloquet, 1818 should no longer be considered a replacement name, as pointed out by Loveridge (1958), but

as an originally proposed name for this species. Its type is the 'Cap Vert' specimen first mentioned as 'L'azurée' in Lacépède (1789, p. 276) and deposited in the Paris Museum. The bluish coloration referred to by the name 'L'azurée' can be explained by the fact that in *Philothamnus* the bright green in life becomes vivid blue when preserved due to the dissolving of yellow pigments in spirit.

7. *Coluber azureus* Bonnaterre, 1790 (p. 13), is also clearly based on Lacépède's (1789) specimen. *C. azureus* antedates the name *C. caesius* Cloquet, 1818 (see Sherborn & Woodward 1906, p. 580, for the correct date of publication). The type specimen is still in the Paris Museum (MNHNP 3464).

8. Junior synonyms are also available for *Philothamnus irregularis* Leach in Bowdich, 1819. The oldest is *Dendrophis chenonii* Reinhardt, 1843 (p. 246), which was placed in synonymy by Loveridge (1958, p. 85). For *Dendrophis (Philothamnus) albovariata* A. Smith, 1848 (pl. 65 & pl. 64, fig. 3) the publication year '1840', as indicated by Loveridge, is wrong (see Waterhouse 1880, p. 490, for publication dates and contents). The position of the taxon *D. albovariata* A. Smith, 1848 among the synonyms of *P. irregularis* Leach in Bowdich, 1819, as stated by Günther (1863, p. 284) and Boulenger (1894, p. 96), differs from the conclusion of Barboza du Bocage (1883, p. 19) who linked *D. albovariata* to *Philothamnus smithii*, a replacement name for *Dendrophis (Philothamnus) semivariiegata* A. Smith, 1847 (pl. 59, pl. 60, pl. 64 fig. 1; see Boulenger 1894, p. 99). Unfortunately, the type specimen of *D. albovariata* A. Smith, 1848 appears to be lost (FitzSimons 1937, p. 273). Hughes (1985, p. 518) and Broadley (1983, p. 238) did not consider *D. albovariata* as a synonym of *P. irregularis*, but as a synonym of *P. angolensis* Barboza du Bocage, 1882. Its synonymy with *P. natalensis* (A. Smith, 1848), as found on the Uetz & Hallermann (2013) database, remains undocumented.

9. The name *caesius* Cloquet, 1818 was never used as a valid taxon name after its publication. The name *azureus* Bonnaterre, 1790 was never used after Merrem (1820). The name *chenonii* Reinhardt, 1843 has not been used as valid for the last 130 years.

10. The following references have used *Philothamnus irregularis* Leach in Bowdich, 1819 as a valid name [excluding internet references] since 1962: Barnett et al. (2001, p. 11), Barnett & Emms (2005, p. 23), Böhme (1978, p. 396), Böhme et al. (2011, p. 46), Broadley (1966, p. 418), Brogard (2005, p. 140), Butler (1990, p. 30), Chippaux (2001, p. 123; 2006, p. 128), Chirio (2009, p. 28), Chirio & Ineich (2006, p. 51), Chirio & LeBreton (2007, p. 514), Coborn (1991, p. 271), Cundall & Irish (2008, p. 642), Doucet (1963, p. 250), Derleyn et al. (1983, p. 781; 1984, p. 43), Dunger (1973, p. 160), Emms et al. (2007, p. 8), Fitch (1970, p. 142), Graber (1966, p. 139), Greenbaum & Carr (2005, p. 14), Gruschwitz et al. (1991, p. 28), Håkansson (1981, p. 160), Hughes (1983, p. 328; 1985, p. 515), Hughes & Barry (1969, p. 1016), Hulselmans et al. (1970, p. 194; 1971, p. 48), Hulselmans & Verheyen (1970, p. 202), Ineich (2003, p. 618), Joger (1990, p. 97), Leaché (2005, p. 18), LeBreton (1999, p. 89), Mané (1992, p. 19), Mattison (1999[2005], p. 169), Meirte (1992, p. 73; 1999, p. 151), Menzies (1966, p. 172), Miles et al. (1978, p. 452), Moore & Jackson (2010, p. 182), Obst et al. (1988, p. 595), Papenfuss (1969, p. 282), Penney (2009, p. 41), Pitman (1974, p. 89), Porter (1972, p. 407), Raxworthy & Attuquayefio (2000, p. 555), Roman (1974, p. 50; 1980, p. 89; 1984, p. 39), Rödel et al. (1995, p. 5; 1999, p. 168), Segniagbeto et al. (2011, p. 335), Spawls et al. (2002, p. 353), Stucki-Stirn (1979, p. 287), Thieme et al. (2005, p. 332), Trape (2005, p. 42), Trape & Mané (2000, p. 23; 2002, p. 149; 2004,

p. 14; 2006, p. 138), Ullenbruch et al. (2010, p. 43), Villiers (1963, p. 1371; 1975, p. 117), Welch (1982, p. 167). The name *Coluber azureus* Bonnaterre, 1790 has not been used as valid after 1899.

11. In the interests of stability the name *Coluber irregularis* Leach in Bowdich, 1819 should be given priority over the underused name *Coluber azureus* Bonnaterre, 1790 under Article 23.9.2, as conditions of both Articles 23.9.1.1 and 23.9.1.1 are met. Here the name *Coluber azureus* Bonnaterre, 1790 is declared to be a nomen oblitum and *Coluber irregularis* Leach in Bowdich, 1819 to be a nomen protectum.

12. However, *C. irregularis* Leach in Bowdich, 1819 is a junior primary homonym of *C. irregularis* Bechstein, 1802, the latter name being still in use. Therefore the case is referred to the Commission under Article 23.9.5.

13. The International Commission on Zoological Nomenclature is accordingly asked to use its plenary power:

- (1) to rule that the specific name *Coluber irregularis* Leach in Bowdich, 1819 is not invalid by reason of being a junior primary homonym of *Coluber irregularis* Bechstein, 1802;
- (2) to amend the entry on the Official List of Specific Names in Zoology for the specific name *irregularis* Leach in Bowdich, 1819, as published in the binomen *Coluber irregularis*, to record that it is not invalid by reason of being a junior primary homonym of *Coluber irregularis* Bechstein, 1802.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3623***Grallaria fenwickorum* Barrera et al., 2010 (Aves, FORMICARIIDAE):
proposed replacement of an indeterminate holotype by a neotype**

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Abstract. The purpose of this application, under Article 75.5 of the Code, is to replace the incomplete and improperly described holotype of the antpitta *Grallaria fenwickorum* Barrera et al., 2010 with a neotype that constitutes a full, diagnosable, name-bearing type. Because the holotype of *G. fenwickorum* was described poorly, was not deposited appropriately in a scientific collection and does not possess the characters that diagnose the taxon, and because the taxonomy of *Grallaria* ranks among the most fluid of all avian genera, it is crucial that a full, information-rich, recognizable type be available to the scientific community to represent this new taxon. I consider *G. fenwickorum* to be a nomen dubium and urge declaration of a neotype as a basis for a more stable foundation in the complex taxonomy of this genus.

Keywords. Nomenclature; taxonomy; Aves; FORMICARIIDAE; *Grallaria fenwickorum*; *Grallaria urraoensis*; antpitta; Colombia.

1. A previously undescribed taxon of *Grallaria* Vieillot, 1816 (Aves, FORMICARIIDAE) was detected recently in Colombia by a series of investigators, and two separate descriptions were published in 2010, causing considerable controversy and debate (e.g. Cadena & Stiles, 2010; Regalado, 2011). The description of the new taxon under the name *G. fenwickorum* (Barrera et al., 2010) antedated the name *G. urraoensis* (Carantón-Ayala & Certuche-Cubillos, 2010) by only 37 days, which nonetheless made the latter name a junior synonym of the former. Although the circumstances of the accelerated description of *G. fenwickorum* are unsatisfactory, the Barrera et al. (2010) description appears to establish a valid name in the literature. In this contribution, however, indicate several substantive problems with the description of *G. fenwickorum*, such that it is here considered to be a nomen dubium, and replacement of the inadequate holotype with a neotype is proposed.

2. Code Recommendation 72D indicates that holotypes should be labeled clearly, such that their status as types is unmistakable. In the case of *G. fenwickorum*, parts of the holotype (14 feathers from the wing, tail, and body of the individual) were deposited at the Museo de Historia Natural Jose Celestino Mutis, Facultad de Ciencias, Universidad de Pamplona, Colombia, but some ambiguity regarding the holotype of *G. fenwickorum* is evident in the description. Whereas some paragraphs suggest that the holotype is the sample of feathers, others suggest that the holotype is the original bird. For example, an entire paragraph justifies the sample of feathers as an appropriate holotype (p. 10) but the 'Description of the holotype'

(p. 11) is entirely based upon the original bird, not the sample of feathers. Note that, although the description cites 'Article 74.1.4' (probably an error for Article 73.1.4) of the Code as indicating the description's Figure 1, and the cover illustration of the issue of *Conservación Colombiana* in which it appeared, as a holotype, Article 72.5.6 also makes clear that the holotype is the specimen per se, and not the illustration. The feathers were reportedly obtained from the bird in the photograph.

3. Problems with this holotype include the following: (a) The feathers were labelled only as 'Grallariidae Grallaria sp.', with no indication that these constituted a holotype (Diego J. Lizcano, Universidad de Pamplona, pers. comm. 25 March 2011); (b) the catalog number indicated in the description ('tissue collection No.699') appears to have originated with the authors of the description, as the Universidad de Pamplona has neither a cataloguing system, nor for that matter any organized systematic collections (Diego J. Lizcano, Universidad de Pamplona, pers. comm. 25 March 2011); (c) the data reported as associated with the holotype are incomplete, in that the sex of the individual was not provided (see Recommendation 73C.3; this information was unavailable because the individual was not sacrificed and because *Grallaria antpittas* are not sexually dimorphic), and in that the name of the 'collector' was not given (see Recommendation 73C.5; only the persons who released the individual are named in the description). Finally, and most significant; (d) because the holotype consists only of 14 feathers, and given poor selection of those feathers, the taxon is not diagnosable based on the holotype specimens. The description of *G. fenwickorum* indicates that the features that diagnose it as distinct from the closely related *G. milleri* Chapman, 1912 are the coloration of the back and breast. However, no feathers were drawn from the back of the individual and the only breast feathers were down feathers, rather than the contour feathers that might conceivably have been diagnostic. In other words, although a verbal diagnosis was provided that referred to the illustration, the actual holotype (i.e. the parts of the animal that are candidates to constitute the holotype according to Article 72.5.6) is not sufficient to distinguish this individual from other *Grallaria* species, in particular from *G. milleri*.

4. Here attention is focused on the proper documentation and typification of this taxon in the light of the highly volatile nature of *Grallaria* taxonomy. Indeed, this genus has arguably seen as many new species descriptions as any in all of Aves (except the tapaculo genus *Scytalopus*) in recent years (e.g. Stiles, 1992; Krabbe et al., 1999). Although some new *Grallaria* taxa are described as full species, as in the case at hand, others have been described as subspecies (e.g. Salaman et al., 2009). Clearly, careful consideration of species limits and comparability of species taxa is in order for this genus, a process that will only be confused by poor typification of the taxa involved. To address Article 75.3.2, I refer to the detailed descriptions of full specimens (paratypes of *G. fenwickorum*, and including the same specimen proposed as a neotype in this contribution) provided elsewhere (Carantón-Ayala & Certuche-Cubillos, 2010).

5. As indicated above (paragraph iii), the holotype of *G. fenwickorum* was not identified and characterized in sufficient detail, and is in fact indeterminate with insufficient characters to diagnose this taxon. This situation leads me to propose *G. fenwickorum* as a nomen dubium; as the holotype corresponding to the name is fixed in the original publication (Article 72.3 of the Code); I propose to designate a neotype. Conveniently two complete specimens are available that diagnose it fully

and appropriately (Carantón-Ayala & Certuche-Cubillos, 2010). As these specimens were cited and discussed in the description of *G. fenwickorum*, no doubt exists that they refer to the same taxon and that they were collected from very close to the original type locality. These specimens are appropriately designated as to their status as name-bearing types (for the junior synonym *G. urraoensis* Carantón-Ayala & Certuche-Cubillos, 2010), and are already deposited and catalogued in the ornithological collections of the Instituto de Ciencias Naturales, Universidad Nacional de Colombia (ICN-MHN), Bogotá, Colombia—the proposed neotype is ICN-MHN catalogue number 36689, and the paratype is ICN-MHN catalogue number 36688. It is hoped by many in the ornithological community that such incomplete descriptions of new species taxa (Smith et al., 1991; Athreya, 2006) will cease, in favour of more rigorous, careful, well-documented, and responsible additions to avian nomenclature; when appropriate specimen material is not available, the new taxon can be ‘described’ but less formally and without application of a name, which would be a more responsible approach.

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all type fixations for the nominal species *fenwickorum* Barrera et al., 2010, as published in the binomen *Grallaria fenwickorum*, and to designate specimen ICN-MHN 36689 at the Instituto de Ciencias Naturales, Universidad Nacional de Colombia (ICN-MHN), Bogotá, Colombia, as the neotype;
- (2) to place on the Official List of Specific Names in Zoology the name *fenwickorum* Barrera et al., 2010, as published in the binomen *Grallaria fenwickorum* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3611

***Basilosaurus kochii* Reichenbach, 1847 (currently *Zygorhiza kochii*; Mammalia, Cetacea): proposed replacement of the holotype by a neotype**

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Abstract. The purpose of this application, under Article 75.5 of the Code, is to set aside the existing, non-diagnostic holotype of *Basilosaurus kochii* Reichenbach, 1847 (currently *Zygorhiza kochii*) and designate a neotype. The designation of a neotype is necessary to conserve the prevailing usage of the specific name and resolve questions of synonymy between *Zygorhiza kochii* and the closely related and geographically proximal species *Dorudon serratus* (Gibbes, 1845; True, 1908) and *Chrysocetus healyorum*.

Keywords. Nomenclature; taxonomy; Mammalia; Cetacea; BASILOSAURIDAE; *Basilosaurus*; *Zygorhiza*; *Basilosaurus kochii*; *Zygorhiza kochii*; Alabama; Eocene; primitive whales.

1. Heinrich Gottlieb Ludwig Reichenbach in Carus (1847, p. 13) (Reichenbach, 1847) named the basilosaurid cetacean species *Basilosaurus kochii* based on a posterior cranial fragment that had been included as part of the chimaeric skeleton of *Hydrargos sillimani* Koch, 1845 (Koch, 1845a). This chimaeric skeleton was subsequently referred to as *Hydrarchos sillimani* by Wyman (1845) without comment on the alternate spelling of the genus. Subsequently, it was referred to as *Hydrarchos harlani* Koch, 1845 (Koch, 1845b) at the request of Dr. Benjamin Silliman (Kellogg, 1936). This assemblage of remains was acquired by Albert C. Koch from Washington and Clarke Counties, Alabama, U.S.A., most likely from what is now known as the Late Eocene (Priabonian) Pachuta Member of the Yazoo Formation (Kellogg, 1936; Koch, 1972). The material included in *Hydrarchos harlani* was quickly recognized as belonging to several individuals of at least three species in as many genera (Carus, 1847; Kellogg, 1936). Both Geinitz and Reichenbach (in Carus, 1847) (Carus, 1847; Geinitz, 1847; Reichenbach, 1847) considered *Hydrarchos harlani* to be a junior subjective synonym of the previously named *Basilosaurus cetoides* (Owen, 1839) [see Kellogg (1936) for a thorough discussion of the nomenclatural history of *Basilosaurus cetoides*]. Reichenbach identified a posterior cranial fragment (which he referred to as a 'Gaumenstück') of the *Hydrarchos harlani* chimaera as a separate species based on its smaller size, and named it *Basilosaurus kochii*. This specimen was later given the specimen number 15324a-b and subsequently given a new specimen number, MB Ma 43248. It is currently housed in the Museum für Naturkunde, Berlin, Germany (MB).

2. Müller (1849) named a new species, *Zeuglodon brachyspondylus*, based on 27 large vertebrae with short bodies from Alabama (among these are his M. 64 to M. 68; now identified respectively as, MB Ma 43273, 43274, 43275, and 43277 (Hampe, 2009)). Müller never designated a holotype, but Gingerich (2007) designated the lumbar vertebra figured by Müller (1849) as No. 6 in his vertebral series II of his Plate XX as the lectotype. Unfortunately, this specimen cannot be unequivocally identified within the MB collection (Hampe, 2009; O. Hampe, pers. comm., pers. obs.). Here, the lumbar vertebra MB Ma 43263 is designated as the neotype of *Zeuglodon brachyspondylus* Müller (1849) as it is necessary for unambiguous identification of the species.

3. Müller (1851) named a new subspecies, *Zeuglodon brachyspondylus minor*, based on the cranial fragment MB Ma 43248 (Müller, 1849, pls. 3–5), which is also the holotype of *Basilosaurus kochii*; another posterior cranial fragment MB Ma 43247 (Müller, 1849, pl. 27, fig. 1); a mostly complete skull and lower jaws with associated cervical vertebrae at Tyler's Museum specimen TM 8501, which is also the holotype of *Zeuglodon hydrarchus* (Carus, 1849); and a set of vertebrae figured by Müller (1849, pl. 19). This designation was also followed by Stromer (1903). Kellogg (1936) subsequently referred to this set of specimens as co-types (i.e. syntypes) of *Zeuglodon brachyspondylus minor*. The posterior cranial fragment MB MA 43247 is here designated as the lectotype of *Zeuglodon brachyspondylus minor*.

4. True (1908) opined that the taxon *Zeuglodon brachyspondylus minor* was a representative of a genus distinct from that of *Zeuglodon* Owen, 1839 (which in itself is a junior synonym of *Basilosaurus* Harlan, 1834), and proposed the generic name *Zygorhiza* for this species (True, 1908, p. 78), although he did not address the taxonomic position of the parent species, *Zeuglodon brachyspondylus*, directly. It is clear from the text (True, 1908, p. 67, footnote 2) that True considered *Zeuglodon brachyspondylus minor* to be a separate species from *Zeuglodon brachyspondylus*, and he also clearly noted that the subspecies constituted the type species for the genus *Zygorhiza* (True, 1908, p. 78).

5. Kellogg (1928) referred to this species as *Zygorhiza minor* without comment.

6. Later discoveries of several more complete specimens from the same stratum and area are summarized by Kellogg (1936, p. 102–106), who recognized that the name *Basilosaurus kochii* had priority over *Zygorhiza minor*. Kellogg (1936, p. 100) also opined that this species belonged in a separate genus from *Basilosaurus* and used the oldest generic name available, True's *Zygorhiza*, along with the oldest specific epithet available, *kochii*, to construct the binomen *Zygorhiza kochii* for this species.

7. Study of the original Reichenbach type specimen (MB Ma 43248) confirms that it is indeterminate as to genus and species due to the incompleteness of the specimen, although it can be identified as belonging to the BASILOSAURIDAE. Thus, the taxonomic identity of *Basilosaurus kochii* as a nominal species-group taxon cannot be determined from the existing type material.

8. Subsequent to Kellogg's (1936) publication, many additional specimens have been referred to the species *Zygorhiza kochii*, but only one author (Lancaster, 1982) has made reference to the holotype specimen, MB Ma 43248. While Lancaster (1982) correctly identified MB Ma 43248 as the holotype of *Zygorhiza kochii* (using the old designation 15324a-b), he only made morphological comparisons with the

well-figured specimen from Kellogg (1936, plates 11–14, plate 15, fig. 1), USNM 11962, and not with the holotype itself. Several authors have also made comparisons to USNM 11962 when referring specimens to *Zygorhiza kochii* without reference to MB Ma 42348 (Carpenter & White, 1986; Daly, 1999; Köhler & Fordyce, 1997). Many more authors (Breard, 1991; Breard & Stringer, 1995; Carpenter & Dockery, 1985; Dockery, 1974; Thurmond & Jones, 1981; Westgate, 2001; Westgate, 2008) have referred specimens to *Zygorhiza kochii* without reference to any comparative specimens whatsoever. There has been no debate among these authors as to the distinct and separate identity of this genus and species since True's publication in 1908. Thus, specimen USNM 11962 defines the 'accustomed meaning' of this 'long-accepted name' (Introduction to the Code).

9. Because the taxonomic identity of the nominal species *Zygorhiza kochii* Reichenbach, 1847 cannot be determined from its existing name-bearing type specimen, the stability of the species and genus names, both long entrenched in the scientific literature, are threatened (Article 75.5 of the Code). Specimen USNM 11962 is extant and diagnostic, and would maintain prevailing usage of the name *Zygorhiza kochii*. Specimen USNM 11962 is well known to researchers and has been profusely illustrated previously in publications (Kellogg, 1936, pls. 11–15). If a neotype is not designated, the name *Zygorhiza kochii* could eventually be restricted to the original type specimen, which would (a) not reflect the currently understood concept of this taxon, but also (b) effectively eliminate the name from functional use.

10. The lack of a neotype for *Zygorhiza kochii* exacerbates an ongoing difficulty associated with understanding cetacean diversity by preventing resolution of the question of synonymy between *Z. kochii* and the closely related and geographically proximal species *Dorudon serratus* (Gibbes, 1845; True, 1908) and *Chrysocetus healyorum* (Uhen & Gingerich, 2001). Without a neotype for *Z. Kochii*, these taxa cannot be differentiated with certainty, which was True's (1908) original purpose in naming the genus. Lack of differentiation among these taxa has led many authors to (often mistakenly) identify most specimens of small BASILOSAURIDAE in North America as belonging to the genus *Zygorhiza* (Breard, 1991; Breard & Stringer, 1995; Daly, 1999; Westgate, 2008). This practice distorts the true temporal and geographic range of North American BASILOSAURIDAE and prevents understanding of the true diversity, ecology, and biogeography of these species, simply due to taxonomic confusion.

11. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *kochii* Reichenbach, 1847, as published in the binomen *Basilosaurus kochii*, and to designate specimen USNM 11962 as the neotype;
- (2) to place on the Official List of Generic Names in Zoology the name *Zygorhiza* True, 1908 (gender: feminine), type species *Zeuglodon minor* Müller, 1851 (a junior objective synonym of *Basilosaurus kochii* Reichenbach, 1847);
- (3) to place on the Official List of Specific Names in Zoology the name *kochii* Reichenbach, 1847, as published in the binomen *Basilosaurus kochii* and as defined by the neotype designated in (1) above (valid specific name of the type species of *Zygorhiza* True, 1908).

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Comment on *Turbo bidens* Linnaeus, 1758 (Gastropoda, CLAUSILIIDAE): request for setting aside the neotype

(Case 3581; see BZN 69: 85–87, 213–218, 280; 70: 43–45)

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Nordsieck (BZN 70: 43–45) argues again that Linnaeus's *Turbo bidens* was based on the species better known as *Papillifera papillaris* (Müller, 1774). Giusti & Manganelli (2005) and Kadolsky (2009; BZN 69: 213–218) concluded that Linnaeus so named the species now known as *Cochlodina laminata* (Montagu, 1803), and gave a bibliographic reference to a different *Cochlodina* species of very similar external appearance, *C. incisa* (Küster, 1876). Kadolsky (2009) attempted to settle the identity question by proposing a neotype which rendered *Cochlodina incisa* a junior subjective synonym of *Cochlodina bidens* (Linnaeus, 1758). This action seemed to be the best possible solution following the decision in Opinion 2176 not to suppress the name *Turbo bidens*; it honoured the ruling in Opinion 2176 as well as the historical truth and avoided displacing one of the well established species names, *papillaris* or *laminata*. The centuries-old dispute should have been solved thereby had not Welter-Schultes needlessly applied to set aside the neotype designation and make *Turbo bidens* Linnaeus, 1758 an objective synonym of *Helix papillaris* Müller, 1774. In so doing, he ignored all reasoning put forward by Giusti & Manganelli (2005) and Kadolsky (2009). The key arguments of these authors may be summarized here:

1. There is no contradiction between Linnaeus's diagnosis ('sutura subcrenata') and the cited figure (Gualtieri, 1742, pl. 4 fig. C), which shows a clausiliid with a subcrenate suture; therefore there is no reason to allege Linnaeus meant to quote Gualtieri's figures D and/or E which depict *Papillifera papillaris*.

2. Linnaeus's species cannot be *Papillifera papillaris*, because Linnaeus' text does not mention the brown subsutural band interrupted by white papillae. Amongst hundreds of clausiliid taxa *Papillifera papillaris* can be immediately recognized by this external feature. All authors who characterized *Papillifera papillaris* described it. To Müller (1774) it inspired the choice of the species epithet, and to Hartmann (1842) the choice of the genus name. To suppose Linnaeus failed to mention it, or that Linnaeus's term 'sutura subcrenata' describes it, is beyond belief.

3. Schröter's (1784) opinion that Linnaeus's *Turbo bidens* is synonymous with *Helix papillaris* Müller is erroneous, but is being treated to this day as authoritative by some authors.

4. Müller (1774) described the species now known as *Cochlodina laminata* (Montagu, 1803) under the name of *Helix bidens* (Linnaeus). He may have ascertained the species identity through his direct contacts with Linnaeus.

5. Falkner et al.'s (2002) designation of Gualtieri's figure E as the neotype of *Turbo bidens* is invalid, as the specimen no longer exists and does not agree with Linnaeus's species concept.

Only point 5 is not in dispute by Welter-Schultes and Nordsieck, insofar as the missing specimen is concerned.

Nordsieck's comment is taken almost verbatim from an online essay which Kadolsky (BZN 69: 213–218) had already considered and partly discussed in his reply to Welter-Schultes's application. In order to arrive at the opposite conclusions as Manganelli & Giusti (2005) and Kadolsky (2009, 2012) did, Nordsieck is in open denial of obvious facts (item 1 above), or ignores them (items 3, 4), or engages in reasoning replete with obfuscation and confusion (item 2) which culminates in his text p. 44 lines 6–13 and p. 45 lines 1–3, which can be paraphrased as: 'The weakly crenulated sutures of *Cochlodina laminata* and *C. incisa* (visible in my figures 3 and 4, as well as in Kadolsky's neotype specimen) cannot be described as subcrenate, because they are not papillate; such sutures have been described [by uncited subsequent authors in uncited taxa] as smooth.' (!)

Nordsieck implies that Linnaeus used the term 'crenatus' (with its diminutives 'crenulatus' and 'subcrenatus') also in the sense of 'papillatus'. An analysis of Linnaeus's diagnoses of gastropod shells reveals, however, that he used the term 'papillatus' with the same meaning as did Gualtieri (1742), Müller (1774), Gmelin (1791, p. 3609) and Rossmässler (1835, p. 29), which agrees with the original meaning of the Latin papilla (a teat or nipple), as well as with the definition of the term 'papillate' in modern English.

Nordsieck cites Linnaeus's contemporaries Schröter (1784) and Gmelin (1791) as witnesses that the interpretation of Linnaeus's *bidens* as *Papillifera papillaris* is correct. Nordsieck does not mention contemporaries who interpreted *Turbo bidens* differently to the way Nordsieck wishes it to be. Müller (1774), Pennant (1777, p. 131, pl. 81 fig. 117), Chemnitz (1786, pp. 119–120, pl. 112, fig. 960.1), and Bruguière (1792, pp. 352–353) interpreted *Turbo bidens* Linnaeus as *Cochlodina laminata*; the two last-named included other species with it, but they described *P. papillaris* separately, using the species epithet *papillaris*.

Concerning Nordsieck's witnesses, he ignores that Schröter's treatment of *Turbo bidens* has already been discussed and rejected (Giusti & Manganelli, 2005; Kadolsky, 2009 and BZN 69: 213–218). Gmelin (1791, p. 3609, no. 87) united at least four different clausiliid species under the name of *Turbo bidens*: under his nominotypical form we find bibliographic references to *Cochlodina laminata*, *Papillifera papillaris*, *Clausilia bidentata* (Strøm, 1765) and unidentified species; his form β is *Papillifera papillaris*; and his form γ is *Albinaria corrugata* (Bruguière, 1792) (see Gittenberger & Schilthuizen 1992 for the identity of the latter). Apparently he meant the nominotypical form to be *Cochlodina laminata* (contrary to Nordsieck!). His addition of the references to Buonanni's and Gualtieri's descriptions of *Papillifera papillaris* was by mistake, as he separated *Papillifera papillaris* as form β from the nominotypical form. The erroneous inclusion in *Turbo bidens* of the original reference to *Clausilia bidentata* (Strøm, 1765) was first made by Müller (1774) and copied by Chemnitz (1786) and Bruguière (1792) as well as Gmelin (1791).

However, the opinions of subsequent authors are, strictly speaking, irrelevant as to the identity of *Turbo bidens*, as none of them seem to have inspected Linnaeus's material with the possible exception of Müller (1774).

In summary, Nordsieck only rehashes disproven reasoning without offering new insights into the question of the identity of Linnaeus's *Turbo bidens*. Therefore, the counterproposal (BZN 69: 218) to Welter-Schultes's application stands.

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Comment on the proposed conservation of the specific names of *Limax fasciatus* Razoumowsky, 1789 (LIMACIDAE) and *Limax fasciatus* Nilsson, 1823 (currently *Arion fasciatus*, ARIONIDAE) (Gastropoda, Stylommatophora)
(Case 3569; see BZN 68: 253–256; 69: 127)

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The commonly used name *Arion fasciatus* (Nilsson, 1823), originally *Limax fasciatus*, is a junior primary homonym of the dubious and hardly used name *Limax fasciatus* Razoumowsky, 1789. Falkner et al. (2002, p. 141) declared *Limax fasciatus* Razoumowsky, 1789 a nomen oblitum in accordance with Article 23.9.2 of the Code with the aim of preserving the current usage of the name *Arion fasciatus* (Nilsson, 1823). Von Proschwitz & Falkner demonstrated that this action had been taken in error, because the conditions of Article 23.9.2 of the Code were not met. The name *Limax fasciatus* Razoumowsky, 1789 has been used at least twice after 1899. Thus, they referred the case to the Commission in accordance with Article 23.10 of the Code. Contrary to the intention of Falkner et al. (2002, p. 141), von Proschwitz & Falkner asked the International Commission on Zoological Nomenclature to rule that priority of *Limax fasciatus* Razoumowsky, 1789 be maintained and to place both, *Limax fasciatus* Nilsson, 1823 and *Limax fasciatus* Razoumowsky, 1789 on the Official List of Specific Names in Zoology. The reason for their shift of opinion concerning *Limax fasciatus* Razoumowsky, 1789 was that ‘from preliminary results it seems very likely that this early name for an alpine *Limax* needs to be revalidated’ and that ‘Up to now no other available names which could potentially be applied to Razoumowsky’s *Limax* species have been identified’. G. Falkner (pers. comm.) considers *Limax fasciatus* Razoumowsky, 1789 a

distinct species closely related to the widespread and common *Limax cinereoniger* Wolf, 1803. However, he cannot exclude at present that it is only an infraspecific unit within *Limax cinereoniger* Wolf, 1803. There are also other opinions concerning the identity of *Limax fasciatus* Razoumowsky, 1789. Hesse (1926, p. 82) and Alzona (1971, p. 149) thought that this name referred to a variety or subspecies of *Limax albipes* Dumont & Mortillet, 1853, whereas Turner et al. (1998, p. 294) considered it a doubtful older synonym of *Limax subalpinus* Lessona, 1880. The identity of the name *Limax fasciatus* Razoumowsky, 1789 can only be fixed by the designation of a neotype. No such designation has been proposed so far. In any case, the name *Limax fasciatus* Razoumowsky, 1789 would threaten other names in current usage, if it were revalidated and should turn out not to refer to a distinct species. The stability of names for well-known species in current usage has to be valued higher than the conservation of a hardly and inconsequently used name that threatens their stability. The taxon that Falkner and colleagues would like to name *Limax fasciatus* Razoumowsky, 1789 is specifically distinct from *Limax maximus* var. *fasciatus* Razoumowsky, 1789 sensu Taylor (1906, p. 266), mainly from the British Isles, and *Limax albipes fasciatus* Razoumowsky, 1789 sensu Alzona (1971, p. 149), from the Pennine Alps, the two only known usages of *Limax fasciatus* Razoumowsky, 1789 as a valid name in the last century. If it actually is specifically distinct from all other mentioned species, it is a new species not recognized by any author before. There is no necessity to conserve a name for this putative taxon that has been used inconsistently in the literature and potentially threatens other names in current use.

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to suppress the name *Limax fasciatus* Razoumowsky, 1789 for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the name *fasciatus* Nilsson, 1823, as published in the binomen *Limax fasciatus*;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *fasciatus* Razoumowsky, 1789, as published in the binomen *Limax fasciatus* and as suppressed in (1) above.

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Comment on *Ecdyonurus* Eaton, 1868 and *Ephemera venosa* Fabricius, 1775 (currently *Ecdyonurus venosus*; Insecta, Ephemeroptera): proposed conservation of usage by designation of a neotype for *Ephemera venosa* (Case 3594; see BZN 69: 254–259)

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The abovementioned case submitted by Bauernfeind and Haybach is of critical importance for taxonomists and ecologists dealing with Ephemeroptera throughout the world.

I strongly support the proposed conservation of usage by designation of a neotype for *Ephemera venosa* (currently *Ecdyonurus venosus*) for the following reasons:

- (1) On a nomenclatorial level, the changes imposed by the principle of priority, if applied in this special case, will bring a lot of confusion by suppression of the generic name *Siphonurus* as a junior synonym of *Ecdyonurus*; *Siphonurus* encompasses almost 40 valid species recognized in the Holarctic realm. Recombination of extant *Siphonurus* species (SIPHONURIDAE) with the genus name *Ecdyonurus* (HEPTAGENIIDAE) will bring a lot of confusion for the coming years. The use of the first synonym of *Ecdyonurus* (HEPTAGENIIDAE) to avoid homonymy will be *Ecdyurus*, which will add more confusion by the close spelling, and the reassignment of more than 60 nominal species. All in all, more than 100 species are concerned by this nomenclatorial act, and the proposed conservation is just a question of stabilizing the mayfly nomenclature.
- (2) Ephemeroptera are widely used in ecological survey, biomonitoring and ecotoxicological trials. If these nomenclatorial changes happen, this will cause years of confusion among ecologists who will be slow and reluctant to change their habits.

For these reasons, I strongly endorse the above proposal and hope the Commission will follow it.

**Comment on the proposed emendation of spelling of PHYCINAE Lyneborg, 1976
(Insecta, Diptera, THEREVIDAE) to PHYCUSINAE to remove homonymy with PHYCINAE
Swainson, 1838 (Osteichthyes, Gadiformes, PHYCIDAE)**
(Case 3605; see BZN 70: 22–29)

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The application presented by Gaimari, Hauser & Fricke tries to modify a correctly formed name (PHYCINAE Lyneborg, 1976) to conserve an incorrectly formed name (PHYCINAE Swainson, 1838), creating complications instead of solving them with the extant rules of the Code. This application overlooks the fact that the Latinized Greek name for the fish genus *Phycis* makes a genitive *Phycidis*, and consequently its stem is *Phycid-*, as the Greek noun *φυκίς* (a fish that hides among seaweed) makes a genitive *φυκίδος*. Moreover, the gender of *Phycis* was not mentioned in any part of the application and was absent from para. 9. If any name must be modified, this is the incorrect one.

Consequently, I oppose this part of the application and present to the International Commission on Zoological Nomenclature the following set of alternative proposals with amendments made to clauses (1a), (4) and (5):

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power:

- (a) to rule that for the purposes of Article 29 of the Code the stem of the generic name *Phycis* Walbaum, 1792, is *Phycid-*;
- (b) to set aside all previous type species fixations for the generic name *Phycis* Walbaum, 1792 and designate *Blennius phycis* Linnaeus, 1766 as type species;

(2) to place on the Official List of Generic Names in Zoology the following names:

- (a) *Phycus* Walker, 1850 (gender: masculine), type species *Xylophagus canescens* Walker, 1848, by monotypy (Insecta, Diptera);
- (b) *Phycis* Walbaum, 1792 (gender: feminine), type species *Blennius phycis* Linnaeus, 1766 (Osteichthyes, Gadiformes), as ruled in (1) above;

(3) to place on the Official List of Specific Names in Zoology the following names:

- (a) *canescens* Walker, 1848, as published in the binomen *Xylophagus canescens* (specific name of the type species of *Phycus* Walker, 1850) (Insecta, Diptera);
- (b) *phycis* Linnaeus, 1766, as published in the binomen *Blennius phycis* (specific name of the type species of *Phycis* Walbaum, 1792) (Osteichthyes, Gadiformes), as ruled in (1) above;

(4) to place on the Official List of Family-Group Names in Zoology the name PHYCIDINAE Swainson, 1838 type genus *Phycis* Walbaum, 1792 (spelling emended by the ruling in (1) above) (Osteichthyes, Gadiformes);

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name PHYCINAE Swainson, 1838 (an incorrect original spelling of PHYCIDINAE, as ruled in (1) above) (Osteichthyes, Gadiformes).

Comment on the proposed ‘validation’ of *Siganus* Forskål, 1775 (Pisces, SIGANIDAE): awaiting a ruling since 1968

(Case 1721; see BZN 25: 26–28, 200–201; 26: 178–179; 29: 190–193; 30: 6–7)

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The purpose of this comment is to request the Commission to issue a ruling on Case 1721, which has been in limbo since the original application made 45 years ago (Nielsen & Klausewitz, 1968) and completed by an additional request 41 years ago (Woodland, 1972). The case and the subsequent comments concern three generic names of fishes well known in the literature. They are in frequent use by ecologists; incorporated in legal instruments on conservation and international trade; used in the aquarium-fish trade; and in aquaculture. They are also of relevance to veterinary medicine and public health as some species inflict wounds, others have poisonous glands, and still others may have poisonous flesh. The status and type species of these three names are important because each is the type genus of a family-group name, two of them in universal use.

Comments were published between 1969 and 1973 (Smith, 1969; Taylor, 1970; Woodland, 1972, 1973), and R.V. Melville, then Secretary of the Commission, corresponded with Nielsen, Klausewitz, Taylor and Woodland until 1980 but the case was never presented to the Commission for a ruling.

During the 45 years that have passed, the 1968 nomenclature has been maintained and stabilised by virtue of Article 82.1, and is in universal usage. Closing the case is not an option as it entails a return to the normal application of the Code and hence a complete destabilisation of the current nomenclature (details below). The usage maintained under Article 82.1 dates back to about 1910. After a century of continuous usage, and having had four decades of opportunity to change the status quo, the Commission has no alternative but to issue a ruling that will ratify the current usage. I suggest that it is not constructive or consistent to rule against the current usage whose universality the Commission actually established by allowing the case to sleep.

Availability of *Siganus*

The case commenced when Nielsen & Klausewitz (1968) asked for the ‘validation’ of the name *Siganus* Forskål, 1775 under the Commission’s plenary power. According to these authors, the manner in which Forskål had made the name *Siganus* available was ambiguous and left room for interpreting it as a species name in the genus *Scarus* Forskål, 1775. On p. x, Forskål had the heading ‘SCARUS: novum genus’ under which he listed species numbered 9 to 18. Species 9 was ‘rivulatus [. . .] nov. genus: SIGANUS’. Pages 25–26, Forskål described species 9. The description started with ‘SCARUS SIGANUS: RIVULATUS; maxillis continuis, complanatis, [etc.]’. Species 10 to 18 do not mention ‘SIGANUS’. Nielsen & Klausewitz explained why *Siganus* is a not an alternative species name for *rivulatus* but a genus-group name; they then concluded that *rivulatus* is type species by monotypy. Both *Scarus* and *Siganus* are available from Forskål (1775). ‘In order to put an end to all doubts’, Nielsen & Klausewitz asked the Commission to ‘validate’ *Siganus* and designate *rivulatus* as the type species, to validate *Scarus* (with the type species *psittacus* designated by Jordan &

Gilbert, 1882 [sic]), and to place *Siganus*, *Scarus*, *rivulatus*, *psittacus* and SIGANIDAE on the respective Official Lists.

This application was not necessary. The way the case was presented shows that a simple application of the Code resolves the problem.

In fact *rivulatus* is not type by monotypy. The new genera established in Forskål (1775) are listed on page ii; this includes 'SCARUS. (Scarus 11–18.)' and next line 'SIGANUS. (Scarus 9. 10.)'. This format (also used for the other fish genera listed) means that the species described as Scarus 9 and 10 belong to the genus *Siganus* and that Scarus 11–18 belong to the genus *Scarus*. This unambiguously refers to the species described under the numbers 9 and 10 on p. 2526, viz. *S. rivulatus* and *S. stellatus*. The type species of *Siganus* is *Scarus rivulatus* Forskål, 1775, p. 25, by subsequent designation by Gill (1884, p. 280).

Also, the earliest type species designation for *Scarus* is *S. psittacus* Forskål, 1775, by subsequent designation by Swain (1883, p. 274 [2 January]) not by Jordan & Gilbert, 1882, p. 938, which in fact appeared in April 1883 (Bean, 1883, p. 661). In view of this, the application seems even less necessary.

***Teuthis* as a siganid**

Taylor (1970) pointed out that *rivulatus* had already been designated as type of *Siganus* by Gill, 1884, p. 280. Gill's designation in fact made *Siganus* a junior subjective synonym of *Teuthis* Linnaeus, 1766 because the type of *Teuthis* (*T. javus* Linnaeus, 1766) is congeneric with the type of *Siganus*. *Teuthis javus* was designated as type of *Teuthis* in Opinion 93 (ICZN, 1926). For unknown reasons, *Teuthis* was omitted from the printed Official List (and still is). *Teuthis* is type genus of TEUTHIDIDAE Bonaparte, 1831. Taylor designated a lectotype for *T. javus*. He recommended the Commission to take no action concerning *Siganus* but place TEUTHIDIDAE and *Teuthis* on the Official List, with *T. javus* as type species and to confirm the lectotype that he had just designated. Taylor's proposal would have resulted in replacing *Siganus* by *Teuthis*, and SIGANIDAE by TEUTHIDIDAE.

Woodland (1973) examined the 'lectotype' of *javirus* designated by Taylor (1970) and concluded that it was not part of the type series and therefore could not be the lectotype. My examination of the case shows that Linnaeus (1766, p. 507) based *T. javus* on two literature sources: Gronovius, 1763, p. 113, n° 352, pl. 8 fig. 4 and Valentyn, 1726, p. 476, pl. fig. 410. The specimen described and figured by Gronovius unambiguously belongs to the family SIGANIDAE and that described by Valentyn to the family ACANTHURIDAE [(not seen by me, identified as *Acanthurus glaucopareius* Cuvier, 1829 (p. 224) by Cuvier & Valenciennes, 1835, p. 191 [= *A. nigricans* (Linnaeus, 1758, p. 274)]). In addition, Gronovius's account too, is based on references to Rondelet, Ray, Gesner and two species in Valentyn, apparently including more species in still more families.

The type species of *Teuthis* listed in Opinion 93 (*T. javus*) makes *Teuthis* and TEUTHIDIDAE valid names for present *Siganus* and SIGANIDAE (rabbit fishes), or *Teuthis* a valid name for current *Acanthurus*, depending of the lectotype designation.

***Teuthis* as an acanthurid**

The wording of Opinion 93 could have been more explicit, but the intention was to replace the usage that had been introduced by Gill (1884, p. 278), who had validly

designated *Teuthis hepatus* Linnaeus, 1766 (p. 507) as type species of *Teuthis*. Linnaeus had based *T. hepatus* on various bibliographic sources, which refer to up to five species in three genera, including the Atlantic-Ocean *Acanthurus chirurgus* (Bloch, 1787, p. 99), the Indo-Pacific species currently known as *Paracanthurus hepatus*, and apparently *Naso lituratus* (Forster, in Schneider, 1801, p. 216) and *A. nigricans* (Linnaeus, 1758, p. 274).

Gill explicitly had *Chaetodon chirurgus* in mind when he designated *T. hepatus* as type. At that time the type-species designation was valid, but the synonymy of *T. hepatus* and *C. chirurgus* could only be fixed by the designation of a lectotype for *T. hepatus*, which has never been done. *Chaetodon chirurgus* is presently considered a valid species of *Acanthurus* Forskål, 1775. If *T. hepatus* is understood as identical to *C. chirurgus* (as did Gill), then: (1) the well-known *A. chirurgus* becomes a junior synonym of *T. hepatus*, a name usually applied to another well-known species; (2) *Acanthurus* becomes a junior synonym of *Teuthis*; (3) the Indo-Pacific *Paracanthurus 'hepatus'* (more below) should apparently be called *P. triangulus* (Valenciennes, in Cuvier & Valenciennes, 1835, p. 189) (a name possibly not used as the valid name of a species after 1835); (4) TEUTHIDIDAE Bonaparte, 1831 becomes a junior synonym of ACANTHURINI Rafinesque-Schmaltz, 1810. But *Siganus* and SIGANIDAE retain the usage current in 1968.

Nevertheless, since Gill designated it as type species for *Teuthis*, *T. hepatus* has almost always been used as the valid name for another well-known species from the Indo-Pacific now called *Paracanthurus hepatus*. If, by lectotype designation, *T. hepatus* were understood as the Indo-Pacific species, the only change is that *Paracanthurus* Bleeker, 1863, p. 252 becomes a junior synonym of *Teuthis*. If *T. hepatus* were restricted to the Atlantic *C. chirurgus*, the genus name *Paracanthurus* could be retained for the Indo-Pacific '*hepatus*' on the grounds of a mis-identified type species (Article 70.3) but the species name should be changed (see above).

Suppression of *Teuthis*

By the time Opinion 93 was issued (ICZN, 1926), the usage of *Teuthis* was limited mainly to acanthurids and (rarely) siganids; its usage continued to decline and in the 1930s it was almost abandoned. Commenting on Case 1721, Woodland (1972) noted that the nomenclature of siganids had been stable since 1926 (then after 46 years), although in defiance of Opinion 93. Woodland asked the ICZN to (1) annul that part of Opinion 93 relevant to *Teuthis*; (2) suppress *Teuthis* for the purposes of the principle of priority but not those of the principle of homonymy; and (3) place *Teuthis* on the Official Index.

Rejecting Woodland's proposal or closing the case without ruling means the return to the normal application of the Code, with ambiguity as to the type species of *Teuthis* and the multispecific type series of each of the potential type species, affecting the usage of the well-established names *Siganus*, *S. javus*, SIGANIDAE, *Acanthurus*, *A. chirurgus*, *Paracanthurus* and *P. hepatus*. Return to the situation of 1926 by a strict application of the Code would not make sense, in my opinion, especially after the Commission has let the issue rest for four decades.

Stability would be better maintained by the suppression of *Teuthis* than by the reversal of precedence. Reversal of precedence between *Teuthis* and *Siganus* leaves the door open to a possible re-use of the name for a lineage within the present *Siganus*

and this would again create confusion. Further, to be meaningful, reversal of precedence requires a prior clarification of the type species of *Teuthis* and, whichever the type species, a lectotype designation. If the purpose of Opinions is to contribute to stability, the reversal of precedence or the partial or conditional suppression of names does not achieve this goal.

Woodland (1972, p. 193) alluded to the possibility of retaining *Teuthis*, but with *T. hepatus* as type-species, as originally designated by Gill, 1884, p. 278. This, however, does not seem judicious as the name *Teuthis* would then become a senior synonym of either *Paracanthurus*, *Acanthurus* or *Naso*, depending on the lectotype designation.

The suppression of *Teuthis* will have the consequence of *Hepatus* Scopoli, 1777, p. 455 becoming a senior objective synonym of *Paracanthurus*. *Hepatus* Scopoli, 1777 too, has sometimes been listed in the synonymy of *Siganus*, with *S. javus* as type species. *Hepatus* was first proposed by Gronovius (1763, p. 113), which is not an available work (Opinion 89; ICZN, 1925, p. 27). Scopoli (1777, p. 455) listed it as a synonym of *Teuthis*. It was then treated as valid and made available by Walbaum (1792, p. 655) (Article 11.6.1), who included two species, *T. javus* and *T. hepatus*. Therefore, *T. hepatus* is type species by absolute tautonymy among the originally included species (Article 68.4, with the originally included species determined by Article 67.12). *Hepatus* continued to be in use until about 1936, but with authorship attributed to Gronovius. *Hepatus* has also been made available independently at least twice, by Artedi (1793, p. 113) without validly included species (but the included non-binominal names refer to *Labrus hepatus* Linnaeus, 1758, p. 282, presently in SERRANIDAE), and Snodgrass & Heller (1905, p. 403), apparently still without a designated type species. Because of the problems with the multispecific type series of *T. hepatus* mentioned above, after the suppression of *Teuthis*, depending on a lectotype designation, *Hepatus* Scopoli could become a senior synonym of *Paracanthurus* Bleeker, 1863 or *Naso* La Cèpède, 1801, p. 105. To avoid further problems and confusion I recommend that *Hepatus* be suppressed together with *Teuthis*.

Some authors list *T. hepatus* as the type species of the well known *Acanthurus*, which is erroneous since it was not originally included; the type species of *Acanthurus* is *Chaetodon unicornis* Forskål, 1775, which is a problem on its own because this is not an *Acanthurus* as in current usage.

I considered the option to designate here lectotypes for *T. javus* and *T. hepatus*, but it would be inopportune before the suppression of *Teuthis* and *Hepatus*.

There are a number of unjustified emendations of the name *Teuthis* and all should be suppressed. *Teuthis* Schneider, 1784, p. 113 is a junior homonym in Mollusca.

Although it is now considered that Gill (1884, p. 280) is the author of the first type-species designation for *Siganus* (*S. rivulatus*), the ichthyological literature of the 18th and early 19th centuries is replete with overlooked or misinterpreted nomenclatural acts and it cannot be excluded that some earlier designation may still come to light and threaten the stability again. To avoid this risk, I propose to use the plenary power to confirm *rivulatus* as type species.

Scarus

Scarus does not seem to require any action. Smith (1969) commented that the choice of *S. psittacus* as type species for *Scarus* was unfortunate and suggested the

designation of *S. ghobban* Forskål, 1775 instead. That *S. psittacus* is type species of *Scarus* does not seem to be questioned today.

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that the following names be suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
 - (a) *Teuthis* Linnaeus, 1766, and all its possible emendations;
 - (b) TEUTHIDIDAE Bonaparte, 1831;
 - (c) *Hepatus* Scopoli, 1777;
- (2) to remove from the Official List of Generic Names in Zoology the following names
 - (a) *Teuthis* Linnaeus, 1766 as suppressed in (1)(a) above;
 - (b) *Hepatus* Scopoli, 1777 as suppressed in (1)(c) above;
- (3) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
 - (a) *Teuthis* Linnaeus, 1766, and all its possible emendations, as suppressed in (1)(a) above;
 - (b) *Hepatus* Scopoli, 1777, as suppressed in (1)(c) above;
- (4) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name TEUTHIDIDAE Bonaparte, 1831 (type genus *Teuthis* Linnaeus, 1766), as suppressed in (1)(b) above.
- (5) to use its plenary power to set aside all previous type fixations for *Siganus* Forskål, 1775 and designate *Scarus rivulatus* Forskål, 1775, as its type species;
- (6) to place on the Official List of Generic Names in Zoology the name *Siganus* Forskål, 1775 (gender: masculine), type species *Scarus rivulatus* Forskål, 1775, as ruled in (5) above;
- (7) to place on the Official List of Specific Names in Zoology the name *rivulatus* Forskål, 1775, as published in the binomen *Scarus rivulatus* (specific name of the type species of *Siganus* Forskål, 1775);
- (8) to place on the Official List of Family-Group Names in Zoology the name SIGANIDAE Richardson, 1836 (type genus *Siganus* Forskål, 1775).

Acknowledgments

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Comment on Case 3560: *Plateosaurus engelhardti* Meyer, 1837 (Dinosauria, Sauropodomorpha): proposed replacement of unidentifiable name-bearing type by a neotype

(Case 3560; see BZN **69**: 203–212, 295–296)

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Galton has recently applied for the designation of a neotype for the Late Triassic sauropodomorph dinosaur *Plateosaurus engelhardti* Meyer, 1837 under Article 75.5 of the Code. Whereas I support Galton's application to have Meyer (1837) rather than Meyer (1839) formally established as the authority for *Plateosaurus engelhardti*, there are issues that lead me to urge the Commission to reject his proposed designation of a neotype.

In his detailed revision of the material of *Plateosaurus* from Bavaria, Moser (2003) designated a lectotype from Meyer's original suite of skeletal remains of *Plateosaurus engelhardti* from the Feuerletten (uppermost Middle Keuper; Late Triassic: Norian) from a clay pit south of Heroldsberg, Bavaria (Germany). This lectotype, a partial sacrum with three vertebrae (Universität Erlangen-Nürnberg, UEN 552), has long been featured in discussions of the anatomy and diversity of *Plateosaurus*. Galton's claims that the material is 'non-diagnostic' or even 'unidentifiable' have to be carefully considered in historical perspective. When Meyer (1839) discussed the distinctiveness of *Plateosaurus engelhardti* he explicitly made reference to the sacrum comprising three vertebrae. With much new and better-preserved material of *Plateosaurus* and other dinosaurs recovered since that time the distribution of this character state has changed. However, comparable situations are found in countless other taxa, especially those established during the early years of Linnean taxonomy. Addressing it in the manner suggested by the application discussed here would likely result in chaotic changes in zoological nomenclature.

Galton proposes to designate an excellently preserved, almost complete skull and postcranial skeleton of *Plateosaurus* from the Knollenmergel (Trossingen Formation) of Trossingen, Baden-Württemberg, now housed in the collections of the Staatliches Museum für Naturkunde Stuttgart (SMNS 13200), as the neotype of *Plateosaurus engelhardti*. The rationale for his proposal is the fact that this specimen has long been

considered the anatomical standard for *Plateosaurus*. Indeed, Yates (2003, p. 331) went so far as to refer to SMNS 13200 as ‘the unofficial holotype of *Plateosaurus engelhardti*.’

Galton mentions that Fraas (1913) designated SMNS 13200 as the holotype of *Plateosaurus trossingensis*. Although Fraas’s original description was brief, Moser (2003, p. 147) noted that it was adequate for the purpose of establishing this binomen under Article 12 of the Code. Later Fraas was concerned about the specific name *trossingensis* because Huene (1907–1908) had previously used the same name for a species of *Teratosaurus* (now known to be based on indeterminate sauropodomorph remains) and decided to replace *trossingensis* with the new specific epithet *integer* (Huene, 1915, p. 3). Huene (1926) described the skeleton of SMNS 13200 in great detail but hesitated to use a particular binomen for this specimen. He clearly stated that the specimen was the holotype of Fraas’s *Plateosaurus trossingensis* but then stated ‘... but this name cannot be maintained as a very much older one is available’ (Huene, 1926, p. 141; my translation). Huene referred to a forthcoming study for further discussion of the specific status of SMNS 13200. That publication proved to be Huene’s (1932) monographic review of all saurischian dinosaurs known at that time. In this study Huene (1932, p. 140) considered *Plateosaurus trossingensis* a nomen nudum and designated SMNS 13200 as the holotype of the new species *Plateosaurus fraasianus* because of the concern about a possible confusion with *Teratosaurus trossingensis*. However, it has never been unambiguously established that *Plateosaurus trossingensis* and *Teratosaurus trossingensis* (considered a nomen dubium by Galton, 2001) were congeneric. Thus, there is no need for a replacement name for the former, and *Plateosaurus fraasianus* Huene, 1932 is a junior objective synonym of *P. trossingensis* Fraas, 1913.

Although many authors have argued that there is only a single species of *Plateosaurus* from France, Germany, Greenland, and Switzerland (Galton, 1990, 2001; Moser, 2003), others (Yates, 2003, 2007; Galton & Upchurch, 2004) have recognized two or more species. There is still no majority consensus regarding the species-level taxonomy of *Plateosaurus*: for example, Galton & Kermack (2010) still listed *Plateosaurus trossingensis* as a distinct taxon. Neither Galton nor any other author has ever demonstrated conclusively that *Plateosaurus engelhardti* and *P. trossingensis* are conspecific, and thus the holotype of the latter cannot serve as the neotype of the former. Indeed, if one were to accept Galton’s argument that the lectotype of *Plateosaurus engelhardti* is ‘unidentifiable’, it would be impossible to compare this taxon with *P. trossingensis* or any other sauropodomorph dinosaur in a meaningful fashion. If that is the case, another species should be proposed as the type species of the genus *Plateosaurus* in order to preserve the generic name.

OPINION 2317 (Case 3540)**AMPHIPORIDAE Rukhin, 1938 (Porifera, Stromatoporida, Amphiporida): emended to AMPHIPORAIDAE to remove homonymy with AMPHIPORIDAE McIntosh, 1874 (Nemertea, Hoplonemertea)**

Abstract. The Commission has removed homonymy between the family-group name AMPHIPORIDAE Rukhin, 1938 (Porifera, Stromatoporoidea, Amphiporida) and AMPHIPORIDAE McIntosh, 1874 (Nemertea, Hoplonemertea) by emending the spelling of the stem of *Amphipora* Schultz, 1883 to *Amphipora-* to give AMPHIPORAIDAE, while leaving the nemertean family-group name (based on *Amphiporus* Ehrenberg, 1831) unchanged.

Keywords. Nomenclature; taxonomy; Nemertea; Enopla; Hoplonemertea; AMPHIPORIDAE; *Amphiporus*; Porifera; Stromatoporida; Amphiporida; AMPHIPORAIDAE; *Amphipora*; *Amphipora ramosa*; nemerteans; stromatoporoids; Silurian; Devonian; European seas; cosmopolitan.

Ruling

- (1) Under the plenary power the Commission has ruled that for the purposes of Article 29 of the Code the stem of the generic name *Amphipora* Schulz, 1883 is *Amphipora* –.
- (2) The name *Amphipora* Schulz, 1883 (gender: feminine), type species by original designation *Caunopora ramosa* Phillips, 1841, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *ramosa* Phillips, 1841, as published in the binomen *Caunopora ramosa* (specific name of the type species of *Amphipora* Schulz, 1883), is hereby placed on the Official List of Specific Names in Zoology.
- (4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
 - (a) AMPHIPORIDAE McIntosh, 1874, type genus *Amphiporus* Ehrenberg, 1831 (Nemertea);
 - (b) AMPHIPORAIDAE Rukhin, 1938, type genus *Amphipora* Schulz, 1883 (spelling emended by the ruling in (1) above) (Porifera).
- (5) The name AMPHIPORIDAE Rukhin, 1938, type genus: *Amphipora* Schulz, 1883 (Porifera) is hereby placed on the Official List of Rejected and Invalid Family-Group Names in Zoology.

History of Case 3540

An application to remove homonymy between the family-group name AMPHIPORIDAE Rukhin, 1938 (Porifera, Stromatoporoidea, Amphiporida), and AMPHIPORIDAE McIntosh, 1873 (Nemertea, Hoplonemertea) by emending the spelling of the stem of *Amphipora* Schulz, 1883 to *Amphipora-* to give AMPHIPORAIDAE was received from Hüseyin Özdikmen and Hakan Demir (*Gazi University, Ankara, Turkey*) on 28 July 2010. After correspondence the case was published in BZN 68: 167–169 (2011). The

title, abstract and keywords of the case were published on the Commission's website. One comment was distributed to the Commissioners, as it arrived after the deadline for printed comments had passed. The comment from Hiroshi Kajihara (*Hokkaido University, Sapporo, Japan*) stated that while he was supportive of the proposal in general, he had a different view on the publication date of the nemertean family-name AMPHIPORIDAE. He pointed out that as Özdikmen & Demir (BZN 68: 169) were correctly aware, McIntosh's (1873–1874) work was issued in two parts, *Part I* and *Part I Continued*, published in 1873 and 1874, respectively. However, the relevant page, in which AMPHIPORIDAE was established (*ibid.*, p. 134), is contained in *Part I Continued* issued in 1874. Therefore, according to Article 21.5 of the Code, the date of the name AMPHIPORIDAE McIntosh is 1874 (cf. Kajihara, H. 2007. A taxonomic catalogue of Japanese nemerteans (phylum Nemertea). *Zoological Science*, 24(4): 287–326), not 1873 as printed in the Case. Although this difference does not affect the homonymy, Kajihara emphasized that it was important that the correct date be used if the name were placed on the Official List of Family-Group Names in Zoology.

Decision of the Commission

On 1 December 2012 the members of the Commission were invited to vote on the proposals published in BZN 68: 168. At the close of the voting period on 1 March 2013 the votes were as follows:

Affirmative votes – 22: Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Halliday, Harvey, Krell, Kojima, Kullander, Lamas, Lim, Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 0.

Alonso-Zarazaga split his vote, voting FOR proposals 1,2,4,5 and AGAINST proposal 3.

Grygier split his vote, voting FOR proposals 1, 2, 4b, 5, AGAINST proposal 3 and CONDITIONAL for proposal 4a.

Kottelat split his votes, voting FOR proposals 1, 2, 4, 5 and AGAINST proposal 3.

Pyle and Ng were on leave of absence.

SPLITTING his vote, Grygier explained why he voted AGAINST proposal 3. He said this Case included no request for any particular ruling concerning the type species of *Amphipora* or the specific name *ramosa* per se; it was therefore unclear to him, under the specifications provided in Article 78.4.2 of the Code, why *ramosa* should be entered in the Official List. Grygier explained that he voted FOR Proposal 4a under the condition that the date of publication of AMPHIPHORIDAE be given in the Official List as 1874, not 1873, in accordance with the comment by Kajihara.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Amphipora Schulz, 1883. *Jahrbuch der Königlich Preussischen Geologischen Landesanstalt (und Bergakademie) zu Berlin für 1882*: 245.

AMPHIPORIDAE Rukhin, 1938 (results from this ruling), p. 42.

AMPHIPORIDAE McIntosh, 1874, *A monograph of the British annelids. The nemerteans*, Part 1 continued (1874), The Ray Society, London, p. 134.

- AMPHIPORIDAE Rukhin, 1938, *Gostrest Dal'stroya. Materialy po izucheniyu Kolymsko-Indigirskogo kraya. Ser. 2. Geologiya i geomorfologiya*, vyp. 10 [*Contributions to the knowledge of the Kolyma-Indigirka Land. Series 2, Geology and Geomorphology*], vol. 10, p. 42.
- ramosa*, *Caunopora*, Phillips, 1841, *Figures and descriptions of the Paleozoic fossils of Cornwall, Devon, and West Somerset observed in the course of the Ordinance Geological Survey of that district*, Longman, Brown, Green & Longmans, London, p. 19.

OPINION 2318 (Case 3558)***Pleurotoma scabriuscula* Brugnone, 1862 (currently *Mangelia scabriuscula*; Mollusca, Gastropoda, CONOIDEA): specific name conserved**

Abstract. The Commission has conserved the specific name *Pleurotoma scabriuscula* Brugnone, 1862 (originally published as *Pleurotoma scabriusculum*; currently *Mangelia scabriuscula*, MANGELIIDAE) by ruling that it is not invalid by reason of being a junior primary homonym of *Pleurotoma scabriuscula* Edwards, 1861 (currently *Crassispira scabriuscula*, PSEUDOMELATOMIDAE).

Keywords. Nomenclature; taxonomy; Gastropoda; CONOIDEA; MANGELIIDAE; PSEUDOMELATOMIDAE; *Mangelia*; *Raphitoma*; *Crassispira*; *Pleurotoma*; *Pleurotoma scabriuscula*; gastropods; Eocene; Pliocene; Pleistocene; Recent; Great Britain; Italy.

Ruling

- (1) Under the plenary power the Commission has ruled that the specific name *Pleurotoma scabriuscula* Brugnone, 1862 is not invalid by reason of being a junior primary homonym of *Pleurotoma scabriuscula* Edwards, 1861.
- (2) The following names are hereby placed on the Official List of Specific Names in Zoology:
 - (a) *scabriuscula* Brugnone, 1862, as published in the binomen *Pleurotoma scabriusculum*, with the endorsement that it is not invalid by reason of being a junior primary homonym of *Pleurotoma scabriuscula* Edwards, 1861, as ruled in (1) above;
 - (b) *scabriuscula* Edwards, 1861, as published in the binomen *Pleurotoma scabriuscula*.

History of Case 3558

An application to conserve the specific name *Pleurotoma scabriuscula* Brugnone, 1862 (originally published as *Pleurotoma scabriusculum*; formerly assigned to CONIDAE; currently *Mangelia scabriuscula*, MANGELIIDAE), by ruling that it is not invalid by reason of being a junior primary homonym of *Pleurotoma scabriuscula* Edwards, 1861 (formerly assigned to TURRIDAE; currently *Crassispira scabriuscula*, PSEUDOMELATOMIDAE), was received from Daniele Scarponi (*University of Bologna, Italy*), Alessandro Ceregato (*ISMAR CNR, Bologna, Italy*), Giano Della Bella (*Bologna, Italy*) and John K. Tucker (*Illinois Natural History Survey, Brighton, IL, U.S.A.*) on 17 March 2011. After correspondence the case was published in BZN 68: 180–183 (2011). The title, abstract and keywords of the case were published on the Commission's website. A comment in support was published in BZN 68: 282.

Decision of the Commission

On 1 December 2012 the members of the Commission were invited to vote on the proposals published in BZN 68: 182. At the close of the voting period on 1 March 2013 the votes were as follows:

Affirmative votes – 24: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Krell, Kojima, Kottelat, Kullander, Lamas, Lim, Minelli, Pape, Patterson, Rosenberg, Štys, Winston, Yanega, Zhang and Zhou.

Negative votes – 1: van Tol.

Pyle and Ng were on leave of absence.

Voting FOR, Bouchet added that he wished to record that the family allocations of the names *Pleurotoma scabriuscula* Edwards, 1861 and *Pleurotoma scabriuscula* Brugnone, 1862 had been reassigned since the application, based on Bouchet, P., Kantor, Y., Sysoev, A. & Puillandre, N. 2011. A new operational classification of the Conoidea (Mollusca, Gastropoda), *Journal of Molluscan Studies*, 77: 273–308.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

scabriuscula, *Pleurotoma*, Brugnone, 1862, *Memoria sopra alcuni Pleurotomi fossili dei dintorni di Palermo*, F. Lao, Palermo, p. 39.

scabriuscula, *Pleurotoma*, Edwards, 1861, *A monograph of the Eocene Mollusca, or descriptions of shells from the older Tertiaries of England. Part III, No. II. Prosobranchiata (continued)*, Palaeontographical Society, London, vol. 9, p. 254.

OPINION 2319 (Case 3503)***Papilio hesperus* Westwood, 1843 (Insecta, Lepidoptera, PAPILIONIDAE): conserved by suppression of *Papilio hesperus* Fabricius, 1793 (NYMPHALIDAE)**

Abstract. The Commission has conserved the name *Papilio hesperus* Westwood, 1843 by suppression of *Papilio hesperus* Fabricius, 1793. Coincidentally this also conserves the name *Harma chalcis* C. & R. Felder, 1860, which is in widespread use in much of Africa in the combination *Euryphura chalcis*.

Keywords. Nomenclature; taxonomy; Insecta; Lepidoptera; NYMPHALIDAE; PAPILIONIDAE; *Papilio*; *Hamanumida*; *Hamanumida daedalus*; *meleagris*; *hesperus*; *phemius*; *chalcis*; Africa.

Ruling

- (1) Under the plenary power the Commission has suppressed the name *hesperus* Fabricius, 1793, as published in the binomen *Papilio hesperus*, for the purposes of both the Principle of Priority and the Principle of Homonymy.
- (2) The name *hesperus* Westwood, 1843, as published in the binomen *Papilio hesperus*, is hereby placed on the Official List of Specific Names in Zoology.
- (3) The name *hesperus* Fabricius, 1793, as published in the binomen *Papilio hesperus* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 3503

An application to conserve the name *Papilio hesperus* Westwood, 1843 (Lepidoptera, PAPILIONIDAE) for a well-known species of butterfly by suppression of *Papilio hesperus* Fabricius, 1793, was received from Torben B. Larsen (*Frederiksberg C, Denmark*), Masaya Yago (*The University Museum, The University of Tokyo, Japan*), R.I. Vane-Wright (*Natural History Museum, London and Durrell Institute of Conservation and Ecology, University of Kent, Canterbury, U.K.*), Mark Williams (*Onderstepoort, South Africa*), Kyoichiro Ueda (*Kitakyushu Museum of Natural History and Human History, Kitakyushu, Japan*) and Takashi Yokochi (*Aichi, Japan*) on 8 September 2009. After correspondence the case was published in BZN 68: 190–196 (2011). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this Case.

Decision of the Commission

On 1 December 2012 the members of the Commission were invited to vote on the proposals published in BZN 68: 194–195. At the close of the voting period on 1 March 2013 the votes were as follows:

Affirmative votes – 25: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Krell, Kojima, Kottelat, Kullander, Lamas, Lim,

Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 0.

Pyle and Ng were on leave of absence.

No comments were received from Commissioners on the votes.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

hesperus, *Papilio*, Westwood, 1843, *Arcana Entomologica; or illustrations of new, rare, and interesting species*, vol. 1. iv, W. Smith, London, p. 189.

hesperus, *Papilio*, Fabricius, 1793, *Entomologia systematica emendata et aucta*, 3(1): [vi], C.G. Proft, Copenhagen, p. 47.

OPINION 2320 (Case 3536)***Stegosaurus* Marsh, 1877 (Dinosauria, Ornithischia): type species replaced with *Stegosaurus stenops* Marsh, 1887**

Abstract. The Commission has preserved stability in the taxonomy of stegosaurian dinosaurs by replacing *Stegosaurus armatus* Marsh, 1877, the unidentifiable type species of the ornithischian dinosaur genus *Stegosaurus* Marsh, 1877, with the very well represented nominal species *Stegosaurus stenops* Marsh, 1887, also from the Upper Jurassic Morrison Formation, U.S.A.

Keywords. Nomenclature; taxonomy; Dinosauria; Ornithischia, Stegosauria, STEGOSAURIDAE; STEGOSAURINAE; *Stegosaurus*; *Stegosaurus armatus*; *Stegosaurus stenops*; western U.S.A.; Upper Jurassic.

Ruling

- (1) Under the plenary power the Commission has set aside all previous fixations of type species for the nominal genus *Stegosaurus* Marsh, 1877 and designated *Stegosaurus stenops* Marsh, 1887 as the type species.
- (2) The name *Stegosaurus* Marsh, 1877 (gender: masculine), type species *Stegosaurus stenops* Marsh, 1887, as ruled in (1) above, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *stenops* Marsh, 1887, as published in the binomen *Stegosaurus stenops* (specific name of the type species of *Stegosaurus* Marsh, 1877, as ruled in (1) above), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3536

An application to preserve stability in the taxonomy of stegosaurian dinosaurs by replacing *Stegosaurus armatus* Marsh, 1877, the unidentifiable type species of the ornithischian dinosaur genus *Stegosaurus* Marsh, 1877, with the very well represented nominal species *Stegosaurus stenops* Marsh, 1887, also from the Upper Jurassic Morrison Formation, U.S.A., was received from Peter M. Galton (*College of Naturopathic Medicine, University of Bridgeport, Bridgeport, CT, & Peabody Museum of Natural History, Yale University, New Haven, CT, U.S.A.*) on 20 September 2010. After correspondence the case was published in BZN 68: 127–133 (2011). The title, abstract and keywords of the case were published on the Commission's website. Comments were published in BZN 68: 213–217 and 69: 63–64.

Decision of the Commission

On 1 December 2012 the members of the Commission were invited to vote on the proposals published in BZN 68: 131. At the close of the voting period on 1 March 2013 the votes were as follows:

Affirmative votes – 22: Alonso-Zarazaga, Ballerio, Brothers, Fautin, Grygier, Halliday, Harvey, Krell, Kottelat, Kullander, Lamas, Lim, Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 3: Bogutskaya, Bouchet and Kojima.

Pyle and Ng were on leave of absence.

Voting FOR, Grygier quoted a comment (BZN 69: 63–64) in which Demirjian urged ‘the Commission to address the priority of *S. unguatus* over *S. stenops*’, but noted that he did not make any explicit proposal. Grygier said that although the Comment was somewhat confused in that *S. unguatus* (dated 1879) could not ‘become a junior subjective synonym of *S. stenops*’ (dated 1887), he felt that the point was well taken in that even if the Commission designates *S. stenops* as the type species of *Stegosaurus*, ontogenetic study might cause it to vanish into the synonymy of *S. unguatus*. Grygier suggested that Demirjian was perhaps hinting at a supplementary proposal to give *S. stenops* conditional precedence over *S. unguatus* in case of synonymy, an idea which has merit and should be borne in mind for future formal consideration. Also voting FOR, Halliday said that it was not necessary for the Commission to make any statement about the status of *ungulatus*. If further taxonomic research should show that *ungulatus* was a subjective synonym of *stenops*, that would not affect the status of *stenops* as the type species of *Stegosaurus*.

Voting AGAINST, Bouchet said that if the type material of *Stegosaurus armatus* Marsh, 1877 was considered unidentifiable, then the proposals addressed only part of the consequences. He said it would have been preferable to set aside this type material and to designate the holotype (USNM 4934) of *S. stenops* as holotype of *S. armatus*, thus establishing the identity of both the species *S. armatus* and the genus *Stegosaurus*. The technical solution offered by the applicant left the name *Stegosaurus armatus* in limbo. Also voting AGAINST, Kojima commented that the reasoning for replacement of the type species of *Stegosaurus* Marsh, 1877, i.e. *Stegosaurus armatus* Marsh, 1877 to be replaced with *Stegosaurus stenops* Marsh, 1887, was more taxonomic than nomenclatural. He said that a species was not necessarily monophyletic, and thus all the diagnostic characters of a species were not necessarily the autapomorphic characters for the species, and the fact that the holotype of *Stegosaurus armatus* Marsh, 1877 lacked parts representing putative autapomorphic characters for *Stegosaurus armatus* in its current usage could not be the reason to consider *Stegosaurus armatus* Marsh, 1877 a nomen dubium. Moreover, the concept of a taxon to which a name was attached could not be defined by its type specimen, as a type was purely a nomenclatural standard.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Stegosaurus Marsh, 1877, *American Journal of Science*, (3)14: p. 513.

stenops, *Stegosaurus*, Marsh, 1887, *American Journal of Science*, (3)34: 414.

Synonymy and its Discontents: Alfred Russel Wallace's Nomenclatural Proposals from the 'Species Notebook' of 1855–1859

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Abstract. Alfred Russel Wallace made fundamental contributions to biogeography and the establishment of evolutionary thinking. He was also a working collector who spent a total of twelve years traveling in Amazonia and southeast Asia, his immense collections yielding hundreds of new species. Wallace was, accordingly, intimately familiar with the diversity of species and varieties, and was attuned to fine shades of morphological difference in a geographical context. In identifying, preparing, labelling and cataloguing his myriad specimens Wallace often confronted nomenclatural issues, foremost among them keeping track of taxonomic synonyms. In the absence of internationally recognized codes of taxonomic nomenclature, synonyms proliferated in the 19th century. In Wallace's 'Species Notebook,' the most important of his field notebooks kept between 1855 and 1859 during his travels in southeast Asia, Wallace devoted several pages to addressing synonymy and related issues. I discuss Wallace's far-ranging proposals, which range from ways to stop the proliferation of synonyms to establishing central reference works to obviate the need for naturalists to redundantly review synonyms, and from cooperative natural history libraries to international committees to oversee designated publications for new descriptions. I also discuss Wallace's struggle to design an efficient catalogue layout for his collections, and how he sought to build information on geographical distribution into his cabinet and catalogue format. I consider, finally, Wallace's engagement with the principle of priority in the Species Notebook and other writings. While not all of Wallace's proposals proved practicable, several are in essence realized today; as seen through the lens of the Species Notebook, Wallace was far ahead of his time in regard to his creative solutions to the nomenclatural frustrations of his day.

1. Introduction

Alfred Russel Wallace (1823–1913) made significant contributions to a remarkable range of disciplines both scientific and social in his long and distinguished career (Berry, 2002). Wallace's scientific accomplishments, notably his foundational works in biogeography and evolutionary biology, are well known to biologists, while his social thinking is much less so. Wallace's writing on social issues typically took the form of prescriptions or solutions for real and perceived social ills. At times his scientific and social interests intersected, and there is perhaps no better example of this than Wallace's various proposals to address the highly vexing problems of synonymy and related nomenclatural issues. Here we see Wallace's characteristic creativity brought to bear on a problem of scientific practice, namely nomenclatural policy, and his schemes for making the labours of naturalists working with taxa (collectors, taxonomists, biogeographers, for example) at once easier and more efficient.

Wallace's prescriptions for remedying the synonymy problem are found in the 'Species Notebook,' the most important of the field notebooks that Wallace kept between 1855 and 1859 or 1860 (Linnean Society ms. 180), encompassing most of his eight-year expedition in Southeast Asia. The 2013 Wallace Centennial provided an opportunity to publish this notebook for the first time, with commentary (Costa, 2013). Its contents are far-ranging, from collection lists and short memoranda to lengthy discussions of an evolutionary nature. In the mix are some dozen pages with Wallace's nomenclatural proposals (Figure 1), the object of this paper. In the following exploration of Wallace's writings on nomenclatural issues I first describe Wallace as working collector and 'philosophical naturalist,' his collections and observations bearing on his quest to solve the mystery of species origins. These interests brought the problems of the proliferation of synonyms and other unsettled 19th century nomenclatural matters into sharp focus for Wallace. I then provide an overview of Wallace's prescriptions for addressing these problems; his proposals, most of which were never published, show him to be far ahead of his time in anticipating today's International Commission for Zoological Nomenclature and go-to catalogues and databases. Finally, I briefly consider some of Wallace's related nomenclatural writings, mainly his ideas on arranging collections and catalogues, and on the principle of priority in taxonomy.

2. 'A view to the theory of the origin of species'

Wallace was a self-taught naturalist, whose reading of *Vestiges of the Natural History of Creation* (Chambers 1844) at the age of 22 convinced him of the reality of transmutation (McKinney, 1972, pp. 9–12; Slotten, 2004, pp. 28–31; Fichman, 2004, pp. 66–70). Wallace and his friend Henry Walter Bates, who introduced him to entomology in 1844, were passionate beetle collectors, and their interest in beetle diversity extended to a broader philosophical interest in species and varieties: 'I begin to feel rather dissatisfied with a mere local collection; little is to be learnt by it,' Wallace wrote in 1847 to Bates, continuing that he 'should like to take some one family to study thoroughly, principally with a view to the theory of the origin of species. By that means I am strongly of opinion that some definite results might be arrived at' (Wallace Correspondence Project [WCP] letter 348). Their plan to pursue the species question by traveling to the tropics as collector-naturalists seems more than bold in view of their lack of formal scientific training, connections, or financial means, yet a year later Wallace and Bates found themselves deep in Amazonia, and their bounteous collecting commenced immediately. The two separated after their first year, for obscure reasons. Wallace spent four years in South America (1848–1852) followed by eight years in Southeast Asia (1854–1862). During that time, with the aid of able hired field assistants and an equally able agent, Samuel Stevens, in London, Wallace enthusiastically pursued what he had once referred to as 'my favourite subject—the variations, arrangements, distribution, etc., of species' (WCP348).

3. 'A blot upon our science'

As Wallace's collections both financed his travels and fuelled his pursuit of the species question, he was acutely aware of nomenclatural and taxonomic issues. Of the various unsettled matters at the time he was especially concerned with the interrelated

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Plan to stop the further increase of Synonyms.

Let 3 periodicals be appointed in each principal country of Europe & in the United States, in which alone ^{after a fixed date} New species can be described ^{so as to be} adopted by Naturalists. For example, let the Proceedings of the Linnean Zoological & Entomological Soc^y respectively be the medium for making known new species of Plants, Animals (Insects except?) and Insects ^{described in England} & let the directors of all the public Museums & all the Chief Naturalists of Europe &c. declare their determination to recognize no names of species described in other places unless repeated here also. Let the Proceedings of all the appointed Societies be regularly published say ^{monthly} quarterly in sheets & mutually exchanged, by which means the whole body of Naturalists would become immediately aware of all descriptions of new species & all hunting through the Proceedings of ~~the~~ Scientific Societies & ~~the~~ Periodicals be unnecessary.

To make sure of not being under synonyms each Society should have certain no. of S. meeting in the year so arranged as to come in rotation. Every person called after a certain date his species had been previously published.

Figure 1. Sample page from Alfred Russel Wallace’s Species Notebook, Linnean Society ms. 180, p. 67 (see Costa, 2013, p. 162). Wallace’s ‘Plan to stop the further increase of Synonyms’ is the first of several proposals in the Species Notebook bearing on nomenclature and related issues concerning collections and catalogues. Image courtesy of the Linnean Society of London.

issues of priority and the proliferation of synonyms. Aside from the scientific importance of accurately identifying genera, species, and varieties, Wallace faced formidable practical and logistical concerns stemming from taxonomy: lack of clarity on identification had financial ramifications; while any beautiful or unusual species and varieties were in demand, new or rare species and varieties fetched the highest prices back in London. He also needed a concise, convenient, and clear approach to recording his innumerable specimens *and* their synonyms in his collecting notebooks and consignments to Stevens. The problem was that each synonym had its own authority and reference work giving descriptions, locality information, etc., all of which must be recorded for each specimen in order to cross-reference and compare specimens collected at different times and places.

Wallace's choice of words in the entries bearing on the synonymy problem in his Species Notebook — 'disgrace,' 'source of error & perplexity,' and 'absurdity,' for example — nicely capture his frustration. As for the concomitant problem created by proliferating synonyms, he sought to rally fellow naturalists who seemed resigned to endlessly citing ever-growing lists of authorities and synonyms for each genus and species, incredulous at their complacency — that to them it seemed 'hardly to be considered as an evil, as something to be got rid of, as a blot upon our science. . . .' (Costa, 2013, p. 122). The proliferation of synonyms in 19th century taxonomy was in fact widely acknowledged as a crisis, and naturalists lamented the endless taxonomic confusion that the lack of a uniform and stable system of taxonomic nomenclature permitted. Synonyms arose in several ways, most commonly when a given species was described or named by more than one author (for example, as a result of the same species being taken by different collectors at different times and places), and as a result of taxonomic revisions in which for various reasons previously-named species were renamed. Synonyms might, then, arise through ignorance of the published work of others, over disagreement with that work, and even deliberate efforts to undermine rival naturalists. Nationalistic prejudices sometimes played a role, when rival scientific expeditions to the same regions yielded much the same species in different collections. Melville (1995) and Ride (1999) reviewed the synonymy problem and the history of efforts to address it.

A strict (if evolving) code of nomenclature including rules on priority and synonymy was adopted by international consensus only in the 20th century. The current Code, now in the 4th edition, traces its ancestry to proposed rules and recommendations of a committee commissioned by the British Association for the Advancement of Science in the 1840s. Naturalist Hugh Strickland chaired the committee, which issued its report in 1842 (Strickland et al., 1842). This became a standing committee on rules of nomenclature, and although Wallace never served on the committee he played a role in the refinement of the rules (see e.g. his recommendations to committee member William Jardine in letters WCP4193, WCP4194, and WCP4195, from 1865). He was also concerned with the dissemination of the rules, writing to Jardine in 1863 for copies for distribution (WCP3535), and commenting in a letter to his friend Alfred Newton (WCP4004) that copies of the rules 'should be sent to all really working naturalists if any good is to be done.' This letter continues:

'At least 50 copies [should] be sent to the Secretaries of the Linnean & Zoological Societies for distribution, or no good will be done . . . Will you as a personal

Table 1. Entries in the Wallace ‘Species Notebook’ (Linnean Society ms. 180) bearing on nomenclature and related topics.

Topic	Notebook Page Nos. ¹
Plan to stop the further increase of synonyms	67 ²
Plan to obviate the necessity for quoting synonyms . . .	68–69 ²
Formation of a complete library of natural history	70 ²
On reference to synonyms and quotation of authorities	126–130 ³
Plan for references in synopsis	157
Form for a synonymical catalogue	158

¹Page numbers correspond to the *recto* Species Notebook; see Costa (2013)

²Three entries apparently written consecutively, in the same pen; entry on pp. 68–69 is dated February 1857.

³Constituting a single entry, dated 12 May 1858

friend of Sir W.J. & a member of the Committee write & ask to have the residue of the copies printed sent to London for distribution. I know at least a dozen working Entomologists & Conchologists who ought to have them. They should also be sent liberally abroad.’ (Emphases in original, as will be true of all quoted material in this paper.)

The Strickland report of 1842 was unequivocal in its condemnation of ever-multiplying synonyms and related problems as an ‘evil’ (using this word five times), and lamented the ‘anarchical state’ of the science. Its rules and recommendations became known as the Stricklandian Code, among the very first provisions of which an assertion of the ‘Law of Priority,’ whereby the first name designated for a species accompanied by a complete description (and which fulfils certain basic requirements — Linnaean binominals, Latin orthography, etc.) will be the officially recognized name. This is true regardless of whether the name with priority was well known or had wide currency. The Stricklandian Code not only defined the ‘Law of Priority,’ but also discussed the conditions under which priority applies, when and which synonyms may be cancelled out, and exceptions to the priority rule.

4. ‘An Era in Natural Science’

Wallace’s remedies for the problems posed by synonymy, which, once realized, he declared would herald ‘an Era in Natural Science,’ are found in six entries in the Species Notebook constituting 11 pages (summarized in Table 1; see Figure 1 for example). Related entries, in particular his ideas on arranging and cataloguing his own collections and an opinion regarding the principle of priority, are found on another four pages in the Species Notebook, in one case continuing for an additional three pages in a second notebook, Wallace’s ‘Insect Register’ for 1858 (manuscript WCP4767). In the following discussions of Wallace’s proposals, space constraints preclude the complete quotation of his notebook entries, but see Costa (2013) for complete transcriptions with annotations.

The first three entries in the Species Notebook (‘Plan to stop the further increase of Synonyms,’ p. 67; ‘Plan to obviate the necessity for quoting any Synonyms for the future,’ pp. 68–69, and ‘Formation of a complete library of Natural History,’ p. 70), are interrelated and were likely made at the same time, judging from the appearance of the script and ink used. The second of these is dated February 1857, at which time

Wallace was collecting in the Aru Islands, where he was based from January to early July 1857. Wallace's proposals recognize the need for coordination, both among scientific societies and among countries.

A. Plan to stop the further increase of Synonyms

This plan (Figure 1) entails the designation of three journals in each country as the agreed-upon venues for the publication of new species descriptions:

'Let 3 periodicals be appointed in each principal Country of Europe & in the United States, in which alone [after a fixed date] New species can be described [so as to be] adopted by Naturalists. For example, let the Proceedings of the Linnaean Zoological & Entomological [Societies] respectively be the medium for making known New species of Plants, Animals . . . and Insects [described in England]. . .'

Wallace does not suggest what body might 'appoint' these periodicals, but implicitly this would be done by consensus among the learned societies of each nation with an active community of naturalists. Recognizing that this by itself is insufficient to ensure that descriptions are published solely in these 'go-to' journals, he then recommends that '...the directors of all the public Museums & all the chief Naturalists of Europe &c. declare their determination to recognize no names of species described in other places unless repeated here also.' The publication frequency of these journals should be increased, he next suggests, to ensure the timely communication of new descriptions:

'Let the Proceedings of all the appointed Societies be regularly published say [monthly] in sheets & mutually exchanged, by which means the whole body of Naturalists would become immediately aware of all descriptions of New species. . .'

A virtue of this scheme is that 'all hunting through the Proceedings of Scientific Societies & Periodicals become[s] unnecessary,' he declared. Wallace then had an after-thought. To ensure that the descriptions are indeed *new* species and minimize the possibility of introducing yet more synonyms, he added this suggestion written vertically in the margin: 'To make sure of not having more synonyms each Society should have certain N. S. [New Species] meeting in the year so arranged as to come in rotation. Every person could then be certain whether his species had been previously published.' Although Wallace's plan would make it easier for naturalists to find or keep up with new species descriptions (thereby remedying ignorance of existing descriptions, one of the main factors contributing to synonymy), he had not thought through how the appointed journals of different countries might coordinate; the door to synonymy by redundant species descriptions by naturalists of *different* countries was still open.

B. Plan to obviate the necessity for quoting any synonyms for the future

This next entry takes a step in the direction of international coordination. Here Wallace suggests a complete authorized catalogue, a central repository of synonyms for each branch of natural history 'prepared and corrected by Committees of

Naturalists in every country of Europe...’ (and presumably other countries). Wallace envisioned that this catalogue would give ‘all the synonyms under which each species has ever been described or figured since the establishment of the binomial nomenclature, with full references; at the same time determining, by authority, the true & standard specific name to be henceforward used by all naturalists without quotation of Synonyms.’ The international committees would be charged with determining ‘true Synonyms’ by ‘comparisons of the original specimens in all doubtful cases.’ The prospect of a central authoritative repository of all synonymical information for each species, such that naturalists need only cite this source and not be compelled to recount lengthy lists of synonyms and authorities repeatedly in each taxonomic paper and monograph, must have delighted Wallace. He rather idealistically enthused over the benefits he envisaged from this scheme:

‘This Catalogue being published, uniformity & simplicity of nomenclature will reign among Naturalists. In all Catalogues Lists, Synopses &c. & in all exchanges of specimens & communications among naturalists one specific name only need be used — every one being supposed to have a copy of the Catalogue in the department he studies [& all collections to be named by it]. The expense of all future Catalogues & systematic works will thus be much diminished a great portion of their space being now occupied by references to the synonyms. Uniformity in the naming of collections will be introduced & thus a fertile source of error & perplexity removed, & all those numerous ‘aliases’ which are a disgrace to Nat[ural] History will be kept out of sight, & only referred to for purposes of study.’

C. Formation of a complete library of natural history

The previous plan may have inspired this one — that is, the idea of a central authoritative catalogue may have suggested to Wallace going one step further, and having a centralized natural history library system where catalogues and other works could be more easily consulted by naturalists. ‘That such does not exist is discreditable to Naturalists,’ Wallace wrote at the opening of this proposal. His idea is essentially one of resource-sharing:

‘It is proposed that the chief [Natural History] Societies (Linnaean, Zoological & Entomological) should, while keeping their Libraries distinct, have them under one roof in adjoining rooms & under the care of one Librarian. Members of all the Societies to have free use of all in the Library, duplicates only to be taken out, except . . . for short periods & on leaving a deposit of the value of each work.’

The suggestion of the scientific societies housing their libraries in adjoining rooms, under one roof, for easy access by their collective membership is reminiscent of the cooperative libraries that Wallace frequented back in England. Forerunners of modern public libraries, the working-men’s libraries and mechanic’s institutes of Wallace’s formative years in London, Neath, and Leicester were accessible free or charge or for a very modest fee, and the self-taught Wallace often availed himself of their books, periodicals, and lectures (Slotten, 2004, pp. 10–21). Such libraries were not the pooled resources of cooperating institutions, but nonetheless evoke the spirit of cooperative sharing and accessibility seen in this proposal, connected to and

reflecting Wallace's Owenite ideals of social justice (Claeys, 2008). This could be why Wallace changed his mind about his initial suggestion that original works (as opposed to duplicates) in the shared library could only be taken out 'by members of the Society to which the work belongs.' He thought better of this and struck the sentence — not suggesting that everyone regardless of membership should have this privilege instead, but that no one should have it — on the grounds, presumably, that it is better to require in-house use of works for which there are no duplicates. Wallace closed his proposal by pointing out its practical financial benefits: 'Saving of Expense in rooms & Librarian to be spent on Books, each adding works in its own department. To such a joint library many expensive works would be given by foreign governments which could not be afforded to each of the three.'

D. On the reference to Synonyms & the quotation of Authorities by Naturalists

Jumping ahead just over 50 pages in the Species Notebook we come to this five-page entry dated 12 May 1858. At that time Wallace was collecting in Dorey (now Manokwari), western New Guinea, where he had landed after departing the Moluccas in March of that year (not before, incidentally, posting to Darwin his famous 'Ternate essay' announcing his discovery of the natural selection mechanism). On the very day that Wallace dated this entry he was laid up; he had been confined indoors for weeks with a fever and sore foot, and one of his Malay assistants, Jumaat, was gravely ill (and tragically died the following month).

Synonymy was again on Wallace's mind, and this entry is both lengthier than his previous ones and is written in a didactic style suggesting he intended to publish it (but apparently did not). It is worth noting, too, that it is preceded by two pages in which Wallace sketches candidate plans for arranging his beetle collection once he returned to England, struggling with how best to arrange his specimens taking into account their taxonomic placement *and* geographical distribution. There is much struck text and marginal notation on these pages, ending with a scrawled note in pencil at the bottom of the second page: 'NB. for improved plan see p. 24 of 'Register 1858.' I will discuss this in the next section of the paper, but first I consider Wallace on the issue of referring to synonyms and quoting Authorities.

Wallace opened the discussion with a statement of the problem: 'This practice is so universal that most naturalists look upon it as an inevitable necessity. . . . It seems hardly to be considered as an evil, as something to be got rid of, as a blot upon our science, & as one of the causes which decrease its popularity & deter enquiries at the outset.' What's more, he says, the practice is a waste of space and effort:

'If we take up any natural history catalogue, or work describing species, we find a considerable portion of it occupied by names only & references to volume & page of every work in which the species have been mentioned described or figured. A third, a half or even three fourths of a work is often so occupied, & the task of compiling these references is one of the greatest & most tedious labours of the monographer.'

There is no need to repeat this information 'over & over again' in treatments of local fauna and species descriptions, Wallace says. After all, 'We do not give the etymology & derivation of foreign or local terms every time we have occasion to use them — the vulgar can call a 'lion' by its name without requiring to know when it first became an

English word, by whom & whence it was introduced. . . Such information must be sought in Etymological dictionaries if any where[,] not in [works] which describe Lions & their habits.’ His solution is, again, to establish central, agreed-upon reference works: a reference for references.

‘What we want is a series of general synonymical catalogues which should give all the references, & determine authoritatively & finally the specific name to be used & it would then be only necessary in any work describing species, to state that the names used in such a family or group were those of the catalogue, & use them as names only without reference or authority . . . Now it is this absurdity that the naturalist daily practices — he cannot use a name without stopping to give its origin & all the various errors that have been made respecting it, & quoting every work in which the object it distinguishes has been mentioned or described.’

Realizing that ‘some reference is necessary to enable persons to recognize the species who may only know it under one of its synonyms,’ Wallace proposed a streamlined citation format, settling finally on a format summarized in a marginal note:

‘N.B. Give at most references to 3 works.

1st. Authority for species name . . .

2nd. where best figured . . .

3rd. To some cheap & well known list where synonyms are given . . .

This will give all the information necessary in a very small space.’

In other words, Wallace suggested that three references be given for each species: the authority and publication of the first description; where the best figure of the species can be found, and a go-to source for synonyms for the species (like that described above, given on pp. 68–69 of the Species Notebook). He was emphatic about the benefits of such a scheme:

‘The beauty & advantage of the binomial nomenclature is in fact completely neutralised if we are obliged to quote a host of synonyms in addition. The old specific phrase would be better than this; — it would occupy less room & would in the majority of cases ensure the determination of the species. In the meantime Naturalists should combine to check the further increase of synonyms by adopting the plan proposed at p. 67.’

In this entry Wallace declares that the adoption of such synonymical catalogues by united naturalists would usher in ‘an Era in Natural Science,’ it only being ‘necessary to form the catalogues . . . complete up to that date & Naturalists might boast of a universal language — brief definite & unchangeable — which they cannot do with justice at the present time.’ Although various forms of synonymical catalogues did become subsequently available, these tended (and in large part still tend) to be taxon-specific. Electronic resources hold new promise for scope and accessibility, such as the registry of new taxonomic names launched in 2003 by the *Zoological Record* in partnership with BIOSIS (Thorne, 2003), and more recently *ZooBank* (zoobank.org), an on-line registry of available zoological names developed by the ICZN, launched in January 2008 (Polaszek et al., 2005; Pyle & Michel, 2008; Krell, 2009).

E. Plan for references in Synopsis

Here Wallace offers a format for taxonomic overviews or synopses whereby cited authors are alphabetically listed, with the key references for each given in a lettered list (reference a, b, c, etc.). Following this prefatory section, in the taxonomic monograph itself the author and letter of the relevant references would need only be cited, rather than repeatedly writing out the references in full under each species. He follows his earlier idea of citing three references for each species: original author, best figure, and synonymical catalogue. Among several examples is the bee beetle *Trichius abdominalis* (SCARABAEIDAE, TRICHIINAE), for which Wallace lists ‘Schmidt’ reference (a) as authority, ‘Olivier’ reference (a) for a good figure, and ‘Blanchard’ reference (d) for synonyms. Another is the hawk *Accipiter ruficeps* (Accipitridae), under which Wallace listed Gray reference (c) for author, Gray (a) for figure, and Strickland (b) for synonyms.

F. Form for a synonymical catalogue

In this last entry on synonymy Wallace gave an outline of a comprehensive catalogue of synonyms for each species, of the kind proposed on pp. 68–69 of the Species Notebook. One of his examples uses *Cetonia aruginosa* (now *aeruginosa*), a scarabaeid beetle. The following entries Wallace gave for this species are selected from a larger list to give a sense of the format he had in mind. They take form of author, synonym, reference, and year of publication, in orderly columns:

Drury	<i>Cetonia aruginosa</i>	<i>Illustrations of Natural History</i>	1770
Scopoli	<i>Scarabaeus speciosissimus</i>	<i>Del. Flora et Fauna Insubr. Ticini</i>	1776
Olivier	<i>Cetonia aurata</i> var.	<i>Entomologie</i>	1789
Fabricius	<i>Cetonia fastuosa</i>	<i>Systema eleuthatorum</i>	1801
Gory et Perch.	<i>Cetonia aruginosa</i>	<i>Monographie des cétoines. . .</i>	1833
Burmeister	<i>Cetonia aruginosa</i>	<i>Handbuch der Entomologie</i>	1842

Wallace decided, however, that such a comprehensive synonymical catalogue would end up being too much work: ‘The above would be an immense labour & of no necessity.’ Returning to the format he explored previously, he concluded that ‘A catalogue determining authoritatively the name to be used & giving references to the 2 or 3 best figures & original descriptions would be ample. This would be possible, the other impossible!’ He must have been dismayed at the prospect of a comprehensive catalogue in view of the ever-growing roster of known species plus the sheer number of synonyms associated with these.

5. ‘Valuable & instructive for reference & comparison’

Wallace’s ideas for synonymical catalogues were likely related to his concern with how best to arrange and catalogue his personal collections. There are two important entries in the Species Notebook bearing on this: the first, alluded to already, is titled ‘Plan for the arrangement of my Collection of Coleoptera – on return to England’ (pp. 124–125). The other is a ‘Note for descriptions in ‘Coleoptera Malayana’’ (p. 133). Although collection arrangement may seem tangential to nomenclatural matters, in this case the entries give insight into Wallace’s global perspective and how he envisioned that the arrangement of collections could both inform and reflect taxonomy and cataloguing. For example, in his plan for the arrangement of his

Coleoptera collection, he suggests that he should arrange the species for each family in order of locality from west to east. The localities as well as the specimens were to be numbered consecutively; this would then yield a catalogue with distribution data for each family: ‘Under each locality therefore would be found only those species first found there,’ he wrote, and so-arranging specimens in cabinets ‘will be also generally natural’ — language reflecting his grasp of the essential correspondence between species relationships and their geography.

After further consideration Wallace returned to these entries and made additional marginal notes in pencil. At the bottom of p. 125 he wrote ‘N.B. for improved plan see p. 24 of – ‘Register 1858.’ This is a reference to his ‘Insect Register’ notebook (WCP4767, pp. 24–26) where he summarized the ‘improved plan’:

‘The best plan therefore seems to be to take one family first, say Longicorns, & beginning with one locality, say Sarawak, relax and reset the specimens and attach new locality tickets with a consecutive series of numbers, in approximate systematic order so as to keep the species of the well-marked genera together (though this is of little or no importance) . . . A second locality (say Singapore) is then taken & a fresh series of numbers begun & so on through all the localities. Space may be left for addition to each locality & also at the end for any fresh localities of importance in the Archipelago (as Java Sumatra).

Another family, say Cicindelidae, being then taken, the numbers attached to the species are to be in continuation of those of the same locality in the former family, so that when the catalogues are completed there will be a consecutive series of numbers for each locality shewing the total number of species found there. Additions to any family from the same locality may have a fresh series of numbers. . .’

In this way Wallace saw the integration of collections and catalogues: The catalogue generated by this method of arrangement ‘would thus be a most useful preliminary to a synopsis & would also furnish at once with scarcely any alterations complete locality lists. . .Catalogues of two or more families would be contained in a light pocket volume convenient for carrying to museums &c. when determining species by comparison. . .’ Wallace concluded that this approach would be ‘valuable & instructive for reference & comparison.’

Wallace’s ‘Note for descriptions in ‘Coleoptera Malayana’” refers to the comprehensive treatment of his southeast Asian beetle collections that he planned to undertake once he returned home. He described the plan in a letter dated 2 March 1858: ‘. . . I look forward to undertaking on my return to England a ‘Coleoptera Malayana’ to contain descriptions of the known species of the whole archipelago, with an essay on their geog. distribution, and an account of the habits of the genera & species from my own observations’ (WCP367). This plan was never realized, the closest being the ‘*Longicornia Malayana*’ treating Wallace’s long-horned beetles, published by Francis Pascoe between 1864 and 1869. Pascoe’s approach differed from Wallace’s, however, with a format more typical of the time. In any case, Wallace’s plan as given in the Species Notebook takes the approach of giving the key characters for each species in bold or larger type followed by the remainder of the description, then habitat and references for authority and best figure. Synonyms are not mentioned, however.

6. 'This should not be allowed'

The final nomenclatural matter arising in the Species Notebook regards the principle of priority in recognizing species names. There is but one entry on this subject (p. 130), involving what Wallace took to be a case of changing a taxonomic name for unacceptable reasons: 'Thompson changes *Aphies* Dej. (a coleopteron) into *Amillarus* Thomp. on account of *Aphis* a genus of Hemiptera.' Evidently coleopterist James Thomson (not Thompson) felt that the beetle genus name *Aphies*, given by French entomologist Auguste Dejean in 1837, was too similar to the aphid genus *Aphis* and he took it upon himself to change it to a name of his own. In his revision (Thomson 1857, p. 312), Dejean's *Aphies* was given as 'nom déjà employé, or 'name already employed.' 'This should not be allowed,' Wallace wrote disapprovingly in the Species Notebook; he did not elaborate, but likely felt that making nomenclatural changes on the arbitrary basis of similar-sounding names was unfair, and would introduce yet more confusion to an already chaotic taxonomic system.

This may be the only example where priority is mentioned in the Species Notebook, but Wallace weighed in several times on questions of priority in letters, addresses, and papers. In most cases Wallace argued *against* a name change that had been proposed or effected; his positions were not always based on strict priority, and underscore the complexities of applying the priority rule. For example, in Wallace (1858) he argued against Edward Doubleday's name-change for a species of *Ornithoptera* butterfly, pointing out that the new name, although used earlier by Linnaeus and so seemingly having priority, was in fact based on an error of identification by Linnaeus (who mistakenly named males and females of these sexually dimorphic butterflies as different species, confusing matters). Wallace felt that the misapplied though earlier name should not displace the name in use, given by a later lepidopterist who correctly identified the males and females of the species in question for the first time. Similarly, in a published letter (Wallace 1861) he lambasted zoologists P.L. Slater and G.R. Gray for changing the names of certain birds: 'It strikes me that, by forcing the law of priority to its extreme limits, you create a complicated synonymy, instead of settling it. Was not that law made to decide among several names already in use—not to introduce diversity where uniformity of nomenclature has hitherto existed?' In this letter, too, are echoes of some of Wallace's proposals to remedy the synonymy problem:

'I believe the synonymy of Natural History will never be settled till a tribunal shall be appointed by general assent, from whose decrees there shall be no appeal. It matters absolutely nothing whether a bird has one name or another; but it is of the utmost importance that it should not have two or three at once. A synonymical catalogue, which should be authoritative and final by the general consent of naturalists in congress assembled, would be a work worthy of the century. Let ornithologists be the first in the field, and the other -ologists will soon follow.' (Wallace, 1861)

A decade later little had changed; in his Presidential Address to the Entomological Society of London for 1872 he lamented that 'we shall never obtain complete uniformity and permanence of nomenclature, as long as each writer of a monograph or compiler of a catalogue thinks himself at liberty to use it as a medium for

expressing his own views on the subject.’ He went on to reiterate his ‘tribunal’ proposal:

‘To enact laws is of little use if we have no judges to interpret them. I have long been of opinion that we require a tribunal to decide authoritatively what changes of nomenclature shall be allowed; and though I have often been told this is impracticable, I cannot yet see the impracticability. As an example of what I mean, I would propose that the Natural-History Societies of each of the great nations of Europe and America should appoint one or more well-qualified naturalists to form a Judicial Committee of Nomenclature, all these societies, of course, agreeing to abide by the decisions of such committee. It might meet once a year, or even less frequently (as much business might be done by means of a Secretary), when any one could lay before it cases of non-accordant or erroneous nomenclature, with reasons and authorities for proposed changes. Its decisions, once given, would be adopted in the publications of all the societies, and this would soon lead to their universal adoption.’ (Wallace, 1872, p. lxviii).

Wallace felt that this idea was as worthy as it was attainable: ‘I cannot believe that there would be any great difficulty in its practical working; still less can I believe that its decisions would not be respected, and that it would not help us to obtain, much earlier than we otherwise should do, a uniform and permanent nomenclature’ (Wallace, 1872, p. lxviii). Yet, more than twenty more years would pass before the International Commission on Zoological Nomenclature would be founded, in 1896.

In 1863 Wallace’s ire was raised again over the priority issue — and once again by Doubleday and Gray. The case involving Doubleday pertained to the butterfly genus *Iphias*, which Doubleday had sought to synonymize with an earlier-named genus given by Pierre Hübner. Wallace (1863a) rejected the change on the questionable grounds of what might be called ‘settled taxonomy’ — sticking with a name that had been in wide use despite evidence that it did not have priority (though he apparently did take proper description into account.) He wrote, rather scathingly:

‘I have retained Boisduval’s name *Iphias* for this genus, because he first properly characterised it; and his name was, I believe, in universal use among entomologists till Mr. Doubleday, in his ‘Genera,’ revived Hübner’s forgotten name *Hebomoia*, thereby doing his best to introduce confusion and misunderstanding into a perfectly satisfactory and uniform nomenclature . . . I presume that the proper application of the law of priority is to determine among conflicting names still in use, and thus establish a uniform nomenclature. To apply it to rake up obsolete names, and thus create synonyms and produce the confused nomenclature it was intended to abolish, is an abuse which ought not to be tolerated.’ (p. 2)

The issue at stake in Wallace’s paper ‘On the proposed change in name of *Gracula pectoralis*’ (1863b) was closer to home, as it pertained to a name he had coined. In an open letter to the editors of the *Annals and Magazine of Natural History* Wallace objected to Gray (1862) synonymizing his myna bird species *Gracula pectoralis* with a name given earlier by the French naturalist René Lesson. Wallace argued that the specimen used by Lesson actually consisted of the parts of two or more species: ‘It seems probable, therefore, that Lesson’s specimen was made up of the *trunk* of my bird, with the *head, wings, tail, and legs* of one or more other birds,’ calling it an ‘ingenious

work of art. . . .’ Yet another name was bestowed independently by an American ornithologist, but based on a mutilated specimen, prompting Wallace to ask ‘Shall a name, given to a mutilated skin, and which is erroneous and inapplicable as regards the perfect bird, be perpetuated by the law of priority?’ He summarized his case thus:

‘In this case we have, first, a name and description of a made-up specimen, of which probably one-fifth part only is genuine, and, secondly, a specimen confessedly mutilated in its most important parts, and the name given to which is inapplicable to the entire bird; and in both cases the absence of the legs and wings has led to the species being placed in a wrong genus. I now leave ornithologists to decide, in the interest of science, by what name this bird shall be called; and I would further beg to suggest, as a useful and necessary supplement to the law of priority, that it be decreed *that where the first description of a species is absolutely insufficient to determine the same, and a new name has, owing to such insufficiency, been given to the species, with a good and sufficient description attached, such new name shall be for ever retained, notwithstanding at any future time the former name may be proved to have been applied to the same species.*’ (Wallace, 1863b, p. 17)

During Wallace’s tenure as president of the Entomological Society (1870 to early 1872) issues of classification and nomenclature were constantly discussed — in particular nomenclatural issues pertaining to genera. In his Presidential Address for 1870 Wallace commented that ‘five very valuable papers are on subjects connected with classification and nomenclature.’ These included two papers on beetles that ‘[brought] to light an amount of confusion and error in generic nomenclature,’ and an essay on generic nomenclature in butterflies that revealed ‘a state of confusion in that group’ similar to that shown for the beetles (Wallace, 1870). The priority rule often came up in his letters. ‘I hold that a generic name cannot claim priority, which itself breaks the law of priority in changing an old generic name,’ he wrote to Alfred Newton in 1875 (WCP4051). He continued: ‘Have you read Lewis’ paper on ‘Entomological Nomenclature & Law of Priority’? It applies to zoology generally, & I believe his proposals are sound & will sooner or later be adopted.’ His reference is to a paper on priority by entomologist William Arnold Lewis (1875), extracted from Lewis’s earlier treatise on the subject (1872).

If Wallace was not always consistent in his view of how and when the principle of priority should be applied, whether to genera or species, he did think broadly and was open to novel and unorthodox solutions. We have seen that he at times advocated for exceptions to the priority rule, yet he also wrote approvingly to Alfred Newton in 1863 about Arthur Adams who ‘sticks up for the law of priority, without exceptions absolutely, & has almost converted me to the adoption of the Boddaertian names as a matter of principle’ (WCP4004). Adams and Adams (1858) championed the recognition of bird names bestowed in 1783 by the Dutch naturalist Pieter Boddaert in a treatment of birds using the color plates executed by E.-L. Daubenton for Buffon’s *Histoire naturelle* of 1749–1789. Accompanying the plates Boddaert (1783) gave accounts of the birds from Buffon, Linnaeus, and others, devising Latin names for those birds that lacked one. Wallace was perhaps ‘almost converted’ — but not fully — by the fact that Boddaert’s treatments were neither his own, nor in many cases proper descriptions. (Nonetheless, today many of Boddaert’s names are recognized.)

Another example of Wallace's openness to creative, if unworkable, proposals is his endorsement in 1874 of an idea to extend the priority principle to the entire Linnaean binominal, not merely the specific epithet. 'Mr. David Sharp, a well-known entomologist, advocates a mode of attaining the great desideratum of naturalists—a fixed and uniform nomenclature of species — which has not, so far as we are aware, been suggested before, although it is at once simple and logical. He proposes that, not merely one-half, but the entire name of every species once given, should be inviolable. . .' (Wallace, 1874, p. 259). This proposal did not go anywhere, however, which Wallace predicted (and with good reason). Wallace was aware and indeed commented that under this proposal a full binominal species like *Papilio dido* would remain a unit with priority even if its very family should change, and even should new methods of classification find that it belonged in another genus altogether! He was perhaps being provocative, underscoring the need for rules pertaining to generic as well as specific names, and ever the optimist he closed his review with a plan 'best adapted to lead speedily to a fixed nomenclature, and at the same time one that will least offend the prejudices of zoologists. . .' (Wallace, 1874, p. 260).

7. Conclusion

A fixed nomenclature is an unknown ideal and even, perhaps, an impossibility given centuries of free-wheeling naming and revising of taxa, as well as new methods and types of characters used by naturalists for diagnosis, from morphological to chemical to various classes of molecular-genetic data. Wallace may have been inconsistent at times in his view of issues like priority, but this only reflects the difficulties inherent in delimiting and applying the principle at a time when nomenclatural rules themselves were being hotly debated. Yet Wallace was ahead of his time with several of his proposals, perhaps foremost among them recognizing the need for coordination and cooperation among the scientific communities of different nations to both combat synonymy and arbitrate nomenclatural disputes. The International Commission on Zoological Nomenclature, founded in 1896 as noted previously, is just such a body, charged with developing, refining, and applying the International Code of Zoological Nomenclature (ICZN) for the zoological community. As interpreter and arbiter of the Code, communicated since 1943 through its key publication *The Bulletin of Zoological Nomenclature*, the ICZN represents the realization of the kind of 'tribunal. . .appointed by general assent' that Wallace advocated (Wallace, 1861; 1872).

Wallace's prescience is also seen in his recognition of the importance of standard and readily available synonymical catalogues as essential sources for nomenclatural information, and in his rather democratic vision of pooling or sharing bibliographic resources among organizations to facilitate the work of naturalists. Both have been realized in ways that would have delighted him: the 'virtual commons' made possible by information technology and the internet has revolutionized the communication of taxonomic information and literature. On-line references and repositories like *ZooBank*, *Zoological Record*, *Index Animalium* and *Nomenclator Zoologicus* represent the ultimate in universally available (in principle) catalogues of taxonomic information in zoology, while the *International Plant Name Index*, *Tropicos*, and *Index Nominum Supragenericorum Plantarum Vascularium* (among others) achieve this for the botanical realm.

The recent amendment to accept e-publication of works in zoological nomenclature and taxonomy by the ICZN (BZN 69(3): 161–169; <http://iczn.org/content/electronic-publication-made-available-amendment-code>) will facilitate the linkage between taxonomic databases (as modern versions of catalogues) and taxonomic publications, increasing visibility, access, and precision as advocated by Wheeler & Krell (2007). Moreover, libraries and scholarly organisations can now share their books and periodicals as never before; where Wallace suggested library resources of a few learned societies pooled under one roof, we now have a multitude of libraries sharing resources beneath one virtual roof, thanks to such invaluable organizations as the Biodiversity Heritage Library (biodiversitylibrary.org), Botanicus (www.botanicus.org), and the HathiTrust Digital Library (hathitrust.org). In the future additional proposals found in Wallace's Species Notebook may come to fruition as well. There is at present no single central site or source required for registering zoological nomenclatural acts, for example, but if *ZooBank* registration becomes obligatory, as the ICZN envisions, this may eventually serve as the central clearing-house for zoological names and their bibliographic references.

Non-uniformity in taxonomy — that 'fertile source of error & perplexity' that Wallace lamented — may persist indefinitely owing to the vagaries of the historical record and philosophical differences, and a single synonymical catalogue or universal taxonomic database for the tree of life may prove quixotic, but Wallace's far-ranging proposals in the Species Notebook hold lessons for the pursuit of such ideals. With regard to the quagmire of synonymy and cataloguing Wallace may have got more than he bargained for back in 1847 when he declared his intent to pursue his 'favourite subject—the variations, arrangements, distribution, etc., of species.' But then, he was not one to let such concerns slow him down. Therein may lie the most important insight we may glean from Wallace's proposals for addressing the nomenclatural issues of his day. His ideas are worthy of our notice not so much, perhaps, as overlooked solutions, or examples of a man ahead of his time, as for how they underscore the value of persistently and creatively thinking about solutions to our nomenclatural conundrums.

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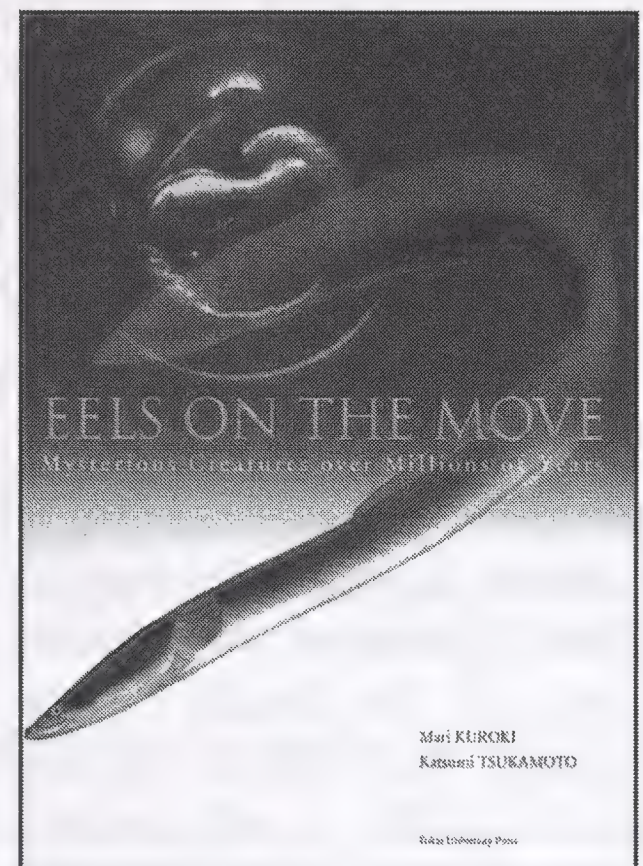
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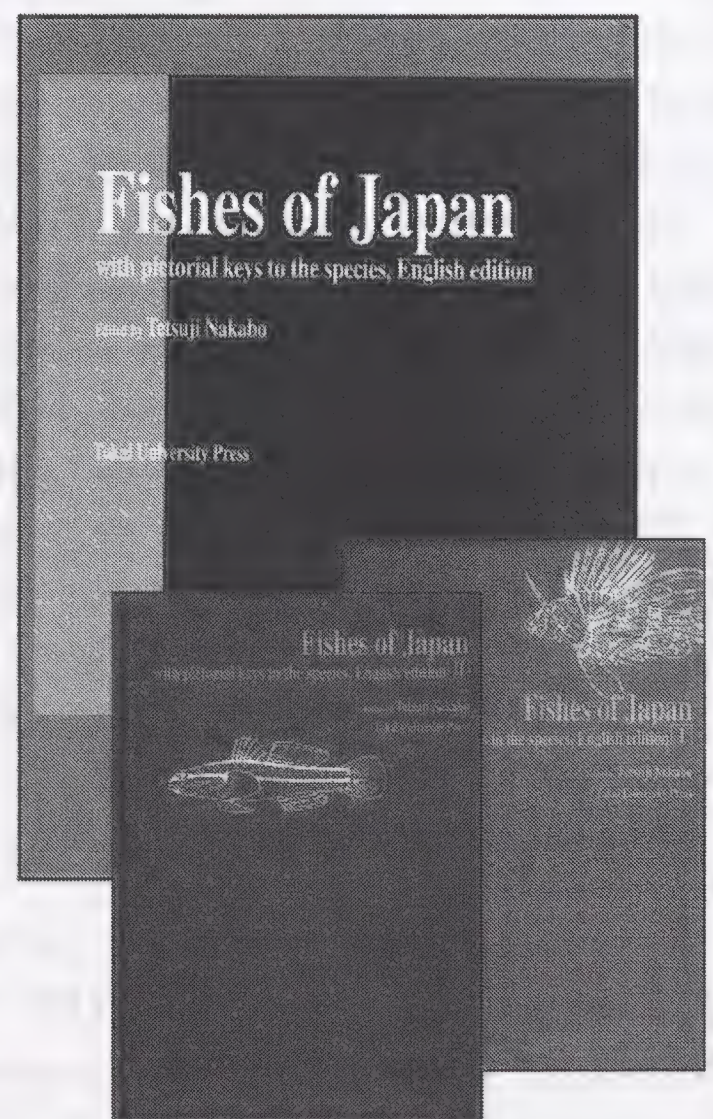
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on Zoological Nomenclature



ICZN

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

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Cover image: *Rhacophorus nigropalmatus* Boulenger, 1895, known as Wallace's flying frog was discovered by Alfred Russel Wallace in Sarawak, Borneo in 1865. The holotype (female) was collected by Charles Hose and is housed in the Natural History Museum, London. Wallace wrote in his book *The Malay Archipelago* (1869, pp. 59–61): 'One of the most curious and interesting reptiles which I met with in Borneo was a large tree-frog, which was brought me by one of the Chinese workmen. He assured me that he had seen it come down in a slanting direction from a high tree, as if it flew. On examining it, I found the toes very long and fully webbed to their very extremity. . . . This is, I believe, the first instance known of a "flying frog," and it is very interesting to Darwinians as showing that the variability of the toes which have been already modified for purposes of swimming and adhesive climbing, have been taken advantage of to enable an allied species to pass through the air like the flying lizard.' This watercolour was painted by Wallace and was used as the basis for the woodcut illustration of this species in *The Malay Archipelago* (p. 60). This year marks the 100th anniversary of Wallace's death. (© scan of the original drawing – A.R. Wallace Memorial Fund).

BULLETIN OF ZOOLOGICAL NOMENCLATURE

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Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the ICZN at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at <http://iczn.org/content/guidelines-case-preparation>) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will, where possible, answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should preferably be sent by e-mail to 'iczn@nhm.ac.uk'.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at <http://iczn.org/content/instructions-comments>).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at <http://list.afriherp.org/mailman/listinfo/iczn-list>.

(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to iczn@nhm.ac.uk.

New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 70, part 2, 30 June 2013) went to press. Under Article 82 of the Code, the prevailing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3633: *Aiptasia pallida* (Aggasiz in Verrill, 1864) (Cnidaria, Hexacorallia, Actiniaria): proposed conservation of usage by suppression of the senior synonym *Aiptasia diaphana* (Rapp, 1829). A. Grajales & E. Rodriguez.

CASE 3634: Proposed replacement names for three families of fossil insects (Arthropoda, Insecta): OMALIIDAE Handlirsch, 1904, ORTHOCOSTIDAE Bolton, 1912, and XENOPTERIDAE Pinto, 1986. A.J. Ross, D.B. Nicholson & E.A. Jarzembowski.

CASE 3635: *Antheraea roylei* Moore, 1859 (Insecta, Lepidoptera, SATURNIIDAE): proposed conservation of usage by suppression of the supposed senior synonym

Bombyx (Saturnia) pernyi Guérin-Méneville, 1855 (currently *Antheraea pernyi*). R.S. Peigler & B.Ch. Chutia.

CASE 3636: BOLTONOCOSTIDAE Carpenter, 1985 (Insecta, Hypoperlida): a replacement name for ORTHOCOSTIDAE Bolton, 1912. A.J. Ross, D.B. Nicholson & E.A. Jarzembowski.

CASE 3637: Proposal to suppress the name *Papilio phoebus* (Lepidoptera, PAPILIONIDAE) Fabricius, 1793 for both the principle of priority and the principle of homonymy. E. Balletto & S. Bonelli.

CASE 3638: *Saturnia canningi* Hutton, 1859 (currently *Samia canningi*; Insecta, Lepidoptera, SATURNIIDAE): proposed conservation. R.S. Peigler & R. Luikham.

CASE 3639: *Limax maculatus* Nunneley, 1837 (Gastropoda, Stylommatophora, LIMACIDAE): proposed suppression of the specific name. I. Balashov.

CASE 3640: *Touit* G.R. Gray, 1855 and *Prosopieia* Bonaparte, 1854 (Aves, PSITTACIDAE): proposed conservation of usage. R. Schodde, W.J. Bock & D. Watling.

Case 3633

***Dysactis pallida* Agassiz in Verrill, 1864 (currently *Aiptasia pallida*; Cnidaria, Anthozoa, Hexacorallia, Actiniaria): proposed precedence over *Aiptasia diaphana* (Rapp, 1829), *Aiptasia tagetes* (Duchassaing de Fombressin & Michelotti, 1864), *Aiptasia mimosa* (Duchassaing de Fombressin & Michelotti, 1864) and *Aiptasia inula* (Duchassaing de Fombressin & Michelotti, 1864)**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name *Aiptasia pallida* (Agassiz in Verrill, 1864) for a species of sea anemone (Cnidaria, Actiniaria) widely used as a model system for dinoflagellate-cnidarian symbiosis and coral bleaching studies. The name *A. diaphana* (Rapp, 1829) is a senior subjective synonym of *A. pallida*, while *Aiptasia inula* (Duchassaing de Fombressin & Michelotti, 1864), *Aiptasia mimosa* (Duchassaing de Fombressin & Michelotti, 1864) and *Aiptasia tagetes* (Duchassaing de Fombressin & Michelotti, 1864) are also synonyms, but published in the same year. The use of the name *A. pallida* meets the requirements for reversal of precedence of a junior synonym (Article 23.9.1) in the case of *A. inula* and *A. mimosa*, which were not used in the 20th century and are declared nomina oblita under Article 23.9.2 in this paper. The names *A. diaphana* and *A. tagetes* were used after 1899; hence the conditions of Article 23.9.1.1 are not met. However, in the interest of nomenclatural stability, we request a ruling to maintain the use of the junior synonym under the plenary power, thereby making *A. pallida* a nomen protectum, and *A. diaphana* and *A. tagetes* nomina oblita.

Keywords. Nomenclature; taxonomy; Actiniaria; *Aiptasia*; *Aiptasia pallida*; *Aiptasia diaphana*; *Aiptasia tagetes*; sea anemone.

1. Sea anemones (Cnidaria, Actiniaria) of the genus *Aiptasia* Gosse, 1858 are conspicuous members of tropical and subtropical shallow-water marine environments worldwide and serve as a model system for studies of cnidarian-dinoflagellate symbiosis. However, despite their importance, accessibility and the fact that publications using *Aiptasia* spp. as focal taxa are common (e.g. Dunn et al., 2002; Muller-Parker & Davy, 2001; Weis et al., 2008; LaJeunesse et al., 2010), to date there has not been a comprehensive systematic analysis of the group.

2. The latest inventory of the genus *Aiptasia* recorded 14 species distributed worldwide (Fautin, 2013); however, most of the descriptions of the 14 species inventoried by Fautin (2013) are incomplete by modern standards and type material is only available in a few cases. The type series of *Aiptasia pallida* (Agassiz in Verrill, 1864, p. 26) consists of two syntypes deposited in the Museum of Comparative Zoology at Harvard University (MCZ: SCOR-1004). There are no types in existence for *A. tagetes* (Duchassaing de Fombressin & Michelotti, 1864, p. 39), *A. mimosa* (Duchassaing de Fombressin & Michelotti, 1864, p. 29), *A. inula* (Duchassaing de Fombressin & Michelotti, 1864, p. 39) or *A. diaphana* (Rapp, 1829, p. 57). There were originally two syntypes of *A. tagetes* from Puerto Rico, one syntype of *A. mimosa* from the Virgin Islands, one syntype of *A. diaphana* from Naples (Italy); however, there is no information available about the museum collections where these types were deposited (Fautin, 2013), and they are thought to have been lost. After detailed morphological examination of available type and newly-collected material and cnidae from all but three of the type localities or nearby localities of the type reported for 11 of the 14 putative species within *Aiptasia*, Grajales & Rodríguez (2013 submitted) did not find any constant morphological character to distinguish between *A. diaphana*, *A. pallida*, *A. inula*, *A. mimosa*, *A. tagetes*, *A. minuta* (Verrill, 1867, p. 50), *A. leiodactyla* Pax, 1910, p. 178, *A. pulchella* Carlgren, 1943, p. 38, and *A. californica* Carlgren, 1952, p. 388. Thus, they proposed to synonymize these eight species. Although there is no type material in existence for *A. inula*, *A. mimosa*, *A. tagetes* or *A. diaphana*, the synonymy was possible based on available descriptions and newly-collected material from nearby localities to the type localities of these species (Grajales & Rodríguez, 2013, submitted).

3. According to the Principle of Priority, the name *Aiptasia diaphana* is the senior subjective synonym and thus must be used over the junior synonym, *A. pallida*. In addition, the names *Dysactis mimosa* (currently *A. mimosa*), *Bartholomea tagetes* (currently *A. tagetes*), and *Bartholomea inula* (currently *A. inula*) might also have priority over the name *A. pallida*. Verrill's (1864) paper was published in July 1864, while Duchassaing de Fombressin & Michelotti's (1864) supplement was published between May 1864 and January 1865 (on page 7 of the supplement Duchassaing de Fombressin & Michelotti included a footnote which is dated 17 May 1864). Duchassaing de Fombressin & Michelotti's paper (1864) has a flyleaf note to say that it is an extract from the *Memoires de l'Academie des Sciences de Turin*, Serie 2, Tome 23. The supplement was indeed republished in the *Memoires de l'Academie des Sciences de Turin*, but only in 1866.

