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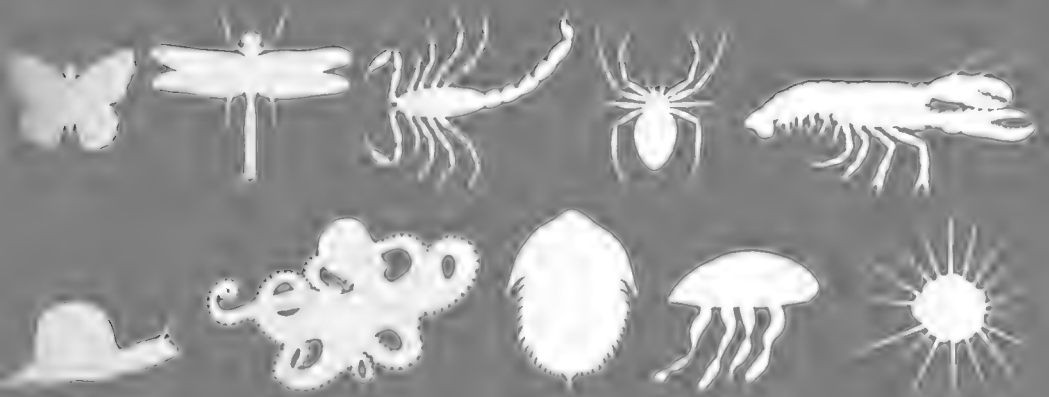

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 55, part 1 (pp. 1–72) 31 March 1998

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 54, part 4 (published on 18 December 1997). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) Gastropod family-group names on the Official List and Index: corrections of authorship and date. (Case 3056). P. Bouchet & J.-P. Rocroi).

(2) *Phrynichus* Karsch, 1879 (Arachnida, Amblypygi): proposed designation of *Phrynus ceylonicus* Koch, 1843 as the type species, and proposed conservation of the specific name of *P. ceylonicus*. (Case 3070). P. Weygoldt.

(3) *Osphromenus deissneri* Bleeker, 1859 (currently *Parosphromenus deissneri*; Osteichthyes, Perciformes): proposed replacement of holotype by a neotype. (Case 3071). P.K.L. Ng & M. Kottelat.

(4) *Crioceris* Geoffroy, 1762 and *Lilioceris* Reitter, 1912 (Insecta, Coleoptera) and other names ending in *-ceris*: proposed fixation of gender as feminine. (Case 3072). M. Schmitt.

(5) *Vespertilio pipistrellus* Schreber, 1774 and *V. pygmaeus* Leach, 1825 (currently *Pipistrellus pipistrellus* and *P. pygmaeus*; Mammalia, Chiroptera): proposed designation of neotypes. (Case 3073). G. Jones.

(6) *Eudendrium arbuscula* Wright, 1859 (Cnidaria, Hydrozoa): proposed conservation of the specific name. (Case 3074). A.C. Marques & W. Vervoort.

(7) *Cyathostomum* Molin, 1861 (Nematoda): proposed conservation of usage by designation of a neotype for the type species, *Strongylus tetracanthus* Mehlis, 1831. (Case 3075). L.M. Gibbons & J.R. Lichtenfels.

(8) *Tanaecia coelebs* Corbet, 1941 (Insecta, Lepidoptera): proposed conservation of the specific name. (Case 3076). T. Yokochi.

(9) GLIRIDAE Thomas, 1897 (Mammalia, Rodentia): proposed conservation. (Case 3077). A. Gentry.

(d) *Rulings of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

The International Commission on Zoological Nomenclature and its publications

The International Commission on Zoological Nomenclature was established in 1895 by the third International Congress of Zoology, and at present consists of 26 zoologists from 19 countries whose interests cover most of the principal divisions (including palaeontology) of the animal kingdom. The Commission is under the auspices of the International Union of Biological Sciences (IUBS), and members are elected by secret ballot of zoologists attending General Assemblies of IUBS or Congresses of its associated bodies such as the International Congress of Systematic and Evolutionary Biology (ICSEB). Casual vacancies may be filled between Congresses. Nominations for membership may be sent to the Commission Secretariat at any time.

The International Code of Zoological Nomenclature has one fundamental aim, which is to provide 'the maximum universality and continuity in the scientific names of animals compatible with the freedom of scientists to classify all animals according to taxonomic judgements'. The current (Third) Edition was published in 1985 by the International Trust for Zoological Nomenclature, acting on behalf of the Commission. A Fourth Edition is in course of preparation and will be published in 1998; its provisions will come into effect on 1 January 1999. A notice of some of the new provisions, particularly affecting the availability of new names, was published in BZN **54**: 216–218 (December 1997) and on the World Wide Web at http://www.iczn.org.

Observance of the rules in the *Code* enables a biologist to arrive at the valid name for any animal taxon between and including the ranks of subspecies and superfamily. Its provisions can be waived or modified in their application to a particular case when strict adherence would cause confusion; however, this must never be done by an individual but only by the Commission, acting on behalf of all zoologists. The Commission takes such action in response to proposals submitted to it; applications should follow the instructions in the *Bulletin*, and assistance will be given by the Secretariat.

The Bulletin of Zoological Nomenclature is published four times each year. It contains applications for Commission action, as described above; their publication is an invitation for any person to contribute comments or counter-suggestions, which may also be published. The Commission makes a ruling (called an Opinion) on a case only after a suitable period for comments. All Opinions are published in the *Bulletin*, which also contains articles and notes relevant to zoological nomenclature; such contributions are invited and should be sent to the Secretariat.

The Commission's rulings are summarised in *The Official Lists and Indexes of Names and Works in Zoology*; a single volume covering the period 1895 1985 was published in 1987. Copies may be obtained from the Secretariat.

In addition to dealing with applications and other formal matters, the Commission's Secretariat is willing to help with advice on any question which may have nomenclatural (as distinct from purely taxonomic) implications.

The International Trust for Zoological Nomenclature is a charity (not-for-profit company) registered in the U.K. The Secretariat of the Commission is based in London, and the Trust is established there to handle the financial affairs of the Commission. The sale of publications covers less than half of the costs of the service given to zoology by the Commission. Support is given by academies, research councils, institutions and societies from a number of countries, and also by individuals; despite this assistance the level of income remains a severe restraint. Donations to the Trust are gratefully received and attention is drawn to the possible tax advantage of legacies.

For a more detailed discussion of the Commission and its activities and publications see BZN **48**: 295–299 (December 1991). A Centenary History of the Commission – *Towards Stability in the Names of Animals* describes the development of zoological nomenclature and the role of the Commission; it was published in 1995 and is obtainable from the Secretariat.

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International Trust for Zoological Nomenclature

The International Code of Zoological Nomenclature

The new (4th) edition of the International Code of Zoological Nomenclature will be published in 1998. A notice about some new provisions in it was published in BZN **54**: 216-218. Meanwhile, copies of the 3rd edition (published 1985) are still available. Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) *or* A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu).

The cost is £19 or $35 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £15 or $29. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 x 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to 1995. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) *or* A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu).

The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

Official Lists and Indexes of Names and Works in Zoology

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works (about 9,900) on which the Commission has ruled since it was set up in 1895, up to 1985. A supplement giving the 946 names and five works added in the five years up to 1990 is also available.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) *or* A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu).

The cost is £60 or $110 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £40 or $75. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

Case 3011

Strombidium gyrans Stokes, 1887 (currently *Strobilidium gyrans*) and *Strobilidium caudatum* Kahl, 1932 (Ciliophora, Oligotrichida): proposed conservation of the specific names

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Abstract. The purpose of this application is to conserve the specific name of one fresh water ciliate (*Strombidium gyrans* Stokes, 1887) that has frequently been used as an indicator for the ecological monitoring of water quality and of another (*Strobilidium caudatum* Kahl, 1932) that was given to a rare but characteristic brackish water species. Both names are threatened by *Strombidion caudatum* Fromentel, 1876, which is probably a senior synonym of the first and is a senior secondary homonym of the second. *Strombidion caudatum* Fromentel had not been used for almost a century until its reintroduction by Foissner (1987); its suppression is proposed.

Keywords. Nomenclature; taxonomy; Protozoa; Ciliophora; Oligotrichida; *Strobilidium gyrans*; *Strobilidium caudatum*; fresh water and brackish water ciliates.

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1. In the last quarter of the 19th century the following three names were established for fresh water ciliates:

Strombidion caudatum Fromentel, 1876 (p. 264, pl. 24, figs. 7–8);

Strombidium claparedi Kent, 1882 (p. 634, pl. 32, fig. 46);

Strombidium gyrans Stokes, 1887 (p. 37, pl. 5, figs. 11–12).

2. The last name came to be widely used, and in 1932 Kahl (p. 510) redescribed the species and placed the other two names (*Strombidion caudatum* Fromentel and *Strombidium claparedi* Kent) in synonymy, stating that he believed all three names to refer to the same species. He rejected the two senior names on the grounds, apart from usage, that their descriptions were inadequate to determine with certainty which species they referred to. He noted that Stokes had seen Kent's publication and had been unable to recognize his own specimens as belonging to Kent's species. Kahl recommended that *gyrans* should be the name applied to the species since this was the name that had been generally accepted; he assigned the species to the genus *Strobilidium* Schewiakoff, 1892. In the same paper, Kahl (1932, p. 511) described a new species, *Strobilidium caudatum*, from the Kiel Bight.

3. The two specific names published by Fromentel and Kent were unused for almost a century, while the name *Strobilidium gyrans* has always been widely used both in systematic papers and in ecological publications and faunal lists. However, in 1987 Foissner (p. 225) rejected the name *Strobilidium gyrans* Stokes, 1887 in favour of the senior probable synonym, *Strombidion caudatum* Fromentel, 1876, on the grounds that the descriptions by both Stokes and Fromentel were superficial and that Kahl should not have deprived Fromentel of priority in naming the species. In this

Foissner was correct as far as priority is concerned, but the reintroduction of *Strobilidium caudatum* (Fromentel) would cause considerable confusion due to the continued widespread use of the name *Strobilidium gyrans* both prior to Foissner's action (e.g. Kaltenbach, 1960; Deroux, 1974; Foissner & Adam, 1979; Haslauer & Pichler, 1979; Zharikov, 1987) and since (e.g. Heckman, 1990; Jack, Wickham, Toalson & Gilbert, 1993; Wickham, Gilbert, & Berninger, 1993). A further six references by seven authors in the last 12 years are held by the Commission Secretariat. To use the name *Strobilidium caudatum* (Fromentel) for the taxon widely known as *Strobilidium gyrans* would add to the confusion. An additional area of confusion relates to the name *Strobilidium caudatum* established by Kahl (1932) for a different brackish water species. It was not until 1992 that Petz & Foissner pointed out (p. 160) that the reintroduction of the specific name *caudatum* Fromentel in the hitherto unused combination *Strobilidium caudatum* would make *Strobilidium caudatum* Kahl a junior secondary homonym; they renamed it *Strobilidium kahli*. I propose the suppression of the names *Strobilidium caudatum* (Fromentel) and *Strombidium claparedi* Kent in order to maintain the usage of the two names *Strobilidium gyrans* (Stokes) and *Strobilidium caudatum* Kahl.

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

(1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy
   (a) *caudatum* Fromentel, 1876, as published in the binomen *Strombidion caudatum*;
   (b) *claparedi* Kent, 1882, as published in the binomen *Strombidium claparedi*;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *gyrans* Stokes, 1887, as published in the binomen *Strombidium gyrans*;
   (b) *caudatum* Kahl, 1932, as published in the binomen *Strobilidium caudatum*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
   (a) *caudatum* Fromentel, 1876, as published in the binomen *Strombidion caudatum* and as suppressed in (1)(a) above;
   (b) *claparedi* Kent, 1882, as published in the binomen *Strombidium claparedi* and as suppressed in (1)(b) above;
   (c) *kahli* Petz & Foissner, 1992, as published in the binomen *Strobilidium kahli* (a junior objective synonym of *Strobilidium caudatum* Kahl, 1932).