4. *Aiptasia pallida* has been used as a model system for research of dinoflagellate-cnidarian symbiosis and the processes responsible for coral bleaching over more than 30 years (e.g. Hessinger & Lenhoff, 1973; Palinscar et al., 1989; Sawyer & Muscatine, 2001; Rodriguez-Lanetty et al., 2006; Sunagawa et al. 2008, 2009, see Appendix) and thus is currently in wider use than its senior putative synonyms: in the last 50 years the name *A. diaphana* has been used in 25 publications, *A. tagetes* in seven publications, and *A. mimosa* and *A. inula* have not been used, whereas *A. pallida* has been used in at least 50 publications. Furthermore, most of the studies using *A. pallida* are non-taxonomic works which do not always follow formal nomenclature. In the interests of nomenclatural stability and to avoid potential confusion, it would be ideal to maintain the use of the junior synonym by reversal of precedence (Article

23.9 of the Code). The names *A. inula* and *A. mimosa* have not been used as valid names after 1899, thus meeting the conditions of Article 23.9.1.1. They are considered as nomina oblita under Article 23.9.2 of the Code. However, the names *A. diaphana* and *A. tagetes* have been used as valid after 1899 (e.g. Schmidt, 1982; den Hartog & Ocaña, 2003) and so do not meet the conditions of Article 23.9.1.1. Therefore reversal of precedence cannot be automatically granted, although the name *A. pallida* has been the most widely used in the last 50 years. We consider that the use of the senior synonyms *A. diaphana*, *A. inula*, *A. mimosa* and *A. tagetes* would cause confusion and threaten stability and, under Article 23.9.3 of the Code, we request the Commission to use its plenary power to maintain the use of the junior synonym, *A. pallida*. A list of 50 supporting references demonstrating the prevailing usage of *A. pallida* is held by the Commission Secretariat.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to give precedence to the name *pallida* Agassiz in Verrill, 1864, as published in the binomen *Dysactis pallida*, over the following names, whenever they are considered to be synonyms:
 - (a) *diaphana* Rapp, 1829, as published in the binomen *Actinia diaphana*;
 - (b) *tagetes* Duchassaing de Fombressin & Michelotti, 1864, as published in the binomen *Bartholomea tagetes*;
- (2) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *pallida* Agassiz in Verrill, 1864, as published in the binomen *Dysactis pallida*, with the endorsement that it is to be given precedence over the names *diaphana* Rapp, 1829, as published in the binomen *Actinia diaphana*, and *tagetes* Duchassaing de Fombressin & Michelotti, 1864, as published in the binomen *Bartholomea tagetes*, whenever it and either of the other two are considered to be synonyms;
 - (b) *diaphana* Rapp, 1829, as published in the binomen *Actinia diaphana*, with the endorsement that it is not to be given priority over the name *pallida* Agassiz in Verrill, 1864, as published in the binomen *Dysactis pallida*, whenever the two are considered to be synonyms;
 - (c) *tagetes* Duchassaing de Fombressin & Michelotti, 1864, as published in the binomen *Bartholomea tagetes*, with the endorsement that it is not to be given priority over the name *pallida* Agassiz in Verrill, 1864, as published in the binomen *Dysactis pallida*, whenever the two are considered to be synonyms.

Acknowledgments

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Acknowledgement of receipt of this application was published in BZN 70: 151.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3626***Phoronis* Wright, 1856 (Phoronida) and *P. muelleri* Selys Longchamps, 1903: proposed conservation of both names**

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Abstract. The purpose of this application, under Article 81.2.3, is to conserve the generic name *Phoronis* Wright, 1856 and the specific name *Phoronis muelleri* Selys Longchamps, 1903 in their accustomed use. Both names are well known and included in all major textbooks on zoology and in hundreds of papers. However, a parallel set of older names, *Actinotrocha* Müller, 1846 and *A. branchiata* Müller, 1846 (and other ‘species of *Actinotrocha*’) are very often used in papers on phoronid larvae, so the conditions for reversal of precedence using Article 23.9.1.1 are not met. The name *Phoronis* is the base for the names PHORONIDAE, Phoronidea and Phoronida in various uses for the family, order, class, and phylum dating from Hatschek (1888). A strict application of the Principle of Priority would create confusion, and the Commission is therefore asked to use its plenary power to suppress the generic name *Actinotrocha* Müller, 1846 and the specific epithet *branchiata* Müller, 1846 (as published in the binomen *Actinotrocha branchiata*) for the purposes of the Principle of Priority.

Keywords. Nomenclature; Phoronida; *Phoronis*; *Phoronis muelleri*; *Phoronis hippocrepia*; *Actinotrocha*; *Actinotrocha branchiata*; horseshoe worms.

1. Müller (1846, p. 101) described a new pelagic organism and gave it the name *Actinotrocha branchiata*. He was uncertain about the affinities of the animal. He rejected relationships with mollusc larvae, but hinted at a relationship to rotifers. Similar larvae were subsequently reported by a number of authors.

2. Wright (1856, p. 316) described two ‘tubicolar animals’ which he named *Phoronis hippocrepia* and *P. ovalis*. He was uncertain about the systematic position of the genus, but suggested that they should belong to the Annelida. A type species of the new genus was not mentioned, but the first-mentioned species was described first and in some more detail than the second. There seems to be no designation of a type species in the literature, so I hereby designate *Phoronis hippocrepia* Wright, 1856 as the type species of the genus *Phoronis* Wright, 1856.

3. Both Krohn (1858) and Schneider (1862) observed that some specimens of *Actinotrocha branchiata* went through a metamorphosis into a ‘worm’ which they compared with a sipunculan.

4. Kowalevsky (1866, footnote p. 5; see also Leuckart, 1867, pp. 235–238) was the first to link the metamorphosed *Actinotrocha* to the adult *Phoronix* (sic).

5. Since then, a few actinotrocha larvae have been described and in some cases been given separate names, but they have now all been assigned to adult species of one of the two phoronid genera *Phoronis* or *Phoronopsis*.

6. Selys Longchamps (1903, p. 9) described *Phoronis muelleri* (spelled *Mülleri*) and demonstrated that *Actinotrocha branchiata* is the larva of this species.

7. *Phoronis* is the base for the names of the family PHORONIDAE, the order, class and phylum Phoronidea/Phoronida, in principle all dating from Hatschek (1888, p. 40), who introduced Phoronida as a class name.

8. Over the last century, almost all authors of individual papers and textbooks on this phylum have used the genus name *Phoronis* and the species name *P. muelleri* (variously spelled *mülleri* or *mulleri*), but the larval names are very often mentioned as *Actinotrocha* in the Latin form and with the author name, so both types of names have been in constant use. The larval names are clearly available according to Article 17.3 in the Code.

9. Silén (1952, footnote on pp. 95–96) summarized the problem very clearly:

‘In fact, according to Article 27 of the International Rules of Zoological Nomenclature *Ph. mülleri* Selys-Longchamps 1903 ought to have been called *Ph. branchiata* Müller, its larva having been described by Müller in 1846 as *Actinotrocha branchiata*. Still worse, the generic name *Phoronis* Str. Wright 1856 ought to be suppressed on behalf of *Actinotrocha*. Poche (1903 and 1908) has pointed out these facts. However, Poche has never done any research of his own on the phoronids, and the names *Phoronis* and *Ph. branchiata* have been so universally adopted by the workers on the group, *Actinotrocha* and *A. branchiata* being exclusively used as technical names of larval forms, that a strict application of the Rules to this case would cause a most embarrassing disorder. In order to eliminate the risk of future confusion the present author has therefore, on the advice of Dr. Henning Lemche, Copenhagen, member of the International Commission of Zoological Nomenclature, applied to the Commission that *Actinotrocha* and *A. branchiata* be suppressed as official names on behalf of *Phoronis* and *Ph. mülleri*.’

In fact the Commission has no record of any such application, but the arguments are still valid.

A number of authors, for example Bartolomaeus (2001, p. 135, footnote) have advocated following the common usage of the ‘adult’ names and treating the larval names as technical names, but since both set of names have been in continuous use, this is not in accordance with the Code.

The acceptance of *Phoronis* as the valid genus name will legalize the stable use of the name in all textbooks and papers dealing with the adult worms for more than a century. It will bring the term actinotrocha in line with the use of other larval names, such as the planktonic nemertean larvae, which are called pilidium (it appears that none of the pilidium larvae described from the plankton has been linked to an adult species), and the planktotrophic bryozoan larvae, which are called cyphonautes (for example cyphonautes compressus, the larva of *Electra pilosa*). An acceptance of the name *Actinotrocha* would cause considerable confusion, because the vast majority of the previous literature has used *Phoronis*.

The databases ‘Encyclopedia of Life’ (EOL) and ‘World Register of Marine Species’ (WoRMS) will both have to be revised whatever decision is taken, because their present formats are not in accordance with the Code as they use both sets of names.

10. The International Commission on Zoological Nomenclature is accordingly asked:
- (1) to use its plenary power to suppress for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy the following names:
 - (a) *Actinotrocha* Müller, 1846;
 - (b) *branchiata* Müller, 1846, as published in the binomen *Actinotrocha branchiata*;
 - (2) to place on the Official List of Generic Names in Zoology the name *Phoronis* Wright, 1856 (gender: feminine), type species *P. hippocrepeia* Wright, 1856 (as designated above in para. 2);
 - (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *muelleri* Selys Longchamps, 1903, as published in the binomen *Phoronis muelleri*;
 - (b) *hippocrepeia* Wright, 1856, as published in the binomen *Phoronis hippocrepeia*;
 - (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Actinotrocha* Müller, 1846, as suppressed in (1)(a) above;
 - (5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology *branchiata* Müller, 1846, as published in the binomen *Actinotrocha branchiata* Müller, 1846, as suppressed in (1)(b) above.

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Constructive comments from Dr Thomas Pape (*Natural History Museum of Denmark, Copenhagen*) are greatly appreciated.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3604***Helix (Helicogena) aspersa insolida* Monterosato, 1892 (currently *Ercella insolida*; Gastropoda, Pulmonata, HELICIDAE): proposed conservation of the specific name**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name *Helix (Helicogena) aspersa insolida* Monterosato, 1892 (currently *Ercella insolida*; Gastropoda, Pulmonata, HELICIDAE; endemic to NW Sicily), threatened by the senior primary homonyms *Helix (Campylaea) insolida* Brusina, 1876 and *Helix (Campylaea) insolida* Pfeiffer & Clessin, 1881, two unjustified emendations, no longer in use, for *Helix insolita* Rossmässler, 1838 (currently *Chilostoma insolita*, Gastropoda, Pulmonata, HELICIDAE, endemic to Croatia, Bosnia, Montenegro and Herzegovina). In order to conserve the current usage of Monterosato's name it is proposed that *Helix (Campylaea) insolida* Brusina, 1876 and *Helix (Campylaea) insolida* Pfeiffer & Clessin, 1881 be suppressed.

Keywords. Nomenclature; taxonomy; HELICIDAE; *Chilostoma insolita*; *insolida*; *Ercella insolida*; pulmonates; land snails; NW Sicily; Balkans.

1. Rossmässler (1838, p. 31, Plate 37, fig. 506, sub *Helix insolita* Ziegler) described *Helix insolita*, a land snail (Gastropoda, Pulmonata, HELICIDAE) from 'Albanien'. Rossmässler, like many other authors of that period, when describing a new species, used to add a person's name to its species name in order to indicate the origin of the material studied (in this case Ziegler, who was a dealer of shells). Therefore, for several years, *insolita* was often wrongly attributed to Ziegler, rather than to Rossmässler (1838), who is in fact the author of the name (Article 50.1 of the Code). Since Pfeiffer (1841, p. 18) the taxon has been referred to as *H. insolida*; see also Pfeiffer (1842, p. 83; 1846, p. 36; 1848, p. 352, 450; 1852, p. 232; 1868, p. 359, 503; 1876, p. 414; 1877, p. 587), followed by Bielz (1865, p. 225: *H. nisolida* (!) Zgl.) and Brusina (1866, p. 121; *H. insolida* Ziegler with var. α , β , α . . .). All these names must be regarded as incorrect subsequent spellings, hence unavailable names. Although the spelling *insolida* was in prevailing usage from 1841 to 1881 (with a few exceptions: Möllendorf (1873, p. 38), Kobelt in Rossmässler (1876, p. 32) and Westerlund (1876–78, p. 86), who all used the correct name *insolita*), such usage does not qualify as the 'prevailing usage' according to the Code (see Glossary), which requires a substantial majority of the 'most recent authors' and in our case all most recent

authors use the original correct spelling: in fact, after 1881 the correct spelling *insolita* Rossmässler, 1838 prevailed and the name *insolida* fell into disuse, e.g. Tryon (1888, p. 98); Westerlund (1889, p. 135, 333: *H. insoleta* (sic !) (Z.) Rossm. Syn. *H. insolida* Auct. mult.); Pilsbry (1894, p. 98); Sturany (1901, p. 68).

2. Besides the aforementioned incorrect subsequent spellings, there are two unjustified emendations: (a) by Brusina (1876) and (b) by Pfeiffer & Clessin (1881).

(a) Brusina (1876, p. 54) used *insolida* Ziegler and quoted among its chresonyms *Helix insolita* Kobelt and *Helix insolita* Möllendorf (Möllendorf attributes *insolita* to its correct author Rossmässler). This is therefore an unjustified emendation, as it satisfies the requirements of Article 33.2.1 (both the original and the changed spellings are cited and the latter is adopted in place of the former) and does not satisfy the requirement of Article 33.2.2 of the Code. It must be stressed that Article 33.2.1 requires only the simultaneous citation of original and changed spellings and the adoption of the latter in place of the former in order to fulfil the intentionality requirement stated by Article 33.2, no other statements of intention are required, hence we have no alternative but to consider *insolida* Brusina 1876 as an unjustified emendation. Brusina's *insolida* 'Ziegler' was published as *Campylaea insolida*, not as *Helix insolida*, but Brusina's 1876 paper is titled 'Aggiunte alla monografia delle *Campylaea* della Dalmazia e Croazia' ('Additions to the monograph of the *Campylaea* from Dalmatia and Croatia'). In the 'Monografia delle *Campylaea* della Dalmazia e Croazia', Brusina (1869), although he used *Campylaea* rather than *Helix* in his binomina, expressly stated that he considered *Campylaea* to be a subgenus of *Helix*. While the binomina are written in an unorthodox style, we can conclude that if Brusina regarded *Campylaea* as a subgenus in 1869, the same should apply to his 1876 paper. Therefore, the name *Campylaea* must be considered as a subgenus of *Helix* and consequently, the name *Campylaea insolida* is an available name and unjustified emendation of *Helix insolida* Rossmässler. An alternative interpretation – not favoured by the applicants – would be to regard *Campylaea insolida* Brusina as an independent binomen, in that case not relevant to homonymy within the genus *Helix*.

(b) Pfeiffer & Clessin (1881, p. 145, n. 2928, sectio *Campylaea* Beck, 1837, subsectio *Eucampylaea* Westerlund, 1889) used for this species the name *H. insolida* (attributed to Ziegler) and gave '*Helix insolita* Auct., Kob.' as a synonym. This is therefore another unjustified emendation, as it satisfies the requirements of Article 33.2.1 (both the original spelling, *insolita* Auctorum, and the changed spelling, *insolida* Ziegler, are cited and the latter is adopted in place of the former) and does not satisfy the requirement of Article 33.2.2. Hence we have no alternative but to consider *insolida* Pfeiffer & Clessin 1881 as an unjustified emendation. Therefore *H. insolida* Pfeiffer & Clessin, 1881 is an available name. Pfeiffer & Clessin listed *Campylaea insolida* Brusina among the synonyms or chresonyms of *Helix insolida*, and this might suggest that Pfeiffer's *insolida* is nothing but a chresonym of *insolida* Brusina, and therefore not another unjustified emendation. However, Pfeiffer treated '*insolida* Ziegler' as a valid name but did not treat *insolida* Brusina in this capacity (the name was listed as a junior synonym or chresonym). Therefore it is possible to conclude that Pfeiffer established another unjustified emendation of *insolita* Rossmässler.

3. As stated above, after 1881 *insolida* Brusina, 1876 and *insolida* Pfeiffer & Clessin, 1881 were no longer in use and, nowadays are generally considered to be junior

synonyms of *insolita* Rossmässler, 1838 (Dhora & Welter-Schultes, 1996, p. 165). The species *insolita* Rossmässler, 1838 is now placed in *Helicigona* (Hesse, 1931, p. 69; Subai, 1995, p. 88; 2002, p. 28; Welter-Schultes, 2012, p. 594), or in *Chilostoma* Fitzinger, 1833 (Štamol, 2010, pp. 24, 43, 59, 61, 67; Bank, 2011a).

4. Monterosato (1892, p. 26) described a land snail (HELICIDAE) from NW Sicily as *Helix (Helicogona) aspersa* var. *insolida*, with locus typicus ‘Favignana ?; comprata al mercato di Trapani come del Monte S. Giuliano e di Favignana’ (‘Favignana?; bought at the market in Trapani as coming from Monte S. Giuliano and [the island of] Favignana’). Subsequently, Monterosato (1894, pp. 168–169) changed his views on the affinity of the taxon and slightly redefined its distribution area, reporting it as a variety of *Helix mazzullii* De Cristofori & Jan, 1832 from Monte San Giuliano or Erice (Favignana being definitely ruled out). In this same work (1894, pp. 168–169), Monterosato also described the new ‘sectio’ *Ercella* for a group of endemic species of *Helix* Linnaeus, 1758, from NW Sicily, including *insolida*.

5. After the revised account by Monterosato (1894, pp. 168–169), *Helix insolida* Monterosato, 1892 was almost completely ignored by all subsequent authors. Taylor (1911, table 24, sub *Helix aspersa* var. *Insolida*), Alzona (1971, p. 220, as a synonym of *Helix (Cryptomphalus) aspersa*) and Bank (2011b, as a synonym of *Cornu aspersum*) cited this taxon. However, recently *insolida* Monterosato has been revalued in its original meaning as an endemic taxon belonging to the group of *Ercella mazzullii*, with distribution limited to the surroundings of Trapani (Sicily-NW); see Colomba et al. (2008, p. 90, sub *Cornu mazzullii insolidum*); Liberto et al. (2010, pp. 115–116, fig. 156, sub *Ercella insolida*); Colomba et al. (2011, p. 43, sub *Ercella insolida*); Giglio (2012, p. 15, sub *Ercella insolida*), Giannuzzi-Savelli et al. (2012, p. 109, figs. 8–10, sub *Ercella insolida*); Reitano et al. (2012, p. 566, sub *Ercella insolida*); Nordsieck (2013, p. 3, sub *Ercella insolida*). No junior synonyms are known for this taxon. The nominal taxon *Helix vitincola* De Gregorio, 1895, described from San Vito Lo Capo (De Gregorio, 1895, p. 7) differs from it in morphological and molecular characters (Colomba et al., 2011, pp. 10, 36). Type material of *Helix insolida* Monterosato (syntypes) is kept in the Museum of Zoology in Rome.

6. *Helix insolida* Brusina, 1876 and *Helix insolida* Pfeiffer & Clessin, 1881 and *Helix aspersa* v. *insolida* Monterosato, 1892 are primary homonyms, and, although the first two are no longer in use and have not been used after 1899, we cannot act under Article 23.9.1, since the junior homonym does not satisfy the requirements of Article 23.9.1.2. With two senior homonyms no longer in use and a junior homonym lacking synonyms, the best solution promoting stability and avoiding confusion is, in our opinion, to suppress the senior homonyms.

7. As a final remark we would like to highlight that if the Commission don’t decide to suppress the names *Helix insolida* Brusina, 1876 and *Helix insolida* Pfeiffer & Clessin, 1881 in order to give precedence to *Helix aspersa* v. *insolida* Monterosato, 1892, uncertainty will remain as to whether to consider *Helix insolida* Brusina, 1876 and *Helix insolida* Pfeiffer & Clessin, 1881 as incorrect subsequent spellings (and therefore unavailable names) or unjustified emendations (and therefore available names). This will create instability with different schools of thought, so that for some students *Helix aspersa* v. *insolida* Monterosato, 1892 will need to be replaced while for others it will not need a replacement name. Therefore, in order to avoid this

unpleasant consequence, we here accept for the purposes of this application that *Helix insolida* Brusina, 1876 and *Helix insolida* Pfeiffer & Clessin, 1881 are unjustified emendations (available names) and ask the Commission to suppress them. Alternatively we could have asked the Commission to rule under Article 78.2 that the names *insolida* Brusina, 1876, as published in the binomen *Helix insolida* and *insolida* Pfeiffer & Clessin, 1881, as published in the binomen *Helix insolida* are incorrect subsequent spellings, and therefore unavailable names. One way or another, in the event of a positive decision, the name *Helix insolida* Monterosato, 1892, would stand and would not need to be replaced.

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the following specific names for the purposes of both the Principle of Priority and the Principle of Homonymy:
 - (a) *insolida* Brusina, 1876, as published in the binomen *Helix insolida*;
 - (b) *insolida* Pfeiffer & Clessin, 1881, as published in the binomen *Helix insolida*;
- (2) to place on the Official List of Specific Names in Zoology the name *insolida* Monterosato, 1892, as published in the combination *Helix (Helicogena) aspersa* var. *insolida*;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
 - (a) *insolida* Brusina, 1876, as published in the binomen *Helix insolida* and as suppressed in (1)(a) above;
 - (b) *insolida* Pfeiffer & Clessin, 1881, as published in the binomen *Helix insolida* and as suppressed in (1)(b) above.

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Case 3634

OMALIIDAE Handlirsch, 1904 (Insecta, Archaeorthoptera) and XENOPTERIDAE Pinto, 1986 (Insecta, Megasecoptera): proposed emendation to OMALIAIDAE and XENOPTERAIDAE respectively to remove homonymy with OMALIINAE MacLeay, 1825 (Insecta, Coleoptera) and XENOPTERIDAE Riek, 1955 (Insecta, Orthoptera)

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Abstract. The purpose of this application, under Articles 29 and 55.3 of the Code, is to remove the homonymy between the family-group names OMALIDAE Handlirsch, 1904 (Insecta, Archaeorthoptera) and OMALIDAE MacLeay, 1825 (Insecta, Coleoptera), which are homonyms due to the similarity of the names of their respective type genera *Omalia* Beneden & Coemans, 1867 and *Omalium* Gravenhorst, 1802, and between the family-group names XENOPTERIDAE Pinto, 1986 (Insecta, Megasecoptera) and XENOPTERIDAE Riek, 1955 (Insecta, Orthoptera), which are homonyms due to the similarity of the names of their respective type-genera *Xenoptera* Pinto, 1986 and *Xenopterum* Riek, 1955. It is proposed that the stem of the generic name *Omalia* be emended to *Omalia-* to give OMALIAIDAE, while leaving the beetle family name unaltered, and that the stem of the generic name *Xenoptera* be emended to *Xenoptera-* to give XENOPTERAIDAE, while leaving the orthopteran family name unaltered.

Keywords. Nomenclature; taxonomy; Insecta; Protorthoptera; Coleoptera; Archaeorthoptera; Megasecoptera; Orthoptera; OMALIIDAE; XENOPTERIDAE; insects; Carboniferous.

1. During a search to update the fossil record of insect families since Ross & Jarzembowski (1993), for a PhD by Nicholson (2012), two junior homonymous family names were encountered.

2. The family OMALIDAE Handlirsch, 1904 (p. 13) was erected for the type genus *Omalia* Beneden & Coemans, 1867 (p. 392), (Insecta, Protorthoptera), the stem being *Oмали-*. However, this family name is a junior homonym of OMALIDAE MacLeay, 1825 (p. 49) (Insecta, Coleoptera), and is now considered to be a subfamily of STAPHYLINIDAE (see Bouchard et al., 2011, p. 175), spelling corrected to OMALIINAE. Although MacLeay (1825) does not mention a type genus, this is given as *Omalium* Gravenhorst, 1802 (p. 111) in Newton & Thayer (1992, p. 57) and Herman (2001, p. 210), the stem is therefore *Oмали-*. The spelling OMALIDAE MacLeay, 1825 was at some stage corrected to OMALIIDAE and this spelling has been in use since at least 1893 (see Lewis, 1893). OMALIDAE Handlirsch, 1904 was corrected to OMALIIDAE by Handlirsch (1919, p. 552), and the emended spelling has been used ever since, e.g. Carpenter (1992, p. 121, authorship incorrectly attributed to Handlirsch, 1906 in 1906–08). Brauckmann & Hahn (1980, p. 303) considered OMALIIDAE Handlirsch, 1904 to be a nomen nudum, however the original use is clearly accompanied by the type genus and species names with their primary reference and the locality and a detailed description (with a figure) of the type specimen. This satisfies Articles 11 & 12 of the Code that the name is available. Kukalová-Peck & Brauckmann (1992, p. 2454) gave the correct authorship (OMALIIDAE Handlirsch, 1904) though they synonymised the family with GERARIDAE Scudder, 1885. However, this synonymy was not followed by Béthoux & Nel (2002, 2005), who regarded OMALIIDAE Handlirsch, 1904 as unplaced in the superorder Archaeorthoptera. In order to remove the homonymy, following the Principle of Priority and because the OMALIINAE MacLeay is highly diverse with 1458 included species (according to Herman, 2001, p. 209), it is proposed that the stem of the generic name *Omalia*, currently *Oмали-* be emended to *Omalia-* giving OMALIAIDAE.

3. The family XENOPTERIDAE Pinto, 1986 (p. 25) was erected for the type genus *Xenoptera* Pinto, 1986 (Insecta, Megasecoptera), the stem being *Xenopter-*. However this family name is a junior homonym of XENOPTERIDAE Riek, 1955 (p. 687) based on the type genus *Xenopterum* Riek, 1955 (Insecta, Orthoptera), the stem being *Xenopter-*. The homonymy was noted by Ross & Jarzembowski (1993, p. 369) but has not been subsequently dealt with. Sharov (1968, p. 41) synonymised XENOPTERIDAE Riek, 1955 with TRIASSOMANTEIDAE Tillyard, 1922 however Gorokhov (1989, 2005) took the family out of synonymy and added more species. In order to remove the homonymy, following the Principle of Priority and because XENOPTERIDAE Riek is more diverse with 17 included species (see Gorokhov, 2005, p. 181), it is proposed that the stem of the generic name *Xenoptera*, currently *Xenopter-* be emended to *Xenoptera-* to give XENOPTERAIDAE.

4. There is also another family-group homonym – XENOPTERINAE Gill, 1878 (p. 792) (a junior synonym of TETRAODONTINAE Bonaparte, 1832 (p. 163) and a senior synonym of CHORNERHINIDAE Gill, 1884 (p. 423)). This name is based on *Xenopterus* Troschel 1856 (p. 88), which is an unjustified emendation of *Xenoptere* Bibron in Duméril, 1855 (p. 281), if the Commission accepts removal of accents as correct latinisation of the gallic name *Xénoptère* nec *Xenopterus* as proposed by Kottelat (2001). *Xenoptere* is a junior synonym of *Chonerhinos* Bleeker, 1854 (p. 259) (see Kottelat, 1999). It is not necessary to request a solution in this application because the family-group name is in synonymy and is likely to be a nomen oblitum.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that for the purposes of Article 29 of the Code:
 - (a) the stem of the generic name *Omalia* Beneden & Coemans, 1867 is *Omalia-*;
 - (b) the stem of the generic name *Xenoptera* Pinto, 1986 is *Xenoptera-*;
- (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Omalia* Beneden & Coemans, 1867 (gender: feminine), type species by monotypy *Omalia macroptera* Beneden & Coemans, 1867;
 - (b) *Omalium* Gravenhorst, 1802 (gender: neuter), type species by subsequent designation *Staphylinus rivularis* Paykull, 1789;
 - (c) *Xenoptera* Pinto, 1986 (gender: feminine), type species by monotypy *Xenoptera riojaensis* Pinto, 1986;
 - (d) *Xenopterum* Riek, 1955 (gender: neuter), type species by monotypy *Xenopterum crosbyi* Riek, 1955;
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *crosbyi* Riek, 1955, as published in the binomen *Xenopterum crosbyi*;
 - (b) *macroptera* Beneden & Coemans, 1867, as published in the binomen *Omalia macroptera*;
 - (c) *riojaensis* Pinto, 1986, as published in the binomen *Xenoptera riojaensis*;
- (4) to place on the Official List of Family Group Names in Zoology the following names:
 - (a) OMALIAIDAE Handlirsch, 1904, type genus *Omalia* Beneden & Coemans, 1867, spelling emended by ruling in (1)(a) above (Insecta, Archaeorthoptera);
 - (b) OMALIIDAE MacLeay, 1825, type genus *Omalium* Gravenhorst, 1802 (Insecta, Coleoptera);
 - (c) XENOPTERAIDAE Pinto, 1986, type genus *Xenoptera* Pinto, 1986, spelling emended by ruling in (1)(b) above (Insecta, Megasecoptera);
 - (d) XENOPTERIDAE Riek, 1955, type genus *Xenopterum*, Riek, 1955 (Insecta, Orthoptera);
- (5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the following names:
 - (a) OMALIDAE Handlirsch, 1904, spelling emended to OMALIAIDAE, as ruled in (1)(a) above (Insecta, Archaeorthoptera);
 - (b) XENOPTERIDAE Pinto, 1986, spelling emended to XENOPTERAIDAE by ruling in (1)(b) above (Insecta, Megasecoptera).

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Case 3624**A proposal for the rejection of 38 names in ANTHICIDAE (Coleoptera)**

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Abstract. The purpose of this application, under Articles 11.8, 11.8.1, 78.2.3 and 81 of the Code, is to confirm the unavailability of 23 names published by Marseul in 1879, one name published by Pic in 1892, one name attributed to Pic in 1911 and one name used by Kreckich-Strassoldo, 1919. These names have been incorrectly put in use by Chandler, Nardi & Telnov in 2004, in place of the correct use of names proposed by Pic and Sahlberg. The original names were French vernacular plurals for species-group names in a French text and cannot be converted into singular by application of Article 11.8.1. The incorrectly proposed names have destabilized a nomenclature settled for more than one century. Twelve other names proposed by Pic and Sahlberg that are junior objective synonyms should also be rejected. *Anthicus pumilus* Baudi, 1877 is designated as type species of *Tenuicomus* Pic, 1894, *A. rufivestis* Marseul, 1879 is designated as type species of *Trapezicomus* Pic, 1894 and *Notoxus bimaculatus* Illiger, 1801 is designated as type species of *Laticomus* Pic, 1894.

Keywords. Nomenclature; taxonomy; Insecta, Coleoptera; ANTHICIDAE; ant-like flower beetles.

1. The family ANTHICIDAE Latreille, 1819 or ‘ant-like flower beetles’ is a moderately small family of Coleoptera, containing 101 genera and over 3,000 species. The family is cosmopolitan and shows a relatively wide sample of ways of life in both adult and larval states (Chandler, 2010). Its type genus is *Anthicus* Paykull, 1798 (p. 253), whose type species is *Meloe antherinus* Linnaeus, 1760, by subsequent designation of Westwood (1830, p. 59).

2. The family attracted attention of LaFerté-Sénéctère, who, after several contributions, produced a preliminary monograph (LaFerté-Sénéctère, 1849a) and later the same year, completed it as a single volume (LaFerté-Sénéctère, 1849b). Also Mulsant & Rey (1866a) treated the French representatives in a book, whose text appeared also as an article a few months later (1866b). One of the new subgenera of *Anthicus* that they proposed was *Cyclodinus* (1866a, p. 77) for two species, *Anthicus humilis* Germar, 1824 and *A. longipilis* C. Brisout de Barneville, 1863, of which the former was designated as its type species by Bonadonna (1949, p. 57).

3. Thomson (1864, p. 366) described the new genus *Eonius* and designated as type species *Notoxus bimaculatus* Illiger, 1801.

4. Desbrochers des Loges (1868, p. 79) described a new species of ANTHICIDAE from Bône (now Annaba, Algeria) as *Formicomus oliverii* and conditionally proposed (p. 80) a new genus for it, *Pseudantichus*.

5. Chevrolat (1877, p. 168) proposed the new subgenus *Microhoria* and included in it four Algerian species. One of these, *Anthicus oedipus* Chevrolat, 1860, has been designated as type species by Bonadonna (1952, p. 234).

6. Marseul (1879a) revised the components of the family ANTHICIDAE (naming it a tribe) in the Old World. This work was published in 9 'livraisons' (Marseul, 1879b), but for the moment it has been impossible to know the contents and date for each one. He gave descriptions for all taxa in the family, genus and species groups that were known to him and reproduced those that were unknown to him. Genera and species were separated with the aid of keys. In his treatment of genus *Anthicus*, he introduced 19 species-groups to separate the 178 species of this genus known to him, with the words: 'Ces espèces, nous les répartissons en 19 groupes, aussi naturels que possible: le tableau qui suit permettra de reconnaître auquel de ces groupes chacune des espèces doit se rapporter' ['I divide these species into 19 groups, as natural as possible: the following key will allow the recognition of every group to which each species must belong']. In this key, the 'Tableau synoptique des groupes du genre *Anthicus*' (pp. 65–68), his new names are written as follows:

- p. 65 I. LEPTALEUS (EPHIPPICOLLES) (*Rodriguesi*)
 II. STENIDIUS (STENICOLLES) (*vittatus*)
 p. 66 III. SULCICOLLES (*giganteus*)
 IV. RECTICOLLES (*inderiensis*)
 V. LAGENICOLLES (*humilis*)
 VI. BITUMICOLLES (*turca*)
 VII. TRAPEZICOLLES (*floralis*)
 VIII. CORDICOLLES (*instabilis*)
 IX: STRICTICOLLES (*longicollis*)
 X. CLAVICOLLES (*longiceps*)
 p. 67 XI. HIRTICOLLES (*4-guttatus*)
 XII. BREVICOLLES (*antherinus*)
 XIII. TENUICOLLES (*olivaceus*)
 XIV. PUBICOLLES (*axillaris*)
 XV. BIRRICOLLES (*Genei*)
 VI. [lapsus for XVI] LIPARODERUS (ROTUNDICOLLES) (*insignis*)
 XVII. LATICOLLES (*baikalicus*).
 XVIII. FOSSICOLLES (*Ghilianii*)
 * MONSTROSIPEDES (*varus*)
 p. 68 ** NORMALIPEDES (*andalusicus*)
 XIX. AULACODERUS (BIPARTICOLLES) (*Friwaldskyi*).

All his species-group names ended in -colles, much in the way of the names adopted by Mulsant for the Coleoptera groups in his *Histoire Naturelle des Coléoptères de France* (Angusticolles, Gibbicolles, Scuticolles, etc.). In some instances, they were placed between parentheses and preceded by generic names made available by former authors, in such a way that he was giving precedence to these names over his own, namely for groups I, II, XVI and XIX he respectively used *Leptaleus* LaFerté-Sénectère, 1849 (type species *Notoxus rodriguezii* Latreille, 1804 by original designation), *Stenidius* LaFerté-Sénectère, 1847 (type species *Anthicus vittatus* Lucas, 1843 by monotypy), *Liparoderus* LaFerté-Sénectère, 1849 (type species *Anthicus insignis*

Lucas, 1843 by original designation) and *Aulacoderus* LaFerté-Sénéctère, 1849 (type species *Anthicus transversalis* LaFerté-Sénéctère, 1849 by original designation, a junior homonym, replaced with *Anthicus mutatus* Gemminger, 1870). This clearly indicates that he intended them to be at a lower rank than the subgenus. He also divided group XVIII into two subgroups. In his treatment of the species of *Anthicus* (pp. 68–234), he used as the leading name his own species group name in bold face, and in those groups having an alternative LaFerté-Sénéctère's name, appending it preceded with the abbreviation 'S.-G.' (Sous-Genre, i.e., Subgenus). However, in each species treatment, he placed in parentheses between the genus name *Anthicus* and the species name only LaFerté-Sénéctère's names, so that only species names in groups I and II bear a correctly placed subgeneric name, while those in groups XVI and XIX bear no interpolated name. Some spellings or names changed from the key proposed on pp. 65–68 by the addition of a French acute accent: the word for group V was LAGÉNICOLLES (p. 79), that for group VII was TRAPÉZICOLLES (p. 100) and inexplicably the name for group XVIII was modified to BIFOSSICOLLES (p. 187) (while commenting its identity with genus *Microhoria* Chevrolat, 1877, and offering a key where the names MONSTROSIPEDES and NORMALIPEDES were not used, giving instead the marking by one or two asterisks). Moreover, the name of group XIX on p. 230 was also modified into BISSICOLLES. In the 'Explications des planches' (p. 257), the following names are mentioned: '*Anthicus (Leptaleus) Rodriguesi* Latr.', '*Id. (Lagenicolles) humilis* Germar', '*Id. (Stenidius) tenuipes* Laf.', '*Id. (Cordicolles) instabilis* Schmidt', '*Id. (Laticolles) sellatus* Panz.', '*Id. (Bifossicolles) nectarinus* Panz.', '*Id. (Hirticolles) 4-guttatus* Rossi', '*Id. (Birricolles) Genei* Laf.' and '*Id. (Tenuicolles) olivaceus* Laf.'

Some authors have cast doubt on whether these new names of Marseul had a subgeneric rank or were just names for species-groups, as he admitted, and also on which language they were proposed in. The names look Latin, but the presence of acute accents on some of their appearances in the text allow the suspicion that they were intended as vernacular French names. Under Article 10.4, these names were proposed as 'species-groups', i.e., for an 'aggregate of species', and cannot be deemed to be genus-group names, even if they were placed in some cases between parentheses after a genus, e.g. in the 'Explication des Planches'. Moreover, either in French or in Latin, these names are plural, and not singular. In Latin, adjectives derived from Latin noun *collum* (neck) get the form *-collis*, with the modificative part in front, as a prefix, and with an *-i-* as a joining vowel, e. g., the classical adjective *parvicollis* (short-necked). The same reasoning is to be applied to the adjectives derived from Latin noun *pes* (foot), which get the form *-pes* and belong to the 3rd adjectival Latin declension, as the classical adjectives *aeripes* (bronze-footed) or *celeripes* (swift-footed). Since *Anthicus* is masculine, the groups of species belonging to this genus are also deemed to be masculine, and the nominative plural of masculine adjectives of the 2nd adjectival Latin declension ending in *-collis* ends in *-colles* and those of the 3rd ending in *-pes* end in *-pedes*. So, if these names are deemed to be Latin, they are masculine plural nominalized adjectives, and according to this evaluation, they are unavailable since they do not meet the requirements of Article 11.8 of the Code, which specifically requests that the names 'must be, or be treated as, a noun in the nominative singular'. There is no word in Latin ending in *-colles* that is singular. On the other hand, even if these names are deemed to be vernacular French used as

Latinized words and are allowed by Article 11.3, they are still plural forms (as the –s at the end shows, being the common plural mark in French) and are still excluded from availability by Article 11.8. Their conversion to nominative singular nouns to make them available is prevented by Article 11.8.1, which states that this can be done only if they are published in a Latin text, which is not the case, Marseul's work being written in French.

7. Marseul (1887) used his former names as subgenera of *Anthicus*, placing LaFerté-Sénectère's names in synonymy (Ephippicolles = *Leptaleus*, Stenicolles = *Stenidius*, Rotundicolles = *Liparoderus* and Biscissicolles = *Aulacoderus*). He did not use Fossicolles and Biparticolles, replacing these with Bifossicolles and Biscissicolles.

8. Pic (1892, p. 44) proposed a new group of *Anthicus* following Marseul's division system, with the words: 'Cette espèce que je n'ai pas su faire rentrer dans aucun des groupes de de Marseul, me paraît devoir tenir la tête d'une division nouvelle: *Curticolles*' in French and 'Es ist mir nicht möglich gewesen, diese Art in irgend eine der von Marseul'schen Gruppen einzuordnen; und es scheint mir, dass sie vornan in eine neue Gruppe, 'Die *Curticolles*' placiert werden muss.' in German [translation: This species that I have been unable to place in any of the groups of de Marseul, seems to me to head a new division: the *Curticolles*.]. This name, proposed as a division for the only new species *Anthicus trotommidens* Pic, 1892, and preceded by the plural definite article in the German version, is evidently to be considered a vernacular name, in the same category as Marseul's names.

9. Pic (1894a, p. 41, February) rejected Marseul's names as being vernacular French and latinized several (but not all) of these with a variation of ending to –*comus* (perhaps simply in to the manner of another Anthicid genus, *Formicomus*), with the words: 'J'ai cru bon de latiniser les coupes de De Marseul, . . .' [I have considered it desirable to latinize De Marseul's divisions, . . .]. Thus, these are newly created names and not replacement names, since unavailable names cannot be replaced (Article 12.2.3). Ten of these names took the first two syllables from Marseul's vernacular names. They were: in the key, without included species except for *Tenuicomus*, the divisions *Birricomus*, *Hirticomus*, *Curticomus* and *Laticomus* (p. 41) and *Pubicomus*, *Sticticomus*, *Clavicomus*, *Brevicomus*, *Tenuicomus* (2 spp.), *Trapezicomus* and *Cordicomus* (p. 42), and in the text, with included species, *Birricomus* (3 spp.) (p. 43), *Cordicomus* (6 spp.) and *Trapezicomus* (5 spp.) (p. 45), *Brevicomus* (18 spp.) (p. 46), and *Pubicomus* (7 spp.) (p. 48). In the continuation of his catalogue (Pic, 1894b, March) treated again *Hirticomus* (2 spp.) and *Tenuicomus* (p. 69), *Clavicomus* (8 spp.) and *Stricticomus* (4 spp.), correcting the original *Sticticomus* (p. 70), and *Laticomus* (2 spp.) (p. 71). *Curticomus* (p. 76), apparently being an emendation of *Curticollis* Pic, 1892 to match the selected ending of the other names, even if not overtly stated so, is not based on any of Marseul's names and is here considered a completely new description (type species by monotypy *Anthicus trotommidens* Pic, 1892 (as *trotommideus*, an incorrect subsequent spelling). The original spelling *Bissicomus* on p. 41 and 43 was corrected in the Errata (p. 79) to *Birricomus*. No type species were designated.

10. Pic (1895, p. 92) used *spinicornes* as an adjective to qualify some species of *Anthicus* belonging to two different subgenera (*Cyclodinus* and *Brevicomus*), having in common a peculiar dorsal tooth on the dorsum of the antennal scape. The exact words used were: ' . . . je ne crois pas inutile de donner l'énumération des espèces que

j'ai reconnues *spinicornes* (il peut s'en trouver d'autres encore non nouvelles) et que j'ai rapprochées pour cela bien qu'elles fassent partie de deux groupements différents, celui des *Cyclodinus* et celui des *Brevicomus*. [Translation: . . . I do not think it useless to give a list of the species I have recognised as having the antennae spined (maybe there are still some others which are not new) and that I have brought closer because of this even if they belong to two different groups, that of *Cyclodinus* and that of *Brevicomus*.]. This is an emphasized plural adjective in a French sentence, in lowercase, constituting no scientific name that could be taken, as is the case for Marseul's names, either as a plural vernacular French name or as a plural Latin compound adjective, being in both cases unavailable (Article 11.8). This name has been considered unavailable by later authors and only Krekich-Strassoldo (1919, p. 65) commented on its use by Pic: '... und die er *Spinicornes* oder *Spinifères* benennt' [Translation: . . . and which he called *Spinicornes* or *Spinifères*.]. He did not use it as an available name, kept the original French grave accent but capitalised the words.

11. J.R. Sahlberg (1903a) was the first to use what apparently seem to be nominative singular versions of Marseul's plural names, as subgenera of *Anthicus*. They were: *Lagenicollis* (pp. 66–67, 5 species included), *Trapezicollis* (p. 67, type species by monotypy *Meloe floralis* Linnaeus, 1758), *Cordicollis* (p. 67, type species by monotypy *Anthicus instabilis* Schmidt, 1842), *Stricticollis* (p. 67, two species included), *Hirticollis* (p. 67, type species by monotypy *Notoxus hispidus* Rossi, 1792), *Brevicollis* (p. 67, 4 species included) and *Birricollis* (p. 67, type species by monotypy *Anthicus genei* LaFerté-Sénéctère, 1849). These names are available under the general requirements of Article 11. They lack any reference to Marseul's work (which is only mentioned as a general reference for the family) or to a possible intent of Sahlberg to amend them, so they must be taken as new names proposed by this latter author. Although descriptions are lacking, the indications required by Article 12.2 are furnished since there is at least one available specific name included in every proposed subgenus. Even if the issue of the *Öfversigt af Finska Vetenskaps-Societetens Förhandlingar* for 1902–1903 (nr. 45) seems to have been published as a single volume at the end of the Finnish financial year, it was usual that the authors received reprints of their articles as soon as they were available, advancing thus the publication date (H. Silfverberg, pers. comm.). I have been unable to check this situation.

12. J.R. Sahlberg (1903b) used some of the previously proposed subgenera and added a new one, *Pubicollis* (p. 9, type species by monotypy *Anthicus fenestratus* Schmidt, 1842).

13. In a later paper, J.R. Sahlberg (1903c) added a new subgenus *Bifossicollis* (p. 31, type species by monotypy *Anthicus iscarיותes* LaFerté-Sénéctère, 1849).

14. In a later paper, J.R. Sahlberg (1903d) added two new subgenera, *Clavicollis* (p. 55, type species by monotypy *Formicomus oliverii* Desbrochers des Loges, 1868 [as *olivieri*, incorrect subsequent spelling]) and *Tenuicollis* (p. 56, four species included).

15. Pic (1911, p. 30) listed 21 subgenera of *Anthicus* recognized as valid (and two synonyms) for the World fauna, and placed his names *Bissicomus*, *Brevicomus*, *Clavicomus*, *Cordicomus*, *Curticomus*, *Hirticomus*, *Laticomus*, *Pubicomus*, *Sticticomus*, *Tenuicomus* and *Trapezicomus* under the heading 'Verschiedene Abteilungen' [Other divisions], but not as subgenera. The list of World species followed, some of them carrying after their treatment the name of the containing division in

parentheses. Among these, none of these names or of those of Marseul appeared. The only one used (after 16 species) is *Spiniferes*, which was not listed with the other subgenera or divisions. As in the case of *Spinicornes*, *Spiniferes* is a plural name, either vernacular French or a Latin compound adjective in nominative, and is unavailable (Article 11.8). *Spiniferes* was raised to the genus rank by Uhmman (1976) and used by two other authors. The treatment of *Leptaleus* (p. 28) did not include any mention of Ehippicolles.

16. Pic's names were in predominant use for the subgenera of *Anthicus* (and given precedence over Marseul's unavailable names) or sometimes used as genera, while Sahlberg's names were largely overlooked, until Chandler et al. (2004) modified the current nomenclature. After consulting with Dr. A. Smetana 'who pointed out that these names were a French plural form of scientific names that was commonly used in the 1800's and early 1900's', they decided that 'these names can be emended to the nominative singular [Article 11.8.1]'. However, this Article states literally: 'A genus-group name proposed *in Latin text* [my emphasis] but written otherwise than in the nominative singular *because of the requirements of Latin grammar* [my emphasis] is available, provided that it meets the other requirements of availability, but it is to be corrected to the nominative singular.' Marseul's names were proposed in a text written in French, where there were no requirements of Latin grammar. Moreover, if they recognized them as being 'a French plural form of scientific names' they should have excluded them from Zoological Nomenclature under Article 1.3.5, since vernacular names do not form part of Zoological Nomenclature. The only names that could have been proposed originally in a vernacular form are family-group names under the conditions of Article 11.7.2.

This incorrect interpretation of the Code led them to amend without justification 22 names proposed by Marseul, Pic, and Kreckich-Strassoldo, and to take the available names proposed by Sahlberg as justified emendations of Marseul's names without their proper authorship and date.

They considered the following names to have been emended by Sahlberg:

Bifossicolles to *Bifossicollis* Marseul, 1879a, p. 187 [incorrectly as 67] (type species *Anthicus ghilianii* LaFerté-Sénectère, 1849 by original designation.) under synonymy with *Microhoria*. *Bifossicollis* Sahlberg, 1903 was considered a justified emendation of Bifossicolles.

Birricolles to *Birricollis* Marseul, 1879a, p. 67 (type species *Anthicus genei* LaFerté-Sénectère, 1849 by original designation) under synonymy with *Anthicus*. *Birricollis* Sahlberg, 1903 was considered a justified emendation of Birricolles. *Birricomus* Pic, 1894 was considered a replacement name for *Birricollis*.

Brevicolles to *Brevicollis* Marseul, 1879a, p. 67 (type species *Meloe antherinus* Linnaeus, 1760 by original designation) under synonymy with *Anthicus*. *Brevicollis* Sahlberg, 1903 was considered a justified emendation of Brevicolles. *Brevicomus* Pic, 1894 was considered a replacement name for *Brevicollis*.

Clavicolles to *Clavicollis* Marseul, 1879a, p. 66 (type species *Anthicus longiceps* LaFerté-Sénectère, 1849 by original designation) and used it as a valid genus. *Clavicollis* Sahlberg, 1903 was considered a justified emendation of Clavicolles. *Clavicomus* Pic, 1894 was considered a replacement name for *Clavicollis*.

Cordicolles to *Cordicollis* Marseul, 1879a, p. 66 (type species *Anthicus instabilis* Schmid, 1842 by original designation) and used it as a valid genus. *Cordicollis* Sahlberg, 1903 was considered a justified emendation of Cordicolles. *Cordicomus* Pic, 1894 was considered a replacement name for *Cordicollis*.

Hirticolles to *Hirticollis* Marseul, 1879a, p. 67 (type species *Notoxus quadriguttatus* Rossi, 1792 by original designation) and used it as a valid genus. *Hirticollis* Sahlberg, 1903 was considered a justified emendation of Hirticolles. *Hirticomus* Pic, 1894 was considered a replacement name for *Hirticollis*.

Lagenicolles to *Lagenicollis* Marseul, 1879a, p. 66 (type species *Anthicus humilis* Germar, 1824 by original designation) under synonymy with *Cyclodinus* Mulsant & Rey, 1866. *Lagenicollis* Sahlberg, 1903 was considered a justified emendation of Lagenicolles.

Pubicolles to *Pubicollis* Marseul, 1879a, p. 67 (type species *Anthicus axillaris* Schmidt, 1842 by original designation) under synonymy with *Anthicus*. *Pubicollis* Sahlberg, 1903 was considered a justified emendation of Pubicolles. *Pubicomus* Pic, 1894 was considered a replacement name for *Pubicollis*.

Stricticolles to *Stricticollis* Marseul, 1879a, p. 66 (type species *Anthicus longicollis* Schmidt, 1842 by original designation) and used it as a valid genus. *Stricticollis* Sahlberg, 1903 was considered a justified emendation of Stricticolles. *Stricticomus* Pic, 1894 was considered a replacement name for *Stricticollis*.

Tenuicolles to *Tenuicollis* Marseul, 1879a, p. 67 (type species *Anthicus olivaceus* LaFerté-Sénéctère, 1849 by original designation) and used it as a valid genus. *Tenuicollis* Sahlberg, 1903 was considered a justified emendation of Tenuicolles. *Tenuicomus* Pic, 1894 was considered a replacement name for *Tenuicollis*.

Trapezicolles to *Trapezicollis* Marseul, 1879a, p. 66 (type species *Meloe floralis* Linnaeus, 1758 by original designation) under synonymy with *Anthicus*. *Trapezicollis* Sahlberg, 1903 was considered a justified emendation of Trapezicolles. *Trapezicomus* Pic, 1894 was considered a replacement name for *Trapezicollis*.

They also emended:

Biscissicolles to *Biscissicollis* Marseul, 1879a, p. 230 [incorrectly as 67] (type species *Anthicus friwaldszkyi* LaFerté-Sénéctère, 1849 by original designation) under synonymy with *Aulacoderus*.

Bitumicolles to *Bitumicollis* Marseul, 1879a, p. 66 (type species *Anthicus turca* Marseul, 1879, by original designation) under synonymy with *Cordicollis*.

Curticolles to *Curticollis* Pic, 1892, p. 44 (type species *Anthicus trotommidens* Pic, 1892, by monotypy) under synonymy with *Anthicus*.

Ephippicolles to *Ephippicollis* Marseul, 1879a, p. 65 (type species *Notoxus rodriguesi* Latreille, 1804) under synonymy with *Leptaleus* LaFerté-Sénéctère, 1849.

Laticolles to *Laticollis* Marseul, 1879a, p. 67 (type species *Anthicus baicalicus* Mulsant & Rey, 1866, by original designation) under synonymy with *Cordicollis*. *Laticomus* Pic, 1894 was considered a replacement name for *Laticollis*.

Recticolles to *Recticollis* Marseul, 1879a, p. 66 (type species *Anthicus inderiensis* Marseul, 1879 by original designation) under synonymy with *Anthicus*.

Rotundicolles to *Rotundicollis* Marseul, 1879a, p. 67 (type species *Anthicus insignis* Lucas, 1843 by original designation) under synonymy with *Liparoderus* LaFerté-Sénéctère, 1849.

Spinicornes to *Spinicornus* Krekich-Strassoldo, 1919, p. 65 (type species by monotypy *Anthicus beckeri* Desbrochers des Loges, 1875, a subjective synonym of *Anthicus humilis* Germar, 1824) under synonymy with *Cyclodinus* Mulsant & Rey, 1866.

Spiniferes to *Spiniferus* Pic, 1911, p. 33 (type species *Anthicus cerastes* Truqui, 1855 by subsequent designation by Chandler et al. (2004, pp. 119, 124) under synonymy with *Cyclodinus* Mulsant & Rey, 1866.

Stenicolles to *Stenicollis* Marseul, 1879a, p. 65 (type species *Anthicus vittatus* Lucas, 1843 by monotypy) under synonymy with *Stenidius* LaFerté-Sénéctère, 1847.

Sulcicolles to *Sulcicollus* Marseul, 1879a, p. 66 (type species *Anthicus giganteus* LaFerté-Sénéctère, 1849, by original designation) under synonymy with *Stricticollis*. This is an incorrect emendation as well, since they depart from changing the ending (from -colles to -collis) to avoid homonymy with *Sulcicollis* Klug, 1833 (Coleoptera) in a peculiar application of what an emendation to singular should be.

They used an incorrect subsequent spelling: *Pseudanthicus*, instead of *Pseudantichus* Desbrochers des Loges, 1868. It is not clear that this is Desbrochers des Loges's inadvertent misspelling, since he used correctly *Anthicus* in his article. Perhaps he was using as the basis for his *Pseudantichus* the long accustomed in France misspelling *Antichus*, used in former French papers by Latreille and others. They misspelled the original single included species *Formicomus oliverii* as *F. olivierii*. They also failed to meet the requirements of reversal of precedence against *Clavicollis* or *Clavicomus* under Article 23.9.1.2, since they merged in a single comparison of use both names, which are nominally different, and failed to 'give evidence that the conditions of Article 23.9.1.2 are met' since they did not list the 25 required works.

Moreover, they used as available the names *Monstrosipedes* Marseul, 1879a, p. 67 (type species by original designation *Anthicus varus* Marseul, 1875, a subjective junior synonym of *Anthicus valgus* Fairmaire, 1875) and *Normalipedes* Marseul, 1879a, p. 68 (type species *Anthicus andalusiacus* LaFerté-Sénéctère, 1849 by original designation) in the synonymy of *Microhoria* Chevrolat, 1877.

They did not treat as available the names Fossicolles Marseul, 1879a, p. 67, considered to be an incorrect alternative spelling of Bifossicolles Marseul, 1879a, p. 187, and Biparticolles Marseul, 1879a, p. 68, considered to be an incorrect alternative spelling of Biscissicolles Marseul, 1879a, p. 230 (they mention Marseul [1887, p. 353] as First Reviser for both names). All these emendations were proposed under synonymy of other genera but these five: *Clavicollis*, *Cordicollis*, *Hirticollis*, *Stricticollis* and *Tenuicollis*, which were used as valid genus names.

17. Three genera present some problems with their typification. The genus *Laticomus* Pic, 1894 has no available type species designation. It originally included two available nominal species: *Notoxus sellatus* Panzer, 1796 and *N. bimaculatus* Illiger, 1801. If the first species were designated, it would become an objective synonym of *Cartolus* Mulsant & Rey, 1866; if the second, it would become an objective synonym of *Eonius* C.G. Thomson, 1859, so this genus will never be used. I hereby designate *Notoxus bimaculatus* Illiger, 1801 as its type species.

A different case is the one presented by *Tenuicomus* Pic, whose only type species designation of *Anthicus ocreatus* LaFerté-Sénectère, 1847 by Bucciarelli (1980, p. 185) is invalid, not being an originally included species. This species was included in this group just in the second part of Pic's (1894b) catalogue. The only two original species are *A. pumilus* Baudi, 1877 and *A. versicolor* Kiesenwetter, 1866 (now in *Clavicomus*), two more species were considered to belong to a possibly different group (Article 67.2.5). Consequently, I hereby select as type species *A. pumilus* Baudi, 1877, currently a junior synonym of *Tenuicomus pauperculus* (LaFerté-Sénectère, 1847).

Finally, *Trapezicomus* Pic has no type species designation. I select here as type species the first mentioned by Pic (1894a, p. 45), namely, *Anthicus rufivestis* Marseul, 1879. This name becomes thus a junior subjective synonym of *Anthicus* Paykull and remains useful if needed in the future.

18. Previous to Chandler et al.'s (2004) paper, some of Marseul's plural names were used only by Krekich-Strassoldo (1911), Schatzmayr & Koch (1934), Koch (1935) and Winkler (1927), some names were never used, and only Spiniferes has known a little wider use either as a genus or subgenus (Uhmann, 1976, 1978, 1985, 1992a, 1992b, 1998; Whitehead, 1993; Telnov, 2002). The introduction of these emendations wrongly attributed to Marseul since 2004 in this widely referenced article and in Chandler et al. (2008) has started a destabilization of the generic nomenclature of the ANTHICIDAE, creating in one case useless names because they are thought to be objective synonyms and in the other case names that have displaced others in common use for more than one century since their inception. The incorrect interpretation of the Code has resulted in 19 unavailable names originally created as 'groupes d'espèces' by Marseul (1879a) having been considered at one time or another names available in the genus-group, even if they are clearly plural names. The 12 names correctly created by Pic (1892, 1894a, b) and in use since their creation have been synonymized with emendations of these names under an incorrect interpretation of Article 11.8.1 of the Code: these plural names have been converted into singular using a provision that allows this only in cases where the names were published in a Latin text under the rules of Latin grammar, whereas they were in fact proposed in a French text. This has led also to the disappearance as 'emendations' of 11 names correctly proposed by Sahlberg (1903a, b, c, d) and to other irregularities as mentioned above. None of the names used by Chandler et al. (2004) can be attributed to these authors since, excepting *Clavicollis*, *Cordicollis*, *Hirticollis*, *Stricticollis* and *Tenuicollis*, they have been treated as available in synonymy (contravening the provisions of Article 11.6.3) and these five because they contravene the mandatory provisions of Article 16.1. The Commission is asked to rule in order to prevent a future extension of the irregular usage of these unavailable names. Regarding the type species for every genus, since author and date are not part of the genus name (Article 51.1), and the identity of concept of the available names and their emendations is strict, I have accepted those designated using an incorrect authority and date as having been designated for the name having a correct authorship and date, mainly in Sahlberg's case, provided that the designated species were originally included (Article 67.7). With the following proposal, only four names (*Biscissicollis*, *Bitumicollis*, *Recticollis*, *Spiniferus*) are lost, but they are not preoccupied if there is a need for them to be described again in the future for genera or

subgenera. A list of 85 uses of Pic's names (1895–2010) and of 20 uses of Chandler et al.'s names (2004–2012), the latter mainly by the three authors of the proposal, has been deposited with the Secretariat of the Commission.

19. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to confirm that the names Ehippicolles, Stenicolles (p. 65), Sulcicolles, Reticolles, Lagenicolles, Bitumicolles, Trapezicolles, Cordicolles, Stricticolles, Clavicolles (p. 66), Hirticolles, Brevicolles, Tenuicolles, Pubicolles, Birricolles, Rotundicolles, Laticolles, Fossicolles, Monstrosipedes (p. 67), Normalipedes, Biparticolles (p. 68), Bifossicolles (p. 187) and Biscissicolles (p. 230), all of Marseul (1879), the names Curticolles Pic (1892, p. 44) and Spiniferes Pic (1911, p. 33) and the name Spinicornes Krekich-Strassoldo (1919, p. 65), are unavailable under Articles 11.8 and 11.8.1 of the Code and cannot be emended to make them available;
- (2) to use its plenary power to rule that the name *Clavicomus* Pic, 1894 is to be given precedence over *Pseudantichus* Desbrochers des Loges, 1868, whenever the two are considered to be synonyms;
- (3) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Anthicus* Paykull, 1798 (gender: masculine), type species by subsequent designation by Westwood (1830) *Meloe antherinus* Linnaeus, 1760, type genus of the family-group ANTHICIDAE;
 - (b) *Bifossicollis* Sahlberg, 1903 (gender: masculine), type species by monotypy *Anthicus iscarיותes* LaFerté-Sénéctère, 1849;
 - (c) *Birricomus* Pic, 1894 (gender: masculine), type species by subsequent designation by Chandler et al. (2008) *Anthicus genei* LaFerté-Sénéctère, 1849;
 - (d) *Clavicomus* Pic, 1894 (gender: masculine), type species by subsequent designation by Bucciarelli (1980) *Anthicus longiceps* LaFerté-Sénéctère, 1849, with the endorsement that it is to be given precedence over *Pseudantichus* Desbrochers des Loges, 1868, whenever they are considered to be synonyms as ruled in (2) above;
 - (e) *Cordicomus* Pic, 1894 (gender: masculine), type species by subsequent designation by Bonadona (1958) *Anthicus instabilis* Schmidt, 1842;
 - (f) *Curticomus* Pic, 1894 (gender: masculine), type species by monotypy *Anthicus trotommidens* Pic, 1892;
 - (g) *Cyclodinus* Mulsant & Rey, 1866 (gender: masculine), type species by subsequent designation by Bonadona (1949) *Anthicus humilis* Germar, 1824;
 - (h) *Hirticomus* Pic, 1894 (gender: masculine), type species by subsequent designation by Bonadona (1958) *Notoxus hispidus* Rossi, 1792;
 - (i) *Microhoria* Chevrolat, 1877 (gender: feminine), type species by subsequent designation by Bonadona (1952) *Anthicus oedipus* Chevrolat, 1860;
 - (j) *Pseudantichus* Desbrochers des Loges, 1868 (gender: masculine), type species by monotypy *Formicomus oliverii* Desbrochers des Loges, 1868, with the endorsement that it is not to be given priority over *Clavicomus* Pic, 1894, whenever they are considered to be synonyms, as ruled in (2) above;

- (k) *Pubicomus* Pic, 1894 (gender: masculine), type species by subsequent designation by Chandler et al. (2008) *Anthicus axillaris* Schmidt, 1842;
 - (l) *Stricticomus* Pic, 1894 (gender: masculine), type species by subsequent designation by Bonadona (1958) *Anthicus transversalis* A. Villa & G.B. Villa, 1833;
 - (m) *Tenuicomus* Pic, 1894 (gender: masculine), type species by present designation *Anthicus pumilus* Baudi, 1877;
 - (n) *Trapezicomus* Pic, 1894 (gender: masculine), type species by present designation *Anthicus rufivestis* Marseul, 1879;
- (4) to place on the Official List of Specific Names in Zoology the following names:
- (a) *antherinus* Linnaeus, 1760, as published in the binomen *Meloe antherinus* (specific name of the type species of *Anthicus* Paykull, 1798);
 - (b) *axillaris* Schmidt, 1842, as published in the binomen *Anthicus axillaris* (specific name of the type species of *Pubicomus* Pic, 1894);
 - (c) *genei* LaFerté-Sénéctère, 1849, as published in the binomen *Anthicus genei* (specific name of the type species of *Birricomus* Pic, 1894);
 - (d) *hispidus* Rossi, 1792, as published in the binomen *Notoxus hispidus* (specific name of the type species of *Hirticomus* Pic, 1894);
 - (e) *humilis* Germar, 1824, as published in the binomen *Anthicus humilis* (specific name of the type species of *Cyclodinus* Mulsant & Rey, 1866);
 - (f) *instabilis* Schmidt, 1842, as published in the binomen *Anthicus instabilis* (specific name of the type species of *Cordicomus* Pic, 1894);
 - (g) *iscariotes* LaFerté-Sénéctère, 1849, as published in the binomen *Anthicus iscariotes* (specific name of the type species of *Bifossicollis* Sahlberg, 1903);
 - (h) *longiceps* LaFerté-Sénéctère, 1849, as published in the binomen *Anthicus longiceps* (specific name of the type species of *Clavicomus* Pic, 1894);
 - (i) *oedipus* Chevrolat, 1860, as published in the binomen *Anthicus oedipus* (specific name of the type species of *Microhoria* Chevrolat, 1877);
 - (j) *oliverii* Desbrochers des Loges, 1868, as published in the binomen *Formicomus oliverii* (specific name of the type species of *Pseudantichus* Desbrochers des Loges, 1868);
 - (k) *pumilus* Baudi, 1877, as published in the binomen *Anthicus pumilus* (specific name of the type species of *Tenuicomus* Pic, 1894);
 - (l) *rufivestis* Marseul, 1879, as published in the binomen *Anthicus rufivestis* (specific name of the type species of *Trapezicomus* Pic, 1894);
 - (m) *transversalis* A. Villa & G.B. Villa, 1833, as published in the binomen *Anthicus transversalis* (specific name of the type species of *Stricticomus* Pic, 1894);
 - (n) *trotommidens* Pic, 1892, as published in the binomen *Anthicus trotommidens* (specific name of the type species of *Curticomus* Pic, 1894);
- (5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
- (a) *Birricollis* Sahlberg, 1903, junior objective synonym of *Birricomus* Pic, 1894;
 - (b) *Brevicomus* Pic, 1894, junior objective synonym of *Anthicus* Paykull, 1798;

- (c) *Brevicollis* Sahlberg, 1903, junior objective synonym of *Anthicus* Paykull, 1798;
- (d) *Clavicollis* Sahlberg, 1903, junior objective synonym of *Pseudantichus* Desbrochers des Loges, 1868;
- (e) *Cordicollis* Sahlberg, 1903, junior objective synonym of *Cordicomus* Pic, 1894;
- (f) *Hirticollis* Sahlberg, 1903, junior objective synonym of *Hirticomus* Pic, 1894;
- (g) *Lagenicollis* Sahlberg, 1903, junior objective synonym of *Cyclodinus* Mulsant & Rey, 1866;
- (h) *Laticomus* Pic, 1894, junior objective synonym of *Eonius* C.G. Thomson, 1859;
- (i) *Pubicollis* Sahlberg, 1903, junior objective synonym of *Pubicomus* Pic, 1894;
- (j) *Stricticollis* Sahlberg, 1903, junior objective synonym of *Stricticomus* Pic, 1894;
- (k) *Tenuicollis* Sahlberg, 1903, junior objective synonym of *Tenuicomus* Pic, 1894;
- (l) *Trapezicollis* Sahlberg, 1903, junior objective synonym of *Trapezicomus* Pic, 1894.

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Case 3632***Anathyris monstrum* Khalfin, 1933 (currently *Anathyrella monstrum*; Brachiopoda, Athyridida): proposed conservation of the specific name**

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Abstract. The purpose of this application, under Article 81.1 of the Code, is to preserve the name of the widely cited fossil brachiopod *Anathyris monstrum* Khalfin, 1933 by ruling that the two unused ‘varietal’ names, which together ambiguously comprised the species, are unavailable from their original descriptions in Khalfin (1933a).

Keywords. Nomenclature; taxonomy; Brachiopoda; Rhynchonellata; Athyridida; *Anathyris*; *Anathyrella*; *Anathyrella monstrum*; *Anathyrella monstrum rotundata*; *Anathyrella monstrum mucronata*; Russia; Solomino Horizon; uppermost Frasnian.

1. Khalfin (1933a, p. 37) described *Anathyris monstrum*, giving two different descriptions, both based on specimens from the same locality, the Frasnian limestones of the village Zharkovsky in the exposure of the left bank (the paper has equivalent Russian and English texts, and all quotations from it herein are from the original English text, uncorrected). Khalfin gave what he called a ‘descriptoin (sic) of adult specimens of *Anathyris monstrum*’ (p. 37 – Russian text, p. 62 – English text), which were shells ‘with long straight hinge-line. The cardinal angles are either extended and mucronata (sic) . . . or rounded off . . ., accordingly the hinge-line either corresponds to the maximal width of the shell, or is a little lesser’. Thereupon, he distinguished two varieties of the adult stage of this species, var. *rotundata* and var. *mucronata* (pp. 37–38, 62) followed (pp. 40, 63) by a ‘description of young specimens of *Anathyris monstrum*’, which were ‘. . . transversaly oval . . . shells. . . the maximal width’ being ‘approximately in the middle of the shell and a little near to the hinge-line’. The hinge-line was ‘almost straight, long enough, but still much less, than the maximal width of the shell . . .’. Khalfin (1933a) illustrated his new species on pl. V, fig. 17, pl. VI, figs. 1–4, and pl. VII, figs. 1–6, as well as figs. 5–11 in the text. In the explanation of these plates (pp. 69, 71), he used the specific name ‘*Anathyris monstrum* n. sp.’ only for ‘the young specimen’. In the remaining captions, when illustrating adult specimens, Khalfin referred to them as ‘*Anathyris monstrum* n. sp., var. *mucronata*’ or as ‘*Anathyris monstrum* n. sp., var. *rotundata*’. The state of maturity of the specimen of var. *rotundata* in pl. V, fig. 17, was not specified in the caption. Khalfin (1933a) did not designate holotypes or use the term ‘type’ for either *A. monstrum* sensu stricto or its two ‘varieties’, and no later author has proposed any

lectotype or neotype. Concerning the two ‘varieties’, at the end of the description Khalfin (1933a, pp. 42, 65) wrote, ‘Perhaps it would be more correct to consider these forms, as independent species’, but he did not attribute this rank to them formally. There were two spellings of the specific name *monstrum* in Khalfin (1933a); by a typesetting error, the specific name was also given as ‘*monstrnm*’ in the caption to Plate VI. We do not believe this has been noted by any subsequent authors and so, acting as First Revisers, we hereby choose ‘*monstrum*’ as the correct original spelling.

2. Under Article 45.6.4 of the Code, a name following a binomen is ‘subspecific if first published before 1961 and its author expressly used one of the terms “variety” or “form”...’, (except for certain circumstances that do not apply here). These varieties were proposed for two sets of large, adult individuals (thus not for two separate ‘age forms’, as defined in the Glossary for the ‘infrasubspecific entity’ entry). If one variety were for young individuals as such, and the other for older ones, these would indeed be infrasubspecific entities. Also, since the final remarks dwelt on their differences with a suggestion that they could be considered as distinct species, one cannot easily say Khalfin was presenting them as ‘variants of noninterrupted variability or polymorphism’. The matter is not unambiguous, but the two varieties could feasibly be considered as available subspecific names. If the varieties ‘*rotundata*’ and ‘*mucronata*’ were to be ranked as subspecies, under Article 46.1 of the Code, the nominotypical subspecies *Anathyris monstrum monstrum* must also be included. Khalfin’s (1933a) text clearly shows that he only considered *A. monstrum* to comprise two, not three ‘varieties’ so one (or both) of his new varieties must be a synonym of *A. monstrum monstrum*. This is confirmed by the fact that Khalfin (1933b) soon afterwards abandoned his var. *rotundata* into the synonymy of *A. monstrum* and elevated *A. mucronata* to specific rank. There are two growth stages: the first, in which Khalfin (1933a) included all the young/small specimens from the type locality and called simply, ‘*Anathyris monstrum* n. sp.’; and the second, in which he included all the adult/large-sized specimens from the type locality. As was noted in the preceding paragraph, he referred to those adults with rounded extremities as ‘*Anathyris monstrum* n. sp., var. *rotundata*’, and to those with the cardinal extremities more or less mucronate as ‘*Anathyris monstrum* n. sp., var. *mucronata*’. Under Article 17.3, the availability of all three subspecific names is not affected by their representing particular life stages of an animal.

3. In the same year, Khalfin (1933b) listed ‘*Anathyris monstrum* Khalf.’ among the species included ‘at the present time in the genus *Anathyris*’ [all quotations from this work are translated from the original Russian]. Under the headings of ‘*Anathyris monstrum* Khalf.’ and ‘*Anathyris mucronata* Khalf.’ Khalfin (1933b) cited Khalfin (1933a) which is thus assumed (e.g. by Modzalevskaya et al., 2013) to have been published later than the former. The examination of the publication date of Khalfin (1933a) showed that the permission for printing was granted by the State Censor (GORLIT) on 7 September 1932. The manuscript was sent for typesetting on 14 March 1933, while the corrected proofs were signed to press on 4 July 1933. The publication schedule for Khalfin (1933b) was as follows: the permission for printing was granted by the State Censor (GORLIT) on 8 July 1933, the manuscript was sent for typesetting on September 9 1933, while the corrected proofs were signed to press on 10 December 1933. It would be extremely unlikely that a volume with Khalfin’s (1933a) paper was not printed before 10 December 1933 (the date when 1933b was

signed to press). In addition, Khalfin (1933b) cited the exact page number of the *A. monstrum* description in 1933a. He would not have known the page number, if he had not seen the final proofs at least. In the printing practice in the former Soviet Union the pagination was done very late in the typesetting process, and the final pagination would not have been known to the author at the early proof correcting stage. However, in the absence of any outside evidence of precise day or month, both works are to be dated as 31 December 1933. In that case, in this paper we formally award priority to Khalfin (1933a) under Article 24.2 (First Reviser action). No varieties of ‘*monstrum*’ were listed by Khalfin (1933b), although the name ‘*rotundata*’ appeared as a ‘n. var.’ of the closely related ‘*Anathyris Ussoffi* n. sp.’ (Khalfin 1933b, p. 112). Khalfin (1933b) illustrated two ‘young’ (small) specimens and one adult (large) specimen (the latter in pl. 4, fig. c1-c2) of *A. monstrum*. The adult is the same specimen whose illustrations Khalfin (1933a, pp. 37, 62) cited under the heading ‘*Anathyris monstrum* n. sp.’ but which in the caption to pl. VI, fig. 1a-d was referred to as ‘*Anathyris monstrum* n. sp., var *rotundata*’. Khalfin’s (1933b) synonymy of *A. monstrum* explicitly included this same specimen. Finally, after accepting the variety *rotundata* as adults of ‘*Anathyris monstrum* Khalf.’, and including what he had previously (1933a) illustrated as ‘*Anathyris monstrum* n. sp., var *rotundata*’ in the synonymy of ‘*Anathyris monstrum* Khalf.’ (1933b, pp. 120, 124), Khalfin (1933b, p. 125) upgraded his other variety to ‘*Anathyris mucronata* Khalf.’ (see also Khalfin 1946, p. 58, fig. 16a-c).

4. After Khalfin (1946), virtually all authors (e.g. Grunt, 1980, 1986; Rzhonsnitskaya & Modzalevskaya, 1996; Rzhonsnitskaya et al., 1998; Yazikov & Shcherbanenko, 2011; Yazikov et al., 2011; Modzalevskaya et al., 2013) have ignored the names ‘*rotundata*’ and ‘*mucronata*’ since these two ‘varieties’ appeared to fall within the range of the high infrapopulation variability of a single species, *A. monstrum*. In a revision of the Devonian faunas of the Kuznetsk Basin, Modzalevskaya et al. (2013, p. 46) used *Anathyrella monstrum* as the valid name (with a change of genus), again regarding the two ‘varieties’ (or subspecies) as only ‘morphological variations’ in the adult stage. They also provided an emended diagnosis that both encompasses the whole range of variation of the species and serves to distinguish it from its congeners.

5. No name-bearing type for *Anathyris monstrum* has ever been designated so its type series consists of syntypes (Article 73.2). In order to define the nominal taxon *Anathyrella monstrum* objectively, we originally considered it necessary and appropriate to designate a specimen from Khalfin’s collection as lectotype. The specimen should not be a juvenile but an adult, with all the characteristic morphological characters already developed. Following Recommendation 74B (Preference for illustrated specimens), we intended to designate as lectotype the adult specimen illustrated by Khalfin (1933a, pl. 6, fig. 1a-d). Unfortunately, Khalfin (1933a) assigned all adults of ‘*A. monstrum*’ to either ‘var. *mucronata*’ or ‘var. *rotundata*’, and in the original figure caption, Khalfin (1933a, pl. 6, fig. 1a-d) explicitly included the above-mentioned specimen in his ‘var. *rotundata*’. Since Article 72.4.1 excludes from the type series any specimens ‘that the author . . . refers to as distinct variants (e.g. by name, letter or number),’ this specimen (as is also true for all of Khalfin’s adult specimens) is thus not a member of the type series of *A. monstrum*. The entire type series of this species, and (under Article 47.1) of its nominotypical subspecies *A. m. monstrum*, consists of young

specimens, which we regard as unsuitable candidates for lectotype status. The only complete and reasonably undistorted adult specimen that could be considered as a possible lectotype is the one illustrated by Khalfin (1933a, pl. 6, fig. 1a-d; 1933b, pl. 4, fig. 3c1-c2; see also Modzalevskaya et al., 2013, fig. 22, H-J).

6. It could be argued that this brachiopod taxon is not frequently mentioned in published literature but in palaeontology the number of published works on particular invertebrates is often low. Such invertebrates may, however, be widely used for geological mapping and stratigraphy and the data on which many conclusions and maps are based are generally not released or published. It is not uncommon for a superficially small mistake in identification or nomenclature to lead to vast areas being wrongly dated, mapped, and subsequently paleogeographically interpreted, even though the key taxa were seldom mentioned in publications. Devonian biostratigraphers and palaeontologists while investigating the position of the very important Frasnian/Famennian boundary (Upper Devonian) commonly use brachiopods to identify the geological age of the successions. The boundary interval is characterized by a gradual change in the brachiopod assemblages: the assemblage with *Cyrtospirifer ussoffi* (Khalfin) and *Anathyrella monstrum* (Khalfin) (index-species of the Solomino Horizon) is replaced by the assemblage with *Cyrtospirifer tschenyschewi* Khalfin and *Mesoplica praelong* (Sowerby) (index-species of the Peshcheka Horizon) (Racki, 1998; Rzhonsnitskaya et al., 1998; Geldern, 2004; Izokh, 2011; Yazikov et al., 2011; Yazikov & Shcherbanenko, 2011). These assemblages are also used in many other papers on various palaeontological and stratigraphic subjects (e.g. Gutak et al., 2011, etc.).

7. The ambiguity in Khalfin (1933a) involving the three names *monstrum*, *rotundata* and *mucronata*, leaves the universally used name [*Anathyrella*] *monstrum* with a type series consisting of young, poorly determinable specimens, while the variety *rotundata* is typified by a well-preserved adult specimen possessing the definitive characters of the species. Khalfin (1933b) and subsequent authors believed that this specimen was the most suitable type for *monstrum*. The simplest way to solve this problem is to follow Khalfin's original intention and to regard the names of varieties *rotundata* and *mucronata* as merely descriptive terms for adult variation in a polymorphic species, and not available for nomenclature from their use in Khalfin (1933a). This would allow recognition, as lectotype of *Anathyris monstrum*, of the specimen figured by Khalfin (1933b on pl. 4, fig. 3c1-c2 and 1933a, pl. 6, fig. 1a-d). This specimen was recently rediscovered in the Museum of the Polytechnical Institute, Tomsk (MPIT N 20/28-II) by Modzalevskaya et al., (2013, fig. 22, H-J) and so we conditionally propose this specimen as lectotype herein. If the Commission were to support this application the lectotype designation would be valid from the date of publication of the relevant Opinion. For those authors who do not endorse the accepted synonymy the name *Anathyris mucronatus* would still be available from Khalfin (1933b).

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that the names *rotundata* Khalfin, 1933a and *mucronata* Khalfin, 1933a, as published in the binomina *Anathyris monstrum* var. *rotundata* and *Anathyris monstrum* var. *mucronata*, are not available from Khalfin (1933a);
- (2) to place on the Official List of Specific Names in Zoology the name *monstrum* Khalfin, 1933a, as published in the binomen *Anathyris monstrum*.

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Case 3625***Kinosternon chimalhuaca* Berry, Seidel, & Iverson in Rogner, 1996 (Reptilia, Testudines): proposed confirmation of the publication date**

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Abstract. The purpose of this application, under Article 78.2.3 of the Code, is to alleviate confusion caused by the premature publication of the name *Kinosternon chimalhuaca* Berry, Seidel, & Iverson by Rogner (1996), while the full description was published by the same authors in 1997, which is widely but erroneously accepted as the valid publication date of the taxon. We request that the Commission use its specific powers to rule that the specific name *chimalhuaca* Berry, Seidel, & Iverson in Rogner, 1996, as published in the binomen *Kinosternon chimalhuaca*, is the one to be used for the Jalisco mud turtle.

Keywords. Nomenclature; taxonomy; Reptilia; Testudines; KINOSTERNIDAE; *Kinosternon chimalhuaca*; Jalisco mud turtle; Jalisco; Colima, Mexico.

1. In 1996, the second author of this petition (JBI) shared a copy of the 'in-press' description of *Kinosternon chimalhuaca* with the senior author (MR) for inclusion in his forthcoming book (Rogner, 1996), with the understanding that the original description by Berry, Seidel, & Iverson (1997, p. 331) would be published before the publication of Rogner's book. However, through the vagaries of publication schedules, Rogner's work was published first and the name *Kinosternon chimalhuaca* was inadvertently introduced by Rogner (1996, p. 23). Although the description in

Rogner's book was clearly based on that by Berry, Seidel and Iverson (and cited as such), and was paraphrased in Rogner's own words, according to the Code that name is available and attributable to Berry, Seidel, & Iverson in Rogner, 1996.

2. The situation is further complicated by the transposition in Rogner (1996) of two colour photographs (p. 18) provided personally by Iverson to Rogner, such that a photograph of *Kinosternon flavescens arizonense* is misidentified as *K. chimalhuaca* (and vice versa).

3. The full description and discussion of *K. chimalhuaca* subsequently appeared in Berry, Seidel, & Iverson (1997, p. 331, in the journal published by junior author Rhodin), precisely as cited by Rogner (1996), and that name has been cited as authored by Berry, Seidel, & Iverson in all subsequent works (e.g. Bonin et al., 2006; Fritz & Havas, 2007; TTWG, 2012).

4. The book by Rogner was intended to serve as a reference work for both amateurs and specialists, although it was primarily envisioned as a 'popular' guide and secondary source of information, and was never intended to fill a primary nomenclatural role. However, both dates regularly appear in many publications, databases and websites creating confusion (e.g. the publication year 1996 is cited in http://en.wikipedia.org/wiki/Jalisco_mud_turtle;

http://www.inaturalist.org/taxa/Kinosternon_chimalhuaca;

<http://reptile-database.reptarium.cz/species?genus=Kinosternon&species=chimalhuaca>,

while 1997 is cited in <http://www.iucnredlist.org/details/full/63667/0>,

<http://eol.org/pages/792958/overview>;

http://www.infotortuga.com/kinosternon_chimalhuaca.htm, etc.).

5. *K. chimalhuaca* Berry, Seidel, & Iverson, 1997 is a junior homonym and junior objective synonym of *K. chimalhuaca* Berry, Seidel, & Iverson in Rogner, 1996, and the case may appear unnecessary. However, the incorrect date is very often used in various publications and databases, thereby creating confusion. The best chance to end instability, and to establish a single stable combination of the name, authorship and date for this species of turtle, is to have the original date 1996 officially confirmed by the Commission. Confirmation of the publication date would (a) alleviate the confusion caused by the untimely (but valid) publication of Rogner (1996) and (b) take out of circulation the name as proposed by Berry, Seidel, & Iverson, 1997.

6. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its specific powers to confirm that the correct publication date of the specific name *chimalhuaca* Berry, Seidel, & Iverson in Rogner, 1996, as published in the binomen *Kinosternon chimalhuaca*, is 1996;

(2) to place on the Official List of Specific Names in Zoology the name *chimalhuaca* Berry, Seidel, & Iverson in Rogner, 1996, as published in the binomen *Kinosternon chimalhuaca* and as confirmed in (1) above;

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Case 3628***Terrapene putnami* Hay, 1906 (Testudines, EMYDIDAE): replacement of the holotype by designation of a neotype**

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Abstract. The purpose of this application, under Article 75.5 of the Code, is to conserve the current usage of the name *Terrapene putnami* Hay, 1906. We propose replacement of the nondiagnostic holotype (a fragment of a left hypoplastron) that was collected from a temporally mixed locality, with a more complete specimen comprised of the carapace, plastron, and associated non-shell postcrania from a nearby locality of late Pleistocene age. The specific name *T. putnami* is widely accepted by both palaeontologists and herpetologists as either a valid specific or subspecific name and has been established in the literature for over fifty years. However, the taxonomy of large fossil *Terrapene* specimens is ambiguous due in part to the lack of a more diagnostic and well-dated holotype for *T. putnami*. Recent molecular analyses of extant *Terrapene* species coupled with recent palaeontological studies have made the true diagnosis of the taxon imperative. It is proposed that all type species fixations for *Terrapene putnami* be set aside and a firmly dated late Pleistocene neotype be designated.

Keywords. Nomenclature; taxonomy; Reptilia; Testudines; EMYDIDAE; *Terrapene*; *Terrapene putnami*; giant box turtle; North America; Pleistocene.

1. Hay (1906, p. 30) described the species *Terrapene putnami* based on a single hypoplastron that was dredged from the Alafia (sic) River, near Tampa, Hillsborough County, Florida. The holotype was referred to the Plio-Pleistocene (Hay, 1906, 1908) and deposited in the American Museum of Natural History, bearing the reference number AMNH 6097.

2. The species *Terrapene putnami* (or *Terrapene carolina putnami* sensu Auffenberg, 1958, p. 70), which is widely cited and established in technical literature, is currently used to represent all large fossilized *Terrapene* material recovered from the Miocene-Pleistocene of North America, and is commonly discussed in museum exhibits and popular literature.

3. The holotype of *Terrapene putnami* was recovered from the Alafia River in dredged material collected approximately one mile from the mouth at Tampa Bay by Prof. F.W. Putnam (Hay, 1906, 1908). The holotype and other fossil remains, including what Hay referred to as '*Trachemys euglypha*' (Leidy), '*Testudo*' (possibly

'*Testudo crassiscutata*' Leidy), horses and tapirs, were considered contemporaneous with the Peace Creek (now Peace River) beds of Polk County, Florida by Hay, who assigned them a Pliocene age (Hay, 1906, 1908; Auffenberg, 1958). More recent work on Peace River fossils indicates a temporal mixing of Miocene, Pleistocene, and Holocene material (Auffenberg, 1958; Hansen et al., 2001). Furthermore, materials from the Alafia River are also temporally mixed, representing all stages of the Pleistocene. Due to the mixing of different aged fossil horizons at the type locality, the current holotype of *T. putnami* is not firmly dated and has led to much confusion and ambiguity regarding the true definition of the species.

4. A number of fossil box turtle species have been described since Hay's *T. putnami* in 1906. These multiple names are probably due to (a) the fragmentary nature of the holotype of *T. putnami*; (b) confusion about the age of *T. putnami*; and (c) the large morphological variation observed in shells of *Terrapene*. *Terrapene canaliculata* Hay, 1907 (p. 850; USNM 5500) was based on fragmentary material collected from either Whitemarsh or Skedaway Island, Georgia prior to 1869 and assigned a Plio-Pleistocene age. This species was subsequently used for all large Pleistocene *Terrapene* following a reassessment by Gilmore (1927, p. 4). Due to the fragmentary nature of the material Auffenberg (1958) considered *T. canaliculata* a junior synonym of *T. putnami* (p. 70) while considering *T. putnami* a subspecies of the extant Eastern Box Turtle, *Terrapene carolina*, recombining the species as *Terrapene carolina putnami*. Not discussed by Auffenberg, but also equally important, the holotype of *T. canaliculata* is also from a temporally mixed fauna and is therefore not a suitable specimen. The holotype of *Terrapene antipex* Hay, 1916 (p. 58; USNM 8820) was described from a posterior plastral lobe recovered from the late Pleistocene (Rancholabrean NAMLA) of Vero Beach, Indian River County, Florida. It was described as being smaller than *T. putnami* and having a proportionately thinner hypoplastron (Hay, 1916; Auffenberg, 1958). As *T. antipex* was diagnosed only by being smaller than *T. putnami*, it was first synonymized with *T. canaliculata* by Gilmore (1927), which was later synonymized with *T. c. putnami* by Auffenberg (1958). The holotype of *Terrapene singletoni* Gilmore, 1927 (p. 1; USNM 11181) consists of a carapace from the Melbourne bone beds, Brevard County, Florida, which were considered to be stratigraphically equivalent to the type locality of *T. antipex* Hay (Auffenberg, 1958). Barbour & Stetson (1931, p. 37) recognized the variability within the genus *Terrapene* and synonymized *T. singletoni* along with other nominal species, *Terrapene formosa* Hay, 1916 (p. 57), *T. antipex*, and *Terrapene innoxia* Hay, 1916 (p. 61) with *T. canaliculata*. As discussed above, *T. canaliculata* was later recognized as a junior synonym of *T. c. putnami*. The holotypes of *T. formosa* and *T. innoxia* were later recognized by Auffenberg (1958, p. 78) as junior synonyms of either *Terrapene carolina carolina* or *Terrapene carolina bauri*, which is beyond the scope of this report. The holotype of *Terrapene llanensis* Oelrich, 1953 (p. 35; UMMP 26957) was described from the posterior portion of a carapace and hindlobe of a plastron along with some postcranial specimens from the last interglacial Lone Tree Arroyo locality, Meade County, Kansas. Milstead (1956, p. 163) synonymized *T. llanensis* with *T. canaliculata*, along with two late Pleistocene species described from Texas, *Terrapene bulverda* Hay, 1921 and *Terrapene impensa* Hay, 1924. Both of these latter names were based on shell fragments and are not truly diagnostic. As mentioned previously, *Terrapene canaliculata* and all its junior

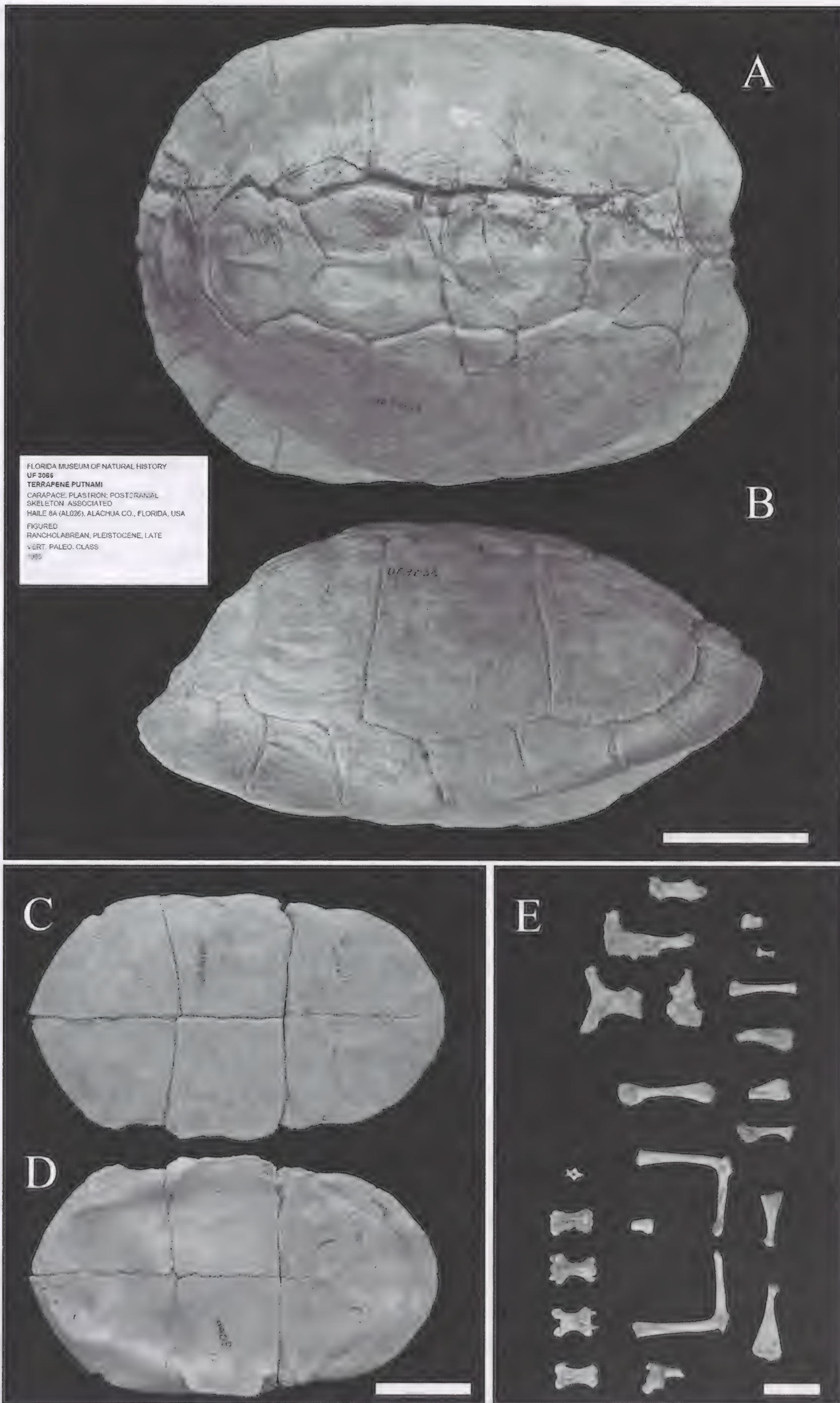


Figure 1. Proposed neotype of *Terrapene putnami* Hay, 1906, UF 3066. (A) Dorsal view of the carapace, (B) side profile of the carapace, (C) Ventral view of the plastron, (D) Dorsel view of the plastron, (E) Associated postcranial elements. (Scale bars: A, B=5 cm; C, D=5 cm; E=3 cm).

synonyms were then synonymized by Auffenberg (1958), who recognized substantial morphological variation within species of *Terrapene*. Furthermore, while Auffenberg believed the holotype of *T. c. putnami* to be late Pleistocene (Rancholabrean NALMA) in age, he referred all large fossil box turtles to *T. c. putnami* regardless of their age (Auffenberg, 1958; Milstead, 1967, 1969).

5. Recent collections made from the early Pleistocene (late Blancan to early Irvingtonian NALMAs) of Florida produced a series of nearly complete specimens of a morphologically distinct, large species of *Terrapene*. These specimens, in conjunction with previously published fossil *Terrapene* material, suggest that there was more than one taxon of large box turtle during the span of the Pleistocene (Ehret et al., 2011 and unpublished data). Despite this diversity, and due to the lack of a truly diagnostic type for *T. putnami*, some workers have attempted to synonymize the name 'putnami' with the extant Gulf Coast Box Turtle, *Terrapene carolina major* Agassiz, 1857. This dilemma is perhaps due in part to a lack of understanding as to what 'T. putnami' actually represents (Blaney, 1971; Bentley & Knight, 1998; Butler et al., 2011; Van Dijk et al., 2011). Butler et al. (2011) stated that *T. c. putnami* should be synonymized with *T. c. major* based on weak morphological evidence of the holotype of *T. putnami* and a preliminary genetic analysis. More recent work by Martin et al. (2013) using sequence-based molecular phylogenetics refutes this hypothesis, and retains the subspecies combination *Terrapene carolina putnami*.

6. The species *Terrapene putnami*, or the subspecies *Terrapene carolina putnami*, has been well established in the scientific literature for over half of a century (Auffenberg, 1958, 1967; Milstead 1967, 1969; Moodie & Van Devender 1977, 1979; Holman, 1966, 1975, 1985, 1987; Davis et al., 2000; Dodd, 2001; Meylan et al., 2001; Sanders, 2002; Holman & Fritz, 2005; Butler et al., 2011; Martin et al., 2013; TTWG, 2011). However, because the holotype (AMNH 6097) is fragmentary and because the true age of the holotype is not known, it is virtually non-diagnostic (other than by its large size). The resulting confusion by biologists and palaeontologists has led to disagreement towards the validity of the taxon. For these reasons we propose designating a neotype for *Terrapene putnami* that is morphologically diagnostic and well-dated to the late Pleistocene, which should be considered the true age for the holotype of *T. putnami* sensu Auffenberg (1958). As discussed previously, the available junior synonyms of *T. putnami* are not valid options for a neotype due to a combination of the poor condition fossil material, the reassignment of specimens to other taxa, and unreliably aged specimens. Because the taxonomic identity and the stratigraphic occurrence of the nominal species *Terrapene putnami* cannot be determined from its existing name-bearing type and the universality is threatened, we request the Commission to set aside under its plenary power the existing name-bearing type and designate specimen UF 3066, catalogued in the Vertebrate Paleontology collection at the Florida Museum of Natural History, as neotype.

7. Designation of UF 3066 as the neotype of *Terrapene putnami* will ensure proper and correct usage of the species name. The specimen was chosen because it is established in the literature, having been identified and figured as *Terrapene putnami* by Auffenberg (1967) and Milstead (1969; his Fig. 8E and F, caption mistakenly lists catalog number as UF 3030). The specimen consists of a nearly complete carapace, plastron, and associated postcranial elements collected from the red zone of Haile 8A, Alachua County, Florida; 27.7° N, 82.58° W (Auffenberg, 1967; Webb, 1974).

Under Article 76.3 of the Code, the neotype locality will serve as the type locality for *Terrapene putnami*. This locality is within the known range of the taxon, approximately 200 km from the current type locality, clearly delineated as early late Pleistocene, and will present researchers with a specific stratigraphic occurrence for *Terrapene putnami* under Recommendation 76A.1.4 of the Code.

8. The International Commission on Zoological Nomenclature is accordingly asked:
- (1) to use its plenary power to set aside all previous type fixations for the nominal species *Terrapene putnami* Hay, 1906 and to designate specimen UF 3066 in the Florida Museum of Natural History, Gainesville, Florida as the neotype;
 - (2) to place on the Official List of Specific Names in Zoology, the name *putnami* Hay, 1906, as published in the binomen *Terrapene putnami* and as defined by the neotype designated in (1) above.

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Acknowledgement of receipt of this application was published in BZN 70: 70.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comment on *Lychnorhiza lucerna* Haeckel, 1880 (Cnidaria, Scyphozoa, Rhizostomeae): proposed conservation of generic and specific names
(Case 3485; see BZN 66: 242–246; 70: 40)

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In brief, this Case sought to ensure nomenclatural stability in Scyphozoa by conserving both generic and specific names of the rhizostome species *Lychnorhiza lucerna* Haeckel, 1880, which are threatened by senior synonyms. The application was based on maintaining prevailing use against priority of the names. Discussions and disagreements between researchers are important and desirable, and are a way to move forward different branches of science; thus I thank Dr Grygier (BZN 70: 40) for his comments and minor corrections. But the intention of this response is to reinforce the application by providing further data about the species, thereby emphasising and clarifying points presented in Case 3485.

Grygier suggests replacing the name *Lychnorhiza lucerna* by *Rhacopilus cruciatus* (Lesson, 1830) through neotypification. Here I stress why this proposition is contrary to nomenclatural stability in the group:

1. It proposes resurrecting an unfamiliar generic name (*Rhacopilus* Agassiz, 1862) that has not been used since its original description in 1862.

2. It proposes replacing the name of a familiar species (*Lychnorhiza lucerna*) with existing type material, by a rarely used name (*Rhacopilus cruciatus*) that is currently of uncertain identity and for which type material is non-existent. Notably, in some works (e.g. Kramp, 1961; Goy, 1979) *Catostylus cruciatus* (Lesson, 1830) has been treated as distinct from *Lychnorhiza lucerna* and it may yet prove valid.

3. Resurrecting the senior but little-known generic name will cause confusion because the familiar family name LYCHNORHIZIDAE Haeckel, 1880 is in current use based on genus *Lychnorhiza* Haeckel, 1880 and type species *L. lucerna* Haeckel, 1880.

4. *Lychnorhiza lucerna* is one of the most abundant and well-known species of Scyphozoa Rhizostomeae in the region from northeast Brazil to northern Argentina (SW Atlantic Ocean) (Nogueira Jr. & Haddad, 2006; Nagata et al., 2009; Schiariti et al., 2008; 2012).

5. *Lychnorhiza* currently includes three described species (see Kramp, 1961: 366–367) that are distributed in the Indo-West Pacific and Western Atlantic regions (Kramp, 1970: 18). The family LYCHNORHIZIDAE includes three valid genera (*Anomalorhiza* Light, 1921; *Lychnorhiza* Haeckel, 1880; and *Pseudorhiza* von Lendenfeld, 1884) comprising six species (Kramp, 1961). Therefore, changing the generic name would also lead to instability and confusion in the name of an important family.

6. Being one of the most abundant rhizostome species in the southwest Atlantic, *L. lucerna* is of significant ecological importance in the planktonic community of the area (Nogueira Jr. & Haddad, 2010). The species is currently being studied using different approaches (stable isotopes, feeding rates and preferences, swimming and feeding patterns) (Nagata & Morandini, unpublished data). Moreover, available data exist concerning the abundance of the species and its deleterious impact on artisanal

shrimp fisheries in southern Brazil (Nagata et al., 2009). At the same time, the potential of the species for economic exploitation as a fishery resource is being assessed (Schiariti, 2008). Several other rhizostome species in other parts of the world support a substantial commercial jellyfish industry (Kitamura & Omori, 2010).

7. A list of where the various combinations (and their synonyms) have appeared in the scientific literature has been sent to the Secretariat. The total numbers are as follows: *Rhizostoma cruciata* Lesson, 1830 has been used 16 times with only 2 authors mentioning collection of the species (Lesson, 1830; Goy, 1979). I recently used the combination *Catostylus cruciatus* (Lesson, 1830) (see Gul & Morandini, 2013) because no decision has yet been made about its nomenclatural status. *Lychnorhiza lucerna* Haeckel, 1880 has been used 58 times altogether (excluding Case 3485) and 33 times since 2000 by 24 different first authors. The combination is widely used in monographs on medusae as a component of the South American fauna, including major works by Haeckel (1880), Mayer (1910), Kramp (1961) and Mianzan & Cornelius (1999). Finally, the combination has appeared as well in at least one guidebook on the coastal fauna of Alagoas state (northeastern Brazil) (Salles, 1994).

Acknowledgements

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Comment on the proposed establishment of availability of *Balintus* d'Abrera, 2001, *Gulliveria* d'Abrera & Bálint, 2001, *Salazaria* d'Abrera & Bálint, 2001, *Megathecla* Robbins, 2002 and *Gullicaena* Bálint, 2002 (Insecta, Lepidoptera, LYCAENIDAE)

(Case 3458; see BZN **65**: 188–193; **66**: 271–272, 349–351; **68**: 206–211; **69**: 60–61, 281–283)

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If an author inadvertently omits some small detail when describing a new taxon, we would normally expect the zoological community to help that author to correct his or her error and to validate the names in question. However, the proposed treatment of d'Abrera's (2001) new genera by Case 3458 is the kind of rough justice usually reserved for 'rogue taxonomists' by their opponents, i.e. the dismissal of all or most of their new names based on some technicality, and replacement with younger 'more acceptable' names.

Wisely, the Commission has so far managed to avoid becoming involved in such disputes, which are often more personal than professional. I trust that it will continue to do so in this case and let priority take its course.

Comment on the proposed precedence of *Haltica undulata* Kutschera, 1860 (currently *Phyllotreta undulata*, Insecta, Coleoptera, CHRYSOMELIDAE) over *Haltica bivittata* Waterhouse, 1838 (currently *Phyllotreta bivittata*)

(Case 3575; see BZN **69**: 24–28)

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I give my full support to the proposals put forward by Reid, Booth & Doberl in Case 3575, to preserve prevailing usage of the name *Haltica undulata* Kutschera, 1860 for a widespread flea beetle. Much as it goes against the grain to relegate to synonymy a name based on material collected by Charles Darwin, described by George Waterhouse, and with its type material in the Natural History Museum, London, stability of nomenclature, especially where a widely distributed agricultural pest is concerned, must take priority over such concerns. A pest of several crops on several continents is known in its extensive agricultural literature by the name *Phyllotreta undulata* (Kutschera, 1860), and agriculturalists are usually not taxonomists and often not able to understand the reasons why names change, or to accurately follow an unstable nomenclature. Consequently, the interests of stability are best served if the name *undulata* Kutschera can be conserved, as proposed in Case 3575.

Comment on the proposed conservation of usage of *Scarabaeus* Linnaeus, 1758, *Dynastes* MacLeay, 1819, SCARABAEINAE Latreille, 1802, and DYNASTINAE MacLeay, 1819 (Insecta, Coleoptera, SCARABAEOIDEA)

(Case 3590; see BZN 69: 182–190, 293–295; 70: 46–48)

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Ever since Linnaeus's large genera started to be broken up, most coleopterists have treated *Scarabaeus sacer* as the type species of *Scarabaeus*; accordingly, the name SCARABAEINAE has been almost universally applied to the diverse and well studied subfamily of dung rollers known as 'scarab dung beetles'. The unfortunate possibility that *Scarabaeus* may, in fact, have a type species other than *sacer* has been suspected by some coleopterists for years, but was never openly discussed because of the amount of damage to the stability of the nomenclature that could be done if a rogue taxonomist, in search of Herostratic fame, started to apply the names as required by the actual type species. The authors of this case, Krell, Branco and Ziani, should therefore be congratulated for recognising this latent problem, bringing it into the open, and proposing a sensible and elegant solution to maintain stability. Five eminent entomologists have so far written comments in support, and I am proud to add my voice in favour of this extremely necessary and important application.

The wide usage of the names that the authors of the case seek to preserve is unquestioned. The authors mention how many usages are recorded in Zoological Record, but on Google the numbers are yet more impressive, 144,000 and 113,000 for SCARABAEINAE and DYNASTINAE respectively, and 345,000 and 276,000 for *Scarabaeus* and *Dynastes*, all or effectively all referring to the same, general usage as set out by Krell et al. More evidence for stability seems almost extraneous, and it is hoped that no responsible commissioner would vote against such a clear, necessary, well constructed and well supported case.

However, if I may be permitted a small digression, Cambefort (BZN 69: 47–48) explores an interesting sideline, and attempts to discern what Linnaeus might have considered to be 'the more appropriate' type for *Scarabaeus*, using other evidence from Linnaeus's works. He makes a convincing argument in favour of *sacer* based on it being more 'vulgar and officinal' than *hercules*. As a continuation of this exercise, it may be of interest to look at the insects that Linnaeus considered to resemble '*Scarabaeus*' to the extent that he gave them the specific name *scarabaeoides* (i.e. 'like' or 'resembling' *Scarabaeus*), to see whether they more closely resemble '*hercules*' or '*sacer*'. There are three such species in the 10th Edition: *Dermestes scarabaeoides*, *Dytiscus scarabaeoides* and *Cimex scarabaeoides*. These are now respectively *Sphaeridium scarabaeoides* (Linnaeus) (Coleoptera: HYDROPHILIDAE), *Dytiscus scarabaeoides*, subjective synonym of *Hydrobius fuscipes* (Linnaeus) (Coleoptera: HYDROPHILIDAE) and *Thyreocoris scarabaeoides* (Linnaeus) (Hemiptera: CYDNIDAE). These are all more-or-less circular blackish insects lacking horns, in which characteristics they resemble *sacer*, and not the elaborately horned, longer-bodied, blue-grey speckled *hercules*. For size, the description of *Dytiscus scarabaeoides* states 'Magnitudo Scarabaei' (i.e. 'the size of a *Scarabaeus*') which is not particularly enlightening

considering the vast size range within Linnaeus's genus. However, all three '*scarabaeoides*' are somewhat less than a centimetre in length, making them all considerably smaller than either *sacer* or *hercules* (although closer to *sacer* which is the smaller of the two). In behaviour, *Thyreocoris* is a ground-dweller and *Hydrobius* is a water beetle, but *Sphaeridium* is a dung beetle like *Scarabaeus sacer*. Thus, inasmuch as they resemble either of the potential type species, the species named '*scarabaeoides*' by Linnaeus bear a closer resemblance to *sacer* than to *hercules*, supporting Cambefort's conclusion using a different line of evidence.

Such interesting but ultimately speculative diversions aside, it is in the interest of nomenclatural stability that the extremely wide existing usage of *Scarabaeus*, SCARABAEINAE, *Dynastes* and DYNASTINAE be preserved. These names are used not just by taxonomists but, among others, by ecologists (SCARABAEINAE are used as a key ecological indicator group in tropical forest ecosystems) and conservationists (*Dynastes satanas* Moser 1909 is the only beetle on Appendix II of the Convention on International Trade in Endangered Species, *CITES*). I strongly support Case 3590.

Comment on the proposed precedence of *Curculio scirpi* Fabricius, 1792 (currently *Notaris scirpi*; Insecta, Coleoptera, CURCULIONOIDEA, ERIRHINIDAE) over *Curculio rhamni* Herbst, 1784 and *C. scirpi* Rossi, 1790
(Case 3570; see BZN 68: 267–270)

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I am writing to support the proposals put forward by Caldara, Winkelmann & Alonso-Zarazaga in Case 3570, to preserve prevailing usage of the name *Curculio scirpi* Fabricius, 1792. This common and widespread weevil has been cited under this name in many more published works than the authors list, including numerous British faunistic and conservation papers. Under normal circumstances, the name could easily have been preserved using Article 23.9.1, except that Krivets & Legalov (2002), who excavated the then unused senior synonym *Curculio rhamni* Herbst, 1784, and unfortunately used it in a faunistic list instead of simply invoking Article 23.9.1 to lay it permanently to rest. Since they used it as valid (and the usage was repeated by Telnov (2004)), the conditions of Article 23.9.1.2 are no longer met. This kind of 'taxonomic archaeology' helps nobody, and three weevil specialists were obliged to write an application to the Commission to correct a situation that could easily have been solved if use of the forgotten senior name been avoided. One consolation is that at the same time the authors of the case are able to address another problem, the unused senior homonym *Curculio scirpi* Rossi, 1790. Their solutions are straightforward and simple, and a positive vote from the Commission is hoped for.

One other point, which may displease those who regard names simply as 'handles' but may be welcomed by those of a more ecological persuasion, is that the species in question is a wetland beetle (Morris, 2002), generally found in association with rushes

of the genus *Scirpus* (Cyperaceae), but in no way associated with buckthorns of the genus *Rhamnus* (Rhamnaceae), so the name *scirpi* might be considered much more appropriate than *rhamni* for that reason.

Comment on the proposed precedence of *Prionocerus bicolor* Redtenbacher, 1868 (Insecta, Coleoptera, CLEROIDEA, PRIONOCERIDAE) over *P. pertii* Laporte de Castelnau, 1836

(Case 3511; see BZN 67: 137–139)

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I fully support the proposal of Geiser in Case 3511, to preserve prevailing usage of the name *Prionocerus bicolor* Redtenbacher, 1868 over the forgotten senior synonym *P. pertii* Laporte de Castelnau, 1836, for a very common Asian flower beetle. Geiser was not able to trace enough references using the name *P. bicolor* to meet the criteria of Article 23.9.1.2 for automatic conservation. However, I would like to make several further points

Firstly, *Prionocerus bicolor* is the only name that has been used since 1868 for an insect that is common over most of the Asian tropics and is immediately recognisable even to the non-specialist, so it seems likely that there are more citations of this name, for example in the species lists and appendices of faunistic, ecological and agricultural publications. Such citations are difficult to find because lists of this kind are generally not abstracted, but some probably exist and perhaps Geiser's list is therefore not exhaustive and more publications use this name than the case suggests.

Secondly, published literature is not the only measure of usage (even though it is currently the only one taken into account by Article 23.9.2). For an easily recognisable beetle, many entomologists carry the name in their heads, to identify it when they encounter it, and museum and private collections hold thousands of specimens of the species in question with determination labels reading '*Prionocerus bicolor* Redtenbacher'. For example the collection of the Natural History Museum, London has more than 300 identified specimens, each with an individual label bearing this name. Many museums (including the Natural History Museum) are now digitising their collections, so names that appear in collections are increasingly appearing on the internet, often accompanied by photographs. Usage of names is then perpetuated further as digitised data from collections are uploaded to projects such as Encyclopedia of Life and Wikipedia, and by reference to named museum specimens, photographs of specimens posted on social media such as Twitter, Flickr and Facebook are identified. It is not surprising, then, that although Geiser struggled and was ultimately unable to assemble 25 formal publications using this name, a Google search for "Prionocerus bicolor" yields more than 800 web pages. Although electronic and collections-based, rather than formally published, all this is evidence of usage of the name *Prionocerus bicolor* Redtenbacher, and all of this usage would be negatively affected if this case were to be rejected. For these reasons I support Case 3511 and I hope that it will receive a positive vote.

Comment on the proposed conservation of *Kalophrynus* Tschudi, 1838 (Amphibia, Anura, MICROHYLIDAE) by designation of a neotype for its type species *Kalophrynus pleurostigma* Tschudi, 1838

(Case 3618; see BZN 70: 86–88)

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I have very strong reservations about replacing a syntype that does not fulfil its function of name-bearing type by a neotype that may also not fulfil this function. As stated by the authors, 'during the past two decades, systematists have recognized that multiple species are hidden under the name *Kalophrynus pleurostigma*'. Such a situation clearly demands a neotype that is associated with molecular sequences. I note that the proposed neotype (USNM 36645) was collected in 1905. It is likely that sequences will be difficult to obtain, and I oppose the choice of that proposed neotype.

By contrast, GenBank displays a number of molecular sequences associated with vouchers in public institutions, one of which is likely to be a potentially appropriate neotype.

Comment on *Plateosaurus* Meyer, 1837 (Dinosauria, Sauropodomorpha): proposed replacement of unidentifiable name-bearing type by a neotype

(Case 3560; see BZN 69: 203–212, 295–296; 70: 120–121)

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In Case 3560, Galton applied for the designation of a neotype, the almost complete skeleton SMNS 13200, for the basal sauropodomorph taxon *Plateosaurus engelhardti* Meyer, 1837 (Upper Triassic, Germany).

Sues (BZN 70: 120–121) noted that the lectotype sacrum (UEN 552) was diagnostic for *Plateosaurus engelhardti* back in the 1830s, as is also the situation for the holotypes of many other dinosaurian taxa erected during the early years of Linnaean taxonomy. He suggested that addressing these problems in the manner suggested by this application 'would likely result in chaotic changes in zoological nomenclature.' However, comparable petitions for taxa from the Victorian era (1837–1901) based on currently indeterminate holotypes would, as in the case of *Plateosaurus engelhardti*, bring clarification rather than chaotic changes and, in addition, bring these dinosaurian taxa in line with the taxonomic realities of the 21st century. He also argued that, because of the indeterminate nature of the lectotype of *Plateosaurus engelhardti*, another species should be proposed as the type species of the genus *Plateosaurus*, rather than the designation of a neotype, in order to preserve the generic name.

Galton & Kermack (2010) recognized four species of *Plateosaurus*: *P. gracilis*, *P. ingens*, *P. longiceps* and *P. trossingensis*, with *P. engelhardti* and *P. erlenbergiensis* as nomina dubia. The sacrum of *Plateosaurus engelhardti* is readily distinguishable from

those of the Swiss *P. ingens* and of *P. gracilis* (see Galton, 1986, 1984b, 1999; Moser, 2003). Yates (2003) referred *Sellosaurus gracilis* Huene, 1908 (lower Löwenstein Formation, Germany) to *Plateosaurus* as *P. gracilis* (Huene, 1908) because the differences from *P. engelhardti* as exemplified by SMNS 13200 were slight. However, Yates (2007) has *P. gracilis* as the sister taxon to the more recent *P. engelhardti* and *P. ingens*, so *gracilis* should revert back to *Sellosaurus gracilis* Huene, 1908 as originally described.

Plateosaurus longiceps Jaekel, 1913 (June) from near Halberstadt has priority over *P. trossingensis* Fraas, 1913 (November) from Trossingen, the other well represented species from the Trossingen Formation of Germany. However, the holotype of *P. trossingensis* (SMNS 13200) is an almost complete skeleton (versus skull MB R.1937 for *P. longiceps*) and it has been extensively illustrated in the literature as *Plateosaurus*. The hypodigm (= specimens available for study) for *P. trossingensis* is very much more extensive than that for *P. longiceps* (details in Galton, 2001a; Schoch, 2011), with numerous articulated skeletons, several of which have complete skulls (Galton, 1984a, 1985a, 2001a; Weishampel & Westphal, 1986; Prieto-Márquez & Norell, 2011; Schoch, 2011). In addition, the SMNS has been excavating the reopened type Trossingen quarry since 2007 (Schoch, 2011) whereas the type Halberstadt quarry was built over in the 1940s.

Yates (2003, p. 331) considered the syntypes of *Plateosaurus engelhardti* as being inadequate for diagnosis, so he treated 'SMNS 13200 as the unofficial holotype of *P. engelhardti*, while recognizing that this decision will need to be ratified by the ICZN.' This usage is formalized in Case 3560 but, if preservation of the genus *Plateosaurus* requires the designation of a new type species, rather than a neotype, then the International Commission on Zoological Nomenclature is accordingly asked instead:

- (1) to use its specific powers as granted by Article 78.2.3 to include in its Opinion on the present Case (cf. Article 80.2.1) a confirmation that the generic name *Plateosaurus* and the name of its type species, *P. engelhardti*, are both available from Meyer (1837);
- (2) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Plateosaurus* Meyer, 1837 and to designate *Plateosaurus trossingensis* Fraas, 1913 as the type species;
- (3) to place on the Official List of Generic Names in Zoology the name *Plateosaurus* Meyer, 1837 (gender: masculine), type species *Plateosaurus trossingensis* Fraas, 1913, as ruled in (2) above;
- (4) to place on the Official List of Specific Names in Zoology the name *trossingensis* Fraas, 1913, as published in the binomen *Plateosaurus trossingensis* Fraas, 1913 (specific name of the type species of *Plateosaurus* Meyer, 1837, as ruled in (2) above).

As regards the original petition, it should be noted that it is Heroldsberg (Berg: castle; not Burg: mountain) and Nürnberg (or Nuremberg, not Nüremberg), the Universität Erlangen did not become Universität Erlangen-Nürnberg until about 1970, and 'by monotypy' should be deleted in section 14 (3). Concerning the Comment by Demirjian (BZN 69: 295–296), the last sentence should read 'Given the risks of nomenclatural instability resulting from abandoning use of the name *Plateosaurus*, I strongly support the proposals in Case 3560.'

OPINION 2321 (Case 3386)***Pseudocoenia* d'Orbigny, 1850 (Coelenterata, Scleractinia): proposed conservation of usage by the designation of a lectotype for the type species not approved**

Abstract. The Commission has ruled that the application to conserve the name *Pseudocoenia* d'Orbigny, 1850 by designating a new lectotype for its type species, *Pseudocoenia bernardina* d'Orbigny, 1850, is not approved.

Keywords. Nomenclature; taxonomy; Coelenterata; Scleractinia; *Pseudocoenia*; *Pseudocoenia bernardina*; Jurassic–Cretaceous; corals.

Ruling

- (1) It is hereby ruled that the application for the proposed conservation of the generic name *Pseudocoenia* d'Orbigny, 1850 in its accustomed usage by designating a new lectotype for its type species, *Pseudocoenia bernardina* d'Orbigny, 1850, is not approved.
- (2) No names are placed on the Official Lists or Indexes in this ruling.

History of Case 3386

An application to conserve the name *Pseudocoenia* d'Orbigny, 1850 by designating a new lectotype for its type species, *Pseudocoenia bernardina* d'Orbigny, 1850, was received from H. Löser (*Universidad Nacional Autónoma de México, Instituto de Geología, Estación Regional del Noroeste, Hermosillo, Sonora, México*), on 28 May 2006. After correspondence the case was published in BZN **64**: 79–82 (2007). The title, abstract and keywords of the case were published on the Commission's website. The Case was sent to vote on 1 March 2008, receiving a majority of votes FOR the Case (8 For, 7 Against), but did not reach the needed two-thirds majority to be approved. In accordance with the Bylaws it was sent to the Commissioners for a revote on 1 December 2008. After correspondence the second round was cancelled and on advice of the Council, the author was asked to submit a new proposal requesting a neotype designation. However the author declined, explaining that the doubt about the lectotype was reasonable from the taxonomic point of view, but not because of the different type locality. He thought that it was not possible to designate a neotype since the type series might still exist. He thought that Orbigny's (1850) type specimen for this species could have been lost, but in the absence of illustrations it could not be ascertained. He also commented that the problem was complicated by the specimen numbers having been changed in the Paris Museum collection. No comments were received on this Case.

Decision of the Commission

On 1 March 2013 the members of the Commission were invited to vote on the proposals published in BZN **64**: 81. At the close of the voting period on 1 June 2013 the votes were as follows:

Affirmative votes – 11: Alonso-Zarazaga, Ballerio, Fautin, Harvey, Krell, Lim, Minelli, Winston, Zhang and Zhou.

Negative votes – 14: Bogutskaya, Bouchet, Brothers, Grygier, Halliday, Kojima, Kullander, Lamas, Pape, Patterson, Rosenberg, Štys, van Tol and Yanega.

Conditional vote – 1: Kottelat.

Pyle and Ng were on leave of absence.

In the first round of voting the Commissioners commented as follows:

Voting FOR, Bouchet commented that he understood the facts as laid out by the author and approved the intention of the application. However, he was concerned that the newly selected 'lectotype' (MNHN 4472b) did not originate from the type locality Landeyron, département Ain, but instead came from Chatel-Censoir, département Yonne. Bouchet also suggested that the specimen might not have been part of the original type series and suggested that it would be safer to designate that specimen as neotype rather than lectotype. Voting FOR, Brothers also suggested that the proposed 'lectotype' should be designated as a neotype. ABSTAINING, Lamas agreed that designation of a neotype was preferable to selection of a lectotype, and suggested that the vote should have been postponed. Voting AGAINST, Kottelat said that based on the data in the application, the proposed lectotype had locality information that disagreed with that in the original description. It did not seem to be a syntype, thus could not be a lectotype. Voting AGAINST, Pape also considered that the only proper name-bearing type would be a neotype, not a lectotype. Voting AGAINST, Grygier said that he was not convinced that it was intolerable to abandon *Pseudocoenia*, which Wells had made a synonym of *Stylina*. Even if Wells's reasoning was faulty, what is done is done. Grygier added that the matter at hand now seemed to be more taxonomic than nomenclatural. As a taxonomic solution, the specimen nominated as lectotype in this proposal could just as easily be designated the holotype of a new species in a new genus that would also serve to hold the other nominal species, apart from the type species that are currently assigned to *Pseudocoenia*. Voting AGAINST, Kullander said that, although taxonomy had not been well executed in this group, he wondered if the status quo (4472 as lectotype) would have caused any problems.

In the second round Grygier, voting AGAINST, reaffirmed his earlier comment. Štys, voting AGAINST said that judging from the statement of the author of the proposal (which seemed to him insufficient), no action of the Commission concerning fixation of a mandatory type specimen of *Pseudocoenosia bernardina* d'Orbigny, 1850 (type species of *Pseudocoenosia* d'Orbigny, 1950) from d'Orbigny's specimens available at MNHN would, with the present state of the taxonomy of the genus and species, help to fix their nomenclatural and taxonomic concepts. He added that perhaps fixation of a different type species under the plenary power would be helpful. Voting AGAINST, Rosenberg said that he would have voted for this case if it had requested a neotype instead of a lectotype, a change the author of the proposal declined to make. He would also have voted in favour had it requested that *Pseudocoenia suboctionis* be made the type species of *Pseudocoenia*. Voting FOR, Kottelat said that he supported the proposal only on the condition that the

'lectotype' was in fact designated as a neotype. To designate as lectotype a specimen not from the type locality did not make sense. The applicant should first have explained why he thought that this specimen was indeed a syntype, considering that it came from a different locality. If it was not a syntype, then it could not be made lectotype. And if it was a syntype, then it did not make sense for the Commission to set aside the earlier lectotype fixation and replace it with a new lectotype. The Commission should only designate a neotype, which could be a more appropriate specimen. Voting AGAINST, Bogutskaya said that she agreed with Grygier's reasoning but did not consider it technically possible to substitute words in the original proposal. Also voting AGAINST, Brothers said that he approved the intention, but it seemed doubtful that the proposed 'lectotype' was part of the type series (in addition to the discrepancy in locality, no justification for considering it as such was provided). However, he would have voted FOR an alternative set of proposals, identically worded except substituting 'neotype' for 'lectotype'. Kojima also voted AGAINST saying that by mentioning 'Type No. 4472 [non 4472a, b]' Wells (1936, p. 128) had excluded specimens numbered '4472a' and '4472b', possibly because they were indicated to be from a locality not mentioned in the original description; however, Wells's statement was scarcely considered in the choice of a lectotype. The type status of the specimens of 'Coll. D'Orbigny 4472' was not certain as they possessed characters that did not match those in the original description. In this situation, if the name *Pseudocoenia* d'Orbigny, 1850 were to be conserved, a neotype (rather than lectotype) designation should have been proposed. But acceptance of Wells's synonymy of *Pseudocoenia* under *Stylina* Lamarck, 1816, considering that the specimens of 'Coll. D'Orbigny 4472' are syntypes of *Pseudocoenia bernardina* d'Orbigny, 1850, could be a solution. Bouchet voted AGAINST saying that the applicant was mistaken in believing that it was not possible to designate a neotype since specimens of a supposed type series could still exist. In fact the Commission could make such a designation under the plenary power. He regretted that the applicant did not follow the proposed route and preferred the designation of MNHN 4472b as the neotype of *Pseudocoenia bernardina* d'Orbigny, 1850. Lamas commented that although he voted AGAINST the proposals as set in Case 3386, he would have voted FOR alternative proposals, in which the word 'neotype' was substituted for 'lectotype' in both proposals (1) and (2).

Voting AGAINST, Kullander noted that after having considered all the comments of other Commissioners, he felt that a neotype would be a better solution to the problem. This was not the subject of the vote, however, so he stayed with his original decision.

No names are placed on the Official Lists and Indexes by the ruling in the present Opinion. The issue is left open for subsequent workers to follow the precepts of the Code or to make new proposals to the Commission.

OPINION 2322 (Case 3567)***Bulimus lineatus* Bruguière, 1789 (currently *Macroceramus lineatus*; Gastropoda, UROCOPTIDAE) and *Bulimus lineatus* Draparnaud, 1801 (currently *Acicula lineata*; Gastropoda, ACICULIDAE): specific names conserved**

Abstract. The Commission has conserved two specific gastropod names, *Bulimus lineatus* Bruguière, 1789 (currently *Macroceramus lineatus*; Pulmonata, UROCOPTIDAE) from Haiti and *Bulimus lineatus* Draparnaud, 1801 (currently *Acicula lineata*; Gastropoda, Caenogastropoda, ACICULIDAE) from central Europe by ruling to disregard their primary homonymy.

Keywords. Nomenclature; taxonomy; Gastropoda; UROCOPTIDAE; ACICULIDAE; *Macroceramus lineatus*; *Acicula lineata*; caenogastropods; stylommatophoran pulmonate snails; Europe; Haiti.

Ruling

- (1) Under the plenary power the Commission has ruled that the name *lineatus* Draparnaud, 1801, as published in the binomen *Bulimus lineatus*, is not invalid by reason of being a junior primary homonym of *lineatus* Bruguière, 1789, as published in the binomen *Bulimus lineatus*.
- (2) The following names are hereby placed on the Official List of Specific Names in Zoology:
 - (a) *lineatus* Bruguière, 1789 as published in the binomen *Bulimus lineatus*;
 - (b) *lineatus* Draparnaud, 1801, as published in the binomen *Bulimus lineatus*, the type species of *Acicula* Hartmann, 1821, with the endorsement that is not invalid by reason of being a junior primary homonym of *lineatus* Bruguière, 1789, as published in the binomen *Bulimus lineatus*, as ruled in (1) above.

History of Case 3567

An application to conserve two specific gastropod names, *Bulimus lineatus* Bruguière, 1789 (currently *Macroceramus lineatus*; Pulmonata, UROCOPTIDAE) from Haiti and *Bulimus lineatus* Draparnaud, 1801 (currently *Acicula lineata*; Gastropoda Caenogastropoda, ACICULIDAE), from central Europe by ruling under the plenary power to disregard their primary homonymy, was received from Francisco W. Welter-Schultes (*Zoologisches Institut, Göttingen, Germany*) on 22 June 2011. After correspondence the case was published in BZN **68**: 250–252 (2011). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this case.

Decision of the Commission

On 1 March 2013 the members of the Commission were invited to vote on the proposals published in BZN **68**: 251. At the close of the voting period on 1 June 2013 the votes were as follows:

Affirmative votes – 25: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Lamas, Lim, Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 0.

Pyle and Ng were on leave of absence.

Voting FOR, Bouchet advised that the Opinion should record that *Bulimus lineatus* Draparnaud, 1801 is the type species of *Acicula* Hartmann, 1821, a name that has been placed on the Official List by Opinion 344.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

lineatus, *Bulimus*, Bruguière, 1789, *Encyclopédie méthodique. Histoire naturelle des vers. Tome premier*. [ABE-CON], i-xviii, 1–757, p. 323.

lineatus, *Bulimus*, Draparnaud, 1801, *Tableau des mollusques terrestres et fluviatiles de la France*. pp. [1–2], Montpellier, Paris. (Renaud; Bossange, Masson & Besson), (<http://www.biodiversitylibrary.org/item/47270>), p. 67.

OPINION 2323 (Case 3527)***Anguis jamaicensis* Shaw, 1802 (currently *Typhlops jamaicensis*; Reptilia, Serpentes): specific name conserved**

Abstract. The Commission has conserved the specific names of *Anguis jamaicensis* Shaw, 1802 and *Anguis lumbricalis* Linnaeus, 1758 for two species of blind snake from the Caribbean in their accustomed usage, by ruling that *Anguis jamaicensis* Shaw, 1802 is not to be treated as a replacement name for *A. lumbricalis* Linnaeus, 1758 (currently *Typhlops lumbricalis*). A neotype is designated for *A. jamaicensis*.

Keywords. Nomenclature; taxonomy; Reptilia; Serpentes; TYPHLOPIDAE; *Typhlops lumbricalis*; *Typhlops jamaicensis*; blind snakes; West Indies; Bahamas; Cuba; Jamaica.

Ruling

- (1) Under the plenary power the Commission has ruled that the specific name *jamaicensis* Shaw, 1802, as published in the binomen *Anguis jamaicensis*, is to be treated as the specific name of a newly proposed nominal species and not as a replacement name for *Anguis lumbricalis* Linnaeus, 1758.
- (2) Specimen KU 269908 at the University of Kansas Natural History Museum & Biodiversity Research Center, Lawrence, KS, U.S.A. is hereby designated as the neotype of *Anguis jamaicensis* Shaw, 1802.
- (3) The name *jamaicensis* Shaw, 1802, as published in the binomen *Anguis jamaicensis* and as defined by the neotype designated in (2) above, is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3527

An application to conserve the usage of the specific names of *Anguis lumbricalis* Linnaeus, 1758 and *Anguis jamaicensis* Shaw, 1802 for two species of blind snake from the Caribbean, was received from M. Domínguez (*Centro Iberoamericano de la Biodiversidad (CIBIO), Universidad de Alicante, Edificio de Ciencias III, Alicante, Spain*) and R.E. Díaz, Jr. (*University of Kansas Medical Center, Kansas City, KS, U.S.A.*) on 9 June 2010. After correspondence the case was published in BZN **68**: 197–203 (2011). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on that case.

Decision of the Commission

On 1 March 2013 the members of the Commission were invited to vote on the proposals published in BZN **68**: 201–202.

At the close of the voting period on 1 June 2013 the votes were as follows:

Affirmative votes – 23: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Lim, Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 1: Kojima.

Split votes – 1: Bouchet (FOR – proposals 1 and 3, ABSTAIN – proposal 2).
Pyle and Ng were on leave of absence.

Voting FOR, Rosenberg said that an application was not needed in this case as the question mark with the Linnaean reference made it clear that *Anguis jamaicensis* was not a replacement name for *Anguis lumbricalis*. He voted FOR this case, since a neotype was needed. If the Commission designated the neotype under Article 80.2.1 (without use of the plenary power), then there was no need to publish the neotype designation separately elsewhere. He added that, as the comments showed, this ruling must be made under Article 78.2.3 using the specific powers, not Article 78.1 (plenary power). Voting FOR, Grygier explained that it was acceptable to write that ruling (1) was based on use of the plenary power. He explained it as follows: ‘The need for that power depends on how Shaw’s question mark after the name *lumbricalis* is interpreted. If the question mark is considered to represent a doubtful assignment, then no plenary power is needed; but if it is regarded as mere typography transcribed from an earlier work with no import in context, the plenary power is needed. Commissioners may be divided on this point. so it is probably safest to invoke the plenary power’. SPLITTING his vote, Bouchet regretted that the opportunity was missed to select a neotype that was associated with molecular data. Voting AGAINST, Kojima commented that he had not found any reasons why the plenary power was necessary to conserve the specific name *jamaicensis* Shaw, 1802, as published in the binomen *Anguis jamaicensis*. Regardless of Shaw’s (1802) unstated intention, *jamaicensis* Shaw, 1802 was treated as the specific name of a newly proposed nominal species which Shaw might have considered as a probable synonym of *Anguis lumbricalis* Linnaeus, 1758. The application did not in his view clearly mention the reason for *jamaicensis* Shaw, 1802 being interpreted as a replacement name for *lumbricalis* Linnaeus, 1758. He added that the two names had been used as valid and not as synonyms. The authors did not need to request a ruling to designate a neotype for *Anguis lumbricalis* Linnaeus, 1758. Yanega, who voted FOR, said that while the name *jamaicensis* was in common use, it was not demonstrably so well-known that replacing it would be a significant problem if the application were rejected. Nonetheless, it seemed to him that it served the overall goal of stability to continue using this name rather than coining a new one. Voting FOR, Kottelat noted that *Anguis jamaicensis* was not a replacement name for *Anguis lumbricalis*. However, now that the work was done, a neotype should be designated, and the case closed.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

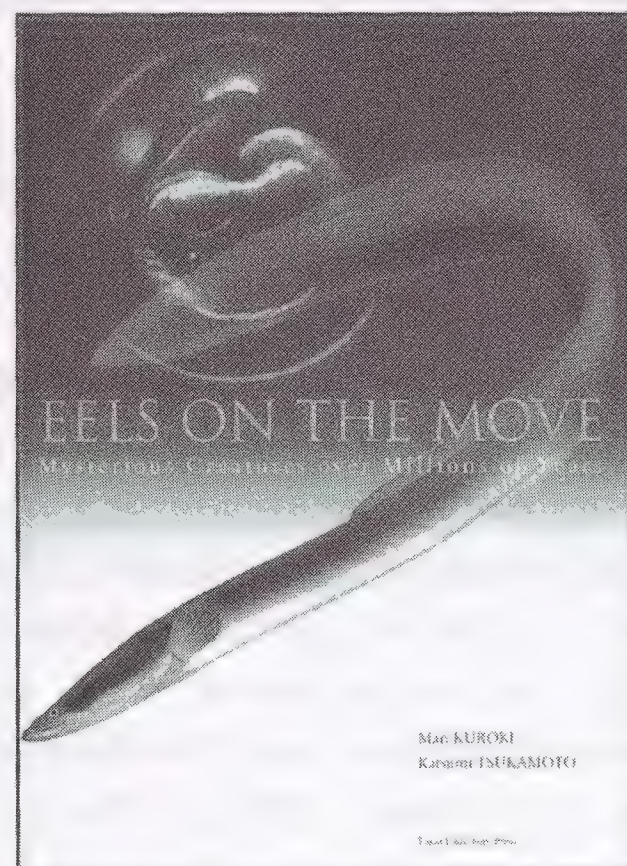
jamaicensis, *Anguis*, Shaw, 1802, *General zoology, or systematic Natural History*, vol. 3 (Amphibia), part 2. vii, Kearsley, London, p. 588.

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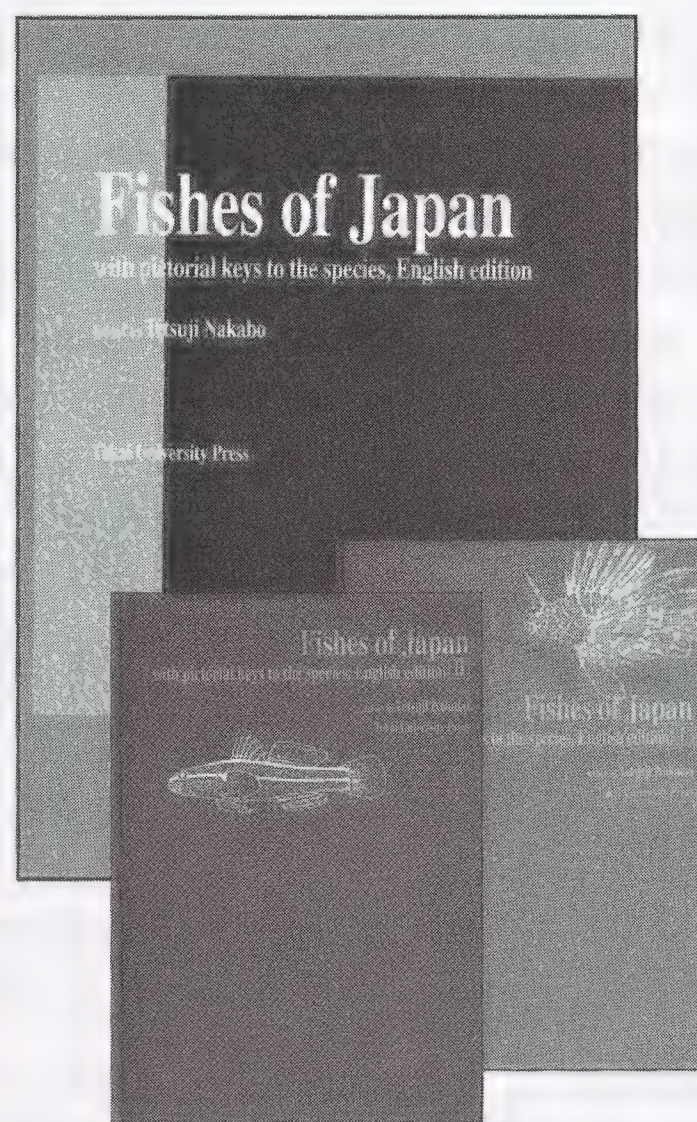
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Cover image: *Rhacophorus nigropalmatus* Boulenger, 1895, known as Wallace's flying frog was discovered by Alfred Russel Wallace in Sarawak, Borneo in 1865. The holotype (female) was collected by Charles Hose and is housed in the Natural History Museum, London. Wallace wrote in his book *The Malay Archipelago* (1869, pp. 59–61): 'One of the most curious and interesting reptiles which I met with in Borneo was a large tree-frog, which was brought me by one of the Chinese workmen. He assured me that he had seen it come down in a slanting direction from a high tree, as if it flew. On examining it, I found the toes very long and fully webbed to their very extremity. . . . This is, I believe, the first instance known of a "flying frog," and it is very interesting to Darwinians as showing that the variability of the toes which have been already modified for purposes of swimming and adhesive climbing, have been taken advantage of to enable an allied species to pass through the air like the flying lizard.' This watercolour was painted by Wallace and was used as the basis for the woodcut illustration of this species in *The Malay Archipelago* (p. 60). This year marks the 100th anniversary of Wallace's death. (© scan of the original drawing – A.R. Wallace Memorial Fund).

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Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the ICZN at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at <http://iczn.org/content/guidelines-case-preparation>) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will, where possible, answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should preferably be sent by e-mail to 'iczn@nhm.ac.uk'.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at <http://iczn.org/content/instructions-comments>).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at <http://list.afriherp.org/mailman/listinfo/iczn-list>.

(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to iczn@nhm.ac.uk.

New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 70, part 3, 30 September 2013) went to press. Under Article 82 of the Code, the prevailing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3641: *Ascalabotes sthenodactylus* Lichtenstein, 1823 (currently *Stenodactylus sthenodactylus*; Reptilia, Gekkota, GEKKONIDAE): proposed conservation of current usage of the specific name by designation of a neotype. P.-A. Crochet & M. Metallinou.

CASE 3642: *Amalia kaleniczenkoi* Clessin, 1883 (Gastropoda, Stylommatophora, MILACIDAE): proposed conservation of the specific name. I. Balashov.

CASE 3643: *Mutilla clytemnestra* Fox, 1899 (currently *Dasymutilla clytemnestra*) and *Mutilla clytemnestra* Péringuey, 1899 (currently *Mutilla dasya* Péringuey, 1899): proposed conservation of current usage (Insecta, Hymenoptera, Aculeata, VESPOIDEA, MUTILLIDAE). D.J. Brothers, D.G. Manley & K.A. Williams.

CASE 3644: *Belostoma ellipticum* Latreille, 1833 (Insecta, Heteroptera, BELOSTOMATIDAE): proposed designation of a neotype. J.R.I. Ribeiro & A.L. Estévez.

CASE 3645: *Orthezia* Bosc d'Antic, 1784 and its type species *O. characias* Bosc d'Antic, 1784 (Insecta, Hemiptera): proposal to preserve both names. D.J. Williams & D. Matile-Ferrero.

CASE 3646: *Liturgusa* Saussure, 1869 (Insecta, Mantodea, LITURGUSIDAE): proposed conservation as the correct original spelling. G.J. Svenson.

CALL FOR COMMENTS: TAXONOMIC PRACTICE AND THE CODE

by Mark Harvey and Douglas Yanega (ICZN Commissioners)

This issue of the BZN contains two papers, one by Raymond Hoser and one by Hinrich Kaiser, that reflect an ongoing controversy in herpetological taxonomy and nomenclature; in effect, the situation is one in which the works of a specific author are being 'boycotted' by a substantial number of taxonomists and cataloguers, in large part due to questions of scientific merit and integrity, rather than questions of compliance with the Code. It is clearly exceptional for the taxonomic community to treat names as unavailable when the Code appears to indicate they are available, but the controversy raised here reflects a more general phenomenon about which the Commission has been asked (at various times and in various ways) to issue rulings or position statements that might offer guidance to the taxonomic community.

It is, and long has been, the policy of the Commission to remain neutral regarding matters of taxonomic opinion, practice, or ethics. Of particular note is Appendix A of the Code (the 'Code of Ethics'), which explicitly precludes the intervention of the Commission even if the Code of Ethics is violated: '7. *The observation of these principles is a matter for the proper feelings and conscience of individual zoologists, and the Commission is not empowered to investigate or rule upon alleged breaches of them.*' It is not the duty of the Commission to engage in censorship; the freedom of taxonomic practice and opinion is a fundamental principle. The Commission's primary duty is, however, to draft and interpret rules governing the creation and use of names in a manner compatible with the needs and desires of the taxonomic community, chief among these needs being resolution of conflict in a predictable manner so as to promote stability of nomenclature. We emphasise 'predictable' here to highlight the inherent problems with the adoption of subjective criteria, which admittedly can be incorporated into the Code, but only with great care and circumspection, and in exceptional need. The Commission's primary 'punitive' power - to declare names as unavailable or works as unpublished - is one we are very reluctant to employ without clear, objective criteria defining the conditions under which such action is necessary.

The question has been put before us, however, as to whether the desires of the community can compel a re-evaluation of the policy of neutrality; specifically, whether taxonomic freedom requires us to remain blind to ethical considerations,

including a failure to adhere to proper standards of scientific conduct. Therefore, we seek guidance from the taxonomic community as to whether there is a perceived need for change, and we wish to solicit comments in order to ascertain a clearer picture of public opinion. We are, ultimately, at the service of the community, and if there is a consensus indicating that the community feels neutrality does not serve their needs, then we wish to be clear about it.

We must stress that this is a very broad issue, which manifests in many ways, affects many disciplines, and has occurred throughout the history of taxonomy. We also recognize that the most prominent and timely concerns relate to issues such as plagiarism, falsification of data, criminal activities, and practices that subvert or circumvent the process of peer review (which is considered an essential element of all scientific practice, taxonomy included). This is, emphatically, not a referendum on professionals versus amateurs (or other cultural stereotypes), nor a referendum on the merits (or lack thereof) of peer review. Basically, what we seek to know is whether the taxonomic community wants to continue dealing with these issues at their own discretion, or whether they want the Commission to be empowered to do so (or something in between); we will not do so on our own initiative.

In keeping with this, we prefer, at this point, to receive comments discussing the general principles at issue here, rather than any specific cases or papers (i.e., not comments on Kaiser's paper or his call to employ the mechanism of review proposed by Commissioner Yanega – though such comments are welcomed independently, as are comments on any other papers in the BZN). We will accept comments of any nature, however brief or lengthy, for purposes of assessing the diversity of opinion within the community, with the stipulation that comments intended for publication be clearly marked as such, and we reserve the right to exercise editorial review before publishing them. A special digital supplement (e-only) is planned, if the volume of responses warrants it. We further ask that comments, even if not intended for publication, address issues such as: whether there is a perceived problem; if so, what is its nature and scope; constructive suggestions for solutions (or, conversely, whether no solutions are desired); most importantly, whether any suggested solutions should or should not involve the Commission and the Code.

Case 3639***Krynickillus maculatus* Kaleniczenko, 1851 (currently *Limax maculatus*; Gastropoda, Stylommatophora, LIMACIDAE): proposed conservation of the specific name**

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Abstract. The purpose of this application, under Article 81.2.1 of the Code, is to conserve the specific name of the terrestrial slug *Krynickillus maculatus* Kaleniczenko, 1851 (currently *Limax maculatus* or *Limacus maculatus*, LIMACIDAE) by suppression of its little-used senior homonyms *Limax maculatus* Nunneley, 1837 and *Limax cinereus* var. *maculatus* Picard, 1840, for the sake of nomenclatural stability and universality.

Keywords. Nomenclature; taxonomy; Gastropoda; Stylommatophora; LIMACIDAE; *Limax*; *Limax maculatus*; *Krynickillus maculatus*; *Limacus maculatus*; terrestrial slug; Europe.

1. *Limax maculatus* Nunneley, 1837 (p. 46) was expressly proposed as a synonym of *Limax maximus* Linnaeus, 1758. The new name was thought to be 'more descriptive of its appearance' than *L. maximus*, however this name was never used as valid (even by Nunneley himself who referred to his specimen of a terrestrial slug from Leeds, England as 'the second species') until Cockerell (1923, p. 27) who established it as *Limax maximus* var. *maculatus* (Nunneley) and applied it to the morph of the slug dissected and described by Nunneley (1837). According to Article 11.6 of the Code *L. maculatus* Nunneley, 1837 was an unavailable name, having been proposed in the synonymy of a name then used as valid, but Cockerell's subsequent usage made it available with its original author and date (Article 11.6.1). Synonymy with *Limax maximus* Linnaeus, 1758 has generally been assumed, although Taylor (1907, pp. 34, 78) included different figures of Nunneley (1837) in the synonymies of both *Limax maximus* Linnaeus, 1758 and *L. flavus* Linnaeus, 1758.

2. Picard (1840, p. 165) somewhat unconventionally described a new 'variety' of *Limax cinereus* Müller, 1774 (*L. maximus* Linnaeus, 1758 being included in the synonymy) as 'Var a. *L. maculatus* nob.' with a brief description in Latin. *L. maculatus* Picard, 1840 is considered to represent a different taxon from *L. maculatus* Nunneley, 1837, although Hesse (1926, pp. 76–77) used the name *Limax maculatus* Nunneley, 1837 as a junior synonym of *Limax maximus* Linnaeus, and *Limax maculatus* Picard (spelled as 'maculata') as a variety of *Limax maximus*.

3. The name *Krynickillus maculatus* Kaleniczenko, 1851 (p. 226) was introduced for a new terrestrial slug species from the Crimea (Ukraine). This species was subsequently assigned to *Limax* (Likharev & Wiktor, 1980) and until 2001 it was widely used in this combination for the species in the Crimea and Caucasus and other regions of the world where it was introduced as a pest. Wiktor (2001) revealed the

secondary homonymy of *Limax maculatus* (Kaleniczenko, 1851) with *Limax maculatus* Nunneley, 1837 and in compliance with Articles 57.3.1 and 59 of the Code replaced it with the next available synonym *Limax ecarinatus* Boettger, 1881, which prior to that had not been used as a valid species name. This was not the best solution because the usage of the well-established name *Limax maculatus* (Kaleniczenko, 1851) could have been conserved under Article 23.9.2 of the Code.

4. *Limax maculatus* (Kaleniczenko, 1851) (currently *Limax ecarinatus* Boettger, 1881) is one of the two recognized species of *Limacus* Lehmann, 1864, a disputed group considered by some authors as a subgenus of *Limax* Linnaeus, 1758 (Likharev & Wiktor, 1980; Wiktor, 2001; Sysoev & Schileyko, 2009; Welter-Schultes, 2012; Welter-Schultes & Audibert, 2013 and others) and by other authors as a separate genus close to *Limax* (Forcart, 1986; Reischütz, 1986; Falkner et al., 2001; Nitz et al., 2009; Horsák et al., 2010; Bank, 2011; Balashov & Gural-Sverlova, 2012 and others). Before and after 2001 both combinations, *Limax maculatus* (Kaleniczenko, 1851) and *Limacus maculatus* (Kaleniczenko, 1851), were used frequently. *L. maculatus* (Kaleniczenko, 1851) (or *Limax ecarinatus* Boettger, 1881) is a pest and an introduced species, and has been featured in many publications. After 2001 it was variously referred to as *Limax ecarinatus* Boettger, 1881, *Limacus maculatus* (Kaleniczenko, 1851) (as per Article 59.4 of the Code) and *Limax maculatus* (Kaleniczenko, 1851). None of these combinations appear to be prevalent, although *Limax ecarinatus* has been the least used. Welter-Schultes & Audibert (2013) used the combination *Limax ecarinatus* and argued that ‘both names are correct, this depends on taxonomic classification’ and ‘those who follow the system used by Falkner et al. (2001) must use the name *Limacus maculatus* (Kaleniczenko, 1851)’, as per Article 59.4 of the Code. However, this will only increase confusion.

5. Nomenclatural stability in this case would be better achieved if the Commission were to rule under Article 81.2.1 to suppress the underused names *Limax maculatus* Nunneley, 1837 and *Limax maculatus* Picard, 1840, thereby conserving the most junior homonym *Krynockillus maculatus* Kaleniczenko, 1851, which is widely used. A list of 50 examples of usage in 1980–2013 is kept by the Commission Secretariat.

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that the following names are suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy:
 - (a) *maculatus* Nunneley, 1837, as published in the binomen *Limax maculatus*;
 - (b) *maculatus* Picard, 1840, as published in the combination *Limax cinereus* var. *maculatus*;
- (2) to place on the Official List of Specific Names in Zoology the name *maculatus* Kaleniczenko, 1851, as published in the binomen *Krynockillus maculatus*;
- (3) to place on the Official Index of the Rejected and Invalid species in Zoology the following names:
 - (a) *maculatus* Nunneley, 1837, as published in the binomen *Limax maculatus* and as suppressed in (1)(a) above;
 - (b) *maculatus* Picard, 1840, as published in the combination *Limax cinereus* var. *maculatus* and as suppressed in (1)(b) above.

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Acknowledgement of receipt of this application was published in BZN **70**: 152.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the I.C.Z.N. Secretariat, Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3635***Antheraea roylei* Moore, 1859 (Insecta, Lepidoptera, SATURNIIDAE):
proposed conservation**

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Abstract. The purpose of this application, under Article 81.1 of the Code, is to conserve the name *Antheraea roylei* Moore, 1859 believed to be the progenitor of *Bombyx (Saturnia) pernyi* Guérin-Méneville, 1855 (currently *Antheraea pernyi*). Tussah silk is second only to mulberry silk (from *Bombyx mori*) in world production and consumption. Recently compiled evidence indicates that the tussah silkworm, also called the Chinese oak silkworm, *Antheraea pernyi* Guérin-Méneville, 1855, was derived thousands of years ago in China from the Himalayan *Antheraea roylei* Moore, 1859, which would place the latter in synonymy under the former, since the two names refer to the same biological species. Although there are no significant and consistent differences in wing pattern and genitalia, both names have had wide usage for more than 150 years, and the two entities differ in their chromosome numbers and cocoon structure. The name *A. roylei* has been applied by almost all authors to wild collected material in India, Burma, Nepal, Thailand, etc., while the name *A. pernyi* has been used by Chinese and Korean authors for sericultural populations and wild collected specimens in southern China, although the wild collected material does not differ from that of countries that share borders with southern China. The authors propose that the name *Antheraea roylei* be conserved and added to the Official List of Specific Names in Zoology.

Keywords. Nomenclature; taxonomy; *Antheraea pernyi*; *Antheraea roylei*; Chinese oak silkworm; Himalayan oak silkworm; oak tasar silk; tussah silkworm.

1. The name *Bombyx (Saturnia) pernyi* was established by Guérin-Méneville (1855, pp. 297–298, pl. 6, fig. 1), who provided a formal Latin description within his French text. It has been recognized by the name *Antheraea pernyi* for more than a century. The Himalayan oak silkworm, *Antheraea roylei* was described by Moore (in Horsfield & Moore, [1860], p. 397; for publication date of the catalogue see Cowan (1975)). The moth was also described in another work by Moore (1859, p. 256, pl. 64, fig. 1) that was actually published prior to the catalogue of Horsfield & Moore. Therefore the correct publication date and reference is Moore (1859). In Moore (1859) the name was misspelled as *roylii*, but Nässig & Holloway (2010) concluded that the name should be spelled *roylei*, citing the relevant articles of the Code, and pointing out that

the spelling *roylei* had been used consistently in publications for 140 years. Nässig & Holloway also verified the correct publication date for the original description as 1859, and provided evidence that the species was named after J. Forbes Royle (1856). To our knowledge the spelling *Antheraea roylia* Moore, 1859 has not been used since 1900 thereby satisfying the conditions of Article 23.9.1.1 of the Code, while *Antheraea roylei* Moore, 1859 has been used in multiple publications satisfying the conditions of Article 23.9.1.2 of the Code. To confirm that the spelling *roylei* is the one to be used we declare the name *Antheraea roylia* Moore, 1859 a nomen oblitum under Article 23.9.2 of the Code.

2. The senior author has examined the original type specimens of *Bombyx (Saturnia) pernyi* in the Muséum National d'Histoire Naturelle in Paris. Moreover, we recently received colour images of a syntype male of *Antheraea roylei* Moore by the courtesy of the Natural History Museum (Entomology), and could thus confirm the identity of this taxon.

3. As detailed by Peigler (2012), there is now a preponderance of evidence that *roylei* and *pernyi* are biologically the same species, indicating that the latter was derived from the former by artificial selection in China more than two millennia ago (see Liu et al., 2010). The evidence compiled and documented by Peigler included the points that all wild collected specimens reported from China are assigned the name *pernyi*, whilst ones reported by authors from Nepal, Thailand, Burma, Vietnam, West Malaysia, and Himalayan regions of India are almost always called *roylei*. Cultures of *pernyi* that were introduced into Spain and Japan in the 19th century and into Romania and Ukraine in the 20th century always failed to establish, or persisted less than ten years (Szekely, 2010, p. 38). Field collections of *pernyi* in South Korea are so rare (single specimens taken in 1924, 1938, and 1992, two of which were on small islands, see Park & Tshistjakov, 1999), that they are assumed to represent escapees from sericultural colonies (Peigler, 2012). Sericultural hybrids derived in India in the 1970s and 1980s by crossing *roylei* with *pernyi* produced viable offspring for multiple generations (Jolly et al., 1979), which appeared to be an exception to the 'biological species concept.' Thus, we consider the two names to apply to the same biological species, with *roylei* being the wild progenitor, and *pernyi* being the derivative by artificial selection.

4. Not surprisingly then, *pernyi* and *roylei* do not have consistent wing pattern characters to separate them, because the moths are variable and the variability overlaps. The larvae look the same and the genitalia (used to separate closely related species in many groups of Lepidoptera) do not differ. However, *pernyi* and *roylei* do differ significantly in the structure of their cocoons and their chromosome numbers. The cocoons of *A. pernyi* are compact and ovoid, and contain 750–810 continuous metres of silk, whilst cocoons of *roylei* are double with an inflated irregular outer cocoon and a compact inner cocoon, and contain only 175–210 continuous metres of silk (Devi et al., 2011). *Antheraea roylei* has a chromosome number of $n = 31$, which is the modal and probably ancestral number for most SATURNIIDAE, but the chromosome number for *A. pernyi* is $n = 49$ (Belyakova & Lukhtanov, 1994, 1996).

5. Two entities could be routinely and easily separated by the fact that *A. roylei* is the one that is collected in the wild, but *A. pernyi* exists in captive colonies. However, occasionally cocoons or moths of *A. pernyi* are found in the wild, as escapees from captive colonies (Yang, 1978), because most of the rearing is done outdoors on

pruned oaks. Even so, most tussah silk culture is carried out in the northeast (provinces of Liaoning, Shandong, Anhui and Henan) where no wild populations exist. Records for the natural distribution of *A. roylei* are in the southern provinces of Fujian, Jiangxi, Hunan, Sichuan, Yunnan, Guangdong and Guangxi. There is one record from southern Shaanxi, west of the primary region of tussah sericulture. Thus, the geographical source of a specimen would also provide evidence to assign it to either *roylei* or *pernyi*.

6. Three silkmoths are apparently entirely of sericultural origin and do not exist in nature, namely *Bombyx mori*, *Samia ricini* and *Antheraea pernyi*. The following traits characterise these three silkmoth species: inability to establish and maintain feral populations, they are easy to mass-rear indoors, the larvae are highly disease-resistant, cocoons have excessive amounts of silk, cocoons have few or no peduncles (attachments to stems), and in the case of the first two, adult moths do not fly. The aforementioned silkmoths have the last two traits listed by Clutton-Brock (1981, pp. 15–16) for species that are amenable to domestication. Peigler (2012) put forth a hypothesis that developing the sericultural insect would be favoured if that were carried out in a region to the north of where wild populations occur, so that gene flow would not interfere with the artificial selection process, and we believe that this was what happened.

7. The alternative solution to this problem is to accept the synonymy and treat the wild and sericultural populations as *pernyi*. However, this would lead to excessive confusion, especially in countries to the south of China, where wild collected specimens are almost always identified as *roylei* (e.g. Arora & Gupta, 1979; Pinratana & Lampe, 1990; Haruta, 1992; Allen, 1993; Singh & Suryanarayana, 2005; Kakati & Chutia, 2009; Sharma et al., 2010; Chutia & Kakati, 2011; Devi et al., 2011; Kavane & Sathe, 2011).

8. By contrast, authors treating the Chinese fauna have been calling wild collected specimens *pernyi* in virtually all of their published surveys (e.g. Yang, 1978; Zhang, 1986; Wang, H.-Y., 1988; Wang, L.-Y., 1988, 1992; Guo, 1988; Lu, 1990; Wu & Lin, 1995; Zhu & Wang, 1996; Wu & Li, 1997; Fang, 2003; Fu & Tzuoo, 2004; Zhao & Li, 2005; Li et al., 2011), and some would probably prefer to maintain the *status quo* in that regard, so some opposition to this proposal might be expected from entomologists in China. However, we believe that it would best serve Chinese entomology in the long term if both names were available to distinguish the wild and domesticated forms. Interestingly, Mell (1939, p. 143), a German who collected insects in China for years, used the name *A. roylei* for his wild-collected material, and Sonan (1937), a Japanese entomologist working in Taiwan, did the same.

9. Major taxonomic catalogues and monographs on SATURNIIDAE or sericulture (e.g. Horsfield & Moore, [1860]; Simmonds, 1869 (p. 599); Hutton, 1872; Wardle, 1879; Cotes & Swinhoe, [1889]; Cotes, 1891–1893; Sonthonnax, 1901; Quajat, 1904, pp. 26, 45; Schüssler, 1933; Bouvier, 1936; Cooper, 1942; Lampe, 2010; Meister, 2011) have all treated *pernyi* as the northern Chinese insect and *roylei* as the Himalayan one. In the classic series edited by Adalbert Seitz, *The Macrolepidoptera of the World*, the taxon *A. pernyi* was treated in a volume on Palearctic moths (Jordan, 1911a, b, p. 216), whilst *A. roylei* was covered in another on Indo-Australian moths (Seitz, 1926a, b, p. 511). In his catalogue covering larger moths, Kirby (1892,

pp. 758–759) listed *roylei* from Darjeeling and *pernyi* from North China. Packard (1914, p. 201) cited *roylei* as a subspecies of *pernyi*, but virtually no other authors have treated these taxa as trinomina.

10. Additional publications on more specialised topics (Belyakova & Lukhtanov, 1994, 1996; Peigler & Naumann, 2003, p. 64; Regier et al., 2005; Mahendran et al., 2006; Holloway, 2011) used both names *roylei* and *pernyi*, treating the two entities as separate.

11. Crosses between *pernyi* and *roylei* were already made in the 19th century (Hutton, 1872; Wailly, 1882), and names were applied to them (Tutt, 1901). Beginning in the 1970s, these ‘hybrids’ were re-named *A. proylei* Jolly by Indian sericulturists, and in the 1980s and 1990s these stocks became the basis for ‘oak tasar’ or ‘temperate tasar’ silk, as distinguished from India’s traditional ‘tropical tasar’ silk, based on *Antheraea paphia* (Linnaeus 1758) (= *A. mylitta* Drury 1773). Much attention has been given to these Himalayan cultures called *proylei* by Indian sericulturists (Jolly et al., 1979; Singh & Suryanarayana, 2005; CSB, 2006; Sharma et al., 2010), although Srivastav & Thangavelu (2005, p. 103) reported that ‘cytogenetically, morphologically and physiologically both stocks [*pernyi* and *proylei*] appear to be the same.’

12. Aside from the taxonomic confusion and instability that would result by synonymising the names *pernyi* and *roylei*, loss of the latter name could hinder efforts to conserve wild populations in the countries having territory in the Himalayas, including China. Conservation of this progenitor is desirable because tussah silk is second only to mulberry silk (from *Bombyx mori*) in world commerce. Chinese sericulturists maintain over 130 named varieties of *A. pernyi*, primarily in Liaoning, and they are continually developing new strains (SRIL, 1994), so the need to protect populations of the wild form as a genetic resource cannot be overstated. How could the case be made that wild populations of *pernyi* be conserved, when the species exists abundantly and securely in captivity? Indeed, it may be harder to promote and fund conservation programmes aimed at protecting wild populations of an insect that carries the same name, than if there were two names.

13. The two moths do not behave the same way, nor are they used in the same way by humans. *Antheraea roylei* is difficult to mass-rear in captivity, and its cocoons are of minimal use (Chutia & Kakati, 2011). As mentioned above, *Antheraea pernyi* apparently cannot be permanently established as feral populations, but its cocoons have great economic value. In our opinion, the two need to carry different binomials. Opinion 2027 (BZN 60(1): 74–75, March 2003) provides an excellent precedent for this proposed action. Both authors work on taxonomy and sericulture of SATURNIIDAE (Peigler, 1993, 1999, 2012; Peigler & Naumann, 2003; Chutia & Kakati, 2011; Kakati & Chutia, 2009), and they hope to be able to use the names *pernyi* and *roylei* to refer to the separate entities in their future publications. Similar to authors of Case 3010 that resulted in Opinion 2027 our application seeks to stabilize the names of the wild species whether or not domestic forms are considered as ‘conspecific’, i.e. can be included in the same species. We are asking for a nomenclatural rather than a taxonomic decision, and are not concerned with the ongoing discussion on the nomenclature of domestic animals. Whatever view on the conspecificity and derivation of domestic and wild taxa was taken, both groups are recognizable entities thereby creating two different areas of application of both groups of names. A Commission’s ruling can be a justification for using the junior names in practical situations, such as conservation of wild populations.

14. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that the name *roylei* Moore [1859], as published in the binomen *Antheraea roylei*, is not invalid by reason of being pre-dated by a name based on a domestic form;
- (2) to place of the Official List of Specific Names in Zoology the following names:
 - (a) *roylei* Moore, [1859], as published in the binomen *Antheraea roylei*, with the endorsement that is not invalid by reason of being pre-dated by a name based on a domestic form;
 - (b) *pernyi* Guérin-Méneville, 1855, as published in the combination *Bombyx (Saturnia) pernyi*.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to I.C.Z.N. Secretariat, Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3638***Saturnia canningi* Hutton, 1859 (currently *Samia canningi*; Insecta, Lepidoptera, SATURNIIDAE): proposed conservation**

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Abstract. The purpose of this application, under Article 81 of the Code, is to conserve the name *Saturnia canningi* Hutton, 1859, the progenitor of *Samia ricini* (Jones, 1791). The eri silk moth (*Samia ricini*) is the third largest source of silk in world commerce. The Himalayan *Samia canningi* has been demonstrated to be the wild progenitor of *S. ricini*, which exists only in captivity. Therefore, the two names refer to the same biological species, but the name *Phalaena ricini* Jones, 1791 has precedence over *Saturnia canningi* Hutton, 1859. However, both names have been used widely and consistently by authors in the entomological and sericultural literature for over 150 years to refer to the domesticated and wild entities, respectively. The authors propose that the name *Saturnia canningi* be conserved and added to the Official List of Specific Names in Zoology, so that it can continue to be used when referring to the wild form.

Keywords. Nomenclature; taxonomy; *Samia*; *Samia canningi*; *Samia ricini*; eri silk; eri silkmoth; India; wild silk

1. SATURNIIDAE are among the most popularly studied and collected of the lepidopterans. There is a saturniid moth historically and currently known as *Samia canningi* that ranges in the sub-Himalayan region, from Pakistan down through Nepal, Bhutan, northeastern India, Burma, Thailand, Cambodia, Laos, and northern Vietnam (Allen, 1993; Arora & Gupta; 1979; Seitz, 1926a, b; Zhu & Wang, 1996). There are also records from southern Yunnan and eastern Xizang (Tibet) in China. *Samia* Hübner, 1819 was revised by Peigler & Naumann (2003), who considered the genus to contain 19 species. Two of those species were given as *Samia ricini*, the well-known eri silk moth which exists only in captivity, and *S. canningi*. Peigler & Naumann presented a compelling case that *S. ricini* was derived from *S. canningi* by sericultural selection. They considered that for stability of nomenclature in the entomological and sericultural literature, the wild and domestic entities should carry separate names and be treated as separate species, citing the example of the wolf and the dog as analogous. Opinion 2027, also published in 2003, provides several additional cases of domestic animals being named prior to their wild progenitors, and

the example of *Bombyx mandarina* and *Bombyx mori* exactly parallels the present case of *Samia canningi* and *S. ricini*.

2. Peigler & Naumann (2003) determined that the name *canningi* was first established by Hutton (1859, p. 28) but were unable to track the original description of the name *ricini* prior to the use of that name by Donovan (1798), so they reluctantly cited the authorship of *ricini* as 'Anonymous' citing Articles 14 and 50.1 of the Code (1999). The recent study by Peigler & Calhoun (2013) resolved the original description and generic combination as *Phalaena ricini*, establishing that the name should be attributed to Sir William Jones (in Anderson, 1791, p. 43). However, an anonymous reviewer of that paper pointed out that *canningi* must be considered a junior synonym of *ricini*, since the two entities are biologically the same species. Although Opinion 2027 (BZN 60(1): 74–75, March 2003) could be cited in support of treating *S. canningi* and *S. ricini* as separate species, thereby conserving the junior synonym *canningi*, the Commission did issue a specific ruling on this particular example.

3. The name *Samia canningi* has been used to designate the wild form by many authors since the 1860s and all through the 20th century, as shown in the exhaustive synonymy of the taxon given by Peigler & Naumann (2003, pp. 112–113) (i.e. Simmonds, 1869; Wardle, 1879; Cotes & Swinhoe, 1887; Horsfield & Moore, 1858–1859; Schüssler, 1933; Bouvier, 1936; Gardiner, 1982; Pinratana & Lampe, 1990; Allen, 1993; Zhu & Wang, 1996; Mohanraj et al., 1998). Prior to 1860, *S. canningi* was also separated from the cultivated *S. ricini* and identified as *Samia cynthia* (Drury, 1773), although the true *S. cynthia*, the type-species of *Samia* Hübner, 1819 and its main synonym *Philosamia* Grote, 1874, is native only in northeastern China and Korea.

4. The name *canningi* is still used freely and by most authors when citing the wild form (Singh & Suryanarayana, 2005; Clary, 2009; Kakati & Chutia, 2009; Lampe, 2010; Meister, 2011; Devi et al., 2011; Peigler, 2012; Luikham, 2012; Badola & Peigler, 2013). However, the current situation is that it is technically incorrect to use that junior subjective synonym, since the two entities are known to be the same species biologically, and the recent publication of Peigler & Calhoun (2013) pointed out the synonymy. The Code does not provide any articles to conserve junior subjective synonyms when it is demonstrated that they pertain to a wild progenitor or domesticated form that was named earlier, even when the two can be easily distinguished from each other, which is the case here.

5. The adult moths of *Samia canningi* and *Samia ricini* are easy to distinguish from each other. Moths of *S. canningi* have individual white tufts on the dorsal surface of the abdomen, like most other species in the genus, and they fly. Moths of *S. ricini* have solid white abdomens, and they do not fly. The slender, compact cocoons of *S. canningi* are grey or brownish, with well developed peduncles by which they remain attached to the hostplants. The larger and puffy cocoons of *S. ricini* are snow white or brick red, and lack peduncles (Kavane & Sathe, 2011). *Samia ricini* exists only in captivity, like *Bombyx mori*, and the eri silkworms are usually reared indoors. Each of these well-defined and easily observed differences in cocoons and moths reliably ensures that specimens of the two entities are not confused with one another.

6. There are no extant type specimens of *Samia ricini* or *Samia canningi*, but Peigler & Naumann (2003) did not believe there was a need to designate neotypes because the

two names have been clearly and consistently applied to the domesticated and wild forms, respectively, for more than a century.

7. Annually more than 96% of all eri silk is produced in Northeast India, primarily Assam, Meghalaya and Manipur, but small amounts come also from other states throughout India (Central Silk Board, 2006; Sharma et al., 2010). Eri silk is also cultured in Japan (Mitamura, 2013), Thailand, Vietnam, China, and other southeast Asian countries. It has been successfully produced in Ethiopia since 2001, where it serves as an agent of fair trade and poverty alleviation. The Assamese and Bengali name 'eri' has become the international standard name for this type of silk, used by the Central Silk Board, although English authors and speakers sometimes call it 'endi,' which is its name in Hindi and Oriya. Whilst it has traditionally been used in ethnic clothing (chaddars, salwar kameez, scarves, etc.) and bedcovers in Northeast India, eri silk is becoming increasingly used for cushion covers, shawls, and other items that target the market of the emerging middle class of India (Badola & Peigler, 2013). After mulberry silk (*Bombyx mori*) and China's tussah silk (*Antheraea pernyi*), eri silk ranks third in world production (Srivastav & Thangavelu, 2005).

8. The implications of maintaining the current situation would not affect the sericultural literature very much, mostly published by workers in India, except when those writers occasionally refer to the wild form. The proposed solution would be for the Commission to issue a ruling conserving the name *Saturnia canningi* Hutton, 1859, so that this name could be legally applied to the wild form, as is currently being done and has been for more than a century. The alternative solution would require authors to use the name *ricini* for the wild form that is frequently cited in taxonomic publications and regional surveys, which would lead to new confusion and inconsistent usage, because some authors would comply and others would not.

9. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that the name *canningi* Hutton, 1859, as published in the binomen *Saturnia canningi*, is not invalid by reason of being pre-dated by a name based on a domestic form;
- (2) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *canningi* Hutton, 1859, as published in the binomen *Saturnia canningi*, with the endorsement that it is not invalid by reason of being pre-dated by a name based on a domestic form;
 - (b) *ricini* Jones in Anderson, 1791, as published in the binomen *Phalaena ricini*.

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Case 3601***Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published**

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Abstract. The purpose of this application, under Articles 78.2.3 and 80.2.1 of the Code, is to confirm that the generic name *Spracklandus* Hoser, 2009 [23 March] for the African spitting cobras is available in the sense of the Code, and also that the work in which this genus was proposed met the Code's criteria of publication under Article 8.1. The Commission is asked to rule on these seemingly routine matters because widely promulgated recommendations by some herpetologists to use a junior objective synonym, *Afronaja* Wallach, Wüster & Broadley, 2009 [21 September], instead has resulted in instability in nomenclature.

Keywords. Nomenclature; taxonomy; Reptilia; ELAPIDAE; spitting cobras; taxonomy; *Spracklandus*; *Afronaja*.

1. On, or a few days before 23 March 2009, Raymond Hoser (the present author) simultaneously made available more than 100 printed copies of issue no. 7 of his self-published journal, *Australasian Journal of Herpetology* (ISSN 1836–5698). This issue contained a single paper on the taxonomy of cobras (Hoser, 2009a). In it (p. 8), the new genus *Spracklandus* Hoser, 2009 was proposed for the African spitting cobras (type species *Naja nigricollis* Reinhardt, 1843). The original run of issue no. 7 was printed double-sided on white glossy paper and held together with a staple at the top left corner. Shortly before the cover date of 23 March [the precise date of first distribution does not matter for establishing priority of the names considered herein], part of the original print run was distributed by post to *Zoological Record*, major public libraries in Australia, and a number of other interested persons, including taxonomists and those who had taxa named in their honour therein (usually 11 copies to each). Approximately 10 days after distribution of the printed edition, this issue was uploaded to the internet <http://www.smuggled.com/AJHI7.pdf> with a different ISSN number (ISSN 1836–5779). Dated acknowledgements for receipt of some of the printed copies of issue no. 7 were received before the electronic edition was uploaded. Some examples of these acknowledgements are held by the Commission Secretariat. They provide proof that a printed edition existed and that it preceded the electronic edition. The printed edition is the only one that can be regarded as published under the Code, having been printed on paper with numerous identical copies being made available free of charge at the time of publication. This printed edition is the only edition from which any new names and nomenclatural acts were ever intended by their author (myself) to become available.

2. Copies of *Australasian Journal of Herpetology* no. 7 were also offered to anyone else interested, this being done by several means. In particular, the website <<http://www.herp.net>> offered original hard copies or online copies, the latter (as was noted above) being identified as a different publication by its different ISSN number. Advice of publication was also disseminated via various internet sites and forums. When demand for hard-copy originals exceeded those in stock, photocopies or printouts of the original were sent to persons requesting copies. Such photocopies and printouts differed from the original print run in being reproduced single-sided.

3. A set of photocopies of issues nos. 1–7 of *Australasian Journal of Herpetology* was sent to Van Wallach in response to his e-mailed request of 29 April 2009 for a hard copy; receipt as ‘reprints’ was acknowledged in Wallach’s e-mail of 9 May 2009. On 21 September that year, Wallach et al. (2009) published a paper in *Zootaxa*, alleging that *Australasian Journal of Herpetology* issues nos. 1–7 were not publications in accordance with the Code. This judgment was based on a claim that their search for original hard copies had, for issue no. 7, turned up only one original copy in a library in Australia (the Australian National Library). On this basis they concluded that no other originals existed and that the journal as whole failed to comply with the Code. They further wrote that any other hard copies in existence were printed ‘on demand’ after the publication date and therefore were not published according to the Code. The Secretariat of the Commission has independently confirmed the receipt of issue no. 7 by two libraries in Australia and by the *Zoological Record* prior to the publication of Wallach et al. (2009).

4. A second statement by Wallach et al. (2009), interpolated with the first, was that issues nos. 1–7 were only ‘online’ publications and therefore not valid according to the Code. These erroneous opinions, including the claim that *Spracklandus* Hoser, 2009 is not a valid or available name, have subsequently been repeated widely on internet forums and elsewhere. Although such online exchanges, including Hoser’s on-line rebuttal in 2009 at <http://www.sareptiles.co.za/forum/viewtopic.php?f=83&t=17849>, do not have nomenclatural force, interested readers are referred to Hoser (2012a, b), where they are documented in detail.

5. Wallach et al. (2009, p. 32) proposed the subgeneric name *Afronaja* Wallach, Wüster & Broadley, 2009 for the African spitting cobra. *Afronaja* is an objective synonym of *Spracklandus* since the latter is an available name, and both genus-level names have the same type species, *Naja nigricollis* Reinhardt, 1843.

6. In the face of continued misrepresentations by some herpetologists (e.g. Wüster & Bérnils, 2011; Schleip & O’Shea, 2010), Hoser (2012a) published an essay both in print and online in which he attempted to present the whole story, including the documentary evidence of receipt of the printed edition of issue no. 7 of *Australasian Journal of Herpetology* by several recipients.

7. Despite this, some authors (e.g. Kaiser et al., 2013, p. 17) still maintain that issue no. 7 of *Australasian Journal of Herpetology* was not validly published in the sense of the Code, but was rather an electronic publication available in print only by print-on-demand (Hoser, 2013). As examples of authors and important internet resources now using or urging the use of the junior synonym *Afronaja* as valid, one may cite Kaiser et al. (2013) and a large number of online forums and websites with posts by Wüster, the main proponent for the junior synonym. A number of online correspondents, including Pernetta in 2009 at <http://herpetoblog.wordpress.com/>

tag/hoser/ have expressed confusion as to what the appropriate name should be (*Spracklandus* or *Afronaja*), although the final reply to Pernetta by Wells that same year, at <http://herpetoblog.wordpress.com/2009/04/02/taxonomic-traumas-for-cobras-and-rattlesnakes/#comments>, stated that Hoser's names proposed in revisions of *Naja* and *Crotalus* were available.

8. The wider significance of the present case resides in the danger that validly self-published taxonomic works may, improperly, become viewed as unavailable under the Code, thus enabling the renaming of validly named taxa, if the above-mentioned argumentation becomes more widespread and gains general acceptance (e.g. Kaiser et al., 2013). For a full list of printed and on-line works that have adopted this viewpoint, and a discussion of nomenclatural instability that is likely to result thereby with respect to names proposed not only by Hoser, but other authors as well, see Hoser (2013). Under the present Code, such works have the same status and force as any other, but they are not necessarily so viewed by some. In the defence of such works and their authors, the present matter is being brought to the Commission's attention.

9. To remedy the present confused situation concerning the nomenclature of the spitting cobras, a request is placed to the International Commission on Zoological Nomenclature to use its specific powers granted under Articles 78.2.3 and 80.2.1 to confirm the availability of the name *Spracklandus*.

10. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to confirm that:

- (a) issue no. 7 of *Australasian Journal of Herpetology* and the included article by Hoser (2009) are published works in the sense of Article 8.1 of the Code, and any available names and nomenclatural acts proposed therein take their priority from the date 23 March 2009 provided that they meet the other provisions of the Code (i.e. Articles 10–20) related to availability;
- (b) *Spracklandus* Hoser, [23 March] 2009, a generic name proposed in the work cited in proposal (1) (a), type species *Naja nigricollis* Reinhardt, 1843, is an available name;
- (c) *Afronaja* Wallach, Wüster & Broadley, [21 September] 2009, type species *Naja nigricollis* Reinhardt, 1843 is a junior objective synonym of *Spracklandus* Hoser, [23 March] 2009, having been proposed for the same taxon as the latter with the same type species;

(2) to place the name *Spracklandus* Hoser, 2009 on the Official List of Generic Names in Zoology.

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CASE 3630

CORCORACIDAE Mathews, 1927 (Aves) and the spelling *melanorhamphos* Vieillot, 1817 for the valid name of the type species of its type genus: proposed conservation of usage

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Abstract. The purpose of this application, under Articles 81.1, 81.2.3.2, 23.9.3 and 33.3.1 of the Code is to (1) conserve the family name CORCORACIDAE Mathews, 1927 for the Australian bird family known as mudnesters; and (2) conserve *melanorhamphos* Vieillot, 1817 as the correct spelling of the valid name for the type species of the type genus of CORCORACIDAE. At family or subfamily rank, CORCORACIDAE has been in prevailing use for the mudnesters for over 50 years. Reversal of precedence for the competing name STRUTHIDEIDAE Mathews, 1924 under Article 81.2.3.2 of the Code will maintain stability in nomenclature. The species-group name *melanorhamphos*, an incorrect subsequent spelling of *Coracia melanoramphos* Vieillot, 1817, has also been in prevailing use for the type species of the type genus of CORCORACIDAE for over 50 years. Deeming *melanorhamphos* as the correct original spelling under Article 81.1 and in accordance with Article 33.3.1 will also maintain stability in nomenclature.

Keywords. Nomenclature; taxonomy; Aves; CORCORACIDAE; STRUTHIDEIDAE; *melanoramphos*, *melanorhamphos*, *melanorhamphus*, Australian mudnesters; Australia.

1. The endemic Australian mudnesters are a group of communal songbirds that build cup-shaped nests of mud in trees. Morphological, behavioural and DNA sequence information gathered over the last 60 years shows, by consensus, that they comprise two monospecific genera, *Corcorax* Lesson, 1831 and *Struthidea* Gould, 1837. Their species, moreover, are together so distinct from other songbird lineages that they have been placed in their own family, CORCORACIDAE (data in Amadon, 1950; Mayr, 1963; Sibley & Ahlquist, 1985, 1990; Baverstock et al., 1992; Schodde & Mason, 1999; Barker et al., 2002, 2004; Ericson et al., 2002; Norman et al., 2009; Jönsson et al., 2011).

2. Two family-group names are available for the mudnesters. First published was STRUTHIDEIDAE Mathews, 1924 (p. 218) in the original spelling STRUTHIIDIDAE, corrected here under Article 32.5.3.1 of the Code. It is based by reference on *Struthidea* Gould, 1837 (type species: *Struthidea cinerea* Gould, 1837). The other is CORCORACIDAE Mathews, 1927 (p. 413) in the original spelling CORCORACIIDIDAE, corrected here under Article 32.5.3.1 of the Code. It is based by reference on *Corcorax* Lesson, 1831 (type species: *Corcorax australis* Lesson, 1831 = *Coracia melanorhamphos* Vieillot, 1817). *Corcorax* and *C. australis* were published available together on pp. 324–325 in livraison 5 of Lesson's two volume *Traité d'Ornithologie*, dated 1831. Nevertheless, their year of publication has been cited as 1830 by Mathews (1913, p. 317; 1927, pp. 413, 414), the R.A.O.U. Checklist Committee (1926, p. 113), Mayr (1962, p. 160) and Dickinson (2003, p. 515). This date comes from Mathews who earlier (1911, p.14) listed the dates of issue of the livraisons of Lesson's work from the *Bibliographie de la France*. Although livraisons 1–4 appeared between 13 February and 25 September 1830 and livraisons 6–8 between 1 March and 11 June 1831, no precise date is recorded for livraison 5 anywhere (Zimmer, 1926, pp. 387–388; Dickinson et al., 2011, p. 119). Mathews (1927, pp. 413–414) cites '(Dec.) 1830', but, despite the logic, that can only be a guess. In accord with Article 21.2 of the Code, we therefore use and advocate 1831 as the date of publication of *Corcorax* Lesson and *Corcorax australis* Lesson because that is the date on the title page of the work in which they were first published.

3. *Corcorax* and *Struthidea* first began to be associated in their own family-group from the mid 20th century on, following a review by Mayr (1963). From the beginning, the name used has been CORCORACIDAE, even though junior (McGill, 1960, p. 49; Mayr, 1962, p. 160). CORCORACIDAE was preferred by Mayr (1962) for the Harvard *Check-List of Birds of the World* and expressly advocated by Bock (1994, p. 221) in his compendium of avian family-group names. Although their approach was contrary to the law of priority, it has been accepted in ornithology. CORCORACIDAE has now been employed almost exclusively for the group over the last 50 years to 2013. For that period, the Commission Secretariat holds a submitted list of 84 usages of CORCORACIDAE in major Australian and global handbooks and checklists, Australian field guides and atlases, significant scientific papers and other reference and technical works. These do not include the multitude of usages in minor provincial journals and lists in Australia. Even where *Struthidea* and *Corcorax* are separated in subfamilies (e.g. Wolters, 1977, p. 220), CORCORACIDAE has been given precedence as the family name.

4. Until the turn of the 21st century, the senior name STRUTHIDEIDAE appears to have been used only once, by Condon (1968, p. 103). Since then, however, it has

appeared in one more printed work that we know of, in the account of the Australian mudnesters in the influential *Handbook of the Birds of the World* (Rowley & Russell, 2009, p. 272). Changing from such a long-accepted and familiar name as CORCORACIDAE to the unfamiliar STRUTHIDEIDAE, as could follow from Rowley & Russell's (2009) action, would disrupt and destabilise nomenclature for this distinctive family and potentially confound names for it in literature. This is already happening in the electronic media. Although CORCORACIDAE is the only name that currently accesses the family in Google searches, present entries in a widely used reference, Wikipedia, can confuse. It recognises STRUTHIDEIDAE as the senior name for the family but cites CORCORACIDAE as the commonly used name as well, and employs both as entry family-group names to Wikipedia's page on mudnesters. Implicit here is acknowledgement that CORCORACIDAE is the name in prevailing use.

5. The valid specific name for the type species of the type genus of CORCORACIDAE is *Corcorax melanoramphos* (Vieillot, 1817). In the original publication, Vieillot (1817, p. 2) made the specific name available, with description, as *melanoramphos* in the binomen *Coracia melanoramphos*. Here, however, we use and advocate the spelling *melanoramphos* as directed by Article 33.3.1 of the Code. Spellings of the name have been various. G.R. Gray (1846, text to plate lxxviii) was the first to appreciate the priority of Vieillot's name, but he quoted it as '*melanorhynchus*' in a straight-forward mis-transcription. Jean Cabanis (1851, p. 228) realised the error but emended it unjustifiably to *melanoramphus*, citing Vieillot's spelling in synonymy. Gould (1965, p. 470), Sharpe (1877, p. 149), the R.A.O.U. Checklist Committee (1926, p. 113) and Australian literature followed his lead. Then Amadon (1950, p. 126) and Mayr (1962, p. 160) 'corrected' it again, this time to '*melanoramphos*', compounding an unjustifiable emendation with another incorrect subsequent spelling.

6. Nevertheless, the spelling *melanoramphos* has been adopted almost universally over the 50 years since. It has been used not only in global and Australian checklists, hand-books, field guides and regional lists, but also in hundreds of regional Australian papers dealing with the distribution and behaviour of this species in Australian ornithological journals and newsletters. It has even been used in posters of Australian birds for public education. In the 84 references that we have lodged with the Commission to demonstrate usage of CORCORACIDAE or CORCORACINAE (see paragraph 3 above), 66 employ the species name in the spelling *melanoramphos*. Of the remainder, 11 do not refer to the species at all, 2 revert to the emendation *melanoramphus*, and only 5 (Poiani & Jermiin, 1994; Ericson et al., 2002; Rowley & Russell, 2009; Jönsson et al., 2011; TiF Checklist, 2013) use the original spelling *melanoramphos*. On the electronic search engine Google Scholar, we have recorded 468 usages of the spelling *melanoramphos* to 17 of the original spelling *melanoramphos*. Within the last ten years the proportion recorded for *melanoramphos* in that source has risen slightly, at 14 compared to 346 for *melanoramphos*; some of them appear to be mis-spellings for *melanoramphos* (e.g. Hobbs, 2002; Ericson et al., 2002).

7. In 2009, however, the account of mudnesters in the influential *Handbook of the Birds of the World* intentionally returned to the original spelling *melanoramphos* (Rowley & Russell, 2009, pp. 272–285). Following that action there has been some uptake of that spelling in the electronic media. It is used, for example, on the websites Avibase (2013) and TiF Checklist (2013) and, until September 2013, on the

International Ornithological Union's world species list (Gill & Donsker, 2012; see below). Spellings in the electronic record may be reversed at the press of a button, but those in baseline hard-copy references are rarely changed in less than a decade. It is the confusion caused by that lag which concerns us, as well as a shift in spelling of a familiar, in-use name that, because of its subtlety, will not be easy for anyone other than a language scholar. In Australia, national and state government and non-government instrumentalities, professional biologists, amateur naturalists and wildlife managers all use the following hard-copy checklists and manuals as their nomenclatural references: Christidis & Boles (1994, 2008), Schodde & Mason (1999) and Birds Australia's *Handbook of Australian, New Zealand and Antarctic Birds* (1990–2006). Each of these works employs the spelling *melanorhamphos*. It is a spelling that will remain in use for some years to come because no new editions are impending.

8. Due to these circumstances, we placed the issue before the Research Coordinating Committee on Avian Nomenclature (formerly Standing Committee on Ornithological Nomenclature) of the International Ornithological Union for advice. We have also liaised, through that committee, with the Union's group that provides a nomenclatural reference list for the bird species of the world on the internet. The Research Coordinating Committee voted 8 to 2 in favour of preserving the in-use spelling *melanorhamphos*. The International Ornithological Union's species list has also reversed its uptake of the original spelling and, aware of this application to the Commission, currently employs *melanorhamphos* in accord with Article 82.1 (Gill & Donsker, 2013).

9. In conclusion, we stress that we have deep respect for the law of priority and have not drawn up this application lightly. Guided by the third paragraph of the Code's Preamble, however, we consider that stability will be affected, in this particular case, if the priority of STRUTHIDEIDAE and original spelling of *melanoramphos* are allowed to stand, particularly in Australia where the mudnesters are not only endemic but also familiar and popular birds.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power:
 - (a) to give the name CORCORACIDAE Mathews, 1927 precedence over STRUTHIDEIDAE Mathews, 1924, whenever the two are considered to be synonyms;
 - (b) to rule that the spelling *melanorhamphos* is the correct original spelling of the specific name of the type species of the type genus of CORCORACIDAE Mathews, 1927;
- (2) to place on the Official List of Family-Group Names in Zoology the following names:
 - (a) CORCORACIDAE Mathews, 1927, type genus *Corcorax* Lesson, 1831, with the endorsement that it is to be given precedence over the name STRUTHIDEIDAE Mathews, 1924 whenever the two are considered to be synonyms, as ruled in (1)(a) above;
 - (b) STRUTHIDEIDAE Mathews, 1924, type genus *Struthidea* Gould, 1837, with the endorsement that it is not to be given priority over the name CORCORACIDAE Mathews, 1927, whenever the two are considered to be synonyms, as ruled in (1)(a) above;

- (3) to place on the Official List of Generic Names in Zoology the following names:
- (a) *Corcorax* Lesson, 1831 (gender: masculine), type species by monotypy *Corcorax australis* Lesson, 1831;
 - (b) *Struthidea* Gould, 1837 (gender: feminine), type species by monotypy *Struthidea cinerea* Gould, 1837;
- (4) to place on the Official List of Specific Names in Zoology the following names:
- (a) *melanoramphos* Vieillot, 1817, as published in the binomen *Coracia melanoramphos*, correct original spelling of the name of the type species of *Corcorax* Lesson, 1831, as ruled in (1)(b) above;
 - (b) *cinerea* Gould, 1837, as published in the binomen *Struthidea cinerea*, the specific name of the type species of the genus *Struthidea* Gould, 1837;
- (5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
- (a) *melanoramphos* Vieillot, 1817, as published in the binomen *Coracia melanoramphos*, incorrect original spelling of the name of the type species of *Corcorax* Lesson, 1831;
 - (b) *melanoramphus* Cabanis, 1851, as published in the binomen *Cercoronis melanoramphus*, unjustified emendation of the specific name of *Coracia melanoramphos* Vieillot, 1817.

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Case 3640***Touit* G.R. Gray, 1855 and *Prosopeia* Bonaparte, 1854 (Aves, PSITTACIDAE): proposed conservation of usage**

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Abstract. The purpose of this application, under Articles 78.1, 80.2.2 and 81.2.2 of the Code, is to conserve current usage of the well-established genus-group name *Touit* G.R. Gray, 1855 for a genus of South American parrotlets by suppression of the earlier but little-used, taxonomically ambiguous name *Pyrrhulopsis* Reichenbach, 1850. This course of action would also help to confirm the validity of the widely used genus-group name *Prosopeia* Bonaparte, 1854 for the Fijian shining parrots which has also been replaced by *Pyrrhulopsis* at times owing to differing interpretations of its meaning.

Keywords. Nomenclature; taxonomy; Aves; *Touit*; *Prosopeia*; *Pyrrhulopsis*; shining parrots; parrotlets; Central America; South America; Fiji.

1. Since Peters's (1937, p. 208) global checklist of parrots, the genus-group name *Touit* G.R. Gray, 1855 has been used for a distinct group of, Central and South American green parrotlets with purplish red to yellow side-bands in the tail. Although Gray attributed the name to Lesson (1830, p. 201 in livraison 3), Lesson had used the name only in the vernacular as 'Les Touits'. Gray (1855, p. 89) nevertheless treated *Touit* as a genus name and made it available under Article 12.2.5 by explicitly including *Psittacus huetii* (as '*Hueti*') Temminck, 1830 (text to pl. 491 in livraison 83) and designating it as type species. *Touit* is in wide use for these parrotlets today, and we have submitted a list of almost 100 usages in the last 70 years to the

Commission's secretariat. Not only does this submission record the usage of the name in diverse global and regional checklists, handbooks, field guides and scientific papers dealing with these parrots, but also in the species database of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES, 2013). No other name appears to have been used for this genus for over 70 years.

2. Also since Peters (1937, p. 250), the genus-group name *Prosopeia* Bonaparte, 1854 (p. 153) has been widely used for the large red or yellow shining parrots of Fiji. This name was made available under Article 12.2.5 by combination with the nominal species *Coracopsis personata* G.R. Gray, 1848 (p. 21) which is available under Articles 11.5.1 and 11.9.3.4 (see Gray, 1848, p. 20) and is its type species by monotypy. We have compiled and lodged with the Commission's Secretariat a list of 70 usages of *Prosopeia* in global and regional checklists, handbooks, field guides, research papers and Fiji government publications. *Prosopeia* is the genus-group name used for the shining parrots in the IUCN (2012) Red List of threatened species and in Appendix 2 of CITES (CITES, 2013). Of the three species in the genus, one is listed as vulnerable on the Red List, and another as near-threatened.

3. *Prosopeia*, however, is not the only genus-group name that has been used for the shining parrots since Peters (1937). Gregory & Dickinson (2012), drawing on Kashin (1978), found that Gray (1855, p. 85) had also designated *Coracopsis personata* (spelled '*Coracopsis? personatus*') as type species of the earlier *Pyrrhulopsis* Reichenbach, 1850. Gregory & Dickinson (2012) went on to show that *Pyrrhulopsis* had been used since 1899 by Sharpe (1900) and so could not be declared a nomen oblitum under Article 23.9.2 of the Code. Accordingly, they treated the senior objective synonym *Pyrrhulopsis* as valid for the shining parrots, and it was used to replace *Prosopeia* in the 4th edition of the influential *Howard & Moore Complete Checklist of the Birds of the World* (Dickinson & Remsen, 2013, p. 377 and footnote). These are the only usages of *Pyrrhulopsis* that we know of in printed literature since Peters (1937, p. 250 footnote) rejected it over 75 years ago. It leads us to suggest that resurrection of *Pyrrhulopsis* for the shining parrots breaches the purpose of Article 23.2 of the Code. Since Dickinson & Remsen (2013), however, *Pyrrhulopsis* has been adopted for the shining parrots on the websites Avibase (2013) and TiF Checklist (2013).

4. Reichenbach (1850, p. 82) made *Pyrrhulopsis* available by giving uncoloured diagrammatic figures of the head, foot and tail of an apparently small parrot (Article 12.2.7). No species were assigned. The figures show a generalized parrot of ambiguous identity; its cere is feathered although the two genera for which *Pyrrhulopsis* has subsequently been used have naked ceres. The first author that we have found to have assigned species to *Pyrrhulopsis* is Bonaparte (1854, p. 152) who listed six South American parrotlets which today are all placed in *Touit* G.R. Gray. They were (with their currently used synonyms in parentheses): 'Hueti Temm.' (*huetii* Temminck, 1830), 'Purpuratus Gm.' (*purpuratus* Gmelin, 1788), 'Melanopterus Gm.' (*batavicus* Boddaert, 1783), 'Porphyurus Sw.' (*purpuratus* Gmelin, 1788), 'Surdus Ill.' (*surdus* Kuhl, 1820), and 'Melanotus Licht.' (*melanonotus* Wied, 1820). No type species was designated. Gray (1855, p. 85) appears to have been the first to designate a type species, choosing *Coracopsis personata* G.R. Gray, the Masked Shining Parrot of Fiji (see paragraph 2 above). Bonaparte (1856, 1857) subsequently accepted Gray's interpretation, transferred *Pyrrhulopsis* to the shining parrots and introduced the

name *Urochroma* for the American parrotlets. *Urochroma* Bonaparte, 1856 is nevertheless junior to *Touit* G.R. Gray, 1855, as pointed out by Peters (1937, p. 208), and is of no further concern here.

5. What has evidently been overlooked is that *Coracopsis personata*, the type species subsequently designated for *Pyrrhulopsis* by Gray (1855), is not one of the species originally included in it by Bonaparte (1854) as required by Article 67.2.2 and so is ineligible for designation as the type species (Articles 69.1 and 69.2). It follows that *Pyrrhulopsis* cannot be applied to the shining parrots. This information is not new. It was worked out by Mathews (1917, p. 289) whose findings were footnoted in Peters' (1937, p. 250) well-known global checklist of birds over 75 years ago.

6. As a consequence, *Prosopeia* Bonaparte, 1854 is no longer threatened by *Pyrrhulopsis* Reichenbach, 1850. However, because of Bonaparte's (1854) initial action in assigning species of parrotlets to *Pyrrhulopsis*, *Touit* (Gray, 1855) is exposed instead (Article 67.2.2). To our knowledge, none of the originally included species of *Pyrrhulopsis* has ever been designated as its type, although current taxonomy places all of them in *Touit* (see Dickinson & Remsen, 2013, pp. 356–357). Subsequent type designation could, however, be performed at any time. *Pyrrhulopsis* is an ambiguous and little-used name that will cause ongoing disturbance and confusion if allowed to move from one genus of parrots in the southwest Pacific (*Prosopeia*) to replace another well-known in South America (*Touit*).

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the generic name *Pyrrhulopsis* Reichenbach, 1850 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the name *Touit* G.R. Gray, 1855 (gender: masculine), type species *Psittacus huetii* Temminck, 1830 by original designation;
- (3) to place on the Official List of Generic Names in Zoology the name *Prosopeia* Bonaparte, 1854 (gender: feminine), type species *Coracopsis personata* G.R. Gray, 1848 by monotypy;
- (4) to place on the Official List of Specific Names in Zoology the name *huetii* Temminck, 1830, as published in the binomen *Psittacus huetii*, specific name of the type species of *Touit* G.R. Gray, 1855;
- (5) to place on the Official List of Specific Names in Zoology the name *personata* G.R. Gray, 1848, as published in the binomen *Coracopsis personata*, specific name of the type species of *Prosopeia* Bonaparte, 1854;
- (6) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Pyrrhulopsis* Reichenbach, 1850, as suppressed in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comment on the proposed conservation of *Phoronis* Wright, 1856 (Phoronida) and *P. muelleri* Selys Longchamps, 1903

(Case 3626; see BZN 70: 157–159)

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The lasting survival of both *Actinotrocha* Müller, 1846 and *Phoronis* Wright, 1856 (plus *Phoronopsis* Gilchrist, 1907), as generic names for the horseshoe worms, is arguably the most extreme oddity in zoological nomenclature.

As reported by Nielsen in his application, it is known since 1866 that the tiny pelagic animals described as *Actinotrocha* metamorphose into benthic worms described as *Phoronis*; nevertheless, some authors have continued to use both names as valid, and thus to list in one and the same publication one and the same species under two different names. This has been marginally mentioned by Nielsen in the last paragraph of point 9 of the application, where he gives two online databases – ‘Encyclopedia of Life’ (EOL) and ‘World Register of Marine Species’ (WoRMS) – as examples, but this practice extends also to conventional academic papers (e.g. Bailey-Brock & Emig, 2000). Still worse, the larvae of *Phoronopsis* species have also been separately named as species of *Actinotrocha*, this eventually resulting in a nomenclatural marriage à trois, with the names of two taxonomically distinct genera coexisting with a single larval name (where it not for the fact that a species such as *Phoronis ovalis* lacks an actinotrocha larva and is thus known as *Ph. ovalis* throughout its life cycle).

Removing this unique survival of double, larva/adult nomenclature is thus overdue. This said, the reasons for conserving *Phoronis* Wright, 1856 have been clearly presented by Nielsen, whose application I definitely support.

Additional reference

Bailey-Brock, J.H., & Emig, C.C. 2000. Hawaiian Phoronida (Lophophorata) and their distribution in the Pacific region. *Pacific Science*, 54: 119–126.

Comment on the proposed conservation of *Neobisium* Chamberlin, 1930, NEOBISIOIDEA Chamberlin, 1930, NEOBISIIDAE Chamberlin, 1930 and NEOBISIINAE Chamberlin, 1930, (Arachnida, Pseudoscorpiones, Chelonethi) by designation of *Obisium muscorum* Leach, 1817 as the type species of *Obisium* Leach, 1814
(Case 3616; see BZN 70: 75–81)

Giulio Gardini

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With reference to the application by Mark Judson (Case 3616), I wish to express my full agreement with the request to designate *Obisium muscorum* as type species of *Obisium* Leach, 1814 and to conserve *Neobisium* and the related family-group names.

Comment on the proposed establishment of availability of *Balintus* d’Abrera, 2001, *Gulliveria* d’Abrera & Bálint, 2001, *Salazaria* d’Abrera & Bálint, 2001, *Megathecla* Robbins, 2002 and *Gullicaena* Bálint, 2002 (Insecta, Lepidoptera, LYCAENIDAE)
(Case 3458; see BZN **65**: 188–193; **66**: 271–272, 349–351; **68**: 206–211; **69**: 60–61, 281–283; **70**: 201)

Robert K. Robbins

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Gerardo Lamas

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This is a response to the comments of Labuschagne (BZN **70**: 201). Case 3458 is a simple matter of nomenclatural availability. Are the generic names proposed by d’Abrera and by d’Abrera & Bálint available under Article 13.1 of the Code? We presented evidence that the wording and characters in the original descriptions did not meet the requirements of this article. We then proposed a solution and gave the reasons why this was the most stable solution.

Labuschagne seems to think that Case 3458 is about priority. He writes that we advocated ‘dismissal of all or most of their new names based on some technicality, and replacement with younger “more acceptable” names.’ This comment is totally incorrect. The solution that we proposed makes available all generic names that were in use as valid genera at that time (in publications and on websites) including names proposed by d’Abrera and by d’Abrera & Bálint. The purpose of this solution was to maximize stability with current use. Labuschagne continues, ‘let priority take its course.’ We have not suggested otherwise. The priority of available names is a key element of the Code, but we reiterate, this is a case about availability, not priority.

Comment on the proposed precedence of *Maculinea* Van Eecke, 1915 over *Phengaris* Doherty, 1891 (Lepidoptera: LYCAENIDAE)

(Case 3508; see BZN **67**: 129–132, 245, 315–319; **68**: 292–293; **70**: 52–53)

Zsolt Bálint

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1. Case 3508 is very easy to solve. There is no nomenclatural problem, but rather an ideological one. Both names under dispute, the senior *Phengaris* and the junior *Maculinea*, are available names. The applicants have presumed either upon cladistic, conservationist, molecular, phylogenetic or taxonomic grounds, that the Commission possesses the plenary power simply to invalidate the nomenclaturally available name *Phengaris*, which is well defined and in wide use in basic taxonomic and faunistic monographs (e.g. Shirôzu, 1972, pp. 330–332 (text), figs. 362–363 (genitalia),

pp. 774–779 (imagines); Wang & Fan 2002, pp. 358–360 (text and keys), fig. 197 (genitalia), colour plate 24 figs 19–22 (imagines); Wang & Settele, 2010). Therefore the applicants have asked the Commission to suppress the senior name *Phengaris* as a synonym of the junior name *Maculinea*. In the case of a positive vote, *Phengaris* will then be placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

2. The applicants are of the opinion that if a name representing a certain clade turns out, in their working hypothesis, to be paraphyletic, that name is invalid and an older available name must be applied for another broader clade which reflects monophyly, and which solves (for them) the former conflicting paraphyly. Clearly this is not an objective nomenclatural problem at all. It is rather, the problem of reference to a particular a priori school or ideology of higher classification, i.e. how the taxa were, have been, or are to be defined. If the applicants follow their own cladistic principles they must also accept the consequences, which often necessitate severe and usually unstable changes in the nomenclature.

3. However, the applicants are of the (mistaken) opinion that classification, nomenclature and taxonomy are all working for the same basic cause, therefore they cannot help confusing the sole goal of the Commission, which is to preserve stability in nomenclature. It is not the brief of the Commission to rule on taxonomy or support any ideology. The role of the Commission is strictly determined by the rules laid down in the articles and paragraphs of the Code. Hence, nomenclature may not be confused with classification and taxonomy, nor (especially) with modern systematics. In the case of available names the Commission cannot do anything other than express the proprieties of nomenclature (*sensu stricto*). In this case both names are indeed available, and there are no nomenclatural grounds whatsoever for the suppression of *Phengaris*. If the Commission acts differently, it steps over the boundaries strictly determined by the Code, and is clearly acting *ultra vires*.

4. Although the applicants clearly believe that *Phengaris* is paraphyletic they contradict their own logic by adhering to the name *Maculinea*, which should be placed in subjective synonymy.

5. If the applicants do want to use *Maculinea* and also want to serve nomenclatural stability, they should repeat the approach of Fritz et al. and demonstrate that the results of those authors are indeed false; or they should work further on the objective taxonomy of the group and propose another solution to dissolve the hypothetical paraphyly. This will probably keep *Maculinea* in the sense as hitherto applied by many conservationists painstakingly working with the species involved, although only in the tiny western segment of the vast *Maculinea* range.

6. Hitherto the Transpalearctic *Maculinea* and the Sino-Himalayan *Phengaris* were both well-defined LYCAENIDAE genera representing the almost cosmopolitan Glauropsychina on the strictly scientific basis of biogeographical, ecological and morphological data and methods which covered them. Their identities have only recently been questioned by Fritz et al., because of the application of molecular methodology, based on the statistics of large-scale numbers and the use of expensive machinery, both being applied on the basis of several new kinds of ideologies (cladistics, phenetics, and phylogenetics). But these studies themselves are often highly controversial because most of the results originating from different samples have been predictably influenced by sampling errors and/or unwitting subjectivisms.

7. It would be regrettable if the name *Phengaris* was suppressed and listed amongst the unavailable names. Such an arbitrary act would certainly cause much confusion because, sooner rather than later, a still newer name would have to be proposed for this easily definable monophyletic lineage, even according to the most recent results (see Wang & Settele, 2010). It would be dangerous for the Commission to enter the trap of fashionable modernism and surrender its basic vocation of ruling the realm of objective nomenclature for the benefit of the international community of zoologists.

Additional references

- Shirôzu, T. 1972. *Butterflies of Formosa in colour*. 481 pp, 76 pls. Hoikusha Publishing, Osaka Japan.
- Wang, M. & Fan, X. 2002. *Butterflies Fauna Sinica: Lycaenidae*. 440 pp, 28 pls. Henan Science & Technology Publishing House, Zhengzhou, China.
- Wang, M. & Settele, J. 2010. Notes on and key to the genus *Phengaris* (s. str.) (Lepidoptera, Lycaenidae) from mainland China with description of a new species. *ZooKeys*, **48**: 21–28.

Comment on the proposed emendation of spelling of PHYCINAE Lyneborg, 1976 (Insecta, Diptera, THEREVIDAE) to PHYCUSINAE to remove homonymy with PHYCINAE Swainson, 1838 (Osteichthyes, Gadiformes, PHYCIDAE)
(Case 3605; see BZN 70: 22–29; 113)

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Although only a single comment has been published so far in response to our proposal aimed at removing the homonymy between PHYCINAE Lyneborg, 1976 and PHYCINAE Swainson, 1838, we feel it is necessary to address this comment now, particularly because it seeks to present what we consider an unnecessary and unjustified alternative to our proposal. Alonso-Zarazaga (BZN 70: 113) objects to our proposal, contending that we are trying to modify a correctly formed name (PHYCINAE Lyneborg, 1976, based on the type genus *Phycus* Walker, 1850) to conserve an incorrectly formed name (PHYCINAE Swainson, 1838, based on the type genus *Phycis* Walbaum, 1792), which he claims would create complications instead of solving them with the extant rules of the Code.

The reasoning of Alonso-Zarazaga rests on the genitive singular of the latinized name *Phycis*, which is *Phycidis*, and which by Article 29.3.1 of the Code would suggest Phycid- as the appropriately determined stem for a family-group name. However, Article 29.3.1.1 states that for stems so formed ending in ‘-id’, those letters may be elided before adding a family-group suffix. Thus, even by the ‘extant

rules of the Code’, if a family group name were to be established for a genus *Phycis* today (barring the homonymy), that family-group name could still use the stem Phyc–.

Even if Article 29.3.1.1 did not exist in the Code, Article 29.5 explicitly states that if the spelling of a family-group name was not formed in accordance with Article 29.3, that spelling ‘is to be maintained’ if it is in prevailing usage, regardless of whether its derivation from the name of the type genus was in accordance with the grammatical procedures of that Article. This is consistent with one of the objects of the Code being to promote stability (along with universality), as elucidated in the Preamble. Regarding PHYCINAE Swainson, the name is currently used as a family of Gadiformes (PHYCIDAE), has a long history of use as a valid family or subfamily (see Gaimari et al., BZN 70: 24), and is in prevailing usage.

By the standards of Article 29 in toto, there is no reason to consider the family-group name established by Swainson (1838) as having been incorrectly formed for the purposes of zoological nomenclature. Thus, it would be inappropriate to consider alternative proposals under the false premise of an incorrectly formed name, when it is clear that Lyneborg (1976) did propose a family-group name that was a junior homonym of an established, correctly formed family-group name in long prevailing usage, and the clear remedy to solving this homonymy is to apply Articles 29.6 and 55.3 of the Code.

By following the alternative proposal of Alonso-Zarazaga (2013), not only would the Commission need to use its plenary power to suspend application of the Principle of Priority for Swainson’s (1838) family-group name, but also to suspend application of Article 29.5 and the totality of Article 29.3. Effectively, that would represent the name of Swainson (1838) being ‘totally suppressed’ according to Article 81.2.1. That, in our opinion, would not serve stability, and would be far more disruptive as a solution to this problem, particularly when the remedy is clear and does not require any use of the Commission’s plenary power to suspend application of any extant rules of the Code.

Thus, we are opposed to the alternative proposals with amendments given by Alonso-Zarazaga and recommend that our proposal (Case 3605) be considered as originally presented. We acknowledge our unfortunate omission of the gender of *Phycis*, stating here that paragraph 9(2)(b) of our original proposal should begin: ‘*Phycis* Walbaum, 1792 (gender: feminine), type species. . .’

Comments on the proposed conservation of the specific name of *Anathyris monstrum* Khalfin, 1933 (currently *Anathyrella monstrum*; Brachiopoda, Athyridida)

(Case 3632; see BZN 70: 185–189)

(1) Arthur J. Boucot

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I have carefully read the application made by Drs. Modzalevskaya and Alvarez and heartily agree with their proposed conservation of *Anathyris monstrum*.

(2) Jisuo Jin

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London, ON N6A 3K7, Canada (e-mail: jjin@uwo.ca)*

I am in full support of the solutions proposed by these two authors, Alvarez & Modzalevskaya.

(3) L. Robin M. Cocks

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As a former ICZN Commissioner (1982–2002) I write to support Case 3632 made by Fernando Alvarez and Tatyana Modzalevskaya, both of whom I know and both of whom are established international experts on the Athyridida, to place *Anathyris monstrum* Khalfin on the Official List, with lectotype Tomsk MPIT N 20/28 – II. That is an important species for biostratigraphy, local correlation, and in understanding the evolution of the superfamily.

(4) Yves Candela

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Alvarez & Modzalevskaya presented a detailed and thorough application, in which they clarified the issues arising from Khalfin's original works (BZN 70: 185–189; Khalfin, 1933a, 1933b, 1946) and proposed clear resolutions.

In particular, they rightly argued that the 'varietal' names, '*rotunda*' and '*mucronata*', used by Khalfin, have been ignored by all authors working with this taxon since the 'varieties' fell within the range of infra-population variability of a single species, *A. monstrum*. Moreover, Modzalevskaya et al. (2013) proposed an emended diagnosis for *monstrum* that encompassed the range of variation of the species and served to distinguish it from its congeners. Alvarez & Modzalevskaya proposed a lectotype chosen from Khalfin's original fauna, as Khalfin never selected a type specimen for either of his species or 'varieties'.

Secondly, *A. monstrum* is a recognised index-species for the Solomino Horizon. The gradual change in the brachiopod assemblages from *Cyrtospirifer ussoffi* Khalfin and *A. monstrum* to *Cyrtospirifer tschernyschewi* Khalfin and *Mesoplica praelonga* (Sowerby) (both index-species for the Peshchorka Horizon), identifies the position of the Frasnian/Famennian boundary. It is consequently important to sort out any nomenclatural and taxonomical issues.

Therefore, I support the application to preserve the name of the fossil brachiopod *Anathyris monstrum* Khalfin, and to rule that the two 'varietal' names be made unavailable from their original descriptions.

(5) Howard R. Feldman

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Alvarez and Modzalevskaya have submitted a proposal for the conservation of the specific name *Anathyrella monstrum*. I support their proposal for the following reasons:

- (1) Khalfin (1933a) designated no holotype for *A. monstrum* or its two varieties and no subsequent author has proposed any lectotype or neotype. Khalfin thought about naming them as two different species but did not do so formally.
- (2) Varietal names were proposed for *A. monstrum* but the availability of the subspecific names that he proposed is not affected by their representing various life stages of an organism.
- (3) The names '*rotundata*' and '*mucronata*' have been ignored by subsequent authors as noted in paragraph 4 of their application.
- (4) There has been no designation of a name-bearing type for *A. monstrum*. Thus its type series consists of syntypes.
- (5) Alvarez & Modzalevskaya argue correctly, in my opinion, that the ambiguity in the three names *monstrum*, *rotundata* and *mucronata* can best be resolved by accepting their proposal (see paragraph 7 of their application).

(6) Renbin Zhan

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I am sure that, nowadays, there are very few people in our palaeontological circle who are willing to spend so much time to clarify such a confusing situation that is very common in Chinese history of palaeontological study. In the 1970s and early 1980s, more than 10 palaeontological atlases had been published in China and in Chinese, within which many, many new brachiopod subspecies and species were named and simply described without designating type specimens (far away from standardization), let alone the holotype and paratypes. Of those figured specimens (although most of the published pictures are of very poor quality), many are of old taxa already published outside China and some of the so-called new species are actually population variation, and the same situation is true of many new genera and families. In a word, the works published in those Chinese atlases need to be revised urgently. Unfortunately, many of the illustrated specimens in those atlases are lost for various reasons. In this case we have to ask the relevant persons (most of whom are in their 70s and 80s) for locality information, then we must collect topotypes ourselves in order to revise those taxa. So, it is really lucky for the authors (Prof. Alvarez and Prof. Modzalevskaya) to have found some of those type specimens of *Anathyris monstrum* Khalfin, 1933. And it is absolutely necessary and very important to sort out the confusing problems raised by the original author, Khalfin, in 1933. Another thing astonishing me is that the authors of this Case found and pointed out the typesetting error in the original publication. Such a situation is also very common in Chinese publications of the 1970s and 1980s particularly, which rarely anybody cares about; for example, a publication of my own, Zhan & Rong (1995) in which we named a new genus *Eosotrophina*. Unfortunately I cited this genus later in another publication (Zhan & Cocks, 1998) as *Eostrophina*. Learning and studying Lower Palaeozoic brachiopods for more than 20 years I have found that population

variation is very common and exists almost everywhere, a fact we should keep in mind when we are doing brachiopod systematic study. So, I quite agree with the authors' opinion in proposing conservation of the specific name *Anathyris monstrum* Khalfin, 1933 (currently *Anathyrella monstrum*) and ruling out the two unused 'varietal' names which were actually unavailable from their original descriptions in Khalfin (1933).

Comment on *Grallaria fenwickorum* Barrera & Bartels, 2010 (Aves, GRALLARIIDAE): proposed replacement of an indeterminate holotype by a neotype
(Case 3623; see BZN 70: 99–102)

Fundación ProAves de Colombia

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Fundación ProAves de Colombia (here, 'ProAves') is one of Colombia's leading conservation NGOs. Since its establishment in 1998, ProAves has grown to manage 24 nature reserves, most of which are registered as part of the country's national system of protection areas. Its reserves protect over 1,200 bird species including over 80% of Colombia's threatened endemic bird species as well as countless species in other taxonomic groups. ProAves also supports a research programme, including population monitoring, explorations in its reserves and expeditions aimed at finding potential localities for threatened species or new protected areas.

The recently described antpitta to which Case 3623 relates was discovered by a former ProAves employee, Diego Carantón, in a ProAves reserve, during the course of his employment. The name *fenwickorum* was made available in a conservation science journal published by ProAves, *Conservación Colombiana*. The name honours a family who have done much to support bird conservation in Colombia, the Fenwicks. George Fenwick is the president of the American Bird Conservancy (ABC). He and his family, with personal funds, directly supported land purchases by ProAves to establish Reserva Natural de las Aves Colibri del Sol (Dusky Starfrontlet Bird Nature Reserve), which is the sole protected area for the new antpitta, as well as countless other conservation initiatives. The Fenwicks and ABC also gave grants to ProAves to fund conservation management at the reserve and fieldwork research which resulted in the new antpitta being found. No conditions were attached to any ABC grant around the naming of the new species nor were any consideration paid to ProAves for this. Supposed quotes of a ProAves employee in Regalado (2010) suggesting otherwise have been denied by the individual in question and do not reflect the facts. ProAves simply wished to honour valued donors and conservationists, without whose support the new antpitta would not have been found or protected. The name *G. urraoensis* Carantón & Certuche, 2010 was later described for the same species and first authored by the same ProAves' former employee, resulting in considerable controversy.

ProAves welcomes all scientists who wish to study animals, plants or ecology in its reserves, provided that they comply with applicable policies for scientific visitors, including on the collection of specimens. The description of *Grallaria fenwickorum*

was based on a specimen that was sampled, photographed and released. ProAves is not opposed to the collection of specimens per se and has indeed sanctioned this in the past in specific instances on its reserves. However, it does insist that any proposals for collecting be discussed in advance with its administration, threatened populations are not imperilled, the necessary research or collecting permits are in place and the terms of those permits are fully complied with. In connection with the description of the new antpitta to which this case relates, Carantón did not take any of these steps, resulting in a great controversy arising within Colombian ornithology and one of the largest fines ever imposed for illegal collecting.

Perhaps due to Peterson's (BZN 70: 99–102) lack of close familiarity with the background, Case 3623 includes a number of factual inaccuracies and omits material information. ProAves wishes that the Commissioners are fully informed as to the facts underlying this situation. ProAves has therefore produced this response, which has been approved by its Executive board (Junta directiva) and reviewed by its advisory council, the editors of *Conservación Colombiana*, the American Bird Conservancy and the authors of Barrera et al. (2010). ProAves appreciates and in principle supports Peterson's concern to establish a neotype for the name *Grallaria fenwickorum* Barrera & Bartels, 2010. However, the Commission should also fully consider other alternatives for dealing with this situation. The need for a neotype in this case is not clear-cut and is overstated by Peterson (BZN 70: 99–102). As a result, the Commission should consider simply adding the name *fenwickorum* to the Official List, with or without a note that it is not invalid by virtue of the holotype being based on samples of an individual that was photographed and released. Such that a line can be drawn finally under the issues raised by this case, other alternatives should be considered by the Commission including suppressing *fenwickorum*.

In this response, attention is drawn to some errors and omissions in Case 3623 and we attempt to set out a summary of the facts resulting in two descriptions of the same antpitta being published so close in time, such that the Commission is aware of the background. Various alternative proposals are also raised, which the Commission is here asked to consider as part of Case 3623.

Errors and omissions in Case 3623

1. Peterson (BZN 70: 99–102) makes several incorrect statements about the samples taken by Barrera et al. (2010) in order to support his proposition that 'the actual holotype (i.e. the parts of the animal that are candidates to constitute the holotype according to Article 72.5.6) is not sufficient to distinguish this individual from other *Grallaria* species'. He asserted that: 'no feathers were drawn from the back of the individual and the only breast feathers were down feathers, rather than the contour feathers that might conceivably have been diagnostic' and criticised the 'poor selection' of the sample. González et al. (2011) is an important paper, discussing the *urraoensis* and *fenwickorum* descriptions in detail that was not cited by Peterson. The latter authors considered the sampled feathers forming the *fenwickorum* type to include elements allowing diagnosis. Contra Peterson (BZN 70: 100), Barrera et al. (2010) did not restrict diagnosis to the 'back' and 'breast'. They referred in their diagnosis from *G. milleri* to: 'the complete lack of a brown breast band (with the breast instead being uniform slate grey) and lighter brown dorsal plumage' as well as vocalizations. The 'dorsal' part of a bird is not restricted to the

back but is a term used in contrast to the ventral part. It includes feathers of the upper surface of the wing coverts, upper surface of flight feathers and upper tail surface. Sampled feathers from this region were sampled and labelled (see plate 1, 'outermost secondary', 'P2 primary' and 'R4 rectrix') using larger feathers. In addition, some of the smaller, unlabelled feathers in Plate 1 of Barrera et al. (2010) – i.e. the two feathers between 'P2 primary'/R4 rectrix' to the left side and 'breast' to the right; the feather immediately to the left of 'R4 rectrix' and that immediately below 'P2 primary') – are clearly taken from the wing coverts, back and mantle and are contour feathers, showing brownish coloration distally. In any event, concentrating on back plumage is misleading in that the strongest difference in the shade of brown of the upperparts between *G. fenwickorum* and *G. milleri* are in the flight feathers. As for supposed 'down feathers' on the underparts, *G. fenwickorum* has a grey belly, giving feathers a down-like appearance. Peterson also ignores the photographed individual as part of the holotype. The photographs of the released individual on the cover of the journal (and other online photographs referred to in the description which are now published in González et al., 2011) show the diagnostic breast coloration well facilitating an easy identification of the holotype of this morphologically distinctive species from other antpittas.

2. Barrera et al. (2010) stated that 'Should the status of these specimens become resolved, then the authors would encourage, or be willing, to designate the adult male as the neotype.' ProAves was an author of this paper and stands by this position. Now that the situation with these specimens is resolved, it would be better for the name *fenwickorum* to have a more complete holotype and to be placed into indisputably objective synonymy with the name *urraoensis*. Geo-referencing of the localities mentioned in the description shows the types for the two names to have been collected within 350 meters of one another in the same nature reserve (González et al., 2011). Designation of a neotype has not been taken forwards because under Article 75 of the Code, this is only possible (without an act of the Commission) 'when no name-bearing type specimen (i.e. holotype, lectotype, syntype or prior neotype) is believed to be extant' and in a case of 'exceptional need'. There are good arguments that these conditions are not met for *G. fenwickorum* because the feather samples are still extant and McMullan et al. (2010, 2011), González et al. (2011), Martens & Bahr (2012), International Union for Conservation of Nature (IUCN) (2013), BirdLife International (2013) and other authors have had no difficulties in considering the name to be sufficiently precise.

3. Peterson (BZN 70: 100) asserts that 'the catalog number indicated in the description ('tissue collection No. 699') appears to have originated with the authors of the description, as the Universidad de Pamplona has neither a cataloguing system, nor any organized systematic collections (Diego J. Lizcano, Universidad de Pamplona, pers. comm. 25 March 2011)'. As explained by González et al. (2011), the catalogue number cited in Barrera et al. (2010) was based on an e-mail communication to an employee of ProAves by D.J. Lizcano on 5 May 2010. No. 699 was, based on Lizcano's written communication, then the next available serial number in the Pamplona specimen collection in Norte de Santander, Colombia. Telephone conversations between Lizcano and the ProAves employee concerning the deposit of the samples took place at the time of these emails. Several factually incorrect criticisms have been written recently of the

manner in which the *G. fenwickorum* feather samples were deposited at Pamplona (e.g. Remsen et al., 2013). According to Lizcano's (2011) accounts, which can at best be considered only a partial description of relevant events, he had not registered the specimens at the time the *G. fenwickorum* description was published and refrained from doing so after the controversy concerning the two rival descriptions erupted. However, allegations that ProAves sent 'feathers with a phony catalog number to an unsuspecting person' (J.V. Remsen in Remsen et al., 2013) are demonstrably false and, in the words of Peterson, are stories which 'originate with the authors'. The *G. fenwickorum* description included a museum catalogue number based on information supplied by someone working at the relevant institution who knew he was going to receive the materials. Lizcano (2011) claims not to have known in advance of the 'importance' of the samples, which ProAves disputes, but third parties incorrectly took his delphic account further. The *G. fenwickorum* samples were held for some time in abeyance at Instituto Alexander von Humboldt (IAVH), the Colombian governmental research institution, because Lizcano sent them the samples. We understand IAVH may now have been returned the specimens to Universidad de Pamplona. ProAves will do what it can to help find a permanent home for them. The Code requires only that the authors state their intention to deposit specimens, and Barrera et al. (2010) went beyond this in naming not only the museum but what they thought, based on communications with an employee of the relevant institution, was to be the specimen number.

4. Peterson (BZN 70: 101) states that two full specimens used in the descriptions: 'are already deposited and catalogued in the ornithological collections of the Instituto de Ciencias Naturales, Universidad Nacional de Colombia (ICN-MHN), Bogotá, Colombia—the proposed neotype is ICN-MHN catalogue number 36689, and the paratype is ICN-MHN catalogue number 36688'. This is an incomplete summary. As noted in Fundación ProAves de Colombia (2011), the specimens in question were ordered to be confiscated from the ICN-MHN collection by CorpoUrabá, the relevant collection and investigation permit granting authority, due to breaches of the requirements of the relevant permit by Carantón. ICN-MHN is the museum that received these specimens from Carantón but it did not issue the required specimen deposit certificate to CorpoUrabá or ProAves. The specimens were ordered to be sent to IAVH by CorpoUrabá. ProAves understands that IAVH has now returned the specimens to ICN-MHN, making the catalogue numbers cited by Peterson (2013) presumably now again available.

5. Peterson (BZN 70: 99) asserts that the papers describing *G. fenwickorum* and *G. urraoensis* were published 37 days apart. Although PDFs of the *urraoensis* description appeared online and in email communications among some ornithologists on 24 June 2010, neither the description nor any accompanying online materials included the required statement under Article 8.6 of the Code for electronic publications. An Article 8.6 statement was added to the *Ornitología Colombiana* part of the Asociación Colombiana de Ornitología website below the Cadena & Stiles (2010) editorial (but not in the actual PDF of the description) at some point in late June or early July 2010. González et al. (2011) considered that the date of publication of the *G. urraoensis* description might not have been until sometime in March or April 2011, almost one year after the *G. fenwickorum* description was published, when hard copies of the

'Mayo 2010' edition of *Ornitología Colombiana* were deposited in various libraries. In contrast, *Conservación Colombiana* is and has always been a print journal and the date specified on the face of volume 13 is corroborated by other evidence including photographs of hard copies at the aforementioned ProAves donor event and receipts from libraries (González et al., 2011).

6. Peterson (BZN 70: 100) considers the reference to 'Article 74.1.4' of the Code in the description as 'probably an error for Article 73.1.4'. There should be no ambiguity as to the corrected reference (which is indeed to 73.1.4) because a published corrigendum was issued on the *Conservación Colombiana* part of the ProAves website in PDF form on 21 May 2010, just three days after publication of the relevant edition of the journal. This same corrigendum was also included in print in *Conservación Colombiana 15*. This corrigendum was also ignored by Remsen et al. (2013), despite the proposal's author being made aware of its existence. Peterson (2013) seems based on the latter publication.

7. Peterson (BZN 70: 99) considers the genus *Grallaria* and species *G. fenwickorum* to be in the family FORMICARIIDAE, but they are generally today treated as part of the family GRALLARIIDAE (see e.g. Irestedt et al., 2002; Moyle et al., 2009; McMullan et al., 2010; Remsen et al., 2013).

8. Peterson (BZN 70: 99) attributes authorship of the name *G. fenwickorum* to Barrera et al., 2010, but the correct citation of the name is *G. fenwickorum* Barrera & Bartels, 2010. ProAves was an author of the type description paper but is not an author of the name *G. fenwickorum*, as is stated, and for the reasons set out, on page 14 of Barrera et al. (2010).

9. Peterson (BZN 70: 99) cites Cadena & Stiles (2010) and Regalado's (2011) pieces on the controversies relating to the discovery. The other side of the story is set out in Comité Editorial de Conservación Colombiana (2010) and Fundación ProAves de Colombia (2011). The accounts of Cadena (2011), Carantón (2011), Patten (2011), Lizcano (2011), González et al. (2011) and Remsen et al. (2013) also contain relevant background.

Background

Accounts of events are disputed and in some instances suffused with opinion. ProAves has not responded to the latest series of allegations from the other side (Cadena, 2011; Carantón, 2011; Lizcano, 2011; Patten, 2011 and Remsen et al., 2013), which were posted virtually contemporaneously with the circulation of printed editions of the *G. urraoensis* description in March 2011. This silence is not because ProAves agrees with any of these allegations, but was to minimise unnecessary further controversies. The inconsistencies between these later accounts and those in Comité Editorial de Conservación Colombiana (2010) and ProAves (2011) are abundantly clear.

The description of *G. fenwickorum* was published in volume 13 of *Conservación Colombiana*, a conservation science journal published by ProAves. The finding of this new species was based on fieldwork and conservation initiatives supported and financed by ProAves and the American Bird Conservancy (Barrera et al., 2010). The description was based on a holotype constituted by samples of a live individual which was sampled, photographed, released and illustrated in the description. The feather samples (and, to the extent Article 73.1.4 applies, the released individual) were

designated as the *G. fenwickorum* holotype despite two ‘full’ specimens being available for study. These two specimens were illustrated and discussed in the *G. fenwickorum* paper. The male specimen was later designated as the holotype of *G. urraoensis* by Carantón & Certuche (2010). The collection of these specimens by Carantón was associated with breaches of the terms of collecting permits. Carantón withheld details of his findings from ProAves and appropriate government agencies (in breach of permit requirements). Instead, he worked with third parties, including Katherine Certuche of Universidad de Tolima and Dr. C. Daniel Cadena of Universidad de los Andes, on the description. In taking the steps outlined above, Carantón committed numerous breaches of his contract of employment, as detailed in Comité Editorial de Conservación Colombiana (2010) and Fundación ProAves de Colombia (2011).

One of the specimens collected by Carantón was captured alive in a mist-net and then actively collected (sacrificed) by him. It has been claimed that the other specimen died after becoming tangled in a closed mist-net (Carantón & Certuche, 2010). On 6 December 2010, CorpoUrabá, the regional environmental authority with jurisdiction for the region and consequently the reserve, published its findings in resolution N° 200–03–20–04–1722–2010 with a technical report (1213 of 2 December 2010) based on an analysis of evidence provided by both ProAves and Diego Carantón. Carantón filed an appeal against the decision, so CorpoUrabá undertook a second evaluation of all the evidence. The second and final resolution N° 200–03–20–07–0157–2011 of 4 March 2011 confirmed the first resolution, with the government authority making the following findings, among others:

- Diego Carantón, as a ProAves researcher, collected two specimens of the new species without consulting ProAves.
- Diego Carantón did not notify ProAves or CorpoUrabá of the collection of these specimens. This was in breach of the terms of the research permit granted to ProAves.
- Diego Carantón breached ProAves’ internal regulations for research in the reserve.
- Any natural or legal person seeking to carry out biological scientific research involving the capture, collection, fishing, hunting, manipulation or mobilization of biological resources requires a research permit according to Decree 309 of 2000. Moreover, Article 8 of this decree obliges researchers to submit progress reports and list specimens or samples collected during that period to the regional corporation, in this case CorpoUrabá.
- Environmental regulations, particularly Article 8 of Decree 309 of 2000, were breached, as CorpoUrabá was not informed about the collection of two specimens of the new *Grallaria*.
- CorpoUrabá held Diego Carantón and ProAves (as his employer) jointly responsible for this infraction.
- CorpoUrabá imposed a monetary fine of 20,600,000 Colombian pesos (approx. USD 10,800) jointly on Diego Carantón and ProAves.
- The Instituto de Ciencias Naturales, Universidad Nacional de Colombia, was ordered to transfer the two *Grallaria* specimens that were collected by Diego Carantón to the collection of Instituto Alexander von Humboldt (a governmental specimen collection).

ProAves later paid the relevant fine, diverting vital funds from its conservation programmes.

After ProAves became aware of the discovery and collection, various discussions took place between Cadena, Carantón and members of ProAves as to the authorship, name and journal for the description, among other things. Cadena made many communications on behalf of the Carantón team. These discussions broke down for various reasons, but including over the species' proposed name. The approval process for submitted and final versions of the manuscript was also unresolved during mid-2009, and has been emphasised by Carantón (2011). Carantón and Certuche submitted their description to the journal *Condor* in September 2009 whilst ProAves was still awaiting a response to a proposal for collaboration. The manuscript was rejected in December 2009 when the journal's editor heard of the dispute with ProAves from a peer reviewer connected with ProAves. The *Condor* editor's rejection letter recommended that Carantón forego attempts to publish his description until the conflict with ProAves was resolved (Patten, 2011). The editor separately thanked the reviewer for drawing his attention to the dispute.

It was later alleged by Patten (2011) that ProAves manoeuvred 'to trick the *Condor* out of considering [Carantón's] manuscript so that ProAves could publish its own type description'. This and other similar opinions about ProAves' conduct (e.g. Carantón, 2011) are incorrect. There was no plan of ProAves to produce any rival description during the time the manuscript was in review. ProAves' fieldwork did not take place until after rejection by *Condor* of Carantón & Certuche's manuscript and after further contact was made with Carantón in attempt to resolve the dispute (Fundación ProAves de Colombia, 2011). Despite the recommendations of *Condor*'s editor, Carantón refused to engage in further discussions with ProAves. Two separate manuscripts describing the new species were then developed, in the case of the ProAves manuscript independently from January 2010. Carantón submitted his manuscript to *Ornitología Colombiana* and it was peer-reviewed by ornithologists cited in the description (Cadena & Stiles, 2010). Barrera et al.'s (2010) manuscript was received by *Conservación Colombiana* and it was peer reviewed by ornithologists cited in the description prior to publication. The two descriptions are quite different from one another and there have been no allegations that any contents of either paper were copied.

The description of *G. fenwickorum* appeared some 19 months after it is understood that Carantón found the new species, a period exceeding the 1 year minimum required by the ICZN Code of Ethics. Cadena & Stiles (2010) assert that any delays beyond 12 months were due to ProAves' activities in encouraging rejection of the *Condor* manuscript, but this is exaggerated. Any delays involving the Carantón manuscript and ProAves ultimately stem from Carantón not informing ProAves in a timely fashion of his discovery and the discussions that then ensued between the parties, which clearly had as their aim an agreement on collaboration, not the opposite. Also, the Carantón paper was in review at *Condor* for just under three of these nineteen months, a relatively rapid peer review process for a paper of this nature. Finally, those who seek to publish work based on fieldwork involving illegal collecting, breaches of contract and misuse of intellectual property should expect journals to be cautious about publishing their work.

The Dusky Starfrontlet reserve's new director (Barrera) and others carried out fieldwork in January 2010 to collect feather samples which were to become the basis for the *G. fenwickorum* holotype. In addition, a researcher supported by ProAves (Bartels) included results of his investigations into ecology and population sizes in the paper. CorpoUrabá were kept fully informed of this fieldwork and sampling. The samples were considered necessary because Carantón's specimens were at the time under threat of confiscation by the authorities and collection of a third individual of this critically endangered species would be unethical. The publication date for *Conservación Colombiana* 13 was scheduled such that the new species could be announced and journal presented at an important event involving ProAves, the Fenwicks and others at the Colombian embassy in the United States of America in mid-May 2010. As a result, 18 May 2010 became the publication date for the *G. fenwickorum* description, as is stated on the face of the journal. It was only after this date that ProAves heard rumours that Carantón and Certuche had not heeded the Condor editor's advice, but instead submitted their description to another journal. The information made available to ProAves was that the description was to be published in *Boletín Sociedad Antioqueña de Ornitología (Boletín SAO)*. ProAves communicated with the association which publishes that journal (SAO) requesting various assurances. SAO denied that they had received any manuscript of the nature described. The PDF of the *G. urraoensis* description then appeared online in *Ornitología Colombiana*, the journal of another organisation called Asociación Colombiana de Ornitología (ACO) on 24 June 2010.

The journal, in which the *G. fenwickorum* description appeared, *Conservación Colombiana*, has been labelled by some as a 'magazine' (Patten, 2011), 'divulgative organ' or 'propaganda' (Cadena & Stiles, 2010) of ProAves, but it is a physically published scientific journal with peer review. It has Colombian and international authorship not restricted to the foundation. The journal does not include advertisements, popular features or other materials associated with magazines. Eighteen editions of the journal have now been published, including papers on distribution modelling of threatened species, taxonomy, new bird records, assessments of conservation value of particular sites or regions and conservation plans or assessments for threatened species. Those interested in the journal are invited to review through its website, accessible from www.proaves.org, and papers published in it. A separate communication, *Aleteo*, is ProAves' newsletter. Some ornithologists have perpetuated confusion between a short announcement that was published in *Aleteo* about the new species and the scientific description published in *Conservación Colombiana*.

There is now considerable nomenclatural instability. Most users of South American bird names generally follow the American Ornithologists' Union's South American Classification Committee – AOU-SACC (Remsen et al., 2013), the most influential taxonomic committee relevant to neotropical birds, whose work ProAves generally supports and follows in its publications. Remsen et al. (2013) have an open proposal process which resulted in adoption of '*G. urraoensis* Urrao Antpitta' for this species. ProAves chose not to participate in the process due to the bias and irreconcilable conflicts of interest at this committee in connection with this particular issue. The ten AOU-SACC members include two of the editors of the *G. urraoensis* description. One of these editors reversed an earlier decision to abstain in the process,

in order to secure the final vote needed for *G. urraoensis* to be adopted by the committee (due to contrary votes and abstentions of some other members). Remsen et al. (2013)'s proposal is unbalanced in advocating adoption of *G. urraoensis* and their proceedings contain incendiary commentaries about ProAves and multiple factual errors (as discussed in González et al., 2011). A linked committee of the AOU, its North American Classification Committee, recently considered and narrowly rejected a proposal to unilaterally amend the ICZN Code for AOU purposes so as generally to disallow descriptions not based on full specimens (AOU Committee on Classification and Nomenclature (North & Middle America), 2011), a step widely perceived as an attempt to pre-empt the outcome of a likely ICZN Case on *G. fenwickorum*. Various online checklists used by birders such as the International Ornithological Conference list (Gill & Donkser, 2013), Clements et al. (2013) and e-bird.org generally follow AOU-SACC and so also use *G. urraoensis*, as did a recent book on Colombian ecotourism (Múnera et al., 2010).

Other authors, many of whom generally follow Remsen et al. (2013), have unusually chosen to deviate in this instance. The Field Guide to the Birds of Colombia (McMullan et al., 2010, 2011), published by ProAves, the English version of which went to press before the *urraoensis* description and which generally follows AOU-SACC, uses *G. fenwickorum*. A recent publication on nomenclatural issues surrounding these rival descriptions in *Conservación Colombiana* concluded that the name *fenwickorum* is valid and has priority (Gonzalez et al., 2011). Several independent authorities have also used *G. fenwickorum*. These include the world's leading institutions on bird and animal threat status (BirdLife International 2013, IUCN, 2013, who assess *G. fenwickorum* as Critically Endangered). This is despite Birdlife Taxonomic Working Group (BTWG)'s guidelines stating that they use 'Regional sources . . . for the New World . . . except in those cases where the BTWG feels that judgements involve criteria and result in arrangements that are inconsistent with bird lists elsewhere. The AOU (American Ornithologists' Union) and SACC (South American Checklist Committee) checklists are selected . . .'. An independent annual nomenclature review of newly described avian names concluded that *G. fenwickorum* was valid and had priority (Martens & Bahr, 2012). Handbook of the Birds of the World, a comprehensive and widely-cited multi-volume book series (del Hoyo et al., 2013) uses *G. fenwickorum*. *Neotropical Birding* is a journal whose instructions for authors require that 'Names should where possible follow those of the South American Checklist Committee' but one article used 'Antioquia/Urrao Antpitta *G. fenwickorum/urraoensis*' (Swash & Symes, 2013) and another published prior to the conclusion of AOU-SACC deliberations used both Fenwick's Antpitta *G. fenwickorum* and Urrao Antpitta *G. urraoensis* (Woods et al., 2011). Van Loon (2011)'s review of new bird descriptions sided with Carantón's team on the behavioural aspects but considered that *fenwickorum* 'was published first . . . [and] that name will, unfortunately, have priority over *G. urraoensis*'. A recent book on threatened birds uses 'Antioquia (or Urrao) Antpitta *Grallaria fenwickorum-urraoensis*' (Hirschfeld et al., 2013).

The use of two alternative names instead of one in some publications, and a pattern of more or less equally widespread usage of each of the two names in instances where one name is used alone, demonstrates the confusion caused by such nomenclatural problems and the need for a ruling on this matter.

Conclusions and additional proposals

It has been drawn to our attention that Dubois & Nemésio (2007), Nemésio (2009) and others consider that descriptions based on samples and not full specimens do not even qualify as *nomina dubia* but are invalid for alleged failure to satisfy particular interpretations of Articles 16.4 and 72.10 of the Code. The Commission should consider the possibility of confirming that the name *fenwickorum* is not invalid by reason of the holotype being based on samples and a photographed individual and placing it on the Official List with an endorsement to that effect. Such a treatment would be consistent with publications of members of the ICZN secretariat (Wakeham-Dawson et al., 2002; Polaszek et al., 2005; Notton, 2011), and would promote nomenclatural stability.

The Commission should also consider suppressing *fenwickorum* so as to allow the name *urraoensis* to stand. Only if all possibilities are fully considered will it be possible to bring to a conclusion an issue which continues to cast a dark cloud over ornithology and bird conservation in Colombia. Some members of the Colombian and U.S. ornithological communities support Carantón's position and publication. They feel that ProAves acted wrongly in publishing a rival description in which the original discoverer of the new species was not an author. They have cited Carantón's 'moral rights' being violated. ProAves has great sympathy with the perspective that discoverers of new species should be invited to be authors as an abstract principle. However, based on legal advice received by ProAves, there was no violation of Carantón's 'moral rights' because these do not confer rights to authorship, only rights to recognition of a discovery (as discussed in Fundación ProAves de Colombia, 2011). Carantón's contributions to the discovery of *G. fenwickorum* were fully cited in the description and accompanying editorial (Comité Editorial de Conservación Colombiana, 2010) so were fully respected. It is commonplace for collectors who make no contribution to a manuscript not to be authors, although it is ProAves' position that (as happened here) all steps should be taken to involve those who have made a material contribution in a description. As discussed in Comité Editorial de Conservación Colombiana (2010) and Fundación ProAves de Colombia (2011), the foundation made many attempts to come to an agreement with Carantón's team with a view to collaboration. At the end of this process, ProAves concluded that Carantón's secretive behaviour in breach of his contract of employment and the terms of the collecting permit (which resulted in a serious fine for the foundation) and lack of willingness to come to a reasonable arrangement once the situation was uncovered made any other expectations unwarranted. ProAves has never asserted intellectual property rights over the discovery or rights to name, given that it understands legal rights do not subsist in such matters. However, ProAves does hold all the copyright to written works produced by its employees in the course of their employment, as is standard in the non-academic sector, and had contractual rights to receive information about Carantón's research findings. Moreover, it is unclear that any informal moral claim or legitimate expectation of Carantón should be so wide-ranging as to usurp any informal moral claim of ProAves to have at least some input into how the description should be conducted, which through hiding his finding and proposed publications from the foundation, Carantón and his team sought to deny.

Ultimately, neither of the *fenwickorum* or *urraoensis* descriptions deals adequately with the legitimate expectations of all parties.

Reversal of ‘precedence’ under Article 23.9 is not possible because the senior name *fenwickorum* has been used after 1899 in multiple publications. Under Article 23A, a person may ask the Commission to suppress a senior name if this is ‘desirable’. ProAves does not consider suppression of *fenwickorum* a desirable outcome compared to any of the below alternatives 1–3. It should instead be questioned whether the publication, usage and attempted establishment of a junior name for a species that had already been described, due to the supposed ‘scientific value’ (Cadena & Stiles 2000) of describing a competing name or based on mis-statements of verifiable facts and stretched interpretations of the Code (Remsen et al., 2013) ought to be ratified. Cadena (2011) stated that he withdrew from proposed authorship of the Carantón & Certuche manuscript because he ‘did not want to participate in a homage to Fenwick’ [translation] – doubtless a result of the controversies generated by American Bird Conservancy (2007a, b) and Remsen & Stiles (2007). This statement illustrates the personal preferences for epithets among some persons, which have the potential to result in biases in approaches to nomenclature.

The Commission should also consider the harmful precedent that could be set by allowing the name *urraoensis* to stand. This would encourage rival authors to publish new and different names in instances where they see minor errors or perceived shortcomings in the context of the Code. Those concerned by such issues should be encouraged to bring Commission cases to let names stand or to redescribe animals using names that are already in usage, rather than to establish new competing names. Neither the existence of a later description, nor the suggestion that a person honoured in a name may have offended senior members of the ornithological or museum communities in the past, should be relevant considerations in determining the validity of a name. Moreover, if *fenwickorum* were to be suppressed, this would result in usage of a name based on illegal collecting activities, taken without the relevant landowner’s permission. Such practices breach standards for the collection of bird specimens recommended by the main organisation ‘pushing’ usage of *urraoensis*, the American Ornithologists’ Union (AOU 2009), as well as the ethics of bird collecting, as published in one of its journals (Winker et al., 2010). Consideration by the Commission of a proposal to suppress *fenwickorum* is however more desirable than that the issue be ignored. Considering all options as part of Case 3623 would promote nomenclatural stability because the current situation with these two names threatens stability and universality and causes confusion (Article 23.9.3).

Finally, it should be noted that Barrera et al. (2010) are by no means the first to publish an animal description under the current edition of the Code based on a holotype consisting of samples of a live individual that was photographed and released. The case of *G. fenwickorum* is therefore factually indistinguishable from that of various other names listed below. These are *Laniarius liberatus* Smith, Arctander, Fjeldså & Amir, 1991 (Aves, MALACONOTIDAE), *Avahi cleesei* Thalman & Geissmann, 2005 (Mammalia, Lemuriformes), *Liocichla bugunorum* Athreya, 2006 (Aves, LEIOTHRICHIDAE) and *Conolophus marthae* Gentile & Snell, 2009 (Squamata, IGUANIDAE). That some of these names have been considered junior synonyms of other names (e.g. *Laniarius liberatus*: Nguembock et al., 2008) does not affect the

need for clarity and universality. Descriptions based only on photography and not samples, such as those of *Forpus flavicollis* Bertagnolio & Racheli, 2010 or *Lophocebus kipungi* Ehardt, Butynski, Jones & Davenport, 2005, raise additional nomenclatural issues.

In conclusion, ProAves therefore proposes that the following alternative steps be considered by the Commission. Alternative 1 is ProAves' preferred approach (which is modified from Case 3623), followed by Alternative 2. ProAves does not support Alternative 3 but would respect such an outcome were it to be adopted.

Alternative proposals 1 (modified and corrected from the proposal of Case 3623):

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all type fixations for the nominal species *fenwickorum* Barrera & Bartels, 2010, as published in the binomen *Grallaria fenwickorum*, and to designate specimen ICN-MHN 36689 at the Instituto de Ciencias Naturales, Universidad Nacional de Colombia (ICN-MHN), Bogotá, Colombia, as the neotype;
- (2) to place on the Official List of Specific Names in Zoology the name *fenwickorum* Barrera & Bartels, 2010, as published in the binomen *G. fenwickorum* and as defined by the neotype designated in (1) above.

Alternative proposals 2:

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its specific powers to confirm that the name *fenwickorum* Barrera & Bartels, 2010, as published in the binomen *Grallaria fenwickorum*, is not invalid by reason of being based on a holotype consisting of samples of a photographed individual that was released;
- (2) to place on Official List of Specific Names in Zoology the name *fenwickorum* Barrera & Bartels, 2010, as published in the binomen *G. fenwickorum*, with the endorsement that the name is not invalid by reason of being based on a holotype consisting of samples of a photographed individual that was released.

Alternative proposals 3:

The International Commission on Zoological Nomenclature is asked to consider:

- (1) to use its plenary power to rule that the name *urraoensis* Carantón & Certuche, 2010, as published in the binomen *Grallaria urraoensis*, is to be given precedence over *fenwickorum* Barrera & Bartels, 2010, as published in the binomen *Grallaria fenwickorum*, whenever they are considered to be synonyms;
- (2) to place on the Official List of Specific Names in Zoology the name *urraoensis* Carantón & Certuche, 2010, as published in the binomen *Grallaria urraoensis*, with the note that it is to be given precedence over *fenwickorum* Barrera & Bartels, 2010, as published in the binomen *G. fenwickorum*, whenever they are considered to be synonyms.

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Comment on *Anchisaurus* Marsh, 1885 (Dinosauria, Sauropodomorpha): proposed conservation of usage by designation of a neotype for its type species *Megadactylus polyzelus* Hitchcock, 1865

(Case 3561; see BZN 69: 44–50, 141–142, 229–231)

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Until the precise angle of the long axis of the mid-shaft cross-section of the ischial blades is determined for *Asylosaurus*, the holotype of *Anchisaurus polyzelus* (AM 41/109) and also the holotypes of *Ammosaurus major* and *Anchisaurus solus* should be provisionally considered distinguishable from other basal sauropodomorphs by having dorsoventrally flattened ischial blades with the long axis of the cross-section set at 29 degrees to the horizontal.

Regarding other characters listed as autapomorphic for *Anchisaurus* by Yates (2010), the supposed absence of a ventrally opening foramen on the base of sacral rib 2 in the holotype of *Anchisaurus colurus* (YPM 1883) cannot be substantiated. While this foramen is very tiny compared to that of the holotype of *Ammosaurus major* (YPM 208; Yates, 2004, fig. 1), it is unclear whether the difference is due to individual variation or dorsoventral crushing. Even if YPM 208 and YPM 1883 did represent different taxa based on the size of the foramen on the base of sacral rib 2, they would still belong to the same genus because this character is not present in any other non-sauropodan anchisaurian and characters that are present only in YPM 208 (posterior dorsal centra that are about twice as long as the height of the centrum face; narrow iliac preacetabular process that is at least twice as long as its basal height) are also found in the basal anchisaurian *Leoneriasaurus* as well as the putative masospondylid *Gyposaurus*. The cranial autapomorphies seen in YPM 1883 may also have to be evaluated for *Anchisaurus solus* (YPM 209) because the skull of the latter specimen overlaps with cranial elements of YPM 1883.

For these reasons we should perhaps wait for a more complete specimen to be found at the type locality of *A. polyzelus* before the Commission rules on the proposals in Case 3561.

Additional references

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OPINION 2324 (Case 3493)***Haliplanella* Hand, 1956 (Anthozoa, Actiniaria): conserved by suppression of *Haliplanella* Treadwell, 1943 (Polychaeta)**

Abstract. The Commission has ruled under the plenary power that the generic name *Haliplanella* Hand, 1956 is conserved for a widespread sea anemone by suppressing the senior name *Haliplanella* Treadwell, 1943, which was first, through an error, used for a group of polychaete annelids, was later put into synonymy, and is now no longer used.

Keywords. Nomenclature; taxonomy; Cnidaria; Anthozoa; Actiniaria; Annelida; *Haliplanella*; *Haliplanella lineata*; sea anemones; worldwide.

Ruling

- (1) Under the plenary power the generic name *Haliplanella* Treadwell, 1943 and all uses of the name before that by Hand (1956) are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.
- (2) The name *Haliplanella* Hand, 1956 (gender: feminine), type-species by monotypy *Sagartia luciae* Verrill, 1898 (Anthozoa), is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *lineata* Verrill, 1869, as published in the binomen *Sagartia lineata*, senior subjective synonym of the type-species of *Haliplanella* Hand, 1956, is hereby placed on the Official List of Specific Names in Zoology.
- (4) The name *Haliplanella* Treadwell, 1943 (Polychaeta) is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology as suppressed in (1) above.

History of Case 3493

An application asking the Commission to conserve the name for a widespread sea anemone by suppressing the senior homonym *Haliplanella* Treadwell, 1943 used for a group of polychaete annelids, was received from D.G. Fautin (*University of Kansas, Lawrence, Kansas, U.S.A.*); C. Hand (deceased) (*Bodega Marine Laboratory, U.S.A.*) and M. Daly (*The Ohio State University, U.S.A.*) on 14 April 2009.

After correspondence the case was published in BZN **66**: 312–316 (2009). The title, abstract and keywords of the case were published on the Commission's website. Adverse and supporting comments were published in BZN **67**(2): 166–167; **68**(3): 204–20; **69**(2): 122–123.

The Case was originally sent for vote on 1 December 2010. The vote was cancelled on 6 December 2010, as per email of the Executive Secretary explaining that a new substantive comment was received just after the voting papers had been sent out.

Decision of the Commission

On 1 June 2013 the members of the Commission were again invited to vote on the proposals published in BZN **66**: 314. At the close of the voting period on 1 September 2013 the votes were as follows:

Affirmative votes – 18: Alonso-Zarazaga, Ballerio, Bouchet, Brothers, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Pape, Rosenberg, Stys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 4: Bogutskaya, Lamas, Lim and Minelli.

Split votes – 1: Grygier FOR (1), (2), (4); AGAINST (3).

Ng, Patterson and Pyle were on leave of absence.

No vote was received from Fautin.

Voting FOR, Rosenberg said that the application should have provided a statement of characters regarded as differentiating the taxa for which the neotypes were designated. Also voting FOR, Bouchet commented that he was more or less convinced by the taxonomic opinions defended in comments to this case, and it could well be that Case 3493 would ‘lead nowhere’. However the applicants (Fautin, Hand & Daly) had maintained their request that the Commission vote on the potential validity of the name *Haliplanella* Hand, 1956. He voted FOR their proposals as far as nomenclature was concerned, and he left it to sea-anemone taxonomists to evaluate the taxonomic validity. Voting FOR, Brothers said that the validity of the counter-arguments depended on the general acceptance of apparently as-yet unpublished taxonomic proposals and opinions; resolution of the homonymy could only provide greater clarity on the status of the names concerned whatever the taxonomy. Voting FOR, Winston said that supporting comments in BZN 69(2) made a clear case that adhering to priority would cause problems for coelenterate workers, whereas the annelid name was not in use and the possibility of its future use was unclear. Also voting FOR, Halliday said that he voted for that proposal, despite the adverse comments. Even if *Haliplanella* Hand, 1956 was a synonym of *Diadumene* Stephenson, 1920, it would not ‘disappear’, but would remain available, and might become valid again in the future. The rather complex and controversial taxonomic considerations in the published comments were not directly relevant to the matter of the homonymy, which was the substance of the proposal. SPLITTING his vote, Grygier said that the proposal to place a senior synonym of the type species of *Haliplanella* on the Official List, especially a subjective synonym and not the actual type species, was counter-intuitive. Additionally, this Case included no request for any particular ruling on the valid type species of the genus, nor any proposal concerning the specific name of the type species; it was therefore unclear, under the specifications provided in Article 78.4.2, why the type species should be entered in the Official List at all.

Erratum

In the text of the case there was a misprint on p. 314 obscuring the meaning of a paragraph. The correct text should read: ‘Although late in his life Hand came to share the opinion that the name *Diadumene* Stephenson, 1920 (type species by monotypy *Sagartia schilleriana* Stoliczka, 1869) is not universally applied to this species of sea anemone: *Haliplanella* continues to be used (e.g. Mire & Venable, 1999; Ocaña & den Hartog, 2002; Watson et al., 2008). Preliminary data we have gathered for a taxonomic revision of this group support *Haliplanella* as distinct from *Diadumene*. Moreover, a second genus, *Tricnidactis* de Oliveira Pires, 1987 (type species by monotypy *Tricnidactis errans* de Oliveira Pires, 1987), has been placed in

family HALIPLANELLIDAE, which would be invalid under Article 39 unless this application, first made in Case 2192, is granted.'

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Haliplanella Hand, 1956, *Wasmann Journal of Biology*, **13**: 210–211.

Haliplanella, Treadwell, 1943, Polychaetous annelids. *Carnegie Institution of Washington Publication*, **555**: 42.

lineata, *Sagartia*, Verrill, 1869, *Synopsis of the polyps and corals of the North Pacific Exploring Expedition, under Commodore C. Ringgold and Capt. John Rodgers, U.S.N., from 1853 to 1856. Collected by Dr. Wm. Stimpson, naturalist to the Expedition. Part IV. Actiniaria. [Second part], author's reprint of 1869, p. 23 [Communications of the Essex Institute, 1870, 6: 57].*

OPINION 2325 (Case 3568)

***Stirpulina* Stoliczka, 1870 (Mollusca, Bivalvia, Anomalodesmata, CLAVAGELLIDAE): name conserved by suppression of *Tubolana* Bivona Bernardi, 1832)**

Abstract. The Commission has conserved the generic name *Stirpulina* Stoliczka, 1870 for a group of watering-pot shells by suppression of the little-used senior subjective synonym *Tubolana* Bivona Bernardi, 1832.

Keywords. Nomenclature; taxonomy; Bivalvia; Anomalodesmata; CLAVAGELLOIDEA; CLAVAGELLIDAE; *Stirpulina*; *Tubolana*; *Stirpulina coronata*; *Tubolana digitata*; watering-pot shells; Upper Cretaceous; Recent.