References

Deroux, G. 1974. Quelques précisions sur *Strobilidium gyrans* Schewiakoff. *Cahiers de Biologie Marine*, **15**: 571–588.

Foissner, W. 1987. Miscellanea nomenclatorica Ciliatea (Protozoa: Ciliophora). *Archiv für Protistenkunde*, **133**: 219–235.

Foissner, W. & Adam, H. 1979. Die Bedeutung der stagnierenden Kleingewässer im alpinen Ökosystem. *Jahrbuch der Universität Salzburg*, **1977–1979**: 147–158.

Fromentel, E. 1876. *Études sur les microzoaires ou infusoires proprement dits comprenant de nouvelles recherches sur leur organisation, leur classification et la description des espèces nouvelles ou peu connues*. Pp. 193–364. Masson, Paris.

Haslauer, J. Jr. & Pichler, W. 1979. Ein Beitrag zur Biologie und Hydrochemie eines stark belasteten Fliessgewässers (Gersbach 1977). *Bericht des Naturwissenschaftlich-Medizinischen Vereins in Salzburg*, **3–4**: 51–81.

Heckman, C.W. 1990. The fate of aquatic and wetland habitats in an industrially contaminated section of the Elbe floodplain in Hamburg. *Archiv für Hydrobiologie* (*Supplement 75*) *Untersuchungen des Elbe-Aestuars*, **6**: 133–250.

Jack, J.D., Wickham, S.A., Toalson, S. & Gilbert, J.J. 1993. The effect of clays on a freshwater plankton community: an enclosure experiment. *Archiv für Hydrobiologie*, **127**: 257–270.

Kahl, A. 1932. Urtiere oder Protozoa. I. Wimpertiere oder Ciliata (Infusoria) 3. Spirotricha. Pp. 399–650 *in* Dahl, M. & Bischoff, H. (Eds.). *Die Tierwelt Deutschlands*, 25. Fischer, Jena.

Kaltenbach, A. 1960. Ökologische Untersuchungen an Donauciliaten. *Wasser Abwasser, Wien*, **1960**: 151–174.

Kent, W.S. 1882. *A manual of the Infusoria*, vol. 2. Pp. 473–913. Bogue, London.

Petz, W. & Foissner, W. 1992. Morphology and morphogenesis of *Strobilidium caudatum* (Fromentel), *Meseres corlissi* n. sp., *Halteria grandinella* (Müller), and *Strombidium rehwaldi* n. sp., and a proposed phylogenetic system for oligotrich ciliates (Protozoa, Ciliophora). *Journal of Protozoology*, **39**: 159–176.

Stokes, A.C. 1887. Notices of new American fresh-water Infusoria. *Journal of the Royal Microscopical Society*, **1887**: 35–40.

Wickham, S.A., Gilbert, J.J. & Berninger, U.-G. 1993. Effects of rotifers and ciliates on the growth and survival of *Daphnia*. *Journal of Plankton Research*, **15**: 317–334.

Zharikov, V.V. 1987. A new species of fresh-water infusorians (Oligotrichida) from waters of Armenia. *Zoologicheskii Zhurnal*, **66**: 930–932. [In Russian; English abstract].

Case 3055

Osilinus Philippi, 1847 and *Austrocochlea* Fischer, 1885 (Mollusca, Gastropoda): proposed conservation by the designation of *Trochus turbinatus* Born, 1778 as the type species of *Osilinus*

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Abstract. The purpose of this application is to conserve the accustomed understanding and usage of the name *Osilinus* Philippi, 1847 by the designation of *Trochus turbinatus* Born, 1778 as the type species, thereby conserving also the name *Austrocochlea* Fischer, 1885 (family TROCHIDAE). At present *Monodonta constricta* Lamarck, 1822 is the valid type species of both *Osilinus* and *Austrocochlea*. The name *Osilinus* is used either at generic rank or for a subgenus of *Monodonta* Lamarck, 1799 and relates to an eastern Atlantic group of species which range from the south-western British Isles to Angola, the Canary Islands, Madeira and the Mediterranean. The name *Austrocochlea* is widely used for species known from Southern Australia, Tasmania, New Caledonia, and New Zealand if *Fractarmilla* Finlay, 1926 is accepted as a synonym. Both genera include species that are important components of the intertidal fauna of temperate rocky shores.

Keywords. Nomenclature; taxonomy; Gastropoda; TROCHIDAE; molluscs; *Osilinus*; *Austrocochlea*; *Osilinus turbinatus*; *Austrocochlea constricta*.

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1. *Monodonta* Lamarck, 1799 is based on the Indo-Pacific species *Trochus labio* Linnaeus, 1758 (type species by monotypy); it is characterized by a non-nacreous inner labial varix and a very strong columellar tooth, unusual among the tribe GIBBULINI in which it is classified (see Hickman & McLean, 1990, p. 97). Related species lacking such an inner labial varix and with a weakly developed tooth or bulge on the columella have been separated at generic or subgeneric rank.

2. Philippi (February 1847, pp. 19–20) introduced the genus *Osilinus* in a long sentence, which reads (in translation) 'next to [the true *Monodonta*] we can find a construction, in a species-group starting from *M. constricta*, [*M.*] *taeniata*, and going into *M. fragarioides*, *Trochus crassus* . . . where instead of the clearly defined tooth of *T. labio*, there is only a small bulge . . . and I propose therefore the denomination *Osilinus*, from a species here belonging and named *Osilin* by Adanson [1757] . . .'. The first two of the species originally included are Australian, the remainder are eastern Atlantic or Mediterranean.

3. Herrmannsen (September 1847, p. 167) designated the Australian species *Trochus constrictus* 'Macleay' (a species introduced as '*Monodonta constricta* Macleay' by Lamarck, 1822, p. 36) as the type species of *Osilinus*. This designation has been overlooked and subsequent authors have followed Wenz (1938, p. 229) who designated the Atlantic species *Trochus turbinatus* Born, 1778 (p. 340) as the type species, although Philippi (1847) had not included *T. turbinatus* in his genus *Osilinus*.

4. *Trochocochlea* is a pre-Linnaean name originating with Klein (1753) and first mentioned by Herrmannsen (1849, p. 616) without description, previous reference or included species. The name was made available by Mörch (1852, p. 154) who included *Trochocochlea constricta* (Lamarck) and *T. turbinata* (Born) among other species and cited *Osilinus* as a synonym. We could not trace a type designation earlier than that of Bucquoy, Dautzenberg & Dollfus (1885, p. 401), who selected *Trochus turbinatus* Born, 1778 as type species. The name *Trochocochlea* thus relates to the northeastern Atlantic-Mediterranean species-group.

5. Monterosato (1884, p. 43) established *Caragolus* for Mediterranean species included in *Trochocochlea* and noted that the latter should be used for 'another group of tropical species'. In his review of Monterosato's (1884) work, Crosse (1885, p. 140) designated *Monodonta turbinata* 'Bonnani' (a typographical error for Born in Monterosato, 1884) as the type species of *Caragolus*.

6. Fischer (1885, p. 820) introduced *Austrocochlea* for a separate Australian species-group originally included in *Osilinus*; *Monodonta constricta* Lamarck, 1822 is the type species by monotypy. Fischer characterised the genus as having 'Tubercule de la base de la columelle non tronqué, peu saillant'. The name *Austrocochlea* has been, and continues to be, widely used, and has appeared in many publications in the fields of ecology (see, for example, Mapstone, Underwood & Creese, 1984; Little, 1989; Petraitis, 1992; Astles, 1993; Anderson & Underwood, 1997) and ecotoxicology (Alsanullah & Williams, 1989; Walsh, Dunstan & Murdoch, 1995). The genus includes a number of abundant littoral species in Australia (see Parsons, 1996).

7. Pilsbry (1889, p. 92) used the name *Osilinus* for a section of *Monodonta* to include the European species, initiating the current usage (see Nordsieck, 1974; Ghisotti & Melone, 1975; Cesari & Pranovi, 1989, 1990; Hickman & McLean, 1990; Sabelli, Giannuzzi-Savelli & Bedulli, 1990; Cossignani, Cossignani, Di Nisio & Passamonti, 1992). Nordsieck (1974, pp. 21–23) used *Osilinus* at generic rank and established two new subgenera. Herbert (1994) tentatively assigned the Indian Ocean species *Trochus kotschyi* Philippi, 1849 to *Osilinus*.

8. We do not favour the view that a valid nomenclatural act should be set aside simply because it has been overlooked. However, recognition of Herrmannsen's (1847) type species designation for *Osilinus* would render the name *Austrocochlea* a junior objective synonym of *Osilinus*; the latter name would become valid for the Australian species and another name would be required for those from the eastern Atlantic. The name *Austrocochlea* is widely accepted and its use for Australian species encompasses publications in many areas of invertebrate biology. We propose that *Trochus turbinatus* Born, 1778 be designated the type species of *Osilinus*, thereby maintaining the current use of *Austrocochlea* for the Australian species and of *Osilinus* for the European and West African ones. This designation will render the names *Trochocochlea* Mörch, 1852 and *Caragolus* Monterosato, 1884 junior objective synonyms of *Osilinus*.

9. We have consulted with colleagues from Australia and New Zealand (Dr Winston Ponder of Sydney, Dr Bruce Marshall of Wellington, and Dr Fred Wells of Perth) and we are all agreed on the desirability of conserving the name *Austrocochlea*.

10. *Neptheusa* Leach, 1852 (pp. 146, 174) was published in the same year as Mörch's work but has never been used subsequently; the type species of the genus (by monotypy) *Trochus crassus* Pulteney, 1799 (a junior synonym of *Osilinus lineatus* (da Costa, 1778)) is a common northeastern Atlantic species congeneric with *T. turbinatus*. *Neptheusa* is a subjective synonym of *Osilinus* which does not threaten current usage and might be required in the future. It was misspelled '*Nephteusa*' by Monterosato (1888, p. 178). *Gibbium* Gray, 1842 (type species: *T. crassus* Pulteney, 1799, by monotypy) is preoccupied by *Gibbium* Scopoli, 1777 (Coleoptera) and need not be further considered. *Trochius* Leach in Gray, 1847 (p. 270) first appeared in the publication (Gray, 1847a) of Leach's manuscript on the classification of the British Mollusca, with *Trochus crassus* as the sole included species, but is considered to be a misspelling of *Trochus* Linnaeus, 1758, one of the numerous misspellings transcribed from Leach's manuscript (e.g. '*Thicolia*' for *Tricolia* Risso, 1826, '*Aphorais*' for *Aporrhais* da Costa, 1778 and '*Simia*' for *Simnia* Risso, 1826). '*Trochius*' was nevertheless mentioned by Gray (1847b, p. 145) as a synonym of *Labio* Oken, 1815.

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

(1) to use its plenary powers to set aside all previous type fixations for the nominal genus *Osilinus* Philippi, 1847 and to designate *Trochus turbinatus* Born, 1778 as the type species;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Osilinus* Philippi, 1847 (gender: masculine), type species by designation under the plenary powers in (1) above *Trochus turbinatus* Born, 1778;
   (b) *Austrocochlea* Fischer, 1885 (gender: feminine), type species by monotypy *Monodonta constricta* Lamarck, 1822;

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *turbinatus* Born, 1778, as published in the binomen *Trochus turbinatus* (specific name of the type species of *Osilinus* Philippi, 1847);
   (b) *constricta* Lamarck, 1822, as published in the binomen *Monodonta constricta* (specific name of the type species of *Austrocochlea* Fischer, 1885);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
   (a) *Trochocochlea* Mörch, 1852 (a junior objective synonym of *Osilinus* Philippi, 1847);
   (b) *Caragolus* Monterosato, 1884 (a junior objective synonym of *Osilinus* Philippi, 1847 and of *Trochocochlea* Mörch, 1852).

References

Adanson, M. 1757. *Histoire Naturelle du Sénégal*. Coquillages. 275 pp., 19 pls. Bauche, Paris.