Ruling

- (1) Under the plenary power, the name *Tubolana* Bivona Bernardi, 1832 is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.
- (2) The name *Stirpulina* Stoliczka, 1870 (gender: feminine), type species by original designation *Clavagella coronata* Deshayes, 1824 is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *coronata* Deshayes, 1824, as published in the binomen *Clavagella coronata* (specific name of the type species of *Stirpulina* Stoliczka, 1870) is hereby placed on the Official List of Specific Names in Zoology.
- (4) The name *Tubolana* Bivona Bernardi, 1832, as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

History of Case 3568

An application to conserve the genus name *Stirpulina* Stoliczka, 1870 for a group of watering-pot shells by suppression of the little-used senior subjective synonym *Tubolana* Bivona Bernardi, 1832, was received from M.E.Y. Low (*University of the Ryukyus, Okinawa, Japan*) and S.K. Tan (*Raffles Museum of Biodiversity Research, National University of Singapore, Republic of Singapore*) on 24 June 2011. After correspondence the case was published in BZN **68**: 257–261. The title, abstract and keywords of the case were published on the Commission’s website. No comments were received on this case.

Decision of the Commission

On 1 June 2013 the members of the Commission were invited to vote on the proposals published in BZN (**68**: 258–259). At the close of the voting period on 1 September 2013 the votes were as follows:

Affirmative votes – 17: Ballerio, Bouchet, Brothers, Fautin, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Ng, Rosenberg, Štys, Winston, Yanega, Zhang and Zhou.

Negative votes – 8: Alonso-Zarazaga; Bogutskaya; Grygier, Kojima, Lim, Minelli, Pape, van Tol.

Patterson and Pyle were on leave of absence.

Voting AGAINST, Minelli said that the case could have been better solved by ruling that the precedence of *Tubolana* Bivona Bernardi, 1832 over *Stirpulina* Stoliczka, 1870 must be reversed in the event that the type species of the two nominal genera were treated as members of the same genus. Bogutskaya, who also voted AGAINST, said that she considered that ‘conditional suppression’ (as defined in the Code Glossary) must be applied: that the available name *Tubolana* was only to be used as valid when not considered a synonym of *Stirpulina*. Also voting AGAINST, Alonso-Zarazaga said that in his opinion the taxa involved were of no special interest for economical, medical, veterinary or other reasons, so the Principle of Priority should stand. Kojima, voting AGAINST, said since the synonymy of the genera *Tubolana* Bivona Bernardi, 1832 and *Stirpulina* Stoliczka, 1870 was still uncertain, the suppression of *Tubolana* Bivona Bernardi, 1832 was not necessary to conserve *Stirpulina* Stoliczka, 1870. Bouchet, who voted FOR, said the work by Stoliczka where the name *Stirpulina* was established was published in parts. Page 27, containing the description, was published on 1 September 1870. Page xv, containing the fixation of the type species, was published 1 August 1871. He did not regard Vokes (1967, 1980) as publications where the name *Tubolana* was used as valid: Vokes’s *Genera of the Bivalvia* was a nomenclator, not a taxonomic work. Also, the reprint in 1989 of Monterosato’s 1877 work was not a post-1899 usage of *Tubolana* as the valid name of a taxon. Finally, Smith (1962) and Keen & Smith (1962), by using *Stirpulina* as the valid name, clearly did not use *Tubolana* as a valid name. There were thus, in his opinion, no post-1899 uses of *Tubolana* as valid, so the conditions of Article 23.9 were met. He thus considered that no action from the Commission was necessary to conserve the name *Stirpulina*. However, since he did not want to appear to be in favour of conserving the name *Tubolana*, he voted for the proposals.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

- Stirpulina* Stoliczka, 1870, *Palaeontologia Indica, being figures and descriptions of the organic remains procured during the progress of the Geological Survey of India*, (6)3(1–4): xv, 27, 28.
coronata, *Clavagella*, Deshayes, 1824, *Description des coquilles fossiles des environs de Paris*.
 Tome 1. *Conchifères*, Deshayes, Jeune, Frères et Treuttel, Paris, 8, 9.
Tubolana Bivona Bernardi, 1832, *Effemeridi Scientifiche e Letterariae per la Sicilia*, 1: 55–56.

OPINION 2326 (Case 3541)**METINAE Simon, 1894 (Arachnida, Araneae, TETRAGNATHIDAE): spelling emended to METAINAE to remove homonymy with METIDAE Boeck, 1872 (Crustacea, Copepoda)**

Abstract. The Commission has emended the spelling of the family-group name METINAE Simon, 1894 (Arachnida, Araneae, TETRAGNATHIDAE), used for a group of orb-weaving spiders and based on the generic name *Meta* C.L. Koch, 1835, to give METAINAE, thereby removing homonymy with the crustacean family-group name METIDAE Boeck, 1872, based on the generic name *Metis* Philippi, 1843.

Keywords. Arachnida; Araneae; TETRAGNATHIDAE; Crustacea; Copepoda; METIDAE; *Meta*; *Metis*; *Meta menardi*; *Metis ignea*; crustaceans; spiders.

Ruling

- (1) Under the plenary power it is hereby ruled that for the purposes of Article 29 of the Code the stem of the generic name *Meta* C.L. Koch, 1835 is *Meta-*.
- (2) The following names are hereby placed on the Official List of Generic Names in Zoology:
 - (a) *Meta* C.L. Koch, 1835 (gender: feminine), type species *Epeira menardi* Latreille, 1804 by original designation; type genus of the subfamily METAINAE Simon, 1894;
 - (b) *Metis* Philippi, 1843 (gender: feminine), type species *Metis ignea* Philippi, 1843 by monotypy; type genus of the family METIDAE Boeck, 1872.
- (3) The following names are hereby placed on the Official List of Specific Names in Zoology:
 - (a) *menardi* Latreille, 1804, as published in the binomen *Aranea menardii* (specific name of the type species of *Meta* C.L. Koch, 1835);
 - (b) *ignea* Philippi, 1843, as published in the binomen *Metis ignea* (specific name of the type species of *Metis* Philippi, 1843).
- (4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
 - (a) METAINAE Simon, 1894, type genus *Meta* C.L. Koch, 1835, spelling emended by the ruling in (1) above (Arachnida, Araneae);
 - (b) METIDAE Boeck, 1872, type genus *Metis* Philippi, 1843 (Crustacea, Copepoda).
- (5) The name METINAE Simon, 1894 (Arachnida, Araneae), spelling emended to METAINAE, as ruled in (1) above is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology.

History of Case 3541

An application to remove homonymy between the family-group name METINAE Simon, 1894, currently used in Araneae (TETRAGNATHIDAE), and the crustacean family-group name METIDAE Boeck, 1872 by emending the spelling of the spider name

(based on the generic name *Meta* C.L. Koch, 1835) to give METAINAE, while leaving the crustacean name (based on the generic name *Metis* Philippi, 1843) unaltered, was received from F. Álvarez-Padilla (*Universidad Nacional Autónoma de México, Del. Coyoacan, Mexico*) and G. Hormiga (*The George Washington University, Washington D.C., U.S.A.*) on 14 September 2010. After correspondence the case was published in BZN 68: 262–266. The title, abstract and keywords of the case were published on the Commission's website. One comment in support was published in BZN 69(2): 127.

Decision of the Commission

On 1 June 2013 the members of the Commission were invited to vote on the proposals published in BZN (68: 263–264). At the close of the voting period on 1 September 2013 the votes were as follows:

Affirmative votes – 22: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Halliday, Harvey, Kojima, Krell, Kullander, Lamas, Lim, Minelli, Pape, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 1: Kottelat.

Split votes – 1: Grygier (FOR (1), (2), (4), (5) Against (3)).

Ng, Patterson and Pyle were on leave of absence.

Voting FOR, Brothers said that no motivation had been provided as to why the spider name should have been changed instead of correcting the copepod name to its proper grammatical form. The lack of any information on the frequency of usage of the names in the different classes had also made assessment as to relative levels of disruption difficult. Nevertheless, since there had been only one comment, and that was supportive, he had voted for the proposal. SPLITTING his vote, Grygier said that this case included no request for any particular ruling on the valid type species of *Meta* or *Metis*, nor did it include any proposal concerning the specific names of those two type species; it was therefore unclear, under the specifications provided in Article 78.4.2, why *menardi* and *igneae* should be entered on the Official List. Similar considerations might have also applied to the two genera, but the specific names were two full steps away from the family names that were the core of the present proposals. Voting AGAINST, Kottelat said that METIDAE (based on *Meta*) was apparently formed correctly; whereas METIDAE (based on *Metis*) was formed incorrectly (i.e. should have been METIIDAE or METIDIDAE). The application requested changing the correctly formed name based on *Meta* and keeping the incorrectly formed name based on *Metis*. He argued that METIDAE, correctly based on *Meta*, should have been conserved instead, while the incorrectly formed name based on *Metis* should have been emended. Since the application provided no argument supporting one name against the other, he preferred using the correctly formed names.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

- Meta* C.L. Koch, 1835, In Herrich-Schaffer, G.W. *Faunae insectorum Germanicae initia. Arachniden*. Heft 128, folio 8–16, 23–24; Heft 129, folio 12–24; Heft 130, folio 13–14; Heft 131, folio 1–24; Heft 134, folio 1–24. Regensburg, pl. 12.
- Metis* Philippi, 1843, *Archiv für Naturgeschichte*, 9: 59.

menardi, *Aranea*, Latreille, 1804, *Histoire naturelle, générale et particulière des crustacés et des insectes : ouvrage faisant suite aux oeuvres de Leclerc de Buffon, et partie du cours complet d'histoire naturelle rédigé par C. S. Sonnini*, de l'Imprimerie de F. Dufart, Paris, vol. 7, p. 266.

ignea, *Metis*, Philippi, 1843, *Archiv für Naturgeschichte*, **9**: 61.

METAINAE, Simon, 1894, *Historie naturelle des araignées 1*. 1084 pp. Librairie encyclopédique de Roret, Paris, p. 726.

METIDAE, Boeck, 1872, *Forhandlinger i Videnskabs-Selskabet i Christiania*, **1872**: 59.

OPINION 2327 (Case 3570)***Curculio scirpi* Fabricius, 1792 (currently *Notaris scirpi*; Insecta, Coleoptera, CURCULIONOIDEA, ERIRHINIDAE): precedence given over *Curculio rhamni* Herbst, 1784 and *C. scirpi* Rossi, 1790**

Abstract. The Commission has conserved the specific name *Curculio scirpi* Fabricius, 1792 (currently *Notaris scirpi*; CURCULIONOIDEA, ERIRHINIDAE) by giving it precedence over a little-used older name *C. rhamni* Herbst, 1784, whenever the two are considered to be synonyms, and by suppressing the little-used senior homonym *C. scirpi* Rossi, 1790.

Keywords. Nomenclature; taxonomy; Coleoptera; CURCULIONOIDEA; ERIRHINIDAE; *Curculio*; *Notaris*; *Notaris scirpi*; *Notaris rhamni*; *Curculio scirpi*; weevil; Palaeartic.

Ruling

- (1) Under the plenary power:
 - (a) precedence is given to the specific name *scirpi* Fabricius, 1792, as published in the binomen *Curculio scirpi*, over the name *rhamni* Herbst, 1784, as published in the binomen *Curculio rhamni*, whenever the two names are considered to be synonyms;
 - (b) the specific name *scirpi* Rossi, 1790, as published in the binomen *Curculio scirpi*, is hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.
- (2) The following names are hereby placed on the Official List of Specific Names in Zoology:
 - (a) *scirpi* Fabricius, 1792, as published in the binomen *Curculio scirpi*, with the endorsement that it is to be given precedence over the name *rhamni* Herbst, 1784, as published in the binomen *Curculio rhamni*, whenever the two names are considered to be synonyms;
 - (b) *rhamni* Herbst, 1784, as published in the binomen *Curculio rhamni*, with the endorsement that it is not to be given priority over the name *scirpi* Fabricius, 1792, as published in the binomen *Curculio scirpi*, whenever the two names are considered to be synonyms.
- (3) The name *scirpi* Rossi, 1790, as published in the binomen *Curculio scirpi* and as suppressed in (1)(b) above is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 3570

An application asking the Commission to conserve the name *Curculio scirpi* Fabricius, 1792 for a common Palaeartic weevil species currently belonging to the genus *Notaris* (CURCULIONOIDEA, ERIRHINIDAE) was received from R. Caldara (*Milano, Italy*), H. Winkelmann (*Berlin, Germany*) and M.A. Alonso-Zarazaga (*Museo Nacional de Ciencias Naturales (CSIC), Madrid, Spain*) on 2 July 2011. After correspondence the case was published in BZN **68**: 267–270. The title, abstract and

keywords of the case were published on the Commission's website. A comment in support was published in BZN 70(3).

Decision of the Commission

On 1 June 2013 the members of the Commission were invited to vote on the proposals published in BZN (68: 268–269). At the close of the voting period on 1 September 2013 the votes were as follows:

Affirmative votes – 19: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Minelli, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 3: Grygier, Lim and Minelli.

Split votes – 2: Fautin FOR (1)(a), (2)(a); AGAINST (1)(b), (2)(b), 3; Kojima AGAINST (1)(a), FOR (1)(b).

Ng, Patterson and Pyle were on leave of absence.

Voting FOR, Bouchet commented that in 2002, the name *Curculio rhamni* Herbst, 1784, qualified as a nomen oblitum against *Curculio scirpi* Fabricius, 1792. Usage of *rhamni* by Krivets & Legalov (2002) and Telnov (2004) thus violated Article 23.9, which states that prevailing usage must be maintained (not that it 'may' be maintained). Krivets & Legalov (2012) and Telnov (2004) thus could not be taken as examples of legitimate, post-1899, usages of the name *Curculio rhamni* Herbst, 1784 (see Article 23.9.6, which states that 'The deliberate use of a name contrary to Article 23.9.1 [. . .] must not be taken into account in determining usage'. Voting AGAINST, Grygier said that although the history of the establishment of the other principal names involved in this case was given in detail, also for their name-bearing types, this was not done for *Curculio scirpi* Fabricius, 1792. Without that sort of information the case seemed incomplete. He added that it was not even clear to the reader that Fabricius had indeed proposed *scirpi* as a new species, and that he did not just reuse Rossi's name *C. scirpi*. He added: 'Also, since the two homonymous species are now regarded as synonyms (the subjectivity of the synonymy being to some degree overridden by the explicit choice of a neotype also assignable to Fabricius's species), and since "Author, date" is merely an optional adjunct to a scientific name, why not accept Rossi's 1790 authorship of the species? *C. scirpi* Rossi, 1790 is still junior to *C. rhamni*; I would vote FOR proposals (1)(a) and (2) if they were rewritten in terms of Rossi, 1790, not Fabricius, 1792; proposals similar to (1)(b) and (3) would then not be needed'. SPLITTING his vote Kojima said that it was a matter of nomenclature and would cause nomenclatural confusion if *scirpi* Fabricius, 1792 became unavailable because of its senior primary homonym *scirpi* Rossi, 1790, which had been rarely used and no type specimen for which seemed to exist. He added that, on the other hand, giving *scirpi* Fabricius, 1792 precedence over *rhamni* Herbst, 1784 was a matter of taxonomy, and that interest in the species concerned seemed to be limited to specialists of this coleopteran group. He suggested that once the synonymy of *scirpi* Fabricius, 1792 and *rhamni* Herbst, 1784 was accepted by most of these specialists, the nomenclatural change resulting from this synonymy would also be accepted and no confusion would occur.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

scirpi, *Curculio*, Fabricius, 1792, *Entomologia systematica emendata et aucta. Secundum classes, ordines, genera, species adjectis synonymis, locis, observationibus, descriptionibus*, vol. 1(2), C.G. Proft, Hafniae, p. 405.

rahamni, *Curculio*, Herbst, 1784, *Archiv der Insectengeschichte*, **5**(1): 78.

scirpi, *Curculio*, Rossi, 1790, *Fauna Etrusca sistens insecta quae in provinciis Florentina et Pisana praesertim collegit Petrus Rossius*. Tomus secundus, Liburni, Masi, p. 118.

OPINION 2328 (Case 3571)***Crotalinus catenatus* Rafinesque, 1818 (currently *Sistrurus catenatus*) and *Crotalus tergeminus* Say in James, 1822 (currently *Sistrurus tergeminus*; Reptilia, Serpentes): usage conserved by designation of neotypes for both species**

Abstract. The Commission has conserved the usage of the specific names *Crotalinus catenatus* Rafinesque, 1818 (currently *Sistrurus catenatus*) and *Crotalus tergeminus* Say in James, 1822 (currently *Sistrurus tergeminus* or *Sistrurus catenatus tergeminus*) for two species of pygmy rattlesnake, by designation of neotypes.

Keywords. Nomenclature; taxonomy; Reptilia; Serpentes; *Sistrurus*; *Sistrurus catenatus*; *Sistrurus tergeminus*; rattlesnakes; North America.

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- (1) Under the plenary power specimen USNM 526 at the National Museum of Natural History, U.S.A. from Poland, Mahoning County, Ohio, U.S.A. is hereby designated as the neotype of *Crotalinus catenatus* Rafinesque, 1818.
 - (2) Under the specific powers specimen USNM 86472 at the National Museum of Natural History, U.S.A., from Winfield, Cowley, Kansas, U.S.A. is hereby designated as the neotype of *Crotalus tergeminus* Say in James, 1822.
 - (3) The name *catenatus* Rafinesque, 1811, as published in the binomen *Crotalinus catenatus*, and as defined by the neotype designated in (1) is hereby placed on the Official List of Specific Names in Zoology;
 - (4) The name *tergeminus* Say in James, 1822, as published in the binomen *Crotalus tergeminus* and as defined by the neotype designated in (1) above is hereby placed on the Official List of Specific Names in Zoology

History of Case 3571

An application to conserve the long established usage of the specific names *Crotalinus catenatus* Rafinesque, 1818 (currently *Sistrurus catenatus*) and *Crotalus tergeminus* Say in James, 1822 (currently *Sistrurus tergeminus* or *Sistrurus catenatus tergeminus*) for two species of pygmy rattlesnake was received from B.I. Crother (*Southeastern Louisiana University, Hammond, LA, U.S.A.*), J.M. Savage (*San Diego State University, San Diego, CA, U.S.A.*) and A.T. Holycross (*Mesa Community College, Mesa, & School of Life Sciences, Arizona State University, Tempe, AZ, U.S.A.*) on 10 August 2011. After correspondence, the case was published in BZN **68**: 271–274. The title, abstract and keywords of the case were published on the Commission's website. One comment by the original authors proposing a new specimen to be designated as the neotype of *Crotalus tergeminus* Say in James, 1822 was published in BZN **69**(1): 62–63.

Decision of the Commission

On 1 June 2013 the members of the Commission were invited to vote on the proposals modified from those published in BZN (**68**: 273). At the close of the voting period on 1 September 2013 the votes were as follows:

Affirmative votes – 22: Alonso-Zarazaga, Ballerio, Bogutskaya, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Lamas, Lim, Minelli, Pape, Rosenberg, Štys, van Tol, Winston, Yanega and Zhou.

Negative votes – 1: Zhang.

Abstained – 1: Bouchet.

Ng, Patterson and Pyle were on leave of absence.

ABSTAINING, Bouchet commented that he approved the intention of the application, but regretted that the neotypes chosen were not linked to any molecular data. The neotypes might or might not be of suitable preservation for DNA extraction and sequencing. It was, in his opinion, highly anachronistic to fix in the year 2013 neotypes that were not associated with molecular data, especially for species from North America where they could easily be collected. He did not vote ‘Against’ the proposals because he did not want to give the impression that he disapproved of the intention of the application; but he did not vote ‘For’ the neotypes proposed to the Commission. Voting FOR, Harvey said that he was in favour of the proposal, including the modification proposed in BZN **69**: 63. In the original application proposal (1) mistakenly stated ‘Rafinesque, 1816’ instead of ‘Rafinesque, 1818’. Also Voting FOR, Rosenberg said that the application should have provided a statement of characters regarded as differentiating the taxa for which the neotypes were designated.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

catenatus, *Crotalinus*, Rafinesque, 1818, *American Monthly Magazine and Critical Review*, **4**: 41.

tergeminus, *Crotalus*, Say in James, 1822, *Account of an expedition from Pittsburgh to the Rocky Mountains, performed in the years 1819 and '20, by order of the Hon. J. C. Calhoun, Sec'y of War: under the command of Major Stephen H. Long. From the notes of Major Long, Mr. T. Say, and other gentlemen of the exploring party*, vol. 1. H.C. Carey & I. Lea, Philadelphia, p. 499.

Notice of closure of Cases

The following Cases, for which receipts as new applications to the Commission were published though the cases were never published in full, are now closed:

Dasypeltis scabra var. *atra* Sternfeld, 1913 (currently *Dasypeltis atra*; Reptilia, Squamata): proposed conservation of the specific name). D.G. Broadley (Case 3608; acknowledgement of receipt published in BZN 69: 247)

Thisbemys brevicrista Ostrander, 1986 (Rodentia, ISCHYROMYIDAE): replacement of the holotype by the designation of a neotype. D.K. Anderson (Case 3619; acknowledgement of receipt published in BZN 70: 2)

Proposed use of the plenary power to designate the type species of the genus *Dhosaites* Spath, 1924, in accordance with the author's original intentions (Class Cephalopoda, Order Ammonoidea) M.K. Howarth (Case 3621; acknowledgement of receipt published in BZN 70: 69)

Proposal to reverse the decision of the ICZN (Case 2899) on the names of *Dodecaceria fimbriata* and *D. concharum* on the basis of new evidence. P.H. Gibson (Case 3622; acknowledgement of receipt published in BZN 70: 69)

NOMENCLATURAL NOTES

On the nomenclature of the genus name *Ululodes* (Neuroptera, ASCALAPHIDAE)

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Abstract. *Ascalaphus macleayanus* Guilding, 1823 is fixed as the type species of the Western Hemisphere owlfly genus *Ululodes* Smith, 1900 (ASCALAPHIDAE). Information clarifying the proper authorship, date of publication and nomenclatural gender of this name is presented.

Keywords. Nomenclature, ASCALAPHIDAE, *Ululodes macleayanus*, owlflies, Nearctic, Neotropical.

Introduction

Ululodes Smith, 1900 is the most speciose genus of owlflies (Neuroptera, ASCALAPHIDAE) in the Western Hemisphere, currently containing approximately 25 valid extant species. Of these, several occur commonly in the warm temperate parts of the United States. The precise number of species that occur north of the Mexican border, however, has never been known with certainty, and several aspects of the nomenclature of the genus have also remained unclear up to the present time. In anticipation of a general review of the north American species of *Ululodes*, currently in progress, we take this opportunity to address and resolve a number of nomenclatural issues that are outstanding with respect to the genus name *Ululodes*. We present below a concise synonymical listing for the genus, followed by a discussion of several specific nomenclatural issues. Citations in the form 'Article 00' refer to articles in the 4th edition of the Code.

Genus *Ululodes* Smith, 1900

Ulula Rambur, 1842, p. 357. Type species: *Ascalaphus senex* Burmeister, 1839 (currently treated as a junior subjective synonym of *Ascalaphus macleayanus* Guilding, 1823, see Penny et al., 1997), by subsequent designation of Blanchard in d'Orbigny (1849, p. 756). Etymology: unexplained, probably from Latin *ulula* [fem.], a screech owl, in allusion to the owl-form of the minor spirit Ascalaphus in Greek mythology and to the taxonomic affinities of *Ulula* with the genus *Ascalaphus*, or perhaps in reference to the large eyes shared by owls and owlflies. Gender: feminine, from the gender of the Latin noun *ulula*, Article 30.1.1. Notes: a junior primary homonym of *Ulula* Cuvier, 1817, p. 329 (in Aves).

Ululodes Smith, 1900, p. 57. Type species: *Ascalaphus macleayanus* Guilding, 1823 [currently valid as *Ululodes macleayanus*, the taxonomic species actually involved

in the originally-included nominal species misidentified by Smith as '*U. hyalinus* Latr.' (= *Ascalaphus hyalinus* Latreille in Humboldt & Bonpland, 1817), by designation herein under Article 70.3.2 (see discussion below)]. Incorrect type species designation by Navás [1912, p. 70 (p. 26 of separate)] of *Ascalaphus macleayanus* Guilding, 1823, a name not originally included in *Ululodes* and not linked by Navás with one of the originally included names. Etymology: unexplained, probably Ulul- (from *Ulula* Rambur, an ascalaphid genus-group name) + -odes (from Gr. -odes, like or resembling), in reference to the ascalaphid taxonomic affinities of its originally included species, or perhaps in reference to the junior homonym *Ulula* Rambur, for which *Ululodes* may have been intended as an objective replacement name (see discussion below). Gender: masculine under Article 30.1.4.4, confirmed by the original combinations *Ululodes hyalinus* and *Ululodes 4-punctatus* (see discussion below).

Authorship. Authorship of *Ululodes* has been variously attributed in the literature to either Currie (e.g. van der Weele, 1909; Navás, 1912; Neave, 1940; Shetlar, 1977; Penny, 1982a) or Currie in Smith (e.g. Oswald & Penny, 1991, Penny et al., 1997, Penny, 2002). Unfortunately, neither of these authorship attributions appears to be compliant with Article 50, which treats the authorship of scientific names. Smith, not Currie, was responsible for publication of the name *Ululodes*. Attribution of authorship to Currie under Article 50.1.1 (and consequent citation of authorship as 'Currie in Smith' under Recommendation 51E) would require demonstration that Currie alone was responsible for both the name and for satisfying all of the criteria of availability other than publication. While it seems reasonable to assume that Smith received the name *Ululodes* from Currie—based on Smith's explicit (1900) attribution of authorship to Currie—Currie does not appear to be responsible for fulfilling all of the non-publication criteria of availability. Smith (1890, p. 462), in his first catalogue of the insect fauna of the state of New Jersey (U.S.A.), had already noted that the two species that were later originally included in *Ululodes* occurred in that state (but in that work they were listed in the genus *Ascalaphus*). This observation provides strong evidence that the list of species originally included in *Ululodes* in 1900 was provided by Smith (based on his previous catalogue), not by Currie, and thus, that Currie did not provide to Smith the list of species that were originally included in *Ululodes*, and which provide the indication that contributes to the availability of *Ululodes* under Article 12.2.5. Furthermore, in his 1900 work (see pp. 54, 721), Smith explicitly acknowledged Banks (i.e. Nathan Banks [1868–1953], American entomologist), and not Currie (i.e. Rolla Patterson Currie [1875–1960], American entomologist) for providing assistance with identifications and taxonomic structure for the Neuroptera parts of the work. In his catalogue of the neuropteroid insects of temperate North America, published a few years earlier, Banks (1892, p. 361; undoubtedly following the taxonomy of McLachlan 1871, pp. 246–247) had included in *Ulula* the same two species that were placed in that genus by Smith (1900). Based on this assessment, authorship of *Ululodes* must be attributed under Article 50.1 solely to Smith, not to Currie or 'Currie in Smith'.

Year of Publication. Smith (1900) was issued as a supplement to the 27th annual report of the New Jersey State Board of Agriculture, covering the calendar year 1899.

The title page of this work bears both the report year, 1899, and a separate year of publication, 1900. Names and nomenclatural acts made available in this work therefore date from 1900.

Type Species. It has sometimes been assumed (e.g. Neave, 1940) that the name *Ululodes* was proposed as a nomen novum for *Ulula* Rambur, 1842. This interpretation has seemed plausible given the etymology of *Ululodes* ('*Ulula*-like') and its original appearance in print without any form of description or diagnosis (much like the proposal of many historical nomina nova). If *Ululodes* was proposed as a nomen novum, its type species would be fixed automatically under Article 67.8 as the type species of *Ulula*. It might be argued that Smith's use of *Ululodes* constituted a nomen novum based on the reasoning that its use as a replacement name is a reasonable inference that could be drawn from the observation that the same two species that were included by Banks (1892) in *Ulula*, were subsequently included by Smith (1900) in *Ululodes*. We find, however, that *Ululodes* was not 'proposed expressly' to replace *Ulula*, and therefore fails the Code's Glossary definition of a new replacement name (nomen novum). The name *Ulula* is, in fact, not mentioned or cited anywhere in the work that contains the original publication of *Ululodes*; so, any conclusion that the name *Ululodes* was intended to replace *Ulula* must rest only on inference, not express statement. Thus, *Ululodes* must be considered to have been proposed as an independent genus name, with its type species to be fixed separately in accordance with the relevant articles of the Code.

Smith (1900) originally included two nominal species in *Ululodes*: (1) *Ascalaphus hyalinus* Latreille in Humboldt & Bonpland, 1817, as '*U. hyalinus* Latr.' [now considered to be a junior subjective synonym of *Ululodes cajennensis* (Fabricius, 1787)]; and (2) *Ascalaphus quadripunctatus* Burmeister, 1839, as '*U. 4-punctatus* Burm.' [now treated as the valid species *Ululodes quadripunctatus* (Burmeister)]. Neither species was fixed in the original publication as the type species of *Ululodes*, and both specific names are available and potential species for type fixation. No valid type species designations are known for *Ululodes*. Van der Weele (1908, p. 97), in the first revision of *Ululodes*, did not designate a type species, stating only 'Die Arten zerfallen in verschiedene Gruppen, von welchen die *macleayana* Gruppe die typische ist.' (= 'The species [of *Ululodes*] can be broken into various groups, of which the *macleayana* group is the typical one.'). This statement refers to a species group, so does not constitute an attempted type-species designation. Navás' (1912, p. 70 [p. 26 of separate]) explicit citation of *Ascalaphus macleayanus* Guilding (as 'Tipo. *U. macleayana* Guild.') as the type species of *Ululodes* is invalid as a type species designation because: (1) *macleayanus* was not a nominal species that was originally included in *Ululodes*, and (2) Navás did not link the name *macleayanus* to one of the two originally-included species in a manner that would satisfy Article 69.2.2. In the 110+ years since the publication of Smith's 1900 listing of New Jersey insects, only two *Ululodes* species—*Ululodes quadripunctatus* (Burmeister) and *Ululodes macleayanus* (Guilding)—have been documented as occurring in the state of New Jersey, an area that is known to lie close to the northeastern limit of the distribution of *Ululodes* in North America. Only one other *Ululodes* species—*Ululodes floridanus* (Banks, 1906)—is known to occur in the United States east of the Mississippi River, but only as far north as south-central North Carolina (ca. 400–500 km SW of

southernmost New Jersey). *Ululodes cajennensis* (Fabricius), the currently-valid name for *Ascalaphus hyalinus* Latreille in Humboldt & Bonpland, 1817 is widespread in Central and South America, and has been reported from the West Indies, but is not known to occur in the continental United States. Based on these distribution data, and because *Ululodes quadripunctatus* (Burmeister) is a well-known and distinctly separate species, we interpret the ‘*U. hyalinus* Latr.’ of Smith (1900) to represent a misidentification of *Ululodes macleayanus*.

To establish the type species of *Ululodes* in a manner that we judge to best serve the stability and universality of this genus name, and in a manner that is consistent with current and historical usage, we hereby designate as its type species the originally-included nominal species *Ascalaphus hyalinus* Latreille in Humboldt & Bonpland (1817). Furthermore, noting Smith’s original misidentification of *hyalinus*, we fix under Article 70.3.2 the taxonomic species actually involved in Smith’s misidentification, *Ascalaphus macleayanus* Guilding, 1823, to be the type species of *Ululodes*.

Nomenclatural Gender. The gender of the name *Ululodes* is masculine under Article 30.1.4.4, which explicitly addresses the gender of genus-group names ending in the suffix -odes. In the publication in which *Ululodes* was made available (Smith, 1900), the specific names of both of the species that were originally included in the genus are both based on Latin adjectives and are both cited in masculine form: (1) ‘hyalinus’ [from Latin adj. *hyalinus*, -a, -um: glassy], and (2) ‘4-punctatus’ [ending in Latin adj. *punctatus*, -a, -um: spotted (from Latin noun *punctum* [neut.], a point or dot + -atus, -a, -um: an adjective-forming suffix)]. Thus, there is no ambiguity as to the proper nomenclatural gender of *Ululodes* under the Code, and specific names based on Latin adjectives or participles should be written in their masculine forms when combined with *Ululodes* (Article 34.2).

Both recent and older usage is varied with respect to the nomenclatural gender accorded to *Ululodes* (as inferred from the endings used on combined species-group names): some works use only masculine endings (e.g. Smith, 1900; Shetlar, 1977; Penny, 2002; Oswald, 2007), some use only feminine endings (e.g. Banks, 1907; van der Weele, 1908; Smith, 1909; Navás, 1912; Penny, 1981b), and some use a mix of both (e.g. Penny et al., 1997). Historically, the treatment of *Ululodes* as feminine was probably strongly affected by the prominent and influential works of Banks (1907, an important catalogue of North American Neuroptera) and van der Weele (1908, an important world monograph of the ASCALAPHIDAE, and the first work to revise a group of species under the genus name *Ululodes*). Both of these works appeared within a few years after the original publication of *Ululodes*, and both treated the genus as feminine (possibly as a simple continuation based on the feminine gender of *Ulula*). While those treatments may have been acceptable for their time, the subsequent maturation of the International Code of Zoological Nomenclature (e.g. the gender treatment of the ending ‘-odes’) now requires that *Ululodes* be treated as masculine. By emphasizing this point here we hope to facilitate the stabilization of *Ululodes* combinations in their Code-compliant masculine forms. Based on the interpretations above, the record for the name *Ululodes* in the Nomenclator Zoologicus (Neave, 1940, p. 609) as ‘*Ululodes* (n. n.

pro *Ulula* Rambur, 1842) Currie 1899 ...' is incorrect with respect to its cited author and date of publication, and in stating that the name is a nomen novum.

Acknowledgements

We thank the reviewers of an earlier draft of this contribution for identifying several points that have been improved in revision.

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(Copies of many of the works cited here are available from the Bibliography of the Neuropterida [BotN] at <http://lacewing.tamu.edu/Bibliography>)

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BOLTONOCOSTIDAE nom. nov. (Insecta, Hypoperlida), a replacement name for ORTHOCOSTIDAE Bolton, 1912

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Abstract. The purpose of this note, under Article 39, is to propose the replacement name BOLTONOCOSTIDAE for the invalid name ORTHOCOSTIDAE Bolton, 1912, a monotypic family of fossil insects (Insecta, Hypoperlida) of Carboniferous age.

Keywords. Nomenclature; taxonomy; Insecta; Palaeodictyoptera; Hypoperlida; ORTHOCOSTIDAE; BOLTONOCOSTIDAE, Carboniferous.

1. During a search to update the family fossil record of insects since Ross & Jarzembowski (1993), for a PhD by Nicholson (2012), an invalid family name was encountered.

2. The monotypic family ORTHOCOSTIDAE Bolton, 1912 (p. 313) was erected for the type genus *Orthocosta* Bolton, 1912 within the order Palaeodictyoptera. However, this generic name was a junior homonym of *Orthocosta* Fritsch, 1879 (in Fritsch, 1879–1884, p. 28). Carpenter (1985, p. 575) published the replacement generic name *Boltonocosta* for *Orthocosta* Bolton, 1912. However, he placed it in ‘Family uncertain’ rather than provide a new family name, and he listed it as such within the order Palaeodictyoptera (Carpenter, 1992, p. 44). Subsequently Labandeira (1995, p. 18) listed the family name ORTHOCOSTIDAE under Palaeodictyoptera. Under Article 39, the family name ORTHOCOSTIDAE is not valid. Carpenter (1992) dismissed the holotype as a ‘wing fragment’. However, there is enough of the wing preserved and enough characters present for future detailed comparison with other families, so the family requires a new replacement name. Although this does not require a Commission’s ruling, it seems appropriate to propose a suitable replacement name here. *Boltonocosta* was placed in the order Hypoperlida by Rasnitsyn in Rasnitsyn & Quicke (2002, p. 111).

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The Taxon Filter, a novel mechanism designed to facilitate the relationship between taxonomy and nomenclature, vis-à-vis the utility of the *Code's* Article 81 (the Commission's plenary power)

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The *International Code of Zoological Nomenclature* (ICZN, 1999; hereafter the *Code*) has one fundamental aim: 'to promote stability and universality in the scientific names of animals and to ensure that the name of each taxon is unique and distinct. All its provisions and recommendations are subservient to those ends and none restricts the freedom of taxonomic thought or actions.' (Preamble of the 4th edition of the *Code*; ICZN, 1999). To be clear: in its pursuit of this aim the *Code* is not an evidence-based scientific system, let alone a taxonomic method. It is, I would suggest, an accounting system akin to those used in finance, defined for this purpose as 'a system of collection, storage, and processing of [taxonomic] data that is used by decision makers' (Atabaki & Khanmohammad, 2013, p. 41). Such a system is by design based on general principles, receiving input from those engaged in taxonomic science. However, even if the science of taxonomy is distinct from the nonscientific realm of nomenclature, the two intersect every time information from the former is passed to the latter. In order to ensure that the system of nomenclature (e.g. Dubois, 2005) is perpetually meaningful to the scientific endeavour, logic dictates that its input from taxonomy must be evidence-based, and follow established scientific methodology (e.g. Popper, 1972; Simon et al., 2012) or 'best practice' (e.g. Dubois, 2005; Kaiser et al., 2013). Unfortunately, at its important intersection with science, the *Code* does not regulate the specifics for how taxonomic input should be generated, received, admitted, or incorporated into nomenclature.

The assumption that taxonomists produce knowledge based on a trail of evidence according to the scientific method (e.g. Popper, 1972), a hypothetico-deductive approach to the assembly of knowledge that includes repeatability and that has been refined and tested over more than two centuries, is so basic that it is hardly ever thought of when scientists make their findings available to a broader audience. This methodology is the key underpinning of how science finds knowledge, and it is what keeps science, and scientists, accountable. In my opinion, the requirement of evidence is also a critical aspect of what differentiates taxonomic science from other intellectual pursuits, such as literature, philosophy, or theology. Science and scientists are necessarily constrained by evidence in their work; there is no 'free speech' when it comes to generating, interpreting, and reporting the facts to which the evidence leads. The term 'free speech' is here used as in the *Universal Declaration of Human Rights* (United Nations General Assembly, 1948), according to which a person has an unfettered right to state their ideas and opinions, no matter whether these opinions are correct or false. While scientists are certainly able to select their form of literal expression, they are always limited by the scope of their findings.

It nevertheless happens on occasion that scientific misconduct is uncovered, such as when individuals knowingly (or unwittingly) usurp the position of scientists and by their actions and production compromise the integrity of scientific research (e.g. through mistakes, plagiarism, falsification or fabrication of data, intellectual theft, or violation of scientific principles; see Bouville, 2008; Fanelli, 2009). Such practices are usually identified quickly, dealt with harshly, and condemned universally. These are not, however, practices prohibited by the *Code*. A new taxon name or its accompanying description may be plagiarized, stolen, or contain false information (e.g. a description that an organism is red with black spots, when the type specimen is actually blue with white spots) without rendering the name unavailable even if it is later found to be based on scientific misconduct. This is not a matter of carelessness, resulting in poor taxonomy, incomplete evidence, deficient protocols or error-prone interpretations (all of which can happen to the best of taxonomists); it is the trouble with the promulgation of honest errors requiring correction, or the premeditated communication of a deceit in science. I here present my thoughts on what can happen when the *Code's* integrity is compromised by scientific misconduct or honest error, and I present a novel solution for how to deal with such a scenario.

Trouble in Herpetology

In taxonomic herpetology there has recently been a troubling development with the emergence of what I qualify as pseudoscientific works, in which taxonomic decisions are reported whose methodology fails on the basic scientific principles described above, or based on modern concepts of publication in science (i.e. demonstrated scientific methodology including a list of specimens examined, scientific publication outlet, peer review with inclusion of editorial oversight; see Kaiser et al., 2013). In a textbook definition,

‘Pseudoscience attempts to look like actual science so that its assertions might appear valid. However, unlike science, pseudoscience begins with a claim and looks only for things that support it. Controlled experiments are never done. In fact, direct tests of any kind even if possible, are generally avoided. Pseudoscience is indifferent to facts and tries to persuade with appeals to emotion, sentiment, or distrust of established knowledge. Unlike real science, pseudoscience does not progress; nothing is revised or learned.’

(Bozzone & Green, in press).

These pseudoscientific works also run afoul of the *Code of Ethics* appended to the *Code*.

Recently, Australian snake enthusiast Raymond Hoser has presented over 500 new taxon names in 20 issues of his self-edited and probably non-peer reviewed *Australasian Journal of Herpetology (AJH)*; Hoser is invariably the only author. A significant portion of the herpetological community has supported the suggestions put forward by Kaiser et al. (2013) in response to Hoser's actions, but there is a broader question of how and whether the scientific community at large should respond to any invasion of pseudoscience into taxonomy. In particular, the question of what the implications of such incursions are for the *Code* and its existence as a safeguard of nomenclature has become of significance.

Science, Nonscience, and the *Code*

In order to investigate this particular situation, I will once again clarify that it is currently not the purpose of the *Code*, nor is it in the purview of the International Commission on Zoological Nomenclature, to police taxonomy. Taxonomy is a scientific endeavour, whereas nomenclature is not. The *Code* should be used as the axiom, by which to determine whether taxon names are nomenclaturally available for use in subsequent publications. But this is precisely where a dilemma exists. The *Code* is by definition not scientific, but it generates a set of nomenclatural rules for taxonomy, and is only useful if there are scientists willing to use the rules. Thus, a name that slips through the (admittedly imperfect) scrutiny of peer review (e.g. Bohannon, 2013), or names generated en masse by poorly executed taxonomy automatically enter nomenclature. All it takes is the observance of a few very simple criteria for a taxon name to become available according to the *Code*. Under these circumstances, it is possible to produce large numbers of names that are *Code*-compliant but have no scientific basis; the *Code* expects these names to be considered in the same manner as science-based names.

In the case of what I qualify as nonscientifically produced taxon names in herpetology, Hoser uses the *Code* as a ‘name-laundering scheme’: his mass-produced names go in and ‘clean’ names come out. The more names that are put through the system, the greater is the likelihood that some will by coincidence stand if science eventually produces supporting facts. None of these names have a rigorous scientific foundation, which would at the very least require a certain amount of specimen work to validate holotypes along with careful first-hand examination of comparative material (either using museum specimens or molecular data). Hoser does neither; he resorts to bulk citations of all literature on a given taxonomic group, including particularly those papers that feature unnamed branches on relationship trees, and creates a new taxon name for any node that falls in line with his ideas. These passages generally include disclaimers, similar to the following from Hoser (2013, p. 5), which is followed by 151 citations: ‘Where it is appropriate to rely on earlier published material, this is not necessarily rehashed herein. This is especially in terms of when the relevant material is widely available to readers on the worldwide web (internet)’. In Hoser’s defence, careful science is not required by the *Code*. Hoser also violates multiple areas of ethics in his publications (as listed by Kaiser et al., 2013; Yanega, 2013a). Hoser’s deportment is also not a problem for the *Code* since the *Code of Ethics* (which is violated by intemperate behaviour) is only an Appendix, and not mandatory.

A Stability Problem

When large numbers of taxon names are produced and promoted, users who routinely rely on the output from science but who themselves are not expert taxonomists will tend to take up the most recent findings under the assumption that this output has a proper scientific footing. This is not indiscriminate use of information on the part of users; it is simply the use of misinformation that comes packaged in a pseudoscientific framework. Two examples may serve to illustrate that this is not merely an academic problem but one with broader implications.

The authorities in Timor-Leste, Southeast Asia’s newest country, have been working on the development of wildlife policies and have been consulting the

literature available online. Their searches initially resulted in a mixture of science-based and Hoser's names. Use of two parallel taxonomies in this document could have created confusion in government policy and enforcement for years to come.

In Brazil, a country where a strong commitment to conservation has been emerging over the years, there are now two parallel taxonomies for snakes in use, one using science-based names and the other Hoser's names. For the purposes of species management, proper communication between government agencies, and the treatment of snakebite, dual taxonomies are impractical and must be avoided.

While neither of these examples has any bearing on the strict academic question of taxonomy and nomenclature, taxonomic research in herpetology nowadays leads in many cases to applications well beyond academia. As a consequence, the output from science becomes influential outside of science, and it is my opinion that as scientists we have a mandate to ensure the quality of our output.

In response to Hoser's new names, many scientific authorities in herpetology that would have to deal with them, such as researchers, scientific societies, journal editors, and compilers (e.g. *The Reptile Database*), have opted not to use them (see Kaiser et al., 2013). This situation has become destabilizing for nomenclature; even if Hoser's publications follow the letter of the *Code*, some authorities in the field are treating these names as if they were nomenclaturally unavailable, largely because they cannot be reliably used in the absence of satisfactory scientific argumentation justifying their appropriate attribution. As a result, there is consensus but not unanimity, meaning that multiple names will be in use simultaneously for a large number of organisms. Compilers of taxonomically broader databases, who justifiably do not regard themselves as qualified nor see it as their responsibility to choose between competing names, may be forced to resort to a wholesale listing of all sets of names (e.g. the *Encyclopedia of Life*; J. Hanken, pers. comm.), which adds to the trail of confusion among potential users. If the purpose of the *Code* is 'to promote stability and universality in the scientific names of animals,' this goal cannot be achieved so long as Hoser's names are treated as available by the *Code* and unavailable by many in the herpetological community.

Other than usage, a key problem for stability with Hoser's approach is his practice of giving names to even the most poorly supported groups, and then selecting type material he assumes to be suitable from lists presented in the literature, without ever evaluating this material himself. This creates an intrinsic instability for each taxon name since it is uncertain that the purported type specimen even has the characteristics listed in the taxon's description. This instability notwithstanding, the resulting names may reflect natural groups for which scientific research may find solid evidence; if such evidence emerges, then Hoser's 'senior synonyms-in-waiting' would be the available names despite their shortcomings (i.e. they are not based on properly evaluated or even properly listed type material or on valid scientific concepts). Tedious evidence-based research will then be required to reconcile inadequate type specimens with the new data, creating a potential further source of nomenclatural instability.

Hoser's naming of poorly supported branches from published phylogenies is contrasted by scientists' tendency to 'err on the side of caution' before making taxonomic judgments that produce new names. The more cautious, scientific approach takes time and patience, which creates a perpetually fertile ground for those

interested in naming new taxa quickly. If it became apparent that Hoser's activities did indeed result in nomenclaturally available names with some frequency, scientists could become tempted to defend their turf pre-emptively and 'err on the side of naming,' by making taxon names available for all branches of phylogenies they discover, even though the evidence may not be conclusive.

This dispute goes well beyond the level of petty squabbling between a small set of individuals operating in a limited niche of science; it pits a strong majority of scientists against a single individual who seeks to validate his actions by using the *Code*. Given that the organisms under consideration are continually in the public eye, whether through conservation efforts, media outlets, herpetoculture, or public health concerns, nomenclatural instability can have a significant negative socio-political impact. The continuing presence of these names as available names in herpetology will sustain the acrimony between Hoser and his critics, will be distracting to herpetological taxonomy, and will engender confusion on the part of non-taxonomist users of taxon names in herpetology who suddenly find themselves asked to choose between two sides in a never-ending controversy.

Is Scientific Credibility in Jeopardy?

In our fast-paced, social media-driven world, science is no longer restricted to the knowledgeable few. Discoveries, methodologies, and disputes are instantly made visible in a 24-hour global news cycle. While this is welcome because it hastens the dissemination of knowledge, it is also problematic because of the potential spread of disinformation and the inability of the public to distinguish real science from pseudoscience. I believe this matter to be a serious problem for the credibility of the scientific endeavour, one that has not been addressed in the past. Perhaps there really was no need for nomenclatural problems to be considered a significant impediment to science; such issues could have been seen as a nuisance only for the few taxonomists who subsequently had to deal with the new taxon names. At a time when the accounting of biodiversity is of great importance and where accuracy in diversity estimates is needed for species management and conservation, however, the appearance of several hundred taxon names based on poorly executed science is a significant detriment.

While it is easy and probably correct to say that taxonomic research will eventually ferret out the false names and place them into the synonymy of scientifically acceptable names—after all, it has always been thus—this is not good enough any more, especially when a single, self-supported individual with the ability to publish at will can easily produce new names faster than scientists can synonymise them; the former has no constraints imposed by peer reviewers, publishers, tenure review boards, funding agencies, or even access to specimens. Poorly executed taxonomy not only contaminates the products of science, but will also divert the efforts of other scientists away from following their own research goals; it compels them instead to devote their efforts to refuting pseudoscience. What, then, can be done to ensure that the *Code*, when faced with situations that require immediate remedy, lives up to the standard that 'all its provisions and recommendations are subservient' to stability, universality, and uniqueness of taxon names?

Democracy in Taxonomy—the Taxon Filter

The solution to the issue will require a strong stand by scientists in each discipline befallen by those whose taxonomy is suspected to be faulty. In herpetology, Kaiser et al. (2013) produced a set of best practices and a list of recommendations for how to treat Hoser's taxon names. However, such best practices must be employed in the future, and the *Code* could protect any taxon names despite the community's refusal to use them. In the grander scheme of things, the best way to address the issue could be to institute an idea I saw first formulated by ICZN Commissioner Douglas Yanega in a *Taxacom* post, and which I refer to as the Taxon Filter. Considering how rogue names might formally be handled one by one, Yanega (2013b) wrote that 'the only way this [...] would be practical is if there were an online interface which allowed for real-time debate and used verifiable IDs to allow for a democratized voting process; a taxonomic social medium.' The idea that the scientific community determines which names stand and which do not, is not something new. Lists of Available Names are an option provided for in the *Code* (Article 79) and peer-reviewed publications validating or synonymising taxon names are created routinely with community (i.e. reviewer and editorial) support. Unfortunately, from start to finish some of these processes can take years, and cannot be used to react rapidly and reliably to the hundreds of new names being published every month across the entirety of taxonomy, any one of which can 'go viral' and enter the mainstream media within a matter of hours after publication (see examples below), even if they are not *Code*-compliant.

The Taxon Filter would be a binding, rapid, public, and democratic community validation process. During an initial registration process, researchers would have the opportunity to become registered in the Taxon Filter's area of their discipline. Initial registration for the Taxon Filter would require some form of verification, such as an institutional or personal email address and a taxonomic credential (e.g. a peer-reviewed taxonomic paper), so that one individual could not register several fictional identities. Once a critical number of individuals was reached (a number determined within each discipline, but likely a percentage of those who publish in a given area) taxonomic cases could be introduced. For example, a required minimum of five applicants from a zoological discipline would create an online petition concerning a particular taxon name, and provide the reason for the petition. Members registered in that discipline would be notified that a petition in their area of interest had been posted, and they would be invited to comment and vote. Open voting would begin immediately after the petition had been filed, continue for a set minimum time and allow real-time discussion (similar to the comment threads used on Facebook). I believe that in most instances, a consensus would emerge quite rapidly (e.g. by a very one-sided vote) so that a decision was generated expeditiously. Petitions without a clear consensus or with considerable argumentation for and against would fail and require traditional resolution outside the Taxon Filter, via peer-reviewed publication. A decision to disqualify a taxon name post-publication via the Taxon Filter would result in its removal from all lists of available names; the name would become permanently relegated to the status of unavailable for the purposes of nomenclature. All taxon names beginning in 2000 could thus be reviewed (2000 being the year the latest edition of the *Code* came into effect), but only if a petition were filed with the requisite support. This arrangement amounts to a scientific safeguard, positioned so

that taxonomic decisions can be broadly reviewed before they pass into the realm of nomenclature and require adjudication via the *Code*; the Taxon Filter's mesh is designed to eliminate names based on poorly executed taxonomy. The Taxon Filter could even be extended to pre-publication filtering, perhaps voluntarily and at the initiative of the prospective authors of taxonomic decisions once a manuscript has been accepted for publication, so that potential taxonomic or nomenclatural problems could be revealed before the taxon names appear in print.

The recent descriptions of the fossil primate *Darwinius masillae* by Franzen et al. (2009) and the fossil sperm whale *Leviathan melvillei* by Lambert et al. (2010a) serve as examples to show that the Taxon Filter has utility beyond the scope of mass-produced scientifically inadmissible names, and that it can be applied as a rapid response to more general issues of *Code*-noncompliance. *Darwinius* was published in an online-only journal, which at the time rendered the taxon name unavailable according to the *Code*. It required the production of printed copies to make the name nomenclaturally valid. Given that this fossil was of significant public interest, its name spread rapidly on the Internet and achieved global recognition within hours, and the issue of improper nomenclature became a very public embarrassment. A petition filed with the Taxon Filter might have resolved this issue within days of publication, irrespective of the letter of the *Code* (which now permits electronic publication; ICZN, 2012). In the case of Lambert et al. (2010a) peer review by the venerable journal *Nature* failed to reveal that the genus name *Leviathan* was preoccupied by a mammoth. It became necessary to publish a corrigendum two months later (Lambert et al., 2010b) to change the genus to *Livyatan*. The Taxon Filter could have accelerated the correction and, if used prior to publication, might have headed off the problem entirely.

Critics of a mechanism like the Taxon Filter may point out that it may be a difficult task to decide which petitions should succeed and which should fail, and that this entire process could be seen as a form of censorship. If these critics have themselves published in peer-reviewed scientific journals, then they are already aware that as scientists, we routinely and voluntarily submit ourselves to a form of censorship during the publication process; peer review and editorial decisions are pre-publication judgments of our work. Review and concomitant revision are accepted scientific processes and, even though they are imperfect, they are what we have come to see as the best available option. If we submit ourselves to such scrutiny routinely anyway, then the Taxon Filter is nothing extraordinary but merely an extension of, or an aid to, the existing process.

Others may be concerned that the Taxon Filter could be unduly influenced by special interest groups, which would skew the voting one way or another for any given petition. I doubt that this could ever become a significant problem given that taxonomists tend to work in relatively narrow niches most of the time, and those working on that 'special interest' are probably the most qualified to comment. It also implies a readiness on the part of a significant number of scientists to simultaneously engage in inappropriate behaviour, which I find implausible.

This solution to the dilemma we face in taxonomy is modelled on how we make many decisions in science, by presenting proposals and allowing qualified community members (as during the business of scientific societies) or reviewers (as during the publication process or the grant review process) to decide how we shall collectively

proceed. Moreover, in addition to allowing the taxonomic community to uphold its standards, the Taxon Filter will be a completely transparent process. It will make it easy to follow the arguments for and against a name, it will grant universal access to all interested and qualified parties, and it showcases the manner in which decisions affecting the interaction of taxonomy and nomenclature are made.

An Effective Alternative

While I believe the concept of a Taxon Filter to be of interest in the broader discussion about how to improve the interaction between scientific input and the rules of nomenclature outlined in the *Code*, the original aim of this article was not to promote the Taxon Filter at any cost, but to find a solution to the instability, confusion, and discord caused by individuals who follow the letter of the *Code* but violate its (unenforceable) spirit and ethics. In herpetology, we have reached the point when the scientific community has formally and nearly unanimously rejected the use of names coined by Raymond Hoser since the year 2000. Given that these names have appeared in a single outlet and their production has followed the same pattern that makes them unacceptable to herpetologists, such names could be rendered void for the purposes of nomenclature if the Commission used its plenary power (Article 81) to declare all names proposed in Hoser's *AJH* unavailable. The Commission has the authority to take such an action even if it is not compliant with, or justified by, the *Code*. It is the 'last resort' that the Commission can employ to fix things when the need arises, or pre-emptively when the need is expected to arise.

At issue therefore is not merely whether there are specific Articles in the *Code* that are violated by the production of names in the *AJH*. Given the argumentation I present above, I firmly believe that there are such violations, but all Articles are to some degree subject to interpretation, and disagreement over the issue is likely. Setting aside the focus on which specific Articles would assist with a 'legalistic' solution, perhaps a more suitable approach is to consider what should be done for the good of the community. At this time, the controversy in herpetology has played out in the pages of scientific journals (e.g. *Herpetological Review*, *Zootaxa*), in the *AJH*, and, endlessly and acrimoniously, in public online forums and social media. Personally, I do not engage in the latter but I find the effect on the scientific community, just by exposure to the vitriol in the discussion, disturbing; it potentially damages the perception of science and, specifically, the relationships among taxonomists. I believe that Hoser is not in accord with the spirit and the ethics of the *Code* with his publications and his comportment. The Commission can fix this very effectively by using its plenary power.

There is precedent for this step, albeit for entirely different reasons, and the Commission recently took it in the case of a work by Lacepède (Savage, 2003; Opinion 2104, BZN 62: 55; March 2005). That decision, however, came at the expense of considerable time and effort by many respondents to the case, and it was years in the making. To reduce the impact not only of names coined in the *AJH* but also of the discussion itself as it plays out in the scientific community, the Commission could act in this specific case for the benefit of the herpetological community, without setting a general precedent. Many of my colleagues and I believe that in this case, the spirit of the *Code* is truly more important than the letter of the *Code*. The question before us, as scientists wishing to rely on the *Code*, is whether we

will now act to support the *Code* in its aim ‘to promote stability and universality’ when the rapid information flow of 21st Century science threatens once more to impact nomenclature (as it did in the days before the *Code* permitted electronic publication). Considering that the *Code*’s ‘provisions and recommendations are subservient’ to its aim, I expect that we will.

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INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE

Financial Report for the year 2012

The main work of the Commission during the year was on applications from zoologists in 19 countries to resolve problems of zoological nomenclature. These were published in the *Bulletin of Zoological Nomenclature*, together with Opinions (rulings) made by the Commission on other cases. Further applications were under consideration. Advice was given by the Commission's Secretariat in response to a large number of enquiries on matters of nomenclature from zoologists worldwide.

Total income received by the Trust consisted of £32,533 for all publications produced by the Commission, £52,090 from general donations, £1,720 in bank interest and investment income, £1,358 capital gain on the sale of investments and £200 from lecture fees, bringing the total income for the year to £87,901.

Expenditure in 2012 was £93,177 on salaries and fees of the Secretariat of the Commission, £586 on meetings, ZooBank and general travel, £7,288 for printing the *Bulletin of Zoological Nomenclature* and for the distribution of all publications and £294 for office expenses, bringing the total expenditure to £101,345.

The Secretariat of the Commission was again housed in the Natural History Museum, London, whom we thank for their continuing support. The Trust wishes to express its thanks to all the donors listed below who have contributed to the continuation of its work during the year for the international zoological and palaeontological community.

Donations and grants were received from:

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INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED
31 DECEMBER 2012

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SALE OF PUBLICATIONS

Bulletin of Zoological Nomenclature	£32,360
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 32,533

GRANTS AND DONATIONS

52,090

INTEREST RECEIVED

9

INVESTMENT INCOME

1,711

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200

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93,177

OFFICE EXPENSES

294

PRINTING OF BULLETIN AND DISTRIBUTION OF
PUBLICATIONS

7,288

MEETINGS AND GENERAL TRAVEL

586

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DEFICIT FOR THE YEAR CARRIED TO BALANCE SHEET (£13,444)

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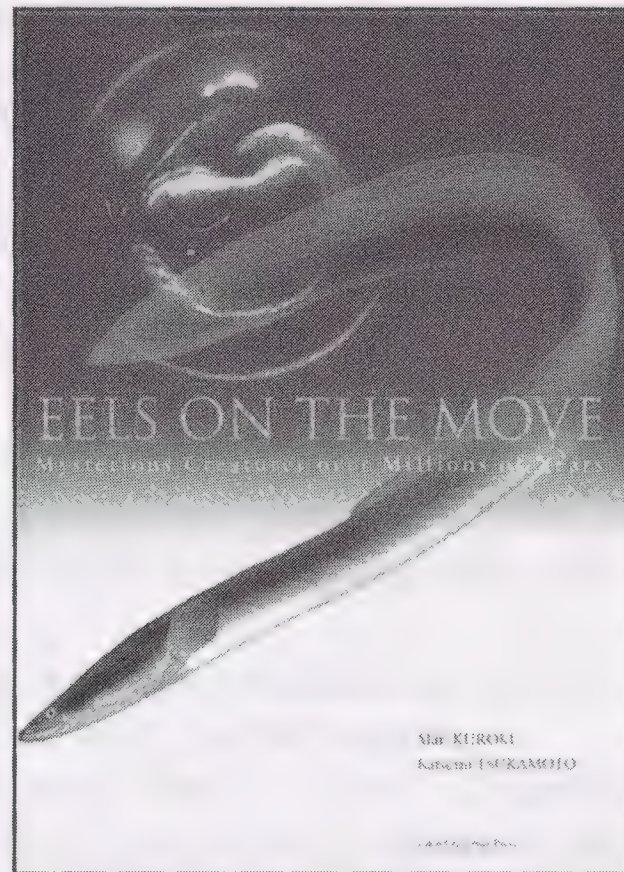
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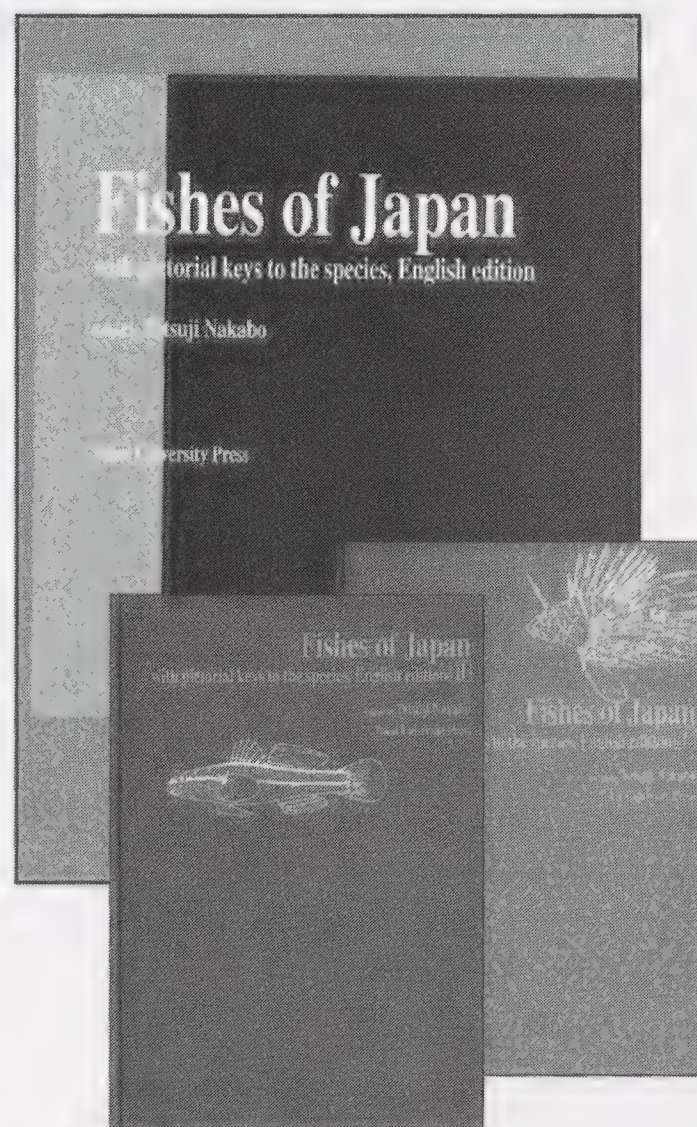
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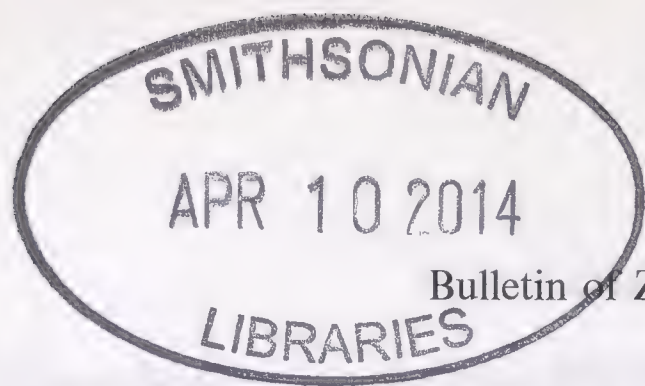
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Abstracts of Applications and Opinions, Comments in full and details of the names published in the *Official Lists and Indexes of Names and Works in Zoology* are posted on the Commission's website (<http://iczn.org>)

Cover image: *Tetrosomus gibbosus* (Linnaeus, 1758) known as the humpback turretfish illustrated by Ernst Haeckel in *Kunstformen der Natur*, pl. 42, fig. 10. as '*Ostracion turritus* (Swainson)' [in fact *Ostracion turritus* Forsskål, 1775], which is a junior synonym of *Ostracion gibbosus* Linnaeus, 1758. This image was chosen to commemorate the 180th anniversary of Haeckel's birth and 110th anniversary of publication of his *Kunstformen der Natur* (1899–1904).



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Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the ICZN at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at <http://iczn.org/content/guidelines-case-preparation>) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will, where possible, answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should preferably be sent by e-mail to 'iczn@nhm.ac.uk'.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at <http://iczn.org/content/instructions-comments>).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at <http://list.afriherp.org/mailman/listinfo/iczn-list>.

(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to iczn@nhm.ac.uk.

New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 70, part 4, 20 December 2013) went to press. Under Article 82 of the Code, the prevailing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3647: *Broghammerus* Hoser, 2004 (Reptilia, Serpentes, PYTHONIDAE); *Adelynkimberlea* Hoser, 2012 (Reptilia, Sauria, AGAMIDAE); *Swilesaurus* Hoser, 2013 and *Funkisaurus* Hoser, 2013 (Reptilia, Sauria, GERRHOSAURIDAE): confirmation of the availability of the generic names. R. Hoser.

CASE 3648: *Australiasis* Wells & Wellington 1983 (Reptilia, Serpentes, PYTHONIDAE): confirmation of the availability of the generic name. R. Hoser.

CASE 3649: *Strix omanensis* Robb et al. 2013 (Aves, STRIGIDAE): declaration as a nomen dubium for lack of a holotype. A.T. Peterson.

CASE 3650: *Tapirus pygmaeus* van Roosmalen, 2008 (Mammalia, Perissodactyla, TAPIRIDAE): proposed suppression of the junior synonym *Tapirus kabomani* Cozzuol et al., 2013. M.G.M. van Roosmalen.

CASE 3651: Proposed correcting inappropriate or misleading scientific names with the 'lapsus contrarius'. J.A. Scott.

CASE 3652: The Toxotaxon: a new Article proposed for the Code. J.A. Scott.

CASE 3653: *Acanthurus* Forsskål, 1775 (Osteichthyes, ACANTHURIDAE): proposed conservation by designation of *Chaetodon nigrofuscus* Forsskål, 1775 as the type species. V.D. Demirjian.

CASE 3654: *Plumulites ruskini* Lamont, 1978 (Machaeridia): proposed unavailability of the specific name. Y. Candela.

CASE 3655: *Mesocrangon* Zarenkov, 1965 (Crustacea, Decapoda, CRANGONIDAE): proposed conservation by suppression of *Mesocrangon* Woodward, 1873. M. E. Y. Low & S. De Grave.

CASE 3656: *Cerambyx striatus* Goeze, 1777 (currently *Asemum striatum*) and *Cerambyx striatus* Fabricius, 1787 (currently *Chydarteres striatus*) (Insecta, Coleoptera, CERAMBYCIDAE): proposed conservation of the specific names. J. P. Botero & M. Cupello.

Case 3642***Amalia kaleniczenkoi* Clessin, 1883 (Gastropoda, Stylommatophora, MILACIDAE): proposed conservation of the specific name**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the specific name *Amalia kaleniczenkoi* Clessin, 1883 (currently *Tandonia kaleniczenkoi*, MILACIDAE) for a terrestrial slug by giving it precedence over its senior subjective synonym *Amalia retowskii* Böttger, 1882.

Keywords. Nomenclature; taxonomy; Gastropoda; Stylommatophora; MILACIDAE; *Tandonia*; *Tandonia kaleniczenkoi*; *Amalia retowskii*; terrestrial slug; Europe.

1. *Amalia kalenzkoi* Clessin, 1883 (currently spelled as *kaleniczenkoi*) (p. 39) was introduced for a terrestrial slug species from the Crimea (Ukraine), later also found in Romania and Turkey. The identity of this nominal species has never been disputed (Tryon, 1885; Simroth, 1901; Likharev & Rammelmeyer, 1952; Likharev & Wiktor, 1980; Wiktor, 1987, 1994, 2007 and others).

2. The name *Amalia retowskii* Böttger, 1882 (attributed to ‘Cless.’, p. 98) was mentioned in the description of *Amalia hessei* Böttger, 1882 from Greece with a brief description indicating only the presence of 12–13 furrow folds. Later, this name was considered to be a senior synonym of *Amalia kaleniczenkoi* (see Welter-Schultes, 2012) and, erroneously, as a nomen nudum (Likharev & Wiktor, 1980; Wiktor, 1987; and others). In view of its brief description *Amalia retowskii* could be considered a nomen dubium. No type specimens are known to exist. Böttger attributed the name to Clessin, but the type materials for Clessin’s names are mainly unknown, including *Amalia kaleniczenkoi* and all other taxa introduced from the Crimea (Sysoev, Schileyko, 2009). As currently understood the species differs from *Amalia cristata* Kaleniczenko, 1851 (currently *Tandonia cristata*, also from the Crimea) mainly by features of its reproductive system and coloration (Likharev & Wiktor, 1980; Wiktor, 1987), but not by the number of the furrow folds. After its original description, the name *Tandonia retowskii* (Böttger, 1882) was not used as valid until 2012 (Balashov & Gural-Sverlova, 2012; Welter-Schultes, 2012), except by Welter-Schultes on the website <http://www.animalbase.org/> and some other Internet sites. Welter-Schultes (2012) concluded that *Amalia retowskii* Böttger, 1882 was not a nomen nudum and should be used for this species instead of the junior synonym *Amalia kaleniczenkoi* Clessin, 1883. This, however should not be followed because *Amalia retowskii* should have been declared a nomen oblitum under Article 23.9.2 of the Code, as the conditions of both Articles 23.9.1.1 and 23.9.1.2 were met. Clessin’s name has been used in more than 25 published works published by more than 10 authors in the last

50 years (Damjanov & Likharev, 1975; Likharev & Wiktor, 1980; Wiktor, 1983, 1987, 1994, 2007; Grossu, 1983; Schütt, 1996, 2001, 2005, 2010; Popov et al., 1997; Popov & Beskaravajnyj, 1998; Popov, 1999; Sverlova, 2003; Korol, 2003; Sverlova & Gural, 2005; Kantor & Sysoev, 2005; Wiktor & Jurkowska, 2007; Sverlova et al., 2007; Egorov, 2008; Sysoev & Schileyko, 2009; Leonov, 2009; Balashov, 2012; Gural-Sverlova & Gural, 2012 and others). Balashov & Gural-Sverlova (2012, p. 98) used the name *Amalia retowskii* as a valid senior synonym of *Amalia kaleniczenkoi*. However, that was not done deliberately by the authors, but was the decision of the editor apparently following a reviewer's suggestion.

3. Welter-Schultes (2012) argued that the correct spelling is *Amalia kalenzkoi* Clessin, 1883, not *Amalia kaleniczenkoi* Clessin, 1883, 'since the misspelling was not clear in the original source itself' and it could not 'be considered as an inadvertent error under Art. 32.5'. The species was named in honour of Ukrainian malacologist I.O. Kaleniczenko (1805–1876), who published the first paper on slugs of the Crimea (Kaleniczenko, 1851). The species name was probably corrected by Tryon (1885) and generally accepted as '*kaleniczenkoi*' in all following works except Damjanov & Likharev (1975). Therefore, the spelling '*kaleniczenkoi*' is in prevailing usage and should be conserved under Article 33.3.1 of the Code (incorrect subsequent spelling in prevailing usage).

4. The name *Amalia kaleniczenkoi* Clessin, 1883 is in prevailing usage but cannot be conserved without a Commission's ruling because of the recent citations of its little-used senior synonym *Amalia retowskii* Böttger, 1882.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to give the name *Amalia kaleniczenkoi* Clessin, 1883 precedence over *Amalia retowskii* Böttger, 1882 whenever the two names are considered to be synonyms;
- (2) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *kaleniczenkoi* Clessin, 1883, as published in the binomen *Amalia kalenzkoi*, with the endorsement that it is to be given precedence over the name *retowskii* Böttger, 1882, as published in the binomen *Amalia retowskii*, whenever they are considered to be synonyms;
 - (b) *retowskii* Böttger, 1882, as published in the binomen *Amalia retowskii*, with the endorsement that it is not to be given priority over the name *kaleniczenkoi* Clessin, 1883, as published in the binomen *Amalia kalenzkoi*, whenever they are considered to be synonyms.

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Acknowledgement of receipt of this application was published in BZN **70**: 215.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to I.C.Z.N. Secretariat, Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3645***Orthezia characias* [Bosc d'Antic], 1784 (Insecta, Hemiptera, ORTHEZIIDAE): proposed validation of the generic and specific names as available**

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Abstract. The purpose of this application, under Articles 78.1 and 81.1 of the Code, is to conserve the established usage of the genus-group name *Orthezia* and species-group name *characias*, both with the author Bosc d'Antic (1784) and to maintain the latter as the type species of *Orthezia*. The original proposal of the name of this scale insect by Bosc d'Antic, intended to be done in the binominal fashion of Linnaeus, was actually done as a hyphenated uninominal originally spelled both as *d'Orthezia-Characias* and *Orthezia-Characias*. It is proposed that this be interpreted as a generic name, whereby universal usage of the subsequent spelling *Orthezia* since at least 1843 now causes the latter to be deemed the correct original spelling of the generic name. Despite universal attribution of the specific name *characias* to Bosc d'Antic (1784), this name is unavailable from that work and under Article 11.6.1 should be reattributed to Amyot & Serville (1843). To avoid confusion, however, the Commission is requested to validate the availability of *O. characias* under the authorship of Bosc d'Antic (1784).

Keywords. Nomenclature; taxonomy; COCCOIDEA; ORTHEZIIDAE; *Orthezia*; *Orthezia characias*; ensign scale insects.

1. [Bosc d'Antic] (1784, p. 173) named a new taxon of insect as *d'Orthezia-Characias* (sic) on the basis of a good description (p. 171) and good illustrations (Pl. I, figs. 1–3). From the title of the article, 'DESCRIPTION DE L'ORTHEZIA-CHARACIAS' (sic, p. 171; also given on p. 176, in the table of contents of the issue and on p. 497 in the table of contents of the volume, as '*Decription de l'Orthezia-Characias*'), it is clear that there were two original spellings of the name, one with the definite article 'l', a common use in 1784, and one with the preposition 'd'. The paper, printed in the February issue of *Observations sur la Physique, sur l'Histoire Naturelle et sur les Arts* for 1784, however, was anonymous until the [Abbé d'Orthez], in the January 1785 issue of the same journal (p. 207), stated that the taxon was named after

him by M. d'Antic. Because no other authorship was included in both articles, the names Bosc d'Antic and Abbé d'Orthez are given in square brackets by applying Recommendation 51D of the Code. For a further discussion of the paper by the [Abbé d'Orthez] (1785) see para. 7. The first authors to use the combination *Orthezia characias* Bosc were Amyot & Serville (1843, pp. 621, 624) (see para. 4). From [Bosc d'Antic]'s (1784) stated intention to follow the example of 'Maître Linné' (p. 172), and from his statement on page 173, it is clear that he intended to name the insect in a binominal manner. This statement reads (in translation), 'It was discovered, according to the Baron de Servières, by the Abbé d'Orthez, who is observing Nature with success. We will join his name, which will form that of the genus, to that of the plant [i.e. *Euphorbia characias*] on which the insect lives, which will be that of the species'.

2. The inclusion of the preposition in the name of the taxon (from 'd'Orthez', the 'name' of the Abbé) cannot easily be dismissed as inadvertent although it could have been carelessness by Bosc d'Antic. Joining of the names of the genus and species by a hyphen, and capitalization of the specific name, must also be regarded as intentional since these features are found in both the title and text although the title is entirely in capitals, and convention at the time would have required an initial capital for the specific name. The hyphen is not being used 'to qualify the application of the name', so it cannot be dismissed under Article 5.3. There is no other provision in the Code concerning conjoined generic and specific names, so, despite the author's intentions; *d'Orthezia-Characias* (under either spelling) seems to be unavailable by reason of being a compound uninomen and not a binomen (Article 5.1). It would be most convenient to treat it as a generic name with no included species, in which case under Article 32.5.2 it would have to be emended, following First Reviser action under Article 24.2, perhaps to *Dortheziacharacias* or *Ortheziacharacias*. Welter-Schultes & Wieland (2012, p. 12), in their remarks on originally hyphenated generic names, claimed that 'the Code does not provide a regulation for how to treat compound genus-group names that were published as separate words connected by a hyphen'. Article 32.5.2 states, however, 'A name published with a . . . hyphen . . . , is to be corrected'. This mandate pertains to genus-group and family-group, not just species-group names, even though the explicit instructions in Article 32.5.2.3 to remove the hyphen only pertain to species-group names. Whatever correction might be envisioned for a hyphenated genus-group name is, in fact, irrelevant in the present case, because of the subsequent major change in spelling described in the next paragraph.

3. To our knowledge, the first authors to use *Orthezia* and *characias* as separated generic and specific names were Amyot & Serville (1843, pp. 621, 624) to whom both names might plausibly be attributed (see para. 4 below). The generic name *Orthezia*, never attributed other than to d'Antic, Bosc or Bosc d'Antic, 1784, together with the name of the purported type species *O. characias*, likewise so attributed, has been in use until the present day. Although it may have been regarded as a convention to associate the genus and species names, which were thus interpreted as separate words as Bosc d'Antic had intended, the original conjoined spelling has apparently remained unnoticed for almost 230 years, so neither the first nor any later usage of *Orthezia* qualifies as an emendation of the longer hyphenated name even if the original name is regarded as a genus, but it can be regarded as an incorrect

subsequent spelling (Article 33.3). Having soon come into universal usage (see citations below), *Orthezia* would now be regarded under Article 33.3.1 as the 'correct original spelling' of the generic name. To illustrate the general acceptance of *Orthezia* as a valid generic name and its attribution to [Bosc d'Antic], 1784, the following references may be cited: White (1877, p. 804), Douglas (1881, p. 176), Fernald (1903, p. 33), Gowdey (1921, p. 13), Danzig (1980, p. 103), Hodgson & Foldi (2006, p. 43), Kozár (2004, p. 322), Miller et al. (2005, p. 367), Morrison (1925, p. 98; 1952, p. 3) and Vea & Grimaldi (2012, p. 779). A list of over 125 additional references demonstrating the universal usage of *Orthezia* as a valid genus-group name has been provided to the Secretariat, and over 550 references mentioning the name can be found in the catalogue of ORTHEZIIDAE by Miller et al. (2005).

4. This argument cannot be applied to the specific name, however. As was noted above, the first authors to refer to this taxon afterwards and to use *characias* as a separated specific name from *Orthezia* were Amyot & Serville (1843, pp. 621, 624). Importantly, Amyot & Serville (1843, p. 620) recognised *Orthezia* under the authorship of Bosc while also relegating the species *Orthezia characias* Bosc, 1784 to the synonymy of *Aphis urticae* Linn. 'SN. II. 733. 30', which is Linnaeus (1767). *Aphis urticae*, however, was described earlier by Linnaeus (1758, p. 453). The nomenclaturally correct authorship of *characias* (and also of *Orthezia* if the argument given in para. 3 is rejected) appears to be Amyot & Serville, 1843. Although these authors explicitly proposed *characias* in the synonymy of another nominal species, before 1961 it was treated frequently as an available and valid name for a taxon, for example by Latreille (1807, p. 175), Westwood (1840, p. 118), Targioni Tozzetti (1868, p. 175), Signoret (1869, p. 872, 1875, p. 390), Fernald (1903, p. 33). As a result, under Articles 11.6.1 and 50.7, *characias* is available and attributable to Amyot & Serville (1843) although it has almost universally been attributed to [Bosc d'Antic], 1784. Additionally, *O. characias* has universally been regarded as the type species of *Orthezia*, by Cockerell (1902, p. 259) and by authors of major works on the genus since Fernald (1903, p. 33), such as Morrison & Morrison (1966, p. 139, (Miller et al., 2005, p. 367) and Kozár (2006, p. 322).

5. Amyot & Serville (1843, p. 619) erected the family-group name ORTHEZIDES for two genera, one being the genus *Orthezia*. This was emended to ORTHEZIIDAE by Enderlein (1914, p. 309) and is currently in use for the ensign scale insects. This family-group name has no available junior synonym.

6. Destructive agricultural pests were described in the genus *Orthezia* before a recent generic revision of the family ORTHEZIIDAE by Kozár (2004). *Orthezia insignis* Browne, 1887, p. 169 (currently *Insignorthezia insignis* (Browne), is a serious greenhouse pest worldwide and destructive to coffee and citrus in East Africa and South America (Bartlet, 1978, p. 136). *Orthezia praelonga* Douglas, 1891, p. 246 (currently *Praelongorthezia praelonga* (Douglas)) causes severe destruction to citrus in South America (Ebeling, 1959, p. 272; Kondo et al., 2013, p. 301). *Orthezia urticae* (Linnaeus, 1758) and its junior synonym *Orthezia characias* [Bosc d'Antic], 1874 have been mentioned in most works on the genus *Orthezia* cited above in Paragraph 3 and any change in nomenclature would cause severe disruption. It is for this reason that use of the plenary power is being sought to preserve the genus-group name *Orthezia* and the species-group name *characias*, both as dating from 1784 and authored by [Bosc d'Antic].

7. The title of the article by the [Abbé d'Orthez] (1785, p. 107) included the name *Coccus-characias*, a uninominal name. Furthermore, at the foot of page 107, the same author introduced the spelling *dorthesia-characias*, another uninominal name. Some later authors introduced the name *Dorthesia* as a genus-group name. Thus, Fabricius (1802, p. 311) under the name *Coccus characias*, listed *Dorthesia characias* Bosc, 1784, in synonymy with *Aphis urticae* Linnaeus. Latreille (1807, p. 175) described the genus *Dorthesia*, listing *Dorthesia characias* Bosc as the first species. The genus *Dorthesia* was treated as a synonym of *Orthezia* by Targioni Tozzetti (1868, p. 722), White (1874, p. 304) and Fernald (1903, p. 33). The genus-group name *Dorthesia* has not been accepted in scale-insect literature since. The genus-group name *Dorthezia* was introduced by Signoret (1869, p. 833) without any description. No matter which spelling of the genus-group name was used by these authors, the genus was always attributed to Bosc although his full name was Bosc d'Antic. As Douglas (1881) has stated, whatever name was adopted for the genus, the original name was restored by Amyot & Serville as according better with its derivation.

8. In the wide range of scale-insect literature, any other combination of authors and dates for the genus-group name *Orthezia* and the species-group name *characias* would cause confusion.

9. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that:
 - (a) the compound uninominal name with the two incorrect original spellings *Orthezia-Characias* [Bosc d'Antic], 1784 and *d'Orthezia-Characias* [Bosc d'Antic], 1784 is an available genus-group name, with the correct original spelling and authorship as *Orthezia* [Bosc d'Antic], 1784;
 - (b) the species-group name *characias* is available from [Bosc d'Antic] (1784, p. 173), despite its original combination in the uninominal name *Orthezia-Characias* or *d'Orthezia-Characias*;
- (2) to use its plenary power to set aside the provisions of Article 11.4 and declare the work [Bosc d'Antic, L.A.G.] 1784, 'Description de l'*Orthezia-Characias*' published in *Observations sur la Physique, sur l'Histoire Naturelle et sur les Arts*, vol. 24, pp. 171–173, pl. 1, figs. 2–4 to be available for nomenclatural purposes;
- (3) to place on the Official List of Generic Names in Zoology the name *Orthezia* [Bosc d'Antic], 1784 (gender: feminine), correct original spelling of *d'Orthezia-Characias* [Bosc d'Antic], 1784 or *Orthezia-Characias* [Bosc d'Antic], 1784, type species by monotypy *characias* [Bosc d'Antic], 1784, as published in the compound uninominals *Orthezia-Characias* and *d'Orthezia-Characias*, as ruled in (1)(a) above;
- (4) to place on the Official List of Specific Names in Zoology the name *characias* [Bosc d'Antic], 1784 (type species of *Orthezia* [Bosc d'Antic], 1784, as published in the compound uninominals *Orthezia-Characias* and *d'Orthezia-Characias*), as ruled in (1)(b) above;
- (5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
 - (a) *Orthezia-Characias* [Bosc d'Antic], 1784, deemed, as ruled in (1) above, an incorrect original spelling of *Orthezia* [Bosc d'Antic], 1784;

- (b) *d'Orthezia-Characias* [Bosc d'Antic], 1784, deemed, as ruled in (1) above, an incorrect original spelling of *Orthezia* [Bosc d'Antic], 1784;
- (6) to place on the Official List of Works Approved as Available for Zoological Nomenclature the work [Bosc d'Antic, L.A.G.], 1784, 'Description de l'Orthezia-Characias' published in *Observations sur la Physique, sur l'Histoire Naturelle et sur les Arts*, vol. 24, pp. 171–173, pl. 1, figs. 2–4.

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Case 3643

***Mutilla clytemnestra* Fox, 1899 (currently *Dasymutilla clytemnestra*) and *Mutilla clytemnestra* Péringuey, 1899 (currently *Mutilla dasya* Péringuey, 1899): maintenance of current usage (Insecta, Hymenoptera, Aculeata, VESPOIDEA, MUTILLIDAE)**

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Abstract. The purpose of this application, under Articles 23.9.3, 78.1 and 81.2.1 of the Code, is to maintain usage of the names *clytemnestra* Fox, 1899 (currently *Dasymutilla clytemnestra*) and *dasya* Péringuey, 1899 (currently *Mutilla dasya*) through suppression of the senior objective synonym *Mutilla clytemnestra* Péringuey, 1899 for the purposes of both the Principle of Priority and the Principle of Homonymy.

Keywords. Nomenclature; taxonomy; Hymenoptera; VESPOIDEA; MUTILLIDAE; *Mutilla*; *Dasymutilla*; *Mutilla clytemnestra*; *Dasymutilla clytemnestra*; *Mutilla dasya*; velvet-ant; Nearctic; Afrotropical.

1. Péringuey (1899a, p. 360) proposed the name *Mutilla clytemnestra* for a new species of velvet-ant (MUTILLIDAE) from South Africa; the paper in which it appeared was published in March 1899, as printed on the cover of that part of the journal and confirmed in the fore-pages of the journal issued in December 1899.

2. Fox (1899, pp. 233 (in key), 246) proposed the name *Mutilla clytemnestra* for a new species of MUTILLIDAE from the U.S.A.; the paper in which it appeared was 'issued April 17, 1899', as printed on its cover. Although the various signatures included in the paper are imprinted with different dates (starting with January 1899 and progressing to March 1899, the name *M. clytemnestra* appearing in signatures dated January and February), there is no evidence that the journal concerned was issued in parts at that time; it appears, rather, that those dates refer to when the applicable pages were compiled or printed (Brown 1964; Neal Evenhuis, pers. comm., August 2013). All indications are, thus, that the printed date of 17 April 1899 must be accepted as the actual date of publication of the paper.

3. Péringuey (1899b, p. 450), in December, stated that his *M. clytemnestra* was preoccupied, and should be changed into *M. dasya*. He presumably considered that Fox's paper had appeared before his own, perhaps being misled by the dates on the signatures, but it seems that he was mistaken and that his own name actually had priority. On the next page (p. 451) Péringuey (1899b) provided captions for Plate VIII which illustrated his three papers on MUTILLIDAE published in that volume of the journal, and there also indicated *M. dasya* as the correct name for his *M. clytemnestra*.

4. André (1901, p. 338) referred to Péringuey's species as *Mutilla (Barymutilla) stupida* var. *Dasya* [sic]. However, in his comprehensive review of the MUTILLIDAE published in Wytsman's *Genera Insectorum* late the following year (for establishment of this date see Lelej & Brothers, 2008, p. 67), André (1902, p. 32) referred to it as *Barymutilla stupida* var. *Clytemnestra* [sic], presumably considering that the homonymy was no longer an issue since he had removed the Fox species from *Mutilla* Linnaeus, 1758 and placed it in *Ephuta (Ephuta)* Say, 1836 (André, 1902, p. 58).

5. All subsequent references to the Péringuey species have used the name *dasya* (Bischoff, 1920, pp. 211, 220; Bradley & Bequaert, 1928, p. 80).

6. Mickel (1928, pp. 41, 48, 126) placed *Mutilla clytemnestra* Fox in *Dasymutilla* Ashmead, 1899, where it has remained, always under the name *clytemnestra*, and for which there are no junior synonyms (e.g. Mickel, 1936, pp. 32, 45; Hurd 1951, pp. 92, 95; Krombein, 1951, p. 763; Krombein, 1958, p. 103; Manley, 1977, p. 553; Ward et al., 1977, p. 54; Krombein, 1979, p. 1306; Manley, 2000, p. 287). There have been suggestions that it should be regarded as a subspecies of *Dasymutilla coccineohirta* (Blake, 1871) or perhaps even a mere colour variety of it (Mickel, 1928; Hurd, 1951), but such suggestions have not been formally implemented, and are in any case matters of taxonomic preference rather than purely nomenclatural matters.

7. Despite the fact that neither species has been mentioned much in the literature, and the requirements for reversal of precedence set out in Article 23.9.1 of the Code are not met, it would be disruptive to overturn usages which have been in place for over a century, and to require another new name for the Fox species (that which has more often been referred to, and for which there are numerous specimens so identified in collections, this being a fairly common taxon in California, U.S.A.); stability and universality would not be served thereby.

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the name *clytemnestra* Péringuey, 1899, as published in the binomen *Mutilla clytemnestra*, for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *clytemnestra* Fox, 1899, as published in the binomen *Mutilla clytemnestra*, with the endorsement that it is not to be considered invalid by reason of being a junior primary homonym of the suppressed name *clytemnestra* Péringuey, 1899;
 - (b) *dasya* Péringuey, 1899, as published in the binomen *Mutilla dasya*, replacement name for the suppressed name *clytemnestra* Péringuey, 1899;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *clytemnestra* Péringuey, 1899, as published in the binomen *Mutilla clytemnestra*, and as suppressed in (1) above.

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Case 3641***Ascalabotes sthenodactylus* Lichtenstein, 1823 (currently *Stenodactylus sthenodactylus*; Reptilia, Gekkota, GEKKONIDAE): proposed conservation of current usage of the specific name by designation of a neotype**

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Abstract. The purpose of this application, under Article 75.6 of the Code, is to conserve the usage of the specific name of *Stenodactylus sthenodactylus* (Lichtenstein, 1823) for a species of gecko from North Africa by designating a neotype to replace the lectotype. Prevailing usage of the name is threatened by the identity of the lectotype, which exhibits the characters of *Stenodactylus mauritanicus* Guichenot, 1850. It is proposed that the existing name-bearing type for the species *Stenodactylus sthenodactylus* (Lichtenstein, 1823) be set aside and a neotype be designated in accord with prevailing usage.

Keywords. Nomenclature; taxonomy; Reptilia; Gekkota; *Stenodactylus*; *Stenodactylus sthenodactylus*; *Stenodactylus mauritanicus*; elegant gecko; Sahara; North Africa.

1. *Ascalabotes sthenodactylus* was established by Lichtenstein (1823, p. 102) who mentioned ‘Aegypt. et Nubia’ as the type locality but did not provide information on the origin of the specimens examined or their whereabouts. Bauer & Günther (1991) and Bauer (2000) demonstrated that the nomen *Ascalabotes sthenodactylus* was based on specimens collected by Hemprich and Ehrenberg in Egypt and Nubia. In Bauer & Günther (1991), a specimen in the Museum für Naturkunde, Berlin, ZMB 437A, was designated as lectotype of *Ascalabotes sthenodactylus* Lichtenstein, 1823.

2. *Stenodactylus mauritanicus* was described by Guichenot (1850, p. 5) based on at least three specimens: two specimens in the Muséum national d’Histoire naturelle (MNHN) collection, Paris, collected by Levaillant and Bravet in the vicinity of Oran, and one specimen collected by himself near Oran and now housed in the same collection. As discussed in more detail in Metallinou & Crochet (2013), these three specimens (MNHN 2339, 6768 and 6769) are all syntypes of *Stenodactylus mauritanicus* Guichenot, 1850.

3. Although *Stenodactylus mauritanicus* was often synonymized with *S. sthenodactylus* (starting with Anderson, 1898), numerous subsequent authors recognized the two forms as subspecies. All authors that did so referred to the eastern and xeric form as *sthenodactylus* and to the western or more mesic form as *mauritanicus* (Doumergue, 1901; Loveridge, 1947; Schmidt & Marx, 1956; Bons, 1957, 1959, 1960, 1972, 1975; Pasteur & Bons, 1960; Bons & Girot, 1962; Kluge, 1967; Salvador & Peris, 1975; Frankenberg, 1975, 1978; Werner, 1982, 1988; Geniez et al., 1992; Geniez & Geniez, 1993; Bons & Geniez, 1996; Schleich et al., 1996; Disi et al., 2001; Disi, 2002; Geniez et al., 2004; Sindaco & Jeremčenko, 2008). Baha El Din (2006, p. 81) showed that *mauritanicus* is a valid biological species that is mostly parapatric, but locally sympatric, with *sthenodactylus*. It retains its morphological and ecological differences from *sthenodactylus* even in areas of sympatry. Metallinou et al. (2012) showed that the two species can be differentiated genetically and confirmed that *mauritanicus* is distributed along the western and northern margins of the Sahara as far east as Egypt, while *sthenodactylus* is not restricted to eastern North Africa as previously believed (for example Sindaco & Jeremčenko, 2008), but has a wide distribution in the Sahara as far west as Mauritania. These two taxa, which have long been recognized as distinct but treated as subspecies, are thus best regarded as two distinct species.

4. During a revision of the nomenclatural status of the nomina available for the African species of the genus *Stenodactylus*, Metallinou & Crochet (2013) realized that specimen ZMB 437A (the lectotype of *Ascalabotes sthenodactylus* Lichtenstein, 1823) in fact belongs to the species *Stenodactylus mauritanicus* Guichenot, 1850 (see Metallinou & Crochet, 2013, Fig. 1, for photos of the specimen). Firstly, the morphology of this specimen is typical of *S. mauritanicus*: the snout profile is strongly convex and the nostrils do not project much (see Baha El Din, 2006). Secondly, according to Bauer (2000), this specimen was collected either in ‘Tscheile’ (= el Achterieh, now Al Dukhaylach, 31°08’N 29°49’E according to Bauer et al., 2003) or Abusiris (an archeological site located close to Burg El Arab, 30°55’N 29°32’E). These localities are both in the mesic coastal Mediterranean area west of the Nile delta, where, according to Baha el Din (2006) and Metallinou et al. (2012), only *S. mauritanicus* occurs nowadays; *S. sthenodactylus* occurs in more xeric habitats further inland. Maintaining specimen ZMB 437A as lectotype of *Ascalabotes sthenodactylus*

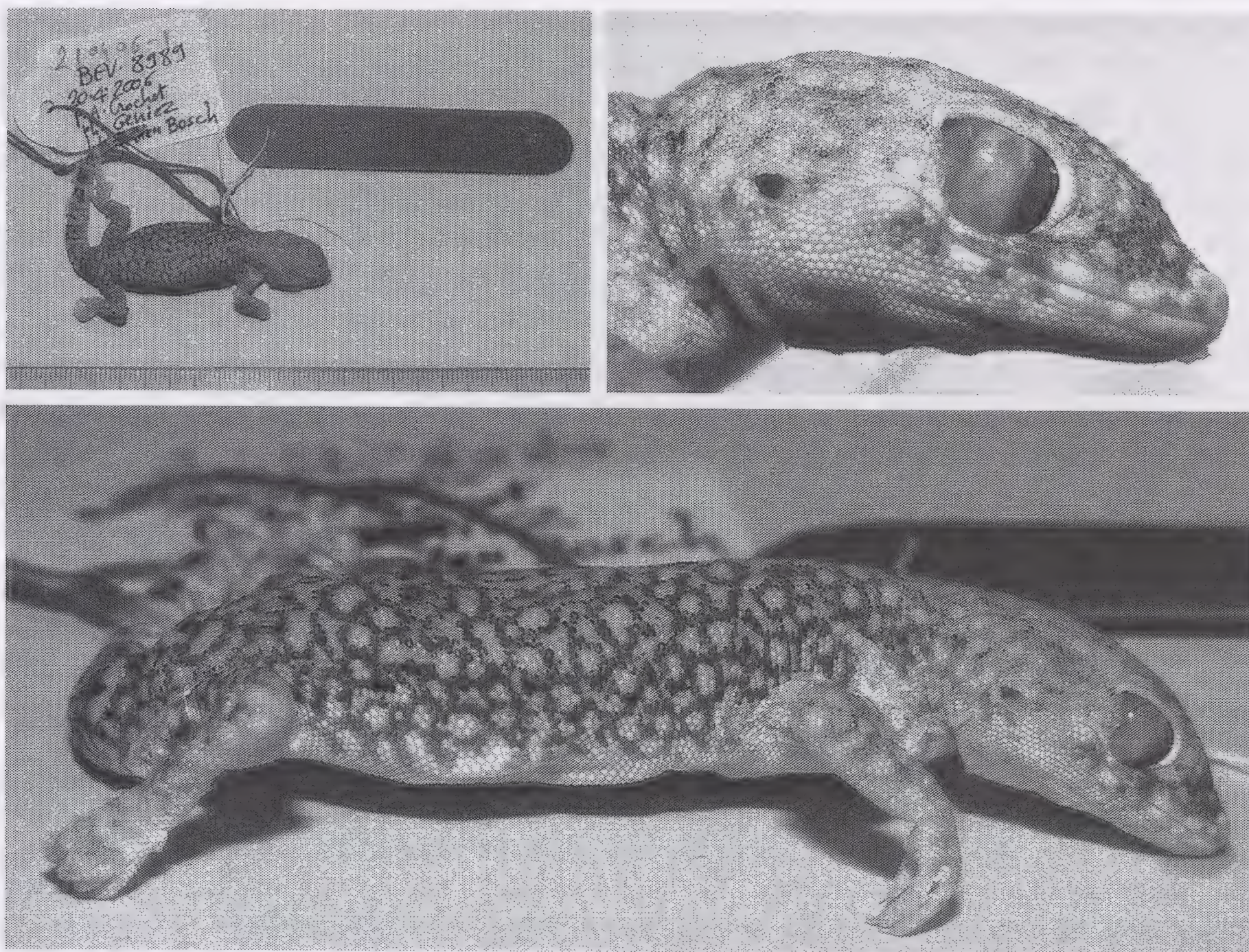


Fig. 1. Specimen MNHN 2012.0250, Muséum national d'Histoire naturelle, Paris; an adult female collected from Wadi El Natrun, Egypt (Lat: 30.4233/Long: 30.2928, elevation -10 m) proposed neotype of *Ascalabotes sthenodactylus* Lichtenstein, 1823.

would result in applying the name *S. sthenodactylus* to the mesic, coastal North African species currently known as *S. mauritanicus* (which has often been the case until recently since the validity of the taxon *mauritanicus* was not universally recognized). However, most of the populations of what was universally called *Stenodactylus sthenodactylus* until now (the inland North African species) would have to be called *Stenodactylus savignyi* (Audouin, 1827) (type locality: most likely Egypt, possibly Israel) since this is the oldest available name for this taxon (see Metallinou & Crochet, 2013). This would clearly threaten prevailing usage, hence violating Article 75.6 of the Code.

5. To maintain stability for the name *S. sthenodactylus*, we propose that the lectotype of *Ascalabotes sthenodactylus* be set aside, and a neotype be designated in accord with currently accepted usage of the name, following Article 75.6 of the Code. The proposed neotype (MNHN 2012.0250, formerly BEV.8989) comes from northern Egypt close to the original type locality. It was collected in Wadi El Natrun, 1.3 km north of the northern tip of lake az Zuqum (= Buhayrat az Zuqum = Birket d el Zugm) (Lat: 30.4233 / Long: 30.2928, elevation -10 m) on 20/04/2006 by P.-A. Crochet, P. Geniez and H. in den Bosch. It exhibits a typical *S. sthenodactylus* phenotype and mitochondrial DNA. Two nuclear genes (RAG2 and MC1R) also revealed only *S. sthenodactylus* alleles. There is a DNA sample available for this specimen (Salvador Carranza's DNA samples collection, at the Institute of Evolutionary Biology) and a tissue sample is still kept in the tissue collection of the

Biogéographie et Écologie des Vertébrés team, EPHE-UMR 5175 CEFE in Montpellier (BEV.T388). Mitochondrial and nuclear DNA sequence data for this specimen are available in GenBank (see below).

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for *Ascalabotes sthenodactylus* Lichtenstein, 1823 and to designate as neotype specimen MNHN 2012.0250, Muséum national d'Histoire naturelle, Paris (formerly BEV.8989 from the collection of the Biogéographie et Écologie des Vertébrés team, EPHE-UMR 5175 CEFE in Montpellier); an adult female collected from Wadi El Natrun, Egypt (Lat: 30.4233/Long: 30.2928, elevation –10 m), DNA GenBank accession numbers KC190520 (12S rRNA), KC190733 (16S rRNA), KF667509 (RAG2) and KF667510 (MC1R);
- (2) to place on the Official List of Specific Names in Zoology the name *sthenodactylus* Lichtenstein, 1823, as published in the binomen *Ascalabotes sthenodactylus* and as defined by the neotype designated in (1) above.

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Case 3629***Vipera latastei* Boscá, 1878 (Reptilia, Serpentes, VIPERIDAE): request for conservation of the original spelling**

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Abstract. There are multifaceted arguments concerning the correct spelling (*latasti* or *latastei*) for the viper named for Fernand Lataste by Boscá in 1878. This application under Article 78.2.3 of the Code seeks confirmation that Boscá (1879) acted as the deemed First Reviser (Article 24.2.4), and requests the Commission to rule that *latastei* Boscá, 1878 is the correct original spelling, that *latasti* Boscá, 1878 is an incorrect original spelling (Article 32.4), and that the names be placed on the Official List and Index respectively.

Keywords. Nomenclature; taxonomy; Serpentes; VIPERIDAE; *Vipera*; *Vipera latasti*; *Vipera latastei*; Iberian Peninsula; North Africa; Lataste's Viper.

1. Boscá (1878), described a new 'forme' of viper from the Iberian Peninsula, and proposed the name '*Vipera Latasti*' (honouring Fernand Lataste) for it, should it be recognized at specific rank; however, it was twice referred to as *Vipera latastei* in the caption for plate 4 (p. 201, figs. 1 and 4). The 'Explication des planches' for plate 4 reads as 'fig 1 et 1^a. *Vipera Latastei* Bosca. . . . Fig. 4. *Vipera Latastei* Bosca, grandeur

naturelle'. It is clear from this that the name *latastei* is attributed to Boscá. In the same volume, the spelling *latasti* is used again in the 'Index des espèces décrites ou citées (p. 353) and in 'Espèces nouvelles décrites dans le Bulletin de 1878' (p. 355).

2. The following year, Boscá (1879) again used the name *Vipera latastei*, notably commenting that he wanted to rectify the brief description previously presented, and in a footnote (p. 76) clearly referred to his description of the species in 1878. He then devoted nine pages to describing the species, its ecology and distribution in the Iberian Peninsula, and followed this detailed review with a formal description in Latin (1879, p. 85) under the heading '*Vipera Latastei* Boscá'. Boscá's use of one of the spellings as valid means that he may be deemed to be the First Reviser under Article 24.2.4 of the Code, provided that both spellings were mentioned. Boscá (1880, 1881) used the name *Vipera latastei* again in subsequent years.

3. The 'Bulletin de la Société Zoologique de France pour l'année 1878, 3^e année' has I-XV + 361 pages and seven plates. There is also an unnumbered 'Errata' sheet bound between pages 201 and 203 that refers back to errata on pages 137, 147, and 148. The publication date for the plates is unknown, but nineteenth century journals frequently published plates after publishing the relevant articles. Plates 1 through 4 were signed by lithographer J. Terrier. The relationships between only plates V–VII and the articles they accompany are mentioned in the text. Page 342 contains an 'Avis' explaining that 'La planche V, tirée depuis près de deux ans, porte par erreur le titre suivant: Bull. Soc. Zool. 1877, pl. III' (it actually illustrates an article which appeared in the previous volume) and 'La planche VI se rapporte au mémoire de M. Tapparone-Canefri ...' (which refers to the article on pp. 244–277). On page 315 'voir la planche VII' appears, and on page 328 there is an 'explication de la planche VII'. On pages 129–132 there are references to 'planches' 1 through 13, which correspond to the figures on plate 3 although there is no reference to the plate itself. There is no further indication in the text regarding the relationship between plates 1 through 4 and their articles. Alonso-Zarazaga (2013), based on information provided by I. Ineich and Jean-Loup D'Hondt (which has turned out to be inaccurate), argued that pages 1–108 of the Bulletin correspond to the first part, pages 109–200 to the second part and pages 201–362 to the third and fourth double part. Alonso-Zarazaga concluded that the 'Explication des planches' for plate 4 (p. 201) was published later than the part containing the description of *Vipera latasti*, and for that reason Boscá (1879) could not be the First Reviser choosing between his different original spellings under Article 24.2.4, because both spellings were not published simultaneously. Close inspection of printed pages near binding margins of the copy of the Bulletin in the Madrid Museum clearly shows that page 201 is printed on the same folded piece of paper (signature) as pages 200 and 199. Pages 200 and 199 were obviously printed at the same time as page 198 because page 199 continues the note 'Mon cher Secrétaire Général' initiated on page 198 and signed by E. Perrier on page 199. The 'Explication des planches' extends over two pages, 200–201, forming the logical end to a part. Page 202, unnumbered and without text, possibly signals the end of the second part, as the same unnumbered and text-free feature is observed with page 108, the last page of the first part. However, the 'Errata' sheet (two unnumbered pages) was almost certainly also published at the same time since its inclusion would indicate a fascicle of 8 pages starting on page 197, as indicated by a number at the bottom right of that page (most fascicles are 16 pages, as is usual, but those completing a part are

sometimes smaller, and 8 pages are easily accommodated). From this information, we conclude that *latasti* and *latastei* were definitely published simultaneously and that Boscá (1879) should be deemed to be the First Reviser under Article 24.2.4. This means that the spelling *latasti* must be considered an incorrect original spelling and therefore unavailable (Article 32.4); it is likely that it resulted from an error, but that cannot be proven.

4. As a result of confusion about the date(s) of publication, and even authorship (summarized in Alonso-Zarazaga, 2013), both spellings have been used by many authors. In addition, Boulenger (1896), in his Catalogue of Snakes of the British Museum, included *Vipera latastei* Boscà, 1878 in the synonymy of what he called *Vipera latastii*, a name he used in other influential works (1891, 1913); few followed his lead, and *latastii* should be considered a subsequent misspelling.

5. We compiled a list of 255 references in which *Vipera latastei* and *Vipera latasti* appear; 185 use *latastei* and 70 use *latasti*. Since its description in 1878 *Vipera latastei* has generally prevailed over *Vipera latasti* in the literature. The spelling *latastei* has been adopted by 175 authors in 100 publications during the last 25 years (1989–2013), whereas the spelling *latasti* has been adopted by 99 authors in 38 publications during the same period. The list of references demonstrating usage of the name *latastei* is held by the Commission Secretariat.

6. The use of the name *latasti* causes confusion in several ways, one of which is database utility. A Zoological Record search (September, 2013) returned 78 publications for *Vipera latastei* and 30 publications for *latasti*; the ISI Web of Science returned 33 references for *Vipera latastei* and 8 for *Vipera latasti*. An additional search using Scopus returned 32 references for *Vipera latastei* and 12 for *Vipera latasti*. Perhaps more important is the fact that legal texts involving conservation action at regional, national, and international levels use the name *latastei*. It would be very difficult to change to another spelling.

7. Saint Girons (1977) stated that *latasti* was a lapsus, and thus the correct spelling should be *latastei*. As with several other authors, he apparently was unaware of the two examples spelled as *latastei* on page 201. Golay et al. (1993) considered *Vipera latastei* a justified emendation, but Alonso-Zarazaga (1998) apparently treated *latastei* Boscá, 1879 as an unjustified subsequent spelling and recommended the use of *latasti*, a conclusion reinforced in Alonso-Zarazaga (2013). McDiarmid et al. (1999) also considered *latastei* to be a justified emendation based on Boscá's (1879) action as First Reviser, while David & Ineich (1999) presented their review arguing their action was that of First Reviser and also selected *latastei* as the correct name for this viper.

8. In spite of these varied efforts, an unsatisfactory situation and nomenclatural confusion remains. We therefore request a Commission ruling under Article 78.2.3 of the Code.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its specific powers to confirm that:

- (a) *latastei* Boscá, 1878 is the correct original spelling of the specific name for the viper named for Fernand Lataste, as selected by Boscá (1879), deemed to be the First Reviser (under Article 24.2.4);

- (b) *latasti* Boscá, 1878 is an incorrect original spelling and therefore unavailable (under Article 32.4);
- (2) to place on the Official List of Specific Names in Zoology the name *latastei* Boscá, 1878, as published in the binomen *Vipera latastei*, the correct original spelling, as confirmed in (1)(a) above;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *latasti* Boscá, 1878, as published in the binomen *Vipera latasti* the incorrect original spelling, as confirmed in (1)(b) above.

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Comment on the proposed conservation of the specific name *Krynickillus maculatus* Kaleniczenko, 1851 (currently *Limax maculatus*; Gastropoda, Stylommatophora, LIMACIDAE)

(Case 3639; see BZN 70: 218–220)

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This is a rare case of a species that has two different correct names when placed in different genera: *Limacus maculatus* (Kaleniczenko, 1851) if placed in the genus *Limacus*, and *Limax (Limacus) ecarinatus* Boettger, 1881 if placed in the genus *Limax*. Some authors in the recent past have used *Limax* Linnaeus, 1758; others have used *Limacus* Lehmann, 1864 as the genus for this species. The name *Limax maculatus* (Kaleniczenko, 1851) is incorrect. This situation is undesirable. Balashov suggests suppressing the senior homonyms of *Limax maculatus*, so that *Limax maculatus* (Kaleniczenko, 1851) becomes a correct name. Alternatively the name *Limax ecarinatus* could be used for the species, in the form *Limacus ecarinatus* (Boettger, 1881) if placed in the genus *Limacus*, but in this solution *K. maculatus* Kaleniczenko, 1851 would have to be suppressed. For both solutions the Commission would have to decide. I support Balashov's proposal.

Comment on *Phoronis* Wright, 1856 (Phoronida) and *P. muelleri* Selys Longchamps, 1903: proposed conservation of both names

(Case 3626; see BZN 70: 157–159, 249)

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I write to point out some inexact and missing data in this application. I already pointed out the same problems addressed by Nielsen (BZN 70: 157–159) in my nomenclatural review of the Phylum Phoronida for the respective volume of the *Fauna Ibérica* series (Alonso-Zarazaga, 2006). However, my comments seem to have been overlooked when preparing this application, maybe because of being written in Spanish (although most volumes of this series have nomenclatural comments and acts in the Appendix). They were an answer to the nomenclature proposed by the authors of the taxonomical part (defended by Emig et al., 2006, pp. 54–56), which was not Code compliant for the same reasons exposed by Nielsen in Case 3626 (parallel nomenclatures for adults and larvae, and application of a so-called 'status quo' derived from Silén's (1952) 'unofficial proposal'). I commented on the disqualification using 'ad hominem' arguments of the names and nomenclatural propositions presented by Dalla Torre (1889) and Poche (1903): they could not write on Phoronida because they were not specialists in this group. I also criticized the wrong use the authors made of several articles of the Code (namely 23.2 and 23.9.2) to support their

incorrect nomenclature. Moreover, they argued [my translation from Spanish]: ‘... in the present hierarchy of Phoronida, no family has ever been described and there is no available diagnosis for this rank.’ I showed then in my answer this was a false assertion, and I will give more data on this point below.

Nielsen (BZN 70: 158, para. 7) recognizes the existence of a family PHORONIDAE, attributing it to Hatschek, 1888, as for the class Phoronida, the only taxon described by this author. Whereas the latter is true (for the class only), the first is not, and the author has missed three other available names. More information on higher taxa names intended for *Phoronis* and its allies (Phoronaria Haeckel, 1896, Phoronia Haeckel, 1896, Actinotrochoidea Poche, 1908, Vermiformiae Délage & Hérourard, 1897, Phoronidea Lang, 1888, Actinotrochidea Poche, 1908 and Diplochorda Masterman, 1896) is available in Alonso-Zarazaga (2006).

The following names have been proposed for a family in Phoronida:

1. PHORONIDAE Hatschek, 1881 (p. 72), incorrectly given as of 1880 in Alonso-Zarazaga (2006, p. 209). This name has no description but it is available by indication by virtue of Article 12.2.4, even if the selected stem is incorrect. The name *Phoronis* comes from the Greek proper noun φορωνίς (an eponym of Io), genitive φορωνίδος, whose Latinized stem is Phoronid-.

2. PHORONIDAE Czerniavsky, 1881 (p. 287). This taxon is described as new and has a short description, it is available as well. I do not know the relative precedence of this and the previous name.

3. PHORONIDIDAE Dalla Torre, 1889 (p. 90). This name is correctly formed, and, since no author is mentioned, it is best considered to be a subsequent spelling of PHORONIDAE.

4. ACTINOTROCHIDAE Poche, 1903 (p. 466). An available name based on *Actinotrocha* Müller, 1846.

I consider advisable that the author of Case 3626 completes his application by requesting the placement of ACTINOTROCHIDAE Poche, 1903 in the Official Index of Rejected and Invalid Family-Group Names in Zoology and by requesting as well the placement in the Official List of Family-Group Names in Zoology of the name PHORONIDAE, with the appropriate authorship, to have the spelling fixed. I understand that this spelling is in prevalent usage and should not be modified to PHORONIDIDAE, under the provisions of Article 29.3.1.1.

And finally, Nielsen’s designation of type species for *Phoronis* (BZN 70: 157, para. 2) is invalid, since there is at least one previous designation (Emig et al., 2006, p. 39) for the same species, *P. hippocrepeia* Wright, 1856. Consequently, I request the Secretariat of the ICZN to modify the wording of Nielsen’s application in para. 10 (2) to read as follows:

(2) to place on the Official List of Generic Names in Zoology the name *Phoronis* Wright, 1856 (gender: feminine), type species by subsequent designation by Emig, Roldán & Viéitez (2006) *P. hippocrepeia* Wright, 1856.

Additional references

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Comment on the proposed conservation of *Kalophrynus* Tschudi, 1838 (Amphibia, Anura, MICROHYLIDAE) by designation of a neotype for its type species *Kalophrynus pleurostigma* Tschudi, 1838

(Case 3618; see BZN **70**: 86–88, 205)

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While we agree with Bouchet's desire to select a museum voucher from which molecular data can be obtained, or for which such data have been obtained and deposited in GenBank, what is desirable in the designation of a neotype is not always possible. Museum specimens of *Kalophrynus pleurostigma* are rare in natural history collections. Currently, no sequences for Sumatran *K. pleurostigma*, which would be from the same island as the original holotype, are available in GenBank. In fact, only four *Kalophrynus* are listed in GenBank: two pet-trade specimens without locality data; one from central Thailand; and the fourth from northern Myanmar. Potentially, the early collection date of the proposed neotype (the year 1905) might permit DNA extraction. At that time, herpetological specimens were still commonly preserved in alcohol, because formalin had not yet become the standard preservation fluid. In the absence of Sumatran material of *K. pleurostigma* that has associated sequences, we conclude that our choice of neotype is sound.

Comment on *Terrapene putnami* Hay, 1906 (Testudines, EMYDIDAE): replacement of the holotype by designation of a neotype
(Case 3628; see BZN 70: 193–198)

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We write in support of the proposal to replace the existing holotype of *Terrapene putnami* Hay, 1906 with a neotype as proposed by Ehret (BZN 70: 193–198). Single plastral elements are not particularly diagnostic at the species or genus level and as such do not give adequate material for comparative morphology. In fact most of the diagnostic morphological characters available in turtles require carapace elements (Thomson & Mackness, 2000; Thomson, 2000) and skulls (sensu Gaffney, 1979). For these reasons replacing the undiagnostic holotype with a neotype that is diagnostic is desirable for both nomenclatural and taxonomic reasons.

Case 3628 has clearly outlined the nomenclatural issues with variable applications of the name and uncertainty on how to apply it in relation to both other fossil forms and the living forms of the genus *Terrapene*. In a large and diverse group of species it is unfortunate and inconvenient to be unable to properly allocate names that are available and valid. From a taxonomic point of view it is difficult to propose new combinations or new species without any certainty of where those names already published should be utilized. This becomes a negative impact in that it discourages people from proposing new arrangements because of a fear of an unstable nomenclature.

Therefore, we strongly support the proposal by Ehret to replace the existing holotype (AMNH 6097) with the suggested neotype (UF 3066). The aim of this would be to stabilize the nomenclature of *Terrapene putnami* Hay, 1906.

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Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published

(Case 3601; see BZN 70: 234–237)

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Case 3601 seeks to perpetuate false nomenclature. Those unfamiliar with the controversy over Raymond Hoser's taxonomic contributions to herpetology should take a look at several issues of the *Australasian Journal of Herpetology* (hereafter, *AJH*; available through the website www.smuggled.com/AJHIP1.htm) as well as associated webpages (see the list at www.smuggled.com/faq1.htm) so that they can better appreciate the situation he has created for herpetologists. These names place a significant burden on herpetological nomenclature and, as of this writing, add up to 604 taxon names beyond *Spracklandus*, across all groups of reptiles. Hoser produces taxon names by the dozen in a manner that he proclaims to be compliant with the Code yet which are clearly crafted without the constraints of due scientific process, thus failing to meet the criteria of Article 8.1.1 of the Code (a work 'must be issued for the purpose of providing a public and permanent *scientific* record'; emphasis added).

One may ask how it is even possible that one author, working without examining museum specimens or input from experts in the field and generating insufficient data, produces so many taxonomic decisions across such a wide taxonomic arena in such a short period of time (2012: $n = 280$; 2013: $n = 255$). Examination of the issues of *AJH* shows the pattern: start with one very basic taxon naming section devoid of sections on methodology, specimen lists, new data, original interpretations or illustrations, which is filled with a single text block that includes all the literature on the particular group available; then, after copying and pasting as needed, the listing of literature is changed as appropriate for each treated group, specimens are picked from the lists of others when needed, and an extensive etymology is composed. As a consequence, Hoser's taxon names, *Spracklandus* among them, are almost entirely dubious in their inception, and it is no wonder that this methodology has been heavily and formally criticized in many publications (e.g. Aplin, 1999; Wüster et al., 2001; Borrell, 2007; Wallach et al., 2009; Zaher et al., 2009; Bates et al., 2013; Kaiser, BZN 70: 293–302, December 2013), and by the herpetological community at large (Kaiser et al., 2013).

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The genus name *Spracklandus* Hoser, 2009, was clearly presented chronologically ahead of *Afronaja* Wallach et al., 2009. Therefore, should its publication be judged to be Code-compliant, there is no argument regarding Article 23 (the Principle of Priority). However, given that serious questions were, and continue to be, raised

regarding the circumstances under which this particular issue of the *AJH* was published (Wallach et al., 2009), a close examination of the facts is in order.

After a review of photographs of the copy of Issue 7 of the *Australasian Journal of Herpetology* held by the Australian National Library, which is unquestionably an original copy of the document under scrutiny, it becomes clear that this document does not meet the requirements of Article 8.1.3. Based on the photographs, the following can be stated:

(1) As clearly visible on the first page (Fig. 1A), there is a printer-produced pattern embedded in the black emblem. This pattern is also easily visible on p. 12, which has white writing on a black background. In a normal printing company run of 100 copies or more, such a pattern would be detected as part of the regular quality-control process and suitable adjustments would be made. However, if someone were to home-print individual double-sided copies, as appears to have been the case here, such a pattern may not be detected. A similar almost identical ink pattern is visible on the single-sided copy later received by Van Wallach (Fig. 1B). I believe this shows that there really was no print run of 'numerous identical and durable copies' (Article 8.1.3), as Hoser asserts.

(2) With an ink defect present on a document, such patterns will vary slightly from copy to copy, meaning that it is not possible to produce visually identical copies. Furthermore, the online issue includes colour in its layout, whereas the printed copies are black-and-white with grayscale images. While I think the spirit of the Code should be interpreted here to mean 'identity of content,' I feel it is prudent to include all details.

(3) The position of the staple in the upper portion of the document (Fig. 1C), horizontal near the top of the page and not in the upper left hand corner, as Hoser claims, shows once more that this document was not produced in an edition and that Hoser himself is no longer sure how he produced 'original copies.' There is no printing machine that places staples in the position where these original staple holes are (the library appears to have re-stapled the pages in the exact location of the original staple). Incidentally, the staple in Wallach's copy is vertical along the left margin in the upper left hand corner of the page (Fig. 1D).

(4) The presentation of this work does not reflect the level of durability expected from a 21st Century work compliant with Article 8.1.3. If someone were to request a 'durable copy' of a given document and then received what we can see in the images, I contend that this would be unacceptable. The hallmark of a 'durable' item is that it can withstand repeated handling and the test of time. If this document were to be handled frequently, even if only to open it for reading, there are potential problems with the fastening and the paper itself (showing some fraying after only a few years in a library).

(5) Based on the condition of the copy in the Australian National Library, which all acknowledge is currently the only accessible original copy of this issue, there can be no doubt that the work was printed on a desktop printer and hand-stapled. While the printing medium itself may conform to the Code, much of the initial production of Issue 7 clearly does not. Furthermore, I have seen no proof that there were ever more than a handful of copies produced around the publication date (receipts confirmed only for the Australian National Library, *Zoological Record*, and Robert Sprackland).

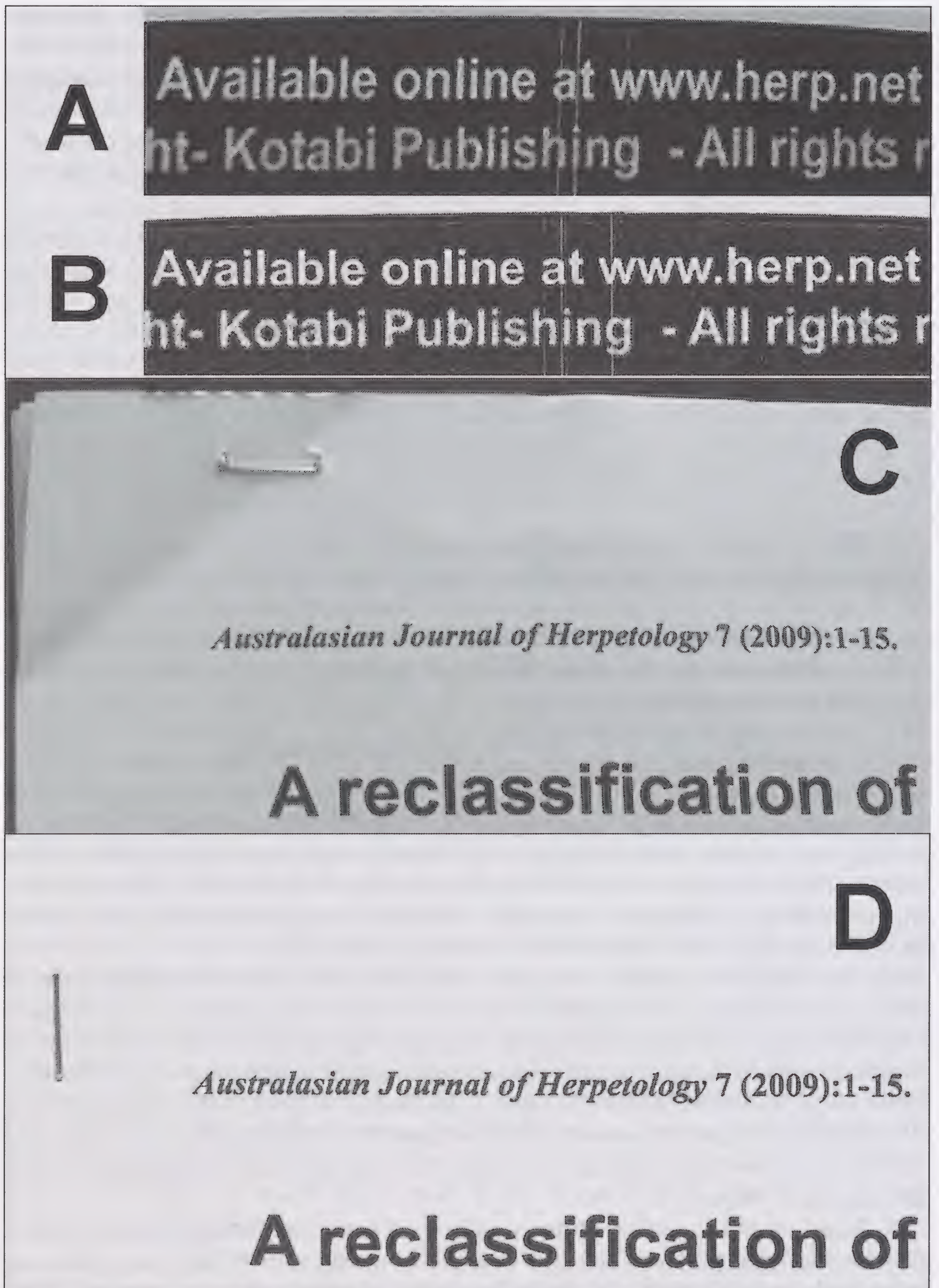


Fig. 1. Details of an original (A, C) and a Van Wallach's copy (B, D) of Issue 7 of the *Australasian Journal of Herpetology*. (A, B) The streaking in the ink running through the logo is very similar, and was probably caused by a worn print roller. (C, D) The position of the staple in (C) demonstrates that the original was hand-stapled. The position and direction of the two staples is different. (A, C) From photographs by Phil May. (B, D) Scans provided by Van Wallach.

I conclude that in addition to violating Article 8.1.1 this work contravenes four tenets of Article 8.1.3. (i) The work cannot be considered as having been published ‘in an edition,’ in the usual meaning and understanding of this word; (ii) there is no evidence that ‘numerous’ copies were made, as ‘numerous’ is commonly understood to mean ‘great in number, many’; (iii) the copies are not ‘identical’; (iv) the copies are not ‘durable’ in the commonly accepted meaning of the word. Therefore this work is not Code-compliant and appears instead to conform to the description in Article 9.12 of the amendment to the Code (ICZN, 2012; formerly Article 9.7) for an item explicitly considered unpublished by the Code. Given that, for decisions relating to the availability and priority of names, key articles of the Code must be adhered to, this work fails several critical aspects. Therefore, taxon names based on taxonomic decisions presented in Issue 7 of *AJH* must be excluded from zoological nomenclature. It also appears to have been the intent of the author to validate the nomenclatural availability of the entire run of the *AJH* (see the title of Case 3601), although the Editor has assured me that such a request was not intended and cannot be part of the Commission’s voting.

A Momentous Decision

The Commission has now been asked to rule on the proposals in Case 3601. I have previously proposed in the pages of this journal (Kaiser, BZN 70: 293–302) that taxon names produced outside of scientific process after the year 2000 (i.e. in violation of the Best Practices proposed by Kaiser et al., 2013) should be considered non-existent for the purposes of nomenclature. If this proposal were to be accepted by the Commission, such names, including *Spracklandus*, would fall outside of the scope of the Code, and the Commission could then formally reject the Case as being outside its jurisdiction, now that it has been formally presented.

I have also argued that the presentation of pseudoscience is but one of many ethical problems besetting science in general and taxonomy in particular (Kaiser, BZN 70: 293–302). While I do not dispute that a wide variety of transgressions against generally accepted scientific norms or ethical scientific conduct occur throughout the sciences, I contend that the problem of errant taxonomy occupies a unique place. Unlike in non-taxonomic situations, where the scientific community can quickly and informally discredit and ignore bad science and freely condemn misconduct, taxonomists are restricted in their response because a formalized set of rules exists in the form of the Code, and because dealing with bad science and misconduct may, as in this case, require an interaction with a council of peers, the Commission. As stated by Dayrat (2005, p. 410), ‘The current codes make taxonomy a peculiar discipline: all taxonomic work is permanent, regardless of its scientific rigor.’ The impact of this unique, Code-generated situation is that the strict application of the Principle of Priority without regard for other factors requires scientists to honour the output of substandard works that would be ignored in other disciplines, while simultaneously incentivizing those seeking scientific immortality without scientific accomplishment to abuse the system.

It may be instructive to investigate possible outcomes of Case 3601, and how the scientific community and the public will perceive them. If the Commission rules in favour of the case, then two taxonomies will emerge in herpetology, one system created, supported, and used by the herpetological community working according to

scientific Best Practices (as formalized through the votes taken by several major herpetological societies; see Kaiser et al., 2013), and one dissident system created by a single person, demonstrably not based on rigorous taxonomic research. The presence of two mutually exclusive taxonomic systems based on completely different premises will doubtlessly result in confusion among users, and it may lead to perpetual nomenclatural instability. It may also lead to the perception that there is a schism in the system, pitting those who uphold the Code in a supportive role for scientific taxonomic principles against those who uphold the Code as a pure, standalone entity unencumbered by those principles. Let me be clear: the current edition of the Code gives the Commission the power to set aside any provision of the Code in the pursuit of stable nomenclature (Article 81 of the Code). If the Commission rules against Case 3601, this would show that nomenclatural stability trumps taxonomy rejected by the herpetological community. The Commission could then also respond favourably to a case brought before it to suppress the *AJH* by using its plenary power, because this would align the trajectory followed by the herpetological community with the Code, avoid the potential for nomenclatural instability, and place those wishing to work outside of scientific principles and the Code of Ethics, on notice that the scientific community will not accept their involvement in taxonomy and the resulting nomenclature unless their taxonomic decisions are produced in accordance with scientific principles (scientific Best Practices). A ruling by the Commission merely to satisfy the Principle of Priority, in my opinion, would constitute too narrow an application of the Code to an issue that ultimately is much broader than the question of what to do with the genus name *Spracklandus*. In the interest of long-term stability in herpetological taxonomy, I believe it is time for the Commission to officially discard its policy of neutrality towards the merit of taxonomic decisions (see Harvey & Yanega, *BZN* 70: 216–217), and, as it begins to deliberate on Case 3601, I urge the Commission to join the worldwide herpetological community in opposing this flawed work.

The International Commission on Zoological Nomenclature is accordingly asked to:

- (1) confirm that Issue 7 of the *Australasian Journal of Herpetology* was not Code-compliantly published, failing to meet the criteria set forth in Article 8.1.1 of the Code;
- (2) confirm that Issue 7 of the *Australasian Journal of Herpetology* was not Code-compliantly published, failing to meet the criteria set forth in Article 8.1.3 of the Code;
- (3) place the name *Spracklandus* Hoser, 2009 on the Official Index of Rejected and Invalid Generic Names in Zoology.

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1. In his submission to the Commission, Hoser seeks to not only to have the generic name *Spracklandus* Hoser, 2009 conserved for a group of African cobras by the Commission but implicitly asks the Commission to decide whether or not his Issue 7 (2009) of his self-published journal, the *Australasian Journal of Herpetology (AJH)*, fully complies with the Code thus making several names and nomenclatural acts published therein available. However, there are several problems with this journal and specifically with the issue concerned. I therefore advocate the suppression of the name *Spracklandus* Hoser, 2009 and the placement of *AJH* on the Official Index of Rejected and Invalid Works in Zoological Nomenclature.

2. *AJH* is a self-published journal of which Raymond Hoser is the publisher, editor and, since its founding in 2009, the exclusive author. Within three months of the first publication, seven issues of *AJH* were produced naming 14 species and subspecies and 3 genera and subgenera, including *Spracklandus* Hoser, 2009. The existence of this outlet was primarily proclaimed in herpetoculture internet forums, and zoologists unlikely to participate in such forums were widely unaware of its existence (see the Code, Appendix B.8, General recommendations).

3. Article 8.1.1 of the Code states that works ‘...must be issued for the purpose of providing a public and permanent scientific record’. Given that publishers, editors and the scientific community as whole make great efforts to retain the integrity of the scientific record by preventing inadequate or unethical works to enter, Article 8.1.1 implies that works must have been produced in a way that enables them to enter the scientific record. Thus, works can only comply with this article if they also comply with the generally agreed and most basic standards in scientific writing, and hence are adequate to make a meaningful contribution to the scientific record. Adherence to these standards lies within the responsibility of authors, editors, and publishers, with the latter two functioning as gatekeepers of the scientific record. Contrary to this, works of poor science, little scientific merit, or produced in violation of scientific principles do not qualify to enter the scientific record and should be rejected immediately by an independent editorial board.

4. Case 3601 states that Issue 7 of *AJH* was made available on 23 March 2009 but parts of the original print run had been distributed a few days earlier to a small group of institutions and individuals. This statement must be seen as evidence for the existence of paper copies, and therefore Article 21.4 of the Code, ‘Date incorrect’ applies and the publication date must be advanced to the date of the first distribution (see Glossary of the Code for ‘date of publication’). However, on the date the issue was distributed, it was not obtainable by the public. The Code explicitly does not recommend the distribution of original works on other than the specified date. Recommendation 21A of the Code states that an author, editor or publisher ‘should not publish, permit to be published, or distribute a work, in whole or in part, for the first time other than on the specified date of publication. . .’.

5. In regard to the first seven issues of *AJH*, it is evident that these issues were produced by printing files on a domestic printer rather than having been professionally produced. While this itself does not render the status of the work noncompliant with the Code, it is impossible to determine the original source from which the printout was generated because both the paper and the online editions include the ISSN for both versions. In the absence of evidence to the contrary, it is not possible to determine whether or not the copies were printed in accordance with Article 8.1.3 or ‘printed on demand.’ The latter would be explicitly excluded by Article 9.7. One of the underlying principles of the Code is to ‘. . .effectively ensure that, irrespective of when and where they were published, names and the descriptions of new taxa would be permanently accessible and could be consulted most easily; moreover, there would be no doubt as to whether any name had been publicly presented in a form identical to all zoologists. . .’ (the Code, Introduction: Development and underlying principles). Although the introduction is not a mandatory part of the Code, it reflects the spirit of the Code and helps to interpret the meaning of its provisions. Taken together the above evidence suggests that *AJH* must be considered as not published and the names presented therein must be considered de facto non-existent for the purpose of zoological nomenclature.

6. If the Commission, however, were to vote in favor of Case 3601 and declare the name *Spracklandus* Hoser, 2009 available, the Commission would thereby compromise the scientific record by opening a backdoor for works not published in adherence to scientific principles to enter the scientific record. This would be an inappropriate action by the Commission and might thereby diminish the influence of the Code in terms of its use in zoological taxonomy and generate user nomenclature that deviates from that compliant with the Code, causing even more confusion and nomenclatural instability. Very few zoologists will readily use the scientific names and concepts coined in the pages of *AJH*. I predict that the majority of herpetologists will follow the recommendations of Kaiser et al. (2013) and continue to ignore *AJH* as a reliable source for nomenclatural and taxonomic information.

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In March 2009, Raymond Hoser published Issue 7 of the *Australasian Journal of Herpetology* (hereafter *AJH*), of which he was then, and has remained since, the sole editor and sole contributing author. In this issue, he proposed the genus *Spracklandus* for the African spitting cobras (type species *Naja nigricollis* Reinhardt, 1843).

At the time of publication of Issue 7 of the *AJH*, Wallach and others were working on a manuscript detailing the division of *Naja* into four subgenera, *Naja*, *Boulengerina*, *Uraeus*, and a new subgenus, *Afronaja*, for the African spitting cobras.

On the *AJH* website, Hoser claimed the availability of a printed version of the journal free of charge at the time of the publication of Issue 7. This changed to a substantial fee shortly after publication of that issue in 2009. Ordinarily, it would be normal practice to assume journal publisher statements of this nature to be correct, however previous experience with this publisher led us to question the wisdom of relying on this assumption. Consequently, Wallach and others made enquiries with Australian libraries (through the Libraries Australia search system of the Australian National Library, which searches all major Australian libraries) and colleagues in Australian museums who we expected would have seen or received hard copies of the journal if indeed they existed. Our enquiries revealed a single hard copy, registered in the Australian National Library, Canberra. The second Australian library copy mentioned by Hoser (BZN 70: 234–237, December 2013), the State Library of Victoria, confirmed that its hard copy Issue 7 of the *AJH* was only received on 28 October 2009, i.e. after the publication of Wallach et al. (2009). This therefore does not constitute evidence for the existence of multiple copies at the time of the original publication. Since the copy Hoser sent to Van Wallach upon his request showed evidence of having been printed on demand, we concluded that there was no evidence to suggest the existence of a hard copy journal compliant with the requirement of Article 8.1.3. of the Code that ‘it must have been produced in an edition containing simultaneously obtainable copies by a method that assures numerous identical and durable copies.’ In the absence of clear evidence of *Spracklandus* being published within the meaning of the Code, Wallach et al. (2009) proposed the subgenus *Afronaja* for the African spitting cobras (type species *Naja nigricollis* Reinhardt, 1843), and considered the name *Spracklandus* to be unpublished.

Following the publication of Wallach et al. (2009), Hoser made representations to the editors of *Zootaxa* regarding the priority of his genus *Spracklandus*. He was invited to submit a rebuttal of Wallach et al. on three separate occasions by *Zootaxa*’s subject editors David Gower and Aaron Bauer, and Editor-in-Chief Zhi-Qiang Zhang, but failed to submit a manuscript to the journal (D. Gower, pers. comm.).

We maintain that Issue 7 of the *AJH* cannot be considered published within the meaning of the *Code*. Article 8.1.3, as in force in 2009, specifically required that any new name ‘must have been produced in an edition containing simultaneously obtainable copies by a method that assures numerous identical and durable copies.’ In our view, any publication ‘held together with a staple at the top left corner’, as described by Hoser (2013b) for Issue 7 of the *AJH*, fails the requirement of durability specified by Article 8.1.3; such documents are likely to fall apart with minimal handling. In this context, we also note that Recommendation 8 of Appendix B of the *Code* firmly places the responsibility for ensuring that new names are ‘self-evidently published’ on the author(s) of the names.

Finally, we submit that Hoser’s case needs to be assessed not solely on its own technical merits, but against the wider background of a very large number of poorly based names introduced by Hoser (Kaiser et al., 2013; Kaiser (BZN 70: 293–302, December 2013). The over 500 names (Kaiser et al., 2013; Kaiser (BZN 70: 293–302)) proposed by Hoser have been criticized by numerous authors (Aplin, 1999; Bates et al., 2013; Branch in Li Vigni, 2013; Kaiser et al., 2013; Schleip & O’Shea, 2010; Williams et al., 2006; Wüster et al., 2001; Zaher et al., 2009).

The point of view proposed by Kaiser et al. (2013), that these names should not be considered part of the scientific record, has received support from numerous individual herpetologists and most major scientific herpetological societies, including the World Congress of Herpetology. A Commission Opinion favouring Hoser’s case will place the Commission and the *Code* at odds with the clearly stated wishes and practices of the scientific herpetological community, and carries the risk that the authority and universal acceptance of the *Code* will be undermined.

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to confirm that Issue 7 of the *Australasian Journal of Herpetology* is not published in the sense of the *Code* as a result of failing to meet the criterion of durability of Article 8.1.3;
- (2) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Spracklandus* Hoser, 2009;
- (3) to place on the Official Index of Rejected and Invalid Works in Zoological Nomenclature Issues 1–21 of the *Australasian Journal of Herpetology*.

Additional references

- Hoser, R.T. 2009. A reclassification of the true cobras; species formerly referred to the genera *Naja*, *Boulengerina* and *Paranaja*. *Australasian Journal of Herpetology*, **7**: 1–15.
- Hoser, R.T. 2012a. Exposing a Fraud! *Afronaja* Wallach, Wüster and Broadley 2009, is a junior synonym of *Spracklandus* Hoser 2009! *Australasian Journal of Herpetology*, **9**: 1–64.
- Hoser, R.T. 2012b. Robust taxonomy and nomenclature based on good science escapes harsh fact-based criticism, but remains unable to escape an attack of lies and deception. *Australasian Journal of Herpetology*, **14**: 37–64.
- Hoser, R.T. 2013a. The science of herpetology is built on evidence, ethics, quality publications and strict compliance with the rules of nomenclature. *Australasian Journal of Herpetology*, **18**: 2–79.
- Li Vigni, F. 2013. *A Life for reptiles and amphibians*, vol. 1. Edition Chimaira, Frankfurt a. M.
- Schleip, W.D. & O’Shea, M. 2010. Annotated checklist of the recent and extinct pythons (Serpentes, Pythonidae), with notes on nomenclature, taxonomy, and distribution. *ZooKeys*, **66**: 29–79
- Wallach, V., Wüster, W. & Broadley, D.G. 2009. In praise of subgenera: taxonomic status of cobras of the genus *Naja* Laurenti (Serpentes: Elapidae). *Zootaxa*, **2236**: 26–36.

Comment on the proposed conservation of usage of *Touit* G.R. Gray, 1855 and *Prosopeia* Bonaparte, 1854 (Aves, PSITTACIDAE)
(Case 3640; BZN 70: 245–248)

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This case has been submitted owing to a paper by Gregory & Dickinson (2012) and the fact that we, the authors, failed to dig deeply enough into the precise origin of the name *Pyrrhulopsis* Reichenbach, 1850. In the light of the deeper research by Schodde et al. (2013) we are happy to state that we support their application.

Comment on the proposed conservation of usage of CORCORACIDAE Mathews, 1927 (Aves) and the spelling *melanoramphos* Vieillot, 1817 for the valid name of the type species of its type genus
(Case 3630; see BZN 70: 238–244)

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I am in support of the proposal to conserve the family name CORCORACIDAE. By contrast I see no sufficient reason to abandon the original spelling *melanoramphos* in favour of *melanoramphos*. Granted it might be in prevailing usage. However, there is, I think, general agreement that the Glossary definition in the 1999 Code does not provide a clear and unambiguous methodology for determining prevailing usage. There is a need for such a methodology; however, I believe any debate on the subject should start from a re-examination of that need, and then examine whether the background has changed since the time when prevailing usage seemed like the only solution. I believe zoologists generally would agree that the original concept arose in the context of wholly different names when earlier applicable but forgotten names were being ‘rescued’ from synonymy. By contrast I think that the ‘mission-creep’ which has extended that original concept to one where minor spelling changes are seen in the same light was, and is, unfortunate. This is ever more true; the Biodiversity Heritage Library makes access to old works, and thus original spellings, more and more easy. Original spellings should be seen as the right basis for stability because they remain before us. As the Code now describes prevailing usage any declaration that a given spelling is in prevailing usage could be revised within a matter of years due to the ease of rediscovery of use of the original spellings. The relevance of ZooBank to this should be considered. Wherever possible changes to original spellings should be avoided and not inflicted on ZooBank with the requirement that the change be recorded therein. I am not suggesting that the Articles in the Code that

either mandate or permit changes should be ignored; plainly they should not. Nor do I have a clear preference for retaining or abolishing gender agreement although this, owing to taxa being reallocated between genera, has been shown to be the single greatest cause of spelling differences, and thus of claims of instability in relation to names of birds (Olson, 1987).

Additional reference

Olson, S.L. 1987. On the extent and source of instability in avian nomenclature, as exemplified by North American birds. *Auk*, **104**(3): 538–542.

Comment on *Grallaria fenwickorum* Barrera & Bartels, 2010 (Aves, GRALLARIIDAE): proposed replacement of an indeterminate holotype by a neotype
(Case 3623; see BZN **70**: 99–102, 256–269)

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We consider that the designation of a neotype for *Grallaria fenwickorum* Barrera & Bartels, 2010 is not necessary because the name is not available, i.e. the description by Barrera et al. (2010) does not satisfy criteria of availability for names published after 1999 because they failed to designate a holotype unambiguously (an explicit fixation is lacking). The Code requires type specimens to be explicitly and unequivocally designated when proposing new species-group names after 1999 (Articles 16.4 and 72.3) and, by definition, a holotype should be a single specimen (Article 73.1). The holotype designation by Barrera et al. (2010) contains a fundamental ambiguity. The designation is divided in two parts: ‘a’ and ‘b’. In part ‘a’, they designated a sample of 14 feathers as the holotype, whereas in part ‘b’, they designated a bird depicted in a photograph as the holotype (the photograph was published on the cover

of the same issue of the journal). The typification is ambiguous because it is not clear whether the holotype is the sample of feathers or the bird in the photograph. This ambiguity is not a lapsus in the wording of the type designation; instead, the ambiguity persists for the remainder of the article. For example, an entire paragraph is used to justify the sample of feathers as an appropriate holotype (p. 10) but the ‘Description of the holotype’ (p. 11) is entirely based upon the bird photographed, not the sample of feathers. Therefore, Barrera et al. (2010) intentionally designated two entities as the name-bearing type and used one holotype or the other alternatively throughout the description as a way to cope with different interpretations of the Code (acknowledged by Gonzalez et al., 2011).

A holotype can be a whole animal, or one or more parts of an animal, but it must be a single specimen derived from a single animal (Articles 72.5 and 73.1). In ornithology, the holotype is typically a preserved ‘round skin’ specimen, which is just a part of the original bird. Other parts from the same bird (tissue samples, partial skeletons, stomach, etc.) can also be part of a holotype (i.e. holotypes can be composed of multiple parts). However, the typification by Barrera et al. (2010) does not conform to a holotype composed of multiple parts for two reasons. First, the two ‘parts’ of the holotype were not treated as a single specimen. The feathers were preserved but the bird was not. Barrera et al. (2010) actually declared that they released the holotype back into the wild, a fact that was reaffirmed subsequently by one of the authors (ProAves, BZN 70: 256–269, December 2013) and documented with photographs published by González et al. (2011) and online (<http://www.flickr.com/photos/proaves/sets/72157623898966996/>). We interpreted this action as in direct contravention of Article 16.4.2, which requires a declaration regarding the deposition of the type specimen in a collection. According to other interpretations, Article 16.4.2 does not apply in this case: because the type was not preserved, it cannot be an ‘extant specimen’ (González et al., 2011). In any case, the fact that the two parts of the holotype were treated as different specimens remains clear.

Secondly, the evidence available indicates that the feathers and the photograph were not taken from the same individual bird; thus, the holotype is a composite of different individuals. The bird that was captured and its feathers sampled (hereafter specimen A, depicted in figure 1 of González et al., 2011, also available at <http://www.flickr.com/photos/proaves/sets/72157623898966996/>) is different from the bird depicted on the cover page of Barrera et al. (2010) also designated as holotype (specimen B). Specimen A was photographed in the hands of an investigator while being sampled on 11 January 2010, and shows a prominent metal band on the right foot, just before it was released (the bird was banded during the study); its bill is clean and looks straight (the culmen is decurved but the gonys is recurved, resulting in no overall curvature). Specimen B, on the other hand, seems to be a free-roaming bird; other than some disarranged feathers, it does not show any sign of being captured and studied; in particular, it does not have a metal band on the foot; its bill is more decurved than in specimen A, mostly the effect of a straighter gonys; its bill and feathers around the face look dirty. Another photograph of bird B is available on the Internet Bird Collection (IBC, <http://ibc.lynxeds.com/photo/urrao-antpitta-grallaria-fenwickorum/holotype-foto-grallaria-fenwickorum>), where it is labelled as depicting the holotype of *fenwickorum*; the bill of this bird shows blotches of dirt in exactly the same places as the bird in the cover of Barrera et al. (2010), suggesting that the two

photographs were taken at least on the same day. Although the cover photo was reportedly taken on 11 January 2010, this could not be confirmed independently, since the Exchangeable image file format (Exif) metadata of the digital file were erased. However, the IBC photo of specimen B was taken on 9 January 2010 (reported in the IBC site and confirmed by the Exif metadata). Therefore, specimens A and B not only look different and have signs of differential treatment, but they also were photographed two days apart. Finally, we noted that the biometric measurements reported for the holotype (Barrera et al., 2010, Table 1) do not coincide with the measurements taken when the bird was captured and banded on 11 January (see notebook depicted in the photographs in González et al., 2011, also available at <http://www.flickr.com/photos/proaves/4538313633/>). Overall, the evidence demonstrates that at least two individual birds were involved. Therefore, Barrera et al. (2010) simultaneously and intentionally designated two birds as ‘the holotype’, an action that invalidates the description since fixation of a single specimen as holotype is required for descriptions after 1999 (Article 16.4.1).

Several arguments have been presented in defence of the *fenwickorum* description. Those regarding the Principle of Priority will not be discussed here since this principle concerns available names, and we consider *fenwickorum* not available. Barrera et al. (2010, see also González et al., 2011) argued that because *fenwickorum* is based upon photographs, Article 73.1.4 applies (‘Designation of an illustration of a single specimen as a holotype is to be treated as designation of the specimen illustrated; the fact that the specimen no longer exists or cannot be traced does not of itself invalidate the designation’), and no preservation of type specimens would be necessary. However, the alluded photographs were never designated as holotypes; instead, the ‘individual depicted’ in the photographs was designated as holotype directly; therefore, Article 73.1.4 is irrelevant in this case. González et al. (2011, p. 50) tried to make the case that, because the bird sampled was not a holotype at the moment of study, Article 16.4.2 does not apply, and no preservation of the holotype would be required. However, it is evident that individual feathers were collected knowingly on 11 January 2010, indicating the intent of designating the specimen under study as the name-bearing type (ProAves, BZN 70: 263). Lastly, it has been argued that because types can be just parts of an animal, deposition of parts of a holotype is sufficient for the purposes of Article 16.4.2 (Barrera et al., 2010, González et al., 2011). Although a holotype can be any part of an animal, the holotype itself must be preserved, not just a fragment of the holotype.

For the reasons expressed above, we conclude that the name *fenwickorum*, Barrera & Bartels, 2010, is not available for nomenclatural purposes. Because another name is available and in current use for this bird, *Grallaria urraoensis* Carantón-Ayala & Certuche-Cubillos, 2010, described by the actual discoverers of the new species, the unavailability of *fenwickorum* does not result in any inconvenience or nomenclatural instability. Therefore, we think that no action from the Commission is required, other than clarifying matters publicly by placing *fenwickorum* on the Official Index of Rejected and Invalid Names in Zoology and *urraoensis* on the Official List of Specific Names in Zoology.

We also consider the comment on this case by ProAves (BZN 70: 256–269) to contain several fallacious and misleading statements regarding the history surrounding the descriptions of *G. fenwickorum* and *G. urraoensis*. However, we restrain from

setting the record straight here and restrict this comment to the nomenclatorial issues that the Commission is asked to consider. A full dissection of ProAves (BZN 70: 256–269) will be published elsewhere.

Acknowledgements

We thank Edward Dickinson (*Aves Press*), Mary LeCroy (*American Museum of Natural History*), Daniel Lane (*Louisiana State University Museum of Natural Science*), and Richard Schodde (*Australian National Wildlife Collection*) for comments and discussion on an earlier version of the manuscript.

Additional reference

González, J., Proctor, G. & Bruno, E. 2011. The nomenclatural availability of and priority between two recently described names for the same new antpitta species from Colombia. *Conservación Colombiana*, **15**: 45–54.

OPINION 2329 (Case 3532)***Murex tubercularis* Montagu, 1803 (currently *Cerithiopsis tubercularis*; Mollusca, Gastropoda, CERITHIOPSIDAE): proposed conservation of usage of the specific name by designation of a neotype not approved**

Abstract. The application to conserve the current usage of the name *Cerithiopsis tubercularis* (Montagu, 1803) for a species of cerithiopsine gastropod from the southern coast of Great Britain by designating a neotype consistent with current usage was not approved.

Keywords. Nomenclature; taxonomy; CERITHIOPSIDAE; *Cerithiopsis*; *Cerithiopsis tubercularis*; cerithiopsine gastropod; Recent; Atlantic; Mediterranean.

Ruling

- (1) It is hereby ruled that the application for the proposed conservation of the name *Murex tubercularis* Montagu, 1803 in its accustomed usage by designation as neotype the possible syntype BMNH 20090384 at the Natural History Museum, London, is not approved.
- (2) No names are placed on the Official Lists or Indexes in this ruling.

History of Case 3532

The application to conserve the current usage of the name *Cerithiopsis tubercularis* (Montagu, 1803) for a species of cerithiopsine gastropod from the southern coast of Great Britain by designating a neotype consistent with the current usage was received from Alberto Cecalupo (*Via Grancino 6y, 20090 Buccinasco, Italy*) and Elio Robba (*Dipartimento di Scienze Geologiche e Geotecnologie, Università degli Studi di Milano Bicocca, Milano, Italy*) on 15 July 2010. After correspondence the case was published in BZN **68**: 41–46 (March 2011). The title, abstract and keywords of the case were published on the Commission's website. Supportive and adverse comments were published in BZN **68**(3): 205, **69**(1): 56–59 and **69**(2): 123–124.

Decision of the Commission

On 1 September 2013 the members of the Commission were invited to vote on the proposals published in BZN **68**: 44. At the close of the voting period on 1 December 2013 the votes were as follows:

Affirmative votes – 3: Minelli, Winston and Zhou.

Negative votes – 21: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Krell, Lamas, Lim, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Yanega and Zhang.

Kottelat, Kullander and Pyle were on leave of absence.

Voting AGAINST, Alonso-Zarazaga said that the Case had been presented without a properly worked out taxonomic basis. It should not be presented again until the

proposed morphological and genetic studies of the cryptic species recognised to exist in the genus *Cerithiopsis* have been carried out and only if that study could not solve the existing nomenclatural conflicts. Voting AGAINST, Rosenberg said that, as pointed out by Bouchet & Marshall (BZN 69: 123), the specimen designated by Marshall (1978) as lectotype of *Murex tubercularis* Montagu, 1803 appeared not to be one of the syntypes of the species, but rather a specimen referred to as a white variety by Montagu (1808). Under Article 74.2, it automatically lost its status as lectotype since it was not a syntype; use of the plenary powers was not needed to suppress the lectotype designation. As the proposed neotype would not resolve the taxonomic confusion, he voted against the case. Also voting AGAINST, Bouchet noted that Bouchet & Marshall (BZN 69: 123) had explained in their comment that Marshall's 1978 lectotype designation was invalid, and thus no action was required by the Commission to suppress it. A sequenced neotype could thus be designated in the future by any zoologist without the Commission's involvement. Kojima, also voting AGAINST, stated as well that the proposal should have included a statement as to why the name *Murex tubercularis* should be conserved, e.g. whether or not this gastropod was economically important, or was an important organism for scientists in any field of biology, rather than being important only for specialists on this group of gastropods. It was not clear to him why the name *Murex tubercularis* Montagu, 1803 should be conserved to conform to the prevailing usage of *C. tubercularis* (Montagu, 1803). Voting AGAINST, Krell considered that if *Murex tubercularis* was in fact a group of cryptic species, it seemed to be most appropriate to designate a neotype for which we have sequence information. Prkić et al.'s alternative solution (BZN 69: 56–59) seemed the most appropriate procedure, but Prkić et al. did not suggest a suitable neotype specimen in their comment. Ng, voting AGAINST, said that he thought that options presented in the Case were pointless. The proposed neotype did nothing to help solve the problems outlined in the paper. He considered that in this case a suitable neotype must be one that has fresh colours, and preferably fresh tissues preserved as well, that enable a molecular analysis. Thus, he concluded, this case was not ready for voting.

No names are placed on the Official Lists or Indexes by the ruling in the present Opinion. The issue is left open for subsequent workers to follow the precepts of the Code or to make new proposals to the Commission.

OPINION 2330 (Case 3385)***Termes serratus* Froggatt, 1898 (currently *Microcerotermes serratus*) and *Termes serrula* Desneux, 1904 (currently *Microcerotermes serrula*) (Insecta, Isoptera, TERMITINAE): specific names conserved**

Abstract. The Commission has conserved the names *Termes serratus* Froggatt, 1898 (currently *Microcerotermes serratus*) and *Termes serrula* Desneux, 1904 (currently *Microcerotermes serrula*) (Isoptera, TERMITINAE) for two species of termite.

Keywords. Nomenclature; taxonomy; Isoptera; TERMITIDAE; TERMITINAE; *Microcerotermes serratus*; *Microcerotermes serrula*; termites; Southeast Asia; Australia.

Ruling

- (1) Under the plenary power the Commission:
 - (a) has suppressed the specific name *serratus* Haviland, 1898, as published in the binomen *Termes serratus*, and all uses of the name *Termes serratus* before Froggatt, 1898 for the purposes of both the Principle of Priority and the Principle of Homonymy;
 - (b) has ruled that the specific name *serrula* Desneux, 1904, as published in the binomen *Termes serrula*, was not invalid by reason of being an unjustified replacement for the name *Termes serratus* Haviland, 1898.
- (2) The following names are hereby placed on the Official List of Specific Names in Zoology:
 - (a) *serratus* Froggatt, 1898, as published in the binomen *Termes serratus*;
 - (b) *serrula* Desneux, 1904, as published in the binomen *Termes serrula* (not invalid by reason of being an unjustified replacement for the name *Termes serratus* Haviland, 1898, as ruled in (1)(b) above).
- (3) the name *serratus* Haviland, 1898, as published in the binomen *Termes serratus* and as suppressed in (1)(a) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 3385

An application to conserve the specific names *Termes serratus* Froggatt, 1898 (currently *Microcerotermes serratus*) and *Termes serrula* Desneux, 1904 (currently *Microcerotermes serrula*) (Isoptera, TERMITINAE), both currently in use for well-known and common termite species in Southeast Asia and Australia respectively was received from David T. Jones (*Department of Life Sciences, Natural History Museum, London, U.K.*) on 26 June 2006. After correspondence the case was published in BZN 64: 83–86 (June 2007). The title, abstract and keywords of the case were published on the Commission's website. The Case was originally sent for vote on 1 December 2008. A majority of Commissioners voted FOR the Case (10 For, 9 Against), but it failed to meet the two-thirds majority required for approval. Comments on this case were published in BZN 64(3): 185–187; 65(1): 47–49, 65(2): 132–134, 134–136; and after the first voting round in 66(4): 342–348; 68(3): 205–206. In accordance with the bylaws, the case was sent for a revote.

Decision of the Commission

On 1 September 2013 the members of the Commission were invited to vote again on the proposals published in BZN **64**: 84–85. At the close of the voting period on 1 December 2013 the votes were as follows:

Affirmative votes – 18: Ballerio, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Krell, Minelli, Ng, Pape, Patterson, Rosenberg, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 6: Alonso-Zarazaga, Bogutskaya, Kojima, Lamas, Lim and Štys. Kottelat, Kullander and Pyle were on leave of absence.

In the first round of voting the Commissioners commented as follows:

Voting FOR, Krell said that the transfer of a widely used species name from one common species to another was highly confusing, probably the most confusing act imaginable in nomenclature, so should be avoided at any reasonable cost. Ng, voting AGAINST, explained that he would do so until the applicants could make a more convincing case. He sympathised with the proposals, but it had to be shown that the species was of substantial economic or commercial importance, and had been the subject of a large number of technical papers from other fields. All this was apparent from the original application, while the number of papers cited to justify the plenary actions required was relatively low. Brothers also voted AGAINST, saying that although the potential for some confusion was recognised, this was unlikely to be widespread or significant in a broader context, so he did not consider the case to be convincing. Voting AGAINST, Alonso-Zarazaga explained that he considered that the action taken by Roisin & Pasteels (2000) of following the Principle of Priority was fully justified, and that both species involved were of minor importance and their names infrequently used. He added that some authors continued to use names that had been shown to be invalid by other authors without any justifying explanation which was another example of zoologists not conforming to rules, and was one of the sources of instability. Nomenclatural inaccuracies in regional faunas were mainly of local interest and they were not a reason to overturn the Principle of Priority, which was universal.

In the second round, Kojima, voting AGAINST, stated that it sounded strange to him that biologists working on termites were unaware for nearly ten years of Roisin & Pasteels's (2000) correct nomenclatural action and some were still unaware today. He had also not heard that these two particular species were serious pest termites, or of any pesticides that had been designed specifically for them. If biologists working on termites had been aware of Roisin & Pasteels's (2000) work, and had accepted it, these nomenclatural problems would not have occurred.

Original references

The following are the original references to the name placed on Official Lists and Indexes by the ruling given in the present Opinion:

serratus, Termes, Froggatt, 1898, *Proceedings of the Linnean Society of New South Wales*, **22**: 731.

serratus, Termes, Haviland, 1898, *Journal of the Linnean Society of London, Zoology*, **26**: 403.

serrula, Termes, Desneux, 1904, *Isoptera. Family Termitidae in: Genera Insectorum. Wytsman, Brussels, Fasc. 25, p. 45.*

OPINION 2331 (Case 3472)***Cetiosaurus* Owen, 1841 (Dinosauria, Sauropoda): usage conserved by designation of *Cetiosaurus oxoniensis* Phillips, 1871 as the type species**

Abstract. The Commission has conserved the usage of the generic name *Cetiosaurus* Owen, 1841 by designating *Cetiosaurus oxoniensis* Phillips, 1871 as the type species of *Cetiosaurus* in place of *Cetiosaurus medius* Owen, 1842.

Keywords. Nomenclature; taxonomy; Dinosauria; Sauropoda; CETIOSAURIDAE; *Cetiosaurus*; *Cetiosaurus oxoniensis*; England; Europe; Middle Jurassic.

Ruling

- (1) Under the plenary power, the Commission has set aside all previous fixations of type species for the nominal genus *Cetiosaurus* Owen, 1841 and designated *Cetiosaurus oxoniensis* Phillips, 1871 as the type species.
- (2) The name *Cetiosaurus* Owen, 1841 (gender: masculine), type species *Cetiosaurus oxoniensis* Phillips, 1871, as ruled in (1) above, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *oxoniensis* Phillips, 1871, as published in the binomen *Cetiosaurus oxoniensis*, specific name of the type species of *Cetiosaurus* Owen, 1841, as ruled in (1) above, is hereby placed on the Official List of Specific Names in Zoology

History of Case 3472

An application to maintain stability in the taxonomy of sauropod dinosaurs by designating *Cetiosaurus oxoniensis* as the type species of the historically significant genus *Cetiosaurus* was received from Paul Upchurch (*University College London, London WC1E 6BT, U.K.*), John Martin (*6 The Nook, Great Glen, Leicester, U.K.*) and Michael P. Taylor (*School of Earth & Environmental Sciences, University of Portsmouth, Portsmouth, U.K.*) on 23 June 2008. After correspondence the case was published in BZN **66**: 51–55 (March 2009). The title, abstract and keywords of the case were published on the Commission's website. Two comments in support were published in BZN **66**: 187–188.

Decision of the Commission

On 1 March 2010 the members of the Commission were invited to vote on the proposals published in BZN **66**: 53. At the close of the voting period on 1 June 2010 the votes were as follows:

Affirmative votes – 16: Alonso-Zarazaga, Bouchet, Brothers, Fautin, Halliday, Krell, Lamas, Lim, Ng, Papp, Patterson, Rosenberg, Štys, Winston, Yanega and Zhou.

Negative votes – 8: Bogutskaya, Kojima, Grygier, Harvey, Kottelat, Kullander, Pape and van Tol.

Ballerio and Minelli abstained.

Pyle and Zhang were on leave of absence.

Voting AGAINST, Bogutskaya said that in her opinion the major problem with this case was that the authors had considered *C. medius* to be the type species of *Cetiosaurus* incorrectly, since Owen (1842) had not used any word equivalent to the word 'type'; hence the reference to Article 69.1.1 was incorrect. Also, it was not clear to her whether Steel (1970) or any other author had used wording that could be accepted as a type species designation for *C. medius*. Also, voting AGAINST, Grygier said that the work in which *C. brevis* had been validly designated as the type species of *Cetiosaurus* was not stated clearly, and in para. 3, after the mention of the lack of an explicit type designation by Owen (1842a), there was only the bald statement that '*C. medius* is thus the type species . . .'. He added that this abrupt transition had left him with the impression that an intervening sentence concerning the details of a post-Owen subsequent designation had been inadvertently omitted, but an inquiry to the Secretariat indicated something different. Unpublished correspondence with the authors of the Case showed that, by means of a very 'flexible' interpretation of the phrase 'or an equivalent term' [for 'type' or 'type species'] in Article 69.1.1, the present authors actually had accepted Owen (1842b) as having designated *C. medius* as the type species. [Grygier also said that this would be a 'subsequent' designation because the genus had been originally proposed without any originally included species, and Owen (1842a) was the first to assign any (four) nominal species to it.] Aside from the fact that this explanation was not expressly presented in the published Case, he could not agree with this line of reasoning. There was no such 'equivalent term' in the explanation from Owen (1842a) quoted in para. 3, and the authors did not present enough information to know whether any subsequent author, such as Steel (1970), succeeded in making a valid type designation. It was only clear that Upchurch & Martin (2003) did not do so. If someone after Owen (1842b) had indeed designated *C. medius* as the type species, then the proposals of the present Case would erase this act just as effectively as if Owen had done so, and a FOR vote would be called for. However, if nobody had yet validly made a subsequent type designation, then the present authors were free to designate *C. oxoniensis* as type species without involving the Commission. He voted AGAINST, pending a clarification of the actual type-species situation heretofore. Also voting AGAINST, Harvey said that the applicants had not convincingly established that there is a taxonomic problem associated with retaining *Cetiosaurus medius* as the type species of *Cetiosaurus*. If the species was recognisable, which could not be established from the application, the designation of *C. oxoniensis* as type species would be purely for convenience. The Commissioners were provided with no details of whether any type material of Owen's various species is still extant and, if so, whether it can be recognised at the species level. If his interpretation of para. 5 were correct, he added, *C. medius* is not one of the recognisable species of the genus, but a concrete statement to this effect was necessary. Until conclusive evidence is produced that there is a substantial nomenclatural problem, he saw no need to vote FOR this application. Voting AGAINST, Kojima said that it was not clearly explained which problems would result from *Cetiosaurus medius* being treated as the type species of the genus *Cetiosaurus*, based on the application of the provisions of the Code. Also voting

AGAINST, Kottelat said that based on the data provided in the application, *C. medius* is not type species by subsequent designation by Owen (1842b), because the word ‘type, type species or . . . an equivalent term’ was not used in that publication and the reference to Article 69.1.1 in the application was incorrect. A term is ‘a word or group of words having a particular meaning’; the quoted sentence is not a ‘term’, so there is no type designation, he said. It appeared to him that that some authors had designated, or considered, that the type species of *Cetiosaurus* was *C. brevis*, and that there had also been a designation of *C. medius* as type species by Steel (1970). He had not checked these details, but it seemed this should have been mentioned or discussed. Also, he was missing information on the current identity of the supposed type species *C. medius* (or *C. brevis*) and of the implications of retaining *C. medius* (or *C. brevis*) as the type. Voting AGAINST, Kullander also maintained that the reference to Article 69.1.1 to suggest that *C. medius* was the type species of *Cetiosaurus* was not correct. *C. medius* was not made type species by that text. Consequently, *Cetiosaurus* had no type species. There was no particular reason to make *oxoniensis* the type species of *Cetiosaurus* and there was no reason why those fossils should not be managed under the normal rules of nomenclature. ABSTAINING, Minelli said that information provided in the application was incomplete: in which genus was ‘*medius*’ likely to fall, if ‘*oxoniensis*’ were fixed as the type species of ‘*Cetiosaurus*’? Would the acceptance of ‘*medius*’ as the type species of *Cetiosaurus* really affect the current circumscription of *Cetiosaurus* and CETIOSAURIDAE?.

Original references

The following is the original reference to the name placed on Official Lists and Indexes by the ruling given in the present Opinion:

Cetiosaurus Owen, 1841, *Proceedings of the Geological Society of London*, 3: 457.
oxoniensis, Cetiosaurus, Phillips, 1871, *Geology of Oxford and the valley of the Thames*, Clarendon Press, Oxford, p. 291.

OPINION 2332 (Case 3572)**PSITTACULINAE Vigors, 1825 (Aves): usage conserved**

Abstract. The Commission has conserved the current usage of the family-group name PSITTACULINAE Vigors, 1825 for the Indo-Australasian long-tailed parrots by designation of *Psittacula* Cuvier, 1800 as its type genus. The simultaneously published family-group name PALAEORNITHINAE Vigors, 1825, which was originally applied to the Indo-Australasian long-tailed parrots, has been suppressed.

Keywords. Nomenclature; taxonomy; Aves; PSITTACULINAE; *Psittacula*; PALAEORNITHINAE; *Palaeornis*; parrots; Africa; Asia; Indonesia; Australasia.

Ruling

- (1) Under the plenary power the Commission:
 - (a) has ruled that *Psittacula* Cuvier, 1800 is the type genus of PSITTACULINAE Vigors, 1825;
 - (b) has suppressed the family-group name PALAEORNITHINAE Vigors, 1825 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.
- (2) The generic name *Psittacula* Cuvier, 1800 (gender: feminine) (type species *Psittacus alexandri* Linnaeus, 1758, by subsequent designation by Mathews (1917)), type genus of PSITTACULINAE, as ruled in (1)(a) above, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *alexandri* Linnaeus, 1758, as published in the binomen *Psittacus alexandri* Linnaeus, 1758, specific name of the type species of *Psittacula* Cuvier, 1800 is hereby placed on the Official List of Specific Names in Zoology.
- (4) The family-group name PSITTACULINAE Vigors, 1825, type genus *Psittacula* Cuvier, 1800, as ruled in (1)(a) above, is hereby placed on the Official List of Family-Group Names in Zoology.
- (5) The family-group name PALAEORNITHINAE Vigors, 1825, a junior objective synonym of PSITTACULINAE Vigors, 1825 by the First Reviser action of Bock (1994), is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology, as suppressed in (1)(b) above.

History of Case 3572

An application to conserve the current usage of the family-group name PSITTACULINAE Vigors, 1825 as valid for the Indo-Australasian long-tailed parrots by designation of the generic name *Psittacula* Cuvier, 1800 as its type genus was received from Richard Schodde (*clo Australian Biological Resources Study, Canberra, Australia*), Leo Joseph (*Australian National Wildlife Collection, CSIRO Ecosystem Sciences, Canberra, Australia*) and Walter J. Bock (*Department of Biological Sciences, Columbia University, New York City, NY, U.S.A.*) on 10 August 2011. After correspondence the case was published in BZN **69**: 51–55 (March 2012). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this case.

Decision of the Commission

On 1 September 2013 the members of the Commission were invited to vote on the proposals published in BZN **69**: 53–54. At the close of the voting period on 1 December 2013 the votes were as follows:

Affirmative votes – 24: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Krell, Lamas, Lim, Minelli, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – none.

Kottelat, Kullander and Pyle were on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the rulings given in the present Opinion:

PSITTACULINAE Vigors, 1825, *The Zoological Journal*, **2**: 400.

Psittacula Cuvier, 1800, *Leçons d'anatomie comparée*, Tome 1, Badouin, Paris, Table 2.

PALAEORNITHINAE Vigors, 1825, *The Zoological Journal*, **2**: 400

Psittacus alexandri, Linnaeus, 1758, *Systema Naturae*, Ed. 10, Salvii, Holmiae, vol. 1, p. 97.

OPINION 2333 (Case 3548)***Mémoires pour servir à l'histoire des insectes* by De Geer (1752–1778) and the additional volume by Retzius (1783): ruled to be binominal and available**

Abstract. The five volumes of *Mémoires pour servir à l'histoire des insectes*, published between 1752 and 1778 by De Geer, and an additional volume published by Retzius in 1783, which are not consistently binominal, have been ruled as consistently binominal and available for zoological nomenclature, whereas 140 polynominal names mentioned in these works have been suppressed. In addition, the names *Aranealupus*, *Araneaphalangium* and *Araneacancroides* have been suppressed for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy. The name *Pediculus humanus capitis* has been ruled to be available.

Keywords. Nomenclature; taxonomy; early zoological literature; Arthropoda; Insecta; Chelicerata; De Geer; Retzius.

Ruling

- (1) Under the plenary power the Commission:
 - (a) has set aside the provisions of Article 11.4 and declared the volumes of the work *Mémoires pour servir à l'histoire des insectes* published by De Geer (1773), De Geer (1774), De Geer (1775), De Geer (1776), De Geer (1778) and Retzius (1783) to be binominal and available for nomenclatural purposes;
 - (b) has suppressed the 140 names listed below for nomenclatural purposes;
 - (c) has ruled that *Pediculus humanus capitis* was made available by De Geer (1778, p. 67);
 - (d) has suppressed the name *Pediculus humanus corporis* Retzius, 1783 (p. 201) for the purposes of the Principles of Priority, but not for those of the Principle of Homonymy;
 - (e) has suppressed the names *Aranealupus* De Geer, 1778, *Araneaphalangium* De Geer, 1778 and *Araneacancroides* De Geer, 1778 for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy.
- (2) *Mémoires pour servir à l'histoire des insectes* by De Geer (1752–1778) and the additional volume by Retzius (1783) are hereby entered on the Official List of Works Approved as Available for Zoological Nomenclature: deemed binominal as ruled in 1(a) above, but with many of the names proposed therein suppressed as ruled in 1(b, d, e) above.
- (3) The name *capitis* De Geer, 1778, as published in the trinomen *Pediculus humanus capitis*, is hereby placed on the Official List of Specific Names in Zoology, as ruled in (1)(c) above.
- (4) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
 - (a) *Aranealupus* De Geer, 1778 as suppressed in (1)(e) above;

- (b) *Araneaphalangium* De Geer, 1778, as suppressed in (1)(e) above;
 - (c) *Araneacancroides* De Geer, 1778, as suppressed in (1)(e) above;
 - (d) *Sphinx adscita* De Geer, 1778, as suppressed in (1)(b) above.
- (5) The name *corporis* Retzius, 1783, as published in the trinomen *Pediculus humanus corporis* and as suppressed in (1)(d) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.
- (6) One hundred and forty names listed below are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology and on the Official Index of Rejected and Invalid Generic Names in Zoology, as appropriate (see (4)(d) above), as suppressed in (1)(b) above.
- (7) The Commission hereby issues an Official Correction, as part of this Opinion, amending the entry for *Perla* Retzius, 1783 on the Official Index of Rejected and Invalid Generic Names in Zoology to record that it is not an available name but a subsequent use of *Perla* De Geer, 1773 (a junior homonym of *Perla* Geoffroy, 1762).

History of Case 3548

An application to rule under the plenary power that inconsistently binominal works published by De Geer (1773, 1774, 1775, 1776, 1778) and Retzius (1783) be considered to be available as binominal works, while 140 polynominal names mentioned therein be suppressed, was received from Francisco Welter-Schultes (*Zoologisches Institut, Universität Göttingen, Germany*) and Frank Wieland (*Biozentrum Grindel & Zoologisches Museum, Universität Hamburg, Germany*) on 15 December 2010. After correspondence the case was published in BZN 69: 3–19 (March 2012). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this case.

Decision of the Commission

On 1 September 2013 the members of the Commission were invited to vote on the proposals published in BZN 69: 13–14. At the close of the voting period on 1 December 2013 the votes were as follows:

Affirmative votes – 22: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Krell, Lamas, Minelli, Ng, Pape, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – none.

Abstained – 1: Lim.

Split votes – 1: Patterson (1)(a) FOR; (1)(b) FOR; (1)(c) FOR; (1)(d) AGAINST; (1)(e) AGAINST.

Kottelat, Kullander and Pyle were on leave of absence.

Voting FOR, Grygier said that in the last sentence of para. 13 of the application, the authors suggested that six names 'be placed on the Official List'; however, the presence of these six names in their 'List of 140 polynominal names . . . proposed for suppression' showed that they had meant to write 'to be placed on the Official Index'. He added that whereas their proposal (1)(b) asked for the 140 listed names to be suppressed for nomenclatural purposes, there was no accompanying request that they be entered in the Official Index; this should be done anyway, as mandated by Article

78.4.2. He also noted that near the end of para. 11, the authors proposed a new Article to be added to the next edition of the Code to address the availability of originally hyphenated genus-group names; they could just as well have formally sought a Declaration to that effect now as part of the present Case or as a separate, related application. Also voting FOR, Ng said that he was normally reluctant to agree to such a large ‘block’ decision as validating a large number of ‘potentially’ binominal names and rejecting a list of ‘supposedly polynominal’ and hence unavailable names. He thought that this was not the best solution. He considered that it might have been better declaring all these works non-binominal and starting afresh, but the authors had argued well that some of the names had unfortunately come into common use and this approach would not have helped stability; so he reluctantly voted FOR.

Voting FOR, Lamas said that Linnaeus (1758) had divided his genus *Sphinx* into four sections, the last one being ‘Adscitae habitu & larva diversae’ (i.e. ‘adopted’ (or ‘accepted’) species, differing in appearance and larval character). Evidently, De Geer (1778) agreed with that Linnaean section, and called it ‘*Sphinx adscita*’. De Geer’s action should be treated (in modern terms) as having informally established the new subgenus ‘*Adscita*’, although he attributed it to Linnaeus. Retzius (1783) (pp. 8, 35) ‘elevated’ De Geer’s *Adscita* to the genus rank, and this latter name had been accepted ever since as valid in the family ZYGAENIDAE, and credited to Retzius, 1783 (type species *Adscita turcosa* Retzius, 1783, by subsequent designation by Kirby, 1892). Both Cramer and Stoll, in ‘Papillons exotiques’ and in Stoll’s continuation (‘Aanhangsel’) of the same work, used ‘*Sphinx Adscita*’ several times as a section of the genus *Sphinx*, following Linnaeus (and antedating De Geer, because ‘Papillons exotiques’ started publication in 1775 and continued until 1791, but these ‘intermediate’ Linnaean names were ruled by Opinion 279 (1954), to have no subgeneric status. The same applies to Sepp’s work published between 1829 and 1854, where he used ‘*Adscita*’ or ‘*Adscitae*’ (plural) as a section of *Sphinx*, sometimes attributing it to Stoll, because Stoll used the same ‘formula’. *Adscita* was never used as a binominal name before Retzius (1783). Therefore, Lamas suggested that De Geer’s 1778 name should be placed on the Official Index of Rejected and Invalid Generic Names in Zoology as ‘*Sphinx (Adscita)*’ (treated as a subgenus).

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

- De Geer, C.** 1773. *Mémoires pour servir à l’histoire des insectes*. Tome troisième. Pp. I-VIII [=1–8], 1–696, [1–2], pls. 1–44. Hesselberg, Stockholm.
- De Geer, C.** 1774. *Mémoires pour servir à l’histoire des insectes*. Tome quatrième. Pp. I-XII [=1–12], 1–456, [1], pls. 1–19. Hesselberg, Stockholm.
- De Geer, C.** 1775. *Mémoires pour servir à l’histoire des insectes*. Tome cinquième. Pp. I-VII [=1–7], [1], 1–448, pls. 1–16. Hesselberg, Stockholm.
- De Geer, C.** 1776. *Mémoires pour servir à l’histoire des insectes*. Tome sixième. Pp. I-VIII [=1–8], 1–522, [1], pls. 1–30. Hesselberg, Stockholm.
- De Geer, C.** 1778. *Mémoires pour servir à l’histoire des insectes*. Tome septième. Pp. I-XII [=1–12], 1–950, pls. 1–49. Hesselberg, Stockholm.

Retzius, A.J. 1783. *Caroli Lib. Bar. De Geer [. . .] genera et species insectorvm e generosis-simiavctoris scriptis extraxit, digessit, latine qvoad partem reddidit, et terminologiam insectorvmLinneanam additit Anders Iahan Retzivs [. . .].* Pp. [1–5], III-VI [=3–6], 7–220. Crusius, Lipsiae.

List of 140 polynominal names from De Geer's and Retzius's works suppressed by rulings in this Opinion and placed on the Official Index of Rejected and Invalid Specific Names in Zoology and on the Official Index of Rejected and Invalid Generic Names in Zoology:

De Geer, 1773

- Aphis nuda Pini* De Geer, 1773 (p. 27)
Aphis tomentosa Pini De Geer, 1773 (p. 39)
Aphis betulæ nigro punctata De Geer, 1773 (p. 45)
Aphis Salicis farinosa De Geer, 1773 (p. 76)
Aphis Tiliæ nigro-punctata De Geer, 1773 (p. 77)
Cicada spumaria graminis De Geer, 1773 (p. 163)
Cicada spumaria Salicis De Geer, 1773 (p. 180)
Cicada musciformis Ulmi De Geer, 1773 (p. 189)
Cicada musciformis Rosæ De Geer, 1773 (p. 193)
Cicada Laternaria Chinensis De Geer, 1773 (p. 197)
Cicada Laternaria fusca De Geer, 1773 (p. 200)
Cicada foliata-fasciata De Geer, 1773 (p. 205)
Cicada foliata-arcuata De Geer, 1773 (p. 206)
Cicada foliata-fusca De Geer, 1773 (p. 208)
Cicada foliata-sinuosa De Geer, 1773 (p. 208)
Cimex viridis totus De Geer, 1773 (p. 266)
Cimex niger spinipes De Geer, 1773 (p. 269)
Cimex griseus nigro-punctatus De Geer, 1773 (p. 270)
Cimex niger rufipes De Geer, 1773 (p. 286)
Cimex depressus Betulæ De Geer, 1773 (p. 305)
Cimex viridis pensylvanicus De Geer, 1773 (p. 330)
Cimex nanus fasciatus De Geer, 1773 (p. 343)
Locusta viridis cantatrix De Geer, 1773 (p. 428)
Sphex Americana aptera De Geer, 1773 (p. 591)

De Geer, 1774

- Lampyrus noctiluca communis* De Geer, 1774 (p. 31)
Elater fuscus major De Geer, 1774 (p. 146)
Elater fuscus minor De Geer, 1774 (p. 146)
Elater aeneus rufipes De Geer, 1774 (p. 149)
Elater fuscus flavipes De Geer, 1774 (p. 151)
Silpha nigra major De Geer, 1774 (p. 173)

De Geer, 1775

- Leptura aquatica spinosa* De Geer, 1775 (p. 140)
Leptura aquatica mutica De Geer, 1775 (p. 142)
Leptura aquatica fasciata De Geer, 1775 (p. 142)

- Leptura aquatica aenea* De Geer, 1775 (p. 143)
Chrysomela marginella Ranunculi De Geer, 1775 (p. 304)
Chrysomela viridis Alni De Geer, 1775 (p. 306)
Chrysomela cærulea Betulæ De Geer, 1775 (p. 317)
Chrysomela cærulea Salicis De Geer, 1775 (p. 318)
Chrysomela grisea Alni De Geer, 1775 (p. 325)
Chrysomela cylindrica 4-punctata De Geer, 1775 (p. 329)
Chrysomela rubra liliorum De Geer, 1775 (p. 339)
Chrysomela 22-punctata obscura De Geer, 1775 (p. 380)

De Geer, 1776

- Musca major larvarum* De Geer, 1776 (p. 24)
Musca minor larvarum De Geer, 1776 (p. 25)
Musca minor domestica De Geer, 1776 (p. 26)
Musca carnaria cærulea De Geer, 1776 (p. 57)
Musca vivipara major De Geer, 1776 (p. 63)
Musca vivipara minor De Geer, 1776 (p. 70)
Musca domestica major De Geer, 1776 (p. 72)
Bombylius tabaniformis-griseus De Geer, 1776 (p. 270)
Bombylius tabaniformis-rufus De Geer, 1776 (p. 272)
Tipula agarici seticornis De Geer, 1776 (p. 367)
Tipula nigra aquatica De Geer, 1776 (p. 387)
Tipula Marci nigra De Geer, 1776 (p. 428)
Tipula Marci fulvipes De Geer, 1776 (p. 429)
Coccus ovatus Ulmi De Geer, 1776 (p. 436)
Coccus rotundus Salicis De Geer, 1776 (p. 440)
Coccus farinosus Alni De Geer, 1776 (p. 442)

De Geer, 1778

- Podura arborea nigra* De Geer, 1778 (p. 18)
Podura arborea grisea De Geer, 1778 (p. 21)
Podura aquatica nigra De Geer, 1778 (p. 23)
Podura aquatica grisea De Geer, 1778 (p. 28)
Podura globosa fusca De Geer, 1778 (p. 35)
Pediculus humanus corporis De Geer, 1778 (p. 67)
Acarus aquaticus ruber De Geer, 1778 (p. 141)
Acarus aquaticus globosus De Geer, 1778 (p. 146)
Acarus aquaticus maculatus De Geer, 1778 (p. 147)
Acarus aquaticus holosericeus De Geer, 1778 (p. 149)
Acarus aquaticus marginatus De Geer, 1778 (p. 152)
Aranea viridis punctata De Geer, 1778 (p. 233)
Aranea resupina sylvestris De Geer, 1778 (p. 245)
Aranea resupina domestica De Geer, 1778 (p. 251)
Monoculus Pulex ramosus De Geer, 1778 (p. 442)
Monoculus Pediculus ramosus De Geer, 1778 (p. 467)
Cimex capensis ruber De Geer, 1778 (p. 619)
Sphinx adscita De Geer, 1778 (p. 694) (used as a genus-group name)

Retzius, 1783

- Papilio Argus marginatus* Retzius, 1783 (p. 30)
Papilio margaritaceus medius Retzius, 1783 (p. 31)
Phalaena tesseraria pratensis Retzius, 1783 (p. 36)
Phalaena Ziczac trituberculata Retzius, 1783 (p. 37)
Phalaena Ziczac quinquetuberculata Retzius, 1783 (p. 38)
Phalaena diura major Retzius, 1783 (p. 38)
Phalaena diura minor Retzius, 1783 (p. 38)
Phalaena porrecta alba Retzius, 1783 (p. 38)
Phalaena porrecta cana Retzius, 1783 (p. 38)
Phalaena alticauda alba Retzius, 1783 (p. 39)
Phalaena alticauda grisea Retzius, 1783 (p. 39)
Phalaena alticauda furcata Retzius, 1783 (p. 39)
Phalaena fusca trimaculata Retzius, 1783 (p. 40)
Phalaena cinerea bistigmata Retzius, 1783 (p. 40)
Phalaena flava nigro-punctata Retzius, 1783 (p. 40)
Phalaena fusca bistrigata Retzius, 1783 (p. 41)
Phalaena alba nigro-punctata Retzius, 1783 (p. 41)
Phalaena grisea fasciata Retzius, 1783 (p. 41)
Phalaena cristata albo-lineata Retzius, 1783 (p. 41)
Phalaena cristata flavo-punctata Retzius, 1783 (p. 42)
Phalaena cinerea undulata Retzius, 1783 (p. 43)
Phalaena Noctua major Retzius, 1783 (p. 44)
Phalaena viridis bilineata Retzius, 1783 (p. 45)
Phalaena varia albo-maculata Retzius, 1783 (p. 45)
Phalaena cinerea bimaculata Retzius, 1783 (p. 46)
Phalaena viridis maculata Retzius, 1783 (p. 46)
Phalaena ferruginea fasciata Retzius, 1783 (p. 47)
Phalaena flava strigata Retzius, 1783 (p. 48)
Phalaena sulphurea caudata Retzius, 1783 (p. 49)
Phalaena alba trilineata Retzius, 1783 (p. 50)
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NOMENCLATORIAL NOTE

Liturgusa Saussure, 1869 (Insecta, Mantodea, LITURGUSIDAE): conservation as a justified emendation

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Abstract. The Mantodea genus name *Liturgusa* Saussure, 1869 was originally published as *Liturgousa* but the spelling of *Liturgusa* (an unjustified emendation) has been in prevailing usage since 1900 and as such is deemed available under Article 33.2.3.1 of the Code.

Keywords. Nomenclature; taxonomy; Mantodea; LITURGUSIDAE; *Liturgusa*; *Liturgousa*; *Liturgousa cayennensis*; praying mantis; Neotropical.

1. *Liturgousa* was described by Henri de Saussure in 1869 (p. 62) to include two species, *Mantis annulipes* Audinet Serville, 1838 (p. 199) and his newly described *Liturgousa cayennensis* Saussure, 1869 (p. 62). The genus name is derived from the Greek ‘Liturgus’ (feminine form ‘Liturga’), meaning ‘celebrator of liturgy’, which indicates that Saussure’s correct original spelling of *Liturgousa* may have been a mistake, but under Article 32.5.1 of the Code ‘incorrect transliteration or latinization, or use of an inappropriate connecting vowel, are not to be considered inadvertent errors’ and thus is not demonstrably incorrect under Article 32.5 and stands as the correct original spelling under Article 32.2 of the Code.

2. *Liturgusa*, first used by Carl Stål (1877, pp. 3, 40) was attributed to the original author, Saussure (1869) and appears to be an emendation. However, since this emendation is applied to a correct original spelling and he also did not include a justification for his subsequent spelling (Article 33.2.1), it is considered as an unjustified emendation under Article 33.2.3 of the Code. Stål did cite the correct original spelling in his 1877 (p. 50) work, giving evidence that he was attempting an emendation to correct Saussure’s incorrect latinization.

3. The two included species upon the establishment of the genus *Liturgousa* Saussure, 1869 were *Mantis annulipes* Audinet Serville, 1838 and *Liturgousa cayennensis* Saussure, 1869, but neither was designated as the type species. No type was established until subsequent designation, adherent to Article 69.1 of the Code, by Kirby (1904, p. 271) of *Liturgousa cayennensis* Saussure, 1869, which was valid under Article 67.2 of the Code as this species was an ‘originally included nominal species’ available for fixation. However, Giglio-Tos (1927, p. 292) took subsequent action by designation of *Mantis annulipes* Audinet Serville, 1838, an act not valid according to Article 69.1.2 of the Code, which states that the first designation in a publication is to be accepted, which is Kirby (1904, p. 271). This type discrepancy was first recognized by Rehn (1935, p. 198) having stated in footnote ‘Giglio-Tos (Das

Tierreich, Lief. 50, p. 292, (1927)), erroneously gives *annulipes* as the genotype. Kirby's fixation is the first, and, being made on one of the two originally included species, must be followed.' Unfortunately, recognition of *Liturgousa cayennensis* Saussure, 1869 as the type for the genus has not been uniform across taxonomic works (e.g. Ehrmann, 2002, p. 206 recognizes *Mantis annulipes* and Otte & Spearman, 2005 (p. 132) recognize *Liturgousa cayennensis*).

4. Both spellings of the generic name have been used in new species binomials before 1899 and after, as well as in recent times. Subsequent to the original genus description, Saussure (1872, p. 53) added an additional species under the binomen *Liturgousa surinamensis*. Three species were described, *Liturgousa lichenalis*, *Liturgousa superba* and *Liturgousa nubeculosa* by Gerstaecker (1889, pp. 52–56) using Stål's spelling. John Obadiah Westwood (1889, p. 30) described *Liturgousa mesopoda* using the correct original spelling. The publication by Westwood came slightly after that of Gerstaecker's and included *Mantis annulipes*, *Liturgousa cayennensis*, *Liturgousa lichenalis*, *Liturgousa nubeculosa* and his own new species *Liturgousa mesopoda*. The next species, *Liturgousa maya*, was described by Saussure & Zehntner (1894, p. 160) only as a variant of *Liturgousa cayennensis*. Kirby (1904, p. 271) included six species within *Liturgousa*, *Liturgousa annulipes*, *Liturgousa lichenalis*, *Liturgousa cayennensis*, *Liturgousa maya*, *Liturgousa mesopoda* and *Liturgousa malagassa*. Kirby also included *Liturgousa nubeculosa*, *Liturgousa superba* and *Liturgousa surinamensis* within *Hagiomantis* without providing a justification for the move. Giglio-Tos (1914, pp. 77–78) described *Liturgousa peruviana* from Peru and *Liturgousa parva* from Brazil. Max Beier (1931, p. 14) described *Liturgousa atricoxata*. Then, Beier (1935, p. 11) provided a description of the genus as well as a list of nine species of *Liturgousa* that included *Liturgousa peruviana*, *Liturgousa cayennensis*, *Liturgousa maya*, *Liturgousa charpentieri*, *Liturgousa atricoxata*, *Liturgousa mesopoda*, *Liturgousa nubeculosa*, *Liturgousa annulipes* and *Liturgousa parva*. La Greca (1939, p. 2–5) described in detail the highly distinct species *Liturgousa guyanensis*. Rehn (1950) described two new species from Central America, *Liturgousa cursor* (1950, p. 369) and *Liturgousa actuosa* (1950, p. 377). Piza (1982, p. 94) described *Liturgousa sinvalnetoi* from Piracicaba, Brazil.

5. Only one publication cited the action of Stål as an emendation, but it did not label his action as unjustified (Roy & Cuche, 2008). In addition, four works consider Saussure's correct original spelling of *Liturgousa* as an error of transcription (see 1. above; Ehrmann, 2002; Giglio-Tos, 1927; Jantsch, 1999; Terra, 1995). Two works consider *Liturgousa* simply as a synonym of *Liturgousa* (Agudelo et al., 2007; Otte & Spearman, 2005).

6. Subsequent to Stål's first use of *Liturgousa* in 1877, the spelling has been used in only 18 works previous to 1963 by 11 authors. However, use of Stål's spelling is now dominant in the recent literature and reverting to using *Liturgousa* would threaten taxonomic stability. Under Article 33.2.3.1 the unjustified emendation (*Liturgousa*) becomes justified when it is in prevailing usage and is attributed to the original author and date. Clearly demonstrating prevailing usage as outlined in Article 23.9.1.2, thirty three works have been identified (at least 25 are required) using *Liturgousa* in the previous 50 years that are by at least 10 authors (27 authors identified), p. Beier, 1964, p. 943; Weidner, 1964, p. 143; Beier, 1968, pp. 8, 14, 32; Marshall, 1975, p. 322; Bazyluk, 1977, pp. 133, 169; Passerin d'Entrèves, 1981, p. 61; Piza, 1982, p. 94; Jantsch, 1991, p. 125; Terra, 1995, pp. 53–54, figs. 85–87; Salazar E., 1998, p. 105,

Fig. 4; Edmunds & Brunner, 1999, p. 282; Jantsch, 1999, p. 19, 24, 30–31, 33, 35, 39, 47, Tables 4–6; Roy, 1999, p. 30; Salazar E., 1999, p. 10; Maes & Roy, 2000, p. 61; Salazar E., 2000, p. 67; Lombardo & Agabiti, 2001, p. 90, 96–97; Salazar E., 2002, p. 121, 124; Ehrmann, 2002, p. 26, 33, 206, 375; Agudelo & Chica, 2002, pp. 7, 20, 30, 36, 62, Fig. 8b; Agudelo & Chica, 2003, p. 127, 130, 131, 132, 133, Tables 1, 3, figs. 1, 3, 7; Agudelo, 2004, pp. 44, 55, Table 3.1; Salazar E., 2004, pp. 211, 213; Agudelo, 2005, p. 3; Otte & Spearman, 2005, pp. 132, 481; Agudelo et al., 2007, pp. 109, 116, 141; Medellín et al., 2007, p. 151; Roy & Cuche, 2008, pp. 8, 14, 21; Yager & Svenson, 2008, pp. 556, 565; Wieland, 2008, p. 158; Svenson & Whiting, 2009, p. 503; Wieland, 2013, pp. 22, 57, 87, 89, 130, 154, 158, 176, figs. 2, 4A, 20–21; Svenson, 2014. However, a number of works use the correct original spelling of *Liturgousa* Saussure, 1869 after 1899; Scudder, 1901, pp. 159, 407, 419; Waterhouse, 1902, p. 202; Rehn, 1903, p. 6; Kirby, 1904, p. 271; Bruner, 1906, p. 143; Werner, 1906, p. 372; Werner, 1908, p. 39; Werner, 1909, p. 77–78; Chopard, 1911, p. 323; Carl, 1914, p. 148; Chopard, 1916, p. 164; Werner, 1916, p. 257, 274; Caudell, 1918, p. 5; Hebard, 1919a, p. 31; Hebard, 1919b, p. 134; Hebard, 1924, p. 131; Hebard, 1929, p. 399; Hebard, 1932, p. 211; Hebard, 1933, p. 29; Rehn, 1935, p. 172, 198–199, 201, 203–204, pl. 8, figs. 4–5; Hesse, 1937, p. 108, 578; Tinkham, 1937, p. 490–491; Hughes-Schrader, 1943, p. 266, 280, 282–283, 290, 294, 296–297, Table 1, figs. 19–28; Hughes-Schrader, 1948, p. 267; Rehn, 1950, pp. 369, 377; Hughes-Schrader, 1950, pp. 10–11, 13–14, 27, 38–39, 44–45, Table 1, figs. 9–11; Hughes-Schrader, 1951, pp. 178–181, 183–184, 186–187, Table 1–2, figs. 1–3; Beebe et al., 1952, pp. 245–247, Fig. 2; Crane, 1952, p. 259, 264, figs. 2, 3; Hughes-Schrader, 1953, pp. 544–554; Rehn, 1954, pp. 177, 179; Schrader & Hughes-Schrader, 1956, pp. 493–494, 496; Callan & Jacobs, 1957, p. 201; Krombein, 1963, p. 2; Henderson, 1965, pp. 206, 215; White, 1965, p. 542; Otte, 1978, p. 76; Cerdá, 1996, pp. 75–76. Of the 38 located works using the correct original spelling of *Liturgousa* after 1899, only five (two of which are non-taxonomic) were in the past 50 years, 21 authors total (Rehn, Hebard and the Hughes-Schrader group were dominant users [45% of works], all of whom were close collaborators), and 87% of the works were published before 1960. Therefore, use of the correct original spelling after 1899 did occur, but was primarily in the first half of the 1900s.

7. Svenson (2014) conducted a comprehensive revision of *Liturgousa* and used the subsequent spelling, *Liturgusa* Saussure, 1869. This work treated all described species of *Liturgousa*, described 19 new species, identified four synonymies, moved one species from *Liturgousa* to *Hagiomantis* and created three new genera (*Fuga*, *Velox* and *Cortimantis*) for species previously included in *Liturgousa* as well as *Hagiomantis*. This study adds considerable weight to the prevailing usage of the subsequent spelling.

8. Therefore, the unjustified emendation *Liturgousa* is in prevailing usage and as such is deemed to be available as a justified emendation attributed to the original author under Article 33.2.3.1 of the Code.

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Corrigendum to The Taxon Filter, a novel mechanism designed to facilitate the relationship between taxonomy and nomenclature, vis-à-vis the utility of the Code's Article 81 (the Commission's plenary power)

(see BZN 70(4): 293–302)

The text in BZN 70(4), p. 300 says: 'In herpetology, we have reached the point when the scientific community has formally and nearly unanimously rejected the use of names coined by Raymond Hoser since the year 2000. Given that these names have appeared in a single outlet and their production has followed the same pattern that makes them unacceptable to herpetologists, such names could be rendered void for the purposes of nomenclature if the Commission used its plenary power (Article 81) to declare all names proposed in Hoser's AJH unavailable.'

Since the publication of BZN 70(4), R. Hoser has contacted the Secretariat with a statement correcting the information provided by H. Kaiser, which says: 'Since 1998, I have published scientific papers of a taxonomic nature, naming species or genera in no less than seven different peer reviewed and other journals (namely *Boydii*, *Crocodylian*, *Monitor*, *Macarthur Herpetological Society News*, *Litteratura Serpentium*, *Ophidia Review* and *Australasian Journal of Herpetology*) proposing new names and combinations for unnamed species and groups.'

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ICZN

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Cover image: *Tetrosomus gibbosus* (Linnaeus, 1758) known as the humpback turretfish illustrated by Ernst Haeckel in *Kunstformen der Natur*, pl. 42, fig. 10. as 'Ostracion turritus (Swainson)' [in fact *Ostracion turritus* Forsskål, 1775], which is a junior synonym of *Ostracion gibbosus* Linnaeus, 1758. This image was chosen to commemorate the 180th anniversary of Haeckel's birth and 110th anniversary of publication of his *Kunstformen der Natur* (1899–1904).

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Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the ICZN at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at <http://iczn.org/content/guidelines-case-preparation>) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will, where possible, answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should preferably be sent by e-mail to 'iczn@nhm.ac.uk'.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at <http://iczn.org/content/instructions-comments>).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at <http://list.afriherp.org/mailman/listinfo/iczn-list>.

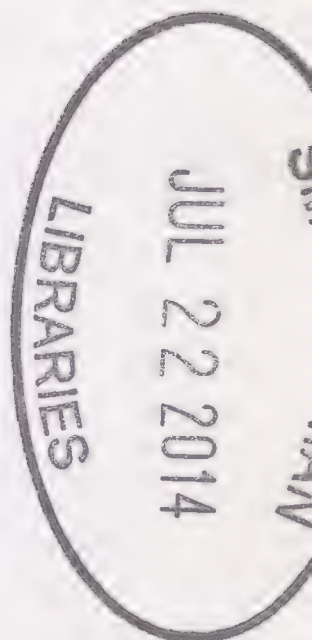
(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to iczn@nhm.ac.uk.

New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 71, part 1, 31 March 2014) went to press. Under Article 82 of the Code, the prevailing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3657: STENODERINI Selander, 1991 (Insecta, Coleoptera): proposed emendation of spelling to STENODERAINI to remove homonymy with STENODERINI Pascoe, 1867 (Insecta, Coleoptera); and STENODERINI Pascoe, 1867: proposed precedence over SYLLITINI Thomson, 1864. Y. Bousquet, P. Bouchard & M.A. Bologna.

CASE 3658: *Calyptorhynchus baudinii* Lear, 1832: Conservation of usage by designation of a neotype for *Calyptorhynchus baudinii* Lear, 1832. R.E. Johnstone, C. Fisher & D.A. Saunders.



CASE 3659: Proposed use of the plenary power to correct Opinions 278 and 382 to validate the genus-group names *Danaus*, *Heliconius*, *Nymphalis* and *Plebejus* as published by Kluk (1780) rather than by Kluk (1802). E. Balletto & S. Bonelli.

CASE 3660: *Antilope arabica* Lichtenstein, 1827 (currently *Gazella arabica*; Mammalia, Ruminantia): proposed conservation of part of the lectotype designated by Neumann (1906). E.V. Bärmann, A.W. Gentry & Anthea Gentry.

CASE 3661: *Apion longirostre* Olivier, 1807 (currently *Rhopalapion longirostre*; Insecta, Coleoptera): proposed conservation of usage of the specific name. C. Giusto.

CASE 3662: *Siphonichnus ecccaensis* Stanistreet, le Blanc Smith & Cadle, 1980 (trace fossil): proposed conservation of the ichnogenus name by giving it precedence over a senior subjective synonym. D. Knaust.

The ‘International Trust for Zoological Nomenclature (ITZN)

ITZN was established under U.K. charity law in 1947 as a mechanism for the International Commission on Zoological Nomenclature (ICZN) to accumulate money to fund its London based secretariat. This was necessary as ICZN was not an incorporated body in the U.K. and could not, for example, run its own bank accounts. For many years income derived from ICZN’s publications, the Code and this Bulletin, generated sufficient surplus to fund the secretariat. Over the past twenty years this position altered markedly, such that charitable donations were necessary to subsidise the necessary activities.

Last year the Trustees of ITZN recognised that the current business model was unsustainable and that, as a result, the ITZN should be wound up. Concurrently ICZN Commissioners met in Singapore to discuss a new vision for ICZN and what it should become in a digital world. The winding up of ITZN will take place during 2014. In order to ensure the ongoing viability of this Bulletin the Natural History Museum, London has stepped in to provide support for the essential work that goes into editing Cases and publishing the Bulletin for the next two years, by which time a new process for considering and publishing cases will have been put in place by the Commission.

Subscribers and authors of cases should notice effectively no change in the meantime.

Dr Michael Dixon, Chair, ITZN

Dr Jan van Tol, President, ICZN

Case 3644***Belostoma ellipticum* Latreille, 1833 (Insecta, Heteroptera, BELOSTOMATIDAE): proposed designation of a neotype**

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Abstract. The purpose of this application, under Article 75.5 of the Code, is to designate a neotype for *Belostoma ellipticum* Latreille, 1833. This species has been accepted by heteropterists since 1962, but it is actually a nomen dubium, since Latreille designated neither types nor a type locality and provided little descriptive information. Subsequent to Latreille, in the absence of a useful diagnosis, authors referred specimens of several other taxonomically valid taxa to *B. ellipticum*. *Belostoma ellipticum* sensu Lauck, 1962, however, is readily defined by the presence of a pair of conspicuous notches along the lateral margins of the ventral diverticulum of the phallus in ventral view, and it is this concept of the species that has gained general acceptance. Fixation of a neotype displaying this feature, which cannot be confirmed in any potentially syntypic Latreille specimen of the *subspinosum* group in Carreno's collection at the Museo Nacional de Ciencias Naturales, Madrid, will facilitate retention of *B. ellipticum* as a valid species name.

Keywords. Nomenclature; taxonomy; Hemiptera; Heteroptera; BELOSTOMATIDAE; *Belostoma*; *Belostoma ellipticum*; aquatic insects; Neotropics; giant water bug.

1. The supposed original description of *Belostoma ellipticum* Latreille, 1833 is a one-page note possibly, but not conclusively, based only on a single specimen

(Latreille, 1833, p. 105, pl. 39, fig. 4); body length was given as 26 mm. Otherwise Latreille wrote that the aforementioned species might be nothing more than a variety of his 'B. briquit -p le', referring to the type species *B. testaceopallidum* Latreille, 1807 of *Belostoma*. Latreille neither designated a type nor gave its locality. This situation led Lauck (1962, p. 59), in his important revision of *Belostoma*, to note that the identity of this species is problematic. Our examination (unpublished) over some years of some of Montandon's (1903, pp. 117–119) male specimens included in Signoret's collection housed in the Mus um national d'Histoire naturelle, Paris, France (MNHN), shows that he indeed applied the name *B. ellipticum* to specimens of *B. anurum*, *B. ellipticum* sensu Lauck and *B. subspinosum*. Concerning North and Central American species, Lauck (1962) mentioned many mistakes in identification by American authors, one example being that the characters used by Palisot de Beauvois (1805, p. 236) to describe his *Nepa subspinosa* (currently *Belostoma subspinosum*) are insufficient to distinguish it from *B. ellipticum*. Although one cannot accept all published records of *B. ellipticum* as correct, this name was used as valid before 1961 (according to Article 11.5) by De Carlo (1938, pp. 216–217) and Lauck (1959, p. 9) who have cited Mexico and Cuba as its distribution. Lauck (1962, figs. 24, 34 and 40) sketched dorsal, lateral and ventral views of the male genitalia of specimens supposed to be *B. ellipticum*, even though this name might be considered a *nomen dubium*, without a type or type locality. Lauck's description was apparently based on specimens from Bahama Islands, Cuba, Guatemala, Honduras, Mexico, and United States of America housed in United States National Museum, Washington, D.C., Snow Entomological Museum, University of Kansas, Lawrence, American Museum of Natural History, New York, and Iowa State University, Ames. Based on this interpretation *B. ellipticum* would be distinguished from the other species of the *subspinosum* group by the presence of a pair of conspicuous notches along the lateral margins of the ventral diverticulum of the phallus (visible in ventral view). Although we have found much variation in eyes and head sclerites in *Belostoma* species, we agree on the diagnostic utility of this genital feature.

2. Latreille's collection was dispersed, and his types are spread across various museums. His collection of Hemiptera went to P.F.M.A. Dejean, and on Dejean's death went to E. Carre o (Horn & Kahle, 1935–1937). Izquierdo et al. (1997) mentioned that the Museo Nacional de Ciencias Naturales, Madrid (CSIC) has about 400 of Latreille's hemipteran specimens, which were housed there after Carre o's death in 1842. This was reiterated in Blanco's book (1988, p. 36). This author also mentions that Latreille's collection, which contained coleopterans, hymenopterans, orthopterans, lepidopterans, neuropterans, dipterans and hemipterans, was transferred to the aforementioned museum after Carre o's death. ICZN Commissioner Miguel Alonso-Zarazaga informed us that Carre o's collection, including Latreille's Hemiptera, is indeed housed there.

3. One of us (J.R.I. Ribeiro) went to Madrid to examine this material. Latreille's specimens, with labels — when present — written in his hand, are contained in 17 boxes. Among these, six specimens (three males and three females) attributable to the *subspinosum* group sensu Lauck (1962) of *Belostoma* were found. None of the six was exactly or approximately 26 mm long, so we cannot confirm that any of them might be the specimen measured by Latreille (1833) in his original description of *B. ellipticum*. The genitalia of two males do not agree with Lauck's (1962, fig. 34)

sketches, instead demonstrating that they belong to *B. subspinosum* Lauck, 1959. One other male has its genital operculum, as well as part of its genitalia, damaged. Four of those male and female specimens are labelled. A male and a female each have an unreadable label (maybe '1919'), whereas a label of other male reads only "Belost / Boscii, Mot[?]"'. Finally, another female has its label completely unreadable.

4. An early entomologist in possession of Latreille's (1833) work would almost certainly identify a *Belostoma* giant water bug belonging to Lauck's (1962) *subspinosum* group or any similar *Belostoma* as *B. ellipticum*. Given the allegedly 'elliptic shape' mentioned by Latreille, at least four different species may have been mentioned as *B. ellipticum* by his successors: *B. anurum* (Herrich-Schäffer, 1848), *B. boscii* (Le Peletier de Saint-Fargeau & Serville, 1825), *B. dallasi* De Carlo, 1930, and *B. subspinosum*.

5. Despite the above-mentioned taxonomic confusion, the name *B. ellipticum* has been accepted since Lauck's (1962) revision, in his sense, and has been in use by virtually some subsequent researchers on giant water bugs (see above). Nonetheless, there is no name-bearing type exhibiting the diagnostic feature of the genitalia. The specimen measured by Latreille (1833) is evidently no longer extant. Even if Recommendation 73F is invoked, and the possibility is admitted that one or more syntypes may be present among the above-mentioned six *subspinosum*-group specimens of Latreille, none of them shows this diagnostic feature, and thus none can be designated as lectotype. Similarly, there is no sort of precise specification concerning Lauck's specimen used for preparing his sketches in his work. With this in mind, there is no data sufficient to ensure recognition of the specimen designated (not fulfilling the conditions of Article 75.3.3).

6. When an author considers that the taxonomic identity of a nominal species-group taxon cannot be determined from its existing name-bearing type and stability or universality are threatened thereby the Code allows an author to request the Commission to set aside under its plenary power (Article 81) the existing name-bearing type and designate a neotype (Article 75.5). A neotype is here proposed, a male specimen from San Salvador, El Salvador, housed for years in N. Nieser's collection, Tiel, The Netherlands, now in the Naturalis Museum (Leiden) with the following three labels: 1st: 'Museum Leiden, DR. M. Boeseman, San Salvador, 18.V. [to] 2.VI – 1953'; 2nd: 'Belostoma ellipticum Latr., det. N. Nieser '73'; 3rd: 'RMNH Leiden collection.' Two new labels will be added: 4th: 'Belostoma ellipticum Latreille, 1833, J.R.I. Ribeiro det. 2013'; 5th: 'NEOTYPE' (pending the ICZN decision).

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *ellipticum* Latreille, 1833, as published in the binomen *Belostoma ellipticum*, and to designate the male specimen specified in para. 6 above as the neotype;
- (2) to place on the Official List of Specific Names in Zoology the name *ellipticum* Latreille, 1833, as published in the binomen *Belostoma ellipticum* and as defined by the neotype designated in (1) above.

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Case 3637***Papilio phoebus* De Prunner, 1798: proposed conservation in its accustomed usage by suppression of *Papilio phoebus* Fabricius, 1793 (Insecta, Lepidoptera, PAPILIONIDAE)**

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Abstract. The purpose of this application, under Articles 78.1 and 81.2.1 of the Code, is to conserve a name that has been used mistakenly for a long time for a very well-known Holarctic butterfly species, by suppressing *Papilio phoebus* Fabricius, 1793 and thereby freeing for use *Papilio phoebus* de Prunner, 1798, a junior primary homonym that actually refers to the taxonomic species in question. This course, effectively resulting only in a change in authorship, would make additional name changes unnecessary and thus promote nomenclatural stability.

Keywords. Nomenclature; taxonomy; PAPILIONIDAE; PARNASSIINAE; *Parnassius*; *P. phoebus*; *P. ariadne*; *P. corybas*; European ‘Small Apollo’ butterfly; Holarctic.

1. The European ‘Small Apollo’ butterfly was long known as *Parnassius delius* (originally *Papilio delius* Esper, [1804], p. 114; pl. 115, fig. 5), a taxon described from the Alps, ‘in der Nähe von Genev’ [in the vicinity of Geneva] (see Staudinger, 1861, p. 14; 1871, p. 2). Godart ([1819], p. 80) was the first to suggest that *Papilio phoebus* (Fabricius, 1793, p. 181), described from ‘Sibiria’, [sic] and *P. delius* Esper were conspecific. Kirby (1871, p. 511) also thought so, with the result that Esper’s name was used for a time to identify the European ‘subspecies’, as *Parnassius phoebus delius* (Esper, [1804]) (see Butler, 1870, p. 233; Kirby, 1871, p. 511). *Papilio delius* Esper, [1804], however, is a junior primary homonym of *Papilio delius* Drury, [1782] (vol. 3, p. [77] (name in index) and p. 18 (description), pl. 14, figs. 5, 6; currently *Antanartia delius*). The date of publication of Esper’s book was established by Heppner (1981, 1982), while that of Drury’s was fixed by the International Commission on Zoological Nomenclature in Opinion 474 (Opinions and Declarations **16**: 297–306; July 1957). The homonymy between Esper’s and Drury’s names was soon resolved by Stichel (1906, p. 86), who proposed the name *Parnassius phoebus sacerdos* to replace *Papilio delius* Esper, [1804].

2. The name *Papilio phoebus* Fabricius, 1793 itself has, until recently, been applied to a wrong species. As Hanus & Theye (2010) correctly observed, Fabricius made unequivocal reference to the watercolours painted by William Jones (i.e. ‘Papilio

Phoebus Jon. fig. pict. 2. tab. 2. fig. 2'). Under Article 72.5.6 of the Code, these pictures are deemed to be representations of the dorsal and ventral surfaces of the holotype (or two syntypes?) of *P. phoebus*, which Fabricius said was preserved, at the time, in the 'Mus.[eum] Dom.[ini] Drury'. Drury apparently never figured this specimen independently and his collection has been lost. No other possibly original Fabricius's specimen is extant in either the Natural History Museum in London or the Natural History Museum of Denmark (see Zimsen, 1964, p. 560, and Kristensen & Karsholt, 2008). A neotype was designated by Hanus & Theye (2011). It is worth noting that, although the watercolours comprising Jones' 'Icones' were apparently painted between ca. 1780 and ca. 1790 (see Vane-Wright, 2010), i.e. at a time antedating Fabricius's description of his *Papilio phoebus*, they were not then printed or published. As a result, the apparently uninominal name 'Phaebus' [sic!] attributed to Fabricius on the plate has no status in nomenclature (Articles 8.1, 8.4, and 9.12), and the description given on the plate ('*Alis rotundatis integerrimis concoloribus albis nigro maculatis: posticis maculis tribus rufis*') may be a later addition copied verbatim from Fabricius's (1793) description of *Papilio phoebus*. When Jones's watercolours were inspected by Hanus & Theye (2010), it became apparent that they did not depict the species generally known as *Parnassius phoebus*, but instead represented a specimen of what is commonly known as *Parnassius ariadne* Lederer, 1853 (p. 354), a species inhabiting the southwestern foothills of the Altai Mountains Hemming (1934, p. 198) reviewed the nomenclatural history of this latter taxon.

3. Most authors have overlooked the fact that the name *Papilio phoebus* was independently published twice, the first time by Fabricius in 1793 as recounted above, and later on by de Prunner (1798, p. 69), in a book dealing with the Lepidoptera of the South Western Alps and the surroundings of Nice, in which this author provided a detailed (for the times) description. Esper (1800, p. 102, footnote) did notice the homonymy but he regarded de Prunner's *phoebus* as merely a variety ('Abänderung') of *P. apollo* Linnaeus, 1758.

We reproduce here for clarity de Prunner's original description, together with an English translation provided to clarify a couple of peculiarities inherent to this author's Latin.

'E.[ques] H.[eliconius] Pap.[ilio] Phoebus

Antennis albe, nigre catenatis; alis oblongis integerrime flave-albis: primoribus intus extusque ocellis coccineis nigro circulo circumdatis, ac prope corpus quatuor, duobus similibus solitariis longitudine alarum; posterioribus intus extusque nigris transversis maculis, extus vermiculato ocello prope marginem exteriorem.

In fine Varaitanae vallis non tam rarus: invenitur in monte Verz mense Junii.'

i.e.

'*Antennae white-and-black ringed; wings elongate, completely yellowish-white; the first (i.e. the hind wings) inside and outside with scarlet ocelli, [each] surrounded by a black ring, and near the body four [ocelli], two [of which] similar to isolated [ocelli] for the whole length of the [wing] basis; the second (i.e. the fore wings) inside and outside with transverse black spots, outside with a vermillion eye-spot by the outer margin.*

At the end of the Varaita Valley, not very rare: it is found on Mount Verz in the month of June.' (Translation by S. Cecchin).

It should be noted that de Prunner's description was published as part of an appendix to 'Sectio Prima, Papiliones' of his work, which appendix included 30 species not listed in the main text. Eight of them were clearly attributed to previous authors, while the remaining 22, including *Pap. phoebus*, bore no such attribution. This does not unequivocally prove that the latter were meant to represent new species group names, but most of them have since been treated as such in the following literature, where they have been regarded as either junior synonyms of other names, junior primary homonyms for which replacement names have been created, or valid species or subspecies. *Pap. phoebus* represents the only exception; even though it shares all the characteristics of de Prunner's other new species group names, it was rarely recognised as such. Another reason may be that the taxon it represents is indeed very close to, and has been considered conspecific with, Fabricius's *Papilio phoebus*. It is to be remembered, however, that in ancient Greek (and later Latin) mythology, Phoebus was one of the alternative appellations of Apollo, so that it may have seemed logical to more than one author that a species rather recalling *P. apollo* in its external habit should be named *P. phoebus*. In other words it is possible that the two taxa bear the same name by mere coincidence.

4. Evidence of de Prunner's taxon being regarded as distinct can be traced as follows. Hübner, [1804] (pl. 110, figs. 567, 568, no text) depicted as [*Papilio*] *phoebus* specimens obviously belonging to the European taxon, as is shown by their clearly annulated antennae and the basal red spots on the ventral surface of the hind wings. Godart (1819, p. 80) was apparently the first to observe that Fabricius's *Pap. phoebus* from Siberia was probably a different species than that depicted by Hübner. He attributed [*Pap.*] *phoebus* to Hübner (as first figuring author) and (irrespective of its earlier publication date) listed de Prunner's *Pap. phoebus* among its synonyms, together with *Pap. delius*. Later, Kirby (1871, p. 511, perhaps following Esper) dubiously listed *Pap. phoebus* de Prunner in the synonymy of *Pap. apollo*, therefore not under *Pap. phoebus* Fabricius, but he included *Pap. delius* in the synonymy of the latter. Sherborn (1902, p. 744) separately listed 'phoebus Papilio, J.C. Fabricius, Ent. Syst., III (1) 1793, 181' and 'phoebus Papilio, L. Prunner, Lep. Pedemont. 1798, 69'. Among de Prunner's (1798) names for other new species of *Papilio*, Sherborn (1902) included all the new names apart from *Papilio polidamas* de Prunner, 1798; *Pap. glandon* de Prunner, 1798; *Pap. pluto* de Prunner, 1798; *Pap. xylostei* (also spelled 'xilostei') de Prunner, 1798 and *Pap. medon* de Prunner, 1798; while also including some misspellings and misquotations. Sherborn's authority, together with the foregoing, supports our interpretation of de Prunner's name *Papilio phoebus* as having been published independently of Fabricius's *Pap. phoebus*.

5. Among the several available species-group names proposed to identify Asiatic species of the *Parnassius phoebus* complex, the second most senior after Fabricius's is *Parnassius corybas* Fischer de Waldheim, 1823 (pl. 6, figs. 1, 2), described from Kamchatka [the plates were issued in 1823, the text after November 1824 – see Sherborn (1922)]. It is likely that *P. phoebus* var. *intermedia* [Ménétriés] in Siemaschko (1850, caption to pl. 4, fig. 1) is synonymous with *P. phoebus phoebus*, part of the material being topotypic, having been collected in the Altai according to Ménétriés's (1855, p. 72) detailed description of the former, now raised to full species rank (see also Nekrutenko & Kerzhner, 1986). Hemming's (1934, p. 198) analysis of the 1850 publication was mistaken. Most recently, Hanus & Theye (2010) considered

Parnassius phoebus intermedius [Ménétriés], 1850 a junior synonym of *P. phoebus corybas* Fischer de Waldheim, 1823.

7. As a consequence of the circumstances described in paras. 2 and 4, and as already discussed in depth by Hanus & Theye (2011, 2013), under the Code the widespread species traditionally known as *Parnassius phoebus* must be renamed as *P. corybas* Fischer de Waldheim, 1823, while the Altai species traditionally known as *Parnassius ariadne* should now be called *P. phoebus*. The likelihood of taxonomic confusion is actually much greater, because *P. phoebus* as traditionally conceived is considered to include at least one subspecies in Europe, a minimum of around eight in Asia (Siberia) and at least two in North America, not to mention the 42 subspecies recognized by Eisner (1976). The names used to identify all these taxa would have to switch to as many new combinations, under *P. corybas*. All this confusion can be avoided by suppressing *Papilio phoebus* Fabricius, 1793, thus (1) allowing *Parnassius ariadne* (Lederer, 1853) to continue in use for the Altai species, and (2) raising *Papilio phoebus* de Prunner, 1798 from permanent invalidity, thereby making it available for the species of *Parnassius* traditionally referred to by this name. In effect, only the authorship of *Parnassius phoebus* will change, not the generally accepted application of the name.

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the specific name *phoebus* Fabricius, 1793, as published in the binomen *Papilio phoebus*, for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the name *phoebus* de Prunner, 1798, as published in the binomen *Papilio phoebus*;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *phoebus* Fabricius, 1793, as published in the binomen *Papilio phoebus* and as suppressed in (1) above.

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Case 3653

***Acanthurus* Forsskål, 1775 (Osteichthyes, ACANTHURIDAE): proposed conservation by designation of *Chaetodon sohal* Forsskål, 1775 as the type species**

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Abstract. The purpose of this application, under Article 81 of the Code, is to conserve the widely used generic name *Acanthurus* Forsskål, 1775 in its accustomed usage by the designation of *Chaetodon sohal* Forsskål, 1775 as the type species. The nominal species *Chaetodon unicornis* Forsskål, 1775 is currently the type species of *Acanthurus* by the subsequent designation of Jordan & Everman (1898), but this species currently belongs in the unicornfish genus *Naso* Lacepède, 1801, effectively rendering *Acanthurus* a senior synonym of *Naso*. It is proposed that all previous type fixations for *Acanthurus* including the one by Jordan & Evermann (1898) be set aside and that *C. sohal* be designated the type species of *Acanthurus* in accordance with the current usage of *Acanthurus*.

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; ACANTHURIDAE; *Acanthurus*; *Naso*; *Acanthurus sohal*; surgeonfishes; tropical Indo-Pacific.

1. Forsskål (1775, p. 59) described *Acanthurus* as one of three subgenera of his genus *Chaetodon* Forsskål, 1775 (the others being *Chaetodon sensu stricto* (butterflyfishes) and *Abudefduf* (a genus of damselfishes including the sergeant majors)). He then described numerous species of *Chaetodon* without specifying which ones belonged in *Acanthurus*, leading many authors to mistakenly believe that there no species originally included in *Acanthurus*. Nevertheless, he (p. ii) listed the following species under the heading '*Acanthurus* (*Chaetodon* 88–91.)': *Chaetodon bifasciatus*, *C. nigrofuscus*, *C. sohal* and *C. unicornis*.

2. Of the four originally included species of *Acanthurus*, only *Chaetodon nigrofuscus* and *C. sohal* fall within the current concept of *Acanthurus* (Fricke, 1999; Myers, 1999; Randall, 1956, 2002), while *C. unicornis* belongs in the unicornfish genus *Naso* Lacepède, 1801 ((Borden, 1998; Myers, 1999; Randall, 2002). On the other hand, *Chaetodon bifasciatus* is a species of the seabream genus *Acanthopagrus* Peters, 1855 (Bauchot & Smith, 1984).

4. Lacepède (1802) erected the genus *Aspisurus* for *Chaetodon sohal* Forsskål, 1775 (p. 63). *Aspisurus* was synonymized with *Acanthurus* by Randall (1955, 1956).

5. Since no type species for *Acanthurus* was designated by Forsskål, the first designation of a type species was done by Valenciennes (1840, pl. 71, fig. 2), who selected *Acanthurus xanthopterus* Valenciennes in Cuvier & Valenciennes, 1835 as the type species for *Acanthurus*. However, this type species designation is invalid because *A. xanthopterus* was not among the originally included species of *Acanthurus*, although it belongs in the same genus as *A. nigrofuscus* and *A. sohal*.

6. Desmarest (1856, p. 246) designated *Teuthis hepatus* Linnaeus, 1766 (currently *Paracanthurus hepatus*) as the type species of *Acanthurus*, but this too was invalid because *T. hepatus* was not among the originally included species of *Acanthurus*. This type species designation was followed by Whitley (1939) and Eschmeyer (1990) and who were probably unaware that Forsskål did not include *T. hepatus* in *Acanthurus*. Later, Desmarest (p. 247) designated *Chaetodon chirurgus* Bloch, 1787 as the type species, disregarding that it too was not originally included in *Acanthurus*.

7. In their catalogue of all named fish genera, Jordan & Evermann (1898, p. 1689) listed *Chaetodon unicornis* Forsskål, 1775, in parenthesis following the entry for the genus *Acanthurus*. Throughout the three and a fifth text volumes of the work, after each genus name in their synonymies, they provide the name of one of the originally included species, seemingly the first mentioned in the original description. Since *C. unicornis* was one of the originally included species of the genus, their type species designation can be technically valid in compliance with Article 69.2 of the Code. Throughout the three and a fifth text volumes of Jordan & Evermann's (1898) work, after each genus name in their synonymies, the authors provided the name of one of the originally included species, seemingly the first mentioned in the original description, with no explanation of the selection. However, this could be a valid type species designation, and it was interpreted as such by later authors (e.g. Kottelat, 2013, pp. 4, 442). Later, Jordan & Evermann (1917) disregarded their 1898 type species designation by fixing *C. sohal* as the type for *Acanthurus*, which is invalid because of an earlier valid designation.

8. As the type genus of the family-group name ACANTHURIDAE Bonaparte, 1832 and the subfamily-group name ACANTHURINAE, the genus *Acanthurus* is currently in use for more than a dozen species of surgeonfishes from the Indo-Pacific and Atlantic Oceans and *Chaetodon unicornis* has been universally recognized as a species of the unicornfish genus *Naso* (Borden, 1998; Myers, 1999; Randall, 2002). If, as stressed by Kottelat (2013, p. 442), the designation of *C. unicornis* as the type species by Jordan & Evermann (1898) is accepted, then *Naso* would become a junior synonym of *Acanthurus* and *Aspisurus* Lacepède, 1802 would be the next available name for all surgeonfish species. However, adopting such a change would create nomenclatural instability because past and current usage of *Acanthurus* refers to acanthurid species that are part of ACANTHURINAE (including *Acanthurus nigrofuscus* and *A. sohal*) and *Naso* has been in use for the unicornfishes (including *Naso unicornis*) (e.g. Jordan & Evermann, 1917; Herre, 1927; Randall, 1955, 1956, 2002).

9. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous fixations of type species for the nominal genus *Acanthurus* Forsskål, 1775 and to designate *Chaetodon sohal* Forsskål, 1775 as the type species;
- (2) to place on the Official List of Generic Names in Zoology the name *Acanthurus* Forsskål, 1775 (gender: masculine), type species *Chaetodon sohal* Forsskål, 1775, as ruled in (1) above;
- (3) to place on the Official List of Specific Names in Zoology the name *sohal* Forsskål, 1775, as published in the binomen *Chaetodon sohal* (specific name of the type species of *Acanthurus* Forsskål, 1775).

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Case 3650***Tapirus pygmaeus* Van Roosmalen & Van Hooft in Van Roosmalen, 2013 (Mammalia, Perissodactyla, TAPIRIDAE): proposed confirmation of availability of the specific name and of the book in which this nominal species was proposed**

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Abstract. The purpose of this application, under Articles 78.2.3 and 80.2.1 of the Code, is to confirm the availability of the nominal species *Tapirus pygmaeus* Van Roosmalen & Van Hooft in Van Roosmalen 2013 [22 April] for the black dwarf tapir, thus also confirming its priority over the subjective synonym *Tapirus kabomani* Cozzuol et al., 2013 [December], by ruling that Van Roosmalen's edited book *Barefoot through the Amazon – On the path of evolution*, in which *T. pygmaeus* was proposed, is not unavailable solely on account of its being advertised as a print-on-demand work, but is an original multiple-copy, simultaneously available edition. It is shown that Van Roosmalen & Van Hooft's publication contained information sufficient to satisfy the criteria of availability under Articles 10 to 20 of the Code.

Keywords: Nomenclature; taxonomy; Perissodactyla; TAPIRIDAE; *Tapirus*; *Tapirus pygmaeus*; *Tapirus kabomani*; black dwarf tapir; Brazilian Amazon; Rio Aripuanã basin; print-on-demand.

1. Van Roosmalen first mentioned the discovery of the black dwarf tapir in May 2002 on the website <www.amazonnewspecies.com>. This animal is called in Portuguese 'anta-anã', and also 'pretinho', by local hunters and Amerindians living in the Rio Aripuanã basin, States of Amazonas and Rondônia, SW Brazil. Van Roosmalen partly described the new species on this website, while also including a photograph of a skull acquired from local hunters and an artist's reconstruction of the adult animal. This website was forced to close in July 2002, and early in 2003 Van Roosmalen's compound in Brazil was raided by state and federal authorities, resulting in the confiscation and incineration of all his hitherto collected biological material, but not the above-mentioned tapir skull, which remains in the possession of Tucunaré Village hunters (see para. 3 below). On behalf of his NGO, the Amazon Association for the Preservation of Nature, Van Roosmalen established another website in June 2007, <www.marcvanroosmalen.org>, which since then has offered a free, downloadable PDF-file containing a full description of the black dwarf tapir, which was named by him there, as well as in the earlier website, as *Tapirus pygmaeus* sp. nov.

2. The above-mentioned websites are not considered as published works under the Code, and the name *Tapirus pygmaeus* is not available from them, but this name has

also been proposed in print. First, in a Dutch-language book intended for the general public, Van Roosmalen (2008, p. 306) provided a short description and diagnosis based in part on information extracted from a number of interviews he had with local subsistence hunters (translation by the author: ‘said to be much smaller than the Brazilian lowland tapir . . . dark gray to blackish coloured, and lacking for lowland tapirs so characteristic white ear tips’), accompanied by the above-mentioned photograph and artist’s reconstruction (the latter’s caption again emphasizing ‘the lack of distinctly white ear tips’). A holotype was not explicitly designated, and the text does not exclude the possibility that other examined specimens besides the photographed skull served as the basis for the description and illustration, thus precluding the skull’s automatic fixation as holotype. Indeed, it noted that Van Roosmalen himself ‘spotted these dwarf tapirs several times.’ The lack of fixation of a name-bearing type together with the absence of any statement concerning the collection in which that type has been or is intended to be deposited (Article 16.4) means that the *Tapirus pygmaeus* is not available from this work.

3. Five years later, in an English-language textbook edited by Van Roosmalen and aimed at a predominantly academic audience, Van Roosmalen & Van Hooft (2013 [22 April], p. 400) offered a description of the dwarf black tapir, again under the name *Tapirus pygmaeus* sp. nov. The description was based on the above-mentioned skull (with three photographs), supplemented by the above-mentioned artist’s reconstruction of the living animal and a summary of its general appearance based on both interviews with the locals and Van Roosmalen’s own observations in the wild. The overall content of this publication is the same as that offered since June 2007 on the above-mentioned website. However, the description is more formal and aimed mainly at an academic audience. Moreover, it includes more illustrations and also a table with morphometric data comparing external and skull measurements in millimetres taken of the holotype specimen of *Tapirus pygmaeus* sp. n. with nine specimens of the common lowland tapir *Tapirus terrestris* from the zoological collection of Museu Paraense Emílio Goeldi. As such all the criteria of availability of the specific name under Articles 10 to 20 of the Code were met by it. In particular, the above-mentioned skull was designated as the holotype and the intention to deposit it in the Museu Paraense Emílio Goeldi (MPEG) in Belém, PA was noted, although it remains for now in the care of the villagers of Tucunaré, left bank Rio Aripuanã.

4. The book by Van Roosmalen (Ed.) (2013) was published by Amazon’s CreateSpace <https://wwwcreatespace.com/>. The Commission Secretariat has a copy of the purchase orders indicating that Amazon’s CreateSpace sold and shipped multiple printed copies prior to December 2013, including at least two copies printed and shipped on the same day (which happened for the first time on 22 April 2013). These copies can be considered as an original print run, and simultaneous shipment makes the publication ‘obtainable’ and ‘available’ in the sense of the Code regardless of the statement ‘printed on demand’ by ‘Amazon’s CreateSpace’ on their website. That date (when two copies were for the first time simultaneously shipped to the customers) should be considered as the correct publication date. The file of the first version of ‘*Barefoot*’ was submitted and the proofs were sent back to the author by the editors of Amazon’s CreateSpace department by Feb 22, 2013, the author having changed only the font from Arial to Times New Roman and the letter colour from black to dark green. The author entered this version of the interior (main text) the

next day and then approved the new proofs. As such Van Roosmalen (Ed.) (2013) as paperback was put for sale on Amazon's bookstore website from March 5th, 2013 on. The author wrote a statement to the Secretariat saying that since then, he had not changed it or uploaded other versions, but as 22 April 2013 was the date that constituted the initial print run, the status of any subsequently printed copies didn't affect the status of the publication at all. Article 9.12 of the amended Code says that facsimiles or reproductions of an unpublished work obtained on demand do not constitute published work, but the example shows that print on demand is not prohibited [‘If an editorial process was evident in converting the work to print-on-demand form (e.g. change to single spacing, repagination, addition of running headers), it might be considered published]. Therefore, print-on-demand in and of itself as a system of publishing, cannot automatically be excluded as a valid method, provided that the criteria of Article 8 are met. Without producing an edition of numerous simultaneously obtainable copies of the initial print run, any subsequently produced copies would not form part of that run and would be prohibited by Article 9.12. The fact that a work is available for re-printing on demand does not retroactively render the original issue (involving numerous simultaneously obtainable copies) unpublished in the sense of the Code.

5. Later that same year, Cozzuol et al. (2013 [December], p. 1333) described a new Brazilian tapir, *Tapirus kabomani* Cozzuol, Clozato, Holanda, Rodrigues, Nienow, De Thoisy, Redondo & Santos, 2013. This nominal species, although based on a different holotype specimen than that of the unavailable *T. pygmaeus* Van Roosmalen, unmistakably pertains to the same taxonomic species as the latter. The morphometric skull characters, dwarfed body size (about 100 kg), overall black coloration of the skin, supposed distribution (the larger Rio Aripuanã basin), and habitat preference for primary rain forest with a dense understory and shrub/sapling layer are all identical, attesting to this synonymy.

6. Under the Code, *Tapirus pygmaeus* Van Roosmalen & Van Hooft, 2013 has priority over *Tapirus kabomani* Cozzuol et al., 2013 for the black dwarf tapir. Despite this fact, the latter name has already been used as valid in a number of publications in the media and on the internet (e.g. www.wikipedia.org), though not (yet) in print, except for the original publication by Cozzuol et al. (Dec. 2013) in *Journal of Mammalogy*, **94**(6): 1331–1345. Conversely, *T. pygmaeus* has been used as valid on a number of websites, among which: www.bbc.co.uk (2007), www.planet-mammiferes.org (2008), www.es.wikipedia.org, www.worldvisitguide.com, and www.cyclopaedia.net. The Commission can best address this unstable situation, and confirm priority by ruling that Van Roosmalen (2013) and, by extension, Van Roosmalen & Van Hooft (2013) is not to be regarded as an unpublished work.

7. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its specific powers to confirm that:

- (a) Van Roosmalen's (Ed.), 2013 [22 April] book *Barefoot through the Amazon – On the path of evolution*, including the paper by Van Roosmalen & Van Hooft, 2013 (pp. 400–404), in which *T. pygmaeus* Van Roosmalen & Van Hooft, 2013 was proposed, is an original multiple-copy, simultaneously available edition;

- (b) *Tapirus pygmaeus* Van Roosmalen & Van Hooft in Van Roosmalen [22 April] is an available name with priority over *Tapirus kabomani* Cozzuol, Clozato, Holanda, Rodrigues, Nienow, De Thoisy, Redondo & Santos, 2013 [December] whenever these two nominal species-group taxa are considered to be synonyms;
- (2) to place on the Official List of Works Approved as Available for Zoological Nomenclature, Van Roosmalen's (Ed.). (2013 [22 April]) book *Barefoot through the Amazon – On the path of evolution*, including the paper by Van Roosmalen & Van Hooft, 2013 (pp. 400–404), in which *T. pygmaeus* Van Roosmalen & Van Hooft, 2013 was proposed, with the endorsement that it is confirmed as is an original multiple-copy, simultaneously available edition, as ruled in (1)(a) above;
- (3) to place on the Official List of Specific Names in Zoology the name *pygmaeus* Van Roosmalen & Van Hooft in Van Roosmalen, 2013 [22 April], as published in the binomen *Tapirus pygmaeus*, with the endorsement that it is confirmed as an available name with priority over *Tapirus kabomani* Cozzuol, Clozato, Holanda, Rodrigues, Nienow, De Thoisy, Redondo & Santos, 2013 [December] whenever these two nominal species-group taxa are considered to be synonyms, as ruled in (1)(b) above.

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Case 3660***Antilope arabica* Lichtenstein, 1827 (currently *Gazella arabica*; Mammalia, Ruminantia): proposed conservation of part of the lectotype designated by Neumann (1906)**

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Abstract. The purpose of this application, under Articles 74 and 81 of the Code, is to maintain the usage of the name *Gazella arabica* (Lichtenstein, 1827) for a gazelle from central and southern Arabia. The lectotype designated by Neumann in 1906, consisting of a skull and skin, has been found to be composite and it is proposed that only the skin be retained as the name-bearing specimen. The holotype of *Gazella arabica rueppelli* Neumann, 1906, consisting also of a skull and skin, is also composite and only the skin is now retained as the name-bearing specimen, rendering the name *rueppelli* a junior synonym of *G. gazella* (Pallas, 1766).

Keywords. Nomenclature; taxonomy; Mammalia; Ruminantia; BOVIDAE; *Gazella arabica*; *Gazella arabica rueppelli*; *Gazella gazella*; *Gazella dorcas*; gazelles; central Arabia; southern Arabia.

1. In 1820–1825 the zoologists C.G. Ehrenberg and F.W. Hemprich from the Zoologisches Museum der Königlichen Universität zu Berlin (today the Museum für Naturkunde Berlin) travelled in the Middle East and North Africa. From 1823 to 1826 they periodically sent to the Museum specimens that they had collected. In 1827 the Museum director H. Lichtenstein published a series of booklets setting out recent Museum acquisitions for non-specialist readers. In his second booklet he illustrated (pl. 6) and described (figure caption) a new gazelle species, *Antilope arabica* Lichtenstein, 1827, and noted that it lived on higher ground along the eastern shore of the Red Sea and nearby islands such as Farsan (currently Farasan, about 40 km offshore in south-west Saudi Arabia). He did not designate a type but figured one male and one female individual in life and gave some measurements. He referred to a more detailed manuscript by Hemprich and Ehrenberg, the collectors of the material.

2. In an account of the expedition published shortly afterwards, Hemprich & Ehrenberg (1828, 1833) described the species in detail. Only the plates were published in 1828 and they illustrated (pl. 5) a living male, female and young of '*Antilope arabica*. Sinai'. In a volume delayed in publication, they subsequently (1833) described four specimens with measurements (two males, one female and a subadult female). They noted that the species was collected from valleys in Sinai, deserts along the coast of Arabia and Farasan Island but did not note which specimens came from each locality.

3. None of the documents (Lichtenstein, 1827; Hemprich & Ehrenberg, 1828, 1833) included catalogue numbers for the specimens. In later publications, Neumann (1906) listed only the male (ZMB_MAM_2115) and female (ZMB_MAM_2108) individuals, without mentioning the material of each that was preserved, and Groves (1983, p. 371) listed the male (ZMB_MAM_2115) represented by a skull and skin; an adult female (ZMB_MAM_2108) consisting of a skull and skin, and a juvenile female (ZMB_MAM_2109), said by him to be 'skin only' but a mandible now accompanies it.

4. Letters of Hemprich and Ehrenberg written during the expedition, compiled by Stresemann (1954) and mentioned by Groves (1983), noted that two individuals of *Antilope arabica* were collected on the Sinai peninsula and one on the Farasan archipelago. Groves (1983, p. 372) suggested that the two individuals collected in Sinai were the female and young as their catalogue numbers are consecutive and possibly they were mother and fawn. In 1906 Neumann (p. 245) designated the adult male individual ZMB_MAM_2115 as the type of *Antilope arabica* Lichtenstein, 1827 (a lectotype designation under Article 74.6 of the Code). Neumann (p. 244) stated this to be (in translation) 'an old buck from Farasan island in the Red Sea'. He also designated the female individual ZMB_MAM_2108 as the holotype of a new subspecies from Sinai, *Gazella arabica rueppelli*, to which he referred also some specimens in the Frankfurt Museum from 'Arabia Petraea' collected by Rüppell. Groves selected specimen ZMB_MAM_2108 as the lectotype of *G. a. rueppelli*, apparently unaware that Neumann had fixed the specimen as the holotype.

5. Identification of the supposed specimens in the Berlin museum of *Gazella arabica* using skull measurements and molecular data has proved to be problematic. The horn lengths of the male skull given by Lichtenstein (1827) are identical to our own measurements of ZMB_MAM_2115 (28.9 cm, assuming that 1 inch = 2.53 cm) but the lengths given by Hemprich & Ehrenberg (1833) for the two male specimens are smaller (26.8 cm and 24.0 cm, respectively). In fact most of the measurements (e.g. total length from head to tail, lengths of head, ear and tail) for the male specimen in Lichtenstein (1827) do not match those in Hemprich & Ehrenberg (1833). It could be that Hemprich and Ehrenberg took measurements of some specimens in Arabia and sent another specimen to the museum from the numerous gazelles they shot during their expedition (Hemprich & Ehrenberg, 1833). The horn lengths of the adult female in the two publications are similar (15.2 cm in Lichtenstein, 15 cm in Hemprich & Ehrenberg.). However, both differ from our own measurements (18.4 cm) taken from the putative female syntype skull ZMB_MAM_2108, so we have some doubt about the identity of this skull.

6. Bärmann et al. (2013a) used mitochondrial DNA to investigate the phylogenetic position of the male *G. arabica* lectotype ZMB_MAM_2115. They found that the

skin and skull of the supposed lectotype individual derive from two individuals belonging to two different phylogenetic groups. The skin belongs to the Arabian Mountain gazelles *G. arabica* (cytochrome b and mitochondrial control region), while the skull comes from an individual of the Levantine form of Mountain gazelles, *G. gazella* (Pallas, 1766), a species of which some regard *G. arabica* as a subspecies (mitochondrial control region only was obtained). Bärmann et al. (2013b) also used mitochondrial gene sequences (cytochrome b and control region) to investigate the phylogenetic position of the female *G. arabica rueppelli* holotype ZMB_MAM_2108. The skull is placed by both sequences in *G. dorcas* (Linnaeus, 1758), this being a species widespread in North Africa and extending into Sinai. However, the corresponding skin ZMB_MAM_2108 is placed within *G. gazella* (control region sequence only was obtained). If the female skull ZMB_MAM_2108 is the original skull collected by Hemprich and Ehrenberg there was, as in the case of the male ZMB_MAM_2115, a mistake in assigning skull and skin to the same individual. Another possibility is that the original female syntype skull was accidentally substituted by a *G. dorcas* skull in later years. The difference in skull measurements between the original species description (horn length: 6 inches = 15.2 cm) and the actual specimen (18.4 cm) is striking. Hemprich and Ehrenberg collected six *G. dorcas* females during their expedition (Museum für Naturkunde Berlin, Historische Bild- und Schriftgutsammlungen, SI, Hemprich & Ehrenberg, Blatt 76), so confusion is possible. The juvenile skin ZMB_MAM_2109 is assigned to the same taxon as the *G. arabica* lectotype skin (ZMB_MAM_2115) by the mitochondrial control region sequence.

7. Bärmann et al. (2013b) used principal component analysis (PCA) and discriminant analysis (DA) of linear skull measurements to investigate the similarity of the *G. arabica* lectotype skull ZMB_MAM_2115 to other living gazelle species. In PCA, the first three components, together accounting for approximately 76% of the variability of the data set, placed the specimen in *G. gazella*. However, C4 (accounting for 5% of the variability) shows high similarity with *G. dorcas saudiya* Carruthers & Schwarz, 1935 and *G. cuvieri* (Ogilby, 1841). Skulls of gazelles from Farasan, where the *G. arabica* lectotype skull was said to originate, were not very similar to this skull (Thouless & al Bassri, 1991; Wronski et al., 2010). The discriminant analysis assigned the skull to the Indian species *G. bennettii* (Sykes, 1831), but the distance to the group centroid was very large. Perhaps Groves (1983) was correct in suggesting that the specimen harbours pathological deformations. Another possibility is a hybrid origin, which can also affect skull proportions to a considerable degree (Ackermann et al., 2010). Hybridization is known to occur in captive gazelles (Rebholz & Harley, 1997; Hammond et al., 2001) and, as the origin of the specimen is not known, this cannot be ruled out. The female skull ZMB_MAM_2108 clustered with *G. dorcas* in the PCA, and was assigned to *G. dorcas* in DA. An identity of *G. arabica* was not indicated for the female syntype skull in any of the analyses.

8. One of us (E.V.B.) has checked the original lists of specimens that were shipped to Berlin by Hemprich and Ehrenberg from 1823 to 1826 (Museum für Naturkunde Berlin, Historische Bild- und Schriftgutsammlungen, SI, Hemprich & Ehrenberg, Blatt 113, 126, 182, 188, 189). Three shipments contained specimens that the collectors referred to as *Antilope arabica*:

8th shipment, arrived in May 1824 (with specimens collected in Arabia and Egypt in 1823): one male skull. This skull was probably lost, although it might be one of the specimens measured by Hemprich and Ehrenberg in Arabia.

9th shipment, arrived in April 1825 (with specimens collected in Arabia and Syria in 1824): two skins and one skeleton. These could be the skins ZMB_MAM_2115 (probably from Arabia) and ZMB_MAM_2108 (probably from Syria). The skull ZMB_MAM_2115 (probably also from Syria) could be the skull belonging to the skeleton from the same shipment, which would account for the erroneous assumption that it belongs to the male skin. The rest of the skeleton is most likely lost as it was never mentioned again.

10th shipment, arrived in April 1826 (with specimens collected in Arabia and Abyssinia in 1825); one adult and one juvenile individual (parts not specified). The juvenile must be ZMB_MAM_2109, skin and mandible, probably from Arabia or Farasan Island. The adult from the same shipment might be the skull ZMB_MAM_2108, probably from Abyssinia, or the original specimen was lost and erroneously replaced by ZMB_MAM_2108.

9. Using the information given in paras. 5–8 above, the three specimens listed by Groves (1983, para. 3 above) can be annotated as follows:

ZMB_MAM_2115 Old male skull of *G. gazella* and skin of *G. arabica* (9th shipment). Both specimens constitute the present lectotype of *G. arabica* (Lichtenstein, 1827).

ZMB_MAM_2108 Adult female *G. dorcas* skull (10th shipment, probably from Abyssinia), and *G. gazella* skin (9th shipment, probably from Syria). Both specimens constitute the holotype of *G. arabica rueppelli* Neumann, 1906. The skin has an identical mitochondrial sequence to the skull of ZMB_MAM_2115.

ZMB_MAM_2109 Juvenile female *G. arabica* skin, not mentioned by Neumann in 1906 (10th shipment, plus a mandible). The skin is conspecific with the skin of ZMB_MAM_2115.

In the recent past Masseti (2010, pp. 361–362) has noted that the specimen ZMB_MAM_2115 (skull and skin) of *G. arabica* collected in 1825 is enigmatic, with a doubtful provenance and the likelihood of human error concerning its origin.

10. Article 73.1.5 of the Code allows parts of a holotype later found to be composite to be excluded by a subsequent author. By the time of a lectotype designation, however, any extraneous elements in the syntype series are supposed to have been removed and a single (non-composite) specimen becomes the name-bearer (Article 74). The lectotype of *Gazella arabica* (Lichtenstein, 1827) consists of a skull and skin which have been shown to belong to different individuals and, indeed, to different species. To conserve the current understanding and usage of the name *G. arabica* for the gazelle of central and southern Arabia we propose that the type status of the skull of ZMB_MAM_2115, a specimen of *G. gazella*, be set aside and that the skin of ZMB_MAM_2115, a specimen of *G. arabica*, be maintained as the sole name-bearing specimen. In the case of the holotype of *Gazella arabica rueppelli* Neumann, 1906, which has also been found to be composite, the skull of ZMB_MAM_2108 is a specimen of *G. dorcas* with an uncertain provenance (para. 5 above). We therefore exclude this skull from the holotype of *G. a. rueppelli* and retain the skin of ZMB_MAM_2108, a specimen of *G. gazella*, as the name-bearing specimen. Consequently, the name *G. arabica rueppelli* becomes a junior synonym of



Fig. 1. Skin of the lectotype of *Gazella arabica* (Lichtenstein, 1827) showing the characteristic dark nasal spot. Photographs: Carola Radke, Museum für Naturkunde Berlin.

G. gazella. Pocock (1935, p. 460) previously suggested that *G. a. rueppelli* was a synonym of *G. gazella gazella*; Groves (1983) thought that *G. a. rueppelli* was a synonym of *G. dorcas isabella* Gray, 1846.

11. The lectotype skin ZMB_MAM_2115 shows characters which largely agree with those of *Gazella arabica* and differ from *G. dorcas*. This latter species occurs in many areas visited by Hemprich and Ehrenberg, specimens of it were described by Lichtenstein (1827), and it is the most likely alternative identification for the Berlin material. According to Lichtenstein, *G. arabica* is the size of a European roe deer *Capreolus capreolus* (Linnaeus, 1758), generally darker in colour than *G. dorcas*, with a fairly large dark spot on the muzzle tip, a black stripe from the eye to the corner of the mouth and a black tail which is brown only at the base. There are conspicuous knee tufts [on the front legs] in both sexes. The black nasal spot is clearly visible from an early age. In designating the lectotype of *G. arabica*, Neumann (1906) noted that the species had no dark side stripe and no greyish tone to the strongly reddish body colour. The lectotype skin ZMB_MAM_2115 seen by all authors in Berlin shows an overall colouring that is not more reddish or less sandy than in *G. dorcas*, but it does have a dark nasal spot and eye stripes which differ from the rufous central face stripe of *G. dorcas*. There is a wide and light mid-flank band, not as light as in many *G. dorcas*, which extends to the rear to a level just above the front of the back legs (a short way in front of the pygal band). Below is a slightly darker and less wide flank band which is no darker than the top of the back (which some might see as a difference from *G. dorcas*) but with a greyer tinge in its colouring than the area more dorsally. The pygal band is a darker brown than the brown in front of it going forward to the back of the lighter flank band. The skin has very slightly darkened carpal tufts (probably not different from *G. dorcas*) and tufts of dark brown fur above the hooves on the front legs (there has been hair loss from the back legs). These morphological characters are in accord with the understanding of *Gazella arabica* from southern Arabia in both the older and more modern literature (see, for example, Wagner, 1844, p. 407; Sclater & Thomas, 1898, pp. 115–118, pl. 59; Anderson & de Winton, 1902, pp. 342–343; Lydekker & Blaine, 1914, pp. 57–59; Flower, 1932, p. 438; Pocock, 1935, pp. 458–462; Morrison-Scott, 1939, p. 185; Harrison, 1968, pp. 350–353; Lange, 1972, p. 227; Kingdon, 1990, p. 141; Lerp et al., 2014).

12. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside the lectotype status of the skull ZMB_MAM_2115 in the Museum für Naturkunde Berlin of *Antilope arabica* Lichtenstein, 1827, retaining only the skin ZMB_MAM_2115 as the sole lectotype specimen;
- (2) to place on the Official List of Specific Names in Zoology the name *arabica* Lichtenstein, 1827, as published in the binomen *Antilope arabica* and as defined by the lectotype skin ZMB_MAM_2115 in the Museum für Naturkunde Berlin designated by Neumann (1906), as ruled in (1) above.

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- Acknowledgement of receipt of this application was published in BZN **71**: 68.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to I.C.Z.N. Secretariat, Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comment on a proposal to reinstate as available the species-group names proposed for Devonian ammonoids (Mollusca, Cephalopoda) by Sobolew (1914a, 1914b)

(Case 3600; see BZN **69**: 170–177; **70**: 45–46)

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1. The names Oma-monomeroceras (*Cheiloceras*) *countrverneuili* and Oma-monomeroceras (*Cheiloceras*) *contrcurvispina* (names 6 and 7 on the list) are cited correctly by Becker & Nikolaeva (BZN **69**: 170–177). These are correct original spellings (Sobolew, 1914a, p. 44).

2. The priority of senior homonyms in the pairs of homonyms (Oma-monomeroceras (*Cheiloceras*) *subpartitum lativaricatum* Sobolew, 1914a; Oma-monomeroceras (*Cheiloceras*) *amblylobum lativaricatum* Sobolew, 1914a (14 and 15 on the list), Gomi-re-monomeroceras (*Tornoceras*) *planilobum avaricatum* Sobolew, 1914a and Gomi-re-monomeroceras (*Tornoceras*) *dorsoplanum avaricatum* Sobolew, 1914a (62 and 63 on the list), Gomi-re-monomeroceras (*Tornoceras*) *simplicius rotundatum* Sobolew, 1914b and Gomi-re-monomeroceras (*Tornoceras*) *simplificatum rotundatum* Sobolew, 1914b (71 and 73 on the list), Gomi-re-monomeroceras (*Tornoceras*) *simplicius subacutum* Sobolew, 1914b and Gomi-re-monomeroceras (*Tornoceras*) *simplificatum subacutum* Sobolew, 1914b (72 and 77 on the list) was explicitly determined by Korn & Klug (2002) in a series of First Reviser actions.

3. Oma-monomeroceras (*Aganides*) *discoideale* Sobolew, 1914a (51 on the list) is a junior synonym of Oma-monomeroceras (*Cheiloceras*) *discoideale* Sobolew, 1914a (9 on the list) as was explicitly determined by Korn & Klug (2002).

4. Oma-monomeroceras (*Cheiloceras*) *parvum* Sobolew, 1914a (21 on the list) is a nomen nudum and should be excluded from the ruling, as an unavailable name as well as invalid.

5. The spelling ‘Oma-monomeroceras (*Cheiloceras*) *umbiliferum*’ (not to be given priority over ‘Oma-monomeroceras (*Cheiloceras*) *umbilifer*’ under Article 24.2.3 of the Code, First Reviser Action by Becker & Nikolaeva (BZN **69**: 170–177) is used by Sobolew (1914a in the explanation of Plate 8, fig. 8).

6. Priority of Oma-monomeroceras (*Cheiloceras*) *longilobum* Sobolew, 1914a over Oma-monomeroceras (*Cheiloceras*) *sacculus longilobum* Sobolew, 1914a, Priority (17 and 18 on the list) is established under Article 57.7 of the Code.

7. Names introduced as ‘var.’ by Sobolew (1914 a, b) are available under Article 45.6.4 – Sobolew did not expressly give them an infrasubspecific rank, and the content of the work does not unambiguously reveal that the names were proposed for infrasubspecific entities.

Below is the list of Sobolew's names with updated annotations:

An annotated list of specific names established by Sobolew (1914a, 1914b), with reference to taxonomic treatments by subsequent authors (The full list demonstrating the taxonomic treatment and usage is held by the Commission Secretariat)

The 35 taxa listed in bold have been regarded as valid by all/most subsequent authors and, therefore, would most likely have to be re-named if Sobolew's names continued to be considered unavailable. Those among them marked by † are based on juveniles and might eventually prove to have available synonyms. The unmarked non-bold names are generally considered as junior synonyms. The 26 additional names marked by * have been regarded as valid by some authors. Six junior homonyms and one nomen nudum that will remain invalid are marked by (-).