Alsanullah, M. & Williams, A.R. 1989. Kinetics of uranium uptake by the crab *Pachygrapsus laevimanus* and the zebra winkle *Austrocochlea constricta*. *Marine Biology*, **101**(3): 323–327.

Anderson, M.J. & Underwood, A.J. 1997. Effects of gastropod grazers on recruitment and succession of an estuarine assemblage: a multivariate and univariate approach. *Oecologia*, **109**(3): 442–453.

Astles, K.L. 1993. Patterns of abundance and distribution of species in intertidal rock pools. *Journal of the Marine Biological Association of the United Kingdom*, **73**(3): 555–569.

Born, I. von. 1778. *Rerum Naturalium Musei Caesarei Vindobonensis*, part 1 (Testacea). [42], 458 pp. Vienna.

Bucquoy, E., Dautzenberg, P. & Dollfus, G. 1885. *Les Mollusques marins du Roussillon*, vol. 1 (Gastropodes), fasc. 10. Pp. 387–418. Baillière, Paris.

Cesari, P. & Pranovi, F. 1989. La sistematica del gen. *Monodonta* Lamck, 1799 (s.l.). II A) Biometria e caratteristiche conchigliari degli *Osilinus* Mediterranei. B) Distribuzione e struttura dei popolamenti della laguna veneta (Gastropoda, Trochidae). *Lavori, Società Veneziana di Storia Naturale*, **14**: 3–64.

Cesari, P. & Pranovi, F. 1990. La sistematica del genere *Monodonta* Lamck, 1799 (s.l.). III Relazioni genetiche tra popolazioni altoadriatiche di *Osilinus articulatus* (Lamarck, 1822), *Osilinus mutabilis* (Philippi, 1846) e *Osilinus turbinatus* (Born, 1780) (Gastropoda, Trochidae). *Lavori, Società Veneziana di Storia Naturale*, **14**: 3–64.

Cossignani, T., Cossignani, V., Di Nisio, A. & Passamonti, M. 1992. *Atlante delle conchiglie del Medio Adriatico*. L'Informatore Piceno, Ancona.

Crosse, H. 1885. Nomenclatura generica e specifica di alcune Conchiglie Mediterranee, pel Marchese di Monterosato [book review]. *Journal de Conchyliologie*, **33**: 139–142.

Fischer, P. 1885. *Manuel de Conchyliologie et de Paléontologie conchyliologique*. Pp. 689–896. Savy, Paris.

Ghisotti, F. & Melone, G. 1975. Catalogo illustrato delle conchiglie marine del Mediterraneo 5. *Conchiglie, Notiziario Mensile della Unione Malacologica Italiana*, **11**(11 12) Supplement: 147–208.

Gray, J.E. 1847a. The classification of the British Mollusca by W.E. Leach, M.D. *Annals and Magazine of Natural History*, **20**: 267–273.

Gray, J.E. 1847b. A list of the genera of Recent Mollusca, their synonyma and types. *Proceedings of the Zoological Society of London*, **15**: 129–219.

Herbert, D.G. 1994. *Trochus kotschyi*, the first Indian Ocean record of the genus *Osilinus* (Mollusca: Gastropoda: Trochidae). *Journal of Zoology*, **233**: 345–357.

Herrmannsen, A.N. September 1847, March 1849. *Indicis generum malacozoorum*, vol. 2. Pp. 105–232 (September 1847); pp. 613–717 (March 1849). Fischer, Cassel.

Hickman, C.S. & McLean, J.H. 1990. Systematic revision and suprageneric classification of trochacean gastropods. *Science Series. Natural History Museum of Los Angeles County*, **35**: 1–169.

Klein, J.T. 1753. *Tentamen methodi ostracologicae* . . . Wishoff, Leiden.

Lamarck, J.B.P.A. de M. de. 1822. *Histoire naturelle des animaux sans vertèbres*, vol. 7 (Histoire des mollusques). 711 pp. Author, Paris.

Leach, W.E. 1852. *A synopsis of the Mollusca of Great Britain*. xvi, 376 pp., 13 pls. Von Voorst, London.

Little, C. 1989. Factors governing patterns of foraging activity in littoral marine herbivorous molluscs. *Journal of Molluscan Studies*, **55**: 273–284.

Mapstone, B.D., Underwood, A.J. & Creese, R.G. 1984. Experimental analyses of the commensal relation between intertidal gastropods *Patelloida mufria* and the trochid *Austrocochlea constricta*. *Marine Ecology — Progress Series*, **17**(1): 85–100.

Monterosato, T.A. di. 1884. *Nomenclatura generica e specifica di alcune conchiglie mediterranee*. 152 pp. Virzi, Palermo.

Monterosato, T.A. di. 1888. Molluschi del Porto di Palermo specie e varietà. *Bullettino della Società Malacologica Italiana*, **13**: 161–180.

Mörch, O.A.L. 1852. *Catalogus conchyliorum quae reliquit D. Alphonso d'Aguirra & Gadea Comes de Yoldi* . . ., part 1. 170 pp. Klein, Copenhague.

Nordsieck, F. 1974. Il genere *Osilinus* Philippi, 1847 nei mari europei. *La Conchiglia*, **9–10**(67–68): 21–23.

Parsons, K.E. 1996. Discordant patterns of morphological and genetic divergence in the *Austrocochlea constricta* (Gastropoda, Trochidae) species complex. *Marine and Freshwater Research*, **47**(8): 981–990.

Petraitis, P.S. 1992. Effects of body size and water temperature on grazing rates of four intertidal gastropods. *Australian Journal of Ecology*, **17**(4): 409–414.

Philippi, R.A. 1847. Versuch einer systematischen Eintheilung des Geschlechtes *Trochus*. *Zeitschrift für Malakozoologie*, **4**: 17–24.

Pilsbry, H.A. 1889. *Manual of conchology*, vol. 11 (Trochidae). 519 pp., 67 pls. Academy of Natural Sciences of Philadelphia, Philadelphia.

Sabelli, B., Giannuzzi-Savelli, R. & Bedulli, D. 1990. *Catalogo annotato dei molluschi marini del Mediterraneo*, vol. 1. xiv, 348 pp. Libreria Naturalistica Bolognese, Bologna.

Walsh, K., Dunstan, R.H. & Murdoch, R.N. 1995. Differential bioaccumulation of heavy metals and organopollutants in the soft-tissue and shell of the marine gastropod *Austrocochlea constricta*. *Archives of Environmental Contamination and Toxicology*, **28**(1): 35–39.

Wenz, W. 1938. *Handbuch der Paläozoologie*, vol. 6(1). Gastropoda 1. Pp. 1–480. Allgemeiner Teil und Prosobranchia 1. Borntraeger, Berlin.

Case 3026

Androctonus caucasicus Nordmann, 1840 (currently *Mesobuthus caucasicus*; Arachnida, Scorpiones): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the specific name of *Mesobuthus caucasicus* (Nordmann, 1840) for a scorpion (family BUTHIDAE) with a wide range in the Middle East, Afghanistan, China and central Asia. The name is threatened by the senior synonym *Scorpio caucasius* Fischer von Waldheim, 1813 which has not been used for over 80 years.

Keywords. Nomenclature; taxonomy; Arachnida; Scorpiones; BUTHIDAE; *Mesobuthus caucasicus*.

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1. Fischer von Waldheim (1813, p. 401, pl. 4, fig. 1) figured and named *Scorpio caucasius*, which is an available name under Article 12b(7) of the Code. The holotype of this species is lost. Birula (1900, p. 366) suggested that *S. caucasius* is a senior synonym of *Androctonus caucasicus* Nordmann, 1840, the name for a taxon described from Tiflis (now Tbilisi), Georgia (currently known as *Mesobuthus caucasicus*; family BUTHIDAE). The names *caucasius* and *caucasicus* are not homonyms because their spellings differ by one letter (Article 57f of the Code), and they are not treated as such under Article 58; they were, however, often confused by subsequent authors.

2. Fischer's specific name *caucasius* was used as valid from 1900 to 1912. It was used as *Buthus caucasius* for the species currently called *Mesobuthus caucasicus* (Nordmann, 1840) by Birula in a number of publications, as noted by Vachon (1958, p. 148), and by Leister (1910), and for *Mesobuthus eupeus* (C.L. Koch, 1837) by Pocock (1900). Birula (1917a, p. 1) stated that Fischer's name related to either one of the two Caucasian species, *M. caucasicus* and *M. eupeus*, and on this basis he rejected *S. caucasius* as a 'nomen nudum' (nomen dubium would have been more accurate). It has not been used since but it is an available name and as such is a putative threat.

3. I (Fet, 1989, p. 102) mentioned an unidentified scorpion collected by Baron de Vietinghoff (1812, p. 96) in Pyatigorsk (northern Caucasus). There is strong circumstantial evidence that this specimen could have been the holotype of *Scorpio caucasius*:

(a) Vietinghoff (1812) recorded that the specimen was sent to Fischer in Moscow; Fischer's work was published the following year and contained no Caucasian scorpions other than *S. caucasius*. Actually, no other scorpion species from the Caucasus was described for many years until the works of C.L. Koch (1839) and Nordmann (1840).

(b) Vietinghoff (1812) recorded the number of plates on the paired abdominal pectinal organs of the specimen as 30–35, a characteristic of the male of *Mesobuthus caucasicus* (Nordmann) and one which readily distinguishes it from the other, related Caucasian species, *M. eupeus* (C.L. Koch), in which males have 23–26 plates (Fet, unpublished data).

(c) Although Pyatigorsk is far removed from the continuous range of both species, it is known that *Mesobuthus caucasicus* (but not *M. eupeus*) forms disjunct local populations (see Fet, 1989) and is found in human dwellings (see Birula, 1917b), and as a result is carried by man.

4. Thus, the possibility exists that *Scorpio caucasius* Fischer, 1813 is a senior synonym of *Mesobuthus caucasicus* (Nordmann, 1840, p. 731, pl. 1, fig. 1), and its recognition threatens the stability of use of the latter name. No material of *caucasius* exists in Moscow now; I searched for it in the Moscow University Zoological Museum, where Fischer's materials supposedly went. It was already missing in Birula's time.

5. Fischer's name has not been used as valid for more than 80 years, while both *Mesobuthus caucasicus* (Nordmann, 1840) and *M. eupeus* (C.L. Koch, 1839) have become well established and have been used dozens of times (in combination with either *Buthus* or *Mesobuthus*) by numerous authors in taxonomic and biological literature (see, for example, Werner, 1934; Vachon, 1958, 1966; Kinzelbach, 1984, 1985; Vachon & Kinzelbach, 1987; Farzanpay, 1988; Fet, 1989, 1994). *M. caucasicus* has a wide range in the Middle East, Afghanistan, China and much of central Asia, and six subspecies are currently recognised.

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

(1) to use its plenary powers to suppress the specific name of *caucasius* Fischer von Waldheim, 1813, as published in the binomen *Scorpio caucasius*;

(2) to place on the Official List of Specific Names in Zoology the name *caucasicus* Nordmann, 1840, as published in the binomen *Androctonus caucasicus*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *caucasius* Fischer von Waldheim, 1813, as published in the binomen *Scorpio caucasius* and as suppressed in (1) above.

References

Birula, A.A. 1900. Beiträge zur Kenntniss der Scorpionenfauna Ost-Persiens (1. Beitrag). *Bulletin de l'Académie Impériale des Sciences de St Pétersbourg*, (5)**12**(4): 355–375.

Birula, A.A. (Bialynicki-Birula, A.A.). 1917a. Arachnoidea Arthrogastra Caucasica. Pars 1. Scorpiones. *Zapiski Kavkazskogo Muzeya* (*Mémoires du Musée du Caucase*), Tiflis, (A)**5**: 1–253. [In Russian]. English translation as Byalynitskii-Birulya, A.A., 1964. *Arthrogastric arachnids of Caucasia*, part 1 (Scorpions). 170 pp. Israel Program for Scientific Translations, Jerusalem.