Genus *Oma-monoceras* (*Cheiloceras*)

1. ***acrilobum*** Sobolew, 1914a, p. 48;
2. ***acutilobum*** Sobolew, 1914a, p. 35;
3. **subpartitum angustivaricatum* Sobolew, 1914a, p. 37;
4. **arcuatovaricatum* Sobolew, 1914a, pp. 51–52;
5. **avaricatum* Sobolew, 1914a, p. 48;
6. **contrcurvispina* Sobolew, 1914a, p. 44;
7. **contrverneuili* Sobolew, 1914a, p. 44;
8. ***depressum*** Sobolew, 1914a, p. 49;
9. ***discoideale*** Sobolew, 1914a, p. 31 (priority established by Korn & Klug (2002) over (*Aganides*) *discoideale* Sobolew, 1914a);
10. **discotransversale* Sobolew, 1914a, pp. 46–47;
11. ***glabrum*** Sobolew, 1914a, p. 48;
12. ***globosoides*** Sobolew, 1914a, p. 42;
13. **globulare* Sobolew, 1914a, p. 49;
14. *subpartitum lativaricatum* Sobolew, 1914a, p. 36 (priority established by Korn & Klug (2002) over *amblylobum lativaricatum* Sobolew, 1914a);
15. (-) *amblylobum lativaricatum* Sobolew, 1914a, p. 41;
16. **lenticulare* Sobolew, 1914a, pp. 49–50;
17. ***longilobum*** Sobolew, 1914a, p. 30 (priority over *Oma-monoceras* (*Cheiloceras*) *sacculus longilobum* Sobolew, 1914a (p. 42) is established under Article 57.7 of the Code);
18. (-) *sacculus longilobum* Sobolew, 1914a, p. 42;
19. **multivaricatum* Sobolew, 1914a, p. 31;
20. *discoideale* var. *parvum* Sobolew, 1914a, p. 31 (available under Article 45.6.4);
21. (-) *parvum* Sobolew, 1914a, p. 69 (nomen nudum);
22. ***postinversum*** Sobolew, 1914a, p. 43;
23. *Ch. praeglobosum* Sobolew, 1914a, p. 43
24. ***praelagowiense*** Sobolew, 1914a, p. 31;
25. ***praelentiforme*** Sobolew, 1914a, p. 34;
26. *praepolonicum* Sobolew, 1914a, p. 35;
27. ***rotundum*** Sobolew, 1914a, p. 44;
28. ***semiinversum*** Sobolew, 1914a, p. 46;
29. **simplicissimum* Sobolew, 1914a, p. 44;
30. **sinuvaricatum* Sobolew, 1914a, p. 51;

31. †*subcostatum* Sobolew, 1914a, p. 52;
32. *subinversum* Sobolew, 1914a, p. 43;
33. **sublagowiense* Sobolew, 1914a, p. 31;
34. **sublentiforme* Sobolew, 1914a, p. 30;
35. **sublentitransversale* Sobolew, 1914a, p. 47;
36. **subsinuvaricatum* Sobolew, 1914a, p. 51;
37. *tenue* Sobolew, 1914a, p. 50;
38. **transversale* Sobolew, 1914a, p. 45–46;
39. *umbilifer* Sobolew, 1914a, p. 53. Hereby we select the spelling *umbilifer* as the correct original spelling over *umbiliferum* under Article 24.2.3 of the Code.

β-Oma-dimeroceras (*Sporadoceras*)

40. **curvispina* Sobolew, 1914a, p. 33;
41. *kielcense* Sobolew, 1914a, p. 32;
42. *lagowiense* Sobolew, 1914a, p. 32;
43. *nux* Sobolew, 1914a, p. 40;
44. **polonicum* Sobolew, 1914a, p. 39;
45. *praevaricatum* Sobolew, 1914a, p. 36;
46. **subvaricatum* Sobolew, 1914a, p. 35.

α-Oma-dimeroceras (*Dimeroceras*)

47. *globosum* Sobolew, 1914a, p. 42;
48. *lentiforme* Sobolew, 1914a, p. 34;
49. †*umbilicatum* Sobolew, 1914a, p. 54.

Oma-monomeroceras (*Aganides*)

50. **atavum* Sobolew, 1914a, p. 37;
51. *discoideale* Sobolew, 1914a, p. 37;
52. *sulcatum* var. *globus* Sobolew, 1914a, p. 40 (would be available under Article 45.6.4);

α-Oma-dimeroceras (*Praeglyphioceras*)

53. *lagowiense* var. *globulare* Sobolew, 1914a, p. 40 (would be available under Article 45.6.4);
54. *kielcense* Sobolew, 1914a, p. 39;
55. **lagowiense* Sobolew, 1914a, p. 39;
56. †*niwae* Sobolew, 1914a, p. 48.

Oma-re-protomeroceras [assigned to *Prolobites* by Sobolew (1914a, p. 25)]

57. *umbilicatum* Sobolew, 1914a, p. 54.

Gomi-monomeroceras (*Tornoceras*)

58. *kielcense* Sobolew, 1914a, p. 57;
59. †*sublentiforme* Sobolew, 1914a, p. 56.

Gomi-re-monomeroceras (*Tornoceras*)

60. *planilobum angulatolobatum* Sobolew, 1914b, p. 355;
61. *planilobum arcuatolobatum* Sobolew, 1914b, p. 353;
62. *planilobum avaricatum* Sobolew, 1914a, p. 60; (priority established by Korn & Klug (2002) over *dorsoplanum avaricatum* Sobolew, 1914a).
63. (-) *dorsoplanum avaricatum* Sobolew, 1914a, p. 65;
64. †*curvidorsatum* Sobolew, 1914a, p. 59;
65. *evolutum* Sobolew, 1914a, p. 68;
66. **flexuosum* Sobolew, 1914a, p. 62;

67. *genulobatum* Sobolew, 1914b, p. 358;
68. (-) *planilobum ornatum* Sobolew, 1914b, p. 356 (probable secondary junior homonym of *Prototornoceras ornatum* Dybczynski, 1913);
69. †*planilobum* Sobolew, 1914a, p. 59;
70. *genulobatum planum* Sobolew, 1914b, p. 358;
71. *simplicius rotundatum* Sobolew, 1914b, p. 361; (priority established by Korn & Klug (2002) over *simplificatum rotundatum* Sobolew, 1914b);
72. *simplicius subacutum* Sobolew, 1914b, p. 360; (priority established by Korn & Klug (2002) over *simplificatum subacutum* Sobolew, 1914b);
73. (-) *simplificatum rotundatum* Sobolew, 1914b, p. 361;
74. †*simplicius* Sobolew, 1914a, p. 63;
75. †*simplificatum* Sobolew, 1914a, p. 63;
76. †*sinuvaricatum* Sobolew, 1914a, p. 59;
77. (-) *simplificatum subacutum* Sobolew, 1914b, p. 360;
78. *umbilicatoides* Sobolew, 1914a, p. 64;
79. **umbilicatum* Sobolew, 1914a, p. 61.
- Gomi-re-protomeroceras** [assigned by Sobolew (1914a, p. 28) to *Mimoceras*]
80. *alobatum* Sobolew, 1914a, p. 61;
81. **simplicissimum* Sobolew, 1914a, p. 63.
- Gomi-monomeroclymenia** [assigned by Sobolew (1914a, p. 28) to *Oxyclymenia* or *Cyrtoclymenia*]
82. **Humboldti flexilobata* Sobolew, 1914a, p. 64;
83. *Humboldti genulobata* Sobolew, 1914a, p. 66;
84. *curvidorsata planiloba* Sobolew, 1914b, p. 354;
85. *Humboldti rotundata* Sobolew, 1914b, p. 361; cited by Korn & Klug (2002) as a junior subjective synonym of *Protactoclymenia humboldtii* (Pusch, 1837);
86. **subacuta* Sobolew, 1914a, p. 64; cited by Korn & Klug (2002) as a junior subjective synonym of *Protactoclymenia humboldtii* (Pusch, 1837); Dzik (2006) as a valid species of *Cyrtoclymenia*.
87. *Humboldti undosa* Sobolew, 1914b, p. 360; cited by Korn & Klug (2002) as a junior subjective synonym of *Protactoclymenia humboldtii* (Pusch, 1837).
- Gomi-protomeroclymenia** (assigned by Sobolew (1914a, p. 28) to *Protactoclymenia*, *Genuclymenia* or *Varioclymenia*).
88. *angustiseptata (?) subcostata* Sobolew, 1914b, p. 362;
89. *varicata* Sobolew, 1914b, p. 373.

New proposals:

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that 88 species-group names established by Sobolew (1914a, 1914b) (all names on the list above, except for *Oma-monomeroceras (Cheiloceras) parvum* Sobolew, 1914a, which is a nomen nudum), are available from the original publications;
- (2) to emend the entries for Sobolew (1914a, 1914b) on the Official Index of Works in Zoology to record that 88 species-group names established in these works are available from the original publications, as ruled in (1) above.

Comment on the proposed conservation of usage by designation of a replacement neotype for *Acarus putrescentiae* Schrank, 1781 (currently *Tyrophagus putrescentiae*; Acariformes, ACARIDAE)

(Case 3501; see BZN 67: 24–27)

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We oppose the proposed conservation of usage by designation of a replacement neotype for *Acarus putrescentiae* Schrank, 1781 (currently *Tyrophagus putrescentiae*; Acariformes, ACARIDAE) (Case 3501; see BZN 67: 24–27). The case was based on insufficient evidence and erroneous perceptions of presumed disruption to stability. We also point out errors in this case, misinterpretations by authors of the case of both the rules of the Code and the work by Fan & Zhang (2007a, b), and also the invalid nomenclatural act by Klimov & OConnor (2009).

Lack of understanding of the Code and disregard of its rules by authors of Case 3501

Robertson (1959) designated a male from the Netherlands as the neotype for *Acarus putrescentiae*, without evidence that it was consistent with the original description. An application (Case Z.N.(S.)1450) to place *putrescentiae* Schrank, 1781 as fixed by Robertson's neotype on the Official List was, however, approved by the Commission in 1981 (BZN 38: 125–129). In the discussion of this case, Klimov & OConnor commented: 'the numerous leg setae and the free palps protruding from the gnathosoma clearly indicate that Schrank's mite specimen (Schrank, 1776, Fig. 28) does not even belong to Astigmata.' They then concluded: 'The Commission, however, approved the proposal in Opinion 1298 (BZN 42: 124–126 (1985)). Robertson's taxonomic concept of *T. putrescentiae* was universally followed thereafter.' It should be noted that the Commission approved the designation of the neotype for *A. putrescentiae* by Robertson (a nomenclatural decision), and not her taxonomic concept of the species. Opinion 1298 ruled that the name *putrescentiae* Schrank, 1781 should be typified by Robertson's neotype, eliminating previous confusion.

Fan & Zhang (2007b) first showed that the material identified as *T. putrescentiae* by Robertson actually included two species ('A' and 'B'). They followed Opinion 1298 to apply the name *putrescentiae* to species 'A' typified by the neotype. This is strict application of the rules of the Code. Species B was named *T. communis* Fan & Zhang, 2007b.

Klimov & OConnor (2009, p. 109), however, ignored Opinion 1298 and identified species B as their '*T. putrescentiae*' with their own new type fixation as follows: 'Type material – Neotype (designated here): male – from culture maintained in the Crop

Research Institute (Prague, Czech Republic), started from specimens collected in Czech Republic, Buštěhrad, grain store, April 1996, received via J. Hubert, UMMZ BMOC 08–1010–002; Neoparatypes: 6 males, 4 females, 1 TN, 1 PN –same data as for neotype. Specimens deposited in UMMZ.’

Klimov & OConnor (2009, p. 109) not only designated a neotype in violation of Articles 75.4 and 80.9 of the Code, but also 12 ‘Neoparatypes’. While the Code allows paratypes when holotype is designated, and also paralectotypes when lectotype is fixed, there is no provision for ‘neoparatype’, which is a term that does not exist in the Code. The above shows the lack of understanding of the Code and disregard of its rules by the authors of Case 3501.

Lack of sufficient evidence for ‘prevailing usage’ in Case 3501

The prevailing usage of a name is clearly defined in the Glossary of the Code as the usage ‘adopted by at least a substantial majority of the most recent authors concerned with the relevant taxon, irrespective of how long ago their work was published’. The key here is ‘at least a substantial majority of the most recent authors’—a condition clearly not met by the evidence cited in the case. The case claimed (BZN 67: 25): ‘An extensive survey showed that the common species, under the name *T. putrescentiae*, was involved in the majority of studies published during the past 20 years. The rare species was involved in only one of 31 published studies (14 authors) (Klimov & OConnor, 2009, Table 3, p. 99).’

However, they also noted (BZN 67: 26): ‘There are hundreds of studies on *T. putrescentiae* and thousands of DNA sequences in GenBank (Klimov & OConnor, 2009, Table 1, p. 97); unfortunately, not all authors involved preserved vouchers for their studies or responded to our inquiries.’

For hundreds of studies on *T. putrescentiae*, a sample of 31 published studies by 14 authors in Klimov & OConnor (2009) is a very small minority. Also, it is a very biased sample towards laboratory-reared material. It is important that at least a substantial majority of the works by most recent authors be examined to establish the prevailing usage of the name as defined in the Code. This cannot be resolved by a survey of a small non-random sample. The fact that ‘not all authors involved preserved vouchers for their studies or responded to our inquiries’ cannot be used as an excuse for not examining the usage of the name in a substantial majority of the works by most recent authors. Taxonomists in different countries have better access to their own material. They should be given the chance to re-examine their material identified as ‘*T. putrescentiae*’ in light of the new findings of Fan & Zhang (2007b). Klimov & OConnor (2009) made the decision that their view based on a small sample was the correct one and designated a neotype illegitimately for a name that already had a neotype designated by Robertson and most importantly approved by Opinion 1298 after discussions and debates. The second neotype designation violates Articles 75.4 and 80.9 of the Code.

Klimov & OConnor claimed in Case 3501 that *T. putrescentiae* fixed by the neotype in Opinion 1298 is a ‘rare species’, based on their own small sample. They did not mention that Fan & Zhang (2007b) examined some 60 specimens available to them and showed that (1) *T. putrescentiae* fixed by the neotype approved by Opinion 1298 is widely distributed in the world: Palearctic (Germany, Netherlands, China, Japan), Nearctic (U.S.A.), Neotropical (Brazil, Ecuador), Oriental (China, Taiwan) and

Australian (Australia, New Zealand); (2) *T. communis* is a widely distributed species: Palearctic (China, Crete, Germany, Greece, Italy, Japan, Malta, Netherlands, Spain, Turkey, U.K.), Nearctic (U.S.A.), Neotropical (Argentina, Brazil, Chile, Ecuador, Jamaica), Ethiopian (Madagascar, West Africa), Oriental (Hong Kong, India, Indonesia, Philippines, Singapore, Taiwan, Thailand) and Australian (Australia, Cook Is., Fiji, New Zealand, Papua New Guinea, Samoa, Solomon Is., Tonga, Tokelau Is., Vanuatu). Fan & Zhang's (2007b) study was focused on the Australian fauna and the slightly wider distribution of *T. communis* is a reflection of the material available to them. It is important that taxonomists from different countries revise their own material previously identified as '*T. putrescentiae*'. The data in Fan & Zhang (2007b) was overlooked by Klimov & OConnor (2009) in their count to establish the so-called 'prevailing usage'. The proportion of material studied so far after '*T. putrescentiae*' s.l. was split into two species is so small that it is premature to claim which species is more rare or common by a substantial majority.

Inaccurate perceptions of presumed disruption to stability by authors of Case 3501

Even if Klimov & OConnor had sufficient evidence for the prevailing usage of their '*T. putrescentiae*', it remains to be seen if there will be presumed disruption to stability if the neotype approved in Opinion 1298 is maintained. Acarologists have shown that they prefer to follow the rules of the Code rather than usage. *Varroa jacobsoni* was the name used for an important bee parasite known widely in literature. Anderson & Trueman (2000), after studying mtDNA Co-I gene sequences and morphological characters of many *V. jacobsoni* from many parts of the world considered it to be a species complex and split it into two species: *Varroa jacobsoni* sensu stricto infests *Apis cerana* in the Malaysia-Indonesia region only, whereas *Varroa destructor* Anderson & Trueman, 2000 infests its natural host *A. cerana* on mainland Asia, and also infests *A. mellifera* L. worldwide (except Australia). The usage of the name *Varroa jacobsoni* was 100% before 2000, but the name *V. destructor* has been widely accepted for this economically important species since 2000 (Table 1). Applied biologists are flexible and receptive to nomenclatural changes.

Table 1. Search results for '*Varroa jacobsoni*' and '*Varroa destructor*' in the number of papers in *Zoological Record*; search done 16 May 2014:

	1990–1999	2000–2009	2010–2014
<i>Varroa jacobsoni</i>	268	52	2
<i>Varroa destructor</i>	0	179	129

Misinterpretations by the authors of this case of the work of Fan & Zhang (2007a, b)

Klimov & OConnor (2009, p. 96) claimed: 'Fan & Zhang (2007b) proposed a new name, *Tyrophagus communis*, without considering previously described taxa.' It is not true. Klimov & OConnor (2009) listed nine species, *T. americanus*, *T. breviceps*, *T. cocciphilus*, *T. longior* var. *castellanii*, *T. australasiae*, *T. neotropicus*, *T. amboinensis*, *T. nadinus* and *T. communis* as synonyms of their '*T. putrescentiae*'. In fact, we examined type specimens of *T. americanus* Banks, 1906, *T. breviceps* Banks, 1906, *T.*

cocciphilus Banks, 1906, *T. australasiae* Oudemans, 1916, *T. neotropicus* Oudemans 1917 and *T. communis* Fan & Zhang, 2007b, and specimens of *T. longior* var. *castellanii* Hirst identified by Robertson (Fan & Zhang, 2007b; unpublished material). *Tyrophagus nadinus* Lombardini, 1944 was not obtained (it was synonymised with *T. putrescentiae* by Robertson, 1959). We restored *T. vanheurni* (Fan & Zhang, 2007b) and synonymised *Povelsenia neotropicus* with *Tyrophagus putrescentiae* (Fan & Zhang, 2007a). Our results on *T. americanus*, *T. breviceps* and *T. cocciphilus* have not been published. We clearly disagree with Klimov & OConnor (2009) that *Tyrophagus amboinensis* Oudemans 1925 is a synonym of their '*T. putrescentiae*' (unpublished data). Oudemans (1927) clearly showed that it is a species similar to *T. palmarum* in which the arms of penis support are turned inwards. This species is neither *T. communis* nor *T. putrescentiae* with the arms of penis support turned outwards. Most species of *Tyrophagus* (those outside of Australasia) are in serious need of revision, and the '*T. putrescentiae*' complex is likely to contain more cryptic species when molecular and other non-morphological data are explored. The best way forward is to revise all other species in the complex from various countries. The issue has not been resolved as there are disagreements between two groups (Klimov & OConnor versus Fan & Zhang). This is in the taxonomic domain and taxonomists may differ in their views. Nomenclaturally, the proposers of case 3501 can easily solve the taxonomic problem by synonymising *T. communis* with a senior name of which they are really certain of the identity and therefore the synonymy, after a full taxonomic revision of material previously identified by a substantial majority of the most recent authors as '*T. putrescentiae*' (this has not been done yet). This would be less disruptive than what is proposed in Case 3501.

Summary

The above discussion shows that Case 3501 was based on insufficient evidence of the so called 'prevailing usage' claimed by Klimov & OConnor for their '*T. putrescentiae*' and also inaccurate perceptions of presumed disruption to stability. The current neotype for *T. putrescentiae* was fixed via the plenary power of the Commission only in the 1980s. To set this aside using the plenary power of the Commission again, there must be evidence beyond any doubt for this decision. With only a small sample studied by a few taxonomists so far after the discovery of two species in the *T. putrescentiae* complex, it is premature to claim real prevailing usage by at least a substantial majority of the most recent authors concerned with *T. putrescentiae*. Until more studies are done with sufficient evidence, Opinion 1298 should be respected and the rules of the Code followed.

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Comment on the proposed validation of the generic and specific names as available of *Orthezia characias* [Bosc d'Antic], 1784 (Insecta, Hemiptera, ORTHEZIIDAE)
(Case 3645; see BZN 71: 7–12)

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My attention was drawn on the text of Case 3645, published March 2014 in the Bulletin of Zoological Nomenclature, concerning the proposed conservation of the established usage of the genus-group name *Orthezia* and species-group name *characias*, both with the author Bosc d' Antic (1784). After almost 230 years, the time that the original spelling remained unnoticed, it would be very undesirable to change the name and combinations. Therefore I support the opinion of the authors expressed in the title to validate the generic and specific names as available. This will avoid confusion; a stable name is of vital importance in the management of pest species.

Comments on *Tibicina* Amyot, 1847 and *Lyristes* Horváth, 1926 (Insecta, Hemiptera, Homoptera): proposed conservation by the suppression of *Tibicen* Berthold, 1827 [?Latreille, 1825], and concerning the type species of *Cicada* Linnaeus, 1758

(Case 239; see BZN 41: 163–184)

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Recent comments by Boulard & Puissant and Sanborn (BZN 71, this issue), renewing a dormant case, Z.N.(S.) 239 from 1984 by Melville & Sims (BZN 41: 163–184), represent the fourth time in the past 68 years in which problems involving the genus name *Tibicen* Latreille, 1825/Berthold, 1827 and its family-group derivatives have been raised before the ICZN.

Issues and proposals center on two problems: (1) the priority of *Tibicen* Latreille, 1825 (or Berthold, 1827, its German translation) over *Lyristes* Horváth, 1926 and *Tibicina* Kolenati, 1857, and (2) confusion caused by family-group names based on *Tibicen* and *Tibicina* and differing by just one letter. Strikingly different interpretations have been taken on the first matter. Boulard & Puissant (BZN 71 this issue) argue that both *Tibicen* Latreille, 1825 and *Tibicen* Berthold, 1827 are nomina nuda, a conclusion not reached in the Melville & Sims (BZN 41: 163–184) proposal or the earlier China (1964) petition, and that *Tibicen* was made available by Latreille (1829) under a completely different concept from that in current usage. Boulard & Puissant support the suppression of *Tibicen* Berthold, 1827 (and therefore *Tibicen* Latreille,

1825) in favor of *Lyristes* Horváth, 1926, as in Alternative A of Case Z.N.(S.) 239, and they request suppression of *Tibicen* Latreille, 1829. However, Sanborn (BZN 71 this issue) has contested the nomen nudum argument and pointed out that the family-group confusion of the mid-20th century has been reduced by recent revisions, especially Moulds (2005). In the numbered arguments below, we concur with Sanborn that the Code supports the availability of *Tibicen* Latreille, 1825 (or Berthold, 1827, pending a ruling on the intended language of the name). We correct errors made in the original case and in relevant literature, and we develop arguments not made by Sanborn or Boulard & Puissant (BZN 71 this issue), especially regarding questions about the type of *Cicada* Linnaeus.

1. *Tibicen* Latreille, 1825 is not a nomen nudum. Boulard & Puissant (BZN 71 this issue) argue that Latreille's text 'Les g. CIGALE, TIBICEN (*c. plebeia*)' (p. 426) is ambiguous and does not satisfy the requirements of the Code for availability. Most importantly, they argue that the epithet *plebeia* in Berthold (1827) is not in combination with *Tibicen*, nor included in it. However, examples from Latreille (1825) listed by Sanborn (BZN 71 this issue) show that Latreille placed species in parentheses following the genera in which he intended to include them, and that his abbreviation refers to the preceding genus beginning with C, or CIGALE. An additional example not yet mentioned is found on the same page of Latreille (1825, p. 476) as the *Elater* case illustrated by Sanborn: the new genus *Chrysoptère* is followed by the parenthetical expression '(*n. concha*)', with the 'n.' referring to the genus *Noctuelle* in the preceding lines. *Chrysoptera* is now regarded as a junior objective synonym of *Lamprotes* R. L., 1817 (see Nye, 1975), as *concha* was an unnecessary replacement name for *c-aureum* Knoch, 1781.

Sanborn examines all aspects of Latreille's (1825) indication, including the lack of a specified author for *plebeia* and the i-for-j substitution (Article 58.3), and shows that Latreille made *Tibicen* available under all requirements of the Code, although uncertainty remains over the intended language for *Tibicen*. Berthold's (1827) translation is cited for many genera originally mentioned in Latreille (1825) because he transcribed Latreille's vernacular names, expanded his abbreviations, and corrected spellings. Since *Tibicen* is spelled appropriately for Latin in Latreille (1825), the Code states that Latin is to be taken as the intended language unless Latreille 'states otherwise' (Article 26). It will fall to the Commission to determine whether the authority for *Tibicen* should be Latreille (1825) or Berthold (1827). Sanborn's and our conclusions regarding *Tibicen* are largely in agreement with those of China (1964) and Melville & Sims (1984), although they trace the genus to Berthold (1827).

It is important to correct Boulard & Puissant's (BZN 71 this issue) citation of Article 67.5 in reference to the availability of *Tibicen* Latreille, 1825, because this article is not relevant. Article 67.5 defines the term 'designation', and this concept is not applied or required by Article 12, which governs names first published before 1931. 'Designation' is listed as one of several means of type fixation in Article 68, which is called by Article 13, 'Names published after 1930'. Article 12 defines and applies its own term 'indication' (Article 12.2) for judging type assignments of old names, and this less stringent method is deliberately excluded by Article 13.6.1 as a route to availability for names after 1930. We return to the issue of confusion of designation and indication when discussing a problem with the type of *Cicada* Linnaeus below (section 8).

2. The validity of *Tibicen* Latreille, 1825 is not affected by later changes made by Latreille (e.g. 1829), as suggested by Boulard & Puissant, if the former publication satisfies the requirements of the Code (Article 23.1, 'Statement of the Principle of Priority'). Boulard & Puissant appear to be correct that Latreille's publication record is contradictory, but their focus on inferring the validity of *Tibicen* Latreille, 1825 from sources other than the original publication does not follow the Code (see also Article 67.3).

3. A ruling that *Tibicen* Latreille, 1825 is a nomen nudum would imply invalidation of other names currently in use from Latreille (1825) and its translation (Berthold, 1827). Latreille was a prolific creator of genera (Dupuis, 1974). For example, 13 available genera from Berthold (1827) are listed in the NHM, London Lepidoptera database (Pitkin & Jenkins, 2014), and 13 valid genera and one family are found in an ITIS database search (ITIS, 2014), including the type genera of MYRMECOPHILIDAE, GONODACTYLOIDEA, PODISMINAE, and multiple tribes. Some accepted genera were assigned in Latreille (1825) in almost exactly the same manner as *Tibicen*, including *Lithurge* Latreille, 1825 (p. 463) with *Centris cornuta* Fabricius as type (Latinized to *Lithurgus* by Berthold, 1827 (p. 467)), *Amphimalle* Latreille, 1825 (p. 371) with type *Melolontha solstitialis* (changed to *Amphimallon* in Berthold (1827, p. 362)), and *Xylopada* Berthold, 1827 (p. 442) (see Sanborn, this issue).

4. The problems with CICADIDAE nomenclature have been reduced substantially since the proposal by Melville & Sims (1984). Only one pair of the family-group names differing by one letter remains in use (tribes TIBICININI and TIBICENINI). This situation is reviewed by Sanborn (this issue), but it should be emphasized as this was a principal motivation for the China (1964) and Melville & Sims (1984) submissions.

5. *Tibicen* Latreille, 1825 (p. 426) includes a description mentioning covered timbals, which are found in all cicadas currently included in *Tibicen*. Prevailing usage of *Tibicen*, which has been assumed by most modern authors to have the type *Cicada plebeja* Scopoli, 1763 (e.g. Metcalf, 1963, Hamilton, 1985, Moulds, 2005, Sanborn, 2014), is therefore not threatened. Note that Melville & Sims (1984, pp. 163–4) were incorrect in stating that *plebeja* does not have the characters assigned by Latreille (1825) and Berthold (1827); they were apparently confused by Latreille's later concept (Latreille, 1829, p. 215).

6. Because *Tibicen* Latreille, 1825 (or, if necessary, Berthold, 1827) is an available name, *Lyristes* Horváth, 1926 is a junior synonym and its retention would require the use of plenary powers. This action would also eliminate the remaining potential source of family-group confusion (TIBICININI/TIBICENINI). In our opinion this would be acceptable, in part because many *Tibicen* species are soon to receive new generic names following molecular and morphological revision (manuscripts in preparation). However, the case for use of plenary powers is limited by the fact that the family-group nomenclature has been stabilized since Moulds (2005).

7. With *Tibicen* established as *Tibicen* Latreille, 1825 (or as Berthold, 1827, if necessary), and with *Tibicen* Latreille, 1829 thereby unavailable, we concur with Sanborn and Boulard & Puissant that *Tibicina* Kolenati, 1857 is an available taxon with an unambiguously assigned type species, *Cicada haematodes* Scopoli, 1763. Note that Alternatives A and B of Melville & Sims (1984) must be modified in regards to this question because *Tibicina* Amyot, 1847 has been suppressed since Opinion 2165 (ICZN 2006).

8. Some arguments regarding the genus *Cicada* L. and its confusing history (reviewed best by China, 1964) appear to conflate the requirements of the Code for pre-1931 names with those for post-1930 names. Our attempt to determine the correct course of action exposes a potential problem that must be addressed in order to affirm the type of this genus as *Cicada orni* Linnaeus, 1758, as proposed by Boulard & Puissant & Sanborn.

These comments both state that the first valid type fixation for *Cicada* Linnaeus is *Cicada orni* Linnaeus, 1758 (subsequent designation by Latreille, 1802, p. 257). However, in the original text of this case, Melville & Sims (1984) stated that the valid type designation of *Cicada* is *Cicada tibicen* Linnaeus (subsequent designation by Van Duzee, 1912, p. 491), and they did not mention Latreille (1802) at all. China (1964, p. 154), reaching another conclusion, stated that Latreille's 1802 indication of *orni* was 'unacceptable as a type designation', and, perhaps unaware of Van Duzee (1912), traced *Cicada* to Van Duzee's later designation of *C. orni* in 1916. According to China (1964), Van Duzee believed in 1916 that a valid designation had been made by Lamarck (1801), but that source was later invalidated by the Commission in Opinion 79 (ICZN 1924; see also Van Duzee, 1914). China did not explain his rejection of Latreille's (1802) type, but the most likely basis for his belief is Latreille's use of the term 'example' when mentioning only *orni* under *Cicada* in 1802. Froriep (1806, p. 267) also used this term (as a German abbreviation) when associating *orni* with *Cicada*. Other authors (e.g. Orian, 1963, p. 21) and the ICZN in Opinion 79 (ICZN, 1924) have implied that 'mere examples' when offered as such are unacceptable as type species. However, some 'example' types from Latreille (1802) have been accepted, even in ICZN publications (e.g. Opinion 905 for *Polyxenus* – ICZN 1970, Opinion 1596 for *Sialis* – ICZN 1990).

This confusion seems unnecessary at first because the exclusion of examples as types is found only in Article 67.5.1, part of the definition of the 'rigorously construed' term 'designation', and pre-1931 types can be fixed by the less restrictive method of indication (Article 12) which allows for 'the use of one or more available specific names in combination with [the new genus-group name], or clearly included under it' (see also Opinion 1, ICZN 1944). These conditions at first appear to fit Latreille (1802). However, there is an important difference: Latreille (1802) was not the first instance of the name *Cicada* L., and Article 12 appears to pertain to new names only ('...every new name published before 1931 must...be accompanied by a description or a definition...or by an indication'). For instances when a pre-1931 name is established without a type fixed (as in *Cicada* Linnaeus), the Code seems to offer only one route to the later fixation of a type, 'subsequent designation' (Article 69), and this method is limited by Article 67.5, which defines the term 'designation' for Article 69 and which excludes examples (Article 67.5.1). Opinions 905 and 1596, cited above, where the ICZN accepted types from Latreille (1802), were both instances of publication of new genera.

However, there is contradiction in the record. Opinion 79 (ICZN, 1924), which invalidated Lamarck (1801) while implying the inadequacy of examples, excluded all of the types, even those that appear to qualify as indications under the current Article 12.

There do seem to be few examples of publications citing Latreille (1802) for subsequent designation despite the large number of genera in that work, although at

least one case exists – *Galeodes* Olivier 1791, type species *Phalangeum araneoides* Pallas, 1772 (subsequent designation by Latreille 1802, p. 61) (Harvey, 2003, p. 255). Many more sources cite Latreille's '*Table les genres...*' (1810) for subsequent designations, probably following Opinions 11 (ICZN, 1945) and 136 (ICZN, 1939), which explicitly affirmed that source. Overall, it is not clear if the Code excludes the less restrictive route of indication (Article 12) from the options for type fixation for pre-1931 genera that were originally published without a type fixed.

If the ICZN holds that Article 67.5 precludes the use of 'examples' from Latreille (1802) as types by subsequent designation, the valid type for *Cicada* will remain unclear. Latreille's (1810) designation of *C. plebeja* was invalid since *plebeja* was not an originally included species (Article 67.2). In the next valid act, Van Duzee (1912) designated *Cicada tibicen* Linnaeus for *Cicada*, but this species is currently classified in *Tibicen* (Sanborn 2008), which already has the type *plebeja* (Latreille, 1825, pending the ruling in this case). Fixing *C. tibicen* as the type of *Cicada* would make *Cicada* and *Tibicen* into synonyms, and *Cicada* would assert priority. This would disastrously change the meanings of CICADOIDEA, CICADIDAE, CICADINAE and CICADINI, all of which are currently in use and linked to *C. orni* Linnaeus. Fortunately, the next valid designation is *Cicada orni* again, via Van Duzee (1916), as explained by Melville & Sims (1984) and China (1964).

We hope that the ICZN will clarify this issue while reaffirming *Cicada orni* Linnaeus as the type of *Cicada* Linnaeus. This is the route of least disruption for cicada taxonomy. If the Commission interprets Article 12 to mean that all type fixations of pre-1931 genera can be accomplished by indication – those in new genera as well as those made by later revisers – then Latreille's (1802) work can be affirmed as designating *C. orni*. If the Commission chooses to uphold the prohibition of examples as types in subsequent designation, then *C. orni* can be designated by way of Van Duzee (1916) although, as explained above, this will also require invalidation of Van Duzee's (1912) designation of *C. tibicen*, a ruling that would probably require the use of the plenary powers. This may be the best solution given the complexity of the case and the overall weight of the evidence against the use of 'examples' as types.

In conclusion, we support a modified version of Alternative B of Melville & Sims (1984), which would incidentally accomplish the three actions proposed by Sanborn for *Tibicen*, *Tibicina*, and *Cicada*. A decision on whether *Tibicen* in Latreille (1825) is to be read as Latin will be required to determine whether Latreille (1825) or Berthold (1827) is the author of the name. Alternative routes are available to the Commission for the affirmation of *Cicada orni* as the type of *Cicada*, an important decision that is needed to stabilize cicada nomenclature.

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The issue of the validity of *Tibicen* Latreille, 1825 or Berthold, 1827 and the higher taxa derivatives was first presented to the ICZN by R.G. Fennah in 1946 with no action taken at that time. China (1964) then presented a case for the suppression of the *Tibicen* derivatives and although there was a consensus in favour of the proposal, it was realized that the family group name suppression would require the suppression of the type genus. This action would require the use of the plenary powers of the Commission and no opinion was made at that time either.

Melville & Sims (1984) then resurrected the issue and started collecting evidence to present a proposal to clarify the matter. There were specialists who supported retention of *Tibicen* and those that supported suppression in favour of *Lyristes* Horváth, 1926. Boulard (1984) wrote the main argument for suppression with additional comments by Hamilton (1985), Boulard (1985), and Lauterer (1985). There were two/three options that were ultimately proposed but once again the Commission failed to render an opinion.

Boulard (1988, 1998, 2001, 2003) has continued to campaign for suppression and the use of *Lyristes* but the majority of publications since 1984 continue to use *Tibicen* while *Lyristes* is used by some scientists in particular geographic regions (Sanborn, 2013). The basis of the argument for suppression is that *Tibicen* is a nomen nudum or was not available to be the type species of the genus, however, I will show that *Tibicen* is a valid taxon based on the information in Latreille (1825).

The historical confusion of the taxa along with the various interpretations and personal preferences has led me to examine the issue from the first mention of *Tibicen* using Latreille, 1825 and Berthold, 1827 along with the Code. Article 67.3.2 states that only information in the original text (either Latreille (1825) or Berthold (1827) in this case) is to be used in determining which taxa are included in determining what species are eligible for type fixation (Article 67.2) and these texts are where we need to focus our attention. I would make the following argument for the conservation of *Tibicen* Latreille, 1825 based on a preponderance of Articles that support *Tibicen* as a valid taxon. At the same time, the type species for *Cicada* Linnaeus, 1758 and *Tibicina* Kolenati, 1857 can also be unambiguously determined clarifying higher taxa based on these genera.

The evidence shows that Latreille, 1825 should be used as the authority for *Tibicen* rather than Berthold, 1827. There is a description included with the new taxon which is used to describe the members of the ‘Chanteuses’ of which Latreille gives two generic examples, *Cicada* and *Tibicen* with a species *C. plebeja* given as an example of *Tibicen* (Latreille’s original use of the lower-case ‘c’ and the *i* vs. *j* in *plebeja* are addressed below) (Fig. 1). By reading further in Latreille (1825) and looking at other taxa it is clear that Latreille considered *Cicada* and *Tibicen* distinct taxa as they are separated by a comma as he has done in other taxonomic groups (I will discuss and illustrate this below with examples from nearby pages to the one containing the first reference to *Tibicen*) as well as being preceded by ‘Les g.’ a plural.

Article 12.1 is satisfied in both Latreille (1825) and Berthold (1827). Article 12.1 states that ‘To be available, every new name published before 1931 must satisfy the

PREMIÈRE TRIBU.

CHANTEUSES. *Stridulantes*.

Elles ont trois petits yeux lisses et des antennes de six articles. Les mâles ont, de chaque côté de la base du ventre, un organe musical intérieur, recouvert extérieurement par un opercule.

Les g. CIGALE, TIBICEN (*c. plebeja*).

Comma separates
genera and thus
species



Position here is significant based
on presentation of species in other genera

Fig. 1. Section of Latreille (1825, p. 426) illustrating the first use of *Tibicen* as a generic name with *C. plebeja* associated with the genus.

provisions of Article 11 and must be accompanied by a description or a definition of the taxon that it denotes, or by an indication.' Articles 11.1, 11.2, 11.3, 11.4, 11.5, and 11.8 are all satisfied while Articles 11.6, 11.7, 11.9 and 11.10 are not applicable, so Article 11 is satisfied. There is a description associated with the 'Chanteuses' that is consistent with *C. plebeja* Scopoli, 1763 and Article 12.2.5 (the applicable article for the indication) states 'in the case of a new genus-group name, the use of one or more available specific names in combination with it, or clearly included under it, or clearly referred to it by bibliographic reference, provided that the specific name or names can be unambiguously assigned to a nominal species-group taxon or taxa.' It is clear from the placement of the species after *Tibicen* in parentheses and italics that Latreille was using this species as the example of the genus *Tibicen* and not as a member of the genus *Cicada*. So even if one does not accept the description in Latreille as applying to *Tibicen*, Article 12.1 is still satisfied because a species is identified with the name *Tibicen*, satisfying Article 12.2.5 and thus 12.1, since a description or indication is necessary for the name to be available. With the designation of *C. plebeja* as the example of *Tibicen* (which Berthold, 1827 clarifies as *Cicada plebeja*), Article 12.1 was satisfied and the name *Tibicen* is available. *Tibicen*, unlike *Cigale* which is the French vernacular for *Cicada*, is also a Latin word so no modification is necessary to make it available under Article 26 with the gender being masculine following Article 30.1.

Latreille and Berthold did not confirm *C. plebeja* Scopoli, 1763 as the type of *Cicada* as has been argued by Boulard & Puissant (2013; BZN 71, this issue). By placing *C. plebeja* after the comma and in parentheses after *Tibicen*, Latreille and Berthold placed the species in the genus *Tibicen* as the example of the genus. This is consistent with the presentation of other species in other taxa within Latreille (1825) and Berthold (1827) where exemplar species are placed in parentheses immediately after their associated genus in the source book, and is a very important point in the validity of *Tibicen* as a genus. We must follow the evidence that is available when the name is published following Article 67.3, not what may be published subsequently (particularly Latreille, 1829).

Looking at the original citation of '*c. plebeia*', it is true the genus is not capitalized and the species epithet is misspelled. However, the lower-case c is clearly a formatting

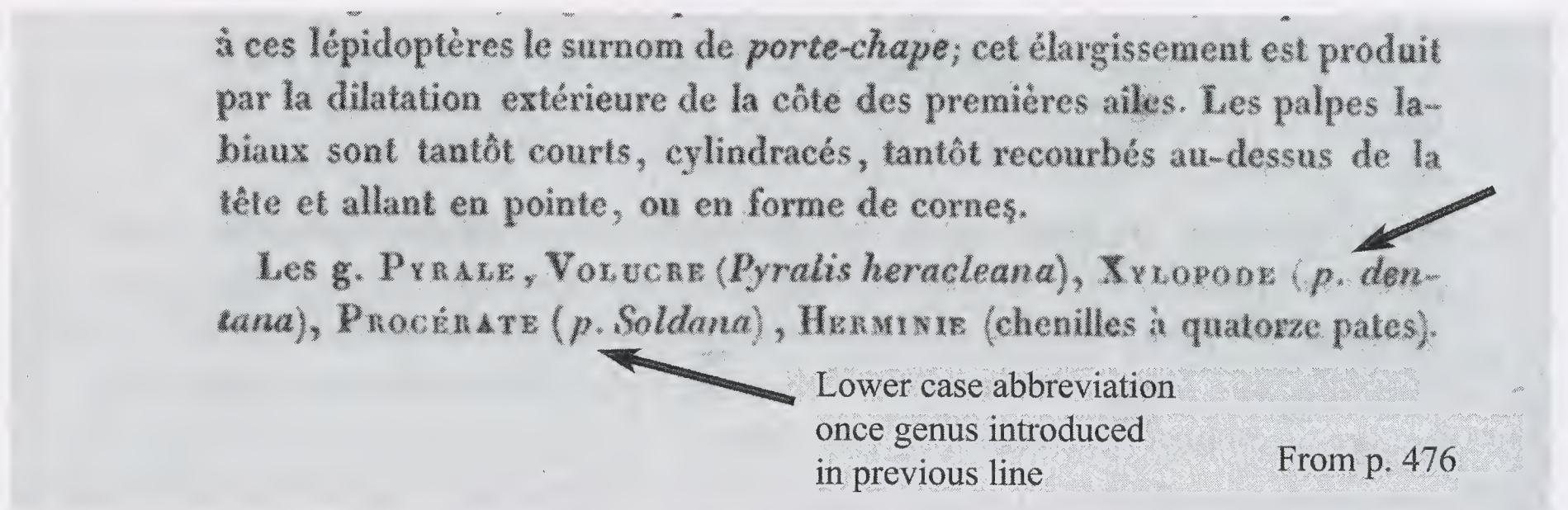


Fig. 2. Section of Latreille (1825, p. 476) illustrating the use of lower case 'p' to identify type species of new genera listed.

choice and is consistent with Latreille's style throughout the book in which he does not capitalize abbreviations of generic names. Importantly, there are many examples within Latreille (1825) where the generic name is abbreviated after the first mention of the genus in a list of genera including most cases where the generic abbreviation is in the lower-case as shown for the species of *Pyralis* assigned to new genera in Fig. 2.

Further examples are found throughout Latreille (1825) such as on p. 349 with the genus *Elater* Linnaeus abbreviated as 'e.', the multiple species of *Musca* Linnaeus identified as examples of several fly genera on pp. 497–498 being presented as 'm.', and the use of 'sc.' in a list of new genera on p. 339 to distinguish *Scarites* Fabricius from *Siagones* Latreille in the list showing that Latreille was being specific with the addition of the generic abbreviations. Latreille was clearly using exemplar species by placing the species in parentheses after the new generic name. The presentation of *C. plebeja* in italics in the parentheses after the name *Tibicen* unquestionably shows that Latreille was using it as the example of the genus *Tibicen* and the *C.* is an abbreviation of *Cicada*, the vernacular name for which (Cigale) is at the beginning of the list of cicada genera and the only valid cicada genus of the time. There is also precedence for these names to become valid. For example, *Tortrix dentana* Hübner, 1796 from the illustration above is the type species of *Xylopoda* Berthold, 1827 as Berthold changed the common vernacular name *Xylopo*de of Latreille (1825) to the Latinized *Xylopoda* and thus made a valid designation of a type species.

As for the spelling *plebeia*, under Article 58.3 'the use of *i* or *j* for the same Latin letter is deemed to be identical variant spellings' and Article 67.6 states that if a type species is cited in the form of an incorrect spelling, 'it is deemed to have been cited in its correct original spelling' as does Article 69.2.1. So Latreille made a valid designation of *C. plebeja* Scopoli as the type species of *Tibicen* following Articles 67 and 68. Berthold can then be thought of as a First Reviser fixing *C. plebeja* Scopoli under Article 24.2.1 even though this appears unnecessary under 24.2.5, where it can be 'shown subsequently that the precedence of names, spellings, or acts can be objectively determined, the action of the First Reviser is nullified.' Since *C. plebeja* Scopoli was 'The Cicada' of the time as argued by Boulard & Puissant (2013), *Cicada* was the only valid genus for cicada species at the time, the variant spelling and lower-case formatting, which is based on a consistent manner of presentation within Latreille (1825), do not negate *C. plebeja* Scopoli as the originally included nominal species for the genus. It is clear that *C. plebeja* was not being used by Latreille as the

most familiar example of all cicadas as proposed by Boulard & Puissant (2013), but rather he is using it as a typical species for the new genus *Tibicen*. The formatting and placement of the name specifically designate it as something other than an example of all cicadas. I see, and the precedence has been set in accepting these names as available, that *C. plebeja* is being used as the example of *Tibicen* based on the presentation of other species and genera in Latreille, 1825.

The positioning of the species name after *Tibicen* (which is the first reference to the genus in the literature) is an unambiguous indication of *C. plebeja* as an example of *Tibicen* alone based on the presentation of species within Latreille's (1825) text. In the other lists of multiple genera, there are no example species given for a group of

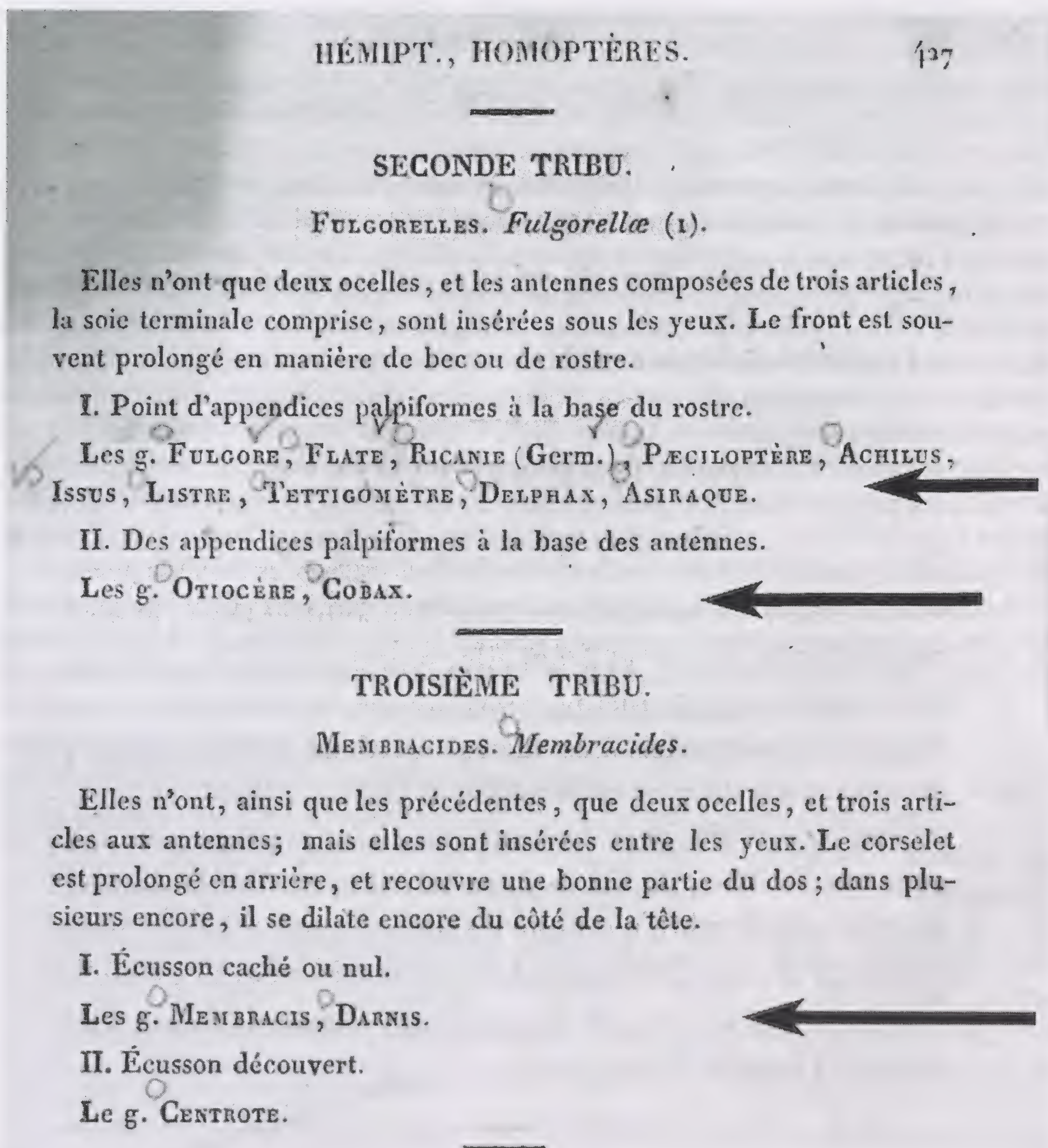


Fig. 3. Section of Latreille (1825, p. 427) illustrating the lack of exemplar species for genera that were already accepted at the time of publication. This contrasts with *Tibicen* on p. 426 showing that *C. plebeja* was being used as an example for the new genus *Tibicen* and not as an example of all cicadas.

genera. Fig. 3 is an image from the next page in Latreille (1825, p. 427) where no examples were provided for the genera listed whether there was a single genus or multiple genera listed.

This again shows that *C. plebeja* was not being used as an example of all cicadas as Boulard & Puissant (2013) contend. Rather, and very importantly here, species included within individual genera were always listed by Latreille after the genus in which they are included, once again supporting the contention that *C. plebeja* was included in the genus *Tibicen*. A list of species is found without a genus being identified unless the species is being moved to the new genus by Latreille as illustrated in Fig. 4.

When there is something unique about an individual genus within a list of genera, the unique information is placed in parentheses after the genus as seen in Fig. 5.

It has been presented by Boulard & Puissant (2013) that at the time of Latreille the large Scopolian cicada was ‘The Cicada’ so the species in question is unambiguously *C. plebeja* Scopoli. Latreille (1810) referenced *Tettigonia plebeia* Fabricius which in reality is *Cicada plebeja* Scopoli (even with the variant spelling) (Boulard & Puissant, 2013; Sanborn, 2013) providing additional evidence that the species in question is unambiguously *C. plebeja* Scopoli, 1763. Therefore, even without an authority in Latreille (1825), who often failed to list authorities with species, the meaning is clear based on Latreille’s previous publications. There were or are also no other species that had a similar spelling that the species could represent. This means that Latreille made a valid designation of *C. plebeja* Scopoli as the type species of *Tibicen* following Articles 67 and 68 and under Article 12 the name *Tibicen* becomes available due to this valid species designation as its type. Since *C. plebeja* Scopoli was ‘The Cicada’ of the time, the variant spelling and formatting choice do not negate *C. plebeja* Scopoli as the originally included nominal species for the genus. The presentation of *C. plebeja* by Latreille identifies it as a typical species for the genus *Tibicen* based on the presentation of species in other genera in the text.

The absence of a cited authority has not prevented other type species designations by Latreille (1825) or Latinized genera in Berthold (1827) from being accepted. Using the moth genera illustrated above (Fig. 2), *Tortrix dentana* Hübner, 1799 is the type

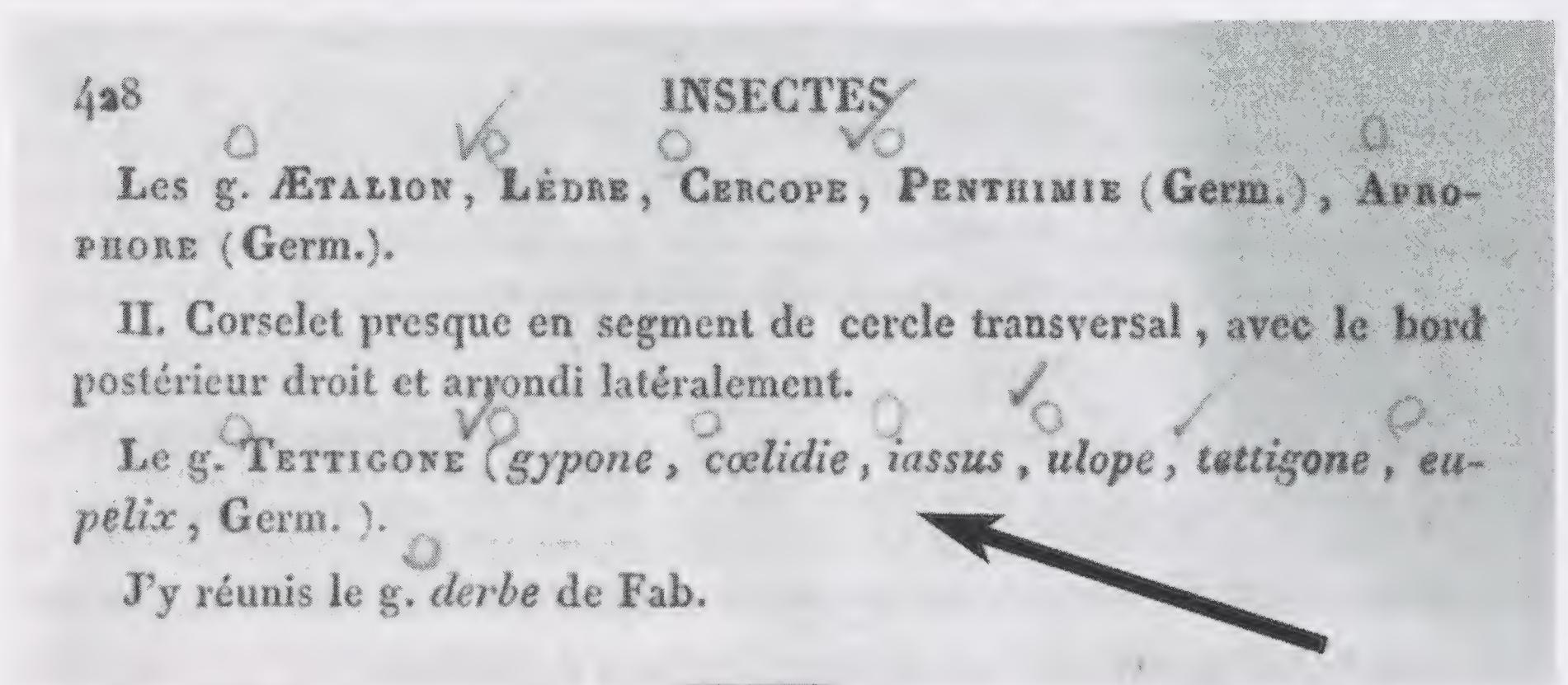


Fig. 4. Section of Latreille (1825, p. 426) illustrating that specific examples of genera are listed in parentheses after the first generic name as *C. plebeja* was done with *Tibicen*.

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fixent pour la plupart vers l'époque de la ponte, et prennent alors la figure d'une galle qui recouvre et garantit les œufs. Les antennes sont composées tantôt de huit à neuf articles dans les uns, de onze dans les autres, tantôt de vingt-deux à vingt-quatre.

Les g. DORTHÉSIE, COCHENILLE, MONOPHLÈBE (antennes moniliformes et d'environ vingt-deux articles).




Fig. 5. Section of Latreille (1825, p. 430) illustrating the use of parentheses after a genus to denote something specific about that genus.

species of *Xylopoda* Berthold, 1827 (because he Latinized the vernacular name in Latreille) (Heller & Duckworth, 1981) even though the authority is not listed in Latreille (1825) nor Berthold (1827). The assignment of *Pyralis soldana* to *Procerata* Berthold, 1827 (again because he Latinized the name) is also considered valid even though 'Soldana' is a misspelling of *P. saldonana* Fabricius, 1787 (Heller & Duckworth, 1981). There is precedence to accept names that have been assigned to the genera first listed in Latreille (or Berthold if he Latinized the common vernacular) even if they may have been misspelled by authors other than the original authority. This is the case we have with *plebeia* in Latreille (1825) so under Articles 67.6 and 69.2.1 it becomes *plebeja* and we have the valid designation of a type species for the genus.

The only difference I can see between *Tibicen* Latreille (1825) and Berthold (1827) is the use of the lower-case 'c' and variant spelling *plebeia* by Latreille and the complete name *Cicada* and correct spelling *plebeja* by Berthold in the identification of the example of *Tibicen*. The presentation above clearly shows that Latreille abbreviated genera within a list once the genus was introduced and that *C. plebeja* was being used as the example of a new genus. A consistent formatting choice should not be the reason to go against the Code and negate the valid designation of a type species. However, if one is to negate the use of *Tibicen* Latreille (1825) based on the formatting or to consider that 'c. *plebeia*' is insignificant to designate *Cicada plebeja* as the type species based on the variant spelling, then Berthold (1827) becomes the authority for *Tibicen* because a valid designation of a type species was made with the complete, correctly spelled species name. There are other examples where Berthold has become the authority for names originating in Latreille (1825) based on the corrections or changes made by Berthold (e.g. *Nematopus* Berthold, 1827, p. 417 is an example from near *Cicada* along with the example of *Xylopoda* above). In either case, *Tibicen* is an available taxon.

Some have considered Latreille (1825) to have used only vernacular names and therefore the names would be unavailable. However, *Tibicen* is a Latin word (as well as a word in French and English since they are derived from Latin) and appears to fulfill Articles 1 and 26. The name *Tibicen* is associated with an extant taxon (*C.*

plebeja) using the binomial system in Latreille (1825) as outlined above. Article 26 also appears to support the use of *Tibicen* as a Latin word because it was presented with the binomen *C. plebeja*. This clearly shows *Tibicen* is being used as a scientific name and is not necessarily a vernacular term. Latreille (1825) is currently accepted as the source for multiple genera. The only mechanism that would not permit Latreille (1825) from being the authority for *Tibicen* is to suppress Latreille (1825) and all the names currently used from it. If this were to be done, then Berthold (1827) would become the authority for *Tibicen* as all the arguments to retain *Tibicen* from Latreille (1825) would also hold for Berthold (1827).

The question of Latreille's (1810) use of *Cicada plebeja* as the type for the genus *Cicada* and thus its eligibility for the type species of *Tibicen* has also been raised (Boulard & Puissant, 2013). The type species of *Cicada* was made by subsequent designation by Latreille (1802) where he gives a description of *Cicada* and lists *C. orni* Linnaeus, 1758 as the only example so *C. orni* becomes the type species by subsequent designation and monotypy of the First Reviser under Articles 69.1, 69.3 and 67.2 (further confusion about this designation is possible due to the use of Article 12 rather than Article 13 and the need for either 'indication' or 'designation' of a type species in the different Articles as outlined by Marshall & Hill, BZN 71, this issue, and I will make additional comments specific to *Cicada* below). Latreille's (1810) subsequent designation of *C. plebeja* as the type of *Cicada* is not a valid designation of a type species for the genus under Article 70.2 since a type species had already been designated by Latreille (1802) in a valid manner under the Code. In addition, *C. plebeja* is not eligible to be fixed as the type of *Cicada* based on Article 69.2.2 since it is not considered a synonym of *C. orni* nor was it included as an original species of the genus (Article 67.2). This makes *C. plebeja* an available species for a new genus in 1825.

Also interesting in the application of the taxon *Tibicen* is the description in both Latreille (1825) and Berthold (1827) where the sound apparatus was described as being in the abdomen and anatomically closed with a lid or cover, which applies to *C. plebeja*. Latreille (1829) then contradicted himself with the elimination of the timbal cover and inclusion of *Cicada haematodes* Scopoli, 1763 (originally misspelled by Latreille showing that the misspelling of *plebeja* is a distinct possibility) within the genus. If we accept the contention that *C. haematodes* became the type species of *Tibicen*, then *Tibicina* is a junior synonym of *Tibicen* and all associated changes would be necessary, e.g. changing all species of *Tibicina* to *Tibicen*, TIBICININAE to TIBICENINAE (and then we would have two concepts of TIBICENINAE), etc. Not following the Code would lead to more confusion and conflicts with the nomenclature.

The following Articles all support the use and availability of *Tibicen* Latreille, 1825 (or Berthold, 1827 if Latreille, 1825 is suppressed) with *Cicada plebeja* Scopoli, 1763 as the type species:

Articles 11 (11.1, 11.2, 11.3, 11.4, 11.5 and 11.8 are all satisfied while Articles 11.6, 11.7, 11.9 and 11.10 are not applicable), 12.1, and 12.2 (using applicable 12.2.5) as outlined above.

Article 58.3 'the use of *i* or *j* for the same Latin letter is deemed to be identical variant spellings' so *plebeia* becomes *plebeja*.

Article 67.2.1 states that ‘originally included nominal species comprise only those included in the newly established nominal genus or subgenus, having been cited in the original publication by an available name.’

Article 67.2.2 (if one supports the argument that Latreille (1825) did not designate a species based on the variant spelling and lower-case ‘c’) states that for a genus published before 1931 without included nominal species, the nominal species that were first subsequently and expressly included in it are deemed to be the only originally included nominal species. Berthold (1827) included *C. plebeja* in proper format and it would again become the type species of *Tibicen* as it is the only species expressly included in the genus.

Article 67.3 states that ‘only acts or other published statements of the author made when a nominal genus or subspecies is established are relevant in deciding’ 67.3.2 ‘which are the originally included nominal species in the meaning of 67.2’ (species eligible for type fixation). This means that although Latreille (1829) would eventually designate another type species, this second designation of a different species in 1829 is not valid for *Tibicen*. Even if we assume Berthold was the First Reviser, a valid type species designation had already been made. This makes *Cicada plebeja* Scopoli the type species of *Tibicen* under Articles 68.2 (original designation) and 68.3 (type species for the genus by monotypy as the only species listed).

Article 67.4 states that type species is fixed in the original publication (Article 68) and *C. plebeja* was specifically stated as the example of *Tibicen* in Latreille (1825) and Berthold (1827) fulfilling 67.4.1.

Article 67.6 states that even if fixation was made using an incorrect spelling, the correct spelling is deemed to have been cited in its correct original spelling so *plebeja* replaces *plebeia*.

Articles 68.2 (type species by original designation) and 68.3 (type species by monotypy) as outlined above.

Articles 69.1, 69.2.1, 69.2.2 and 69.3 in the designation of *C. plebeja* by Berthold (1827) as a type not fixed in the original publication if one considers the presentation of *C. plebeja* by Latreille (1825) was not suitable to validate *Tibicen*. In this case, Article 24.2.1 also applies with Berthold (1827) as the First Reviser.

Article 70.1 states that an author has identified the species correctly when he fixes such a species as the type species of a new or previously established nominal genus or subgenus (Article 70.1.2). Again since *C. plebeja* was identified as the example of *Tibicen*, it becomes the type species. The description in Latreille (1825) and Berthold (1827) also supports *C. plebeja* as the type since they both have the sound organ enclosed within the abdomen as a character of the cicadas (which contradicts the character of a missing timbal cover in Latreille (1829)).

Article 70.2 making *C. plebeja* available for type designation since *C. orni* was already designated as the type of *Cicada*.

Because of the confusion that has occurred historically, it is imperative that we go to the original publications and the introduction of the names using the Code as our guide to determine what should happen with the taxa. It is clear from the above discussion that the Code favours conservation of *Tibicen* Latreille, 1825 with type species *Cicada plebeja* Scopoli, 1763. If you argue that the authority of *Tibicen* should be Berthold, 1827, then all the articles still support the retention of *Tibicen* as they still apply with the added benefit that *Cicada plebeja* is spelled out completely and

correctly. The only difference between *Tibicen* Latreille (1825) and Berthold (1827) is the use of the lower-case 'c' in the identification of the example of *Tibicen* which Latreille did in other lists of genera once the genus was introduced in a fully spelled out manner. It is clear that *C. plebeja* was being assigned to the new genus *Tibicen* by Latreille and the Code supports its valid designation as the type species of the genus. If we do not accept this designation, then all the currently recognized Latreille genera from the 1825 text must also be suppressed as invalid.

It is true that some authors have made the switch from *Tibicen* to *Lyristes*. However, these authors are in the minority in numbers as well as publications. Prevailing usage of *Tibicen* suggests that the concept of *Tibicen* is consistent and the evidence to support retention of *Tibicen* in its current form could be easily compiled to apply to retain the name and concept if it were determined to be invalid by the Commission. In the most recent catalogue of the CICADOIDEA (Sanborn, 2013), there are 250 references (66.3%) that use *Tibicen* and 127 references (33.7%) using *Lyristes* from 1984–2010 (the year of publication for the last petition to the end of the catalogue coverage). A total of 310 different authors cite *Tibicen* and 114 authors cite *Lyristes*. The use of *Lyristes* in Asia, Europe and Turkey began for most authors after the last application to the ICZN to suppress *Tibicen* in 1984 as noted by Boulard & Puissant (2013). However, there are still more authors in these regions that have used *Tibicen* since the 1984 application with at least 101 authors from Europe, Asia and Turkey using *Tibicen* and only 90 using *Lyristes*. *Tibicen* continues to be the dominantly applied and used taxon. The stability in the concept of *Tibicen* over the last century, as seen in the catalogues by Metcalf (1963) and Duffels & van der Laan (1985), and the number of Articles of the Code that suggest *Tibicen* is a valid taxon strongly supports the conservation and continued use of *Tibicen* as the valid taxon with priority (Article 23) over *Lyristes* Horváth. The only real question appears not to be whether *Tibicen* is valid with *C. plebeja* as the type species but whether Latreille, 1825 or Berthold, 1827 should be the authority. The evidence provided here supports Latreille, 1825 as the authority for the validly designated genus *Tibicen*.

The Code supports the retention of the name *Tibicen* with *Cicada plebeja* Scopoli as the type species. *Cicada plebeja* Scopoli has been listed as the type species of *Tibicen* by numerous authors (see list in Metcalf, 1963). If we accept the arguments that *C. haematodes* Scopoli is the type species of the genus, then *Tibicina* becomes *Tibicen* and all associated higher taxonomic changes must also occur. Prevailing usage of *Tibicen* suggests that the concept of *Tibicen* is consistent and the evidence to support retention of *Tibicen* in its current form could be easily compiled to apply to retain the name and concept if it were determined to be invalid. The stability in the concept of *Tibicen* over the last 100 years and the number of Articles of the Code that suggest *Tibicen* is a valid taxon strongly supports the conservation of and continued use of *Tibicen* as a valid taxon with priority (Article 23) over *Lyristes* Horváth.

The valid designation of a type species for *Cicada* is another issue that can be interpreted in different manners. I (along with Boulard & Puissant and Marshall & Hill) interpret Latreille (1802) as designating the type species of *Cicada* since he gave a description of the genus and lists *C. orni* Linnaeus, 1758 as the only example (one of the species originally described by Linnaeus with the formation of the genus) so *C. orni* becomes the type species by subsequent designation and monotypy of the First Reviser under Articles 69.1, 69.3 and 67.2. Confusion about the terms 'indication'

and 'designation' for species identified as types prior to 1930 or after 1931 leads to potential confusion about the validity of the indication by Latreille (1802). Marshall & Hill (BZN 71, this issue) discuss the implications of rejecting the designation by Latreille (1802) as *Cicada tibicen* Linnaeus, 1758 was the next species to be designated a type of *Cicada* by Van Duzee (1912). Since *Cicada tibicen* is now *Tibicen tibicen* (Sanborn, 2008), *Tibicen* would become a junior synonym of *Cicada* and the concept of *Cicada* and its derivatives would be significantly changed with the current species of *Cicada* needing a new genus. The next designation was not until *C. orni* by Van Duzee (1916). I counted five genera in *The Official Lists and Indexes of Names in Zoology* update December, 2012 that use Latreille (1802) as the source of type species. However, all are based on Opinions rendered by the Commission for the respective taxa. It would appear a use of plenary powers would be necessary to accept the designation of *C. orni* by Latreille (1802) and maintain the stability of the nomenclature and concepts of the higher taxonomy.

The type species of *Tibicina* can also be shown to have been made unambiguously. Since there was already a valid designation of *C. plebeja* as the type species of *Tibicen* by both Latreille (1825) and Berthold (1827), the designation of *C. haematodes* as the type species for *Tibicen* by Latreille (1829) is invalid based on Article 70.2. Similarly, since *C. haematodes* is not a synonym of *C. plebeja*, it is not eligible to be fixed as the type of *Tibicen* based on Article 69.2.2. This makes *C. haematodes* available for type species designation for a new genus. Therefore, *C. haematodes* becomes fixed as the type species of *Tibicina* by Kolenati (1857) by original designation (Article 68.2) with the official erection of the genus. So even though Distant (1905) based the TIBICINIDAE on *Tibicina* Amyot, 1847 (unavailable under Opinion 2165), *C. haematodes* remains the type species of *Tibicina* Kolenati, 1857 and the type species of the TIBICINIDAE remains the same.

Moulds (2005) performed a comprehensive cladistic analysis on the higher taxonomy of the CICADOIDEA. Many of the problem taxa of the historical past were shifted to one of the now three recognized subfamilies within the CICADIDAE Latreille, 1802: CICADINAE Latreille, 1802, CICADETTINAE Buckton, 1889, and TIBICININAE Distant, 1905 (a synonymic species list from 1758–2012 is in Sanborn, 2013). The TIBICENIDAE Van Duzee, 1916 and TIBICENINAE are now junior synonyms of the CICADIDAE and CICADINAE respectively. The species of *Tibicen* should be classified in the remaining TIBICENINI which has priority over the CRYPTOTYMPANINI Handlirsch, 1925, LYRISTINI Gomez-Menor Ortega, 1957 and the PLATYPLEURINI Schmidt, 1918 in which the *Tibicen* species have been classified at various times (see discussion in Moulds (2005)). The TIBICININAE has a new concept in terms of the species composition as many of the historically included taxa were shifted to the CICADETTINAE in 2005. Now that the concepts of the genera *Tibicen* and *Tibicina* have remained stable for a century and clearly defined type species can be shown, perhaps it is time to apply Article 23 and use TIBICENINI once again for the group containing the genus *Tibicen*. It has priority over all of the alternative taxa, and the last of the questionable taxa has been removed to a correct phylogenetic position (Sanborn, 2014), and the group is monophyletic (Moulds, 2005). Van Duzee (1916) formed the higher taxa based on *Tibicen* designating *Cicada plebeja* as what he called a haplotype for the taxa. Since he made a designation using what has been shown here to be the valid type species of *Tibicen*, a return to the use of TIBICENINI should occur. Using the

plenary power to suppress *Tibicen* would cause greater confusion since now only the TIBICENINI would be eliminated while simultaneously negating prevailing usage. The concepts of the genera have remained stable for a century, and the reassignment of many problem genera to new higher taxa, along with acknowledgement that *Tibicen* Latreille, 1825 is a valid genus, solves the problems of the higher taxonomy that were a major portion of the last petition. Application of the Principle of Priority will stabilize the problem and retain prevailing usage.

This issue has officially gone before the Commission at least twice with no resolution. There are some 25 separate Articles of the Code that can be applied to support the retention of *Tibicen* as outlined here. The evidence I have illustrated above supports the contention that *Cicada plebeja* is a validly designated type species for a new generic name published before 1931. This valid designation along with the described valid designations of type species for *Cicada* and *Tibicina* eliminates the confusion as to the characteristics of each genus and any derived taxa. The Code states that we must only use the information that is available in a single work to determine the validity of individual taxa (Article 67.3.2), not the considerably confused history that was to follow. By starting at the beginning and clarifying the type species for the genera in question, the confusion can be eliminated and priority can be followed.

The commission is respectfully requested to verify the following and fix the type species based on the evidence provided above:

- (1) *Tibicen* Latreille, 1825 (or Berthold, 1827 if Latreille 1825 is suppressed), type species *C. plebeja* Scopoli, 1763 by original designation and monotypy of an available taxon. Type genus of TIBICENINI Van Duzee, 1916. *Tibicen* has priority over *Lyristes* Horváth, 1926 which is a junior synonym.
- (2) *Cicada* Linnaeus, 1758, type species *C. orni* Linnaeus, 1758 by subsequent designation by Latreille, 1802. Type genus of CICADINI, CICADINAE, CICADIDAE, and CICADOIDEA Latreille, 1802.
- (3) *Tibicina* Kolenati, 1857, type species *C. haematodes* Scopoli, 1763 through original designation. Type genus of TIBICININI and TIBICININAE Distant, 1905.

Fixing the type species for these genera through the publications as outlined above would permit the use of specific powers and would not require the suppression of any currently available name nor the suspension of any portion of the Code. The plenary power can be used to permit the designation of *C. orni* as the type species of *Cicada* by Latreille (1802) using the indication permitted under Article 12 rather than the more stringent definitions of a designation following Article 67. By using the specific and plenary powers to fix the generic names, type species and publications, the names can be added to the List of Available Names in Zoology eliminating all previous confusion with respect to how the taxa are applied. The changes that have occurred to the higher taxonomy have meant that the confusion in higher taxa were eliminated as synonymies and reorganizations occurred. As a result, suppression and plenary power implementation are no longer necessary.

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Summary. Since the early twentieth century, the current highest nomenclature of the CICADIDAE includes two subfamilies whose radicals differ only in one vowel: TIBICENINAE (from *Tibicen* Latreille, 1825) and TIBICININAE (from *Tibicina* Amyot, 1847), thereby causing many difficulties. A third name, *Lyristes* Horváth, 1926 was created to replace *Tibicen* Latreille, 1825, without being universally adopted. We have reviewed the history of the problem and proposed the revision of the specific and generic types in the CICADIDAE:

Cicada Linnaeus, 1758: type species *C. orni* Linnaeus, 1758 by subsequent designation Latreille, 1802, type genus of the family CICADIDAE Latreille, 1802, not including *Tibicen* and its derivatives.

Tibicen Latreille, 1825 (including the latinized version *Tibicen* Berthold, 1827): this name and its derivatives should be taken out of circulation as unavailable. Species erroneously assigned to *Tibicen* in various catalogues have to be re-assigned to other genera. *Tibicina* Kolenati, 1857: type species *Cicada haematodes* Scopoli, 1763, the type genus of TIBICININAE Distant, 1905.

Lyristes Horváth, 1926: type species *Cicada plebeja* Scopoli, 1763. This genus is in the subtribe CRYPTOTYMPANINA Handlirsh, 1925 of the subfamily CICADINAE Latreille, 1802.

The family CICADIDAE Latreille, 1802, true cicadas according to Latreille (1802), contains two major subfamilies TIBICENINAE (Van Duzee, 1917) and TIBICININAE (Distant, 1905) whose current names differ only by one vowel, a source of many errors. This problem originated with the type genera *Tibicen* Latreille, 1825 and *Tibicina* Kolenati, 1857, introduced during the first half of the 19th century, followed by numerous varying interpretations of the nomenclature in this group. Presently, it is urgent to revise the existing catalogues (Metcalf, 1963; Duffels & van der Laan, 1985, and even Sanborn, 2014), using the correct nomenclature and typifications. We propose here to deal with the inherent nomenclatural problem of *Tibicen*, *Tibicina* and *Lyristes*. After some exchange of correspondence between cicadologists, we here review the history of this issue:

In 1740, Réaumur examined, described and drew four species of the French cicadofauna which relate to the present article: 'la cigale de la grande espèce' [*Lyristes plebejus* (Scopoli, 1763)] and 'la cigale de moyenne grandeur' [*Cicada orni* Linnaeus, 1758].

In 1758, Linnaeus dealt, under the patronymic name *Cicada*, with the Noctilucae, Foliaceae, Cruciatae, Manniferae, Spumantes and Deflexae insects, today called Fulgoromorpha and Cicadomorpha.

In 1762, Geoffroy wrote the genus name in Latin: *Cicada*, but reserved it for those species that possessed ‘trois petits yeux lisses’ [three little smooth eyes], the ocelli. Two species of cigale were recorded from Provence (Geoffroy, 1762, p. 429): *Lyristes plebejus* Scopoli, 1763 and *Cicada orni* Linnaeus, 1758.

In 1791, Olivier revised the diagnosis of the genus ‘*Cicada* Lin. Geoff.’, applying it exclusively to cicadas per se [CICADOIDEA].

In 1802, Latreille, dealing with the Family ‘CICADAIRES *cicadariae*’ and ‘du genre CICADA; *cicadae verae*’ concluded as follows: ‘Exemple. *Cicada orni*. Lin.’ (Latreille, 1802, p. 257) ‘Exemple’[example] is here used in the Lamarckian meaning, i.e. the origin of the type concept. Nevertheless, the Commission explicitly and surprisingly invalidated any notion of Lamarck’s type, saying ‘Rigidly construed Lamarck’s (1801) [. . .] is not to be accepted as designation of type species’ (Opinion 79, ICZN, 1924). Typification of *Cicada orni* Linnaeus, 1758, must therefore be definitely attributed to Latreille, 1802 for the following additional reasons:

(a) In French, the word ‘Exemple’ meaning ‘Model to be followed’ does not have to be preceded by the definite article.

(b) Across the French taxonomic papers, at the dawn of the 17th century and later, the word ‘Example’ includes the modern notion of ‘type’.

In 1804, Latreille listed eight European cicadas, but without giving examples. *C. orni* is listed in second position after ‘*Cicada haematodes* Scop. Oliv.’ (1804, p. 305 et seq.)

By the end of 1806, von Froriep, when translating a seminal text of Dumeril published at the beginning of 1806, used as example the notion of ‘type’ for ‘*Cic. orni*’ (Froriep, 1806, p. 267). It is well in the current thinking of the time, however von Froriep wrote in his translation: ‘Z[zum] B[beispiel]’ i.e. ‘for example’ in German language. This act is not rigidly construed and is therefore not a valid designation under the Code (Article 67.5.1 of the Code).

In 1810, Latreille distinguished firstly for ‘Les cicadaïres chanteuses’, the only genus, ‘G. 342. CICADA. *Cicada*.’ without author or species names (1810, p. 262). However, in his ‘Table des genres avec l’indication de l’espèce qui leur sert de Type’ (p. 434) is inscribed: ‘Cigale. *Tettigonia plebeia*, Fab.’ Which in reality means *Cicada plebeja* Scopoli.

In 1825, Latreille concluded the presentation of the Tribe of Singers by: ‘The g. CICADA, TIBICEN (*c. plebeia*)’ a quotation often called cryptic, but which must be seen in the context of its time. It becomes clear that the words ‘CIGALE’ and ‘TIBICEN’ clearly have the same vernacular value under the writings of the author. The two terms are both denominated in capital letters. The second term is a common name from the Roman vocabulary (military and religious), which refers to a trumpeter. Latreille was not consistent in his choice of a definition but he gave an unambiguous definition four years later. ‘TIBICEN’ is therefore not an available name. On the other hand, ‘(*c. plebeia*)’ is referred to here, simply and without special precautions, as the well-known ‘Cigale’: its name is placed in parentheses, begins with a small ‘c’, is spelled with an ‘i’ instead of the original ‘j’ and, finally, without the author’s name. No doubt it here represents the largest cicada species studied by Reaumur (see above), which was named *Cicada plebeja* by Scopoli in 1763.

In 1827, Berthold translated Latreille (1825) latinizing the names of genera and species, but writing ‘*Cicada, Tibicen (Cicada plebeia [sic])*’ Berthold, 1827, p. 424),

showing the following facts misunderstood or ignored (except by Boulard, 1988, 1998). The plebeian cicada belongs to the first genus mentioned and Berthold provided irrefutable proof. In his translation, he wrote in full both the genus name and that of the well-known species directly associated, *Cicada plebeja* (cited as *plebeia*). Thus he understood clearly that Latreille was using vernacular terms (see Boulard, 1988b, p. 24 and Boulard, 1998, p. 94). Berthold confirmed the designation of the representative species mentioned, which he latinized himself as type *plebeja* (cited as *plebeia*). *Tibicen* Berthold, 1827 remains a nomen nudum because there is no description accompanying *Tibicen* and no available specific name in combination with it or clearly included under it (Articles 12.1, 12.2.5 and 67.5.3 of the Code).

In 1829, Latreille (p. 214), as the reviewer of his own writing, placed *C. orni* at the head of the genus ‘Cigale. *Cicada* [Latr.]’ and clarified what kind of cicadas made up his *Tibicen* genus: ‘Celles où le premier segment abdominal offre en dessus une entaille laissant à découvert la timbale.’ [‘Those in which the first abdominal segment has at its top a slit leaving the timbal uncovered’]. This is obviously not the case with *plebeja* Scopoli, 1763; its timbals are completely hidden. In the same paper, Latreille (1829, p. 215) listed ‘*C. haematode* (sic) of Olivier, the *T.[ettigonia] picta, hyalina, algira* Fab.’. These originally included nominal species are acceptable for fixing the type species of the genus *Tibicen* Latreille, 1829, even the first referred to with the name misspelled (Articles 67.2.1, 67.6 of the Code). Note here that *Cicada haematodes* Olivier, 1791 (p. 753) is the exact synonym of *Cicada haematodes* Scopoli, 1763 (p. 118, No. 347). However, no species having been particularly distinguished, *Tibicen* Latreille, 1829 is a nomen dubium.

In 1840, Westwood, with a hitherto unpublished criterion, gave another definition of *Tibicen* in these terms: ‘The species with 2 joined tarsi [bimer tarsi] form *Tibicen* Latreille’s genus, *C. plebeia, tympanum, mannifera, & c*’ (Westwood, 1840, p. 422, footnote).

In 1843, Amyot & Serville kept:

(a) the bimer criterion for their new *Fidicina* genus with type species *Tettigonia mannifera* Prod. (p. 472) [= *C. plebeja* Linnaeus, 1767, non Scopoli, 1763 (see Boulard, 1988b, p. 60) and Boulard & Martinelli, 1996, p. 23].

(b) the genus proposed by Latreille for *C. haematodes* Scopoli, 1763, in these terms: ‘Le genre *Tibicen* Latr. (*Règn. anim.* 1829. 215a), dont le type est la *Tettigonia sanguinea* Fabr. . . . Stoll. pl. II. fig. 11.— *Cicada hematodes* Oliv. [. . .] qui a les cavités sonores entièrement à découvert’ [= ‘The genus *Tibicen* Latr. (*Règn. anim.* 1829. 215a) whose type is the *Tettigonia sanguinea* Fabr. . . . Stoll. pl. II. fig. 11.— *Cicada hematodes* Oliv. [. . .] which has sound cavities completely uncovered’] (p. 482). This was the first way of giving *Tibicen* an unmistakable designation of type species, the latter accepted by Stål in 1861. This choice, made by connoisseur such as Amyot, Serville and Stål, surprisingly fell into oblivion until 1907 (see below).

In 1845/1847, Amyot wanted to build a mononymic method based on genus. This method was unwelcome and abandoned*, apart from a few new features, including *Tibicina*, taken as a subgenus by Kolenati (1857, p. 414). However, Kolenati (1857) did not fix the type species. He listed two names ‘hematodes’ and ‘steveni’, although the latter was only mentioned as a variety of the former. Distant (1905c, p. 22) was the first author to use the term ‘type’ in connection with ‘*Tibicina*’.

(*) Abandoned. In 1963, the ICZN (Opinion 686) rejected most denominations that Amyot proposed from 1845 to 1847 (Amyot, 1847; vols. 3–5), but not those in Volume 5, pp. 143–238, which concern cicadas and in particular the taxon *Tibicina*, invented therein (see Boulard, 1988). Nevertheless, the name was therefore available from Amyot (1847) under Article 78 according to Melville & Sims, (1984, p. 165) (see Boulard, 1991, p. 25; Puissant, 2005, p. 302). However in Opinion 2165 (ICZN, 2006), the Commission erased its oversight. Since that date, the term must be definitively assigned to Kolenati (1857).

In 1872, 1875 and 1876, Fieber eliminated *Tibicen* in his revision of the European cicadas but raised *Tibicina* Kolenati, 1857 to generic rank (1872, p. 1; 1875, p. 338; 1876, p. 30.).

In 1889, Distant used *Tibicen* Latreille, 1825 (sic) and the false radical *Tibicen*–, to create the subfamily TIBICENINAE containing the cicadas with ‘tympanic coverings practically absent’ (pp. 3, 103, 127). However, the author did not mention the type.

In 1896, Melichar included the nomenclatural acts proposed by Fieber (1872/1876) in his important and essential book. He eliminated *Tibicen* and used *Tibicina*.

In 1900, Kirkaldy wrote the first rule for the determination of the type species of a genus ‘by a reference to the species and its author’. This rule came to support Articles 67c and 70b in early versions of the Code.

In 1905 and 1906, Distant took no account of *Tibicen* in his monumental work, the basis of the classification of cicadas globally. Distant (1905c) retained the genus *Tibicina* Kolenati, 1857. He is the first author to designate one of the originally included nominal species: ‘*haematodes* Scop.’ as the type species of *Tibicina* (Article 69.1.1 of the Code).

It is somewhat surprising that three of our great forebears: Fieber, Melichar and Distant, excluded *Tibicen* from their fundamental works, and that a fourth taxonomist, also renowned, Oshanin, joined them a few years later, placing *Tibicen* in the rank of *nomina nuda* (1912, p. 95). Thirteen years later a fifth well known taxonomist, Handlirsch did the same (see below). At the same time, these authors took account of *Tibicina* Kolenati (1857) and used the radical *Tibicen* – in the development of a part of the classification of the CICADIDAE then comprising the ‘TIBICENINAE Distant, 1905’ for many cicadas without timbal covers.

In 1907, Kirkaldy, in an important annotation made to the recent catalogue of Distant (1906), said ‘p. 123. delete Amyot’s ref. to *Tibicina* and make the latter a syn. of *Tibicen* Latreille, 1829’. Therefore Kirkaldy certified ‘*Cicada haematodes* Scopoli, 1763’ as the type species of the genus *Tibicen* Latreille, 1829, the first species mentioned by Latreille under the diagnosis of his genus. This decision had already been taken up by Amyot & Serville (1843). Therefore, before the Code even existed, *C. haematodes* Scopoli was the type species of *Tibicen* Latreille, 1829 (Amyot & Serville, 1843).

In 1912, Horváth applied *C. haematodes* Scopoli as type species for *Tibicen* Latreille, 1829; he was consistent with Amyot & Serville, 1843.

In 1914, Van Duzee, following up the Congress of Berlin in 1901, where it was found that *Cicada plebeja* Scopoli was not on the list of cicadas known to Linnaeus in 1758, gave *Cicada orni* Linnaeus as type for the genus *Cicada* Linnaeus. Van Duzee only confirmed the validity of the ‘Example [-Type]’ applied by Latreille in 1802. Consequently, ‘*plebeja* Scopoli’ having been removed from the Linnaean genus, Van Duzee, while he didn’t accept ‘*Cicada plebeia* Berthold, 1827’, chose to place this

species as type of the genus *Tibicen* Latreille (1825) (sic), an incomprehensible action as *Tibicen*, had already *C. haematodes* Scopoli, 1763 clearly designated as its type species (see above: Amyot & Serville, 1843). Moreover, this nomenclatural act was already confirmed by Kirkaldy (1907) then Horváth (1912).

In 1915, 1916 and 1917, Van Duzee used *Tibicen* Latreille, 1825 (sic), ‘haplotype’ *C. plebeja* Scopoli, 1763 (sic), for large Nearctic cicadas with hidden timbals. This brought him during the year 1915 to produce a new calamitous nomenclature for the major divisions of the classification of CICADOIDEA (see Boulard, 1984, p. 169). His action was thus the origin of the mess in which the nomenclature and higher classification of cicadas find themselves.

In 1925, Handlirsh reworked the higher classification of cicadas and the nomenclature. We find the total eradication of *Tibicen* and its inflections, as well as the appearance of a new sub-group name (in fact, the subtribe CRYPTOTYMPANARIA). On this occasion Handlirsh stressed the need to rename the taxon ‘*Cicada* . . . *auct.* L. nec (mit *plebeja* Scop.)’ (1925, p. 1117).

In 1926, Horváth created the genus *Lyristes* with *C. plebeja* Scopoli as type under the valid name ‘*Lyristes plebejus* (Scop.) 1763’ (1926, p. 96). At the same time, the author put *Tibicina* ‘Fieber, 1875’ (sic) as a junior synonym of *Tibicen* Latreille, 1829 (Horváth, 1926, p. 97).

Unfortunately, for one reason or another, Van Duzee’s errors have been perpetuated.

In 1906, Kirkaldy, an epistemological severe critic of Distant and his recent catalogue, tried to ‘re-hash’ *Tibicen* in contempt both of established texts and his own principles. He claimed that in 1825 ‘Latreille mentioned it [*Tibicen*] giving ‘*plebeia*’ Scop. as the type’, a surprising assertion considering that for Latreille, there was never any question of *plebeja* Scopoli (with hidden timbals) belonging to his *Tibicen*, which included many other species with uncovered timbals. Surprisingly the North American successors of Kirkaldy took what he said to be correct, and since then they have suffered the consequences. First witness: Van Duzee (1914) who matched *C. plebeja* Scopoli to *Tibicen* Latreille, 1825 (sic) and the same in 1916 and 1917, stating ‘*Tibicen* Latr. 1825, haplotype *plebeja* (Scop.)’ where the use of the term haplotype (a type designated by simple reference to a publication; term excluded from the fourth version of the Code) is revealing. Second witness: Metcalf, 1963 and his catalogue unfortunately including ‘TIBICENINAE’ and ‘TIBICINIDAE’. One could cite other works, even recent (e.g. Sanborn & Heath, 2012; Stucky, 2013), in the same spirit.

Cicadologists and colleagues of many countries (China, Europe, Japan, Turkey, etc.) who, have understood the action and explanations of Horváth (1926), used and still use *Lyristes*, for example in catalogues and works of many recent authors: Haupt (1929); Gomez-Menor (1957); Dlabola (1958); Servadei (1960); Wagner & Franz (1961); Villiers (1977); Bonfils & Della Giustina (1978); Lodos (1986); Schedl (1986); Dworakowska (1988); Riou (1995); Quartau (1995); Chou, Lei, Lu & Yao (1997); Gogala (1998); Sueur (2001); Moulds (2005); Drosopoulos, Eliopoulos & Tsakalou (2006); Lee (2008); Hayashi & Saisho (2011); Gogala (2013); Herthach & Nagel (2013) and Simões & Quartau (2013).

In 1957, Gomez-Menor Ortega, after redefining the genus *Lyristes*, placed it as the type genus of the then new tribe ‘LYRISTARINI’ (p. 28).

In 1961, Wagner & Franz perfectly distinguished *Lyristes plebejus* and *Tibicen haematodes* (pp. 152, 153).

In 1963 and 1964, Orian and China, following the posthumous publication of the Catalogue of CICADOIDEA by Metcalf (1963a, b), drew attention to the difficulties in referring to the names of two subfamilies differing only by a single vowel.

In 1972, Boulard divided cicadas found in France into two families: the CICADIDAE including *Lyristes plebejus* and TIBICINIDAE supported by *Tibicina haematodes* (p. 169); this was renewed by the same author in 1976.

In 1979, Boulard described two Solomonian species of a genus hitherto unpublished, *Nggeliana*, which is between a native *Lyristes* from San Cristobal Island [*Lyristes cristobalensis* Boulard, 1990] and genus *Heteropsaltria* Jacobi, 1902. This distinction led the author to note at the bottom of page 50, '*Lyristes* Horváth 1926 = *Tibicen* Van Duzee, 1914 [non *Tibicen* Amyot and Serville, 1843, nec *Tibicen* Latreille, 1829 (nomen incertum), nec *Tibicen* Latreille, 1825 (nomen nudum)]'. At the same time, Boulard formulated a new diagnosis for the subtribe of CRYPTOTYMPANARIA Handlirsh, 1825, now CRYPTOTYMPANINA (see Boulard, 2012, 2013), in which *Lyristes* was implicitly included (Boulard, 1979, p. 58). In other words, the parity *Tibicen* Van Duzee – *Lyristes* Horváth is only hypothetical, based solely on references to publications.

In 1984, Boulard assembled the arguments for the Commission enabling the removal of *Tibicen* and its derivatives from the higher classification of the superfamily of cicadas. The Secretariat of the Commission addressed this request to 16 specialists: 8 proved favourable to the removal of *Tibicen*, while only 4 recognized as valid the nomenclature at that time assigned to Berthold, 1827 (Melville & Sims, 1984, p. 165). The Commission, however, did not act without explanation.

In 1990, Moulds implicitly demonstrated that *Lyristes* and *Tibicen* cannot be entirely synonymous. As a simple example, in his review of the Australian cicado-fauna the author counted 11 species described in *Tibicen* but which he transferred to other generic taxa, some new, *Lyristes* receiving no mention in any part of this work. Originally, there were 19 species included in *Tibicen* in Goding & Froggatt (1904): *Tibicen curvicosta* (Germar, 1834); *T. ruber* Goding & Froggatt, 1904; *T. melanopygius* (Germar, 1834); *T. interruptus* (Walker, 1850); *T. doddi* Goding & Froggatt, 1904; *T. rubricinctus* Goding & Froggatt, 1904; *T. borealis* Goding & Froggatt, 1904; *T. gilmorei* Distant, 1882; *T. kurandae* Goding & Froggatt, 1904; *T. auratus* (Walker, 1850); *T. hirsutus* Goding & Froggatt, 1904; *T. coleoptratus* (Walker, 1850); *T. occidentalis* Goding & Froggatt, 1904; *T. willsi* Distant, 1882; *T. burkei* Distant, 1882; *T. flavus* Goding & Froggatt, 1904; *T. gregoryi* Distant, 1882; *T. muelleri* Distant, 1882 and *T. infans* (Walker, 1850). All today are assigned to genera other than *Tibicen* (Moulds, 1990, 2012). These observations, in addition, indicate a 'false problem', the difficulty of reclassifying '*Tibicen*' species left too long as defined in Van Duzee's system. It also shows how the genus *Tibicen* was poorly understood and remains ill-defined.

In 1998/2001, Boulard reaffirmed the urgent need for the Commission to apply its plenary power and finally resolve the recurring problems marring the nomenclature of the family CICADIDAE. In 2003, Boulard declared '*Tibicen* Latreille, 1825' to be a 'fatal error'.

In 2005, Moulds, after an exhaustive cladistic evaluation of all CICADOIDEA, proposed a cladogram recasting classification and nomenclature of the superfamily, which excluded all forms of *Tibicen*. According to this interesting cladogram, the rich subfamily of CICADINAE has 11 tribes, including that of CRYPTOTYMPANINI, itself including *Lyristes plebejus* (see Moulds, 2005, figs. 59, 60, pp. 421, 422). In this regard, our colleague Mr. Young June Lee recently wrote in an e-mail (pers. comm., 2 September 2013, but widely distributed for the attention of cicadologists), that he voted for using *Lyristes* and suppressing *Tibicen*, and that American species could belong to one or two 'new' genera (not to *Tibicen*).

Conclusions

(1) *Cicada* Linnaeus, 1758: type species *C. orni* Linnaeus; type genus of CICADIDAE Latreille 1802. This typification, universally used, should be validated and the names should be placed on the Official Lists of Names in Zoology.

(2) *Tibicen* Latreille, 1825: vernacular name, not available (Recommendation 11A and Article 12.3 of the Code). This name should be placed on the Official Index of Rejected and Invalid Names in Zoology (Article 80.7.2).

(3) *Cicada* Berthold, 1827: type species *C. plebeja* Scopoli, 1763: not accepted by Van Duzee (1914).

(4) *Tibicen* Bertold, 1827 nomen nudum (unavailable) (Articles 12.2.5. and 67.5.3.).

(5) *Tibicen* Berthold, 1827 and *Tibicen* Van Duzee, 1914 should be placed on the Official Index of Rejected and Invalid Names in Zoology (Article 80.7.2).

(6) *Tibicen* Latreille, 1829: no type species specifically designated by the author; this generic name is a nomen dubium; Amyot & Serville (1843) considered its type to be *C. haematodes* Scopoli, 1763.

(7) *Tibicen* Latreille, 1829: cited by Amyot & Serville (1843) and Kirkaldy (1907); type species *C. haematodes* Scopoli, 1763 [not *C. plebeja* Scopoli, 1763]: designation confirmed in 1926 by Horváth, but little used and should be placed on the Official Index of Rejected and Invalid Names in Zoology (Article 80.7.2), 1763, designated by Distant (1905c).

(8) *Tibicina* Kolenati, 1857: type species *C. haematodes* Scopoli: a junior synonym of *Tibicen* Latreille, 1829, but widely used in its place. These two taxa are objective synonyms (Article 61.3.3). *Tibicina* Kolenati, 1857 (and also TIBICININAE) should be placed on the relevant Official List of Names in Zoology.

(9) *Lyristes* Horváth, 1926: type species *C. plebeja* Scopoli, 1763; subtribe of CRYPTOTYMPANINA Handlirsh, 1925 (see Boulard, 1979).

It is essential to take the name *Tibicen* out of circulation, as it and its derivatives have been ill-defined and misused in the literature. We hope that the Commission will take into consideration our proposals and will act accordingly.

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Comment on the proposed conservation of the specific name *Onitis aeruginosus* Klug, 1855 (Insecta, Coleoptera, SCARABAEIDAE)
(Case 3612: see BZN **70**: 15–18)

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Contrary to my previous statement, the first author to transfer *Onitis aeruginosus* Perty, 1830 to the genus *Gromphas* Brullé, 1837 was Sturm (1843, p. 108), not Harold (1859). This transfer went unnoticed by Harold (1859) and all other authors who have worked with the taxonomy of *Gromphas* (e.g. d'Olsoufieff, 1924; Barattini & Sáenz, 1960, 1964; Cupello & Vaz-de-Mello, 2013) until the publication of Cupello & Vaz-de-Mello (2014, p. 399). Recognizing this, *Onitis aeruginosus* Perty and *O. aeruginosus* Klug were never congeneric, since the former species was transferred to *Gromphas* 12 years before the description of the latter. *Onitis aeruginosus* Perty is the type species of *Gromphas* by subsequent monotypy (Cupello & Vaz-de-Mello, 2014, p. 399).

Corrigendum to Case 3612

Page 16, 2nd paragraph, line 8: ‘...the type specimen of *O. aeruginosus* Klug...’ should be read as ‘...the type specimen of *O. aeruginosus* Gistel...’.

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Comment on *Anaphes* Haliday, 1833 (Insecta, Hymenoptera): proposed designation of *A. fuscipennis* Haliday, 1833 as the type species
(Case 3554: see BZN **68**: 122–126; **69**: 140)

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Opinion 71, relevant to Case 3554, was not included in the submission when it should have been (the senior author of Case 3554 was unaware of Opinion 71 when it was submitted for publication). In Opinion 71 (*Smithsonian Miscellaneous Collections* **73**: 16–18, 1922) the Commission ruled that the species cited by Westwood (1840) as 'typical species' were to be accepted as definite designations of genotypes for the respective genera. The implication is that in addition to setting aside Opinion 729, as requested in Case 3554, Opinion 71 must also be set aside to clear the way for the Commission to vote on the proposed change in types species. The present Comment is submitted to address that important omission by adding item (1) in the list of actions requested of the Commission. It is worth stating that Gahan & Fagan (1923, p. 12), who noted both type species designations for *Anaphes* but did not select one in preference to the other, may yet not have been aware of Opinion 71, as it was published only a year earlier. Subsequent authors mentioned and referenced in Case 3554 also did not mention Opinion 71, though some of them explicitly favoured changing the type species of *Anaphes* to the only species originally described in the genus, namely, *A. fuscipennis* Haliday. In light of Opinion 71, their treatment of *A. fuscipennis* as type species of *Anaphes* is thereby given much less import. Their thoughts on the type species of *Anaphes* were not totally irrelevant, however, because they indicate the rather strong feelings of those involved in taxonomy of MYMARIDAE that *punctum* was not the most suitable choice for type species of *Anaphes*.

The advantages of changing the type species from *I. punctum* Shaw to *A. fuscipennis* Haliday are: (1) *A. fuscipennis* is an objectively defined and recognizable species and was originally included in *Anaphes*; (2) although Haliday transferred *I. punctum* to *Anaphes* the species remained unrecognizable since its original description – neither Haliday nor subsequent workers, except possibly Graham (1982), saw the type specimen and Graham, if he indeed saw the correct specimen (since lost), identified it as belonging to *Camptoptera*; (3) Huber et al. (BZN **68**: 122–126) showed that *punctum* belonged to *Camptoptera* and designated a neotype; (4) thus, if the type species of *Anaphes* is changed to *A. fuscipennis* no nomenclatural changes need to be made to the numerous (almost 200) species of *Anaphes* described since Haliday (1833).

The disadvantage of changing the type species from *I. punctum* Shaw to *A. fuscipennis* Haliday is: because the currently accepted type species of *Anaphes* (*A. punctum*) is actually a *Camptoptera* species numerous nomenclatural changes will be required to move species now in *Anaphes* to the next available genus name, *Patasson*.

Because several *Anaphes* species are important biological control agents with considerable literature on them changing the name will be a nuisance and cause confusion not only for taxonomists but also biological control workers, even more so because *Patasson* has been used for a particular, well-defined subset of *Anaphes* and now would be used for all species of *Anaphes*.

In the interest of causing minimum disruption to and maximum stability in nomenclature the formal change of type species would be by far the best option because the advantages of doing so clearly outweigh the disadvantages.

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside Opinion 71, insofar as it applies to the type species of the nominal genus *Anaphes* Haliday, 1833;
- (2) to use its plenary power to set aside its previous designation (in Opinion 729) of a type-species for the nominal genus *Anaphes* Haliday, 1833 and to designate *Anaphes fuscipennis* Haliday, 1833 as the type-species of the genus;
- (3) to place on the Official List of Specific Names in Zoology, the name *fuscipennis* Haliday, 1833, as published in the binomen *Anaphes fuscipennis* (specific name of the type species of *Anaphes* Haliday, 1833);
- (4) to amend the entry on the Official List of Generic Names in Zoology for the name *Anaphes* Haliday, 1833, to record that its gender is masculine and not feminine, and its type species is *Anaphes fuscipennis* Haliday, 1833 and not *Ichneumon punctum* Shaw, 1798;
- (5) to amend the entry on the Official List of Specific Names in Zoology for the name *punctum* Shaw, 1798, as published in the binomen *Ichneumon punctum*, to record that it is not the name of the type species of *Anaphes* Haliday, 1833.

Comment on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published

(Case 3601; BZN 70: 234–237; 71: 30–38)

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Raymond Hoser has been for some time self-publishing large nomenclatural reviews for a number of taxa. Case 3601, regarding the genus *Spracklandus* (Hoser, 2009), has been brought to the Commission by Hoser himself in an attempt to oblige the larger herpetological community to recognize the availability of this name, hence confirming its validity under the Principle of Priority over another currently used name *Afronaja* Wallach et al., 2009. However, it is probable that the latter name will be used instead of *Spracklandus*, so it is proposed that the name *Spracklandus* Hoser, 2009 be suppressed, to avoid confusion.

In response to this application a number of comments have been made. Kaiser (BZN 71: 30–35) has made the argument that the publication failed under Articles

8.1.1 and 8.1.3 to be properly published as defined by the Code. Schleip (BZN 71: 35–36) agreed that this particular issue of the journal failed under Articles 8.1.1 and 8.1.3 of the Code. Wüster et al. (BZN 71: 37–38) also argued that the publication failed to meet the requirements of Article 8.1.3. However, demonstrating that a work is unpublished with respect to the Code is very difficult; it would seem that having these works rejected under Article 81.1 of the Code may be a better solution for this situation.

Besides the case in point here with *Afronaja* Wallach et al., 2009 preferred over *Spracklandus* (Hoser, 2009), other examples that demonstrate the instability and confusion include: *Malayopython* Reynolds et al., 2014 over *Broghammerus* Hoser, 2004; *Funkisaurus* and *Swilesaurus* Hoser, 2013b, both names replaced by Bates et al. (2013) by *Broadleysaurus* and *Matobosaurus*. The quality of taxonomic descriptions does not make names unavailable there being no requirement as such in the Code, but such practice has been highly criticized in the literature, for example Wüster et al. (2001).

It has been clear from recent publications (for example Kaiser et al., 2013) that many herpetologists are not prepared to use Hoser's names. Some herpetologists are trying to boycott, any such nomenclatural acts and are looking to the Commission to support them. We are heading down a path that will make nomenclatural instability the norm for decades. Many of the species involved are protected by legislation that requires a valid scientific name; this protection is diminished in the light of confusing and controversial nomenclature. A further point along the lines of how names are used was made by Williams et al. (2006). In toxinology there are safety and medical issues involved, so dual nomenclature could be potentially very harmful.

The Commission can, under the Article 81.1 of the Code, use its plenary power to set aside any name, irrespective of its status, for the purposes of stability (Article 81.1). I believe the time is at hand for the Commission to exercise its full plenary power. It is proposed that certain issues of the *Australasian Journal of Herpetology* be suppressed for the sake of nomenclatural stability, an approach supported by many herpetologists, particularly those working directly with snakes. The alternative set of proposals includes several overlapping proposals (if the Commissioners were to vote in favour of his actions (1) (b) and (3), then actions (1) (a) and (2) would be redundant) in case the Commissioners would not support (1) (b) and (3) and split their vote.

9. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power:
 - (a) to suppress the generic name *Spracklandus* Hoser, 2009;
 - (b) to rule that issues 1–21 of the *Australasian Journal of Herpetology* are unavailable for nomenclatural purposes in the interests of nomenclatural stability;
- (2) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Spracklandus* Hoser, 2009, as ruled in (1)(a) above;
- (3) to use its plenary power to place on the Official Index of Rejected Works in Zoology issues 1–21 of the *Australasian Journal of Herpetology*, as ruled in (1)(b) above

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OPINION 2334 (Case 3574)***Cereus Ilmoni, 1830 (Cnidaria, Anthozoa): a new type species designated***

Abstract. The Commission has designated *Actinia pedunculata* Pennant, 1777 (currently *Cereus pedunculatus*; Cnidaria, Anthozoa, Actiniaria) as the type species of the genus *Cereus* Ilmoni, 1830, by setting aside the original type species *Cereus cupreus* Ilmoni, 1830, a nomen dubium not used since 1857 except in synonymy lists, and a member of the order Ceriantharia. The name *Actinocereus* Blainville, 1830 has been suppressed for the purposes of the Principle of Priority.

Keywords. Nomenclature; taxonomy; *Cereus*; Actiniaria; Ceriantharia; *Actinia pedunculata*; sea anemones; tube anemones; northeast Atlantic and Mediterranean.

Ruling

- (1) Under the plenary power the Commission:
 - (a) has set aside all previous type fixations for *Cereus* Ilmoni, 1830 and designated *Actinia pedunculata* Pennant, 1777 as its type species;
 - (b) has suppressed the generic name *Actinocereus* Blainville (1830) for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.
- (2) The name *Cereus* Ilmoni, 1830 (gender: masculine), type species *Actinia pedunculata* Pennant, 1777, as ruled in (1)(a) above, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *pedunculata* Pennant, 1777, as published in the binomen *Actinia pedunculata* (specific name of the type species of *Cereus* Ilmoni, 1830), is hereby placed on the Official List of Specific Names in Zoology).
- (4) The name *Actinocereus* Blainville, 1830, as suppressed in (1)(b) above, is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

History of Case 3574

An application to designate *Actinia pedunculata* Pennant, 1777 (currently *Cereus pedunculatus*), a widely-studied member of the order Actiniaria, as the type species of the genus *Cereus* Ilmoni, 1830 and to suppress the name *Actinocereus* Blainville for the purposes of the Principle of Priority was received from D.G. Fautin (*Department of Ecology and Evolutionary Biology and Biodiversity Institute, University of Kansas, U.S.A.*), R.B. Williams (*Norfolk House, Western Road, Tring, Hertfordshire HP23 4BN, U.K.*) & T. Molodtsova (*P.P. Shirshov Institute of Oceanology RAS, Moscow, Russia*) on 29 August 2011. After correspondence the case was published in BZN **69**: 20–23 (March 2012). The title, abstract and keywords of the case were published on the Commission's website.

Decision of the Commission

On 1 September 2013 the members of the Commission were invited to vote on the proposals published in BZN **69**: 22. At the close of the voting period on 1 December 2013 the votes were as follows:

Affirmative votes – 21: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Grygier, Halliday, Harvey, Kojima, Krell, Lim, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 2: Lamas, Minelli.

Abstained – 1: Fautin.

Kottelat, Kullander and Pyle were on leave of absence.

Voting AGAINST, Lamas said that he believed that the authors had misunderstood Ilmoni (1830, columns 697–698), who had attributed the genus-group name *Cereus* to Oken, 1815, and included his new species *cupreus* in that genus; Ilmoni had also regarded *Anemonia* Risso, 1826 as a subjective synonym of *Cereus* Oken, 1815, and listed the species *bellis*, *gemmacea*, *anemone*, *helianthus*, *doliolum*, *vagans* and *edulis* (in addition to his own *cupreus*) under *Cereus*. Thus, Ilmoni definitely had not proposed *Cereus* as a new genus-group name, but just accepted *Cereus* Oken as a valid name. However, it might be argued under Article 12.2.1 that Ilmoni introduced the ‘new’ name *Cereus* by indication, thus conferring availability on it. If ‘*Cereus* Ilmoni’ were accepted as available, then *cupreus* could not be its ‘type species by monotypy’. Furthermore, although the authors claimed that the actual dates of Ilmoni’s (1830) and Blainville’s (1830) papers could not at present be objectively determined, Blainville’s book must have been published before July 10, 1830 (cf. *Bibliographie de la France*, **19**(28), p. 461), whereas Ilmoni’s paper appeared in issues 5/7 of the 1830 volume of *Isis*, which was probably published sometime in July 1830. Thus, Blainville’s name *Actinocereus* might be older than ‘*Cereus* Ilmoni’.

Voting FOR, Bouchet said that the fact that Ilmoni had not intended to establish *Cereus* as a new name, but had merely used *Cereus* Oken, 1815, was irrelevant. Because the work by Oken (1815) had been placed on the Official Index (Opinion 417), the first author who had used *Cereus* as a valid name after Oken (1815) would have become its author. Ilmoni (1830) was the first author to use the name *Cereus* after Oken (1815), so the attribution of the name to Ilmoni (1830) is Code-compliant. The name *Cereus pedunculatus* (Pennant, 1777) was a widely used name, so the original intent of the application, i.e. its conservation over *Actinocereus* and fixing its type species, remained justified, even if it were proved that Blainville’s work had actually predated Ilmoni’s.

Original references

The following are the original references to the name placed on Official Lists and Indexes by the ruling given in the present Opinion:

pedunculata, *Actinia*, Pennant, 1777, *A British zoology*, vol. 4, Edition 4, quarto format, Benj. White, London, p. 41.

Actinocereus Blainville, 1830, *Dictionnaire des sciences naturelles*, vol. 60, F.G. Levrault, Strasbourg & Paris, p. 294.

Cereus Ilmoni, 1830, *Isis von Oken*, **23**: 349.

OPINION 2335 (Case 3395)

***Geophilus linearis* C.L. Koch, 1835 (currently *Stenotaenia linearis*; Chilopoda): specific name conserved and *Geophilus sorrentinus* (currently *Stenotaenia sorrentina*; Chilopoda) Attems, 1903: specific name not conserved**

Abstract. The Commission has conserved the specific name *Geophilus linearis* C.L. Koch, 1835 for a widespread European species of geophilomorph centipede currently referred to the genus *Stenotaenia* C.L. Koch, 1847 by suppressing the name *Geophilus simplex* Gervais, 1835. The Commission has not approved the proposed suppression of the name *Geophilus forficularius* Fanzago, 1881, a putative senior synonym of *Geophilus sorrentina* Attems, 1903.

Keywords. Nomenclature; taxonomy; Chilopoda; *Stenotaenia*; *Stenotaenia linearis*; *Geophilus simplex*; *Stenotaenia sorrentina*; *Geophilus forficularius*; geophilomorph centipedes.

Ruling

- (1) Under the plenary power the Commission has suppressed the specific name *simplex* Gervais, 1835, as published in the binomen *Geophilus simplex*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.
- (2) The Commission has not suppressed the specific name *forficularius* Fanzago, 1881, as published in the binomen *Geophilus forficularius*.
- (3) The specific name *linearis* C.L. Koch, 1835, as published in the binomen *Geophilus linearis* (specific name of the type species of *Stenotaenia* C.L. Koch, 1847) is hereby placed on the Official List of Specific Names in Zoology.
- (4) The specific name *simplex* Gervais, 1835, as published in the binomen *Geophilus simplex* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 3395

An application to conserve the specific names *linearis* C.L. Koch, 1835 and *sorrentinus* Attems, 1903, both originally published in *Geophilus* Leach, 1814, for two widespread European species of geophilomorph centipedes currently referred to the genus *Stenotaenia* C.L. Koch, 1847, of which *Geophilus linearis* C.L. Koch, 1835 is the type species, was received from L. Bonato and A. Minelli (*University of Padova, Department of Biology, Via Ugo Bassi 58 B, I-35131 Padova, Italy*) on 26 September 2006. After correspondence the case was published in BZN **64**: 160–165 (September 2007). The title, abstract and keywords of the case were published on the Commission's website. The Case was originally sent to vote on 1 June 2008. At the close of the voting period on 1 September 2008 the votes were as follows: set of proposals (a) (for suppression of *simplex* Gervais, 1835) passed; set of proposals (b) (for suppression of *G. forficularius* Fanzago, 1881) needed revote. However, both sets of

proposals were part of a single voting paper and some Commissioners voted for the entire set. The Opinion was put on hold until the Commission had decided how to proceed with handling split votes. In November 2013, the Council voted for cancellation of the first voting round. There were also two ex officio votes (one for and one against cancellation). On 24 November 2013 the vote was officially cancelled in order to proceed with a new vote with two sets of proposals for each name separately.

SET A:

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the specific name *simplex* Gervais, 1835, as published in the binomen *Geophilus simplex*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the name *linearis* C.L. Koch, 1835, as published in the binomen *Geophilus linearis* (specific name of the type species of *Stenotaenia* C.L. Koch, 1847);
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *simplex* Gervais, 1835, as published in the binomen *Geophilus simplex* and as suppressed in (1) above.

SET B:

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the specific name *forficularius* Fanzago, 1881, as published in the binomen *Geophilus forficularius*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the name *sorrentinus* Attems, 1903, as published in the binomen *Geophilus sorrentinus*;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *forficularius* Fanzago, 1881, as published in the binomen *Geophilus forficularius* and as suppressed in (1) above.

Decision of the Commission

On 1 December 2013 the members of the Commission were invited to vote on the two sets of proposals (above) modified from those published in BZN 64: 162–163. At the close of the voting period on 1 December 2013 the votes were as follows:

Set A:

Affirmative votes – 23: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Lamas, Ng, Pape, Patterson, Rosenberg, van Tol, Winston, Yanega, Zhang and Zhou.

Negative vote – 1: Lim.

Abstained – 1: Minelli.

Pyle was on leave of absence.

Set B:

Affirmative votes – 7: Ballerio, Brothers, Krell, Lim, Winston, Yanega and Zhou.

Negative votes – 17: Alonso-Zarazaga, Bogutskaya, Bouchet, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Kullander, Lamas, Ng, Pape, Patterson, Rosenberg, van Tol and Zhang.

Abstained – 1: Minelli.

Pyle was on leave of absence.

Comments from the first round (cancelled)

SPLITTING his vote, Kottelat said that these were two distinct cases with different issues. He voted for conservation of *S. lineaeris* (C.L. Koch, 1835) and against conservation of *S. sorrentina* (Attems, 1903). He saw no justification for the last three points. If the two parts could not be separated, he added that he would then have voted against the whole proposal. Voting AGAINST, Grygier said that the matters of *G. linearis* and *G. sorrentinus* were almost fully independent of each other and should have been voted on separately. The case for the former was much stronger, in terms of documented use of the junior name in the literature, so he might have voted in favour of it alone, but the voting paper called for a single vote on the entire proposal. SPLITTING his vote, Bouchet noted that stability of nomenclature was not a serious issue for a name that had been used in only eight papers since 1903. He also suggested that the identity of *Geophilus forficularius* could have been solved by designation of a neotype. Kullander, who voted AGAINST, said that the first choice in a case of confusion was to apply priority and that the prevailing usage clause set the limit of 1899.

Comments from the new round

Voting FOR set A and AGAINST set B, Alonso-Zarazaga said he voted against set B because neither the identity nor the taxonomy of *Geophilus forficularius* were settled in a convincing manner and a neotype should have been selected for the latter species because it might have been a different species from *Geophilus sorrentinus*. Voting FOR both sets of proposals, Brothers said that in the case of *forficularius* Fanzago, 1881, although it might have seemed unnecessary to propose complete suppression for priority since its synonymy with *sorrentinus* Attems, 1903, was apparently not definitively established (it might turn out to be a valid species in its own right), and conditional suppression (only effective if *forficularius* and *sorrentinus* were considered to be synonyms) might have been more appropriate. He said that *forficularius* had not been used as valid since 1881 which meant that it had disappeared from usage (and had effectively been suppressed) anyway. Voting FOR set A and AGAINST set B, Harvey noted that, with only nine valid usages of *G. sorrentinus* and two published usages of *G. forficularius*, it did not seem that there was any compelling argument to overturn priority, so voted to retain the name *G. forficularius*.

Original references

The following are the original references to the name placed on Official Lists and Indexes by the ruling given in the present Opinion:

simplex, *Geophilus*, Gervais, 1835, *Magasin de Zoologie*, 9(133): 9

linearis, *Geophilus*, C.L. Koch, 1835, *Deutschlands Insecten*, Heft 136. Pustet, Regensburg [without pagination].

OPINION 2336 (Case 3576)***Oscinella* Becker, 1909 (Insecta, Diptera, CHLOROPIDAE): precedence reversed with *Melanochaeta* Bezzi, 1906 and *Pachychaetina* Hendel, 1907**

Abstract. The Commission has conserved the widely used generic name *Oscinella* Becker, 1909 (CHLOROPIDAE) by giving it precedence over *Melanochaeta* Bezzi, 1906 and its objective synonym *Pachychaetina* Hendel, 1907 whenever these names are considered to be synonyms.

Keywords. Nomenclature; taxonomy; Insecta; Diptera; CHLOROPIDAE; *Oscinella*; *Melanochaeta*; *Pachychaeta*; *Pachychoeta*; *Pachychaetina*; *Oscinella frit*; *Melanochaeta capreolus*; Holarctic; Oriental; Afrotropical; Neotropical; Australasian; Palearctic; frit fly.

Ruling

Under the plenary power the Commission:

- (1) has ruled that the name *Oscinella* Becker, 1909 is to be given precedence over the following generic names, which are objective synonyms of each other, whenever it and the other two are considered to be synonyms:
 - (a) *Melanochaeta* Bezzi, 1906;
 - (b) *Pachychaetina* Hendel, 1907.
- (2) The name *Melanochaeta* Bezzi, 1906 (gender: feminine), type species *Elachiptera aterrima* Strobl, 1880, is hereby placed on the Official List of Generic Names in Zoology with the endorsement that it is not to be given priority over *Oscinella* Becker, 1909 whenever the two are considered to be synonyms, as ruled in (1)(a) above;
- (3) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
 - (a) *Pachychaetina* Hendel, 1907 (gender: feminine), type species *Elachiptera aterrima* Strobl, 1880, automatic; a junior objective synonym of *Melanochaeta* Bezzi, 1906, so permanently invalid.
 - (b) *Pachychaeta* Loew, 1845 (gender: feminine); introduced as a synonym that was not later used as valid, so not available under Article 11.6.
 - (c) *Pachychoeta* Bezzi, 1895 (gender: feminine), type species by monotypy *Elachiptera aterrima* Strobl, 1880, by original designation; a junior homonym of *Pachychoeta* Bigot, 1857 and a junior objective synonym of *Melanochaeta* Bezzi, so permanently invalid.
- (4) The entry on the Official List of Generic Names in Zoology for the name *Oscinella* Becker, 1909 is hereby amended to record that the correct reference for this name is Becker, T. 1909. *Bulletin du Muséum National d'Histoire Naturelle (Paris)*, **15**(3), p. 120, and the endorsement is hereby added that it is to be given precedence over *Melanochaeta* Bezzi, 1906 and its objective junior synonym *Pachychaetina* Hendel, 1907, whenever it and the other two are considered to be synonyms, as ruled in (1) above.

History of Case 3576

An application to conserve the widely used generic name *Oscinella* Becker, 1909 (CHLOROPIDAE), threatened by its senior subjective synonyms *Melanochaeta* Bezzi, 1906 and *Pachychaetina* Hendel, 1907, was received from M. von Tschirnhaus (*Faculty of Biology, University of Bielefeld, Bielefeld, Germany*) and E.P. Nartshuk (*Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia*) on 22 September 2011. After correspondence the case was published in BZN **69**: 37–43 (March 2012). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on the case.

Decision of the Commission

On 1 September 2013 the members of the Commission were invited to vote on the proposals published in BZN **69**: 39–40. At the close of the voting period on 1 December 2013 the votes were as follows:

Affirmative votes – 16: Alonso-Zarazaga, Bogutskaya, Bouchet, Brothers, Fautin, Halliday, Harvey, Kojima, Krell, Lamas, Minelli, Ng, Pape, Yanega, Zhang and Zhou.

Negative votes – 7: Ballerio, Grygier, Lim, Patterson, Štys, van Tol and Winston
Split – 1: Rosenberg.

Kottelat, Kullander and Pyle were on leave of absence.

Voting FOR, Bouchet said that when the purpose of the application was to conserve the name string *Oscinella frit*, it would have been good to go further and designate *Musca frit* as the type species of *Oscinella*. He regretted that this technical solution had not been discussed by the applicants, and had not been offered for a vote. What if *Oscinella frit* (Linnaeus, 1758) and *O. deficiens* Becker, 1909, were later regarded as not congeneric? Voting AGAINST, Patterson noted that the reasons for this case given in para. 10 of the published application were insufficient to evaluate its merits. Also voting AGAINST, Grygier said that the authors had evidently wished to conserve the generic name *Oscinella* primarily in reference to the economically important species *Oscinella frit*, i.e. as a familiar binomen that was also the type species of its genus. This was perhaps a laudable goal; however, the history presented in paras. 4–7 and 10 of the application was too incomplete, and too incompletely referenced to relevant provisions of the Code, to follow. Para. 4 ended by saying that *Oscinis* and *Chlorops* had the same type species, *Musca pumilionis*, but the type species of *Oscinis* was earlier stated to be *Musca lineata* Fabricius. Was *pumilionis* the replacement name for this homonymous *lineata*? Para. 5 first referred to *Oscinis capreolus*, but then inexplicably abbreviated the generic name as 'M.' Para. 7 did not state the specific names that arguably might have been combined originally with *Pachychaeta* by Loew (1845); was *Oscinis cornuta*, later designated as type species, one of these? Because Loew's complicated German supposedly made it difficult to tell whether there were any originally included species, didn't *Pachychaeta* Loew, which would be senior to the tachinid *Pachychaeta* Brauer & von Bergenstamm, 1891 if available, need to be suppressed? Even if *Elachiptera aterrima* (type species of *Melanochaeta*) were a junior synonym of *Oscinis capreolus*, and the latter was also senior to *Oscinella coei*, as the application stated, he did not not clearly see how *Oscinella* became endangered since neither of these species was the type of *Oscinella*.

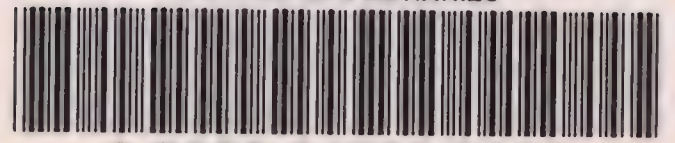
Were both inextricably tied taxonomically to *O. frit*? Were they even in the same subgenus, or were they perhaps among the species that ‘may be transferred to other genera in the future’?

SPLITTING his vote, Rosenberg said he had done so because *Pachychaetina* was a junior objective synonym of *Melanochaeta* and as such was permanently invalid. It should therefore have been placed on the Official Index, not the Official List, and did not need the endorsement requested in the application. He said *Pachychaeta* Loew, 1845 and *Pachychoeta* Bezzi, 1896 should also be placed on the Official Index; the former was a name introduced as a synonym that was not later used as valid, and so was not available under Article 11.6 (publication in synonymy), while the latter was preoccupied by *Pachychoeta* Bigot, 1857 and so was permanently invalid. In Bezzi’s treatment of *Pachychoeta* he mentioned Loew, but did not cite the work where Loew published *Pachychaeta*, and he also used a different spelling, gave it different content, and attributed the name to himself (‘mihi’), so *Pachychoeta* should not be attributed to Loew under Article 11.6. The type species of *Pachychoeta* Bezzi was *Elachiptera aterrima* Strobl, 1880, by monotypy (demonstrated by Bezzi on p. 77), not by original designation as stated in the application. The entries for *Pachychoeta*, *Melanochaeta* and *Pachychaetina* on the Official List and Index should reflect this, he said.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

- Oscinella* Becker, 1909, *Bulletin du Muséum National d’Histoire Naturelle (Paris)*, **15**(3): 120.
Pachychaetina Hendel, 1907, *Wiener Entomologische Zeitung*, **26**: 98.
Melanochaeta Bezzi, 1906, *Zeitschrift für Systematische Hymenopterologie und Dipterologie*, **6**(1): 50.
Pachychaeta Loew, 1845, Dipterologische Beiträge. in: [Einladung] zu der öffentlichen Prüfung der Schüler des Königlichen Friedrich-Wilhelms-Gymnasiums zu Posen, Königliche Hofdruckerei W. Decker, Posen, p. 50.
Pachychaeta Bezzi, 1895, *Bollettino della Società entomologica italiana*, **27**, p. 72.



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Cover image: *Tetrosomus gibbosus* (Linnaeus, 1758) known as the humpback turretfish illustrated by Ernst Haeckel in *Kunstformen der Natur*, pl. 42, fig. 10. as '*Ostracion turritus* (Swainson)' [in fact *Ostracion turritus* Forsskål, 1775], which is a junior synonym of *Ostracion gibbosus* Linnaeus, 1758. This image was chosen to commemorate the 180th anniversary of Haeckel's birth and 110th anniversary of publication of his *Kunstformen der Natur* (1899–1904).

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 71, part 3 (pp. 145–213)

30 September 2014

Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the ICZN at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each volume and available online (at <http://iczn.org/content/guidelines-case-preparation>) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will, where possible, answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should preferably be sent by e-mail to 'iczn@nhm.ac.uk'.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at <http://iczn.org/content/instructions-comments>).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at <http://list.afriherp.org/mailman/listinfo/iczn-list>.

(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to iczn@nhm.ac.uk.

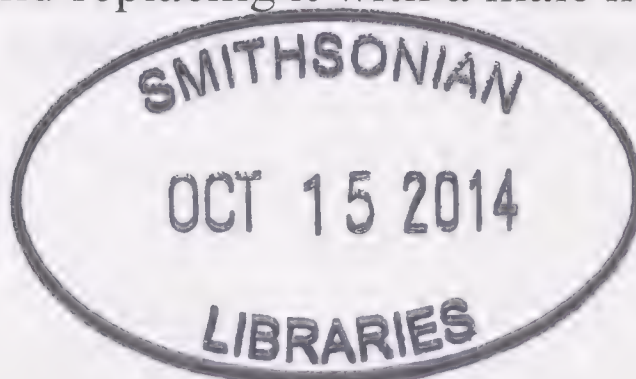
New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (volume 71, part 21, 30 June 2014) went to press. Under Article 82 of the Code, the prevailing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3663: *Peckhamia* Simon, 1901 (Araneae, SALTICIDAE): proposed conservation by suppression of a senior synonym. D. Richman.

CASE 3664: *Tipula contaminata* Linnaeus, 1758 (Insecta, Diptera; currently *Ptychoptera contaminata*): proposed conservation of prevailing usage through designation of a neotype. A. Fasbender and G. W. Courtney.

CASE 3665: *Musca purpurascens* Walker, 1836 (Insecta, Diptera, CALLIPHORIDAE): proposed conservation of prevailing usage of specific name by setting aside the unidentifiable female holotype and replacing it with a male neotype. T. Whitworth & K. Rognes.