Birula, A.A. (Byalynitskii-Birulya, A.A.). 1917b. *Faune de la Russie et des pays limitrophes fondée principalement sur les collections du Musée zoologique de l'Académie des Sciences de Russie*. Arachnides (Arachnoidea), vol. 1, part 1. 227 pp. St Petersbourg. [In Russian]. English translation as Byalynitskii-Birulya, A.A., 1965. *Fauna of Russia and adjacent countries*. Arachnoidea, vol. 1 (Scorpions). 154 pp. Israel Program for Scientific Translations, Jerusalem.

Farzanpay, R. 1988. A catalogue of the scorpions occurring in Iran, up to January 1986. *Revue Arachnologique*, **8**(2): 33–44.

Fet, V. 1989. A catalogue of scorpions (Chelicerata: Scorpiones) of the U.S.S.R. *Revista del Museo Civico di Scienze Naturali 'Enrico Caffi' (Bergamo) 1988*, **13**: 73–171.

Fet, V. 1994. Fauna and zoogeography of scorpions (Arachnida: Scorpiones) in Turkmenistan. Pp. 525–534 *in* Fet, V. & Atamuradov, K.I (Eds.), *Biogeography and ecology of Turkmenistan*. Kluwer Academic Publishers, Dordrecht. (*Monographiae Biologicae* No. 72).

Fischer von Waldheim, G. 1813. *Zoognosia tabulis synopticis illustrata, in usum praelectionum Academiae Imperialis Medico-Chirurgicae Mosquensis edita*, Ed. 3, vol. 1. xiii, 465 pp., 8 pls. Moscow.

Kinzelbach, R. 1984. Die Skorpionssammlung des Naturhistorischen Museums der Stadt Mainz. Teil 2 (Vorderasien). *Mainzer Naturwissenschaftliches Archiv*, **22**: 97–106.

Kinzelbach, R. 1985. Vorderer Orient. Skorpione (Arachnida: Scorpiones). *Tübinger Atlas der Vorderer Orients (TAVO)*. Map No. A VI 14.2.

Koch, C.L. 1839. *Die Arachniden*, part 5. Pp. 25–158. Zeh, Nürnberg.

Leister, A.F. 1910. Die Skorpione des Kaukasus. Systematik, Verbreitung und biologische Daten. *Yestestvoznanie i Geografia*, **15**(10): 1–22. [In Russian].

Nordmann, A. 1840. Notice sur les scorpions de la faune pontique. Pp. 731–732 *in*: *Voyage dans la Russie méridionale et la Crimée, par la Hongrie, la Valachie et la Moldavie, exécuté en 1837, sous la direction de M Anatole de Demidoff, par Mm de Sainson, Le Play, Huot, Léveille, Raffet, Rousseau, de Nordmann et du Ponceau; dédié à S. M. Nicolas Ier Empereur de toutes les Russies*, vol. 3. 756 pp. Paris.

Pocock, R.I. 1900. Arachnida. *In* Blandford, W.T. (Ed.), *The fauna of British India, including Ceylon and Burma*. xii, 279 pp. Published under the authority of the Secretary of State for India in Council, London.

Vachon, M. 1958. Scorpionidea (Chelicerata) de l'Afghanistan. The 3rd Danish Expedition to Central Asia (Zoological Results No. 23). *Videnskabelige Meddelelser fra Dansk Naturhistorisk Forening i Kobehavn*, **120**: 121–187.

Vachon, M. 1966. Liste des Scorpions connus en Égypte, Arabie, Israël, Liban, Syrie, Jordanie, Turquie, Irak, Iran. *Toxicon*, **4**: 209–218.

Vachon, M. & Kinzelbach, R. 1987. On the taxonomy and distribution of the scorpions of the Middle East. Proceedings of the Symposium on the Fauna and Zoogeography of the Middle East, Mainz, 1985. *Beihefte zum Tübinger Atlas des Vorderen Orients, Reihe A (Naturwissenschaften)*, **28**: 91–103.

Vietinghoff, Baron de. 1812. Discours sur quelques objets d'histoire naturelle recuellis au Caucase. *Zapiski Moskovskogo Imperatorskogo Obshchestva Ispytatelei Prirody (Mémoires de la Société Impériale des Naturalistes de Moscou)*, **3**: 83–96. [In Russian].

Werner, F. 1934. Scorpiones. Pp. 1–316 *in*: *H.G. Bronn's Klassen und Ordnungen des Tierreichs*, Band 5 (Arthropoda), Abt. 4 (Arachnoidea), Buch 8 (Scorpiones, Pedipalpi), Lieferung 1–2. Akademische Verlagsgesellschaft, Leipzig.

Case 3031

Paruroctonus Werner, 1934 (Arachnida, Scorpiones): proposed conservation

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Abstract. The purpose of this application is to conserve the name *Paruroctonus* Werner, 1934 for a genus of some 30 species of scorpions (family VAEJOVIDAE) from the western side of North America, from southern Canada to Aguascalientes, Mexico. The name was proposed as a replacement for *Uroctonoides* Hoffmann, 1931 (a junior homonym of *Uroctonoides* Chamberlin, 1920) and has been in use since its original publication. It is threatened by the unused synonym *Hoffmanniellius* Mello-Leitão, 1934 (June), also a replacement for *Uroctonoides* Hoffmann, which under the Code is the senior synonym.

Keywords. Nomenclature; taxonomy; Arachnida; Scorpiones; VAEJOVIDAE; *Paruroctonus*; North America.

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1. The genus *Uroctonoides* was established by Chamberlin (1920, p. 36, pl. 4, figs. 1 and 2) for his new species *U. fractus* from Quito, Ecuador (family VAEJOVIDAE). The type specimen of *U. fractus*, catalog no. 518, is deposited in the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts. Soleglad (1973) considered *Uroctonoides fractus* to be a species of the genus *Teuthraustes* Simon, 1878 (family CHACTIDAE), and probably referable to *T. lojanus* Pocock, 1900. Thus, *Uroctonoides* Chamberlin, 1920 is a junior subjective synonym of *Teuthraustes* Simon, 1878.

2. In 1931, Hoffmann (p. 405, fig. 42), clearly unaware of Chamberlin's (1920) publication, established the new genus *Uroctonoides* for the single new species *U. gracilior* (p. 406, fig. 43), which he described from Aguascalientes, Mexico. Three specimens of original type material are deposited in the American Museum of Natural History, New York; Gertsch & Soleglad (1966, p. 29) designated no. 1 as the lectotype.

3. In a review of the world scorpion fauna, Werner (1934, p. 283) established the replacement name *Paruroctonus* for Hoffmann's (1931) name *Uroctonoides*. Werner published a very brief description of the genus in the key to the VAEJOVIDAE (p. 283), which was based on the description of *Uroctonoides gracilior* by Hoffmann (1931). An

illustration (Abb. 363) on the same page reproduced Hoffmann's drawing of the cheliceral chela of *P. gracilior*.

4. The name *Hoffmanniellius* Mello-Leitão (p. 80) was independently proposed as a replacement for *Uroctonoides* Hoffmann, also in 1934. Subsequent authors recognised *Paruroctonus* and *Hoffmanniellius* as (objective) synonyms and, following Stahnke (1957; see para. 5 below), all adopted *Paruroctonus* as the valid name (see, for example, the publications of Stahnke, 1957, p. 253; Gertsch & Soleglad, 1966, pp. 2, 3; Williams, 1972; the series of revisionary studies by Haradon, 1983, 1984a, 1984b, 1985; and Francke, 1985, pp. 9, 11).

5. The title pages of part 2 of vol. 6 of the *Annaes da Academia Brasileira de Sciencias* and of Mello-Leitão's paper give the publication date as 30 June 1934. We were, however, unable to determine the month of publication of Werner's work, although this was indicated as January 1934 by Stahnke (1957, p. 253, footnote). The cover of Werner's monograph in *H.G. Bronns Klassen und Ordnungen des Tierreichs* bears the date '1935'. However, the work was issued in three parts and later bound in a single volume. The composition and year of publication of the parts are given on the wrapper of each part and are tabulated at the beginning of the volume; Lieferung 2 (pp. 161–316), which included the genus *Paruroctonus* (p. 283), is dated 1934 but the month is not stated. The publisher of the work, the Akademische Verlagsgesellschaft in Leipzig, did not survive the reunification of Germany in 1990; its archives are presumably lost or destroyed and there is no succeeding publisher. Under Article 21c of the Code the date 31 December 1934 must be adopted for Lieferung 2 of Werner's publication and the name *Paruroctonus*.

6. Under the Code the name *Paruroctonus* is junior to *Hoffmanniellius*. However, the latter name has not been used as valid since it was proposed, whereas the usage of *Paruroctonus*, either for a genus or a subgenus of *Vaejovis* C.L. Koch, 1836, has been constant and prolific since its publication and subsequent acceptance by Stahnke (1957). The name has appeared in dozens of taxonomic, ecological, behavioral and physiological publications, among them the recent works of Williams (1980) and Stockwell (1992), and a number of papers in each of the compilations by Polis (Ed., 1990, 1991) and Brownell & Polis (Eds., in press). A representative list of a further 47 references dating from 1961 to 1995 is held by the Commission Secretariat.

7. The subgenus *Smeringurus* Haradon, 1983, with four species, is traditonally included in *Paruroctonus* but was recently given generic rank (see Stockwell, 1992). The general acceptance of this arrangement is pending.

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

(1) to use its plenary powers to suppress the name *Hoffmanniellius* Mello-Leitão, 1934 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 *Paruroctonus* Werner, 1934 (gender: masculine), type species by monotypy of the replaced nominal genus *Uroctonoides* Hoffmann, 1931, *Uroctonoides gracilior* Hoffmann, 1931;

(3) to place on the Official List of Specific Names in Zoology the name *gracilior* Hoffmann, 1931, as published in the binomen *Uroctonoides gracilior* and as defined by the lectotype designated by Gertsch & Soleglad (1966);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Hoffmanniellius* Mello-Leitão, 1934, as suppressed in (1) above.

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We thank Dr Peter Sacher (*Blankenburg a.H., Germany*) who conducted research at our request as to the existence of archives of the Akademische Verlagsgesellschaft in Leipzig.

References

Brownell, P.H. & Polis, G.A. (Eds.). In press. *Scorpion biology and research*. Oxford University Press, Oxford.

Chamberlin, R.V. 1920. South American Arachnida, chiefly from the Guano Islands of Peru. *Science Bulletin. Museum of the Brooklyn Institute of Arts and Sciences*, **3**(2): 35–44.

Francke, O.F. 1985. Conspectus genericus scorpionorum 1758–1982 (Arachnida: Scorpiones). *Occasional Papers of the Museum, Texas Tech University*, **98**: 1–32.

Gertsch, W.J. & Soleglad, M.E. 1966. The scorpions of the *Vejovis boreus* group (subgenus *Paruroctonus*) in North America (Scorpionida, Vejovidae). *American Museum Novitates*, **2278**: 1–54.

Haradon, R.M. 1983. *Smeringurus*, a new subgenus of *Paruroctonus* Werner (Scorpiones, Vaejovidae). *Journal of Arachnology*, **11**: 251–270.

Haradon, R.M. 1984a. New and redefined species belonging to the *Paruroctonus baergi* group (Scorpiones, Vaejovidae). *Journal of Arachnology*, **12**: 205–221.

Haradon, R.M. 1984b. New and redefined species belonging to the *Paruroctonus borregoensis* group (Scorpiones, Vaejovidae). *Journal of Arachnology*, **11**: 317–339.

Haradon, R.M. 1985. New groups and species belonging to the nominate subgenus *Paruroctonus* (Scorpiones, Vaejovidae). *Journal of Arachnology*, **13**: 19–42.

Hoffmann, C.C. 1931. Monografías para la entomologia medica de México. Monografía Nom. 2, Los scorpiones de México. Primera parte: Diplocentridae, Chactidae, Vejovidae. *Anales del Instituto de Biología, Universidad Nacional Autónoma de México*, **2**(4): 291–408.

Mello-Leitão, C. de. 1934. A proposito de um novo Vejóvida do Brasil. *Annaes da Academia Brasileira de Sciencias*, **6**(2): 75–82.

Polis, G.A. (Ed.). 1990. *The biology of scorpions*. 587 pp. Stanford University, Stanford, California.

Polis, G.A. (Ed.). 1991. *The ecology of desert communities*. 456 pp. University of Arizona, Tucson.

Soleglad, M.E. 1973. *Uroctonoides fractus* a synonymy (Scorpionida: Chactidae). *The Pan-Pacific Entomologist*, **49**(1): 60.

Stahnke, H.L. 1957. A new species of scorpion of the Vejovidae, *Paruroctonus mesaensis*. *Entomological News*, **68**(10): 253–259.

Stockwell, S.A. 1992. Systematic observations on North American Scorpionida with a key and checklist of the families and genera. *Journal of Medical Entomology*, **29**(3): 407–422.

Werner, F. 1934, 1935. Scorpiones, Pedipalpi. *H.G. Bronn's Klassen und Ordnungen des Tierreichs*, Band 5 (Arthropoda), Abt. 4 (Arachnoidea), Buch 8 (Scorpiones, Pedipalpi), Lieferung 1–2, pp. 1–316 (Scorpiones, 1934); Lieferung 5, pp. 317–490 (Pedipalpi, 1935). Akademische Verlagsgesellschaft, Leipzig.

Williams, S.C. 1972. Four new scorpion species belonging to the genus *Paruroctonus* (Scorpionidae, Vaejovidae). *Occasional Papers of the Californian Academy of Sciences*, **94**: 1–16.

Williams, S.C. 1980. Scorpions of Baja California, Mexico and adjacent islands. *Occasional Papers of the California Academy of Sciences*, **135**: 1–127.

Case 2958

Corisa propinqua Fieber, 1860 (currently *Glaenocorisa propinqua*; Insecta, Heteroptera): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the specific name of the water-boatman *Glaenocorisa propinqua* (Fieber, 1860). Fieber (1848) established the name *Corisa dohrnii* for what was probably (at least in part) the same taxon, but this name has been treated as a synonym of various names and has not been used as valid for more than 50 years; its suppression is proposed.

Keywords. Nomenclature; taxonomy; Heteroptera; CORIXIDAE; water-boatmen; *Corisa dohrnii*; *Glaenocorisa propinqua*.

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1. Fieber (1848, p. 530) established the name *Corisa dohrnii* for an unspecified number of corixids, all females, collected from Germany and 'Dalmatia' (now Croatia); the description was not accompanied by any illustrations and the name was probably based on more than one taxon. In 1851, in a preprint bearing that date of a paper published in 1852, Fieber (pp. 37–38) emended the original description, and also gave a drawing of the female pala (pl. 2, fig. 25). This drawing shows that the specimen of *Corisa dohrnii* illustrated was conspecific with a taxon later described by Fieber himself (1860, p. 99) as *Corisa propinqua*, the only European corixid having fewer than 15 lower palmar bristles, there being 13 in the 1851 illustration. Pl. 10, fig. 19 of Fieber (1848) and pl. 2, fig. 24 of Fieber (1851) show that Fieber misidentified *Corisa carinata* Sahlberg, 1819; both these drawings are of specimens conspecific with *C. propinqua*. Fieber's type material of both *C. dohrnii* and *C. propinqua* is lost.

2. The specific name of *Corisa dohrnii* has been little used as a valid name this century and not at all for more than 50 years. In contrast, the name *Glaenocorisa propinqua* has been extensively used in recent literature (e.g. Jaczewski & Lansbury, 1961; Coulianos & Ossiannilsson, 1976; Jastrey, 1981; a further 17 references by 18 authors over the last 40 years are held by the Commission Secretariat). Quite apart from its limited use, there has always been considerable confusion about the identity of the taxon (or taxa) originally described as *Corisa dohrnii*. Puton (1899) listed *C. dohrni* [sic] as a possible synonym of *C. carinata*, *C. germari* Fieber, 1838 or *C. cavifrons* Thomson, 1869, and this was repeated by others.

3. When revising the Corixidae of Europe (Jansson, 1986, p. 26), I pointed out that 'because of the lack of type material it is not possible to establish the synonymy [between *Corisa dohrnii* and *Glaenocorisa propinqua propinqua*] with certainty'. Nevertheless, in view of the confusion about the identity of *C. dohrnii*, and the fact that it is almost certainly a senior subjective synonym of *G. propinqua propinqua* (see

Jaczewski & Lansbury, 1961, p. 348; Jansson, 1986, p. 26), I propose that the specific name of *C. dohrnii* be suppressed. I (Jansson, 1986, p. 26) designated as neotype of *Corisa propinqua* a male specimen in the Prague Museum, labelled 'Iezero Plöckensteinské. Dr Stolc'.

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

(1) to use its plenary powers to suppress the specific name *dohrnii* Fieber, 1848, as published in the binomen *Corisa dohrnii*, 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 *propinqua* Fieber, 1860, as published in the binomen *Corisa propinqua* and as interpreted by the neotype designated by Jansson (1986);

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *dohrnii* Fieber, 1848, as published in the binomen *Corisa dohrnii* and as suppressed in (1) above.

References

Coulianos, C.-C. & Ossiannilsson, F. 1976. Catalogus Insectorum Sueciae. VII. Hemiptera-Heteroptera. 2nd Ed. *Entomologisk Tidskrift*, **97**: 135–173.

Fieber, F.X. 1848. Synopsis aller bisher in Europe entdeckten Arten der Gattung *Corisa*. *Nouveaux Mémoires de la Société Impériale des Naturalistes de Moscou*, **21**: 505 593.

Fieber, F.X. 1851. *Species generis* Corisa. 48 pp., 2 pls. Calve, Pragae. (Preprint from (1852), *Abhandlungen der Königlichen Böhmischen Gesellschaft der Wissenschaften*, (7)**7**: 213–260).

Fieber, F.X. 1860. *Die Europäischen Hemiptera*, part 1. Pp. 1–112. Gerold's Sohn, Wien.

Jaczewski, T. & Lansbury, I. 1961. Notes on the genus *Glaenocorisa* Thomson (Heteroptera, Corixidae). *Bulletin de l'Académie Polonaise des Sciences*. Classe 2, **9**: 345–351.

Jansson, A. 1986. The Corixidae (Heteroptera) of Europe and some adjacent regions. *Acta Entomologica Fennica*, **47**: 1–94.

Jastrey, J.T. 1981. Distribution and ecology of Norwegian water-bugs (Hem., Heteroptera). *Fauna Norvegica*, (B)**28**: 1–24.

Puton, A. 1899. *Catalogue des Hémiptères (Hétéroptères, Cicadines et Psyllides) de la faune Paléarctique*. (4 Ed.). 121 pp. Caen.

Case 2957

Phytobius Dejean, 1835 (Insecta, Coleoptera): proposed conservation

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Abstract. The purpose of this application is to conserve the weevil generic name *Phytobius* Dejean, 1835, in its current usage as placed on the Official List of Generic Names in Opinion 1529 (1989). It is threatened by the homonym *Phytobius* Schönherr, 1833 which was established with a different type species.

Keywords. Nomenclature; taxonomy; Coleoptera; CURCULIONIDAE; weevils; *Phytobius*; *Phytobius quadrituberculatus*.

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1. In an application to the Commission published in 1980 (Silfverberg, 1980, p. 254), I proposed, amongst other actions, that the following entry be placed on the Official List of Generic Names in Zoology: '*Phytobius* Dejean, 1835 (gender: masculine), type species by subsequent designation by Thomson, 1859, *Curculio quadrituberculatus* Fabricius, 1787'. This was done in Opinion 1529 (March 1989, p. 71).

2. At the time of my application I was unaware that Schönherr had established the name *Phytobius* in 1833 (p. 20), two years earlier than Dejean's 1835 work. This was pointed out by O'Brien & Wibmer (1984, p. 296), who considered that Schönherr had introduced *Phytobius* as a replacement name for his genus *Hydaticus*, which was preoccupied. The background is that Schönherr (1825, p. 583) introduced the name *Hydaticus* with *Rhynchaenus myriophylli* Gyllenhal, 1813 as type species. This nominal species is listed by Dalla Torre & Hustache (1930) as a junior synonym of *Curculio leucogaster* Marsham, 1802, which is the type species of *Litodactylus* Redtenbacher, 1845. *Hydaticus* Schönherr is a junior homonym of *Hydaticus* Leach, 1817 (Coleoptera, DYTISCIDAE). When Schönherr (1833) established the name *Phytobius* he attributed it to Schmidt and gave his earlier name *Hydaticus* as a synonym; he included only one species, *Rhynchaenus velutus* Beck, 1817, which he gave as the type species of *Phytobius*. *Rhynchaenus velutus* is also the type species of *Eubrychius* Thomson, 1859 by original designation and monotypy. However, it is doubtful whether it was Schönherr's intention to introduce a replacement name for *Hydaticus*, and in terms of the modern Code he did not do so: he attributed *Phytobius* to another person (Schmidt), he did not give a reason for replacing *Hydaticus*, and he designated a different type species.

3. Dejean (1835, p. 282) listed a number of species in *Phytobius*, as did Schönherr (1836, p. 458); they both included *Curculio quadrituberculatus* Fabricius, 1787 (p. 100). In 1859 Thomson (p. 138) designated *C. quadrituberculatus* as the type species of *Phytobius*, which has ever since been used in that sense (e.g. Arnett, 1960 1962; Colonnelli, 1980; Lucht, 1987; a further 12 references by 18 authors in the

last 40 years is held by the Commission Secretariat). Earlier, Schönherr (1825, col. 586) had designated *C. quadrituberculatus* as type species of his new genus *Rhinoncus*, but this usage was not followed, even by Schönherr himself, and in Opinion 1529 *Curculio pericarpius* Linnaeus, 1758 was accepted as the type species of *Rhinoncus*.

4. To maintain the current usage of *Phytobius* as placed on the Official List, and to maintain *C.quadrituberculatus* as the type species, it is necessary to suppress its use as a homonym by Schönherr (1833). This will also conserve the established usage of the names *Litodactylus* Redtenbacher, 1845 and *Eubrychius* Thomson, 1859.

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

(1) to use its plenary powers to suppress the name *Phytobius* Schönherr, 1833 and all uses of that name prior to the publication of *Phytobius* by Dejean, 1835 for the purposes of both the Principle of Priority and the Principle of Homonymy;

(2) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Phytobius* Schönherr, 1833, as suppressed in (1) above.

References

Arnett, R.H. 1960–1962. *The beetles of the United States*. 1112 pp. Catholic University of America Press, Washington, D.C.

Colonnelli, E. 1980. Notes on Phytobiini, with a key to the New World genera (Coleoptera: Curculionidae: Ceutorhynchinae). *The Coleopterists' Bulletin*, **34**: 281–284.

Dalla Torre, K.W. & Hustache, A. 1930. Curculionidae: Ceuthorrhynchinae. *Coleopterorum Catalogus*, **113**: 1–150.

Dejean, P.M.F. 1835. Pp. 257 360 in *Catalogue des Coléoptères de la collection de M. le Comte Dejean*. (2 Ed.). Paris.

Fabricius, J.C. 1787. *Mantissa Insectorum*. 348 pp. Hafniae.

Lucht, W.H. 1987. *Die Käfer Mitteleuropas. Katalog*. 342 pp. Goecke & Evers, Krefeld.

O'Brien, C.W. & Wibmer, G.J. 1984. Annotated checklist of the weevils (Curculionidae *sensu lato*) of North America, Central America, and the West Indies – Supplement 1. *The Southwestern Entomologist*, **9**: 286–307.

Schönherr, C.J. 1825. Tabulae synopticae familiae Curculionidum. *Isis (Oken)*, **16**: cols. 581–588.