CASE 3666: DICROGLOSSIDAE Dubois, 1987 (Amphibia, Anura): proposed conservation. A. Ohler, A. A. Thasun Amarasinghe, F. Andreone, A. Bauer, L. Borkin, A. Channing, Y. Chuaynkern, I. Das, K. Deuti, T. Frétey, M. Matsui, T. Nguyen, R. A. Pyron, M. O. Rödel, G.H. Segniagbeto, K. Vasudevan & A. Dubois.

CASE 3667: Proposed suppression of *Paludina conica* Férussac, 1814, with the preservation of *Paludina conica* Prévost, 1821 (currently '*Peringia*' *conica*) (Gastropoda, Prosobranchia, HYDROBIIDAE). D. Kadolsky.

CASE 3668: *Conus antidiluvianus* Bruguière, 1792 (Mollusca, Gastropoda, CONIDAE): proposed conservation of prevailing usage of specific name by setting aside the unidentifiable lectotype and replacing it with a neotype. A.W. Janssen, R. Janssen, S. Tracey, L.M.B. Vaessen & J. van der Voort.

CASE 3669: ORTALIDAINI Donegan, 2012 or ORTALISINI Donegan, 2012 emend David, 2014 (Aves, CRACIDAE): proposed conservation. T.M. Donegan.

CASE 3670: *Chilicola vicugna* Toro & Moldenke, 1979 (Insecta, Hymenoptera, COLLETIDAE): proposed replacement of a holotype by a neotype. S.K. Monckton.

Notice

Commissioner Professor Susan Lim 1952 – 2014

It is with deep regret that we report the passing of Commissioner Professor Susan Lim on 2 August 2014 after a long illness. Susan Lim was a Commissioner of the ICZN from 2006 until the end of her life, and was able to participate in the 2014 Commissioners' meeting in Singapore. She was one of the most productive taxonomists of Monogenea (Platyhelminthes) of her generation. In an active career at the University of Malaysia (Kuala Lumpur) spanning 43 years, she described over a hundred species of these fish parasites. An obituary will be published in the next issue of the BZN.

Commissioner Professor Zbigniew Kabata 1924 – 2014

It is our sad duty to announce, on 4 July 2014, the passing of former Commissioner Professor Zbigniew Kabata. He served in the Polish Armia Krajowa during World War II, and went on to become a highly respected parasitologist, and a Commissioner of the ICZN 1984–1999. During his career he was awarded the A. Wardle Medal by the Canadian Society of Zoologists, the K. Janicki Medal by the Polish Parasitological Society and the K. Demel Medal by the Sea Fisheries Institute in Gdynia, Poland. An obituary is in preparation for publication in another journal (Mackiewicz, in press).

Case 3662***Siphonichnus* Stanistreet, le Blanc Smith & Cadle, 1980 (trace fossil): proposed conservation by granting precedence over the senior subjective synonym *Ophthalmichnium* Pfeiffer, 1968**

Dirk Knaust

Statoil ASA, N-4035 Stavanger, Norway (e-mail: dkna@statoil.com)

Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to conserve the widely used name *Siphonichnus* Stanistreet, le Blanc Smith & Cadle, 1980 in its accustomed usage for an ichnogenus by giving it precedence over its senior subjective synonym, *Ophthalmichnium* Pfeiffer, 1968, which has been used very rarely since it was first proposed. *Planolites ophthalmoides* Jessen, 1950, the type ichnospecies of *Ophthalmichnium*, is a senior subjective synonym of *Siphonichnus ecccaensis* Stanistreet, le Blanc Smith & Cadle, 1980, the type ichnospecies of *Siphonichnus* which has important applied uses in coal-bed geology and hydrocarbon exploration and production.

Keywords. Nomenclature; ichnotaxonomy; *Siphonichnus*; *Ophthalmichnium*; *Planolites*; *Siphonichnus ecccaensis*; *Planolites ophthalmoides*; trace fossils

1. The ichnogenus *Siphonichnus* was introduced by Stanistreet et al. (1980) from Lower Permian delta deposits of South Africa to describe cylindrical burrows consisting of a thick laminated wall around a homogeneous tubular core, with *Siphonichnus ecccaensis* as its type ichnospecies (p. 343, fig. 14) by original designation. Until 2012, only the type ichnospecies of *Siphonichnus* had been described from Upper Devonian (Angulo & Buatois, 2012) to Holocene (Gingras et al., 2008) deposits of many places around the world. In their recent review, Zonneveld & Gingras (2013) redefined *Siphonichnus* and included three further ichnospecies.

2. Trace fossils resembling *Siphonichnus* were described from Germany long before this ichnogenus was named (Rücklin, 1934, pp. 89–96, figs. 3–5; Gothan, 1932). Jessen (1950, pp. 34–35, figs. 1, 3) described burrows from the Upper Carboniferous of West Germany and described the ichnospecies *Planolites ophthalmoides* for them, based on the eye-like appearance of the burrows in cross-section. A specimen with the catalogue number Kar. 1 in the collection of the Geologischer Dienst (Geological Survey) Nordrhein-Westfalen in Krefeld was designated by Jessen (1950, pp. 34–35, figs. 1, 2) as the holotype of *Planolites ophthalmoides*. During the publication of his work, Jessen (1950) became aware of work done by Desio (1940) and mentioned in a footnote (p. 34) that *Planolites ophthalmoides* could potentially be synonymous with *Sabellarifex parvus* Desio, 1940 (pp. 74–75, pl. IX, fig. 1), which would have implications for the type ichnospecies of the ichnogenus *Siphonichnus* (see below under point 5, 2b), although Schlirf & Uchman (2005) included *Sabellarifex parvus* in the ichnogenus *Skolithos*. Müller (1955, p. 657, figs. 1, 2) proposed the ichnospecies *Planolites? vermiculare* from the Upper Permian (Zechstein) of central Germany, but

its internal composition as well as the vertically orientated burrow parts in both suggest this ichnospecies and *P. ophthalmoides* are incompatible with the diagnosis of *Planolites* Nicholson, 1873 (Pemberton & Frey, 1982). Addressing this incompatibility, Pfeiffer (1968, p. 691) proposed the ichnogenus *Ophthalmichnium* based on the type ichnospecies *Planolites ophthalmoides*. *Ophthalmichnium* did not find wide usage subsequently, being used as valid only by Suhr (1989), probably because Häntzschel (1975, p. W97) regarded *Ophthalmichnium* (misspelled as *Ophthalmidium*) as a superfluous name. Lehotsky (2010), in an online publication (an unpublished museum catalogue) referred to *Ophthalmichnium zonatum* Pek, 1986, which is now identified as *Chondrites* isp. Franke et al. (1988), in another publication mentioned *Ophthalmichnium*.

3. Because herein, the morphology of *Planolites ophthalmoides* is essentially considered identical with that of *Siphonichnus ecccaensis* (the type ichnospecies of *Siphonichnus*), the two nominal species are subjective synonyms, with the former having priority. In accordance with Article 23.1 of the Code, the ichnospecies name *ophthalmoides* Jessen, 1950 (published in the binomen *Planolites ophthalmoides*, later in the ichnogenus *Ophthalmichnium*) must be regarded as the oldest available name applied to this ichnospecies and thus has priority over the ichnospecies name *ecccaensis* Stanistreet, le Blanc Smith & Cadle, 1980 (published in the binomen *Siphonichnus ecccaensis*). The ichnospecies *ophthalmoides* in combination with the generic name *Ophthalmichnium* has rarely been used after its introduction by Pfeiffer (1968) and its usage by Suhr (1989) and a mention in a synonymy list by Pemberton & Frey (1982) are the only occurrences known to the author, aside from an unpublished master's thesis with a newly introduced ichnospecies (Pek, 1986). Consequently, the ichnospecies name *ophthalmoides* Jessen, 1950 should be used in preference to *ecccaensis* Stanistreet, le Blanc Smith & Cadle, 1980. *Siphonichnus* is a widely used ichnogenus (Stanistreet et al., 1980; Raychaudhuri et al., 1992; MacEachern et al., 1992, 1999, 2005; Taylor & Gawthorpe, 1993; Keswani & Pemberton, 1993; Pemberton & MacEachern, 1995; Martin & Pollard, 1996; Zonneveld et al., 2001; Pemberton et al., 2004; MacEachern & Hobbs, 2004; McIlroy, 2004, 2007; Gingras & Bann, 2006; Fielding et al., 2007; Coates & MacEachern, 2007; Dafoe & Pemberton, 2007; MacEachern & Gingras, 2007; Yang et al., 2007, 2008; MacEachern & Bann, 2008; Angulo & Buatois, 2010, 2012a, b; Knaust, 2010, 2014; Dashtgard, 2011; Buatois & Mángano, 2011; Ekdale et al., 2012) and should be granted precedence over *Ophthalmichnium* in order to maintain ichnotaxonomic stability. In accordance with Article 23.9.3 of the Code, this matter is being brought to the attention of the Commission for a ruling.

4. *Siphonichnus ophthalmoides* (and its synonyms) appears to be an important indicator of marginal-marine environments and marine transgressions. It has, therefore, received much attention for more than 80 years, first for recognising marine influence between paralic coal seams in coal mines of West Germany (Gothan, 1932; Jessen, 1950; Fiebig, 1956; Seilacher, 1963, 1964), England (Woodland et al., 1957; Smith et al., 1967; Calver, 1968a, b; Pollard, 1988), Ireland (Eager, 1964), South Africa (Stanistreet et al., 1980), and East Germany (Suhr, 1989), and later in connection with hydrocarbon exploration globally (e.g. Taylor & Gawthorpe, 1993; Pemberton & MacEachern, 1995; Martin & Pollard, 1996; Gowland, 1996; Pemberton et al., 2004; Ekdale et al., 2012). Most of the reports and descriptions of

Siphonichnus ophthalmoides (and its synonyms) have been made from drilling cores, a fact that illustrates its economic importance. Needless to say, a robust ichno-taxonomy is required to recognise this important trace fossil and to use it for palaeoenvironmental and sedimentological reconstructions.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to give the name *Siphonichnus* Stanistreet, le Blanc Smith & Cadle, 1980 precedence over the name *Ophthalmichnium* Pfeiffer, 1968, whenever the two are considered to be synonyms;
- (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Siphonichnus* Stanistreet, le Blanc Smith & Cadle, 1980, type species *Siphonichnus eccaensis* Stanistreet, le Blanc Smith & Cadle, 1980 by original designation, with the endorsement that it is to be given precedence over the name *Ophthalmichnium* Pfeiffer, 1968, whenever the two are considered to be synonyms;
 - (b) *Ophthalmichnium* Pfeiffer, 1968, type species *Planolites ophthalmoides* Jessen, 1950 by original designation, with the endorsement that it is not to be given priority over the name *Siphonichnus* Stanistreet, le Blanc Smith & Cadle, 1980, whenever the two are considered to be synonyms;
- (3) to place on the Official List of Specific Names in Zoology the name *ophthalmoides* Jessen, 1950, as published in the binomen *Planolites ophthalmoides*, the type species of *Ophthalmichnium* Pfeiffer, 1968.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3655***Mesocrangon* Zarenkov, 1965 (Crustacea, Decapoda, CRANGONIDAE): proposed conservation by suppression of *Mesocrangon* Woodward, 1873**

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Abstract. The purpose of this application, under Article 23.9.3 and Recommendation 23A of the Code, is to conserve the generic name *Mesocrangon* Zarenkov, 1965 for a group of boreal crangonid decapods. The genus name *Mesocrangon* Zarenkov, 1965 is in widespread and current use. This name is threatened by the unused senior primary homonym *Mesocrangon* Woodward, 1873. It is proposed that the name *Mesocrangon* Zarenkov, 1965 be conserved by the suppression of *Mesocrangon* Woodward, 1873.

Keywords. Nomenclature; taxonomy; Crustacea; Decapoda; CRANGONIDAE; *Mesocrangon*; *Mesocrangon intermedia*; *Mesocrangon atra*; crangonid decapods; Recent.

1. Woodward (1873, p. 523) established the genus name *Mesocrangon* for a single new fossil species of Decapoda, *Mesocrangon atra* Woodward, 1873 (p. 523), the type species by monotypy.

2. In a later publication, Woodward (1877, p. 13) stated that the genus name *Mesocrangon* was first published in Woodward (1874, p. 306), which he cited as being published in '1873'. However, Woodward (1874) is a verbatim copy of Woodward (1873) but with 1874 as the publication date. The genus name *Mesocrangon* was thus first published in Woodward (1873).

3. The species name *Mesocrangon atra* Woodward, 1873 has not been used as valid since Woods (1925, p. 4), and its identity and the whereabouts of the type material are unknown (see Glaessner, 1929, p. 253).

4. Zarenkov (1965, p. 1762) established the genus *Mesocrangon*, with *Crangon intermedius* Stimpson, 1860 (p. 25) as the type species by original designation, and including *Crangon munitellus* Walker, 1898 (pp. 275, 276) and *Sclerocrangon volki* Birstein & Vinogradov, 1953 (p. 217, fig. 1).

5. The genus name *Mesocrangon* Woodward, 1873 is a senior homonym of *Mesocrangon* Zarenkov, 1965 (Article 52 of the Code).

6. *Mesocrangon* Zarenkov, 1965 currently includes three extant species (see De Grave et al., 2009, p. 19), *M. intermedia* (Stimpson, 1860), *M. munitella* (Walker, 1898) and *M. volki* (Birstein & Vinogradov, 1953). The genus has been accepted by all recent authors, and features as a valid genus in major caridean works, such as the keys to genera (e.g. Burukovskii, 1983, p. 124; Holthuis, 1993, pp. 284, 291) as well as the recent listing of all valid names in the Caridea (De Grave & Fransen, 2011, p. 457). The genus *Mesocrangon* Zarenkov, 1965 is currently assigned to the family CRANGONIDAE Haworth, 1825 (see De Grave et al., 2009, p. 19).

7. The genus *Mesocrangon* Zarenkov, 1965 has been in widespread and current use since it was first established. In the past 36 years, at least 30 publications by 66 different authors using *Mesocrangon* Zarenkov, 1965 as a valid genus have been published (e.g. Markham, 1978, pp. 113, 120; Butler, 1980, pp. 73, 120, 255; Burukovskii, 1983, p. 124; Dardeau & Heard, 1983, p. 7; Ōta, 1983, p. 230; Raymont et al., 1983, p. 6; Carvacho & Olson, 1984, p. 65; Austin, 1985, p. 636; Haynes, 1985, p. 263; Shinn & Christensen, 1985, p. 432; Hendrickx, 1992, p. 7, 1992, pp. 279, 306; Wicksten & Hendrickx, 1992, p. 4; Holthuis, 1993, pp. 284, 291; Jensen, 1995, p. 39; Llorente-Bousquets et al., 1996, p. 124; Boschi, 2000, p. 94; Cruz et al., 2002, p. 184; Yeh & Ohta, 2002, p. 511; Kim & Hayashi, 2003, pp. 669, 670; Wicksten & Hendrickx, 2003, p. 69; Kim, 2005, p. 242; McLaughlin et al., 2005, p. 225; Kuris et al., 2007, pp. 636, 650; Komai & Komatsu, 2008, pp. 192, 194; De Grave et al., 2009, p. 19; Komai & Komatsu, 2009, p. 523; Macdonald et al., 2010, p. 19; De Grave & Fransen, 2011, p. 457; Komai & Ahyong, 2011, p. 107). This fulfils Article 23.9.1.2 of the Code (Reversal of Precedence).

8. Just four publications using the genus name *Mesocrangon* Woodward, 1873 have been found since 1899. Two publications listed this name in lists of valid fossil taxa (Jukes-Brown & Hill, 1900, p. 474; Woods, 1925, p. 4). The third publication discussed the problematic identity of the name and did not consider it to be valid (Glaessner, 1929, p. 253). The fourth was a nomenclator which listed the name but made no assertion of its taxonomic validity (Neave, 1950, p. 153) (Article 23.9.6). The post-1899 use of *Mesocrangon* Woodward, 1873 as valid in the first two publications means that the conditions of Article 23.9.1.1 of the Code (Reversal of Precedence) are not met and a ruling by the Commission is needed for formal suppression of the name.

9. *Mesocrangon* Zarenkov, 1965 has been repeatedly used as valid since its erection. In contrast, *Mesocrangon* Woodward, 1873 has only been used twice as valid. A strict implementation of the Code would cause considerable confusion in caridean nomenclature, given the widespread usage of *Mesocrangon* Zarenkov, 1965. Although the conditions of Article 23.9.1 for maintaining current usage are not fulfilled, the conservation of the name *Mesocrangon* Zarenkov, 1965 would thus best serve nomenclatural stability.

10. The International Commission on Zoological Nomenclature is accordingly asked to use its plenary power to:

- (1) suppress the name generic *Mesocrangon* Woodward, 1873 for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) place on the Official List of Generic Names in Zoology the name *Mesocrangon*

Zarenkov, 1965 (gender: feminine), type species by original designation *Crangon intermedia* Stimpson, 1860;

(3) place on the Official List of Specific Names in Zoology the name *intermedia* Stimpson, 1860, as published in the binomen *Crangon intermedius* (specific name of the type species of *Mesocrangon* Zarenkov, 1965);

(4) place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Mesocrangon* Woodward, 1873, as suppressed in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3657

STENODERINI Selander, 1991 (Insecta, Coleoptera): proposed emendation of spelling to STENODERAINI to remove homonymy with STENODERINI Pascoe, 1867 (Insecta, Coleoptera); and STENODERINI Pascoe, 1867: proposed precedence over SYLLITINI Thomson, 1864

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Abstract. The purposes of this application, under Articles 23.9.3 and 55.3 of the Code, are to conserve the usage of the family-group name STENODERINI Pascoe, 1867 (Insecta, Coleoptera, CERAMBYCIDAE) by giving it precedence over the senior but unused name SYLLITINI Thomson, 1864, and to emend the family-group name STENODERINI Selander, 1991 (Insecta, Coleoptera, MELOIDAE), a junior homonym of STENODERINI Pascoe, 1867, to STENODERAINI, thereby removing the homonymy between the two names.

Keywords. Nomenclature; Coleoptera; CERAMBYCIDAE, MELOIDAE; STENODERINI; STENODERAINI; SYLLITINI; *Stenoderus*; *Stenodera*; *Syllitus*; *Stenoderus suturalis*; *Stenodera caucasica*; *Syllitus grammaticus*; blister and longhorn beetles; Australia; Palaeartic.

1. Eschscholtz (1818, p. 469) established the genus *Stenodera* for a group of meloid beetles. Its type species by monotypy is *Stenodera sexpunctata* Eschscholtz, 1818 (p. 469), a junior synonym of *Meloe caucasica* Pallas, 1781 (p. 94). The genus includes eight species from the Palaeartic Region (Bologna et al., 2002; Bologna, 2008).

2. Dejean (1821, p. 112) in the first edition of the catalogue of his beetle collection established the cerambycid genus *Stenoderus* for one species, *Cerambyx abbreviatus* Fabricius, 1801 (p. 275). Since the species was available at the time, the generic name *Stenoderus* is available from Dejean's catalogue. The name has often been credited incorrectly to Audinet-Serville (1835, p. 210). *Cerambyx abbreviatus* Fabricius, 1801 is a junior synonym of *Stenocorus suturalis* Olivier, 1795 (p. 29), which is currently the valid name for the type species of *Stenoderus*. The genus *Stenoderus* includes five species from Australia (see McKeown 1947, pp. 72–73).

3. Blanchard (1845, pp. 163, 177) proposed the family-group name Sténodérites based on the genus *Stenoderus* Dejean, 1821. This vernacular name was not subsequently latinized by authors and simultaneously dated from Blanchard. Therefore the name is unavailable (Article 11.7.2 of the Code).

4. Thomson (1864, p. 138) established the family-group name SYLLITAE based on *Syllitus* Pascoe, 1859. This genus-group name was established for three species, *Stenoderus grammaticus* Newman, 1840, *Stenoderus deustus* Newman, 1841 and *Stenoderus rectus* Newman, 1841. Its type species is *Stenoderus grammaticus* Newman, 1840 (p. 21) by subsequent designation by McKeown (1947, p. 73).

5. Pascoe (1867, p. 311) proposed the family-group name STENODERINAE for the genus *Stenoderus* Dejean, 1821. This name, as STENODERINI, is currently applied to a tribe of the family CERAMBYCIDAE (Scambler, 1993; López-Pérez, 2005; Monné & Hovore 2006; Bousquet et al. 2009; Bouchard et al., 2011; Lawrence & Ślipiński 2013) and includes both *Syllitus* Pascoe, 1859 and *Stenoderus* Dejean, 1821 (Aurivillius, 1912; López-Pérez, 2005).

6. Selander (1991, p. 77) established the family-group name STENODERINI for meloid beetles of the genus *Stenodera* Eschscholtz, 1818. An earlier usage of the family-group name (Selander, 1964) did not meet the requirements for availability since neither description nor bibliographic reference to such a description (Article 13.1) was included. The name STENODERINI is currently considered valid in MELOIDAE (Bologna & Pinto, 2002; Bologna et al., 2002; Bologna, 2008; Bologna et al., 2010; Bologna et al., 2013).

7. The meloid name STENODERINI Selander, 1991 is younger than the cerambycid name STENODERINI Pascoe, 1867 and there is no synonym available to replace it. To remove the homonymy we propose to emend the meloid name STENODERINI to STENODERAINI, leaving the older cerambycid name unaltered.

8. The family-group name SYLLITINI Thomson, 1864 is older than STENODERINI Pascoe, 1867 but has not been used subsequently as valid. Gressitt (1959, p. 85) used SYLLITINI in his key to the New Guinea tribes of CERAMBYCINAE apparently by error since he used CALLIPRASONINI McKeown, 1947 in the text (p. 148). We are unable to find 25 references using STENODERINI Pascoe as a valid name in the immediately preceding 50 years. Therefore the name SYLLITINI Thomson cannot be qualified as a nomen oblitum and STENODERINI as a nomen protectum following Article 23.9.1. Nevertheless we believe that the use of the older name would threaten stability in cerambycid nomenclature.

9. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary power to rule that:

(a) for the purposes of Article 29 of the Code the stem of the generic name *Stenodera* Eschscholtz, 1818 is *Stenodera-*;

(b) the family-group name STENODERINI Pascoe, 1867 and other family-group names based on *Stenoderus* Dejean, 1821 are to be given precedence over SYLLITINI Thomson, 1864 and other family-group names based on *Syllitus* Pascoe, 1859, whenever their type genera are placed in the same family-group taxon;

(2) to place on the Official List of Generic Names in Zoology the following names:

(a) *Stenodera* Eschscholtz, 1818 (gender: feminine), type species by monotypy *Stenodera sexpunctata* Eschscholtz, 1818;

(b) *Stenoderus* Dejean, 1821 (gender: masculine), type species by monotypy *Cerambyx abbreviatus* Fabricius, 1801;

(c) *Syllitus* Pascoe, 1859 (gender: masculine), type species by subsequent designation of McKeown (1947) *Stenoderus grammaticus* Newman, 1840;

- (3) to place on the Official List of Specific Names in Zoology the following names:
- (a) *caucasica* Pallas, 1781, as published in the binomen *Meloe caucasica* (valid name of the type species of *Stenoderus* Eschscholtz, 1818);
 - (b) *suturalis* Olivier, 1795, as published in the binomen *Stenocorus suturalis* (valid name of the type species of *Stenoderus* Dejean, 1821);
 - (c) *grammaticus* Newman, 1840, as published in the binomen *Stenoderus grammaticus* (specific name of the type species of *Syllitus* Pascoe, 1859);
- (4) to place on the Official List of Family-Group Names in Zoology the following names:
- (a) STENODERINAE Pascoe, 1867, type genus *Stenoderus* Dejean, 1821 (Insecta, Coleoptera, CERAMBYCIDAE), with the endorsement that it and other family-group names based on *Stenoderus* are to be given precedence over SYLLITAE Thomson, 1864 and other family-group names based on *Syllitus* Pascoe, 1859 whenever their type genera are placed in the same family-group taxon;
 - (b) SYLLITAE Thomson, 1864, type genus *Syllitus* Pascoe, 1859 (Insecta, Coleoptera, CERAMBYCIDAE), with the endorsement that it and other family-group names based on *Syllitus* are not given priority over STENODERINAE Pascoe, 1867 and other family-group names based on *Stenoderus* Dejean, 1821 whenever their type genera are placed in the same family-group taxon;
 - (c) STENODERAINI Selander, 1991, type genus *Stenoderus* Eschscholtz, 1818 (spelling emended by the ruling in (1) above);
- (5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name STENODERINI Selander, 1991 (spelling emended to STENODERAINI, as ruled in (1) above) (Insecta, Coleoptera, MELOIDAE).

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Case 3661***Apion longirostre* Olivier, 1807 (currently *Rhopalapion longirostre*; Insecta, Coleoptera): proposed conservation of usage of the specific name**

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Abstract. The purpose of this application, under Article 81.2.1 of the Code, is to conserve the specific name *Apion longirostre* Olivier, 1807 for the well-known apionid beetle (family APIONIDAE) from western Palaearctic and Nearctic Regions by suppressing the name *Apion longirostre* Gravenhorst, 1807, senior primary homonym of the former.

Keywords. Nomenclature; taxonomy; Coleoptera; Curculionoidea; APIONIDAE; *Apion longirostre*; *Rhopalapion*; Palaearctic; Nearctic.

1. The name *Apion longirostre* was established by Gravenhorst, 1807 (p. 198) for an unspecified number of specimens without indication of provenance. Successively this name was used as valid only three times, by Germar (1819, p. 126), by Alonso-Zarazaga (2011, p. 176) who placed the taxon among the APIONIDAE 'incertae sedis' and by Alonso-Zarazaga & Lyal (2014). All these authors just listed the name. Careful researches attempting to find syntypes which might possibly have been stored in the historical collections of the Museum für Naturkunde der Humboldt-Universität in Berlin were in vain (Winkelmann, pers. comm.), and so *Apion longirostre* Gravenhorst, 1807 is currently considered a nomen dubium.

2. In the same year Olivier (1807, p. 35), clearly unaware of Gravenhorst's paper, described a different species under the same name *Apion longirostre*. About a century later, Schilsky (1906, p. V) designated *Apion longirostre* Olivier, 1807 the type species by monotypy of the subgenus *Rhopalapion* Schilsky, 1906, taxon subsequently elevated to genus by Alonso-Zarazaga, 1990 (p. 71). *Rhopalapion longirostre* (Olivier) has been cited as valid in numerous publications in the last 50 years; more than 100 works have dealt with this species, e.g. Alonso-Zarazaga (1990, p. 71); Compte-Sart (1992, p. 615); Schmitz & Maczey, (1993, p. 111); Wanat (1993, p. 54); Behne (1994, p. 206); Abbazzi et al. (1995, p. 9); Poussereau (1995, p. 26); Perrin (1995, p. 67); Kahlen & Hellrigl (1996, 493); Knutelski & Petryszak (1997, p. 52); Reibnitz (2001, p. 140); Colonnelli (2003, p. 30); Cantot & Pelletier (2004, p. 118); Stejskal (2004, p. 77); Osella et al. (2005, p. 35); Braunert (2006, p. 150); Mazur (2007, p. 53); Ugarte San Vicente & Salguera Cerezo (2008, p. 117); Germann et al. (2008, p. 152); Poussereau & Voisin (2009, p. 123); Tuba & Lakatos (2010, p. 886); Bârcă et al. (2011, p. 80); Mazur (2011, p. 55); Avgın & Colonnelli (2011, p. 13560) and Alziar & Lemaire (2012, p. 66). *Rhopalapion longirostre* is one of the most easily recognizable

apionid species, harmful to hollyhock and cotton (Malvaceae), and widespread in the western Palaearctic and Nearctic Regions.

3. Gravenhorst's and Olivier's publications are both dated 1807 and the 31st December 1807 has been hitherto adopted as their date, according to Article 21.3.2 of the Code. However, a book review (Anonymous, 1807, p. 441) shows that Gravenhorst's work was already available at least on March 19, 1807, whilst at present there is no evidence about the precise date of publication of the Olivier's 5th volume. As a consequence, *Apion longirostre* Gravenhorst becomes a senior primary homonym of *Apion longirostre* Olivier.

4. Since the conditions of Article 23.9.1.1 of the Code are not met (the senior name has been used after 1899), the automatic reversal of precedence under Article 23.9.2 of the Code is not possible. The introduction of a new name for the junior primary homonym *Apion longirostre* Olivier, 1807 would cause confusion and would compromise nomenclatural stability in this beetle group.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the specific name *longirostre* Gravenhorst, 1807, as published in the binomen *Apion longirostre*, and all uses of the name before Olivier (1807), for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the name *longirostre* Olivier, 1807, as published in the binomen *Apion longirostre*;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *longirostre* Gravenhorst, 1807, as published in the binomen *Apion longirostre* and as suppressed in (1) above.

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Case 3665***Musca purpurascens* Walker, 1836 (Insecta, Diptera, CALLIPHORIDAE): proposed conservation of prevailing usage of name by setting aside the unidentifiable female holotype and replacing it with a male neotype**

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Abstract. The purpose of the present application, under Article 75.5 of the Code, is to conserve the name *Lucilia purpurascens* (Walker, 1836) in its accustomed usage for a common Neotropical blow fly by setting aside the existing unidentifiable female holotype and replacing it with a male neotype.

Keywords. Nomenclature; taxonomy; Insecta; Diptera; CALLIPHORIDAE; *Musca*; *Lucilia*; *Musca purpurascens*; *Lucilia purpurascens*; *purpurescens*; blow fly; Neotropical Region.

1. Walker (1836, p. 355) described and named *Musca purpurascens* from Brazil, Santa Catarina (as ‘St. Catherine’s’). The female holotype is in the Natural History Museum, London and Whitworth (2014, p. 22, figs. 35–36) published photographs of it and its labels.

2. Aubertin (1933, p. 426) assigned *Musca purpurascens* to the genus *Lucilia* Robineau-Desvoidy. The type species of *Lucilia* is *Musca caesar* Linnaeus, 1758, by subsequent designation of Macquart (1835, p. 251). Aubertin also provided a detailed description of both sexes and included a figure of the phallus and male genitalia (Aubertin, 1933, p. 426, figs. 30a, b). She also noted ‘[*M. purpurascens*] is a striking and easily recognizable species’. The male genitalia for this species as figured by Aubertin (1933, p. 426, fig. 30b) are distinctive according to Whitworth (2014, p. 42).

3. Hall (1948) provided an even more detailed description and figures of *M. purpurascens* (Hall, 1948, Plate 25, figs. C, D) following Aubertin’s interpretation of Walker’s species. He assigned it to the nominal genus *Phaenicia* Robineau-Desvoidy (now considered a synonym of *Lucilia*).

4. Subsequent authors have followed Aubertin’s concept of *Musca purpurascens*: Hall (1948, p. 254; the species name was misspelled as ‘*purpurescens*’ and most subsequent authors followed this incorrect spelling); James (1970, p. 11); Baumgartner & Greenberg (1985, p. 584); Mariluis (1989, p. 75); Carvalho & Riberio (2000, p. 170; name spelled correctly in key but incorrectly as ‘*purpurescens*’ in

summary); Kosmann et al. (2013, p. 77). This concept was also employed in the recent monograph on Neotropical *Lucilia* by Whitworth (2014, p. 42).

5. In his monograph on Neotropical *Lucilia* Robineau-Desvoidy, Whitworth (2014, p. 42) pointed out that the holotype was unidentifiable, that the name *Musca purpurascens* was a nomen dubium and that an application to replace the holotype with a neotype would be forthcoming.

6. The holotype female of *Musca purpurascens* was examined by Whitworth (2014). It was intact, but had a heavy layer of dust adhering to the cuticle which could not be cleaned off without risking destruction. It is difficult to be certain about the exact microtomentum patterns on the thorax and abdomen which are important to confirm species identity. Characters which might reveal the identity of the specimen are obscured. Repeated efforts to confirm this specimen's identity with certainty have failed. Whitworth (2014) stated that, even with good specimens, a lone female *Lucilia* without matched males in the Neotropical Region could be difficult to identify positively.

7. Aubertin's description does not match the holotype of *M. purpurascens*. Whitworth (2014, p. 42, cf. figs. 35–38) compared females conforming to Aubertin's concept of *M. purpurascens* with Walker's holotype and found significant differences. For specimens conforming to Aubertin's concept, the frons width averages 0.28 of head width at narrowest, whereas it measures 0.25 of head width at narrowest in the holotype; the dorsum of thorax in the former has heavy whitish microtomentum, whereas in the holotype only the anterior edge of pronotum has whitish microtomentum; the abdominal tergite T4 in the former is mostly polished or only microtomentose on the anterior edge, whereas in the holotype most of T4 is microtomentose; the gena is all dark brown in the former specimens, whereas in the holotype the anterior edge of the gena is orange; the upper and lower calypters are dark brown with dark brown rims in the females corresponding to Aubertin's concept, whereas in the holotype the upper and lower calypters are light tan, the rim of the upper calypter brown, the rim of the lower calypter pale. There are other less obvious differences as well.

8. The holotype of *Musca purpurascens* was collected from Santa Catarina, in southeast Brazil. It is not clear if this was from the nearby island of that name or somewhere else in the state of Santa Catarina, but according to the detailed distributional records published by Whitworth (2014) specimens matching Aubertin's concept of *purpurascens* have not been found anywhere near this location.

9. The taxonomic identity of the nominal species-group taxon *Musca purpurascens* Walker, 1836 cannot be determined from its existing name-bearing type. The stability and universality of the accustomed usage of the name is threatened thereby. We therefore propose to set aside the existing unidentifiable female holotype and replace it with a male neotype in accordance with prevailing usage of the name *purpurascens*. We propose as neotype a male in perfect condition collected in Costa Rica with the following labels: (1) COSTA RICA Pnts / 1400m, Coton, Las / Alturas 5.IX.91 / P. DeVries M. Wood; (2) Neotype ♂ / *Musca purpurascens* / Walker, 1836: 355 / T.L. Whitworth 2014. 'Pnts' is an abbreviation for Puntarenas Province, 'Coton' is a river near the town of Las Alturas. The neotype has the genitalia partly exposed. It is housed in the Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Canada. It keys out easily by using Whitworth's (2014) key. Photographs of



Figs. 1–4: 1–2. Left lateral and dorsal view of neotype; 3. Location label; 4. Neotype label.

the neotype and its labels are shown in Figs 1–4. If a neotype is not designated under the plenary power then everyone will still be free to interpret the name *Musca purpurascens* Walker as he or she pleases, not being bound by Aubertin's and Hall's interpretations. Such a lack of action will contribute to further confusion about the identity of this species.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *Musca purpurascens* Walker, 1836 and to designate as neotype the male specimen in the Canadian National Collection of Insects, Arachnids and Nematodes, detailed in para. 9 above;
- (2) to place on the Official List of Specific Names in Zoology the name *purpurascens* Walker, 1836, as published in the binomen *Musca purpurascens* and as defined by the neotype designated in (1) above.

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Case 3658***Calyptorhynchus baudinii* Lear, 1832 (Aves, CACATUIDA): proposed conservation of usage by designation of a neotype**

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Abstract. The purpose of this application, under Article 75.6 of the Code, is to conserve prevailing usage of the species names *Calyptorhynchus baudinii* Lear, 1832 and *Calyptorhynchus latirostris* Carnaby, 1948, long established for two endemic cockatoos in southwestern Australia (Lear, 1832). The whereabouts of the holotype of *C. baudinii* Lear, 1832 (Baudin's Cockatoo) was previously unknown and the identity of Lear's (1832) figure was established by Saunders (1974). The holotype has been located at the National Museums Liverpool in December 2010 and found to be conspecific with *C. latirostris* Carnaby, 1948 (Carnaby's Cockatoo). The resulting nomenclatural shift would destabilise the long established usage of these names and confound past and future references to the names in the literature. To conserve the long established use of *baudinii* Lear for the distinct long-billed, Baudin's Cockatoo, and to maintain *latirostris* Carnaby as the valid name for Carnaby's Cockatoo we propose that the type of *baudinii* Lear, be set aside and replaced with a neotype of a specimen of Baudin's Cockatoo.

Keywords. Nomenclature; taxonomy; CACATUIDAE; *Calyptorhynchus baudinii*; Baudin's Cockatoo; *Calyptorhynchus latirostris*; Carnaby's Cockatoo; Australia.

1. Two species of white-tailed black cockatoo – Baudin's Cockatoo (*Calyptorhynchus baudinii* Lear, 1832, unnumbered plate) and Carnaby's Cockatoo (*Calyptorhynchus latirostris* Carnaby, 1948, p. 137) – are endemic to the south-west of Western Australia. The two were only recognised as separate species in 1979 (Saunders, 1979). First discovered by the Baudin Expedition, probably in the vicinity of Cape Naturaliste, Western Australia in 1801 and its consequent supposed illustration and naming by Edward Lear in 1832, Baudin's Cockatoo has been known as *Calyptorhynchus baudinii* Lear, 1832 (e.g. Gould, 1865; Salvadori, 1891 and Mathews, 1913).



Figs. 1a. Lear's plate 1832 showing *Calyptorhynchus baudinii*. **1b.** Specimen D5598s in the Liverpool Museum.

Its affinities with and the taxonomic status of its close relative Carnaby's Cockatoo *Calyptorhynchus latirostris* Carnaby, 1948 has, however, been complicated and confusing. Both species have extremely high profiles in Western Australian ornithology as well as the general community as pest species in agriculture (mainly Baudin's Cockatoo, a long-billed white-tailed black cockatoo), as endangered fauna in both State and federal legislation, and in aviculture. Their respective names are in wide use in Australia and internationally, in handbooks (Serventy & Whittell, 1976; del Hoyo et al., 1997; Johnstone & Storr, 1998; Higgins, 1999), field guides (Storr & Johnstone, 1979, 1985; Pizzey, 1980; Simpson & Day, 1996), checklists (Checklist Committee RAOU, 1926; Peters, 1937; Condon, 1975; Sibley & Monroe, 1990; Johnstone, 2001; Christidis & Boles, 2008), monographs of Psittaciformes (Forshaw, 1978, 1981; Cameron, 2007), regional avifaunas (Storr & Johnstone, 1988; Storr, 1991; Saunders & Ingram, 1995), scientific journals (Saunders 1974, 1979; Chapman, 2007; Johnstone & Kirkby 2008), and action plans for Australian bird conservation (Garnett & Crowley, 2002). This demonstrates that the scientific names have been used for Baudin's Cockatoo in particular for well over a century and in hundreds of references.

2. The type specimen of *Calyptorhynchus baudinii* almost certainly came from the vicinity of Eagle Bay, Western Australia (near Cape Naturaliste) as this is the only area that white-tailed black cockatoos were noted by a small party (under Henri Freycinet) from the Baudin Expedition that took a dinghy ashore there in late May 1801. By March 1804 the collections of the French Baudin expedition were in France

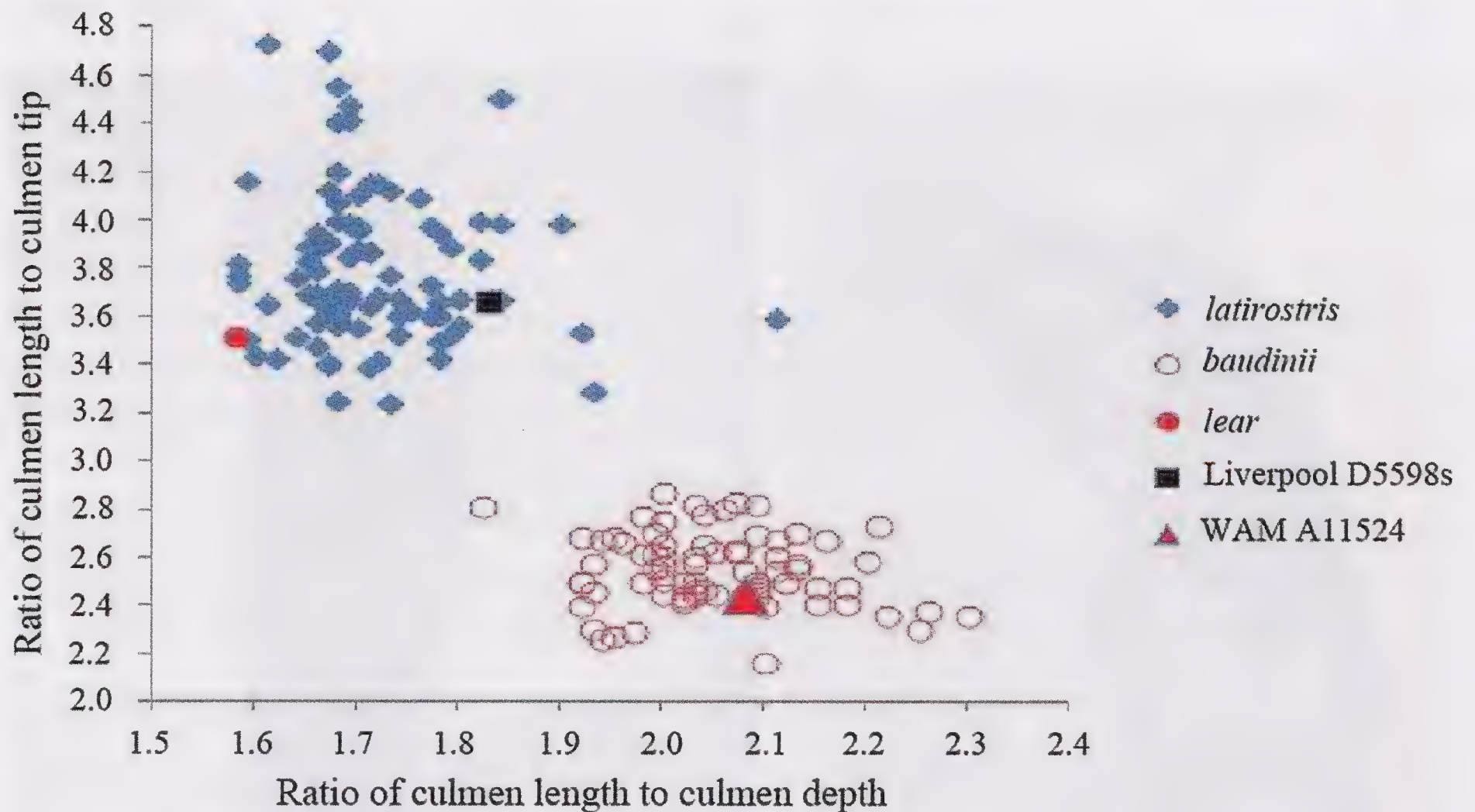


Fig. 2. Ratio of bill measurements of specimens.

and contained at least 80 species of Australian birds, many represented by more than one or two specimens. There are little data as to the present whereabouts of some of their specimens, but the type specimen of the Red-capped Parrot for example is an immature example in the Muséum National d'Histoire Naturelle, Paris (MNHP). Some of the specimens were mounted for the Paris Museum and duplicates were given to M. Becoeur of Paris, a dealer in zoological objects who sold some of them to C.J. Temminck and probably other collectors, in 1806. Specimens that remained in the Paris Museum were studied by Temminck, Vieillot and Levaillant and later by Kuhl (1820) (who for example described the Red-capped Parrot). Some specimens apparently found their way to Leadbeater, including a Western Australian cockatoo, as Lear's plate has a note at the base 'In the possession of Mr Leadbeater'. Leadbeater ran a natural history business in London and with Lear was a member of the Linnean Society. In the 1830s Lear spent much of his time working at Knowsley Hall, near Liverpool, the home of the President of the Linnean Society, Lord Stanley, who became the 13th Earl of Derby in 1834. Lord Derby purchased many specimens from Leadbeater around 1840. In 1851 after his death, the Derby collection was donated to the people of Liverpool, thus founding what is now National Museums Liverpool.

3. Lear's beautiful illustration (Fig. 1a) is labelled at the base as follows:

Calyptorhynchus baudinii

Baudin's Cockatoo

2/3 natural size

In the possession of Mr Leadbeater

On the branch is his signature E. Lear and also in his writing the date 'Decbr 27 1831'.

Lear was obviously aware of the Baudin expedition in 1802–1804, and although this does not prove Leadbeater's specimen had been collected on the expedition, the



Fig. 3. Head of specimen D5598s in the Liverpool Museum (from the Earl of Derby Collection).

fact that he used the patronym *baudinii* as the scientific name to honour him is significant.

The illustration (an unnumbered lithographic plate) is of a female (with pale whitish bill) and certainly depicts a bird with a fairly long upper mandible. Based on the bill ratio incorrectly shown in the plate, the identity of the figure was identified by Saunders (1974) as *Calyptorhynchus baudinii* rather than *C. latirostris* (that has a shorter and broader upper mandible). It is evident, however, that it was Lear's style to greatly overemphasise the length of the upper mandible on virtually all of his paintings (see for example Blue and Yellow Macaw (Fig. 5), Hyacinthine Macaw, Regent Parrot and Red-capped Parrot).

4. The specimen in the Liverpool Museum is from the 13th Earl of Derby Collection D5598s (Fig. 1b), purchased from Leadbeater on 8 February (we think from cross-referencing against other Leadbeater specimens that this may have been 1840). It has a large old parchment label with 'Calyptorhynchus Baudinii (Lear)' in Lear's large black handwriting (Fig. 1b), confirmed by Lear expert Robert McCracken Peck. Peck compared the handwriting on the label with numerous letters written by Lear in the 1830–40s and in his opinion is consistent with Lear's writing (pers. comm. 2014). The Liverpool Museum specimen is a female (based on colour of bill and ear coverts) and based on measurements and photographs it is clearly a Carnaby's Cockatoo (i.e. the short-billed form) (Figs. 2, 3 & 4). We can find no evidence that there were any other specimens of *Calyptorhynchus* in Lord Derby's collection which have a connection to both Lear and Leadbeater and believe that this



Fig. 4. Bill comparison of top, specimen D5598s, and bottom, Lear's plate *Calyptorhynchus baudinii*.

specimen in Liverpool is the re-discovered long-lost holotype. Overall there is a very strong connection between this specimen and Lear and it is apparent that this was the bird used by him for his illustration to honour Nicolas Baudin. In addition, the culmen length and culmen depth ratios were established and plotted against the equivalent ratios from the Liverpool Museum's D5598s, of Lear's plate, 90 C.



Fig. 5. Lear's plate of Blue and Yellow Macaw 1832 showing the exaggerated upper mandible.



Fig. 6. Proposed neotype of Baudin's Cockatoo, specimen A11524 Western Australian Museum.



Fig. 7. Head of proposed neotype of Baudin's Cockatoo, specimen A11524 Western Australian Museum.

latirostris and 73 *C. baudinii* specimens of both sexes. This demonstrates that the types of *C. baudinii* and *C. latirostris* are conspecific (Fig. 7).

5. The consequences of this finding will not only disrupt and destabilise long established nomenclature for these two white-tailed black cockatoos, but create confusion by shifting the name *baudinii* Lear, 1832 from one taxon to another, thereby confounding past and future references to *baudinii* and *latirostris* in the literature. The type of Carnaby's Cockatoo *Calyptorhynchus latirostris* Carnaby, 1948 is a male lodged in the Western Australian Museum specimen A6436. It has been examined by Johnstone and its identification confirmed. In these circumstances,

we believe that the best and simplest solution for maintaining accustomed usage for both Baudin's and Carnaby's cockatoo would be to select a neotype of Baudin's Cockatoo under Article 75.6 of the Code.

6. As an appropriate neotype we propose specimen WAM (Western Australian Museum) A11524, adult female from Grey Stones Plantation, Mundaring Western Australia, collected on 22 June 1971 by D. Saunders and lodged in the Western Australian Museum, Perth, Australia (Figs. 6 & 7). This specimen shows all the characteristics described for the female of this south-western Australian endemic by Johnstone and Storr (1998) and Higgins (1999). This designation conserves prevailing usage, and satisfies collectively all the qualifying conditions of Article 75 of the Code.

7. In support of this action, we propose that the names Baudin's Cockatoo *Calyptorhynchus baudinii* and Carnaby's Cockatoo *Calyptorhynchus latirostris* be placed on the Official List of Specific Names in Zoology, to settle their application.

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for *Calyptorhynchus baudinii* Lear, 1832 and to designate specimen WAM A11524 lodged in the Western Australian Museum, Perth, Western Australia as the neotype;
- (2) to place on the Official List of Specific Names in Zoology the name *baudinii* Lear, 1832, as published in the binomen *Calyptorhynchus baudinii* and as defined by the neotype WAM A11524 designated in (1) above;
- (3) to place on the Official List of Specific Names in Zoology the name *latirostris* Carnaby, 1948, as published in the binomen *Calyptorhynchus latirostris* and as defined by holotype A6436 in the Western Australian Museum.

Acknowledgements

We are grateful to Richard Schodde (*CSIRO Ecosystem Sciences, Canberra*) for advice in the preparation of this case. We also thank Robert McCracken Peck (*Academy of Natural Sciences of Drexel University, Philadelphia, U.S.A.*) for identification and confirmation of Lear's handwriting on the Liverpool Museum specimen and Kim Sarti (*Western Australian Museum, Perth, Australia*) for his assistance.

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Acknowledgement of receipt of this application was published in BZN 71: 70.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comment on *Tibicina* Amyot, 1847 and *Lyristes* Horváth, 1926 (Insecta, Hemiptera, Homoptera): proposed conservation by the suppression of *Tibicen* Berthold, 1827 [?Latreille, 1825], and concerning the type species of *Cicada* Linnaeus, 1758 (Case 239; see BZN 41: 163–184; 71: 103–131)

K.G. Andrew Hamilton

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Recent comments (BZN 71: 103–131) reviewing a dormant case, Z.N.(S.) 239 from 1984 by Melville & Sims (BZN 41: 163–184) represent repeated efforts by a few European workers to upset the long-since stabilized taxonomy of the Holarctic CICADIDAE by questioning the identity of the type-genus of an important family-level taxon, the TIBICENINI. This case had some slight merit in those days, as being needed to differentiate between the two main subfamilies of CICADIDAE: (1) TIBICENINAE, based on *Tibicen* Latreille, 1825 (or 1829) and (2) TIBICININAE, based on *Tibicina* Amyot, 1847. However, this is no longer the case as a phylogenetic classification (Moulds, 2005), widely acclaimed, suppressed TIBICENINAE within CICADINAE.

Furthermore, detailed analysis of the original use of *Tibicen* by Sanborn (BZN 71: 108–118) shows that the name was first validated by Latreille in 1825 with type-species *C.[icada] plebeia* [Scopoli, 1763]. The only point that was not clarified was the cryptic way in which the generic name was first indicated: ‘Les g. Cigale, *Tibicen* (*c. plebeia*)’ (see Fig. 1 in Sanborn op. cit.) This might be interpreted as following the same format as the tribal characterization ‘Première tribu / Chanteuses. *Stridulantes*’ in which the same name is repeated, using French vernacular (‘Chanteuses’) followed by the Latin equivalent (‘*Stridulantes*’). Using this logic, the French word ‘Cigale’ for ‘cicada’ could have been Latinized as ‘*Tibicen*’ even though these names are not exact equivalents and even though only the scientific name *C. plebeia* was italicized. However, the phrase begins with the words ‘Les g.’ which is clearly to be interpreted as ‘les genres’ and therefore indicates that *two* genera are being mentioned, *Cicada* and *Tibicen*. An exactly similar but clearer example is given by Sanborn in his fig. 4, wherein ‘Le g. Tettigone (*gypone, coelidie, iassus, ulope, tettigone, eupelix*, Germ.)’ can only be interpreted as ‘The [singular] genus *Tettigonia* [= CICADELLIDAE] ([which] Germar [has divided into] *Gypona, Coelidia, Iassus, Ulopa, Tettigonia* [and] *Eupelix*).’ Such details might be overlooked by someone who is not familiar with French, but the same cannot be said of the European workers who propose upsetting the identity of *Tibicen* in favour of *Lyristes*. One concludes that their application to the ICZN for suppression of this name at a time when it is not necessary, and which furthermore would upset a large number of well-established names in North America, is without any practical merit.

There is however one additional point that needs clarification. In his masterly treatment of the phylogeny of CICADOIDEA, Moulds rejected the family-group name TIBICININAE in favour of the junior name TETTIGADINAE, but without justifying this action by appeal to the ICZN for official approval. Although this action is unjustified it still has sufficient merit for serious consideration. The only way to suppress such a family-group name is through official rejection of the name on which it is based, *Tibicina*. This is a small Palaearctic genus of ten species, only one of which is

common, belonging to a subfamily in which the genera are distinctive based on both wing venation and male genitalia, with the exception of a very few autapomorphs. *Tibicina* has the same wing venation and male genitalia as the large Nearctic genus *Okanagana* Distant, 1908 and is therefore congeneric. Failure to suppress this genus will ultimately necessitate the renaming of all the species in the largest genus of North American cicadas, a taxonomic upset as least as great as renaming *Tibicen*. So, by the simple action of suppressing one name that is little used in the world literature, it is possible to retain stability in North American cicada names and at the same time remove the final vestige of the TIBICENINI/TIBICININI confusion.

Comments on *Anaphes* Haliday, 1833 (Insecta, Hymenoptera): proposed designation of *A. fuscipennis* Haliday, 1833 as the type species

(Case 3554; see BZN 68: 122–126; 69: 140; 71: 132–133)

(1) John Noyes

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Huber et al. (BZN 68: 122–126) eloquently put the case for the International Commission on Zoological Nomenclature to use its plenary power to set aside Opinion 71, insofar as it applies to the type species of the nominal genus *Anaphes* Haliday, 1833. They argued that the current type species of the genus, *Ichneumon punctum* Shaw, has been shown to belong to the genus *Camptoptera* Förster, 1856 and that the next available genus name for species currently placed in combination with *Anaphes* is *Patasson* Walker, 1846. This would require a change of combination for almost 200 species, many of which are important biological control agents. However, he failed to point out that as *Ichneumon punctum* Shaw belongs to the genus *Camptoptera*, the genus group name *Anaphes* would become the valid genus group name for combination with the 76 species currently placed in *Camptoptera* requiring a further 76 combination changes. This undoubtedly would cause even more confusion. In summary, without the use of the plenary power requested by Huber et al., all 200 species currently placed in *Anaphes* would require generic recombination with *Patasson* and 76 species currently placed in *Camptoptera* would require generic recombination with *Anaphes*. The change would also require seven new generic group name synonymies with *Patasson* and 10 new generic group name synonymies with *Anaphes*. Thus in the interests of simplicity, stability and causing the minimum disruption I support this application.

(2) Mohammad Hayat, Shahid Bin Zeya & Shoeba Binte Anis

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We agree with Huber et al. (BZN 68: 122–126) and the comments by Huber (BZN 71: 132–133). We are in support of their petition asking the ICZN to set aside the earlier designation of *Anaphes punctum* (Shaw) and to designate *Anaphes fuscipennis* Haliday (1833, p. 346) as the type species of *Anaphes* Haliday, 1833.

The designation of *A. fuscipennis* is the right course in the interests of stability and is consistent with the usage of the generic name *Anaphes*. As noted by Huber et al., the use of *Anaphes punctum* (Shaw) as the type species would lead to instability.

Additional reference

Haliday, A.H. 1833. Essay on the classification of the parasitic Hymenoptera of Britain, which correspond with the Ichneumonones minuti of Linnaeus. *Entomologist Magazine*, 1: 259–276, 333–350.

Corrigendum to Comment on Case 3554

***Anaphes* Haliday, 1833 (Insecta, Hymenoptera): proposed designation of *A. fuscipennis* Haliday, 1833 as the type species**
(see BZN 71: 132–133)

The text in BZN 71: 132, beginning on line 4 from bottom of page, should correctly read ‘the disadvantage of not changing the type species from *I. punctum* Shaw to *A. fuscipennis* Haliday is: . . .’

The added ‘not’ is essential to contrast this statement with the first line in the preceding paragraph of the Comment. The situation could more have been more clearly and explicitly expressed as ‘There are no disadvantages whatsoever in changing the type species of *Anaphes* from *I. punctum* to *A. fuscipennis*’.

Comments on *Spracklandus* Hoser, 2009 (Reptilia, Serpentes, ELAPIDAE): request for confirmation of the availability of the generic name and for the nomenclatural validation of the journal in which it was published

(Case 3601; see BZN 70: 234–237, 71: 30–38; 133–135)

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I write in support of the application for the following reasons:

1. As a herpetologist, I find the application is perfectly reasonable. Hoser’s Case 3601 was only made necessary by the unscientific and then unethical actions of Wallach et al. (2009) and more recently those of Kaiser (2012a, 2012b, 2013, 2014), Wüster et al. (2014), and the constant attacks on Hoser in social media.

2. Taking relevant publications at face value, in particular those of Hoser (2009) and the response from Wallach, Wüster & Broadley (2009), it is clear that Hoser’s scientific works are not out of the ordinary in any way and should not in the normal course of events warrant ICZN intervention. However, the continued attempts to suppress Hoser’s publications by Kaiser (2014), Schleip (2014) and Wüster et al. (2014), confirm the need for the ICZN to address these matters.

3. Claims by Wallach et al. and others published since in BZN fail to establish by any reasonable interpretation of the Code that Hoser’s original 2009 paper and the

description within was not Code compliant and that his proposed name *Spracklandus* was not available. It is not clear why Wallach et al. (2009) failed to locate available copies of AJH issue 7, which the ICZN Secretariat was able to do some years after the fact.

4. The actions of Wallach et al. and Wüster et al. appear to be an attack on Hoser, on the grounds that he is not presently a tenured academic and therefore has been labelled an 'amateur' (Wüster et al., 2001). This same argument, if used against others, could lead to widespread abuse of the Code to create dual taxonomies across zoology and widespread destabilization of nomenclature.

5. Hoser's proposal must succeed. If Wüster et al. are allowed to overrule the Code to rename taxa properly named by others, this would open the floodgates to similar such attempts, thereby creating instability of nomenclature far beyond the narrow confines of herpetology.

6. Any act by the ICZN which in any way endorses or rubberstamps the actions of Wallach et al. would be viewed with scepticism by the wider scientific community and would only bring into disrepute a body that must for its own survival be considered impartial.

Additional comments:

Comments supporting Case 3601 have also been received from Michael Smyth (*private address, Melbourne, Australia*), and Paul Woolf (*President of the Herpetological Society of Queensland Incorporated*). Those comments are noted and acknowledged, but are not published here because they repeat essentially the same arguments as those presented by Thomas Cotton (above).

Comment on proposed conservation of usage of CORCORACIDAE Mathews, 1927 (Aves) and the spelling *melanorhamphos* Vieillot, 1817 for the valid specific name of the type species of its type genus (Case 3630; see BZN 70: 238–244)

Paul Sullivan

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As Australia's national ornithological organisation representing thousands of professional and amateur ornithologists, BirdLife Australia expresses its support for Case 3630. The application proposes to conserve the established family name for this endemic family of Australian birds, and the familiar spelling *melanorhamphos* of the name of one of its best known species.

Australia has known mudnesters as CORCORACIDAE, and the spelling of the species name of our White-winged Chough as *melanorhamphos*, for as long as we can remember. Both family and species are familiar birds in the most populous parts of the country and are held in high public esteem and affection for their social behaviour. Australian ecologists, behaviourists, physiologists, wildlife managers, writers and photographers rely on lists, field guides and handbooks which use family name CORCORACIDAE and spelling *melanorhamphos* for the chough. BirdLife Australia

believes any change for other than taxonomic reasons is unnecessarily disruptive, for example impacting on internet and searches in research.

Provisions in the Code prevent disruption to names and can be used to preserve the spelling *melanorhamphos*. Article 33.3.1 directs that incorrect subsequent spellings in prevailing use are to be preserved and deemed as correct original spellings, so we are concerned that this has not been applied recently. BirdLife Australia appreciates that scientific nomenclature managed by the Commission serves the global zoological community, and that it applies to all birds. In the interests of nomenclatural stability in Australia, we hope that the Commission will conserve both the name CORCORACIDAE and the spelling *melanorhamphos*. We would also appreciate the opportunity for formal consultation in future reviews of Australian endemic birds.

OPINION 2337 (Case 3600)**Species-group names proposed for Devonian ammonoids (Mollusca, Cephalopoda) by Sobolew (1914a, 1914b) reinstated as available**

Abstract. The Commission has reinstated the availability of specific names proposed for Devonian ammonoids (Mollusca, Cephalopoda) by Sobolew (1914a, 1914b) widely used by palaeontologists and stratigraphers for almost a century even though these names were established in a work placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature by Direction 32 (following Opinion 132, in which the genus-group names (Gattungsbezeichnungen) established by Sobolew (1914a, 1914b) were considered to be formulas and not available generic names). The entries for Sobolew (1914a, 1914b) in the Official Index of Works in Zoology have been emended to record that the 88 species-group names established in these works are available from the original publications.

Keywords. Nomenclature; taxonomy; Ammonoidea; Clymeniida; Goniatitida; Sobolew; Devonian; ammonoids.

Ruling

- (1) The International Commission on Zoological Nomenclature has ruled under the plenary power that 88 species-group names established by Sobolew (1914a, 1914b) (88 names on the list below, except for *Oma-monoceras* (*Cheiloceras*) *parvum* Sobolew, 1914a, which is a nomen nudum), are available from the original publications.
- (2) The entries for Sobolew (1914a, 1914b) in the Official Index of Works in Zoological Nomenclature are hereby emended to record that the 88 species-group names established in these works are available from the original publications, as ruled in (1) above.

History of Case 3600

An application to reinstate the availability of specific names proposed for Devonian ammonoids (Mollusca, Cephalopoda) by Sobolew (1914a, 1914b) in a work placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature by Direction 32 was received from R. Thomas Becker (*Westfälische Wilhelms-Universität, Institut für Geologie und Paläontologie, Münster, Germany*) and Svetlana V. Nikolaeva (*Paleontological Institute, Russian Academy of Sciences, Moscow, Russia & International Commission on Zoological Nomenclature Secretariat, Natural History Museum, London, U.K.*) on 30 May 2012. After correspondence the case was published in BZN 69: 170–177 (September 2012). The title, abstract and keywords of the case were published on the Commission's website. Supportive comments were published in BZN 70(1): 45–46, and 71(2): 95–98.

Decision of the Commission

On 1 March 2014 the members of the Commission were invited to vote on the proposals published in BZN 69: 173 and emended in Voting Paper 3 (to exclude *Oma-monomerocheras* (*Cheiloceras*) *parvum* Sobolew, 1914a). At the close of the voting period on 1 June 2014 the votes were as follows:

Affirmative votes – 24: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Lamas, Lim, Ng, Pape, Patterson, Rosenberg, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 1: Štys.

Pyle was on leave of absence.

Voting FOR, Kullander explained that there were the original proposal (89 species) and the alternative proposal (88 species), and his vote was for the latter. Voting AGAINST, Štys said that he had to vote against since the application was highly incomplete, lacking the original binominal combinations of the species names and status of the appended list of specific names (containing unexplained solutions of homonymies, original spellings, validity of names and unavailability of one of them).

An annotated list of specific names established by Sobolew (1914a, 1914b), with reference to taxonomic treatments by subsequent authors

The 34 taxa listed in bold have been regarded as valid by most, if not all subsequent authors. Those among them marked by † are based on juveniles and might eventually prove to have available synonyms. The unmarked non-bold names are generally considered as junior synonyms. The names marked by * have been regarded as valid by some authors. Junior homonyms and one nomen nudum that will remain invalid are marked by (-).

Genus *Oma-monomerocheras* (*Cheiloceras*)

1. ***acrilobum*** Sobolew, 1914a, p. 48;
2. ***acutilobum*** Sobolew, 1914a, p. 35;
3. **subpartitum angustivaricatum* Sobolew, 1914a, p. 37;
4. **arcuatovaricatum* Sobolew, 1914a, pp. 51–52;
5. **avaricatum* Sobolew, 1914a, p. 48;
6. **contrcurvispina* Sobolew, 1914a, p. 44;
7. **contrverneuili* Sobolew, 1914a, p. 44;
8. ***depressum*** Sobolew, 1914a, p. 49;
9. ***discoideale*** Sobolew, 1914a, p. 31 (priority established by Korn & Klug (2002) over (*Aganides*) *discoideale* Sobolew, 1914a);
10. **discotransversale* Sobolew, 1914a, pp. 46–47;
11. ***glabrum*** Sobolew, 1914a, p. 48;
12. ***globosoides*** Sobolew, 1914a, p. 42;
13. **globulare* Sobolew, 1914a, p. 49;
14. *subpartitum lativaricatum* Sobolew, 1914a, p. 36 (priority established by Korn & Klug (2002) over *amblylobum lativaricatum* Sobolew, 1914a);
15. (-) *amblylobum lativaricatum* Sobolew, 1914a, p. 41;
16. **lenticulare* Sobolew, 1914a, pp. 49–50;

17. *longilobum* Sobolew, 1914a, p. 30 (priority over *Oma-monomeroceras* (*Cheiloceras*) *sacculus longilobum* Sobolew, 1914a (p. 42) is established under Article 57.7 of the Code);
18. (-) *sacculus longilobum* Sobolew, 1914a, p. 42;
19. **multivaricatum* Sobolew, 1914a, p. 31;
20. *discoideale* var. *parvum* Sobolew, 1914a, p. 31 (available under Article 45.6.4);
21. (-) *parvum* Sobolew, 1914a, p. 69 (nomen nudum);
22. *postinversum* Sobolew, 1914a, p. 43;
23. *Ch. praeglobosum* Sobolew, 1914a, p. 43;
24. *praelagowiense* Sobolew, 1914a, p. 31;
25. *praelentiforme* Sobolew, 1914a, p. 34;
26. *praepolonicum* Sobolew, 1914a, p. 35;
27. *rotundum* Sobolew, 1914a, p. 44;
28. *semiinversum* Sobolew, 1914a, p. 46;
29. **simplicissimum* Sobolew, 1914a, p. 44;
30. **sinuvaricatum* Sobolew, 1914a, p. 51;
31. †*subcostatum* Sobolew, 1914a, p. 52;
32. *subinversum* Sobolew, 1914a, p. 43;
33. **sublagowiense* Sobolew, 1914a, p. 31;
34. **sublentiforme* Sobolew, 1914a, p. 30;
35. **sublentitransversale* Sobolew, 1914a, p. 47;
36. **subsinuvaricatum* Sobolew, 1914a, p. 51;
37. *tenuis* Sobolew, 1914a, p. 50;
38. **transversale* Sobolew, 1914a, pp. 45–46;
39. *umbilifer* Sobolew, 1914a, p. 53. Spelling *umbilifer* has been selected as the correct original spelling over *umbiliferum* under Article 24.2.3 of the Code.

β-Oma-dimeroceras (*Sporadoceras*)

40. **curvispina* Sobolew, 1914a, p. 33;
41. *kielcense* Sobolew, 1914a, p. 32;
42. *lagowiense* Sobolew, 1914a, p. 32;
43. *nux* Sobolew, 1914a, p. 40;
44. **polonicum* Sobolew, 1914a, p. 39;
45. *praevaricatum* Sobolew, 1914a, p. 36;
46. **subvaricatum* Sobolew, 1914a, p. 35.

α-Oma-dimeroceras (*Dimeroceras*)

47. *globosum* Sobolew, 1914a, p. 42;
48. *lentiforme* Sobolew, 1914a, p. 34;
49. †*umbilicatum* Sobolew, 1914a, p. 54.

Oma-monomeroceras (*Aganides*)

50. **atavum* Sobolew, 1914a, p. 37;
51. (-) *discoideale* Sobolew, 1914a, p. 37;
52. *sulcatum* var. *globus* Sobolew, 1914a, p. 40 (available under Article 45.6.4);

α -Oma-dimeroceras (*Praeglyphioceras*)

- 53. *lagowiense* var. *globulare* Sobolew, 1914a, p. 40 (available under Article 45.6.4);
- 54. *kielcense* Sobolew, 1914a, p. 39;
- 55. **lagowiense* Sobolew, 1914a, p. 39;
- 56. †*niwae* Sobolew, 1914a, p. 48.

Oma-re-protomeroceras [assigned to *Prolobites* by Sobolew (1914a, p. 25)]

- 57. *umbilicatum* Sobolew, 1914a, p. 54.

Gomi-monomeroceras (*Tornoceras*)

- 58. *kielcense* Sobolew, 1914a, p. 57;
- 59. †*sublentiforme* Sobolew, 1914a, p. 56.

Gomi-re-monomeroceras (*Tornoceras*)

- 60. *planilobum angulatolobatum* Sobolew, 1914b, p. 355;
- 61. *planilobum arcuatolobatum* Sobolew, 1914b, p. 353;
- 62. *planilobum avaricatum* Sobolew, 1914a, p. 60 (priority established by Korn & Klug (2002) over *dorsoplanum avaricatum* Sobolew, 1914a);
- 63. (-) *dorsoplanum avaricatum* Sobolew, 1914a, p. 65;
- 64. †*curvidorsatum* Sobolew, 1914a, p. 59;
- 65. *evolutum* Sobolew, 1914a, p. 68;
- 66. **flexuosum* Sobolew, 1914a, p. 62;
- 67. *genulobatum* Sobolew, 1914b, p. 358;
- 68. (-) *planilobum ornatum* Sobolew, 1914b, p. 356 (probable secondary junior homonym of *Prototornoceras ornatum* Dybczynski, 1913);
- 69. †*planilobum* Sobolew, 1914a, p. 59;
- 70. *genulobatum planum* Sobolew, 1914b, p. 358;
- 71. *simplicius rotundatum* Sobolew, 1914b, p. 361 (priority established by Korn & Klug (2002) over *simplificatum rotundatum* Sobolew, 1914b);
- 72. *simplicius subacutum* Sobolew, 1914b, p. 360 (priority established by Korn & Klug (2002) over *simplificatum subacutum* Sobolew, 1914b);
- 73. (-) *simplificatum rotundatum* Sobolew, 1914b, p. 361;
- 74. †*simplicius* Sobolew, 1914a, p. 63;
- 75. †*simplificatum* Sobolew, 1914a, p. 63;
- 76. †*sinuvaricatum* Sobolew, 1914a, p. 59;
- 77. (-) *simplificatum subacutum* Sobolew, 1914b, p. 360;
- 78. *umbilicatoides* Sobolew, 1914a, p. 64;
- 79. **umbilicatum* Sobolew, 1914a, p. 61.

Gomi-re-protomeroceras [assigned by Sobolew (1914a, p. 28) to *Mimoceras*]

- 80. *alobatum* Sobolew, 1914a, p. 61;
- 81. **simplicissimum* Sobolew, 1914a, p. 63.

Gomi-monomeroclymenia [assigned by Sobolew (1914a, p. 28) to *Oxyclymenia* or *Cyrtoclymenia*]

82. **Humboldti flexilobata* Sobolew, 1914a, p. 64;
83. *Humboldti genulobata* Sobolew, 1914a, p. 66;
84. *curvidorsata planiloba* Sobolew, 1914b, p. 354;
85. *Humboldti rotundata* Sobolew, 1914b, p. 361; cited by Korn & Klug (2002) as a junior subjective synonym of *Protactoclymenia humboldtii* (Pusch, 1837);
86. **subacuta* Sobolew, 1914a, p. 64; cited by Korn & Klug (2002) as a junior subjective synonym of *Protactoclymenia humboldtii* (Pusch, 1837); Dzik (2006) as a valid species of *Cyrtoclymenia*.
87. *Humboldti undosa* Sobolew, 1914b, p. 360; cited by Korn & Klug (2002) as a junior subjective synonym of *Protactoclymenia humboldtii* (Pusch, 1837).

Gomi-protomeroclymenia [assigned by Sobolew (1914a, p. 28) to *Protactoclymenia*, *Genuclymenia* or *Varioclymenia*].

88. *angustiseptata (?) subcostata* Sobolew, 1914b, p. 362;
89. *varicata* Sobolew 1914b, p. 373.

Original references

The following are the original references to the amendments made to an Official Index by the ruling given in the present Opinion:

- Sobolew, D.N. 1914a. *Izvestiya Varshavskago Politekhnicheskago Instituta*, **1914**(1): 1–193, 9 pls.
- Sobolew, D.N. 1914b. Über Clymenien und Goniaticten. *Paläontologische Zeitschrift*, **1**: 348–378.

OPINION 2338 (Case 3580)***Exechocentrus lancearius* Simon, 1889 (Arachnida, Araneae, ARANEIDAE): a neotype designated**

Abstract. The Commission has replaced the holotype of *Exechocentrus lancearius* Simon, 1889, which was an incomplete specimen, with a neotype.

Keywords. Nomenclature; taxonomy; Arachnida; Araneae; ARANEIDAE; MASTOPHORINAE; *Exechocentrus*; *Exechocentrus lancearius*; bolas spiders; Madagascar.

Ruling

- (1) Under the plenary power the International Commission on Zoological Nomenclature has set aside all previous type fixations for the name *lancearius* Simon, 1889, as published in the binomen *Exechocentrus lancearius*, and designated as neotype the female specimen ZMUC00021482 deposited in the Zoological Museum, Natural History Museum of Denmark, University of Copenhagen.
- (2) the name *lancearius* Simon, 1889, as published in the binomen *Exechocentrus lancearius* and as defined by the neotype designated in (1) above, has been placed on the Official List of Specific Names in Zoology.

History of Case 3580

An application to set aside all previous type fixations for the name *Exechocentrus lancearius* Simon, 1889 and to designate as neotype the female specimen ZMUC00021482 deposited in the Zoological Museum, University of Copenhagen was received from N. Scharff (*Zoological Museum, Natural History Museum of Denmark, University of Copenhagen*) and G. Hormiga (*The George Washington University, Department of Biological Sciences, 20203 G St. NW, Washington D.C. 20050, U.S.A.*) on 3 January 2012. After correspondence the case was published in BZN 69: 88–91 (June 2012). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this case.

Decision of the Commission

On 1 December 2013 the members of the Commission were invited to vote on the proposals published in BZN 69: 90. At the close of the voting period on 1 March 2014 the votes were as follows:

Affirmative votes – 20: Alonso-Zarazaga, Ballerio, Bouchet, Brothers, Grygier, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Lim, Minelli, Pape, Patterson, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 5: Bogutskaya, Fautin, Kojima, Rosenberg and Štys.

Ng and Pyle were on leave of absence.

Voting AGAINST, Bogutskaya said that she considered the case premature and that she thought that there might be other methods in the future to reveal more traits

(including molecular) to link a species to this name. Also voting AGAINST, Fautin said that she would have voted in favour but it seemed the case, as published, provided incomplete information. The authors appeared to recognize they cannot simply declare a neotype while a published holotype exists, yet they seemed to have done so, she added. Voting FOR, Grygier said that the current holotype was probably inadequate, but he voted only reluctantly to replace it. Contrary to the spirit of Article 75.3.2, the diagnostic features of the proposed neotype were given only as vague generalities, and there was no statement of intent to publish a detailed taxonomic paper on this genus elsewhere [Editor's note: such a work was published, as cited herein below]. It was also not stated whether the holotype was a likely candidate (i.e. in alcohol or not) for successful taxonomic bar-coding, for instance by sequencing a non-diagnostic limb joint, whereby the need for a neotype might be diminished. Pape, voting FOR, said that he had taken into account the qualifying conditions (Article 75.3) of the proposed neotype presented by Scharff & Hormiga (2012) in *Arthropod Systematics & Phylogeny*, **70**(2): 107–118. Voting AGAINST, Kojima noted that even if *Exechocentrus lancearius* Simon, 1889 could not be determined from the holotype based on the available characters, judging from the proposal, the stability and universality of the name *lancearius* was not, at least currently, threatened, hence the designation of a neotype was not necessary. Krell, although voting FOR, said that the case seemingly did not fulfil the requirement stated in Article 75.3.2 for 'a statement of the characters that the author regards as differentiating from other taxa'. It was stated in the case only that the neotype had an abdomen and genitalia, but these characters were not described. He considered that Article 75.3.2. required a description of those characters, not just a statement that they existed. Voting AGAINST, Rosenberg said that the application stated that a neotype was needed for nomenclatural stability, but it had not made a case for it. There seemed to be no doubt about the identity of the genus, because of its distinctive morphology, although the type species became a nomen dubium with the discovery of additional members of the genus. The application did not mention that the authors had submitted a description of one of these new species as *E. madilina* Scharff & Hormiga, 2012 (see above). Even if the neotype designation they proposed was not approved, their new species would remain valid, because *E. lancearius* was a nomen dubium until such time as new data allowed it to be identified. If their new species proved to be a synonym of *E. lancearius*, perhaps with DNA sequencing data, there would be no issue of stability as both names had been rarely used. If it was not a synonym, the older name would remain available for use for another species, he added.

Original references

The following are the original references to the name placed on an Official List by the ruling given in the present Opinion:

lancearius, *Exechocentrus*, Simon, 1889, *Annales Société Entomologique de France*, (6)**8**: 227.

OPINION 2339 (Case 3584)***Erythemis* Hagen in Schott, 1861: precedence given over *Leptthemis* Hagen, 1861 (Insecta, Odonata)**

Abstract. The Commission has confirmed the priority of the generic name *Erythemis* Hagen in Schott, 1861 for a group of common dragonflies from the New World, over *Leptthemis* Hagen, 1861.

Keywords. Nomenclature; taxonomy; Insecta; Odonata; LIBELLULIDAE; *Erythemis*; *Leptthemis*; *Erythemis peruviana*; *Erythemis bicolor*; dragonflies; New World.

Ruling

- (1) Under the specific powers it is confirmed that the generic name *Erythemis* Hagen in Schott, 1861 [26 February] has priority over *Leptthemis* Hagen, 1861 [31 July].
- (2) The name *Erythemis* Hagen in Schott, 1861 [26 February] (gender: feminine), type species by monotypy *Libellula bicolor* Hoffmannsegg in Erichson, 1848 is hereby placed on the Official List of Generic Names in Zoology, with the endorsement that it is to be given precedence over *Leptthemis* Hagen, 1861, whenever these two names are considered to be synonymous.
- (3) The name *Leptthemis* Hagen, 1861 [31 July] (gender: feminine), type species by subsequent designation by Kirby (1889) *Libellula vesiculosa* Fabricius, 1775 is hereby placed on the Official List of Generic Names in Zoology, with the endorsement that it is not to be given priority over *Erythemis* Hagen in Schott, 1861, whenever these two names are considered to be synonymous.
- (4) The following names are hereby placed on the Official List of Specific Names in Zoology:
 - (a) *Libellula bicolor* Hoffmannsegg in Erichson, 1848, specific name of the type species of *Erythemis* Hagen in Schott, 1861;
 - (b) *vesiculosa* Fabricius, 1775, as published in the binomen *Libellula vesiculosa*, specific name of the type species of *Leptthemis* Hagen, 1861.

History of Case 3584

An application asking the Commission to conserve the generic name *Erythemis* Hagen, 1861 for a group of common dragonflies from the New World over the simultaneously published nominal genus *Leptthemis* Hagen, 1861 was received from Ângelo Parise Pinto (*Programa de Pós-Graduação em Ciências Biológicas (Zoologia) IB – USP, Museu de Zoologia da Universidade de São Paulo, São Paulo, SP, Brazil*), Rosser W. Garrison (*California Department of Food & Agriculture, Sacramento, CA, U.S.A.*), Dennis R. Paulson (*Slater Museum of Natural History, University of Puget Sound, Tacoma, WA, U.S.A.*), Thomas W. Donnelly (2091 Partridge Lane, Binghamton NY 13903, NJ, U.S.A.) & Michael L. May (*Rutgers University, New Brunswick, U.S.A.*) on 9 March 2012. After correspondence the case was published in BZN 69: 92–100 (June, 2012). The title, abstract and keywords of the case were

published on the Commission's website. A comment in support was published in BZN 69(3). New bibliographic data submitted by Gary Rosenberg and Judith Winston necessitated replacing the original proposal (to assign priority to one of the names in Hagen, 1861) with a new proposal (to confirm the priority of an earlier use of one name in another work).

Decision of the Commission

On 1 December 2013 the members of the Commission were invited to vote on the proposals published in BZN 69: 95–96. At the close of the voting period on 1 March 2014 the votes were as follows:

Affirmative votes – 16: Ballerio Brothers, Grygier, Halliday, Harvey, Kottelat, Krell, Lamas, Minelli, Pape, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 7: Alonso-Zarazaga, Bogutskaya, Fautin, Kojima, Kullander, Lim and Patterson.

Bouchet abstained.

Ng and Pyle were on leave of absence.

Voting FOR, Rosenberg said that it was likely that *Erythemis* was published before *Lepthemis*. It was introduced in a footnote on p. 261 of the 'Report of the Secretary of War, communicating, In compliance with a resolution of the Senate, Lieutenant Michler's report of his survey for an interoceanic ship canal near the Isthmus of Darien.' The footnote says 'Through the kindness of Baron Robert Von Osten Sacken, of the Russian legation, we are informed of the recent determination of three species of this interesting family by Hagen, whose catalogue is soon to be published under the auspices of the Smithsonian Institution. The species belonging to our collection are: *Erythemis bicolor*, Erichson; *Diplax ochracea*, Burm; and *Gomphoides tenuis*, Hagen.' The author of this section (Appendix I. Zoölogy-Invertebratae, pp. 260–268) was A. Schott (p. 268). Schott was cited by Hagen (1861) as having collected *Erythemis bicolor* in New Grenada. Assuming Schott (1861) was published before Hagen (1861), *Erythemis* Hagen in Schott, 1861 has priority over *Lepthemis* Hagen, 1861, and the type species is *Libellula bicolor* by monotypy, not *Libellula peruviana* by subsequent designation. Since these names were considered synonymous in the application, the change in type species should not affect the circumscription of the genus. He explained that he had voted FOR the case on the assumption that it would be resolved under the plenary power (Article 80.2.2) if *Erythemis* and *Lepthemis* both dated from Hagen (1861) and under the specific powers (Article 80.2.1) if *Erythemis* was introduced in Hagen in Schott (1861).

The report itself says that it was sent to the government printing office on 16 February 1861. The report was printed for the 36th U.S. Congress, second session, which ended on 4 March 1861, but that in itself does not mean the document was printed by then.

The website <http://memory.loc.gov/ammem/hlawquery.html> allows search of U.S. congressional documents. Searches for 'ship canal', 'interoceanic' and 'inter-oceanic' in the 36th Congress found the follow items:

Senate Journal for Friday, February 15, 1861 (p. 232) said that Lieutenant Michler's report was laid before the Senate on that date, so we can infer that the

manuscript was ready. On p. 233, the motion to print was ordered referred to the Committee on Printing.

On Saturday, February 16, 1861 (p. 239), the committee sent the motion back for the Senate itself to vote on; the Senate passed the motion to print.

This is reported in more detail in the Congressional Globe for Monday, February 18, 1861 (p. 60), which indicates that the committee sent it back because it didn't have a charge, such as determining the number of copies to print. On Tuesday, February 26, 1861 (*Senate Journal*, p. 319), two resolutions were submitted:

'Resolved, That there be printed one thousand additional copies of the report of Lieutenant Michler, on the survey of the proposed route of an inter-oceanic canal from the Atlantic to the Pacific, for the use of the War Department and the officer named.'

'Resolved, That there be printed for the use of the Navy Department the same number of copies of the report of Lieutenant Craven, of the United States Navy, of the survey of the proposed route of an interoceanic canal from the Atrato to the Pacific, as are printed for the use of the War Department of the Report of Lieutenant Michler, of the United States Army'. Therefore we can conclude that the report was printed by 26 February 1861. Presumably more copies were ordered printed because distribution of the first printing created demand.

Erythemis Hagen in Schott, 1861 [26 February] therefore has priority over *Leptthemis* Hagen, 1861 (July) and has type species *Libellula bicolor* by monotypy. The U.S. government was routinely a sponsor of scientific research in 1800s, the results of which were published in reports for branches of the government. For example, The U. S. Naval Astronomical Expedition was published in 1855 for the U.S. House of Representatives as shown on the title page. The title page also shows that the authors of the zoological sections were well-known scientists: Spencer Baird, John Cassin, Charles Girard, Augustus Gould and Timothy Conrad. Many new taxa were described in this work. Academy of Natural Sciences of Philadelphia's copy of this work was not received from the U.S. government, but was a gift of the coordinating author of the report, J. M. Gilliss, who was a scientist (an astronomer) and a naval officer. Government publications were distributed broadly to state libraries, were available for purchase, and were also available from their authors. They clearly were intended for permanent scientific records, because science is one of the pursuits of the U.S. government. If we say that the Schott report is not available because it was a government report, we would make thousands of names in such reports unavailable. The same is true for reports of many other governments. *Erythemis* Hagen in Schott, 1861 is available by indication under Article 12.2.5 because the available name *bicolor* Erichson [1848] was used in combination with it. Also voting FOR, Grygier said that the list of 'over 120 citations by at least 65 different authors' using *Erythemis* as the senior synonym should have been entrusted to the Secretariat and if it was, the fact should have been stated.

ABSTAINING, Bouchet said that Gary Rosenberg's finding that *Erythemis* was actually published before *Leptthemis* could have of course nullified the application. If this was confirmed, he would of course accept the priority of *Erythemis* over *Leptthemis*. In case it was not confirmed, para. 10 of the application showed that usage of the name *Leptthemis* as a valid name had not been discontinued in the literature of the last 50 years. There was thus no reason to discard it when, in

addition, it was selected by First Reviser's choice over the simultaneously established *Erythemis*. Voting AGAINST, Alonso-Zarazaga said that he did so because the situation was the result of sloppiness or deliberate non-compliance in following the decisions correctly taken under the Code. He added that Schott's paper (1861) was a report to the US Senate and he wondered whether this kind of work complied with Article 8.1.1 of the Code, as it was published for the purpose of accounting to someone the results of investment of public money, in this case, in an expedition, not that 'of providing a public and permanent scientific record.' He explained that if Rácenis's (1958) decision, which he fully supported, had been accepted and followed, this application would have been unnecessary. This decision was recent and made under the Code then in force, not in the pre-Code era. He considered this to be another example of a change being requested to a nomenclatural act made in a non-First World country, for the benefit of First World users, mostly because one of the species in the U.S.A. (where science is usually well funded) had been the subject of many studies. In his opinion this was unethical. Also voting AGAINST, Fautin said that a taxonomic decision was published on this matter – to ignore the action of Rácenis (1958), it seemed to her, was to minimize (or worse!) the type of research zoologists did. An appeal to the Commission in the future could overturn, without any significant new data, any well-considered, published action. Kojima, voting AGAINST, said that it was not clear why Rácenis (1958) was considered as the First Reviser while Kennedy (1923) was not. Regardless whether the First Reviser was Kennedy (1923) or Rácenis (1958), if the synonymy of *Erythemis* Hagen, 1861 and *Lepthemis* Hagen, 1861 was accepted, the biologists (including taxonomists) working on this small group of dragonflies should have accepted precedence of *Lepthemis* over *Erythemis* following the Articles of the Code.

The following are the original references to the names placed on an Official List by the ruling given in the present Opinion:

- Erythemis* Hagen in Schott, 1861, Appendix I. Zoölogy-Invertebratae, in *Report of the Secretary of War*, no. 9, p. 261.
- Lepthemis* Hagen, 1861, *Smithsonian Institution Miscellaneous Collections*, 4: 160.
- bicolor*, *Libellula*, Hoffmannsegg in Erichson, 1848, *Insecten*. In: Schomburgk, R., *Reisen in British Guiana in den Jahren 1840–1844, Versuch einer Fauna und Flora von British Guiana*, v. 3. Verlags Buchhandlung von J.J. Weber, Leipzig, p. 583
- vesiculosa*, Fabricius, 1775, *Systema Entomologiae*, Flensburgi et Lipsiae in Oficina Libraria, Kortii, p. 421.

OPINION 2340 (Case 3592)***Dodecatoma* Westwood, 1849 (Insecta, Coleoptera): name conserved by suppression of *Dodecatoma* Dufour, 1841 (Insecta, Plecoptera)**

Abstract. The genus-group name *Dodecatoma* Westwood, 1849 has been conserved for a group of beetles (family PHENGODIDAE or RHAGOPHTHALMIDAE) by suppressing the unused senior homonym *Dodecatoma* Dufour, 1841, which was proposed for a group of stoneflies (family PERLIDAE).

Keywords. Nomenclature; taxonomy; Insecta; Coleoptera; DRILIDAE; PHENGODIDAE; RHAGOPHTHALMIDAE; *Dodecatoma*; *Dodecatoma bicolor*; beetles; stoneflies; Plecoptera; PERLIDAE; India; Nepal; Afghanistan; Pakistan; France.

Ruling

- (1) Under the plenary power the Commission has suppressed the name *Dodecatoma* Dufour, 1841 for the purposes of both the Principle of Priority and the Principle of Homonymy.
- (2) The name *Dodecatoma* Westwood, 1849 (gender: feminine), type species by monotypy *Dodecatoma bicolor* Westwood, 1849 (Insecta, Coleoptera) is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *bicolor* Westwood, 1849 as published in the binomen *Dodecatoma bicolor* (specific name of the type species of *Dodecatoma* Westwood, 1849) (Insecta, Coleoptera) is hereby placed on the Official List of Specific Names in Zoology.
- (4) The name *Dodecatoma* Dufour, 1841 (Insecta, Plecoptera) is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology, as suppressed in (1) above.

History of Case 3592

An application to conserve the usage of the genus-group name *Dodecatoma* Westwood, 1849 for a group of beetles (family PHENGODIDAE or RHAGOPHTHALMIDAE) was received from Paul J. Johnson (*Insect Biodiversity Laboratory, South Dakota State University, Brookings, SD, U.S.A.*), R. Edward DeWalt (*Illinois Natural History Survey, Champaign, IL, U.S.A.*) & Neal L. Evenhuis (*J. Linsley Gressitt Center for Research in Entomology, Bishop Museum, Honolulu, Hawaii, U.S.A.*) on 23 April 2012. After correspondence the case was published in BZN **69**: 178–181 (September 2012). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this Case.

Decision of the Commission

On 1 December 2013 the members of the Commission were invited to vote on the proposals published in BZN **69**: 179–180. At the close of the voting period on 1 March 2014 the votes were as follows:

Affirmative votes – 18: Alonso-Zarazaga, Ballerio, Bogutskaya, Brothers, Fautin, Halliday, Harvey, Kojima, Kottelat, Krell, Lamas, Minelli, Patterson, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 7: Bouchet, Grygier, Kullander, Lim, Pape, Rosenberg and Štys. Ng and Pyle were on leave of absence.

Voting FOR, Brothers commented that although the beetle name had not been used very often, the stonefly name had not been used as valid for over a century and had thus effectively been forgotten. To refuse the request would have forced the (beetle) name currently in use to be replaced with a new name, causing confusion, with the only purpose being to retain the availability of a name which was a junior synonym and has been forgotten, and thus had no useful function anyway. Voting AGAINST, Grygier said that there were too few uses of the beetle name to automatically make it a nomen protectum, and it contained only five species of no demonstrably wider importance in zoology, medicine, conservation, etc., so the Principle of Priority should be followed. Similarly, Bouchet, voting AGAINST, said that he felt there were far too few usages of *Dodecatoma* Westwood, 1849 to justify conserving the name. Also voting AGAINST, Pape explained that he had voted against because no arguments were presented why strict Code-compliance would create instability or confusion except for the replacement name, and because the coleopteran genus-group taxon was in need of phylogenetic study.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Dodecatoma Dufour, 1841, *Mémoires Présentés par Divers Savants a' l'Académie Royale des Sciences de l'Institut de France (Sciences Mathématiques et Physiques)*, (2)7: 610.

Dodecatoma Westwood, 1849, in Guérin-Méneville, F.E., *Species et iconographie générique des animaux articulés ou représentation des genres, avec leur description et celle de toutes les espèces de cette grande division du règne animal; Ouvrage formant une série de Monographies complètes*. Première partie: Insectes coléoptères. Livraison 6. Bureau de la Revue Zoologique et Magasin de Zoologie, Paris, Number 16, unnumbered page.

bicolor, *Dodecatoma*, Westwood, 1849, in Guérin-Méneville, F.E., *Species et iconographie générique des animaux articulés ou représentation des genres, avec leur description et celle de toutes les espèces de cette grande division du règne animal; Ouvrage formant une série de Monographies complètes*. Première partie: Insectes coléoptères. Livraison 6. Bureau de la Revue Zoologique et Magasin de Zoologie, Paris, Number 16, unnumbered page.

OPINION 2341 (Case 3578)***Copromyza fenestralis* Fallén, 1820 (currently *Pteremis fenestralis*; Insecta, Diptera, SPHAEROCERIDAE): proposed conservation of usage by designation of a neotype**

Abstract. The Commission has conserved the specific name of the widespread West Palaearctic saprophagous fly *Pteremis fenestralis* (Fallén, 1820) (SPHAEROCERIDAE) in its current usage. The exant syntypes have been set aside and a male specimen from Sweden, which corresponds to the current usage of the name, has been designated as neotype.

Keywords. Nomenclature; taxonomy; Diptera; SPHAEROCERIDAE; *Copromyza*; *Copromyza fenestralis*; saprophagous fly.

Ruling

- (1) Under the plenary power the Commission has set aside all previous type fixations for *Copromyza fenestralis* Fallén, 1820, and designated as neotype a male from Sweden labelled 'SWEDEN: Huddinge, Gömmaren lake res., 59°15'15"N, 17°55'40"E, 58 m, J. Roháček leg.', '7.7.2011, peat-bog, sifting *Sphagnum*, moss and grass', 'NEOTYPUS ♂, *Copromyza fenestralis* Fallén, 1820, J. Roháček des. 2011' (red label) and '*Pteremis fenestralis* (Fallén), ♂, J. Roháček det. 2011' (deposited in the Fallén collection in the Swedish Museum of Natural History, Stockholm).
- (2) the name *fenestralis* Fallén, 1820, as published in the binomen *Copromyza fenestralis* and as defined by the neotype designated in (1) above, is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3578

An application to conserve the current usage of the specific name of the widespread West Palaearctic saprophagous fly *Pteremis fenestralis* (Fallén, 1820) (SPHAEROCERIDAE) in its current usage was received from J. Roháček (*Slezské Zemské Muzeum, Tyršova 1, 746 01 Opava, Czech Republic*) on 1 November 2011. After correspondence the case was published in BZN **69**: 101–105 (June 2012). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this case.

Decision of the Commission

On 1 September 2013 the members of the Commission were invited to vote on the proposals published in BZN **69**: 102–103. At the close of the voting period on 1 December 2013 the votes were as follows:

Affirmative votes – 22: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Krell, Lamas, Minelli, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 2: Kojima and Lim.

Kottelat, Kullander and Pyle were on leave of absence.

Voting AGAINST, Kojima said that the proposal should have included a statement justifying why current usage of *Copromyza fenestralis* Fallén, 1820 should be maintained, and whether the presumed syntypes actually comprised the entire syntype series. If the current usage of *Copromyza fenestralis* Fallén, 1820 was well established, and if other syntypes exist that conformed to current usage of *Copromyza fenestralis* Fallén, 1820, this proposal could have been avoided by designation of a lectotype. This proposal would only be necessary if a lectotype that did not conform to current usage of *Copromyza fenestralis* had been designated.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Copromyza, fenestralis, Fallén, 1820, *Heteromyzides Sveciae. Quarum descriptionem Venia Ampl. Facult. Philos. Lund. In Lyceo Carolino d. XXVI Maji MDCCCXX. Berlingianis, Lundae*, p. 8.

OPINION 2342 (Case 3585)***Atomosia* Macquart, 1838 (Insecta, Diptera, ASILIDAE): proposed conservation of usage**

Abstract. The current usage of the generic name *Atomosia* Macquart, 1838 has been conserved for a well-established genus of robber flies. All type species fixations for *Atomosia* Macquart, 1838 prior to that of *Atomosia incisuralis* Macquart, 1838 by Coquillett (1910) have been set aside.

Keywords. Nomenclature; taxonomy; Diptera; ASILIDAE; *Atomosia*; *Atomosia incisuralis*; *Cormansis*; *Aphestia*; robber flies; Neotropical; Nearctic.

Ruling

- (1) Under the plenary power the Commission has set aside all type species fixations for the nominal genus *Atomosia* Macquart, 1838 before that of *Atomosia incisuralis* Macquart, 1838 by Coquillett (1910).
- (2) The name *Atomosia* Macquart, 1838 (gender: feminine), type species *Atomosia incisuralis* Macquart, 1838 by subsequent designation by Coquillett (1910), as ruled in (1) above, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *incisuralis* Macquart, 1838, as published in the binomen *Atomosia incisuralis* (specific name of the type species of *Atomosia* Macquart, 1838), as ruled in (1) above, is hereby placed on the Official List of Specific Names in Zoology.
- (4) The name ATOMOSIINI Lynch Arribálzaga, 1882 (type genus *Atomosia* Macquart, 1838) is hereby placed on the Official List of Family-Group Names in Zoology.

History of Case 3585

An application to conserve the current usage of the generic name *Atomosia* Macquart, 1838 for a well-established genus of robber flies was received from Neal L. Evenhuis (*J. Linsley Gressitt Center for Research in Entomology, Bishop Museum, Honolulu, Hawaii, U.S.A.*) on 20 March 2012. After correspondence the case was published in BZN 69: 106–108 (June 2012). The title, abstract and keywords of the case were published on the Commission's website. No comments were received on this Case.

Decision of the Commission

On 1 December 2013 the members of the Commission were invited to vote on the proposals published in BZN 69: 107. At the close of the voting period on 1 March 2014 the votes were as follows:

Affirmative votes – 23: Alonso-Zarazaga, Ballerio, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Lamas, Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 2: Bogutskaya and Lim.

Ng and Pyle were on leave of absence.

Voting FOR, Grygier said that the number of described species of *Aphestia* was not stated and there was no testimony as to the importance of any species of *Atomosia* or *Aphestia* in contexts outside taxonomy. Such circumstances might favour the taxonomic solution (inter-generic transfer of the relevant species and erection of a new genus for the remainder) over use of the plenary power, but he would give the authors the benefit of the doubt in consideration of the large number of species of *Atomosia*. Also voting FOR, Pape explained that this was because the overlooked type species designation for *Atomosia* by Duponchel in d'Orbigny (1841) had been pointed out in a publication 25 years ago but was not accepted by anybody. Voting FOR, Fautin said that consistency would have suggested a vote against. However, in this instance, the author had argued that recognizing the original type species designation would change the taxonomic concept of the genus.

Original references

The following are the original references to the names placed on Official Lists by the ruling given in the present Opinion:

Atomosia Macquart, 1838, *Diptères exotiques nouveaux ou peu connus*. Tome premier.—2e partie. N.E. Roret, Paris. [3 October], p. 73.

Atomosia, incisuralis, Macquart, 1838, *Diptères exotiques nouveaux ou peu connus*. Tome premier.—2e partie. N.E. Roret, Paris. [3 October], p. 73.

ATOMOSIINI Lynch Arribálzaga, 1882, *Boletín de la Academia Nacional de Ciencias de Córdoba*, 4: 144.

The reference for the type species designation in this ruling:

Coquillett, D.W. 1910. The type-species of the North American genera of Diptera. *Proceedings of the United States National Museum*, 37: 512.

OPINION 2343 (Case 3586)***Glossina* Wiedemann, 1830 (Insecta, Diptera, GLOSSINIDAE): precedence given over *Nemorhina* Robineau-Desvoidy, 1830**

Abstract. The Commission has conserved the generic name *Glossina* Wiedemann, 1830 (Diptera, GLOSSINIDAE), widely used for a well-established and medically important genus of tsetse flies. Under the plenary power precedence is given to *Glossina* Wiedemann, 1830 over its infrequently used senior subjective synonym *Nemorhina* Robineau-Desvoidy, 1830.

Keywords. Nomenclature; taxonomy; Diptera; GLOSSINIDAE; *Glossina*; *Nemorhina*; *Glossina longipalpis*; *Nemorhina palpalis*; tsetse; Afrotropical.

Ruling

- (1) Under the plenary power precedence is given to the name *Glossina* Wiedemann, 1830 [1 September] over *Nemorhina* Robineau-Desvoidy, 1830 [26 June], whenever the two are considered to be synonymous or to be congeneric.
- (2) The following names have been placed on the Official List of Generic Names in Zoology:
 - (a) *Glossina* Wiedemann, 1830 [1 September] (gender: feminine), type species by monotypy *Glossina longipalpis* Wiedemann, 1830, with the endorsement that it is to be given precedence over *Nemorhina* Robineau-Desvoidy, 1830 [26 June], whenever the two are considered to be synonymous or to be congeneric;
 - (b) *Nemorhina* Robineau-Desvoidy, 1830 [26 June] (gender: feminine), type species by monotypy *Nemorhina palpalis* Robineau-Desvoidy, 1830, with the endorsement that it is not to be given priority over *Glossina* Wiedemann, 1830 [1 September], whenever the two are considered to be synonymous or to be congeneric.
- (3) The following names have been placed on the Official List of Specific Names in Zoology:
 - (a) *longipalpis* Wiedemann, 1830, as published in the binomen *Glossina longipalpis* (specific name of the type species of *Glossina* Wiedemann, 1830 [1 September]);
 - (b) *palpalis* Robineau-Desvoidy, 1830, as published in the binomen *Nemorhina palpalis* (specific name of the type species of *Nemorhina* Robineau-Desvoidy, 1830 [26 June]).
- (4) The name GLOSSINIDAE Theobald, 1903 is hereby placed on the Official List of Family-Group Names in Zoology (type genus *Glossina* Wiedemann, 1830).

History of Case 3586

An application to conserve the generic name *Glossina* Wiedemann, 1830 (Diptera, GLOSSINIDAE), widely used for a well-established and medically important genus of tsetse flies was received from Neal L. Evenhuis (*J. Linsley Gressitt Center for*

Research in Entomology, Bishop Museum, Hawaii, U.S.A.) on 3 April 2012. After correspondence the case was published in BZN 69: 109–112 (June 2012). The title, abstract and keywords of the case were published on the Commission's website. The Case was sent for vote on 1 December 2013. A majority of Commissioners voted FOR the Case (22 For, 3 Against). One Commissioner split his vote. No comments were received on this Case.

Decision of the Commission

At the close of the voting period on 1 March 2014 the votes were as follows:

Affirmative votes – 21: Alonso-Zarazaga, Ballerio, Bouchet, Brothers, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Lamas, Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 3: Bogutskaya, Fautin and Lim.

Grygier split his vote: FOR (1) and (2); AGAINST (3) and (4).

Ng and Pyle were on leave of absence.

Voting FOR, Brothers said that in Proposal (1), the wording should be amplified as follows, 'whenever the two are considered to be synonymous or to be congeneric' or some similar wording which would make it absolutely clear that the reversal of precedence also applies when the names are considered as distinct subgenera. Also voting FOR, Pape said that the Case should have mentioned, that because of the Principle of Coordination, reversal of precedence whenever *Glossina* and *Nemorhina* were considered as synonyms would also cover situations where both names were treated as subgenera and as such would have status as separate taxa.

Voting AGAINST, Fautin said that given that the genus *Glossina* was medically very important, the issue of the rank of *Nemorhina* was relevant. The authors, both being well acquainted with the Code, had not appropriately taken that into account in the wording of their appeal.

SPLITTING his vote, Grygier said that only the generic names were at stake, so under Article 78.4.2 he saw no necessity to put the type species of either genus on the Official List, nor the family name.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Glossina Wiedemann, 1830 [1 September], *Aussereuropäische zweiflügelige Insekten. Als Fortsetzung des Meigenschen Werkes. Erster Theil*, Schulz, Hamm, p. 253.

GLOSSINIDAE Theobald, 1903, *Memoirs of the Liverpool School of Tropical Medicine*, 10(Appendix): ii.

longipalpis, *Glossina*, Wiedemann, 1830, *Aussereuropäische zweiflügelige Insekten. Als Fortsetzung des Meigenschen Werkes. Erster Theil*, Schulz, Hamm, p. 253.

Nemorhina, Robineau-Desvoidy, 1830 [26 June], *Mémoires présentés par divers savants à l'Académie Royale des Sciences de l'Institut de France (Sciences Mathématiques et Physiques)*, (2)2: 289.

palpalis, *Nemorhina*, Robineau-Desvoidy, 1830, *Mémoires présentés par divers savants à l'Académie Royale des Sciences de l'Institut de France (Sciences Mathématiques et Physiques)*, (2)2: 289.

Official Correction to Opinions 278 and 382: the publication date amended for the genus-group names *Danaus*, *Heliconius*, *Nymphalis* and *Plebejus* (Insecta, Lepidoptera) from Kluk (1802) to Kluk (1780)

Abstract. Under Article 80.4 of the Code, the publication date for the names *Danaus*, *Heliconius*, *Nymphalis* and *Plebejus* is corrected to Kluk (1780), rather than Kluk (1802) and the spelling of the butterfly genus name *Plebejus* confirmed. These names were formerly treated in Opinions 124, 278, 382 and 450.

Keywords. Nomenclature; NYMPHALIDAE; LYCAENIDAE; NYMPHALINAE; DANAINAE; *Heliconius*; *Nymphalis*; *Danaus*; *Plebejus*; *Plebeius*; *Plebeyus*; butterflies; Kluk.

A letter was received from Emilio Balletto & Simona Bonelli (*Department of Life Sciences and Systems Biology, Via Accademia Albertina 13 – I-10123 Torino, Italy*), in April 2014 requesting an amendment to the entry on the Official List of Generic Names in Zoology for *Danaus*, *Heliconius*, *Nymphalis* and *Plebejus* to record that the correct publication date of the four lepidopteran generic names.

Emilio Balletto & Simona Bonelli provided the following information:

1. Opinion 124 (Smithsonian Miscellaneous Collections 73(8): 1–2, 28 October 1936) rejected the subdivisions of the genus *Papilio* used by Linnaeus in the tenth (1758) and following editions of *Systema naturae* as of (sub)generic value and thus as of date 1758. This point of view was reinforced in Opinion 279 (Opinions and Declarations 6: 179–188, 1 October 1954b) stating that any term placed between the generic and the specific name in the zoological works of Linnaeus and Fabricius was to be deemed unavailable as a name of (sub)generic value. However, in Opinion 124, the Commission also declared that it was ‘prepared to take up individual cases under arguments which may be submitted’ (Smithsonian Miscellaneous Publications 73(8): 2).

2. As concerns Lepidoptera, an application was submitted by Franclemont (1952), asking the Commission to validate under the plenary power, as from Linnaeus (1758) and as of (sub)generic value, the names used by this author for groups of species in the genus *Phalaena*, i.e. *Bombyx*, *Noctua*, *Geometra*, *Tortrix*, *Pyralis*, *Tinea* and *Alucita*, and as from 1767 the name *Attacus*, similarly published by Linnaeus. This application was opposed by Paclt (1952; re-published in 1957 as an appendix to Opinion 450, Opinions and Declarations 15(15): 251–328, 8 March 1957) on the ground that, ‘if we accept any of these terms as being the names of subgenera, we should be bound logically to adopt the same course by analogy in the case of the terms used by Linnaeus for subdivisions of the genus *Papilio*’, i.e. (1) *Barbarus*; (2) *Eques*; (3) *Heliconius*; (4) *Danaus*; (5) *Nymphalis*; (6) *Plebejus*. Of these, as noted by Paclt, the first two ‘have been disregarded for many years’, whereas the other four are still firmly in use and are all available as from Kluk (1802), as fixed by the Commission with the same Opinion 450 and typified in Opinions 278 (*Danaus*, *Nymphalis* and *Plebejus*) and 382 (*Heliconius*) (Opinions and Declarations 6(10): 135–178, 1 October 1954).

3. In the meantime, Paclt discovered in the Central Library of the Jagellonian University (Krakow) a copy of what seems to be the first edition of Kluk’s work,

dated in the front page as of 1780 (Paclt, 1955). This information apparently was unknown to the Commission at least until Opinion 450 was published in 1957, even though Tutt (1906b, p. 304) had long before cited references from another copy of this edition (he erroneously cited *Plebeius* as from p. 81 in Kluk (1780), actually on p. 89). An unexpected problem thus arose, as in the copy of Kluk (1780) cited by Paclt, one of these butterfly genus names was printed differently from the spelling adopted by Linnaeus, and by Kluk himself in the 1802 edition, i.e. *Plebeius*, rather than *Plebejus* (cf. Linnaeus, 1758, pp. 483–485).

4. Following Paclt's (1955) discovery, some authors started citing this name as *Plebeius* Kluk, 1780, thus correcting both name spelling and publication date in respect to the entry *Plebejus* Kluk, 1802 listed in the 'Official Lists and Indexes of Names in Zoology' (Opinion 278, Opinions and Declarations, 6(1): 135–178, 1 October 1954) (see also the Official Lists at <http://iczn.org/sites/iczn.org/files/officialists.pdf>).

5. Crotch (1872, p. 60) was the first author to list *Papilio argus* Linnaeus, 1758 (p. 483) as the type species of *Plebeius* Kluk, 1780, even though he attributed this typification to Cuvier, who did not use binominal nomenclature. Kirby (1896, p. 87) shared a similar view, but proceeded to a more formal typification (see also Tutt, 1906a). Finally Hemming (1933, p. 224) designated *Papilio argus* Linnaeus, 1758 as the type species of *Plebejus* thereby making the two genus group names objective synonyms. Opinion 278 adopted the latter solution.

6. There are at least two distinct printings of Kluk (1780). The copy discovered by Tutt (1906b) was apparently identical to the copy found by Paclt (currently not available from the library of the Jagellonian University (see Bálint et al., 2001). A reprint of this edition is now available online <http://delta.cbr.edu.pl/dlibra/doccontent?id=672&dirids=8> (at the agricultural library, Poland). A different printing is also currently available online http://books.google.it/books/about/Zwierz%C4%85t_domowych_i_dzikich_osobliwie_k.html?id=S5s5AAAACAAJ&redir_esc=y), from the Bavarian State Library, with a different title-page from the one reproduced by Paclt (1955) and one in the Central Agricultural Library in Warsaw. In this copy the name *Plebejus* is spelled with a 'j', identical to the spelling in Linnaeus (1758) and in accordance with the largely prevalent usage, at least prior to the publication by Paclt (1955). In the third edition of Kluk's work (1802) this name is spelled *Plebeyus* (Beuret 1961, p. 318; see also Bálint et al., 2001).

7. Eventually, Bálint et al. (2001) suggested that this name should be cited as *Plebejus* Kluk, 1780, applying the First Reviser Rule to determine precedence under Article 80.6.4. Even though such a proposal could be acceptable, since Opinion 278 (1954a) was based on apparently incomplete information, Bálint et al. failed to submit a formal application to this effect. The present application is aimed at fixing this spelling and publication date through an Official Correction to be issued by the Commission under Article 80.4.

8. Whereas the problem is more relevant for *Plebejus*, because of the existence of spelling variants, we think that the change of date consequent to recognizing Kluk (1780) rather than Kluk (1802) as the relevant source publication must also apply to the other three lepidopteran genera, *Heliconius*, *Nymphalis* and *Danaus*.

In accordance with Article 80.4 of the Code, which states that the Commission can publish an Official Correction of an error or omission in an Opinion without further

vote when the correction does not negate the Opinion or its consequences, notice is hereby given that:

(1) the corresponding entries in the 'Official Lists of Indexes and Names in Zoology' are corrected to read:

- DANAIDAE (correction of DANAIDES) Boisduval, [1833], *Icon. hist. Lépid. Europ.*, 1(9): 84 (type genus: *Danaus* Kluk, 1780) (Insecta, Lepidoptera). Direction 99; Official Correction BZN 71, September 2014.
- DANAIDES Boisduval, [1833], *Icon. hist. Lépid. Europ.*, 1(9): 84 (type genus: *Danaus* Kluk, 1780) (an incorrect original spelling for DANAIDAE Boisduval, [1833]). Direction 99; Official Correction BZN 71, September 2014.
- DANAIDIDAE Reuter, 1897, *Acta Soc. Sci. fenn.*, 22: 301 (type genus: *Danaus* Kluk, 1780) (an incorrect subsequent spelling for DANAIDAE Boisduval, [1833]). Direction 99; Official Correction BZN 71, September 2014.
- plexippus*, *Papilio*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 471, as interpreted by the neotype designated under the plenary power, namely the male specimen figured by Clark, 1941 (*Proc. U.S. nat. Mus.*, 90: pl. 71, fig. 1) and refigured in Opinion 282, pl. 2 (type locality: 'Pennsylvania') (specific name of the type species of *Danaus* Kluk, 1780) (Insecta, Lepidoptera). Op. 282; Official Correction BZN 71, September 2014.
- Apostraphia* Hübner, 1816, *Verz. bekannt. Schmett.*, (1): 13 (a junior objective synonym of *Heliconius* Kluk, 1780). Op. 382; Official Correction BZN 71, September 2014.
- charithonia*, *Papilio*, Linnaeus, 1767, *Systema Naturae*, Ed. 12, vol. 1, part 2, p. 757 (specific name of the type species of *Heliconius* Kluk, 1780) (Insecta, Lepidoptera). Op. 382; Official Correction BZN 71, September 2014.
- Heliconia* Godart, 1819, *Ency. méth.*, 9 (Ins.): 203 (a junior objective synonym of *Heliconius* Kluk, 1780). Op. 382; Official Correction BZN 71, September 2014.
- HELICONIDAE Swainson, 1827, *Phil. Mag. (n.s.)*, 1: 187 (type genus: *Heliconius* Kluk, 1780) (an incorrect original spelling for HELICONIIDAE Swainson, 1827). Direction 54; Official Correction BZN 71, September 2014.
- HELICONIIDAE (correction of HELICONIDAE) Swainson, 1827, *Phil. Mag. (n.s.)*, 1: 187 (type genus: *Heliconius* Kluk, 1780) (Insecta, Lepidoptera). Direction 54; Official Correction BZN 71, September 2014.
- Heliconius* Kluk, 1780, *Zwierz. Hist. nat. pocz. gospod.*, 4: 82 (gender: masculine) (type species, by designation by Hemming, 1933 (*Entomologist*, 66: 223): *Papilio charithonia* Linnaeus, 1767, *Systema Naturae*, Ed. 12, vol. 1, part 2, p. 757) (Insecta, Lepidoptera). Op. 382; Official Correction BZN 71, September 2014.
- Heliconius* Latreille, 1804, *Nouv. Dict. Hist. nat.*, 24 (Tab.): 185, 199 (a junior homonym of *Heliconius* Kluk, 1780). Op. 382; Official Correction BZN 71, September 2014.
- NYMPHALIDAE Swainson, 1827, *Phil. Mag. (n.s.)*, 1(2): 187 (type genus: *Nymphalis* Kluk, 1780) (Insecta, Lepidoptera). Direction 99; Official Correction BZN 71, September 2014.
- Nymphalis* Kluk, 1780, *Zwierz. Hist. nat. pocz. gospod.*, 4: 86 (gender: masculine) (type species, by designation by Hemming, 1933 (*Entomologist*, 66: 223): *Papilio polychloros* Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 477) (Insecta, Lepidoptera). Op. 278, Official Correction BZN 71, September 2014.
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The lectotype for the Asian elephant, *Elephas maximus* Linnaeus, 1758 (Mammalia, Proboscidea) and comments on ‘primary, secondary and tertiary syntypes’ and ‘virtual lectotype designation’

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Last November a group of colleagues and ourselves designated a lectotype for the Asian elephant, *Elephas maximus* Linnaeus, 1758, having used morphology and genetic and proteomic sequencing to confirm that Linnaeus’s syntypes included both Asian and African elephants. The article was published (Cappellini et al., 2013) online in the *Zoological Journal of the Linnean Society*, together with eight items of Supplementary Information, and appeared on paper in the *ZJLS* in January 2014. The paper and SI items are available online at DOI:10.1111/zoj.12084.

The lectotype is a very nearly complete mounted skeleton on display in the Natural History Museum of the University of Florence. John Ray described the specimen in 1673 and 1693 and Linnaeus cited Ray’s 1693 publication. The lectotype designation is available and valid. Dubois, Nemésio & Bour, however, have criticised our choice of selected specimen (published in *Bionomina*, June 2014; a preview is available online at <http://mapress.com/bionomina/content.htm>). We are concerned because they have demonstrated misunderstanding or ignorance of a number of aspects of the *International Code of Zoological Nomenclature*.

To begin, we should like to set the record straight on the date of publication of our lectotype designation. Dubois et al. (2014, p. 46, footnote), writing on 21 November 2013, postulated that the designation would become available only with the publication of the paper version of the *Zoological Journal of the Linnean Society*. This is incorrect. Our paper was registered with ZooBank on 10 October 2013 and given



Female lectotype of the Asian elephant, *Elephas maximus* Linnaeus, 1758 in the Natural History Museum of the University of Florence, specimen no. MZUF 734. John Ray and Philip Skippon studied the skeleton (and at the time the skin) in 1664. Photograph: Marco Ferretti, NHM, Florence.

a registration number. This number was cited when the article was published online by the *ZJLS* on 4 November 2013. An archive for the electronic publication was included in the ZooBank registration on 4 December 2013, thereby completing the procedure for recognition of online publication, and the lectotype designation became available from this date (Article 8.5 of the Amended Code, 2012).

Dubois et al. (2014, pp. 47–48, 54–57) have set up their own system of three categories of syntype. There is nothing, however, in the Code that allows a hierarchy of primary, secondary and tertiary syntypes. We noted in the Introduction to our article that all syntypes, whether cited as specimens or by bibliographic references, whether or not they were examined by the author and whether or not they still exist, are of equal standing. Article 73.2 of the Code states ‘When a nominal species-group

taxon has syntypes, all have equal status in nomenclature as components of the name-bearing type'. There is, of course, absolutely no hierarchy in the choice of a lectotype from among the syntypes.

Dubois et al. (p. 53) noted Linnaeus's (1758) observation that *Elephas maximus* lived on Zeylon (Ceylon, Sri Lanka) and asserted that 'for this reason this island has always been considered to be the type-locality of the species (e.g. Shoshani 2005). It would then be appropriate to designate a lectotype originating clearly from this island to maintain the tradition'. However, Ceylon is only part of the original type locality for *maximus* and this is not because of what Linnaeus wrote but because it is the place of origin of one of the syntypes. Article 73.2.3 states '... if the syntypes originated from two or more localities (including different strata) the type locality encompasses all of the places of origin'.

Linnaeus (1758) did not separate African and Asian elephants and, citing references to Aldrovandi (1616), Gesner (1620), Johnston (1650), Ray (1693), Strachan (1702) and Seba (1734), he included both species under the one name. Therefore the type locality for *Elephas maximus* was both Africa and Asia and included Ceylon because Strachan mentioned a specimen from there. Following publication of the name *E. africanus* Blumenbach, 1797 for the African elephant, the name *maximus* was retained for the Asian elephant, but the appearance of Blumenbach's paper did not in itself change the pre-existing type locality for *maximus*. It is only with our very recent designation of the *maximus* lectotype that at last a restricted type locality has been fixed. Article 73.2.3 goes on to state 'If a lectotype is subsequently designated, the type locality is the place of origin of the lectotype' and Article 76.2 adds 'The place of origin of the lectotype becomes the type locality of the nominal species-group taxon, despite any previously published statement of the type locality'.

It is as certain as anything can be from the written records of the past that the elephant in the Natural History Museum of the University of Florence, now the *Elephas maximus* lectotype, came from Sri Lanka. In 1983 the art historian D. Heikamp, in his study of the original collection in the Uffizi Gallery, noted that the elephant reported in various 17th and early 18th century documents was that observed by Ray in 1664. Heikamp (pp. 532–533, footnote 160) cited four sources (Del Migliore, MS, post 1655; Skippon 1732; Ray, 1673; and Targioni Tozzetti, MS, 1763). He wrote as follows: F. DEL MIGLIORE, *Lo Zibaldone*, BCNF: 'Vi è in questa Galleria uno scheletro d'un grand'elefante il quale nacque l'anno 1630 nell'Isola Celonica, che è nell'Indie Orientali, condotto in Firenze e mostrandovi con gran curiosità al popolo, quivi morì non confacendogli il clima, né l'aria di questo paese differente molto al suo natio l'anno 1655. Era di lunghezza B. 11 e d'altezza B. 8. Fu pesato in Vienna alla presentia dell'Imperatore Federico III e fu libbre 6600. Dicono che questo animale cresce fino a 100 anni e vive fino a 300'. P. SKIPPON, *An account* cit., p. 651 sg.: 'In one room is the skin of a young elephant, which was alive about six years since; it cost the duke 100 pistoles'. Segue un'attenta descrizione dello scheletro e, ancora, J. RAY, *Observations* cit., p. 334: 'the skin and skeleton [sic] of an Elephant, which was shown in Florence some 8 od [sic] 10 years ago, and died there'; G. TARGIONI TOZZETTI, *Catalogo* cit., I, *Animali e loro parti*, p. 27 sg., nn. 1 e 2: 'Il cuoio intero di un elefante giovine delle razza piccola il quale morì in Firenze verso la fine del secolo passato [...] Lo scheletro del medesimo elefante ben pulito e congegnato con grossi fili di ferro e sostenuto ritto da spranghe di ferro [...]

Tanto la stampa, o sia cuoio ripieno, che lo scheletro di questo elefante si conservano nello stanzone detto delle Pietre della Imperial Galleria'. Per quanto ci risulta i resti dell'elefante non esistono più. L'elefante morto fu ritratto da Stefano Della Bella in un disegno su cui è scritto: «Elefante morto in Firenze adì 9 di novembre 1655», cfr. A. Bertini, *I disegni italiani della Biblioteca Reale di Torino*, Roma, Istituto Poligrafico dello Stato 1958, n. 545 e cfr. inoltre W. S. Heckscher, *Bernini's Elephant and Obelisk*, «The Art Bulletin», XXIX, 1947, p. 168 nota 64.

We included a translation of Del Migliore's text in the online Supplementary Information S7 of our article: 'In this Gallery there is the skeleton of a big elephant born in 1630 on the Ceylon Isle, Eastern Indies, brought to Florence and here exhibited raising great curiosity. It died here in 1655 because the weather and the air of this country, much different from those of its place of origin, were inadequate for it. It was 11 B. long and 8 B. tall. It weighed 6600 lbs., and was measured in Vienna in front of the Emperor Frederick the Third. People say this animal grows until it is 100 years old and can live 300 years'.

Del Migliore (1628–1696) was a historian, writer and scholar who chronicled events contemporary with the elephant. It is likely that he saw the animal alive and that his report derived from his direct observations. The data Del Migliore gave on the birth date (1630) and origin (Ceylon) of the elephant most likely derived from Dutch documentation when the animal arrived in Europe, probably Amsterdam in 1633 (Supplementary Information S7). In 1633, Ernst Brinck, Mayor of Hardewijk, reported that he had seen the elephant, that it came in ships into Amsterdam, and that he was told by its keeper that three years earlier the animal had been born in Ceylon: Anno 1633 is met de oostIndischen schepen in Hollandt gekomen een elephant, die ik anno dito te Amsterdam oeck gesien hebbe met mijn sohne Ludovico, die oeck daerop gereden heeft. Desen elephant was doenmaels olt ontrent 3 iahren, was hooch 7 van mijne voeten; was gegeniert int Eijlandt Ceijlon, ende, gelijk den bestierder verhaelde, soo was sijn moeder hooch 17 voet ende een halven. Brinck's report is corroborated by early modern engravings, including a work done in 1652 by Jeremias Glaser; here the elephant is shown wielding a sword and doing other tricks, and the legend clearly indicates the animal was from Ceylon: diser Elephant. ist .1630. uf der. Insel Selon in India (repeated in Slatkes, 1980).

On reading the article by Dubois et al. it is apparent that they have substantially misunderstood the circumstances of our lectotype designation and have inflated them into an unnecessary problem. Our specimen was selected with great care having followed the historical trail from Ray to the Florence skeleton and having assessed its morphology. Its identity as an Asian elephant was corroborated by genetic analysis but this was not the main species-identifying factor used in our paper. We sequenced the mitochondrial DNA of the specimen primarily in the hope that it might reveal a haplotype unique to a particular geographical region (this proved not to be the case). We believe that all possible methods, involving history, morphology and genetics, can be employed in the identification and description of all zoological specimens and particularly those chosen as name bearers. The genetic and proteomic data that we produced were very important in the case of Seba's foetus, contrary to Dubois et al.'s assertion. While earlier authors had suggested the foetus as African based on external morphology, this was essentially restricted to two characters – the shape of the ear and trunk-tip – and none of these authors adduced a comparative study of African

and Asian elephant foetuses. The Seba foetus is far from full-term and allometric effects could be misleading. The genetic and proteomic data provided unambiguous identification allowing us to confidently exclude the foetus as a potential lectotype for the Asian elephant.

The Florence lectotype skeleton is very nearly complete and is readily accessible for study. Its identity as an Asian elephant and, indeed, that seen and described by Ray, is beyond doubt. Surprisingly, Dubois et al. have written that they would have preferred a non-existent specimen from Sri Lanka as the lectotype (their 'virtual lectotype'), followed by the possible designation of a neotype. They consider that a specimen mentioned by Strachan (1702), in a work cited by Linnaeus (1758), would have been a more suitable lectotype. Strachan, however, described the capture and taming of herds of elephants and his note of an individual specimen lacks provenance details. It was in captivity and had been presented to the Dutch by the king of Kandy whose kingdom did not overlap Dutch territory. Hence its source locality could scarcely be that quoted by Dubois et al. from Strachan. Even the Asian elephant depicted by Jonston (1650), in a work also cited by Linnaeus, would make a better lectotype than Strachan's specimen.

It is clearly desirable to have a type specimen to hand and the designation of a non-existent lectotype would not be helpful. Dubois et al. have omitted to say how they would set about finding a suitable neotype specimen, particularly one with a known and restricted locality. There are specimens in museums but in these circumstances we would again have to accept as accurate label and catalogue identifications that may or, in reality, may not be correct. We would then need to morphologically and genetically confirm the identity of a chosen specimen. This was the position at the beginning of our study, and the advantage over our lectotype is not evident. A neotype designation would have the added disadvantage that the direct connection to Linnaeus and one of his syntypes (and an excellent specimen) would unnecessarily have been lost.

Designation of a neotype is subject to the conditions of Article 75. An author must give 'reasons for believing that the name-bearing type specimen(s) (i.e. a holotype or lectotype, or all syntypes, or prior neotype) to be lost or destroyed, and the steps that have been taken to trace it or them' (Article 75.3.4) and is 'advised to choose neotypes from any surviving paratypes or paralectotypes unless there are compelling reasons to the contrary' (Recommendation 75A). This means that, in designating a neotype, any other original type material should not simply be ignored, as advocated by Dubois et al. In the case of the Asian elephant both the skeleton in Florence and the partial tooth in Uppsala (Supplementary Information S8) are extant syntypes and were suitable as name-bearing specimens in accordance with the strong terms in which Recommendation 75A is expressed.

Dubois et al. have noted that we cited the illustration of an African elephant in Gesner's *Historiae Animalium* with the date 1551. Gesner's work was published in various formats but the images remained unchanged even as late as the 1620 Frankfurt reprint. Heller (2007) recorded that in Linnaeus's publications 'Refs. cite synonyms and pages (usually for a nearby fig.), more often of 1620 than 1551, but the figs. can be found in any edn.'

Finally, we point out that the Code is not an anonymous work. On page iv and in Article 85 is the statement 'The author of this Code is the International Commission

on Zoological Nomenclature'. The Code was established to provide stability in zoological nomenclature and a common set of rules ensuring consistency of approach across the international taxonomic community. It has become more comprehensive with time as new problems have come to light from the actions of past generations of taxonomists. Changes are discussed and decided democratically with the whole community. It is, above all, a practical manual and the very last thing needed is a theoretical and complicated system replete with pointless new terminology ('onymophoront' for type specimen, etc.) as advocated by Dubois et al.

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The Bulletin of Zoological Nomenclature

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THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

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Cover image: *Tetrosomus gibbosus* (Linnaeus, 1758) known as the humpback turretfish illustrated by Ernst Haeckel in *Kunstformen der Natur*, pl. 42, fig. 10. as '*Ostracion turritus* (Swainson)' [in fact *Ostracion turritus* Forsskål, 1775], which is a junior synonym of *Ostracion gibbosus* Linnaeus, 1758. This image was chosen to commemorate the 180th anniversary of Haeckel's birth and 110th anniversary of publication of his *Kunstformen der Natur* (1899–1904).

BULLETIN OF ZOOLOGICAL NOMENCLATURE

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20 December 2014

Notices

(1) Applications and correspondence relating to applications to the Commission should be sent to the ICZN at the address given on the inside of the front cover and on the Commission website. English is the official language of the *Bulletin*. Please take careful note of instructions to authors (present in a one or two page form in each Volume and available online (at <http://iczn.org/content/guidelines-case-preparation>) as incorrectly formatted applications will be returned to authors for revision. The Commission's Secretariat will, where possible, answer general nomenclatural (as opposed to purely taxonomic) enquiries and assist with the formulation of applications and, as far as it can, check the main nomenclatural references in applications. Correspondence should preferably be sent by e-mail to 'iczn@nhm.ac.uk'.

(2) The Commission votes on applications eight months after they have been published, although this period is normally extended to enable comments to be submitted. Comments for publication relating to applications (either in support or against, or offering alternative solutions) should be submitted as soon as possible. Comments may be edited (see instructions for submission of comments at <http://iczn.org/content/instructions-comments>).

(3) Requests for help and advice on the Code can be made direct to the Commission and other interested parties via the Internet. Membership of the Commission's Discussion List is free of charge. You can subscribe and find out more about the list at <http://list.afriherp.org/mailman/listinfo/iczn-list>.

(4) The Commission also welcomes the submission of general-interest articles on nomenclatural themes or nomenclatural notes on particular issues. These may deal with taxonomy, but should be mainly nomenclatural in content. Articles and notes should be sent to iczn@nhm.ac.uk.

New applications to the Commission

The following new applications have been received since the last issue of the *Bulletin* (Volume 71, part 3, 30 September 2014) went to press. Under Article 82 of the Code, the prevailing usage of names in the applications is to be maintained until the Commission's rulings on the applications (the Opinions) have been published.

CASE 3671: *Molapopentatodiscus supersaltator* Ellenberger 1970 (Ichnotaxon): discussion of the availability of the name. D.E. van Dijk.

CASE 3672: *Anolis chlorocyanus* Duméril & Bibron, 1837 & *Anolis coelestinus* Cope, 1862 (Reptilia, Squamata): proposed conservation of the specific names and designation of a neotype for *A. chlorocyanus*. G. Köhler & S.B. Hedges.

CASE 3673: *Geophilus alpinus* Meinert, 1870 (Chilopoda): proposed conservation of the specific name. L. Bonato & A. Minelli.

Call for nominations for new members of the International Commission on Zoological Nomenclature

The International Commission on Zoological Nomenclature (ICZN) is seeking nominations for new Commissioners to be elected during the ICZN meeting to be held in parallel with the General Assembly of the International Union of Biological Sciences in Berlin in late 2015.

At least seven actual or prospective vacancies in the Commission have to be filled. The Commission now invites nominations, from any person or institution, of potential candidates for election. The nationalities and specialist fields of the present members of the Commission may be found on the ICZN website (<http://www.iczn.org>), or on the inside cover of each part of the Bulletin of Zoological Nomenclature. Commissioners Prof. P. Bouchet (France, Mollusca), Prof. D.J. Brothers (South Africa, Hymenoptera), Prof. D.J. Patterson (U.S.A., Protista) and Prof. P. Štys (Czech Republic, Heteroptera) have all served at least 18 years and cannot be re-elected in 2015.

Article 2.2 of the Commission's Constitution prescribes that 'The members of the Commission shall be eminent scientists, irrespective of nationality, with a distinguished record in any branch of zoology, who are known to have interest in zoological nomenclature'.

According to Article 2.3., the composition of the Commission shall be such as to secure a balanced representation, including zoologists from different parts of the world.

Nominations, giving the age, nationality and qualifications of each nominee should be sent before 1 October 2015 to the acting secretary of ICZN (iczn@nus.edu.sg).

Lim Lee Hong, Susan (1952–2014) — monogenean systematist and Commissioner 2006–2014

David I. Gibson & Peter K. L. Ng



Professor Lim Lee Hong, Susan, better known to her international colleagues and friends as Susan Lim, or just ‘Susan’, died on 2nd August 2014 in Petaling Jaya, Selangor, Malaysia, after losing a long fight with cancer. She was a very active parasitologist, a full professor in the Institute of Biological Sciences at the University of Malaya in Kuala Lumpur since 2003 and a Member of the International Commission on Zoological Nomenclature since 2006.

Susan was the leading specialist in Malaysia and Southeast Asia on a group of parasitic flatworms called the Monogenea. Most monogeneans are ectoparasites of fishes; they are a relatively large group with about 5,000 described species. Some monogeneans are of significant economic importance because, when they occur in huge numbers, they can have a serious pathogenic impact on fishes, especially food fishes cultured in farms. In a career spanning some 35 years, Susan established herself as one of the top scholars in her field.

Born on St Valentine's Day in 1952 at Seremban in the State of Negeri Sembilan, Susan was the second of three daughters of the owner of an oil palm and rubber business. Educated by nuns in a Roman Catholic school, by the age of six she could neither speak nor understand a word of English and failed all subjects except arithmetic. Eventually, having moved to an all-boys school (causing quite a stir in those days) for her Advanced Level studies, she nevertheless acquitted herself exceedingly well. In 1971, she obtained a deserved place at the University of Malaya in Kuala Lumpur to study zoology, eventually graduating with an honours degree. In those days it was still quite difficult for an ethnic Chinese (and a woman at that!) to obtain training abroad, so Susan remained at the University of Malaya for her MSc and PhD, funding her studies as a careers tutor (1976–89). In 1978, she was awarded a UNESCO scholarship to work on monogeneans for three months with Dr Kálmán Molnár in Budapest, Hungary, and in 1982, she obtained a fellowship from the USSR Academy of Sciences to spend three months in St Petersburg, Russia, working with Prof. Oleg Bauer and Dr Alec Gusev; the latter was, at that time, the leading world expert on monogeneans. Trained and inspired to study these parasites, she started her PhD (*Distribution and Diversity of Monogeneans in Freshwater Fishes of Peninsular Malaysia*) in 1980 under the supervision of Prof. Jose I. Furtado in the then Department of Zoology. During this period, she also embarked on a new venture – she married her colleague George Liew and was later blessed with a daughter and a son.

Through the 1980s, Susan published actively, describing many monogeneans and establishing herself as a key player in the field. In 1987, she completed her PhD, remaining on the university staff as a zoology tutor. However, her academic prowess was such that she was promoted to a lecturer in 1989, after which she never looked back, becoming a full professor by 2003. Although Susan continued her work on freshwater monogeneans, she gradually transferred her attention to the marine fauna. Publishing regularly in good international journals, she became well known internationally from her papers and from her active attendance at and participation in international meetings. These tended to be specialist meetings, such as the *International Symposium on Ichthyoparasitology* and the *International Symposium on Monogenea*, to which she always contributed presentations of her work.

Initially, as Susan was working in a region where the fauna was little known, her research was mostly at the alpha-taxonomic level. She described more than 100 new species, several new genera and a new family. Taking into account these and her specific re-assignments (together more than 200 taxa), she became the sixth most prolific monogenean worker ever (and the foremost female worker). As her expertise developed, she undertook major generic revisions with a wider geographical relevance to workers throughout Asia and around the Indian and Pacific Oceans. These included papers on *Hamatopeduncularia*, *Thaparocleidus*, *Calydiscoides* (one species of which has subsequently been named *C. limae*), *Triacanthinella*, *Neohaliootrema* and *Neocalceostoma*. These were followed by even more general revisionary works and reviews, such as 'Sundaic monogeneans and Gondwana', 'Dactylogyridean monogeneans of the siluriform fishes of the Old World' and 'Diversity of monogeneans in Southeast Asia'. In 2002, she co-edited and contributed to an important book titled '*Diseases and Disorders of Finfish in Cage Culture*'. She also contributed to teaching units on animal diversity for the Open University in Malaysia. Susan was an excellent

artist and quickly converted to making digital drawings, publishing some of the first such illustrations of her group in colour. However, her interests were not all related to classical morphology. Even in her early studies during the 1980s she published a paper on the use of Jaccard's Index of Similarity for distinguishing congeneric monogeneans. Later, she developed an interest in functional morphology and described an entirely new mechanism of attachment in the form of net-like structures formed by the coagulation of secretions emanating from the posterior attachment organ of some of her monogeneans. As reflected in the work of her students, in recent years she also embraced a very wide range of topics and disciplines, including ultrastructural and molecular studies, 3D imaging, biotechnology, information technology and biodiversity database management. She was also heavily involved in the development of a database of the metazoan parasites of Malaysian wild animals.

In addition to her university teaching duties, Susan supervised many postgraduate students. Arpah Bt Abu, Tan Wooi Boon, Wong Wey Lim, Neeta Devi Sinnapah and Theerawoot Lerssutthichawal all completed their PhDs under her guidance; she was still supervising another five PhD students at the time of her death. In addition, 11 MSc students benefitted from her supervision. Susan arranged for some of these students to undertake part of their studies abroad at Queens University, Belfast, UK, and the University of Perpignan, France. Regular checks on her students meant that she was a regular visitor to the Natural History Museum, London, to discuss joint projects and examine material.

Susan had a great interest on passing on her expertise and in the training of taxonomists for filling present and future roles in biodiversity and wildlife management. She presented several talks on this topic at international meetings, emphasizing the lack of available training and job-opportunities in taxonomy. In relation to this, and mainly for younger people, in 2004 she organised a '*Workshop on Parasitic Invertebrate Collections & Relational Database Management*' and a '*Forum on Biodiversity Inventories & Data-sharing – A Framework for Malaysia*' with a significant international specialist involvement, and in 2006 she persuaded the editor of an international parasitological journal to run a course on '*Publishing in International Journals*'. In view of her interest in systematics, she became responsible for the type-collection of the Zoological Museum at the University of Malaya and fought for a national collection of natural history specimens. Since 1979 she had been a member of the Malaysian Society of Parasitology & Tropical Medicine, was its Honorary Secretary twice and was awarded a life membership in 2009. These were in addition to serving on various university and national committees. Her productivity, the quality of her work and sociable nature lead to increased international recognition. This resulted in more travel opportunities and co-operative studies, with research visits to Japan, India, Australia, Canada, New Caledonia, South Africa and various European countries, the longest being a year spent at the University of Guelph, Canada, in 1995. In 2006, Susan was elected into the International Commission on Zoological Nomenclature; an international group of taxonomists tasked to manage and regulate how zoological names are used. As one of only three women in the ICZN at the time (and the only Malaysian ever elected to this prestigious body), she brought her expertise on parasites to the international stage. Ever the advocate for systematics, she defended the science of taxonomy tooth and nail, and was a perfect candidate for the job!

Susan was always positive, energetic and, as in the case of many women who have made it to the top in a male-dominated world, had considerable strength of character, defending her work (and the study of her animals) aggressively. More than one reviewer has taken on the job of refereeing a Lim paper with some degree of trepidation – her rebuttals sometimes had to be ‘moderated’ by co-authors! She singularly disliked self-righteous and condescending characters; her scowl (and growl) for such people was well known. She despised what she saw as unfairness and cronyism, and was a firm believer in meritocracy; and few could ‘out-work’ her. This advocacy often got her in trouble with senior management, but this never stopped her. Courage characterised her many fights for fair treatment for staff and students; and she rarely gave in. One of us (PKLN) had on more than one occasion to calm her down when she worked herself up over what she saw as wrongdoings; and got growled at in the process for being too naïve or diplomatic! Susan always had this ‘fire in her belly’ – one of her remarks to DIG many years ago was proof that this started young – in primary school as a prefect, she commented that “I preferred to play than to guard and got a ticking off from my headmistress who told me that that was not how a prefect should behave – I never like authority nor understand it”. That was Susan and until her last day – a fighter! This same ‘spunk’ made her a friend one could count on through thick and thin. Her ‘defence’ of her animals and her science, and her intolerance of prima donnas belied her more usual convivial nature. The fact is, Susan was a genuinely nice person, with a good heart and jovial (and often cheeky) disposition – always popular with international colleagues, always with a greeting smile. She was never a person overly worried about her appearance – her sartorial elegance usually extended to a t-shirt and pair of jeans; however, on occasions when she got fully ‘toggled out’, and Lim’s limbs made a rare appearance, she could look rather stunning.

PKLN last saw her when the ICZN convened in Singapore in November 2013 to discuss the fate and future of this organisation, as it faced a series of huge financial and scientific challenges. Susan attended the proceedings and contributed in her usual way – energetically and positively. As is typical of Susan – she dragged George down to Singapore with her and, while she was engaged in ICZN matters during the day, he was out in the field collecting parasites from marine fishes with an assistant! And in the evening, she would look at parasites with them. Talk about work ethos and a love for monogeneans! Encouraged by her active participation, and that she had apparently overcome her fight with cancer, the ICZN was hoping she would be a force for change. Sadly, the illness returned and, this time, she lost the fight. Her old friend and mentor, Dr. A. Sasekumar, told PKLN that she was true to form right to the very end, talking about science with her usual passion the day before she passed on. Vintage Susan!

Susan’s passing, at the young age of 62, is a great loss – not only in terms of expertise to her country but to science as a whole. Susan was a good friend to many and will long be remembered by monogenean specialists throughout the world for her contributions. Immortal in the form of the many new taxa she described, her influence will also live on in the form of her students, her published work and in the memories of her family, friends and colleagues.

Case 3667

***Paludina conica* Prévost, 1821 (currently '*Peringia*' *conica*) (Gastropoda, Prosobranchia, HYDROBIIDAE): proposed conservation by suppression of the senior homonym *Paludina conica* Férussac, 1814**

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Abstract. The purpose of this application, under Article 23.9.3 of the Code, is to suppress the unused and unidentified name *Paludina conica* Férussac, 1814, in order to protect the name *Paludina conica* Prévost, 1821 (currently '*Peringia*' *conica*), which has been consistently in use since its inception, and for which no junior replacement name is known, thereby avoiding the introduction of a replacement name. Both nominal species are fossils from the Tertiary of the Paris Basin.

Keywords. Nomenclature; taxonomy; Gastropoda; Prosobranchia; HYDROBIIDAE; *Paludina*; *Paludina conica*; gastropods; Tertiary; Paris Basin.

1. Férussac (1814, p. 64) introduced the nominal species *Paludina conica* by a reference to the description and figure of 'Bulime conique' by Brard (1810, p. 416, pl. 24, figs. 14–17), for a fossil from Tertiary strata from the environs of Lagny, and from St.-Leu Taverny, both in the Paris Basin, France. Férussac named this species as '*C. Conica*. Brard (Bul.)'. The '*C.*' stands for *Cyclostoma*, which is deemed to be an error, as the species is listed under the heading of *Paludina*, which follows a listing of species attributed to *Cyclostoma*. Thus Férussac's intention was to assign Brard's species to the genus *Paludina*, and it is deemed to be published in the original combination '*Paludina conica*'.

2. Prévost (1821, p. 427) introduced the name *Paludina conica* for a new species from Eocene strata in the vicinity of Paris. This species has subsequently been encountered in many localities in the Paris Basin, and it has been re-described and figured several times in the subsequent literature. The name has been consistently used without divergent views about its identity, but it is threatened by the unused senior primary homonym *Paludina conica* Férussac, 1814. There is no junior objective or subjective synonym available which could act as a replacement name. Prévost's species is the subject of a taxonomic review (Kadolsky, in press), which will also address its genus attribution. Currently it is placed in the genus *Peringia* Paladilhe, 1874 in the family HYDROBIIDAE.

3. A list of references has been supplied to the Commission to prove the consistent usage of the name *Paludina conica* Prévost, 1821. However, this name has not been used often enough to fulfil the condition of Article 23.9.1.1 of the Code, i.e. to prove 25 citations in the last 50 years. Consequently, protection of this name will be sought under Article 23.9.3. The list of 59 references supplied to the Commission Secretariat, covering the period 1821 to date, proves the lasting utilisation of this name.

4. *Paludina conica* Férussac, 1814 has not been mentioned in the subsequent literature with the possible exception of Mantell (1839, p. 232, pl. 39, figs.1–2), who figured '*Bulimus conicus*' from the Paris Basin, i.e. he applied Brard's genus attribution in its latinized form, although he did not cite any author or reference, and did not provide further information on the species. No taxon has subsequently been reported from Brard's original localities which could be identified with Brard's and Férussac's species. The strata known to outcrop at the supposed original localities differ widely in age. These observations suggest that one or both of them could be erroneous. Any attempt at identification of this *Paludina conica* Férussac, 1814 would require selecting a neotype, probably from a new type locality and type stratum. Because of the antiquity of Férussac's name, it would take precedence over the junior name given by Prévost (1821). In that case nomenclatural confusion would arise, as the name '*conica*' would have to be applied to a hydrobiid species, also occurring in the Paris Basin and possibly also in Eocene formations, different from the one that had been consistently named '*conica*' in the last 193 years; and most likely it would be a senior synonym of another named hydrobiid species, of which many are known from Tertiary strata of the Paris Basin.

5. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the name *Paludina conica* Férussac, 1814 for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the name *conica* Prévost, 1821, as published in the binomen *Paludina conica*;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *conica* Férussac, 1814, as published in the binomen *Paludina conica*.

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Acknowledgement of receipt of this application was published in BZN **71**: 146.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the I.C.Z.N., Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3668

***Conus antidiluvianus* Bruguière, 1792 (Mollusca, Gastropoda, CONIDAE): proposed conservation of prevailing usage of specific name by setting aside the unidentifiable lectotype and replacing it with a neotype**

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Abstract. The purpose of this application, under Article 75.5 of the Code, is to conserve prevailing usage of the specific name *Conus antidiluvianus* Bruguière, 1792 for a Neogene fossil cone shell, widely distributed in Europe. The type locality stated in the original description was an Eocene site in the east of the Paris Basin, France, and three more unlocalised specimens were said to exist in various collections. No specimen resembling the original description has since been found in this area and all of the former syntypes are believed to be lost. The type locality has long been considered to be erroneous and the name *Conus antidiluvianus* has been almost exclusively applied to the Neogene species by most authors, until relatively recently when this name was applied instead to another Eocene fossil from the central Paris Basin, replacing the widely used name *Conus parisiensis* Deshayes, 1865. In view of the mismatch between original description and type locality, *Conus antidiluvianus* Bruguière, 1792 is strictly a nomen dubium. A recent lectotype designation of the (lost) shell originally figured did nothing to clarify the identity of this species, and the present authors have elsewhere published their intention, under Article 75.1, to set aside this lectotype in favour of a specified neotype; however, it might be considered that this would not fully comply with Article 75.3.6 and so a ruling by the Commission is requested in order to maintain stability of nomenclature for this species.

Keywords. Nomenclature; taxonomy; CONIDAE; *Conus antidiluvianus*; *Conus parisiensis*; Paris Basin; Italy; fossil cone shells.

1. In 1792 Bruguière collaborated with E. Hwass in an account of the family CONIDAE in the 'Histoire naturelle des vers' (part 10 of the 'Encyclopedie Méthodique'). Descriptions of the Recent species in this work were by Hwass, although two fossil species, *Conus antidiluvianus* and *Conus deperditus*, were also described from specimens in Bruguière's own collection without reference to Hwass. These descriptions are attributed to Bruguière (1792). The type locality for both species was Courtagnon (Département Marne) in the eastern Paris Basin, a site of former excavations in the middle Lutetian Calcaire Grossier Formation (Fritel, 1910, p.101). *Conus antidiluvianus* Bruguière, 1792 (p. 637) was accompanied by a short, three-line diagnosis in Latin, but also an extensive description in French in which the author emphasized the slenderness of the shell compared to other cone species. The shell height was given as 'deux pouces trois lignes' (c. 61 mm) with 13 whorls, each with a tuberculate central carina. The stepped spire was said to comprise exactly one third of the shell height and the shell surface was described as covered with numerous shallow transverse [i.e. spiral] striations. Of this new gastropod Bruguière had a single specimen in his own collection and three further specimens were known to him in other collections ('Je n'en connois en tout que quatres exemplaires, qui sont dispersés dans différents cabinets de Paris') although the origins of these three syntypes, if known, were not mentioned. *Conus antidiluvianus* was stated to be very rare at Courtagnon. No illustration of the new species was given in the 1792 Volume but a figure followed six years later in the atlas of the same publication (Bruguière, 1798, pl. 347, fig. 6) issued in the year of Bruguière's death (publication date after Evenhuis, 2003). That drawing shows a moderately slender cone with an acute apex, but the carina on the whorls is barely indicated and the beading of the whorls is absent on the two final, more gradually rounded whorls.

2. Lamarck (1802, p. 386) mentioned *Conus antidiluvianus* with reference to Bruguière's description and illustration. The locality given was Courtagnon, following Bruguière. At least one specimen was stated to be in Lamarck's private collection, which Hall (1964, p. 128) later interpreted as 'the type'. There is no evidence, however, that a shell in Lamarck's 'cabinet' originally was one of the syntypes described by Bruguière. Lamarck's collection was not mentioned by Bruguière. Lamarck several times referred to this species being present in his collection, but never indicated his specimen(s) as including a 'type'.

Again a few years later Lamarck (1810, p. 442), using the same name *Conus antidiluvianus*, repeated Bruguière's description in his own words, mentioning the Courtagnon locality and giving a shell height of 62 mm. This information was largely repeated in a later edition of the same work by Deshayes (in Deshayes & Milne Edwards, 1845), but accompanied by an extensive and contradictory footnote in which Deshayes stated his eventual conclusions (already expressed in Deshayes, 1837) that Bruguière's specimen had in fact been an Italian Pliocene species.

3. Brocchi (1814, pp. 291–292, pl. 2, figs 11a-c) described and figured, as *Conus antidiluvianus* Bruguière, Neogene specimens from northern Italy. Brocchi referred to Bruguière's description and illustration as 'egregiamente descritto e mediocrementemente figurato' [excellently described and moderately well illustrated], but in his text itemized a number of differences between Bruguière's description and illustration and the numerous specimens available to him from a number of Italian localities, seemingly all of Neogene age. Here he emphasized, among other differences, that the

spiral ornament described by Bruguière as covering the last whorl, was restricted in his Italian specimens to the basal part of the shell. In spite of these differences Brocchi accepted Bruguière's name for the Italian material, without noting the large difference in age between his specimens and those supposedly from the Paris Basin. Lamarck's (1802, 1810) papers were not mentioned by Brocchi.

4. Eichwald (1830, p. 222) misspelled the original name as '*antediluvianus*', which was understandable as this was the correct Latin form, but without any explicit statement of intention this has to be considered an 'incorrect subsequent spelling' (Article 33.3). This different spelling was, however, widely used in the literature until relatively recently when the original spelling was restored (e.g. Hall, 1964 and later authors). Prevailing usage of the application of this name is herein deemed to include both spellings.

5. Deshayes (1832, p. 222 and 1833, appendix 1 in Lyell, pp. 40–41) continued to consider the name *Conus antediluvianus* to refer to a French Eocene species, although he extended the records to include sites in the central Paris Basin. However, soon afterwards in the first of his monographs of Paris Basin fossils, Deshayes (1837, p. 749, pl. 98, figs 13, 14) reassessed the species and decided that Bruguière's locality data must have been in error as, in his own experiences of collecting at Courtagnon and neighbouring localities in the eastern Paris Basin, he had never heard of any cone matching Bruguière's description being found, nor any cone of that size (except for *C. deperditus* Bruguière), and he suggested that the originally figured specimen of *C. antediluvianus* must have come from Italy. No evidence to challenge this conclusion has ever been presented since. Deshayes (1837) instead attributed the name '*Conus antediluvianus* Lam.' (not of Bruguière) to a smaller species of the genus that was known to occur in the central Paris Basin [although not at Courtagnon, except for Lamarck's (1802) unsubstantiated record].

6. Edwards (1857, pp. 191, 195), commenting on Deshayes's error in applying the name to two different taxa, introduced a new name, *Conus lamarckii*, for what he described as 'the Eocene species still miscalled *C. antediluvianus*', clearly referring to the Paris Basin form described by Deshayes (1837); however, Edwards's name was, in fact, preoccupied. Deshayes (1865, p. 418), reconsidering his 1833–1837–1845 decisions, introduced the replacement name, *Conus parisiensis*, for *C. lamarckii* Edwards, 1857 non Kiener, 1847 referring to his own (1837, pl. 98, figs 13, 14) illustrations of the central Paris Basin species. As localities he mentioned Parnes, Mouchy, Chaussy and Liancourt [central Paris Basin] but not Courtagnon [eastern Paris Basin]. He also included in the synonymy '*Conus antediluvianus*, Desh. (non Brug.)' emphasizing the difference between Bruguière's species and his own.

7. Bronn (1838, p. 1119), contrary to his earlier opinion (Bronn, 1831), applied the name '*Conus antediluvianus* Deshayes' only to Paris Basin specimens, as interpreted by Deshayes (1837, p. 749) and also referred to by Deshayes (1833). Bronn also synonymized this taxon (as '*C. antediluvianus* Deshayes, 1837' with the earlier *C. concinnus* J. Sowerby, 1821, an older species from the Ypresian London Clay Formation of London, U.K., and proposed the replacement name *Conus apenninicus* Bronn, 1838 (p. 1119, pl. 42, fig. 15; spelled as '*appenninicus*' in the explanation of the plate) for shells previously referred to as *C. antediluvianus* from the Italian Pliocene. The synonymy has not been accepted by later authors. For specimens recorded by Eichwald (1830), von Buch (1830) and Dubois de Montpéreux (1831) from Central

Paratethys localities, as well as for occurrences in Algeria, the Aquitaine and Touraine regions of France and in the Vienna Basin, Bronn applied the name *Conus acutangulus* Deshayes, 1832 [non Lamarck, 1810].

8. Kohn (1992, p. 67), discussing *C. antidiluvianus*, concluded that the marked differences from any previously described species, and the diagnosis, French description, and tableau figure were consistent and adequately identified the nominal species. Consequently, Kohn designated the shell figured in the tableau (Bruguière, 1798, pl. 347, fig. 6) as the lectotype of *C. antidiluvianus* Bruguière. Contrary to Kohn's statement, the taxon was based on four specimens (not one), present in several Paris collections, and the various literature references in which the quality of Bruguière's illustration was criticized were not mentioned. Also, his statement that the type locality Courtagnon was 'erroneous' was unsubstantiated. It is thus clear that Kohn's lectotype designation does not help to clarify the confusion surrounding the identity of Bruguière's taxon.

9. Le Renard (1992) wrote notes on the name *Conus parisiensis*, stating that this species had originally been described as *Conus antidiluvianus*, 'corrected' to *antediluvianus*. He argued that it was wrong to assume that Bruguière's shell did not originate from the Courtagnon locality but to consider it to be from the Italian 'sub-apennin', as authors had done ever since Deshayes. Le Renard did not offer any proof that the original description was indeed based on a Paris Basin specimen, but he accepted the name *C. antidiluvianus* Bruguière for the form named *C. parisiensis* by Deshayes, which in his opinion might be considered a synonym or a subspecies at the most. That concept was followed in species lists published by Le Renard & Pacaud (1995, p. 122) and Pacaud & Le Renard (1995, p. 169), where *Conus (Lithoconus) antidiluvianus* Bruguière, 1792 was listed as number GA 214–6 (in place of *C. parisiensis*) in the Paris Basin Eocene fauna, and thus considered to be a senior synonym of *C. parisiensis*. It is significant to note that *C. parisiensis* Deshayes has never, to our knowledge, been recorded from Courtagnon and is absent or extremely rare at neighbouring localities in the eastern Paris Basin (e.g. Nanteuil-le-Forêt, Damery, Fleury-la-Rivière). Despite intensive collecting over the last two centuries we have only been able to locate a single small example from Damery (Leiden collection, RGM 804 953), and a similar specimen from Damery figured by Courville et al. (2012, p. 71, fig. 5) as '*Conus (Conilithes) antidiluvianus* Hwass in Bruguière, 1792'. *C. parisiensis* is, however, relatively common at a slightly younger horizon at various localities in the central Paris Basin (e.g. Châteaurouge, Mouchy, Fercourt).

10. Under the genus *Conilithes* Swainson, 1840, Tracey & Todd (1996, p. 47) discussed Le Renard's (1992) interpretation of the Paris Basin nomenclature and concluded that *Conilithes parisiensis* was the valid name for the species in question while *C. antidiluvianus* Bruguière was a nomen dubium.

11. Merle (2008, p. 220, pl. 33, figs 3, 4) included '*Conus (Lithoconus) antidiluvianus* (Bruguière 1792)' from the Lutetian and described its colour pattern as seen under UV light in specimens from Châteaurouge and Fercourt (central Paris Basin). Courville et al., 2012 figured shells from Damery as '*Conus (Conilithes) antidiluvianus*', as noted in (9) above. In applying this name to the Eocene species these authors followed Le Renard (1992), Pacaud & Le Renard (1995) and Le Renard & Pacaud (1995).

12. *Conus antidiluvianus* Bruguière, 1792 is the type species of the genus *Conilithes* Swainson, 1840, the type genus of the family CONILITHIDAE Tucker & Tenorio, 2009. CONILITHIDAE was considered a junior synonym of CONIDAE Fleming, 1822 by Bouchet et al. (2011).

13. Apart from the earliest authors detailed above, who apparently repeated the original locality data without question, the name *C. antidiluvianus* (or *antediluvianus*) has been in prevailing use for the Italian Neogene species as first applied by Brocchi (1814) by many authors for over 150 years. A list of 79 such publications has been submitted to the Secretariat. The recent usage of this name for a smaller French species from a different area and stratum to replace the well-established name *C. parisiensis*, and the rejection of the well-known name *C. antidiluvianus* in its accepted meaning for an Italian Neogene species by Le Renard (1992) and others, is considered to be prejudicial to the stability and universality of the nomenclature of these taxa. The taxonomy of the CONOIDEA is becoming increasingly important in the sciences of toxinology and pharmacology today, and the type species of a nominal family, considered by some to be extant, might well be important in this regard.

14. Bruguière's collection was acquired after his death by the Muséum National d'Histoire Naturelle of Paris (Lamy, 1930; Sherborn, 1940). In view of the fact that the illustrated specimen no longer exists according to Mermod (in Dodge, 1946) and Hall [1964: 'The type ... could not be found in the Muséum National d'Histoire Naturelle, Paris (written communication, J. Sornay, 1964) nor was it found in the Museum d'Histoire Naturelle, Geneve (written communication, E. Lanterno, 1964; and a search by the author)'], and the 1798 figure is not consistent with any known species from the French Eocene, we consider that Kohn's (1992) lectotype designation fulfilled no useful purpose and so we propose that this lectotype should be set aside and a neotype designated in its place. As the original type locality is unsubstantiated and is generally considered erroneous, it is not possible to select a specimen from the same geographical area and stratigraphical horizon as the neotype (Article 75.3.6). The proposed neotype (Janssen et al., 2014, fig. 16) is an Italian Pliocene specimen no. MSNM i 28027 in Museo Civico di Storia Naturale at Milano, Italy, with locality data Badagnano, Rio dei Carbonari, Piacenza Province, Italy (Pliocene, Piacenzian, Castell'Arquato Formation), which is consistent with Brocchi's (1814) concept of the name, the concept that has been in prevailing usage since Deshayes (1837, 1845).

15. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) To use its plenary power to set aside the lectotype of *Conus antidiluvianus* Bruguière, 1792 designated by Kohn (1992) and replace it with a neotype, specimen MSNM i 28027 in Museo Civico di Storia Naturale di Milano, Italy, as detailed in paragraph 14 above;
- (2) to place on the Official List of Specific Names in Zoology the name *antediluvianus* Bruguière, 1792, as published in the binomen *Conus antidiluvianus* and as represented by the neotype proposed in (1) above.

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Palaeontology, Museo Civico di Storia Naturale di Milano, Italy) provided information on the Brocchi collection. Luca Pedriali (*Ferrara, Italy*) made the suggested neotype specimen available from his personal collection. We also are grateful to Giulio Pavia (*Museo Regionale di Scienze Naturali, Torino, Italy*) for his much appreciated intermediation, and to two anonymous Commissioners for their useful comments.

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Case 3477

***Nesocyrtosoma* Marcuzzi, 1976 (Insecta, Coleoptera, TENEBRIONIDAE): proposed establishment of availability and designation of *Cyrtosoma inflatum* Marcuzzi, 1976 as the type species.**

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Abstract. The purpose of this application, under Articles 10.1, 13.3 and 81.1 of the Code, is to make available the genus-group name *Nesocyrtosoma* Marcuzzi, 1976 and subsequently designate *Cyrtosoma inflatum* Marcuzzi, 1976 as the type species. As this is the prevailing nomenclatural usage, this act will serve to promote stability in this West Indian genus of tenebrionid beetles.

Keywords. Nomenclature; taxonomy; Coleoptera; TENEBRIONIDAE; *Nesocyrtosoma*; *Hesiodobates*; *Cyrtosoma*; *Pachycyrtosoma*; *Serrania*; *inflatum*; darkling beetles; West Indies.

1. The name *Nesocyrtosoma* was proposed as a new subgenus of *Cyrtosoma* Perty, 1830 by Marcuzzi (1976, p. 137). Marcuzzi (1976) described the subgenus briefly and included three new species in it: *Cyrtosoma* (*Nesocyrtosoma*) *inflatum* (p. 138), *C. (N.) tumefactum* (p. 138) and *C. (N.) gebieni* (p. 139). As recently reported by Hopp & Ivie (2009, p. 2), Marcuzzi (1976) did not designate a type species in his original publication and therefore his genus-group name is unavailable. *Nesocyrtosoma*

however has been used as a valid genus-group name (as either a genus or subgenus) and attributed to Marcuzzi (1976) subsequently in at least 18 publications (Marcuzzi, 1984, p. 102, 1991, p. 235, 1999, p. 81; Doyen, 1989, p. 280; Doyen & Poinar, 1994, p. 45; Garrido & Gutiérrez, 1996, p. 281; Perez-Gelabert, 1999, p. 31 [as *Nesocyrtoma*], 2008, p. 115; Poinar et al. 2001, p. 292; Arillo & Ortuño, 2005, p. 22; Ivie et al., 2008, p. 254; Vitali, 2008, p. 11; Hopp & Ivie, 2009, p.1; Garrido & Varela, 2010, p. 32; Matthews et al., 2010, p. 633; Hopp, 2011, p. 242; Garrido & de Armas, 2012, p. 70; Peck & Perez-Gelabert, 2012, p. 27). *Nesocyrtosoma* is restricted to the West Indies and currently includes 45 valid species-group names.

2. *Hesiodobates* Kaszab & Schawaller, 1984 (p. 2) was described as a monotypic genus for one new Dominican amber fossil species (*H. antiquus* Kaszab & Schawaller, 1984, p. 3) based on a single specimen. Although *Hesiodobates* has been included in lists of taxa described in Dominican amber (e.g. Poinar, 1992, p. 154; Poinar et al., 2001, p. 205) the genus was first synonymized with *Nesocyrtosoma* by Doyen & Poinar (1994, p. 45) and recently confirmed as a synonym of *Nesocyrtosoma* in the revision of Hopp & Ivie (2009, p. 13).

3. The name *Pachycyrtosoma* was proposed as a new subgenus of *Cyrtosoma* Perty, 1830 by Marcuzzi (1999, p.81) with *C. (P.) merkli* Marcuzzi, 1999 (p. 82) as its type species by original designation. This genus-group name was used subsequently in a checklist (Perez-Gelabert, 2008, p. 115) before Hopp & Ivie (2009, p. 13) synonymized *Pachycyrtosoma* with *Nesocyrtosoma*.

4. Garrido (2003, p. 49) proposed the new genus name *Serrania* for a single species *Diaperis viridula* Zayas, 1988 (p. 93), being its type species by monotypy. The name *Serrania* was subsequently used as valid in Peck (2005, p. 150) before Hopp & Ivie (2009, p. 13) synonymized it with *Nesocyrtosoma*.

5. Strict application of the Principle of Priority would mean the recognition of *Hesiodobates* Kaszab & Schawaller, 1984 as the valid name for this group of tenebrionid beetles. However, we do not believe that such action would promote stability in the future. The name *Nesocyrtosoma* has been treated [although incorrectly] as available and valid by all authors since it was first proposed by Marcuzzi (1976) while the available genus-group names *Hesiodobates*, *Pachycyrtosoma* and *Serrania* have seldom been used as valid after they were first proposed and have been recognized as junior synonyms of *Nesocyrtosoma* in the literature. We believe that the conservation of *Nesocyrtosoma*, as it has been used to this day, is necessary in order to promote stability of usage in the future. Following Recommendation 69A (and as documented by Hopp & Ivie, 2009, p. 2), we propose the originally included species *Cyrtosoma (Nesocyrtosoma) inflatum* Marcuzzi, 1976 as the type species of *Nesocyrtosoma* because it is common within its range in Cuba and its holotype is obtainable for study at the Natural History Museum, London, U.K.

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that the name *Nesocyrtosoma* Marcuzzi, 1976 is not unavailable despite not being accompanied by a type species fixation in the original publication and designate *Cyrtosoma inflatum* Marcuzzi, 1976 as its type species;
- (2) to place on the Official List of Generic Names in Zoology the name *Nesocyrtosoma* Marcuzzi, 1976 (gender: neuter), type species *Cyrtosoma inflatum* Marcuzzi, 1976 as designated in (1) above;

- (3) to place on the Official List of Specific Names in Zoology the name *inflatum* Marcuzzi, 1976, as published in the binomen *Cyrtosoma inflatum* Marcuzzi, 1976 (specific name of the type species of *Nesocyrtosoma* Marcuzzi, 1976, as ruled in (1) above).

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Acknowledgement of receipt of this application was published in BZN **65**: 242.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the I.C.Z.N., Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3670***Chilicola vicugna* Toro & Moldenke, 1979 (Insecta, Hymenoptera, COLLETIDAE): proposed replacement of the holotype by a neotype**

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Abstract. The purpose of this application, under Article 75.5 of the Code, is to replace the damaged holotype of *Chilicola vicugna* Toro & Moldenke, 1979, which is missing its head, with a neotype. *Chilicola vicugna* is a small, solitary, stem-nesting bee occurring in north-central Chile. Species identifications in the subgenus *Chilicola* (*Heteroediscelis*) rely to a large extent upon diagnostic characters found on the head, and thus it is essential that an intact name-bearing type be made available for future study.

Keywords. Nomenclature; taxonomy; Insecta; Hymenoptera; COLLETIDAE; *Chilicola*; *Heteroediscelis*; *Chilicola vicugna*; stem-nesting bee; Atacama desert; Chile.

1. The type series of *Chilicola* (*Heteroediscelis*) *vicugna* Toro & Moldenke, 1979 (p. 120) comprises four specimens: a male holotype, a female allotype, one male and one female paratype (all originally held in H. Toro's collection). The description of this species was based on an intact specimen. However, since the publication of this description, both the holotype and the male paratype, now held at the American Museum of Natural History, New York (AMNH), have subsequently lost their heads.

2. The most useful diagnostic characters for this species are located on the head. While other important characters on the meso- and metasoma would be sufficient to diagnose some other species in this group, they are only subtly different between *C. vicugna* and its nearest geographic consubgener, *C. mavida*. As such, reliance on meso- and metasomal characters introduces considerable risk of misidentification, whereas the short malar space and first flagellomere shorter than the pedicel clearly differentiate *C. vicugna* from *C. mavida*.

3. I am preparing a thorough taxonomic revision of the subgenus *Heteroediscelis* and reference to intact type specimens is essential to the diagnoses, descriptions, and subsequent phylogenetic analyses. For this work, I have based my observations of *C. vicugna* on an alternative male specimen which has the diagnostic characters listed in the original description (Toro & Moldenke, 1979, pp. 120–121).

4. Under Article 75.5 of the Code, as the taxonomic identity of *Chilicola vicugna* cannot be verified from the existing holotype (therefore rendering its name a nomen dubium), I propose that the type status of this specimen be set aside, and that the aforementioned specimen be designated as neotype.

5. This specimen satisfies the required qualifying conditions:

(i) The proposed neotype will be designated with the sole intent of clarifying the taxonomic status of *Chilicola vicugna*;

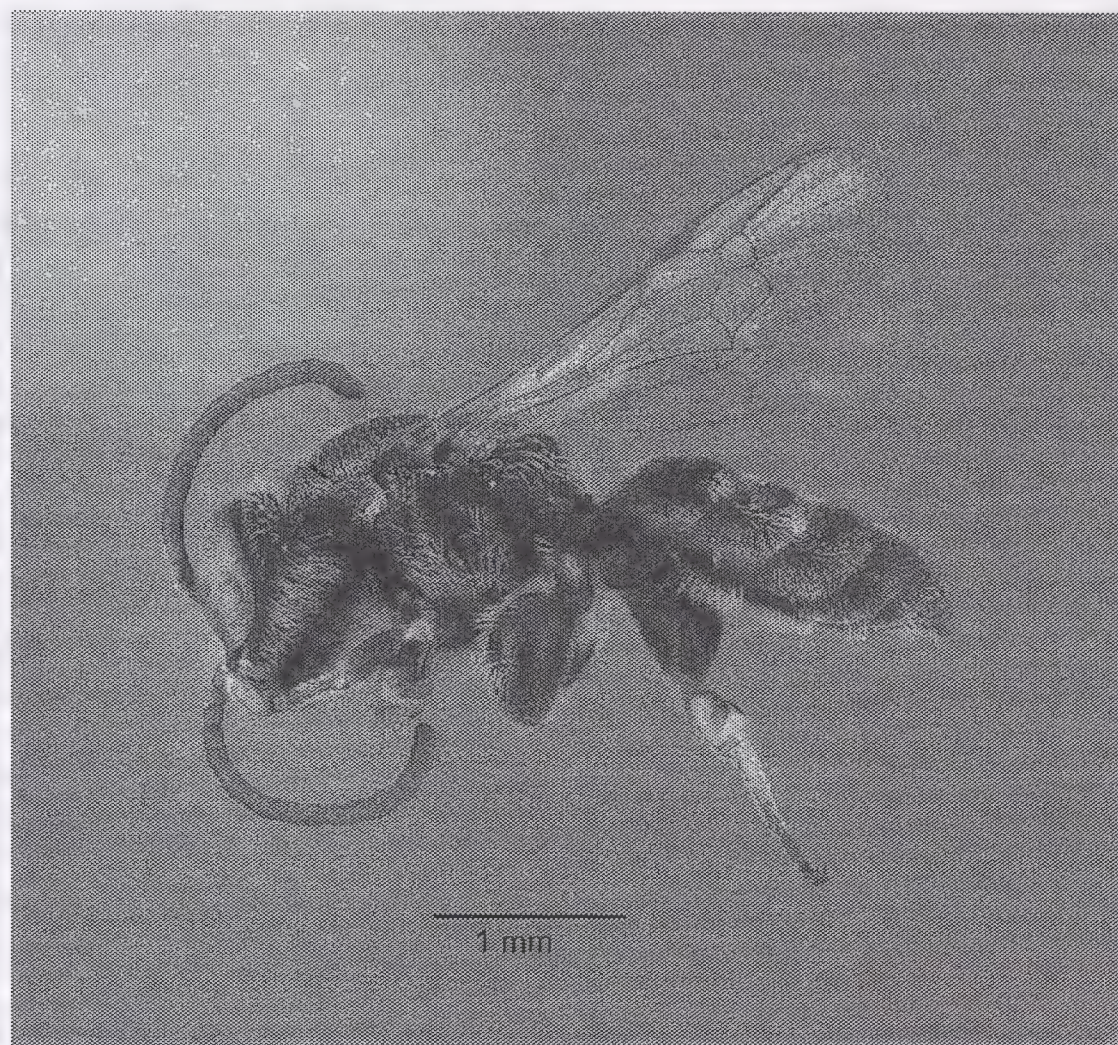


Fig. 1. *Chilicola vicugna* Toro & Moldenke 1979, lateral view of proposed neotype specimen SKM C.vcna.001. Composite image created using Helicon Focus, from stacked image slices taken with lift-operated Canon 5D Mark II camera and Canon 65mm lens.



Fig. 2. Labels attached to proposed neotype specimen SKM C.vcna.001.

(ii) The proposed neotype exhibits the characters listed above as differentiating *Chilicola vicugna* from other species in the subgenus namely, a short malar space, and first flagellomere shorter than the pedicel; these characters are missing from the existing holotype and the only male paratype;

(iii) The proposed neotype has the following data: CHILE, Elqui Prov., 26 km S Vicuña, X-5-1994, Rozen, Quinter, Ascher; SKM C.vcna.001 (AMNH);

(iv) The holotype's head has been lost or destroyed and efforts to locate the head in the containing and adjacent drawers have been fruitless; the head of the male paratype has similarly not been found;

(v) The identity of the proposed neotype was confirmed on the basis of careful comparison to the existing holotype and to its originally published description. In

particular, its malar space and first flagellomere are consistent with the original description, and all other taxonomically relevant characters are concordant with this identification;

(vi) Of the material available to me, the proposed neotype was collected nearest to the original type locality, 'Chile, Coquimbo (El Pangue)' (Toro & Moldenke, 1979, p.121), a small community approximately 22 km south of Vicuña, in Elquí Province, Coquimbo Region, Chile (estimated using Google Earth, ver. 7.1.2.2041). The proposed neotype was collected from 26 km south of Vicuña;

(vii) The proposed neotype is the property of the American Museum of Natural History, New York (AMNH); upon designation, it will be accessible for future study.

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *vicugna* Toro & Moldenke, 1979, as published in the binomen *Chilicola vicugna*, and to designate specimen SKM C.vcna.001 in the American Museum of Natural History, New York as the neotype;
- (2) to place on the Official List of Specific Names in Zoology the name *vicugna* Toro & Moldenke, 1979, as published in the binomen *Chilicola vicugna* and as defined by the neotype designated in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the I.C.Z.N., Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3664***Tipula contaminata* Linnaeus, 1758 (currently *Ptychoptera contaminata*; Insecta, Diptera): proposed conservation of prevailing usage through designation of a neotype**

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Abstract. The purpose of this application, under Article 75.6 of the Code, is to conserve the universal usage of *Tipula contaminata* Linnaeus, 1758 by setting aside all previous type fixations and designating a neotype. *Tipula contaminata* is the type species of the genus *Ptychoptera* Meigen, 1803, itself the type genus of the family PTYCHOPTERIDAE Osten Sacken, 1862. This species is found over much of Europe, and all authors subsequent to Meigen (1803) have utilized his concept of the species. However, the holotype of *Tipula contaminata* Linnaeus, 1758 represents a species of TIPULIDAE. It is proposed that a neotype be designated for *Tipula contaminata* to preserve two hundred years of common usage and ensure nomenclatural stability at the genus and family rank.

Keywords. Nomenclature; taxonomy; Insecta; Diptera; PTYCHOPTERIDAE; *Ptychoptera*; *Tipula*; *Ptychoptera contaminata*; Phantom Crane Fly; Palaeartic; Europe.

1. Linnaeus (1758, p. 586) described the species *Tipula contaminata*. The only available syntype (Linnaeus did not designate a holotype) is a member of the family TIPULIDAE Latreille, 1802. The specimen is an adult male mounted by a pin through the dorsal surface of the thorax. The complete head and abdomen remain attached to the thorax, as does one wing. All legs are detached, with only one leg glued to the determination label, on which is written '*T. contaminata*' in cursive script. No other labels are present. The material is housed at the Linnean Society of London, and the authors examined photographic images of the specimen. In his description of this species, Linnaeus (1758) referred to entry 1134 in his *Fauna Svecica* (Linnaeus, 1746, p. 333), but did not indicate in either of these works how many specimens he examined. The current syntype does not match Linnaeus's (1746) description or (1758) diagnosis, 'alis nigro maculatis, corpore nigro,' [wing maculated black, body black]. The syntype thorax has the scutum and pleurites russet brown with dark patterning. It is possible that this specimen was part of a larger series assigned to *Tipula contaminata* and this is the only specimen still existing. It is currently unknown who designated the syntype. The examination of this specimen was undertaken by the first author based on photomicrographs provided by the Linnean Society of London. The specimen is in good diagnostic condition, retaining the male genitalia and is thus distinguishable to species level with dissection, though the authors feel that a tipulid specialist should undertake this examination.



Fig. 1. Habitus of the proposed neotype of *Tipula contaminata* Linnaeus, 1758. Scale bar 1mm.

2. Fabricius (1775, pp. 749–750; 1781, p. 402) provided a diagnosis of *Tipula contaminata*, correctly referencing Linnaeus as the originator of the name. The species was also diagnosed by Fabricius (1787, p. 322), but no citation to Linnaeus was provided.

3. Meigen (1800) proposed several dozen new genera of Diptera with the description of the genus *Liriope* Meigen, 1800 closely corresponding to his later (Meigen, 1803) description of the genus *Ptychoptera*. Meigen's (1800) publication was suppressed in 1960 by the Commission in Opinion 678 (BZN 20: 339–342, 1963).

4. Meigen (1803, pp. 262–263), listed '*Tipula contaminata* Fabr.' and *Tipula albimana* Fabricius, 1787 as members of the genus *Ptychoptera* Meigen, 1803. '*Tipula contaminata* Fabr.' clearly refers to *Tipula contaminata* Linnaeus, 1758 as presented

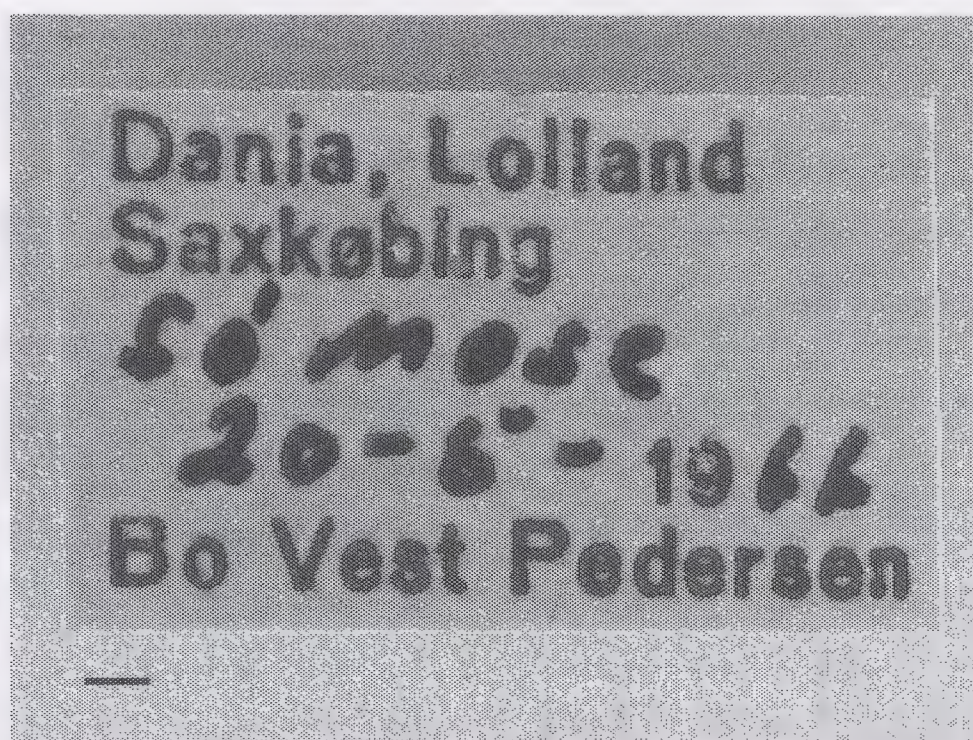


Fig. 2. Locality label of the proposed neotype of *Tipula contaminata*. Scale bar 1mm.

in Fabricius's works. Meigen's generic description (diagnosis based on the elongate first antennal flagellomere/third antennal segment) does not fit the holotype of *Tipula contaminata* Linnaeus, 1758. Specifically, 'PTYCHOPTERA. Die Fühlhörner vorgestreckt, sechszehngliederig: das erste Glied walzenförmig, kurz; das zweite becherförmig; das dritte walzenförmig, lang; die folgenden länglicht, dünnhaarig Die Flügel halb offen.' [PTYCHOPTERA. Antennae stretched forward, sixteen segmented: the first segment cylindrical, short; the second cup-shaped; the third cylindrical, long; the following oblong, fine setae. The wings half open.] In the Linnaean type specimen the first flagellomere/third antennal segment is round, and not significantly longer than the succeeding flagellomeres.

5. Latreille (1810, p. 442) subsequently designated 'Ptychoptera contaminata, Fab.' as the type species of *Ptychoptera* as a First Reviser action (Latreille). According to Article 67.7 the incorrect citation of '*Ptychoptera contaminata* Fabr.' is considered to refer to *Tipula contaminata* Linnaeus, 1758, and is a valid designation. Based on Article 69.1 and the Opinions 11 (Smithsonian Miscellaneous Publications 1938: 17–18, 1910) and 136 (Opinions and Declarations 2: 13–19, August 1939) Latreille's (1810) citation is to be accepted as a designation of *Tipula contaminata* Linnaeus, 1758 as the type of the genus.

6. Osten Sacken (1862, p. 12) proposed the family-group taxon PTYCHOPTERINA (later emended to PTYCHOPTERINAE by Schiner, 1863) within TIPULIDAE in 1862. The genera *Bittacomorpha* Westwood, 1835, *Macrochile* Loew, 1850, *Protoplasa* Osten Sacken, 1860 and *Ptychoptera*, were included; the type genus to be inferred is *Ptychoptera*.

7. Brauer (1869) and Hart (1895, pp. 189–190) considered PTYCHOPTERIDAE as a full family.

8. Meigen's concept of *Tipula contaminata* has been universally accepted (Handlirsch, 1909, p. 269, 271–272; Tonnoir, 1919, pp. 115, 119; Grünberg, 1920, pp. 76–77; Reidel, 1921, p. 147; Séguy, 1925, pp. 8–9, 11–14; Audcent, 1934, pp. 106–109, 111, 116–119; Peus, 1958, pp. 11, 15–21, 26, 28, 30, 32, 34; Brindle, 1962, p. 212–216; Tjeder, 1968, pp. 73–75; Zitek-Zwyrtek, 1971, pp. 416, 418, 420–423; Zwyrtek, 1971, pp. 36–38; Hansen, 1981, pp. 59–63; Theischinger, 1978, pp. 26; Draskovits, 1983, pp. 80, 82–83, 85; Krzemiński, 1986, pp. 105, 107–108, 117–119; Zwick, 1988, pp. 123, 128–129; Podenas, 1991, p. 155; Krzemiński & Zwick, 1993, pp. 80, 85–86; Stubbs,

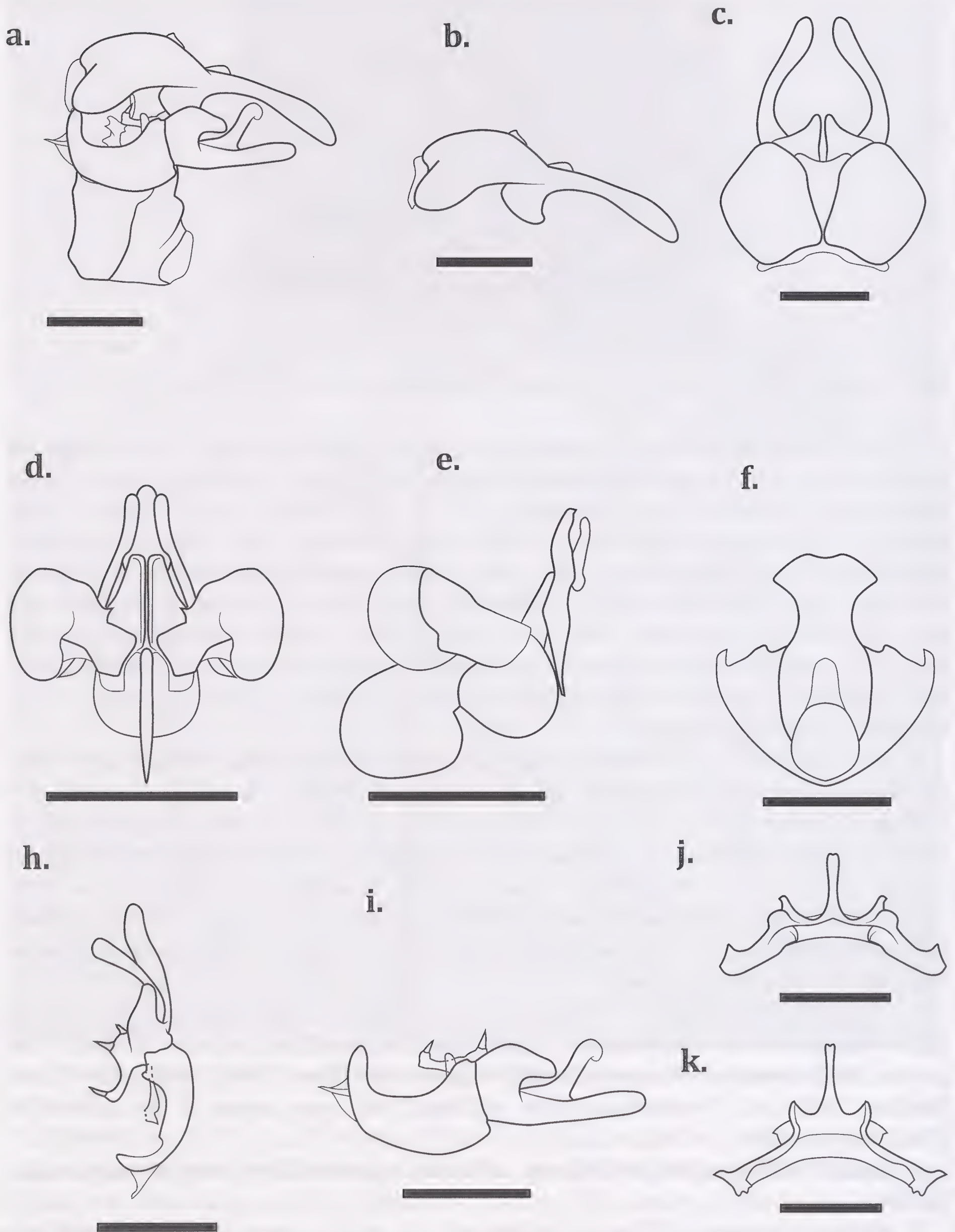


Fig. 3. Male genitalia of the proposed neotype of *Tipula contaminata*: **a.** Overall lateral view; **b.** Epandrium lateral view; **c.** Epandrium dorsal view; **d.** Aedeagus anterior view; **e.** Aedeagus lateral view; **f.** Hypandrium posterior view; **h.** Gonopod dorsal view; **i.** Gonopod dorsal view; **j.** Paramere posterior view; **k.** Paramere dorsal view. Scale bars **a–i** 0.5 mm, **j & k** 0.25 mm.

1993, pp. 7, 9, 12, 25, 28; Rozkošný, 1997, pp. 294–295; Pârvu, 2004, p. 190; Ujvárosi et al., 2011, pp. 40, 42–43, etc.). This species (*Ptychoptera* sp.) has black thoracic

sclerites as well as wings with maculated infuscation, matching the description by Linnaeus (1746, 1758).

9. The authors cannot find a single instance of the usage of *Ptychoptera contaminata* after 1800 which is definitively referable to the species represented by the Linnaean type material, and the descriptions provided by Linnaeus and Fabricius do not match the coloration of the syntype.

10. The consequences of designating the single surviving syntype as a lectotype would be placing *Ptychoptera* as a synonym of an undetermined tipulid genus and PTYCHOPTERIDAE as a subjective junior synonym of TIPULIDAE. The current concept of the taxa *Ptychoptera* and PTYCHOPTERIDAE would require new names, and *Ptychoptera* sp. would be assigned a different name than that to which it has historically been referred. There are no accepted junior synonyms of *Ptychoptera* sp., and Peus (1958 p. 40) did not refer any of the nomina dubia within the genus to *Ptychoptera contaminata*.

11. The authors propose that the Commission, under Article 75.6, set aside all previous type fixations (including the name-bearing specimen of *Ptychoptera contaminata* in the Linnean Society of London, and designate a specimen of the currently unnamed species from the collection of the Natural History Museum of Denmark as the neotype. The neotype was chosen because it is representative of the prevailing usage of the name *Ptychoptera contaminata*, for the state of preservation of the specimen and the locality in northern Europe where Linnaeus' specimen was probably collected. This neotype designation would preserve over two centuries of common usage of *Ptychoptera contaminata*, and preserve the established usage of the genus- and family-rank names *Ptychoptera* Meigen, 1803 and PTYCHOPTERIDAE Osten Sacken, 1862.

12. The authors do not anticipate any opposition among ptychopterid or tipulid taxonomists, as this measure is essentially conservative and avoids any nomenclatural changes in either taxon.

13. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all type fixations for the nominal species *contaminata* Linnaeus, 1758, as published in the binomen *Tipula contaminata*, and to designate the specimen from the Natural History Museum of Denmark (ZMUC) with the locality label data 'Dania, Lolland, Saxkøbing Sómosø 20–6-1966 Bo Vest Pedersen,' and a second label reading 'NEOTYPE: *Tipula contaminata* Linnaeus 1758, det. A Fasbender' as the neotype;
- (2) to place on the Official List of Specific Names in Zoology the name *contaminata* Linnaeus 1758, as published in the binomen *Tipula contaminata* and as defined by the neotype designated in (1) above.

Acknowledgements

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Case 3666**DICROGLOSSIDAE Dubois, 1987 (Amphibia, Anura): proposed conservation**

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Abstract. The purpose of this application, under Article 81 of the Code, is to conserve the name DICROGLOSSIDAE Dubois, 1987 for a family of frogs. Analysis of the publication where the name DICROGLOSSIDAE was first used (Anderson, 1871) showed that this was an incorrect subsequent spelling of DISCOGLOSSIDAE Günther, 1858 and therefore not an available name. This name would have been made available by Dubois (1987) except that *Dicroglossus* Günther, 1860 was then considered a junior subjective synonym of *Euphlyctis* Fitzinger, 1843 and thus unable to be the type-genus of a new family-group name according to Article 11.7.1.1 of the Code. However, DICROGLOSSIDAE is a widely used family name in the recent taxonomy of amphibians. It includes about 180 species distributed in sub-Saharan Africa and tropical Asia. We therefore ask the International Commission on Zoological Nomenclature to make the name DICROGLOSSINI Dubois, 1987, with the type genus *Dicroglossus* Günther, 1860, available by original designation of Dubois (1987, p. 57); to place the names DICROGLOSSINI Dubois, 1987 and *Dicroglossus* Günther, 1860, on the relevant Official Lists of Names in Zoology; and to place the name 'DICROGLOSSIDAE Anderson, 1871', an incorrect subsequent spelling of DISCOGLOSSIDAE Günther, 1858, on the Index of Invalid and Rejected Family-Group Names in Zoology.

Keywords. Nomenclature; taxonomy; Amphibia; Anura; DICROGLOSSIDAE; *Dicroglossus*; Africa; Asia.

1. Günther (1860, p. 158) described the frog genus *Dicroglossus* from India, with a single species, *Dicroglossus adolfi* Günther, 1860, its type species by monotypy.

2. Boulenger (1882, p. 17) considered *Dicroglossus adolfi* to be a junior subjective synonym of *Rana cyanophlyctis* Schneider, 1799 (p. 137), a synonymy that has been accepted by all recent authors, and confirmed by Ohler & Dubois (2014) after examination of the syntypes of both nominal species.

3. The generic name *Dicroglossus* was considered an invalid junior synonym of *Rana* Linnaeus, 1758 by Boulenger (1882, p. 7). This was followed by all authors until Deckert (1938, p. 138), who resurrected this name for several Asian and African ranid species. He was followed by Laurent (1950) in Africa, Dubois (1974) in Asia (as a subgenus of *Rana*) and a few other authors, until Dubois (1980, p. 158, 1981, p. 238) showed that the name *Euphlyctis* Fitzinger, 1843 (type species by original designation *Rana leschenaultii* Duméril & Bibron, 1841, another junior subjective synonym of *Rana cyanophlyctis*) had priority over *Dicroglossus*. At present, the species concerned is recognized as *Euphlyctis cyanophlyctis* (Schneider, 1799) by many authors (e.g. Frost et al., 2006; Joshy et al., 2009).

4. Anderson (1871a, p. 38) mentioned the family name DICROGLOSSIDAE, without any comment, in a list of specimens of the collections of the Indian Museum of Calcutta (now the Zoological Survey of India, Kolkata). He referred to this family a single species, *Xenophrys monticola* Günther, 1864, which at that time was referred, with its relatives, to the family DISCOGLOSSIDAE Günther, 1858 (e.g. Günther, 1859; Theobald, 1868). He did not mention the nominal species *Dicroglossus adolfi*, and he referred the species *Rana cyanophlyctis* to the family RANIDAE.

5. The name 'DICROGLOSSIDAE Anderson, 1871' was ignored by all authors for more than a century, until it was first mentioned by Dubois (1983, p. 275) and then cited in combination with its 'type-genus' *Dicroglossus* by Dubois (1984, p. 41). In Dubois (1987, p. 57), this family name was applied as valid to a tribe of the family RANIDAE Batsch, 1796, the DICROGLOSSINI, for which a short diagnosis, based on the anatomical works of Deckert (1938) and Clarke (1981), was given.

6. The name DICROGLOSSINI was subsequently upgraded to the rank of subfamily, as DICROGLOSSINAE (Dubois, 1992, pp. 309, 313; Roelants et al., 2004, p. 732), then to the rank of family, as DICROGLOSSIDAE (Frost et al., 2006, p. 241). The taxon in question is currently recognized as valid by most authors as the family DICROGLOSSIDAE Anderson, 1871 (Roelants et al., 2007; Fei et al., 2010, p. 25; Blackburn & Wake, 2011, p. 42; Vitt & Caldwell, 2014, p. 510; Pyron & Wiens, 2011, p. 579; Fei et al., 2012, p. 436). This name has been used as valid for about 30 years and has recently appeared not only in taxonomic works (including in their titles) but also in faunal lists, in texts such as the IUCN Red Lists that often form the basis of national and international legal documents, and in conservation reports (see list of references in Ohler & Dubois, 2014).

7. All these uses of the name DICROGLOSSIDAE or its lower-rank taxa rely on Dubois's (1987) interpretation of DICROGLOSSIDAE Anderson, 1871 as an available family group name, according to Article 12.2.4 of the Code, as having been based on the type-genus *Dicroglossus* Günther, 1860, a then available generic name which was presumably considered valid by Anderson (1871a). However, it should be noted that neither this generic name, nor its type-species *Dicroglossus adolfi*, was mentioned in

either of two contemporaneous works by Anderson (1871a, 1871b). Careful examination of these old texts led Ohler & Dubois (2014) to propose another interpretation and to consider that ‘DICROGLOSSIDAE’ was merely a printing error for ‘DISCOGLOSSIDAE’. As such, according to Article 33.3 of the Code, it is an incorrect subsequent spelling and it does not qualify as an available name. It should therefore not be used as valid in zoological taxonomy.

8. Strictly following the Code in this case would require replacement of the name ‘DICROGLOSSIDAE’ by the earliest available junior synonym for this taxon, i.e. either OCCIDOZYGINAE Fei, Ye & Huang, 1990 if the genus *Occidozyga* is included in the taxon (e.g. Frost et al., 2006; Pyron & Wiens, 2011), or LIMNONECTINI Dubois, 1992 if *Occidozyga* is placed in its sister-taxon (e.g. Roelants et al., 2004; Fei et al., 2010). However, as the name ‘DICROGLOSSIDAE’ has been widely used in recent decades for a well-known taxon including about 180 species, this nomenclatural change would be detrimental to communication among zoologists, and above all, between the communities of biologists and non-biologists. We therefore think this usage should be preserved.

9. The first work in which the name ‘DICROGLOSSIDAE’ was considered valid in zoological taxonomy was that of Dubois (1987). It could be appealing to consider that Dubois (1987), when he first used the name DICROGLOSSINI as valid for a newly erected tribe, mentioning its type-genus *Dicroglossus* and providing a diagnosis for this taxon, had indeed rendered the name available. But this is not possible according to Article 11.7.1.1 of the Code, which states that, to be nomenclaturally available, a new family-series (family-group) name must be ‘formed from the stem of an available generic name [. . .] then used as valid in the new family-group taxon’. As Dubois (1987) had expressly considered *Dicroglossus* as an invalid junior synonym of *Euphlyctis*, this condition is not fulfilled and ‘DICROGLOSSINI Dubois, 1987’ is not available.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to provide nomenclatural availability for the name DICROGLOSSINI Dubois, 1987, type-genus *Dicroglossus* Günther, 1860 by original designation of Dubois;
- (2) to place on the Official List of Generic Names in Zoology the name *Dicroglossus* Günther, 1860 (gender: masculine), type species *Dicroglossus adolfi* Günther, 1860 by original monotypy;
- (3) to place on the Official List of Family-Group Names in Zoology the name DICROGLOSSINI Dubois, 1987;
- (4) to place on the Index of Invalid and Rejected Family-Group Names in Zoology the name ‘DICROGLOSSIDAE Anderson, 1871’, an incorrect subsequent spelling of DISCOGLOSSIDAE Günther, 1858.

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Comment on *Siphonichnus* Stanistreet, le Blanc Smith & Cadle, 1980 (trace fossil): proposed conservation by granting precedence over the senior subjective synonym *Ophthalmichnium* Pfeiffer, 1968

(Case 3662; see BZN 71: 147–152)

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Knaust (BZN 71: 147–152) convincingly demonstrates the desirability of conserving the ichnogenus *Siphonichnus*, which is threatened by its little-used senior subjective synonym, *Ophthalmichnium*. However, he only asks for the type species of the latter genus to be placed on the Official List of Specific Names in Zoology, not that of the former genus. Inasmuch as the nomenclatural problem at hand arises from the subjective synonymy of both type species, both are equally germane and both should be treated equally. A vote should, therefore, be taken on a revised version of paragraph 5(3) of this Case, in place of or in addition to the present version. The International Commission on Zoological Nomenclature is accordingly asked:

- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *ecccaensis* Stanistreet, le Blanc Smith & Cadle, 1980, as published in the binomen *Siphonichnus ecccaensis*, the type species of *Siphonichnus* Stanistreet, le Blanc Smith & Cadle, 1980;
 - (b) *ophthalmoides* Jessen, 1950, as published in the binomen *Planolites ophthalmoides*, the type species of *Ophthalmichnium* Pfeiffer, 1968.

The Case is otherwise unclear in two respects. First, the implications of Jessen's suggestion of potential synonymy of his *Planolites ophthalmoides* with the senior name *Sabellarifex parvus* are not stated, certainly not in paragraph 5(2)(b) to which the reader is directed. Second, one sentence in paragraph 3 (viz., 'Consequently, . . . 1980.') is out of place, hindering the logical flow; it properly belongs ahead of the long sentence that now precedes it. If this is done, the following sentence, beginning '*Siphonichnus*', should be read as though it begins with 'In contrast,' or something similar.

Comment on STENODERINI Selander, 1991 (Insecta, Coleoptera): proposed emendation of spelling to STENODERAINI to remove homonymy with STENODERINI Pascoe, 1867 (Insecta, Coleoptera); and STENODERINI Pascoe, 1867: proposed precedence over SYLLITINI Thomson, 1864

(Case 3657; see BZN 71: 158–161)

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Bousquet & Bouchard (BZN 71: 158–161) propose to remove the homonymy between two family-group taxa of beetles, both called STENODERINI, by emending one of their names. They are asking the Commissioner to alter STENODERINI Selander,

1991 to STENODERAINI, and also to allow STENODERINI Pascoe, 1867 to remain in use unchanged by granting it precedence over an unused senior synonym, SYLLITINI Thomson, 1864. There is another way of handling these matters, which might appeal to those Commissioners who favour adherence to the Principle of Priority under most circumstances. Such people might prefer to vote against the proposed reversal of precedence, but be dissuaded from doing so by the fact that this would result in the invalidity of STENODERINI; no valid beetle taxon with the original spelling would remain. Instead, STENODERINI Selander can be left as is, while STENODERINAE Pascoe treated here at the originally proposed rank of subfamily is emended to STENODERUSINAE, based on the full name of its type genus. For those who accept that *Syllitus* and *Stenoderus* are con-tribal genera, this emended name will vanish into the synonymy of SYLLITINI Thomson, which is accepted as valid on the basis of Priority. Since this Case only seems to concern a handful of species in three valid genera (no more than this are mentioned), none of which is stated to be of any significance in fields other than beetle taxonomy, adherence to Priority seems reasonable. Also, having two options to vote on will help the Commission to provide a clear answer concerning which names to use if the present authors' plenary-power proposal fails to be approved (Article 81.2.4 of the Code). A new set of proposals to this end is offered here for a vote by the Commission. In any case, the family name in original paragraph 9(4)(b) must be changed from SYLLITAE to SYLLITINI, as the 'correct original spelling' should be entered into the Official List.

The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to rule that for the purposes of Article 29 of the Code, the stem of the generic name *Stenoderus* Dejean, 1821 is *Stenoderus*-;
- (2) (unchanged);
- (3) (unchanged);
- (4) to place on the Official List of Family-Group Names in Zoology the following names:
 - (a) SYLLITINI (correction by Gressit, 1959, of SYLLITAE) Thomson, 1864, type genus *Syllitus* Pascoe, 1859 (Insecta, Coleoptera, CERAMBYCIDAE);
 - (b) STENODERINI Selander, 1991, type genus *Stenoderia* Eschscholtz, 1818 (Insecta, Coleoptera, MELOIDAE);
 - (c) STENODERUSINAE Pascoe, 1867, type genus *Stenoderus* Dejean, 1821 (Insecta, Coleoptera, CERAMBYCIDAE) (spelling emended by the ruling in (1) above);
- (5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name STENODERINAE Pascoe, 1867 (spelling emended to STENODERUSINAE, as ruled in (1) above) (Insecta, Coleoptera, CERAMBYCIDAE).

Comment on *Apion longirostre* Olivier, 1807 (currently *Rhopalapion longirostre*; Insecta, Coleoptera): proposed conservation of usage of the specific name
(Case 3661; see BZN 71: 162–165)

M.G. Morris

The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.
(e-mail: mgmorris.ent@virgin.net)

I write to support the proposed conservation of the use of the name *Apion longirostre* Olivier, 1807. Although there is a remote possibility that syntypes of *Apion longirostre* Gravenhorst, 1807 exist, the identity of the taxon is currently unknown and considerable confusion would be caused were such syntypes discovered, a very unlikely event.

Rhopalapion longirostre (Olivier) is a species that is continuing to expand its already wide range and consequently the name is being increasingly quoted in faunistic works. For example, the species has recently been found in Britain (e.g. Jones, 2006; Miquel, 2011), references which may not have been included in the 100+ publications mentioned by Giusto (BZN 71: 162).

The case for conserving the current usage of the name *Apion longirostre* Olivier, 1807 seems to be particularly clear and uncontroversial.

Additional references

- Jones, R.A.** 2006. *Rhopalapion longirostre* (Olivier, 1807) (Apionidae) finally discovered in Britain. *The Coleopterist*, **15**: 93–96.
Miquel, M.E. 2011. *Rhopalapion longirostre* (Olivier) and other Apionidae found on hollyhocks in Cambridge (Cambridgeshire, VC 29). *The Coleopterist*, **20**: 73–75.

Comment on the proposed confirmation of the availability of *Spracklandus* Hoser, 2009 (Reptilia, Squamata, ELAPIDAE)
(Case 3601; see BZN 70: 234–237)

George R. Zug

Department of Vertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20013, U.S.A. (e-mail: zugg@si.edu)

Case 3601 requests the acceptance of the Australasian Journal of Herpetology, Volume 7, pages 1–15 as a valid nomenclatural publication, that is, meeting the requirements of Article 8 of the Code. This request also includes a less overt but more damaging goal and that is the validation of the entire run of the Australasian Journal of Herpetology (AJH).

Based on my reading and interpretation of the Code, the AJH does not constitute a published work, either for the purposes of zoological nomenclature or in the sense of a serial scientific publication. Its primary object appears to be the promulgation of R. Hoser's opinions and exhortations. Its tone and regular use of invectives resemble an internet blog, and match many other blogs that have the main purpose of denigrating the writer's opponents.

Specifically, AJH does not meet the criterion (Article 8.1.1.1) ‘it must be issued for the purpose of providing a public and permanent scientific record.’ Upon its inception, AJH was issued as a forum for the opinions of its author and editor. The editor, R. Hoser, did not view it as a scientific publication upon its inception and made no initial effort to meet the criteria of Articles 8.1.3 and 8.6. Efforts to meet those criteria were made subsequently and only when practicing taxonomists refused to accept the validity of the nomenclatural acts proposed in AJH.

Comments on *Antilope arabica* Lichtenstein, 1827 (currently *Gazella arabica*; Mammalia, Ruminantia): proposed conservation of part of the lectotype designated by Neumann (1906)

(Case 3660; see BZN 71: 88–94)

(1) Colin P. Groves

School of Archaeology & Anthropology, Australian National University, Canberra, ACT 020, Australia (e-mail: colin.groves@anu.edu.au).

I support the request that the status of the skull ZMB.MAM.2115 be set aside, retaining only the skin as the sole lectotype specimen of *Antilope arabica*.

Groves (1983, 1996) accepted that the skin and skull, both collected by Hemprich and Ehrenberg, belonged together and came from the Farasan Islands, thereby creating a chimera which fitted poorly into the taxonomic scheme of Arabian gazelles: the name *Gazella arabica* – the earliest available name for an Arabian gazelle – was reserved for the fictitious early 19th century Farasan gazelles, and the Arabian peninsula gazelle had to take the next available name, *Gazella cora*.

The discovery by Bärmann et al. (2013) from DNA analysis, and in the context of a thorough re-examination of the Hemprich/Ehrenberg collections, that the skin and the skull of *Antilope arabica* come from different individuals, very likely neither of them from the Farasan Islands, clarifies matters considerably. Bärmann et al. (2013) have found that the skin of MAM.2115 is indeed an Arabian peninsula gazelle, so we can now revert to the name *Gazella arabica* for that species; while the skull registered under the same number assort with a captive stock of gazelles resembling (but not identical with – see Groves, 1996) the Palestine Mountain gazelle, *Gazella gazella*. So we can now have sensible discussions about the taxonomy of Arabian gazelles, without worrying about the status of what has turned out to be an illusion.

Additional reference

Groves, C.P. 1996. Taxonomic diversity in Arabian gazelles: the state of the art. Pp. 8–39 in Greth, A., Magin, C. & Ancrenaz, M. (Eds.), *Conservation of Arabian Gazelles*, National Commission for Wildlife Conservation and Development, Riyadh.

(2) Reinhard Scharnhözl

Rathaustraße 51, D-50169 Kerpen, Germany

(e-mail: reinhard.scharnhoezl@t-online.de)

After having studied Case 3660 very intensively, I want to support the authors' view. Therefore I agree to point 12. of the article by Bärmann et al. As to the genus, this is a personal question; what will it definitely be, *Gazella* or *Nanger*?

Additional letters in support of this case were received from:

Ari Grossman, *Department of Anatomy, Midwestern University, 19555 N. 59th Avenue, Glendale, AZ 85308, U.S.A.* (e-mail: agross@midwestern.edu)

Gertrud Rößner, *Bayerische Staatssammlung für Paläontologie und Geologie, Richard-Wagner-Str. 10, D-80333 München, Germany*
(e-mail: g.roessner@lrz.uni-muenchen.de)

Ivan de Klasz, *74 avenue du Mont Alban, Bât. C, 06300 Nice, France*
(e-mail: deklasz@aol.com)

Dimitris S. Kostopoulos, *Aristotle University of Thessaloniki, Thessaloniki, Greece*

Comment on *Grallaria fenwickorum* Barrera & Bartels, 2010 (Aves, GRALLARIIDAE): proposed replacement of an indeterminate holotype by a neotype

(Case 3623; see BZN 70: 99–102, 256–269; 71: 40–43)

Fundación ProAves de Colombia

Carrera 20 N° 36–61, Bogotá D.C., Colombia (e-mail: info@proaves.org)

We refer here to comments of Claramunt et al. (BZN 71: 4043). We welcome their insights and alternative proposal of adding *fenwickorum* to the list of Official Index of Rejected and Invalid Names in Zoology, given the importance of all options being considered (ProAves, BZN 70: 256–269). However, their proposed approach is not appropriate because none of the grounds they cite result in the name *fenwickorum* Barrera & Bartels, 2010 being unavailable.

Claramunt et al. (2014) share some common authorship with Remsen et al.'s (2014) proceedings on this topic and present similar arguments to the latter authors in considering the name *Grallaria fenwickorum* Barrera & Bartels, 2010 to be unavailable.

It is worth citing Barrera et al.'s (2010) holotype designation, because this is misinterpreted by Claramunt et al. (2014):

‘The holotype is constituted solely by: a) Feather samples (total of 14 feathers from the wing, tail and body) deposited at the Museo de Historia Natural Jose Celestino Mutis, Facultad de Ciencias de la Universidad de Pamplona, tissue collection No.699 (Figure 1). b) For purposes of Article 73.1.4 of the Code, to the extent applicable, the individual depicted in Figure 1 and the Cover of this edition of *Conservación Colombiana*.

These materials are based on an adult, tape-recorded, captured and banded (with ProAves ring no. D001108), from which feather samples were taken, and plumage description was taken using Munsell (1977). These steps were taken in the field and the bird was photographed before being released alive on 11 January 2010 by LFB and LRG. The individual was captured within the Colibrí del Sol Bird Reserve, Vereda El Chuscal, Municipality of Urrao, Department of Antioquia (06°25'53.1'N 76°04'57.9'W). Elevation 3,130 meters asl. An extensive further series of photos of the individual on which the holotype is based can be downloaded at: <http://www.flickr.com/photos/proaves/sets/72157623898966966/>. Tape-recordings of

the individual on which the holotype is based can be downloaded at: <http://www.xenocanto.org/48114/>. Measurements of individual on which the holotype is based, taken in the field are set out in Table 1.

Claramunt et al. (2014) consider this two-part designation to be ‘ambiguous ... because it is not clear whether the holotype is the sample of feathers or the bird in the photograph’. The reasons for the wording formulation are set out in Gonzalez et al. (2011). Some commentators consider that descriptions in which the holotype is based on an individual in a photograph are invalid (Dubois & Nemesio, 2007; Nemesio, 2009; Claramunt et al., 2014). Others consider such designations to be valid (e.g. Wakeham-Dawson et al., 2002; Polaszek et al., 2005; Notton, 2010, the ICZN online Q&As). As set out in Gonzalez et al. (2011), part (b) ‘The form of wording used in the holotype designation section of the *fenwickorum* description only includes the photographed individual ‘to the extent’ that Article 73.1.4 applies. As a result, it works on both of these differing interpretations of the Code.’ The holotype designation also results in the feather samples being the holotype in all circumstances. Feather samples are clearly ‘part of’ an ‘animal’, within the meaning of the term ‘specimen’ in the Code’s glossary. Article 72.5 of the Code further states that ‘any part of an animal’ is eligible to be a type specimen (Gonzalez et al., 2011). The individual in the photographs is only included in the holotype if the interpretations of Dubois & Nemesio (2007), Claramunt et al. (2004) and others concerning breaches of Article 16.4 for description of this nature are incorrect because if this is the case then Article 73.1.4 cannot apply to make the illustrated individual the holotype as well.

Claramunt et al. (2014) also cite ‘ambiguity’ due to the holotype description referring to both the full bird and not the samples in some places. As noted in Gonzalez et al. (2011), the ‘description of the holotype’s plumage coloration applies equally to the bird studied as to the samples they took of tail, flight and other feathers labelled in their photograph of the samples. ... The authors went further than authors of previous similar descriptions in depicting each feather that was sampled and labelling the largest and most important of them as being taken from the primaries, secondaries (these, together being referred to as ‘flight feathers’ elsewhere), rectrix (tail feather) or breast. The holotype description section focuses more heavily on the morphology of the individual sampled rather than the feathers. This is understandable as the description ends up being more useful to people interested in what the new species looks like.’ It is the norm in ornithology to describe morphological features of a live bird in the holotype description. Claramunt et al.’s (2014) preferred re-description of the same species by Carantón & Certuche (2010, 2011) includes a discussion of colour of irides, the stomach contents (including coleopteran remains), a cloacal pretubercle, a brood patch, well-developed testes and subcutaneous fat, for which no evidence of preservation is presented. Some of the body parts giving rise to these features were presumably discarded and not preserved as the holotype but are described as the holotype.

A novel insight in Claramunt et al. (2014) is their discussion of the possibility that the series of photographs referred to in the description of *G. fenwickorum* may relate to two different individuals. Claramunt et al. (2014) concentrate on the photograph on the front cover of *Conservación Colombiana* 13, but the back cover (included in Barrera et al.’s (2010) ‘cover’) includes other photographs, including a juvenile bird in the hand (which is assumed not to be the holotype), a ringed bird in the field, a

photograph of the same individual as on the front cover and a colour photograph of the feather samples, together with habitat shots. A long series of online photographs (replicated in Gonzalez et al., 2011) were also referred to in the description. These depict the individual bird which was sampled during the course of its capture and study. According to Claramunt et al. (2014), Barrera et al. (2010) ‘simultaneously and intentionally designated two birds as ‘the holotype’’. This conclusion is contradicted by Barrera et al. (2010)’s designation of the illustrated ‘individual’ (singular) and the reference to the feather samples in Figure 1 and the (back) cover within part (b) also. The authors’ intention in part (b) to designate the individual that they sampled, which was definitively and beautifully illustrated in many photographs referred to in the description, is quite clear.

We do not comment on Claramunt et al.’s (2014)’ analysis of the photograph on the cover owing to a lack of consensus among persons referred to in the final paragraph over how to do so. Moreover, the point does not need to be addressed. Due at least to the photographs of the juvenile and various plant species in habitat shots on the back cover, we accept that more than one individual organism is illustrated on the cover of *Conservación Colombiana* 13. Neither this factor nor Claramunt et al.’s (2014)’ arguments, if correct, would make the name *fenwickorum* unavailable. Article 73.1.5 of the Code states that ‘If a subsequent author finds that a holotype which consists of a set of components . . . is not derived from an individual animal, the extraneous components may, by appropriate citation, be excluded from the holotype.’ In order to avoid any doubt on this issue, we hereby restrict the references in part (b) of Barrera et al.’s (2010)’ holotype designation to the individual animal whose feathers appear in Figure 1 and on the back cover of *Conservación Colombiana* 13, pursuant to Article 73.1.5 of the Code. This individual is definitively and unquestionably illustrated in detail in many photographs referred to in the description and reproduced in Gonzalez et al. (2011).

Finally, Claramunt et al. (2014) take the view that *fenwickorum* is unavailable due to the requirements of Article 16.4 not being fulfilled in connection with the release of the individual bird whose sampled feathers (at least) constitute the holotype. We refer to Article 73.1.4 of the Code, the relevant FAQ statement on the ICZN website and past publications of the Commission’s Secretariat on this topic (Wakeham-Dawson et al., 2002; Polaszek et al., 2005; Notton, 2010) all of which express disagreement with such interpretations of the Code. Moreover, these arguments cannot apply to part (a) of Barrera et al.’s (2010) holotype designation of feather samples.

In conclusion, we see nothing in Claramunt et al.’s (2014) discussion which affects the rationale for accepting Peterson’s proposals in Case 3623 (as amended).

These comments have been approved by ProAves’ Executive board (Junta directiva) and reviewed by its advisory council (Consejo), the American Bird Conservancy, the editors of *Conservación Colombiana* and the authors of Barrera et al. (2010).

Additional references

- O’Neill, J.P. 2006. Museum expedition to Northern Peru. LSU Museum of Natural Science. *Museum Quarterly*, **November 2006**: 8–10.

OPINION 2344 (Case 3590)

***Scarabaeus* Linnaeus, 1758, *Dynastes* MacLeay, 1819, SCARABAEINAE Latreille, 1802 and DYNASTINAE MacLeay, 1819 (Insecta, Coleoptera, SCARABAEOIDEA): usage conserved**

Abstract. The Commission has conserved under the plenary power the current usage of the widely used names *Scarabaeus* Linnaeus, 1758 for a dung rolling beetle genus, SCARABAEINAE Latreille, 1802 for the dung beetle subfamily, *Dynastes* MacLeay, 1819 for the Hercules beetle genus, and DYNASTINAE MacLeay, 1819, for the rhinoceros beetle subfamily by setting aside all types species fixations for *Scarabaeus* before Hope's (1837) designation of *Scarabaeus sacer* Linnaeus, 1758.

Keywords. Nomenclature; taxonomy; Coleoptera; SCARABAEIDAE; DYNASTINAE; *Scarabaeus*; *Dynastes*; *Dynastes hercules*; dung rolling beetles; Hercules beetles; rhinoceros beetles.

Ruling

- (1) Under the plenary power it is hereby ruled that all type species fixations for the nominal genus *Scarabaeus* Linnaeus, 1758 before that of *Scarabaeus sacer* Linnaeus, 1758 by Hope, 1837 are set aside.
- (2) The following names are hereby placed on the Official List of Generic Names in Zoology:
 - (a) *Scarabaeus* Linnaeus, 1758 (gender: masculine), type species *Scarabaeus sacer* Linnaeus, 1758, as ruled in (1) above;
 - (b) *Dynastes* MacLeay, 1819 (gender: masculine), type species *Scarabaeus hercules* Linnaeus, 1758 by subsequent designation by Kirby (1825).
- (3) The following names are hereby placed on the Official List of Specific Names in Zoology:
 - (a) *sacer* Linnaeus, 1758, as published in the binomen *Scarabaeus sacer* (specific name of the type species of *Scarabaeus* Linnaeus, 1758);
 - (b) *hercules* Linnaeus, 1758, as published in the binomen *Scarabaeus hercules* (specific name of the type species of *Dynastes* MacLeay, 1819).
- (4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
 - (a) SCARABAEIDAE Latreille, 1802, type genus *Scarabaeus* Linnaeus, 1758 (Insecta, Coleoptera);
 - (b) DYNASTIDAE MacLeay, 1819, type genus *Dynastes* MacLeay, 1819 (Insecta, Coleoptera).

History of Case 3590

An application to conserve the current usage of the widely used names *Scarabaeus* Linnaeus, 1758 for a dung rolling beetle, SCARABAEINAE Latreille, 1802 for the dung beetle subfamily, *Dynastes* MacLeay, 1819 for the Hercules beetle genus, and DYNASTINAE MacLeay, 1819, for the rhinoceros beetle subfamily was received from

Frank-Thorsten Krell (*Department of Zoology, Denver Museum of Nature & Science, Denver, CO, U.S.A.*), Tristão Branco (*Rua de Camões, 788, Porto, Portugal*) & Stefano Ziani (*Via S. Giovanni, 41/a, Meldola (FC), Italy*) on 10 December 2012. After correspondence the Case was published in BZN **69**: 182–190 (September 2012). The title, abstract and keywords of the Case were published on the Commission's website. Comments on this case were published in BZN **69**(4): 293–295; **70**(1): 46–48; **70**(3): 202–203. The Case was sent for vote on 1 March 2014.

Decision of the Commission

At the close of the voting period on 1 June 2014 the votes were as follows:

Affirmative votes – 25: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Lamas, Lim, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – none.

Pyle was on leave of absence.

Voting FOR, Alonso-Zarazaga said that the date for Jolyclerc's books was not later than 30 September 1806 and that this information had been communicated to the authors and to N. Evenhuis. Also voting FOR, Lamas said that since the family-group name for the Hercules beetles was first proposed by MacLeay (1819, p. 64) as DYNASTIDAE, this is the way in which it should be placed on the Official List of Family-Group Names in Zoology, not 'DYNASTINAE' as requested by the authors in para 12(4)(b) of their application.

Original references

The following is the original reference to the names placed on Official Lists by the ruling given in the present Opinion:

Dynastes MacLeay, 1819, *Horae Entomologicae: or essays on annulose animals*, vol. 1, part 1. S. Bagster, London, p. 22.

Scarabaeus Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1. Salvii, Holmiae, pp. 342, 345.
sacer, *Scarabaeus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1. Salvii, Holmiae, pp. 347.
hercules, *Scarabaeus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1. Salvii, Holmiae, p. 345.
 SCARABAEIDAE Latreille, 1802, *Histoire naturelle, générale et particulière des crustacés et des insectes. Tome troisième*. F. Dufart, Paris, p. 144.

DYNASTIDAE MacLeay, 1819, *Horae Entomologicae: or essays on annulose animals*, vol. 1, part 1. S. Bagster, London, p. 22.

The following is the reference to the type species designation:

Hope, W.F. 1837. The coleopterist's manual, containing the lamellicorn Insects of Linneus and Fabricius. Henry G. Bohn, London, p. 22.

OPINION 2345 (Case 3579)***Scarabaeus fimetarius* Linnaeus, 1758 (currently *Aphodius fimetarius*; Insecta, Coleoptera, SCARABAEIDAE): neotype designated**

Abstract. The Commission has conserved under the plenary power the current usage of the name *Aphodius fimetarius* (Linnaeus, 1758) for a Holarctic species of aphodiine dung beetle by setting aside all previous type fixations and designating a neotype.

Keywords. Nomenclature; taxonomy; SCARABAEIDAE; APHODIINAE; *Aphodius*; *Aphodius fimetarius*; *Aphodius pedellus*; *Aphodius foetens*; dung beetle; Recent; Holarctic.

Ruling

- (1) Under the plenary power it is hereby ruled that all previous type fixations for the nominal species *fimetarius* Linnaeus, 1758, as published in the binomen *Scarabaeus fimetarius*, are set aside and the specimen with the unique identification label BMNH{E}UIN990028 at the Natural History Museum, London is designated as the neotype;
- (2) The name *fimetarius* Linnaeus, 1758, as published in the binomen *Scarabaeus fimetarius*, and as defined by the neotype designated in (1), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3579

An application to conserve the current usage of the name *Aphodius fimetarius* (Linnaeus, 1758) by setting aside all previous type fixations and designating a neotype was received from Robert B. Angus (*School of Biological Sciences, Royal Holloway, University of London, Egham & Natural History Museum, London, U.K.*), Christine J. Wilson (*School of Biological Sciences, Royal Holloway, University of London, Egham, U.K.* & Frank-Thorsten Krell (*Department of Zoology, Denver Museum of Nature & Science, Denver, CO, U.S.A.*) on 3 November 2011. After correspondence the Case was published in BZN 69: 29–36 (March 2012). The title, abstract and keywords of the Case were published on the Commission's website. Supportive and adverse comments were published in BZN 69: 128–140; 221–229; 284–293 and 70: 48–51. The Case was sent for vote on 5 June 2014 and included two sets of proposals (original proposals (Set A), and alternative proposals (Set B) published in one of the adverse comments).

Set A (original) (BZN 69: 34)

The International Commission on Zoological Nomenclature was accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *fimetarius* Linnaeus, 1758, as published in the binomen *Scarabaeus fimetarius*, and to designate the specimen with the unique identification label BMNH{E}UIN990028 at the Natural History Museum, London, as the neotype;

- (2) to place on the Official List of Specific Names in Zoology the name *fimetarius* Linnaeus, 1758, as published in the binomen *Scarabaeus fimetarius*, and as defined by the neotype designated in (1) above.

Set B (alternative) (BZN 69: 134)

The International Commission on Zoological Nomenclature was accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for the nominal species *fimetarius* Linnaeus, 1758, as published in the binomen *Scarabaeus fimetarius*, and to designate as neotype the specimen LIN 3386 in the Linnean Collection at Burlington House, London; the specimen is labelled ‘*Aphodius pedellus* (DeGeer), C.J. Wilson det. 2001’;
- (2) to use its plenary power to suppress the following names for the purposes of the Principle of Priority, but not for those of the Principle of Homonymy:
- (a) *subluteus* Mulsant, 1842, as published as *Aphodius fimetarius* var. *subluteus*;
- (b) *nodifrons* Randall, 1838, as published in the binomen *Aphodius nodifrons*;
- (3) to place on the Official List of Specific Names in Zoology the names:
- (a) *fimetarius* Linnaeus, 1758, as published in the binomen *Scarabaeus fimetarius*, and as defined by the neotype designated in (1) above;
- (b) *cardinalis* Reitter, 1892, as published in the binomen *Aphodius cardinalis*, and as defined by the neotype designated herein [BZN 69: 132];
- (4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
- (a) *subluteus* Mulsant, 1842, as published as *Aphodius fimetarius* var. *subluteus* and as suppressed in (2)(a) above;
- (b) *nodifrons* Randall, 1838, as published in the binomen *Aphodius nodifrons* and as suppressed in (2)(b) above.

Decision of the Commission

At the close of the voting period on 5 September 2014 the votes were as follows:

Set A:

Affirmative votes – 16: Ballerio, Bouchet, Fautin, Grygier, Halliday, Harvey, Kottelat, Krell, Lamas, Ng, Pape, Patterson, Rosenberg, van Tol, Yanega and Zhou.

Negative votes – 7: Alonso-Zarazaga, Bogutskaya, Brothers, Kojima, Kullander, Winston and Zhang.

Pyle and Štys were on leave of absence.

Set B:

Affirmative votes – 5: Alonso-Zarazaga, Bogutskaya, Brothers, Kullander and Zhang.

Negative votes – 17: Ballerio, Bouchet, Fautin, Grygier, Halliday, Harvey, Kojima, Kottelat, Krell, Lamas, Ng, Pape, Patterson, Rosenberg, van Tol, Winston and Yanega.

Abstained – 1: Zhou

Pyle and Štys were on leave of absence.

Voting FOR Set A, Grygier said that Miraldo et al.'s (2014) deposition in GenBank of a COI 'barcode' for Angus et al.'s proposed neotype of *Scarabaeus fimetarius* had been the deciding factor for him, as to which nominated specimen would better serve the purpose of name-bearing type. He also commented that such barcodes should be based on name-bearing types, not possibly misidentified vouchers, for absolute assurance of their permanent validity. He also pointed out that Branco had also nominated one of the Linnaeus's syntypes as name-bearing type in his Comment (BZN 69(3): 228–229), but not by reference to any specimen number: 'male on the same type of pin as the females'. Since the metadata for the photos on the Linnean Society's website do not include the sex of the specimens, it was not clear whether or not he was referring to specimen LIN 3386, nominated as neotype by Fery (BZN 69(2): 128–136). The sex of this latter specimen is also not stated on the website, nor in Fery's Comment, while the specimen nominated by Angus et al. was clearly stated to be a male, another point in their favour, he added. Also voting FOR, Bouchet said that he was impressed by the depth and breadth of the application and comments from both sides on this Case. The strength of the proposals set A is that the neotype is a specimen with a known karyotype, and thus more likely to carry its function of name-bearing type, he added. Voting AGAINST both sets, Kojima said that this application could be solved in accordance with the Code, without involvement of the Commission. The critical point would be whether Wilson's (2001) lectotype designation was valid or not according to the Code. Also voting AGAINST both sets, Winston said that new research results as well some of the arguments in the comments indicated that the cryptic species situation for this group in North America and Europe might be different. Making the changes suggested at this point would probably not hold for the future.

Original references

The following is the original reference to the name placed on the Official List by the ruling given in the present Opinion:

fimetarius, *Scarabaeus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1. Salvii, Holmiae, p. 348.

The following is the reference to the deposition in GenBank of a COI 'barcode' for Angus et al.'s proposed neotype of *Scarabaeus fimetarius*:

Miraldo, A., Krell, F.-T., Smalén, M., Angus, R.B. & Roslin, T. 2014. Making the cryptic visible – resolving the species complex of *Aphodius fimetarius* (Linnaeus, 1758) and *Aphodius pedellus* (de Geer, 1774) (Coleoptera: Aphodiidae) by three complementary methods. *Systematic Entomology*, 39: 531–547.

OPINION 2346 (Case 3588)***Brachystoma* Meigen, 1822 (Insecta, Diptera, BRACHYSTOMATIDAE):
usage conserved**

Abstract. The Commission has conserved under the plenary power the current usage of the generic name *Brachystoma* Meigen, 1822 for a well-established genus of brachystomatid flies by setting aside all type fixations for *Brachystoma* Meigen, 1822 prior to that of *Syrphus vesiculosus* Fabricius, 1794 by Blanchard (1840).

Keywords. Nomenclature; taxonomy; Diptera; BRACHYSTOMATIDAE; *Brachystoma*; *Trichopeza*; *Syrphus vesiculosus*; *Brachystoma vesiculosum*; brachystomatid flies; worldwide.

Ruling

- (1) Under the plenary power, all type species fixations for the nominal genus *Brachystoma* Meigen, 1822 before that of *Syrphus vesiculosus* Fabricius, 1794 by Blanchard (1840) are hereby set aside.
- (2) The name *Brachystoma* Meigen, 1822 (gender: neuter), type species *Syrphus vesiculosus* Fabricius, 1794 by subsequent designation of Blanchard (1840), as ruled in (1) above, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *vesiculosus* Fabricius, 1794, as published in the binomen *Syrphus vesiculosus* (specific name of the type species of *Brachystoma* Meigen, 1822); is hereby placed on the Official List of Specific Names in Zoology.
- (4) The name BRACHYSTOMATIDAE Melander, 1908 (type genus *Brachystoma* Meigen, 1822) is hereby placed on the Official List of Family Names in Zoology.

History of Case 3588

An application to conserve the usage of the generic name *Brachystoma* Meigen, 1822 for a well-established genus of brachystomatid flies by setting aside all type fixations for *Brachystoma* Meigen, 1822 prior to that of *Syrphus vesiculosus* Fabricius, 1794 by Blanchard (1840) was received from Neal L. Evenhuis (*J. Linsley Gressitt Center for Entomological Research, Bishop Museum, Honolulu, Hawaii, U.S.A.*) and Bradley J. Sinclair (*Canadian National Collection of Insects & Canadian Food Inspection Agency, Ottawa Plant Laboratory-Entomology, Ottawa, ON, Canada*) on 11 April 2012. After correspondence the case was published in BZN 69: 113–115 (June 2012). The title, abstract and keywords of the case were published on the Commission's website. The Case was sent for vote on 1 March 2014. A majority of Commissioners voted FOR the Case (21 For, 4 Against). No comments were received on this Case.

Decision of the Commission

At the close of the voting period on 1 June 2014 the votes were as follows:

Affirmative votes – 21: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 4: Fautin, Grygier, Kojima and Lim.

Pyle was on leave of absence.

Voting FOR, Alonso-Zarazaga requested that the gender of *Brachystoma* should be indicated as neuter in the final ruling, as this is one of the examples included in Article 30.1.2 of the Code. Also voting FOR, Rosenberg said that another consideration not mentioned in the application was that *Trichopeza* is the type genus of TRICHOPEZINAE. Without action by the Commission, BRACHYSTOMATINAE would become the correct name for TRICHOPEZINAE (currently placed in BRACHYSTOMATIDAE). Also voting FOR, Yanega explained that despite the relatively small number of taxa involved in this application, and their relative obscurity, the degree of disruption that would result if the application was rejected was significant because there was ‘collateral damage’, namely, another genus, long in use, would not only lose its name, but have it replaced by a name which had always referred to a completely different set of species. He also said that we would not have tolerated the replacement, for example, of ‘*Canis*’ by ‘*Felis*’, not simply because the taxa are widely-known, but because their usage has been consistent and stable for centuries. If it were simply a matter of a single name being replaced, he might not have supported such an application (depending on other details of the Case), but this particular Case (along with Cases 3589 and 3595) involved moving a long-established name from one taxon to an entirely different taxon, and that was disruptive enough to merit the use of the Commission’s powers regardless of how widely-known the taxa involved were.

Voting AGAINST, Grygier said that the generic assignment of fewer than a dozen species of *Brachystoma* and evidently nine species (a number not mentioned in the Case, but learned by the Commission afterwards from author Evenhuis) of *Trichopeza* is at stake. Although the authors did not mention it, the subfamily name BRACHYSTOMATINAE Melander, 1908 would move along with its type genus, putting TRICHOPEZINAE Vaillant, 1981 in jeopardy. The valid subfamily name for the former BRACHYSTOMATINAE, including *Blepharoprocta*, was not clear from the Case. The significance of any of these species or genera or subfamilies outside of taxonomy is not addressed. Under these circumstances, the discovery of an overlooked type species designation seems a minor annoyance, not justifying employment of the plenary power. Also, BRACHYSTOMATIDAE was not the subject of any substantive ruling in this Case, and is not threatened whatever the outcome; it is therefore unclear, under the specifications provided in Article 78.4.2, why it should be entered in the Official List. Also voting AGAINST, Kojima said that considering that the present proposal was more or less taxonomic rather than simply nomenclatural, the following taxonomic background should have been clearly mentioned to justify the proposal: (1) how widely the assignment of *longicornis* Meigen, 1822 to *Trichopeza* Rondani, 1856 is accepted; and (2) the reason why *Trichopeza* Rondani, 1856 should be treated as a valid genus, but not as a junior subjective synonym of *Brachystoma* Meigen, 1822. Also, the proposal should have clearly mentioned the nomenclatural instability that would result from synonymizing *Trichopeza* Rondani, 1856 under *Brachystoma* Meigen, 1822.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

Brachystoma Meigen, 1822, Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Dritter Theil. Schultz-Wundermann, Hamm, p. 12.

vesiculosus, *Syrphus*, Fabricius, 1794, *Entomologia Systematica*, vol. 4. C.G. Proft, Hafniae, p. 299.

BRACHYSTOMATIDAE Melander, 1908, Family Empididae, in Williston, S.W. *Manual of North American Diptera*. Third Edition. J.T. Hathaway, New Haven, p. 222.

The following is the original reference for the type species designation cited in this ruling:

Blanchard, C.E. 1840. Vol. III. Histoire naturelle des insectes. Orthoptères, névroptères, hémiptères, hyménoptères, lépidoptères et diptères. In Laporte, F.L.N. de C., *Histoire naturelle des animaux articulés. Annelides, crustacés, arachnides, myriapodes et insectes*. Duméril, Paris. [26 December], p. 582.

OPINION 2347 (Case 3589)***Hemerodromia* Meigen, 1822 and HEMERODROMIINAE Schiner, 1862 (Insecta, Diptera, EMPIDIDAE): genus-group and family-group names conserved**

Abstract. The Commission has conserved under the plenary power the current usage of the generic name *Hemerodromia* Meigen, 1822, for a well-established genus of empidid flies by setting aside all type species fixations for *Hemerodromia* Meigen, 1822 prior to that of *Tachydromia oratoria* Fallén, 1815 by Rondani (1856).

Keywords. Nomenclature; taxonomy; Diptera; EMPIDIDAE; HEMERODROMIINAE; *Hemerodromia*; *Tachydromia oratoria*; *Chelifera*; empidid flies; worldwide.

Ruling

- (1) Under the plenary power it is hereby ruled that all type species fixations for the nominal genus *Hemerodromia* Meigen, 1822 before that of *Tachydromia oratoria* Fallén, 1815 by Rondani (1856) are set aside.
- (2) The name *Hemerodromia* Meigen, 1822 (gender: feminine), type species *Tachydromia oratoria* Fallén, 1815 by subsequent designation by Rondani (1856) is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *oratoria* Fallén, 1815, as published in the binomen *Tachydromia oratoria* (specific name of the type species of *Hemerodromia* Meigen, 1822), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3589

An application to conserve the current usage of the widely used generic name *Hemerodromia* Meigen, 1822, for a well-established genus of empidid flies was received from Neal L. Evenhuis *J. Linsley Gressitt Center for Entomological Research, Bishop Museum, Honolulu, Hawaii, U.S.A.* and Adrian R. Plant *Department of Biodiversity & Systematic Biology, National Museum of Wales, Cathays Park, Cardiff CF10 3NP, U.K.* on 12 April 2012. After correspondence the Case was published in BZN 69: 191–194 (September 2012). The title, abstract and keywords of the Case were published on the Commission's website. A comment in support was published in BZN 69(4): 295. The Case was sent for vote on 1 March 2014.

Decision of the Commission

At the close of the voting period on 1 June 2014 the votes were as follows:

Affirmative votes – 23: Alonso-Zarazaga, Ballerio, Bogutskaya, Bouchet, Brothers, Fautin, Grygier, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 2: Kojima and Lim.

Pyle was on leave of absence.

Voting AGAINST, Kojima said that considering that the present proposal is more or less taxonomic rather than simply nomenclatural, the taxonomic background should

have been clearly mentioned to justify the proposal, for example the extent of instability caused by *Chelifera* having fallen in synonymy with *Hemerodromia*.

Original references

The following are the original references to the names placed on the Official Lists by the ruling given in the present Opinion:

Hemerodromia Meigen, 1822, *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Dritter Theil.* x, Schultz-Wundermann, Hamm, p. 61.
oratoria, *Tachydromia*, Fallén, 1815, *Empidiae Sveciae. Quarum descriptionem Venia Ampl. Facult. Philos. Lund. In Lyceo Carolino d. XVII Junii MDCCCXV*, Berlingianis, Lundae p. 11.

The following is the reference to the type species designation in this ruling:

Rondani, C. 1856. *Dipterologiae Italicae prodromus. Vol: I. Genera Italica ordinis dipterorum ordinatim disposita et distincta et in familias et stirpes aggregata.* A. Stocchi, Parmae, p. 148.

OPINION 2348 (Case 3591)***Argyra* Macquart, 1834 (Insecta, Diptera, DOLICHOPODIDAE): the name conserved**

Abstract. The Commission has conserved under the plenary power the generic name *Argyra* Macquart, 1834 (Diptera, DOLICHOPODIDAE) for a widely distributed and well-established genus of dolichopodid flies by suppressing *Porphyrops* Meigen, 1824.

Keywords. Nomenclature; taxonomy; Diptera; DOLICHOPODIDAE; *Argyra*; *Porphyrops*; *Musca diaphana*; long-legged flies; cosmopolitan.

Ruling

- (1) Under the plenary power it is hereby ruled that the generic name *Porphyrops* Meigen, 1824 is suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.
- (2) The name *Argyra* Macquart, 1834 (gender: feminine), type species *Musca diaphana* Fabricius, 1775 by subsequent designation by Westwood (1840) is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *diaphana* Fabricius, 1775 as published in the binomen *Musca diaphana* (specific name of the type species of *Argyra* Macquart, 1834) is hereby placed on the Official List of Specific Names in Zoology.
- (4) The name ARGYRINI Negrobov, 1986, type genus *Argyra* Macquart, 1834 is hereby placed on the Official List of Family-Group Names in Zoology.
- (5) The name *Porphyrops* Meigen, 1824 (gender: masculine), type species *Musca diaphana* Fabricius, 1775 by subsequent designation by Curtis (1835) is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology.

History of Case 3591

An application to conserve the generic name *Argyra* Macquart, 1834 (Diptera, DOLICHOPODIDAE) for a widely distributed and well-established genus of dolichopodid flies was received from Neal L. Evenhuis (*J. Linsley Gressitt Center for Entomological Research, Bishop Museum, Honolulu, Hawaii, U.S.A.*), Daniel J. Bickel (*The Australian Museum, Sydney, NSW, Australia*) & Harold Robinson (*Department of Botany, Smithsonian Institution, Washington, DC, U.S.A.*) on 17 March 2012. After correspondence the Case was published in BZN **69**: 195–199 (September 2012). The title, abstract and keywords of the Case were published on the Commission's website. No comments were received on this Case. The Case was sent for vote on 1 March 2014.

Decision of the Commission

At the close of the voting period on 1 June 2014 the votes were as follows:

Affirmative votes – 21: Alonso-Zarazaga, Ballerio, Brothers, Fautin, Halliday, Harvey, Kojima, Kottelat, Krell, Kullander, Lamas, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 3: Bouchet, Bogutskaya and Lim.

Split vote – 1: Grygier (FOR (1), (2), (3), (5), AGAINST (4)).

Pyle was on leave of absence.

Voting AGAINST, Bouchet said that the precedence of *Porphyrops* over *Argyra* had apparently been recognized for several decades, but authors deliberately chose to ignore it. He added that the genus apparently did not include species of commercial importance or biological models, and he voted in favour of strict priority. SPLITTING his vote, Grygier said that the family-level name ARGYRINI was not the subject of any ruling in this Case; it was therefore unclear, under the specifications provided in Article 78.4.2, why it should be entered in the Official List.

Original references

The following are the original references to the names placed on the Official Lists and Indexes by the ruling given in the present Opinion:

Argyra Macquart, 1834, *Histoire naturelle des insectes. Diptères. Ouvrage accompagné de planches*. Tome première. N.E. Roret, Paris, p. 456.

ARGYRINI Negrobov, 1986, On the system and phylogeny of flies of the family Dolichopodidae (Diptera). *Entomologicheskoe Obozrenie*, **65**: 184.

diaphana, *Musca*, Fabricius, 1775, *Systema entomologiae, sistens insectorum classes, ordines, genera, species, adjectis synonymis, locis, descriptionibus, observationibus*, Officina Libraria Kortii, Flensburgi & Lipsiae, p. 783.

Porphyrops Meigen, 1824, *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Vierter Theil*. Schultz-Wundermann, Hamm, p. 45.

OPINION 2349 (Case 3595)***Ocydromia* Meigen, 1820 (Insecta, Diptera, HYBOTIDAE): usage conserved**

Abstract. The Commission has conserved under the plenary power the current usage of the generic name *Ocydromia* Meigen, 1820 for a well-established genus of hybotid flies by setting aside all type species fixations for *Ocydromia* Meigen, 1820 prior to that of *Empis glabricula* Fallén, 1816 by Westwood (1840).

Keywords. Nomenclature; taxonomy; Diptera; HYBOTIDAE; OCYDROMIINAE; *Ocydromia*; *Empis glabricula*; *Ocydromia ruficollis*; *Leptopeza*; hybotid flies; cosmopolitan.

Ruling

- (1) Under the plenary power it is hereby ruled that all type species fixations for the nominal genus *Ocydromia* Meigen, 1820 before that of *Empis glabricula* Fallén, 1816 by Westwood (1840) are set aside.
- (2) The name *Ocydromia* Meigen, 1820 (gender: feminine), type species *Empis glabricula* Fallén, 1816 by subsequent designation by Westwood (1840) as ruled in (1) above is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *glabricula* Fallén, 1816 as published in the binomen *Empis glabricula* (specific name of the type species of *Ocydromia* Meigen, 1820) is hereby placed on the Official List of Specific Names in Zoology.
- (4) The name OCYDROMIINAE Schiner, 1862 (type genus: *Ocydromia* Meigen, 1820) is hereby placed on the Official List of Family-Group Names in Zoology.

History of Case 3595

An application to conserve the current usage of the generic name *Ocydromia* Meigen, 1820 was received from Neal L. Evenhuis (*J. Linsley Gressitt Center for Entomological Research, Bishop Museum, Honolulu, Hawaii, U.S.A.*) & Bradley J. Sinclair (*Canadian National Collection of Insects & Canadian Food Inspection Agency, Ottawa Plant Laboratory Entomology, Ottawa, ON, Canada*) on 11 May 2012. After correspondence the Case was published in BZN 69: 200–202 (September 2012). The title, abstract and keywords of the Case were published on the Commission's website. No comments were received on this Case. The Case was sent for vote on 1 March 2014.

Decision of the Commission

At the close of the voting period on 1 June 2014 the votes were as follows:

Affirmative votes – 21: Alonso-Zarazaga, Ballerio, Bouchet, Brothers, Fautin, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Ng, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 4: Bogutskaya, Grygier, Kojima and Lim.

Pyle was on leave of absence.

Voting AGAINST, Grygier said that the generic assignment of eight species of *Ocydromia* and about 20 species (a number not mentioned in the Case, but learned by the Commission from author Evenhuis afterwards) of *Leptozeza* is at stake. The significance of any of these species or genera outside of taxonomy was not addressed in the Case, and under these circumstances, the discovery of an overlooked type species designation seemed to him a minor annoyance, not justifying employment of the plenary power. Also, OCYDROMIINAE was not the subject of any substantive ruling in this Case, and it does not seem to be in jeopardy whatever the outcome of the genus-level question; it is therefore unclear, under the specifications provided in Article 78.4.2, why it should be entered in the Official List. Also voting AGAINST, Kojima said that considering that the present proposal is more or less taxonomic rather than simply nomenclatural, the following taxonomic background should have been clearly mentioned to justify the proposal: (1) how widely the assignment of *ruficollis* Meigen, 1820 to *Leptozeza* Macquart, 1834 has been accepted; and (2) the reason why *Leptozeza* Macquart, 1834 should be treated as a valid genus, and not as a junior subjective synonym of *Ocydromia* Meigen, 1820. Also, the proposal should clearly mention the nomenclatural instability that would result from synonymizing *Leptozeza* Macquart, 1834 under *Ocydromia* Meigen, 1820.

Original references

The following are the original references to the names placed on the Official Lists by the ruling given in the present Opinion:

- Ocydromia* Meigen, 1820, *Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Zweiter Theil.* xxxvi, F.W. Forstmann, Aachen, p. 351.
- glabricula*, *Empis*, Fallén, 1816, *Empidiae Sveciae. Quarum descriptionem continuatam Venia Ampl. Facult. Philos. Lund. In Lyceo Carolino d. XIV Febr. MDCCCXVI.* Berlingianis, Lundae, p. 33.
- OCYDROMIINAE Schiner, 1862, *Fauna Austriaca. Die Fliegen. (Diptera). Erster Theil.* [Heft 8]. C. Gerold's Sohn, Wien, p. lii.

The following is the reference to the type species designation cited in this ruling:

- Westwood, J.O.** 1840. Order XIII. Diptera Aristotle. (Antliata Fabricius. Halteriptera Clairv.) *in: An introduction to the modern classification of insects; founded on the natural habits and corresponding organisation of the different families. Synopsis of the genera of British insects.* 158 pp. Longman, Orme, Brown, Green & Longmans, London, p. 133.

OPINION 2350 (Case 3566)***Tropidolaemus* Wagler, 1830 and *Cophias wagleri* F. Boie, 1827 (currently *Tropidolaemus wagleri*) (Reptilia, Squamata, VIPERIDAE): usage conserved**

Abstract. The Commission has conserved under the plenary power the usage of the specific name *wagleri* for a species of venomous snake by ruling that the specific name *Cophias wagleri* was established by F. Boie (1827), and by designating a neotype. The Commission has ruled that *Trigonocephalus* [*Cophias*] *wagleri* was established by Schlegel (1826) as a separate taxon and not as a replacement name.

Keywords. Nomenclature; taxonomy; Reptilia; Serpentes; *Parias*; *Tropidolaemus*; *Tropidolaemus wagleri*; *Trimeresurus (Parias) sumatranus*; snakes; Southeast Asia.

Ruling

- (1) Under the plenary power:
 - (a) it is hereby ruled that that all usages of the name *Cophias wagleri* prior to that by F. Boie (1827) are unavailable.
 - (b) it is hereby ruled that the nominal species *Cophias wagleri* (misidentified as *Coluber sumatranus*) shall not be treated as a replacement name, but as a new available name published by F. Boie (1827);
 - (c) all type fixations for *Cophias wagleri* F. Boie (1827) prior to that by Vogel et al. (2007) of specimen MNHN 1879.0708 in Muséum National d'Histoire Naturelle, Paris are hereby set aside.
- (2) The name *Tropidolaemus* Wagler, 1830 (gender: masculine), type species by monotypy *Cophias wagleri* F. Boie, 1827 as defined by the type specimen specified in (1)(c) above, is hereby placed on the Official List of Generic Names in Zoology.
- (3) The name *wagleri* F. Boie, 1827, as published in the binomen *Cophias wagleri* (specific name of the type species of *Tropidolaemus*), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3566

An application to conserve the usage of the specific name *wagleri* for a species of venomous snake by ruling that the specific name *Cophias wagleri* was established by F. Boie (1827) and designating a neotype was received from Jay M. Savage (Department of Biology, San Diego State University, San Diego, CA 92182-4614, U.S.A.) on 12 March 2011. After correspondence the case was published in BZN 69: 116–121 (June 2012). The title, abstract and keywords of the case were published on the Commission's website. The Case was sent for vote on 1 December 2013. A majority of Commissioners voted FOR the Case (22 For, 3 Against). One Commissioner abstained. No comments were received on this Case.

Decision of the Commission

At the close of the voting period on 1 March 2014 the votes were as follows:

Affirmative votes – 21: Alonso-Zarazaga, Ballerio, Bogutskaya; Brothers, Grygier, Halliday, Harvey, Kottelat, Krell, Kullander, Lamas, Minelli, Pape, Patterson, Rosenberg, Štys, van Tol, Winston, Yanega, Zhang and Zhou.

Negative votes – 3: Fautin, Kojima and Lim.

Abstained – 1: Bouchet

Ng and Pyle were on leave of absence.

Voting FOR, Grygier said that there were a number of notable errors, although only one possibly affected the main thrust of the Case, which itself was fine. Namely, proposal (2) was misworded: its last part, ‘as ruled in (1)(c) above’, is wrong, since (1)(c) did not rule on the type species or on its fixation by monotypy. He thought the intended meaning was evidently something like ‘as defined by the type specimen specified in (1)(c) above’, and that any qualification put on the name when entered in the Official List should be worded in this way. Among several other concerns, the Case could not be brought up under Articles 12 and 75.3 as stated, since neither of these refers any matter to the Commission; the correct Articles were 78.1 and 81.1. In line 5 of para. 3, ‘the now already’ seemed to be a mistranslation (syntactically misplaced, at least), he added. He also noted that the last line of para. 3 said that certain names are available by bibliographic reference (Article 12.2.1), but they are actually available as replacement names for available names (Article 12.2.3), and this same critique applied to the latter half of para. 8. Para. 4 agreed with an earlier author’s conclusion that *sumatrensis* (for *sumatranus*) is an emendation, based on Schlegel’s use of *sumatrensis* in two works. This was not one of the three instances recognized under Article 33.2.1 as the only circumstances under which a change can be deemed ‘demonstrably intentional’; therefore, contrary to the statements in paras. 4 and 13, ‘*sumatrensis*’ of Schlegel was just an incorrect subsequent spelling with no separate authorship from ‘*sumatranus*’.

Voting AGAINST, Fautin said that the Abstract stated, ‘the Commission is now asked to rule that this name denotes a separate taxon,’ but the Commission did not involve itself in taxonomy, which this statement indicated was the intent of the appeal; the authors could do that without intervention of the Commission. If the authors actually wished the Commission to decide something else, an appeal with that clearly stated should be submitted. Also voting AGAINST, Kojima said that there was no need of the plenary power of the Commission to conserve *Tropidolaemus* Wagler, 1830 and *Cophias wagleri* F. Boie, 1827. Even if it was Schlegel’s (1826a, b) intention, *Cophias wagleri* Schlegel (1826a, b) could not be treated as a replacement for *Coluber sumatranus* Raffles, 1822, unless Schlegel (1826a, b) explicitly stated that his *Cophias wagleri* was the replacement name for *Coluber sumatranus*. Schlegel’s (1826a, b) expression should be regarded as proposing a new name for the snake species that was named as *Cophias wagleri* by H. Boie in his unpublished *Erpetologie* but that was considered by Schlegel or H. Boie as having been misidentified as *Coluber sumatranus*. Referring only to an unpublished manuscript, *wagleri* Schlegel (1826a, b) was unavailable. Consequently *Cophias wagleri* F. Boie, 1827 was available and valid with the type specimen that had been described in Seba (1735). Seba’s (1735) specimen is untraced and Vogel et al.’s (2007) neotype designation is valid, he added.

ABSTAINING, Bouchet said that he understood and approved the intention of the application in terms of stability. However, the proposals on which the Commission was asked to vote were very contorted. The same result would have been obtained by declaring MNHN 1879.0708 (neotype of *Cophias wagleri* F. Boie, 1827) the neotype of *Cophias wagleri* Schlegel, 1826; this could have been done without action by the Commission. He added that he should also want to record that the name *Coluber sumatrensis* [as used in Schlegel (1826)] had no standing in nomenclature: it was not used as a valid name of a taxon, and thus was not an available name; it was unimportant to decide whether it was an incorrect subsequent spelling or an unjustified emendation.

Original references

The following are the original references to the names placed on Official Lists and Indexes by the ruling given in the present Opinion:

wagleri, *Cophias*, F. Boie, 1827, *Isis von Oken*, **20**: column 561.

Tropidolaemus Wagler, 1830, *Natürliches System der Amphibien, mit vorangehen der Classification der Säugethiere und Vögel*. J. G. Gotta, München, p. 175.

The following is the original reference for the type species designation cited in this ruling:

Vogel, G., David, G.P., Lutz, M., Van Rooijen, J. & Vidal, N. 2007. *Zootaxa*, **1644**: 12.

Notice of closure of Cases

The following Cases, for which receipts as new applications to the Commission were published though the cases were never published in full, are now closed:

Raja batis Linnaeus, 1758 and *Raia intermedia* Parnell, 1837 (currently confused under the single name *Dipturus batis*; Chondrichthyes, BATOIDEA, RAJIDAE): proposed conservation by designation of neotypes for both species. S.P. Iglésias (Case 3614; acknowledgement of receipt published in BZN 70: 1).

Phalacrocorax sulcirostris (von Brandt, 1837) (Aves, PHALACROCORACIDAE, *Phalacrocorax*): proposed conservation of the specific name *Phalacrocorax atra* Lesson, 1831. J.J.F.J. Jansen (Case 3631; acknowledgement of receipt published in BZN 70: 70).

Proposed Official Correction to Opinions 278 and 382 to amend the publication date for the genus-group names *Danaus*, *Heliconius*, *Nymphalis* and *Plebejus* as published by Kluk, 1780, rather than by Kluk, 1802. E. Balletto & S. Bonelli (Case 3659; acknowledgement of receipt published in BZN 71: 70; published as an Official Correction in BZN 71: 203–207).

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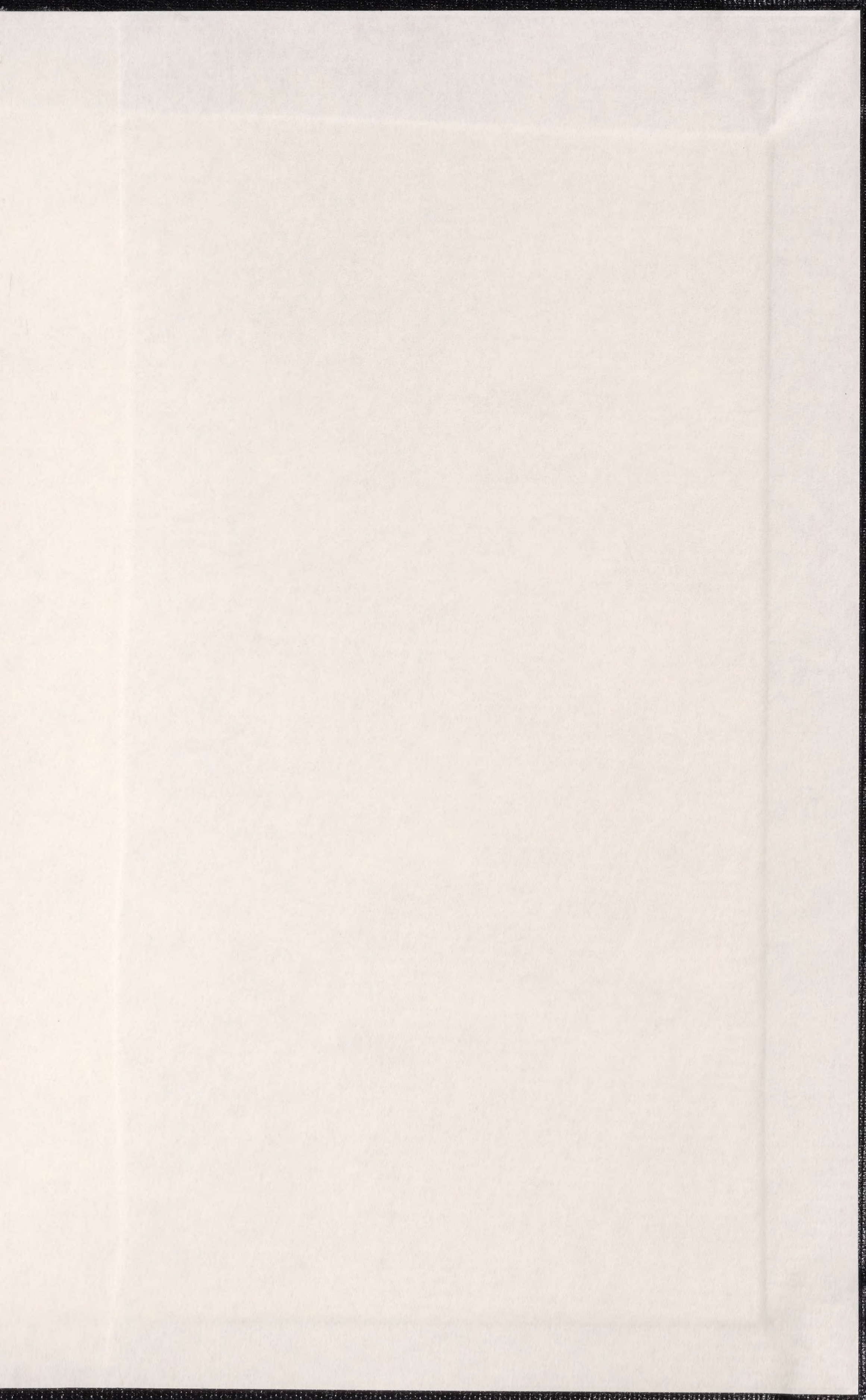
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