Schönherr, C.J. 1833. *Genera et species Curculionidum cum synonymia hujus familiae*, vol. 1. 681 pp. Parisiis.

Schönherr, C.J. 1836. *Genera et species Curculionidum cum synonymia hujus familiae*, vol. 3. 858 pp. Parisiis.

Silfverberg, H. 1980. *Ceutorhynchus* Germar, 1824, and *Rhinoncus* Schönherr, 1826 (Insecta, Coleoptera): proposed conservation and designation of type species by use of the plenary powers. Z.N.(S.) 2219. *Bulletin of Zoological Nomenclature*, **36**: 252–256.

Thomson, C.G. 1859. *Skandinaviens Coleoptera*, vol. 1. 290 pp. Lund.

Case 3023

DASYPODIDAE Börner, 1919 (Insecta, Hymenoptera): proposed emendation of spelling to DASYPODAIDAE, so removing the homonymy with DASYPODIDAE Gray, 1821 (Mammalia, Xenarthra)

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Abstract. The family-group name DASYPODIDAE Börner, 1919 (Insecta, Hymenoptera) is a junior homonym of DASYPODIDAE Gray, 1821 (Mammalia, Xenarthra). It is proposed that the homonymy between the two names, which relate to short-tongued bees and armadillos respectively, should be removed by emending the stem of the generic name *Dasypoda* Latreille, 1802, on which the insect family-group name is based, to give DASYPODAIDAE, while leaving the mammalian name (based on *Dasypus* Linnaeus, 1758) unchanged. *Dasypus novemcinctus* Linnaeus, 1758, the type species of *Dasypus*, has a wide distribution in the southern United States, Central and South America. The genus *Dasypoda* ranges throughout most of the Palearctic region.

Keywords. Nomenclature; taxonomy; Hymenoptera; Mammalia; Xenarthra; bees; armadillos; DASYPODAIDAE; DASYPODIDAE; *Dasypoda*; *Dasypus*.

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1. A colleague, Douglas Yanega, has brought to our attention the homonymous use of the family-group name DASYPODIDAE in the mammalian order Xenarthra and in the insect order Hymenoptera.

2. The mammalian family DASYPODIDAE Gray, 1821 (p. 305) was based on the armadillo genus *Dasypus* Linnaeus, 1758 (p. 50). Gray's family included the single genus; he misspelled the generic name as '*Dasipus*' and rendered the family-group name as 'Dasipidae', which is corrected under Article 35d(i) of the Code.

3. Linnaeus (1758) included six nominal species in *Dasypus*. He placed the name '*Dasypus*' among the synonyms of *D. novemcinctus* (p. 51; the nine-banded armadillo) and this species is the type of the genus by Linnaean tautonymy (Article 68e(i)). Thomas (1911, p. 141) recorded that the account of the Mexican armadillo in Hernandez (1651), against which the generic name *Dasypus* appeared, referred to the *D. novemcinctus* group of species and that recognition of *D. novemcinctus* as the type species of *Dasypus* necessitated adopting *Dasypus* as the valid name for the genus long known (see, for example, Lydekker, 1887, pp. 140–141) as *Tatusia* Lesson, 1827

(p. 309) or, later, as *Tatu* Blumenbach, 1779 (p. 74; type species by monotypy *D. novemcinctus*), thereby rendering *Tatu* a junior objective synonym of *Dasypus*. Thomas noted that 'this is [an] instance in which the use of tautonomy in selecting Linnean types brings out a result contrary to common use'. He adopted the name *Euphractus* Wagler, 1830 (p. 36; type species *D. sexcinctus* Linnaeus, 1758 by subsequent designation by Palmer, 1904, p. 278) for *Dasypus* as hitherto understood (six-banded armadillos) and recorded that 'this shifting is quite unavoidable if the invaluable principle of tautonymy is to be utilized at all'.

4. Not all authors followed Thomas's (1911) switch of the name *Dasypus* from one group of armadillos to another; Patterson (1913), Vanneman (1917), Edgeworth (1923) and Cooper (1930), for example, used *Tatusia* for *novemcinctus*, and Apstein (1915) cited *D. sexcinctus* as the type of *Dasypus*. In 1945 Simpson (p. 193; see also p. 72, footnote) wrote: 'The application of the Linnaean name *Dasypus* is unfortunately subject to confusion. Many writers, probably the majority, have used this name for the quirquinchos [six-banded armadillos], which would be desirable, both to follow usage and because this group of species is the most central and generalized among living forms. In this case the correct name for the nine-banded armadillos would be *Tatu* and so they have been widely called (by me among many others). Oldfield Thomas, however, attempted to fix *Dasypus* as the name for the nine-banded armadillos, making *Euphractus* valid for the quirquinchos. This is apparently gaining in authoritative usage (although it still appears to be open to debate) and is here reluctantly adopted'. Most recent authors have cited *D. novemcinctus* as the type species of *Dasypus* (see, for example, Cabrera, 1958, p. 223; Hall, 1981, p. 282; Gardner, 1993, p. 65). The designation of *D. septemcinctus* Linnaeus, 1758 as the type by Wetzel & Mondolfi (1979, pp. 44, 46), reported by McBee & Baker (1982, p. 1), is invalid. Linnaeus (1758) gave the locality of *D. novemcinctus* as 'in America meridionali'; the type locality was limited by Cabrera (1958, p. 225) to Pernambuco, Brazil. The name *Euphractus* Wagler, 1830 is currently in use for *D. sexcinctus* Linnaeus, 1758. Both *Dasypus* and *Euphractus* are placed in the DASYPODIDAE.

5. Linnaeus (1758) based *Dasypus novemcinctus* on six previous publications, including Hernandez's (1651) *Rerum medicarum Novae Hispaniae thesaurus* (p. 314) and Linnaeus's own (1754) *Museum Adolphi Friderici*, Class 1 (Quadrupedia; p. 6); all are identifiable as the nine-banded armadillo. Thomas (1911, pp. 141, 142) recorded that there were Linnaean mammal specimens preserved in the Swedish Museum of Natural History, Stockholm, from information given to him by Prof Einar Lönnberg. This material was originally in the Crown Prince Adolf Fredrik collection (see Linnaeus, 1754) and includes specimens of *D. novemcinctus* and *D. sexcinctus*, catalogue nos. NRM 532077 and NRM 592711 respectively. These specimens have been authenticated as Linnaean types by Dr Sven Kullander (Swedish Museum of Natural History) from good curatorial records originating from the Museum Adolfi Frederiki. A photograph of specimen NRM 532077 is available on the Website (Linnaeus server) in Stockholm (http://linnaeus.nrm.se/zool).

6. The insect subfamily DASYPODINAE Börner, 1919 (p. 180) was established for a group of bees based on *Dasypoda* Latreille, 1802 (p. 424). The genus included four nominal species, among them *Andrena hirtipes* Fabricius, 1793 (p. 312), and this species was designated the type by Blanchard (1840, p. 414). Fabricius

cited *A. hirtipes* as 'in Germania Dom Smidt'. Zimsen (1964, p. 414) listed seven specimens, which were originally in Kiel, in the Fabrician collections in the Zoologisk Museum in Copenhagen; Warncke (1973) mentioned a lectotype ('♀ Lectotypus, Kopenhagen') but gave no details. The species is widespread in Europe, from the U.K. to Russia. The subfamily name DASYPODINAE has been used in publications by Michener (1944, 1981), Stephen, Bohart & Torchio (1969), Michener & Brooks (1984) and Michener, McGinley & Danforth (1994). Alexander & Michener (1995, p. 422) adopted DASYPODIDAE at the family level.

7. The name DASYPODIDAE Gray, 1821 in addition to being much older than DASYPODIDAE Börner, 1919 has also been much more widely used than the latter. In addition to the works by Cabrera (1958), Hall (1981) and Gardner (1993) cited in para. 4 above, the mammal name has appeared in representative recent publications, covering biology, ecology and conservation, as well as taxonomy, by Findley, Harris, Wilson & Jones (1975), Wetzel (1985), Eisenberg (1989), Corbet & Hill (1991) and Mares & Schmidley (1991). *D. novemcinctus*, the type species of *Dasypus*, is widely distributed. The species is important in the subsistence economy of the area and in the manufacture of tourist goods. It is also valuable in medical research on leprosy and is well known for the propensity to give birth to monozygous quadruplets. We believe that there is good reason not to change the mammalian family-group name. We therefore propose that the insect name be emended to DASYPODAIDAE, while leaving the mammalian name unaltered.

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

(1) to use its plenary powers to rule that for the purposes of Article 29 of the Code the stem of the generic name *Dasypoda* Latreille, 1802 (Hymenoptera) is DASYPODA-;

(2) to place on the Official List of Generic Names in Zoology the following names:
   (a) *Dasypus* Linnaeus, 1758 (gender: masculine), type species by Linnaean tautonomy *Dasypus novemcinctus* Linnaeus, 1758 (Xenarthra);
   (b) *Dasypoda* Latreille, 1802 (gender: feminine), type species by subsequent designation by Blanchard (1840) *Andrena hirtipes* Fabricius, 1793 (Hymenoptera);

(3) to place on the Official List of Specific Names in Zoology the following names:
   (a) *novemcinctus* Linnaeus, 1758, as published in the binomen *Dasypus novemcinctus* (specific name of the type species of *Dasypus* Linnaeus, 1758) (Xenarthra);
   (b) *hirtipes* Fabricius, 1793, as published in the binomen *Andrena hirtipes* (specific name of the type species of *Dasypoda* Latreille, 1802) (Hymenoptera);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
   (a) DASYPODIDAE Gray, 1821, type genus *Dasypus* Linnaeus, 1758 (Xenarthra);
   (b) DASYPODAIDAE Börner, 1919, type genus *Dasypoda* Latreille, 1802 (spelling emended by the ruling in (1) above) (Hymenoptera);

(5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Tatu* Blumenbach, 1779 (a junior objective synonym of *Dasypus* Linnaeus, 1758) (Xenarthra);

(6) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name DASYPODIDAE Börner, 1919 (spelling emended to DASYPODAIDAE by the ruling in (1) above) (Hymenoptera).

References

Alexander, B.A. & Michener, C.D. 1995. Phylogenetic studies of the families of short-tongued bees. *University of Kansas Science Bulletin*, **55**(11): 377–424.

Apstein, C. 1915. Nomina conservanda. *Sitzungsbericht der Gesellschaft Naturforschender Freunde zu Berlin*, **1915**(5): 119–202.

Blanchard, E. 1840. Hyménoptères. Pp. 219–415, 7 pls. *in* Castelnau, F.L.N. de Laporte, *Histoire naturelle des insectes*, vol. 3. Duménil, Paris.

Blumenbach, J.F. 1779. *Handbuch der Naturgeschichte*. [8], 446 pp. Göttingen.

Börner, C. 1919. Stammesgeschichte der Hautflügler. *Biologisches Zentralblatt*, **39**(4): 145–185.

Cabrera, A. 1958. Catalogo de los mamiferos de America del Sur. *Revista del Museo Argentino de Ciencias Naturales 'Bernardino Rivadavia'*. Ciencias Zoológicas, **4**(1): 1–307.

Cooper, Z.K. 1930. A historical study of the integument of the armadillo, *Tatusia novemcinctus*. *American Journal of Anatomy*, **45**: 1–32.

Corbet, G.B. & Hill, J.E. 1991. *A world list of mammalian species*, Ed. 3. viii, 243 pp. Natural History Museum, London.

Edgeworth, F.H. 1923. On the development of the cranial muscles of *Tatusia* and *Manis*. *Journal of Anatomy*, London, **57**: 313.

Eisenberg, J.F. 1989. *Mammals of the neotropics*, vol. 1, x, 449 pp.; vol. 2 (coauthored with K.H. Redford), ix, 430 pp. University of Chicago, Chicago.

Fabricius, J.C. 1793. *Entomologica systematica emendata et aucta . . .*, vol. 2. viii, 519 pp. Hafniae.

Findley, J.S., Harris, A.H., Wilson, D.E. & Jones, C. 1975. *Mammals of New Mexico*. xxii, 360 pp. University of New Mexico, Albuquerque.

Gardner, A.L. 1993. Order Xenarthra. Pp. 63–68 *in* Wilson, D.E. & Reeder, D.A.M. (Eds.), *Mammal species of the world. A taxonomic and geographic reference*, Ed. 2. xviii, 1206 pp. Smithsonian Institution Press, Washington & London.

Gray, J.E. 1821. On the natural arrangement of vertebrose animals. *London Medical Repository, Monthly Journal and Review*, **15**(1): 296–310.

Hall, E.R. 1981. *The mammals of North America*, Ed. 2, vol. 1. 690 pp. Wiley, New York.

Hernandez, F. 1651. *Rerum medicarum Novae Hispaniae thesaurus, seu plantarum, animalium, mineralium mexicanorum historia*. [xiv], 950, [22], 90, [6]. Rome.

Latreille, P.A. 1802. *Histoire naturelle des fourmis* ... xvi, 445 pp., 12 pls. Crapelet, Paris.

Lesson, R.P. 1827. *Manuel de mammalogie, ou histoire naturelle de mammifères*. xv, 441 pp. Paris.

Linnaeus, C. 1754. Classis 1. Quadrupedia. Pp. 1–12 *in*: *Museum S:rae R:ae M:tis Adolphi Friderici Regis ... Qudrupedia, Aves, Amphibia, Pisces, Insecta, Vermes describuntur et determinantur*. xxx, 96, [8] pp., 33 pls. Holmiae.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Lydekker, R. 1887. *Catalogue of the fossil Mammalia in the British Museum (Natural History)*, part 5. xxxv, 345 pp. British Museum (Natural History), London.

McBee, K. & Baker, R.J. 1982. *Dasypus novemcinctus*. *Mammalian Species*, **162**: 1–9. (Published by the American Society of Mammalogists).

Mares, M.A. & Schmidley, D.J. 1991. *Latin American mammalogy. History, biodiversity and conservation*. xii, 468 pp. Oklahoma Museum of Natural History, Norman & London.

Michener, C.D. 1944. Comparative external morphology, phylogeny, and a classification of the bees. *Bulletin of the American Museum of Natural History*, **82**: 151–326

Michener, C.D. 1981. Classification of the bee family Melittidae with a review of the species of the Meganomiinae. *Contributions of the American Entomological Institute*, **18**(3): 1 135.

Michener, C.D. & Brooks, R.W. 1984. Comparative study of the glossae of bees. *Contributions of the American Entomological Institute*, **22**(1): 1–73.

Michener, C.D., McGinley, R.J. & Danforth, B.N. 1994. *The bee genera of North and Central America*. viii, 209 pp. Smithsonian Institution Press, Washington.

Palmer, T.S. 1904. *Index Generum Mammalium: a list of the genera and families of mammals*, vol. 1 (A O). Pp. 1 492. United States Department of Agriculture, Biological Survey Division, Washington. North American Fauna, No. 23.

Patterson, J.T. 1913. Polyembryonic development in *Tatusia novemcinctus*. *Journal of Morphology*, **24**: 559–684.

Simpson, G.G. 1945. The principles of classification and a classification of mammals. *Bulletin of the American Museum of Natural History*, **85**: 1–350.

Stephen, W.P., Bohart, G.E. & Torchio, P.F. 1969. *The biology and external morphology of bees*. 140 pp. Agricultural Experimental Station, Oregon State University.

Thomas, O. [M.R.] 1911. The mammals of the tenth edition of Linnaeus; an attempt to fix the types of the genera and the exact bases and localities of the species. *Proceedings of the Zoological Society of London*, **1911**: 120–158.

Vanneman, A.S. 1917. The early history of the germ cells in the armadillo, *Tatusia novemcinctus*. *American Journal of Anatomy*, **22**: 341–363.

Wagler, J.C. 1830. *Natürliches System der Amphibien, mit vorangehender Classification der Säugethiere und Vögel*. vi, 354 pp., 9 pls. Munich.

Warncke, K. 1973. Die westpalaarktischen Arten der Bienenfamilie Melittidae (Hymenoptera). *Polskie Pismo Entomologiczne*, **43**: 97–126.

Wetzel, R.M. 1985. Taxonomy and distribution of armadillos, Dasypodidae. Pp. 23–48 *in* Montgomery, G.G. (Ed.), *The evolution and ecology of armadillos, sloths and vermilinguas*. 10, 451 pp. Smithsonian Institution, Washington.

Wetzel, R.M. & Mondolfi, E. 1979. The subgenera and species of long-nosed armadillos, genus *Dasypus* L. Pp. 43–63 *in* Eisenberg, J.F. (Ed.), *Vertebrate ecology in the northern neotropics*. 271 pp. Smithsonian Institution, Washington.

Zimsen, E. 1964. *The type material of I.C. Fabricius*. 656 pp. Munksgaard, Copenhagen.

Comment on the proposed conservation of the names *Geopeltis* Regteren Altena, 1949, *Geoteuthis* Münster, 1843, *Jeletzkyteuthis* Doyle, 1990, *Loligosepia* Quenstedt, 1839, *Parabelopeltis* Naef, 1921, *Paraplesioteuthis* Naef, 1921 and *Belemnotheutis montefiorei* Buckman, 1880 (Mollusca, Coleoidea)
(Case 2987; see BZN **53**: 253–260; **54**: 104, 184–185)

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We welcome Dr Riegraf's support in BZN **54**: 184–185 for our proposed conservation of various coleoid names.

Riegraf proposes the suppression of the name *Atramentarius* Buckland & Agassiz in Buckland, 1838. This name is an MS name of Buckland's. To the best of our knowledge, it appears in print only in Agassiz's (1838) footnote cited by Riegraf, and in a brief reference by Quenstedt (1849, p. 504) who does not himself use the name elsewhere. We therefore agree with Riegraf's proposal for the suppression of *Atramentarius*. We support also his proposal that *Belemnotheutis* Pearce, 1842 and the name of its type species *Belemnoteuthis* [sic] *antiqua* Pearce, 1847 be placed on the Official Lists, and the incorrect subsequent spelling *Belemnoteuthis* Pearce, 1847 on the Official Index.

Comments on the proposed conservation of the specific and subspecific names of *Trigonocephalus pulcher* Peters, 1862 and *Bothrops albocarinatus* Shreve, 1934 (Reptilia, Serpentes) by the designation of a neotype for *T. pulcher*
(Case 2921; see BZN **54**: 35–38, 245–249)

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Schätti & Smith (BZN **54**: 35–38) submitted a proposal to the Commission in an attempt to resolve the taxonomic confusion surrounding two species of pitviper (Squamata: Viperidae: Crotalinae) that occur in northern South America. One of these has a green dorsum with dark transverse bands, occurs on the Amazonian versant of the Andes in Ecuador and Colombia, and is arboreal. The other species (hereafter referred to as the western species) has a dorsum with a brown ground color, occurs on the Pacific side of the Andes in Ecuador and Colombia, and is terrestrial. Peters (1862) described the upper Amazonian species as *Trigonocephalus pulcher*, the holotype of which (specimen ZMB 3868) is housed in the Zoologisches Museum der Humboldt-Universität in Berlin. However, Boulenger (1896) mistakenly applied the name *pulcher* to the western species.

In their application Schätti & Smith contend that 'subsequent authors have all followed Boulenger's (1896) usage' (para. 1) and that '*pulcher* has never been used for the Amazonian species for which Peters (1863) [sic] proposed it' (para. 5). They also assert that the name *Bothrops albocarinatus* Shreve, 1934, a junior synonym of *Trigonocephalus pulcher* Peters, 1862, has been 'consistently applied' (para. 5) to the Amazonian species since 1934. Based on these contentions, they ask the Commission to set aside the holotype of *Trigonocephalus pulcher*, so that the 'universal usage' of *pulcher* (para. 6) for the western species can be maintained.

The purpose of this comment is to review past use of the name *pulcher* in order to demonstrate that it has not been universally applied to a single species since Boulenger (1896); thus, no justification exists for ruling against the Principle of Priority in this case. We also demonstrate that the name *albocarinatus* has a more intricate taxonomic history than Schätti & Smith imply.

Publications since Boulenger (1896) that include the name *pulcher* (in combination with generic names *Bothrops*, *Bothriopsis*, or *Lachesis*) can be divided into six categories.

1. At least one author (Noguchi, 1909, p. 38) provides a description of *pulcher* that can only refer to the Amazonian species: 'color olive with brownish crossbands with white rim'.

2. Several authors report a distribution for *pulcher* that can only refer to the Amazonian species. Klemmer (1963, p. 412) lists the range of *pulcher* as 'Amazonas-Tiefländer in Ecuador und Peru', and Minton, Dowling & Russell (1968, p. 61; sometimes cited as Department of the U.S. Navy, 1968) report a range of eastern Ecuador and eastern Peru.

3. Other authors also report a distribution for *pulcher* that can only refer to the Amazonian species, yet these same authors provide descriptions of *pulcher* that can only refer to the western species. J.A. Peters (1960, p. 510) lists the range of *pulcher* as 'Peru and Ecuador in the Amazonian lowlands', but in his key (p. 509) describes *pulcher* as having 'keels on dorsal scales much shorter than scale itself; ventrals 156–174; subcaudals 47–64'. J.A. Peters & Orejas-Miranda (1970, p. 54) report the distribution of *pulcher* as 'equatorial forests in Amazonian lowlands of Ecuador and Peru', but list characteristics (p. 42) that refer to the western species: tail not prehensile, keel shorter than scale, and subcaudals mostly paired. Schätti & Smith (para. 5) fail to point out the important contradiction between distribution and morphology when they state that Peters's (1960) and Peters & Orejas-Miranda's (1970) use of *pulcher* applies to the 'terrestrial' (= western) species.

4. Many authors (for example, Phisalix, 1922; Amaral, 1930; Hoge & Romano, 1971; Hoge & Romano-Hoge, 1981; Groombridge, 1986) who mention *pulcher* include little or no information for determining the species to which the name is applied.

5. Authors who explicitly use *pulcher* to refer to the western species are Campbell & Lamar (1989, 1992). All information presented by these authors (photographs, distribution and description) associates the name *pulcher* with the western species. Pérez-Santos & Moreno (1991) provide a description and distribution that apply to the western species. The works of Peters (1960), Peters & Orejas-Miranda (1970), and Hoge & Romano-Hoge (1981) do not fall into this category contra Schätti & Smith (para. 5).

6. Several authors chose not to use the name *pulcher* for the Amazonian or the western species after realizing that the holotype of *pulcher* belongs to the Amazonian species. Schätti & Kramer (1993) suggested that the name *pulcher* be suppressed so that *albocarinatus* could continue to be used for the Amazonian species. They then established a new name *almawebi* for the western species. Golay et al. (1993) list *Trigonocephalus pulcher* Peters, 1862 as a junior synonym of *Bothriechis oligolepis albocarinatus* (Shreve, 1934), and they list *Lachesis pulcher* Boulenger, 1896 as a junior synonym of *Porthidium almawebi* Schätti & Kramer, 1993. Bauer, Günther & Klipfel (1995, p. 80) list the present name of *Trigonocephalus pulcher* Peters, 1862 as '*Bothriechis oligolepis albocarinatus* (Shreve, 1934) fide Schätti & Kramer (1993)', and remark that 'Schätti & Kramer (1993) discussed the application of the junior synonym of Shreve to this taxon'.

Clearly, there has been neither consistent nor universal usage of the name *pulcher*.

While it is true that *albocarinatus* has only been used to refer to the Amazonian species, other names have also been applied to this species. We have already established that *pulcher* has been used for this species in numerous publications, but another name (only a few months younger than *albocarinatus*) exists in the literature as well. *Bothrops alticolus* Parker, 1934 has only recently been recognized as a junior subjective synonym of *albocarinatus* (see Burger, 1971; Campbell & Lamar, 1989; Schätti et al., 1990; Golay et al., 1993). Many publications (e.g. Peters, 1960; Klemmer, 1963; Duellman, 1979) list both *albocarinatus* and *alticolus*, thus muddling somewhat the taxonomic history of *albocarinatus*. The opinion of Schätti & Kramer (1993) that *Bothriopsis albocarinata* is a subspecies of *Bothriopsis oligolepis* further complicates the history of this name, especially since this opinion has not been universally accepted (Campbell et al., in press).

In addition to the varied uses of the names *pulcher* and *albocarinatus*, it is important to mention that both the Amazonian species and western species are extremely rare in museum collections and presumably in nature as well. Very little has been published about these snakes, so there is not a large body of literature in which the names have been used incorrectly. To our knowledge, human envenomation has not been recorded for these species, so no medical literature will be affected by applying the correct names. In short, the names *pulcher* and *albocarinatus* have been used so few times that even if usage of them were universal, there would not be a strong case for ruling against the Principle of Priority.

If the name *pulcher* is used for the Amazonian species as Peters (1862) intended and as defined by the holotype, a name is needed for the western species. The name available for the western species is *Bothrops campbelli* Freire-Lascano, 1991. The validity of this name has been questioned (see Schätti & Kramer, 1993), but Freire-Lascano's work clearly meets the criteria of the Code for publication (Kuch, BZN **54**: 245–248; Campbell et al., in press).

Because there has been no stable use of the names *pulcher* and *albocarinatus*, we believe there is no justification for setting aside the holotype of *Trigonocephalus pulcher*. The Code provides specifically for full resolution of confusion surrounding these names. These rules have already been applied and the matter resolved (Campbell et al., in press): the eastern species is *Bothriopsis pulchra* (Peters, 1862) and the western species is *Bothrops campbelli* Freire-Lascano, 1991. *Bothrops albocarinatus* Shreve, 1934 and *Bothrops alticolus* Parker, 1934 are junior subjective synonyms of

Bothriopsis pulchra. *Porthidium almawebi* Schätti & Kramer, 1993 is a junior subjective synonym of *Bothrops campbelli*. The synonymies and remarks provided by Campbell et al. (in press) clarify the complex nomenclatural history of these two species for future workers.

Acknowledgement

We thank J.A. Campbell and C.L. Stewart for critically reading an earlier draft of this comment.

Additional references

Amaral, A. do. 1930. *Serpientes venenosas sudamericanas*. Pp. 788–805. Sexta reunion de la Sociedad Argentina de Patologia Regional del Norte. Organized and published by Salvador Mazza.

Campbell, J.A., McDiarmid, R.W. & T. Toure (Eds.). In press. *Snake species of the world*, vol. 1. Herpetologists' League.

Duellman, W.E. 1979. The herpetofauna of the Andes: patterns of distribution, origin, differentiation, and present communities. Pp. 371–459 *in* Duellman, W.E. (Ed.), *The South American herpetofauna: its origin, evolution, and dispersal*. Monograph of the Museum of Natural History, University of Kansas, No. 7.

Groombridge, B. 1986. Comments on the M. pterygoideus glandulae of crotaline snakes (Reptilia: Viperidae). *Herpetologica*, **42**: 449–457.

Minton, S.A., Jr., Dowling, H.G. & Russell, F.E. 1968. *Poisonous snakes of the world. A manual for use by U.S. amphibious forces*. 212 pp. United States Government Printing Office, Washington, D.C.

Noguchi, H. 1909. *Snake venoms. An investigation of venomous snakes with special reference to the phenomena of their venoms*. 315 pp. Carnegie Institution of Washington, Washington, D.C.

Phisalix, M. 1922. *Animaux venimeux et venins*, vol. 2. 864 pp. Masson, Paris.

(2) Beat Schätti

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In his previously published comment (BZN **54**: 245 249, December 1997) Kuch noted that 'the Amazonian species represented by the holotype of *Trigonocephalus pulcher* Peters, 1862 is listed under [...] three names (*Bothrops albocarinatus*, *B. alticolus*, *B. pulcher*) in most of the major works on venomous snakes or influential regional checklists'. He stated that 'the senior name *pulcher* [...] has been correctly used at least four times as the valid name for the eastern (Amazonian) species' by J.A. Peters (1960), Klemmer (1963), U.S. Navy Department (1968) and J.A. Peters & Orejas-Miranda (1970).

However, Kuch admitted that 'none of the cited works includes a description of *B. pulcher*' and that the 'notable exceptions [...] J.A. Peters (1960) and J.A. Peters & Orejas-Miranda (1970)', although indicating an Amazonian distribution, gave morphological data that 'apply to the western species rather than to the Amazonian one'. Further, we learn that 'in many of these publications, only the stated geographical

distribution allowed a decision as to whether a particular name was used for the western or for the Amazonian species. The possibility that authors might have referred to the western species while indicating an erroneous (Amazonian) distribution can therefore not be refuted'.

Except for the original description (Peters, 1862), all citations of *pulcher* based on examined material, including the studies of Campbell & Lamar (1989, 1992), refer to the western species, i.e. [*Lachesis*] *pulcher* sensu Boulenger (1896). As noted by Kuch, this is also the case with 'the characters used for the identification of *pulcher*' by J.A. Peters (1960) and J.A. Peters & Orejas-Miranda (1970). Boulenger (1896) is not cited in these publications because the references are restricted to the original description of a taxon and synonyms (J.A. Peters, 1960, p. 491; J.A. Peters & Orejas-Miranda, 1970, p. v). J.A. Peters (1960) erroneously mentioned 'three syntypes' of *pulcher* and, clearly, the Berlin holotype was not examined. This work served as a basic reference for Klemmer's (1963) checklist and the manual of the U.S. Navy Department (1968), and the incorrect distribution given for *pulcher* only proves how easily this kind of error may enter into the literature. In any case, scientific names denote biological species, defined by name-bearing specimens, and not imaginary geographical ranges.

Kuch does not question the crucial point of the application, namely that under the Code *Bothrops albocarinatus* Shreve, 1934 is a junior objective synonym of *Trigonocephalus pulcher* Peters. His reservations concern the notion that *B. albocarinatus* and *Lachesis bilineatus* var. *oligolepis* Werner, 1901 are conspecific (*Bothriechis oligolepis albocarinatus*), as suggested by Schätti & Kramer (1993). However, in our application we (Schätti & Smith) did not use 'the hypothetical problem of a name change of *oligolepis* to *pulcher oligolepis*' as an argument in favour of their conservation, as alluded to by Kuch, but merely pointed out a possible consequence if the Code were to be strictly applied. Finally, *Bothrops alticolus* Parker, 1934 is a junior subjective synonym of *B. albocarinatus* Shreve (see Schätti & Kramer 1993) and therefore does not affect the case.

The comment by Gutberlet & Harvey (above) raises similar arguments as that by Kuch. The conclusion of Schätti & Kramer (1993) on the status of *Bothrops albocarinatus* Shreve is confirmed. But Gutberlet & Harvey conclude that there is no justification for ruling against the Principle of Priority (i.e. setting aside the holotype of *T. pulcher*). Referring to a yet unpublished paper (Campbell et al., in press) they state that the rules of the Code 'have already been applied and the matter resolved'. However, the proposed use of *pulcher* for the eastern species certainly does not contribute to stability or universality in nomenclature.

Prior to Schätti & Kramer (1993), the availability of *Bothrops campbelli* Freire, 1991 was questioned by Campbell & Lamar (1992). I have never seen Freire's (1991) publication in another form than as a photostatic copy, and the specific name *campbelli* has never been published in *Zoological Record* up to vol. 132. Irrespective of Freire's (1992) republication of *B. campbelli* and the intraspecific concept or generic allocation of *Bothriechis oligolepis* (Werner), the identity of the holotype of *Trigonocephalus pulcher* Peters makes it necessary to conserve *pulcher* as well as *Bothrops albocarinatus* Shreve, as Prof Smith and I proposed in our application.

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1. In their proposal for Case 2921, Schätti & Smith ask the Commission to use its plenary powers to set aside the existing holotype (ZMB 3868 in the Zoologisches Museum der Humboldt-Universität in Berlin) for *Trigonocephalus pulcher* Peters, 1862 and to allow the designation of a neotype.

2. In two insightful comments, Kuch (BZN **54**: 245–249) and Gutberlet & Harvey (above) have opposed this proposal and pointed out a number of weaknesses in it. Their conclusion was that no action by the Commission was required, and that the western species should bear the name *campbelli*, and the eastern species the name *pulcher*. I am in full agreement with the factual basis of their argument, in particular the availability of the name *campbelli* Freire, 1991, and the historically ambiguous usage of the name *pulcher* Peters, 1862; the reader is referred to Kuch's comment for details on the literature regarding this problem.

3. Designation of a neotype for *Bothrops pulcher* (Peters, 1862) is unacceptable as the holotype remains in existence; a holotype is also in existence for *B. campbelli* Freire, 1991, the name of which is available for the species from which the neotype of *pulcher* would be selected under Schätti & Smith's proposal.

4. However, it is my view that following the course of action proposed by Kuch and Gutberlet & Harvey, i.e. no intervention by the Commission, would lead to considerable instability and confusion, in that the name *pulcher*, which is frequently used for the western species, would become the correct name of the eastern species for which the well-established, unambiguous name *albocarinatus* Shreve, 1934 is already available.

5. Kuch and Gutberlet & Harvey are correct in saying that the name *pulcher* has, in many publications, been associated with an explicit or implicit range designation of the Amazonian (eastern) versant of the Andes. Their interpretation is that the authors of these publications were referring to the eastern species described as *pulcher* by Peters (1862), unless evidence to the contrary was presented. However, with the exception of Noguchi (1909), I am not aware of a single publication since Peters (1862) in which the name *pulcher* is accompanied by a description or key which unambiguously refers to the eastern, Amazonian species described by Peters (1862). On the other hand, in at least seven publications (Boulenger, 1896; J.A. Peters, 1960; J.A. Peters & Orejas-Miranda, 1970; Pérez-Santos & Moreno, 1988, 1991; Campbell & Lamar, 1989, 1992) the use of the name *pulcher* is accompanied by descriptions, data and/or illustrations which unambiguously refer to the western species (even though the indicated distribution corresponds to that of the eastern species in Peters, 1960 and Peters & Orejas-Miranda, 1970). Several of these works are highly influential. In particular, the publication by Campbell & Lamar (1989) is likely to remain for many years the standard text on Neotropical pitvipers. The consequence is that the name *pulcher* has, in recent years, become increasingly strongly associated with the western species, and not the eastern species described by Peters (1862). Clearly, the use of the name *pulcher* is thus tainted with a long history of ambiguity and confusion. I therefore agree with Kuch's comment that preserving this name for the western species through designation of a neotype, as proposed by Schätti & Smith, would not benefit nomenclatural stability or prevent confusion.

6. For the eastern species, the name *albocarinatus* Shreve, 1934 is available, with *alticolus* Parker, 1934 as a subjective junior synonym. The name *albocarinatus* has not been used for any other species, and therefore does not give rise to any confusion.

7. The result of a rejection of the proposal by Schätti & Smith would be that the eastern species, currently widely known under the unambiguous name *albocarinatus*, would have this substituted with the highly ambiguous, tainted name *pulcher*, which has become increasingly associated with the western species. This strict interpretation of the Principle of Priority would, in my view, lead to quite unnecessary and highly undesirable confusion, which would be further exacerbated by current uncertainty about the generic classification of both species.

8. Kuch believes that no appeal for the conservation of *albocarinatus* is justified, as the senior name *pulcher* has been used at least four times for the eastern species since 1947. However, two of these references (J.A. Peters, 1960; J.A. Peters & Orejas-Miranda, 1970) provide descriptions which clearly refer to the western species, although they indicate an eastern distribution; the other two references (Klemmer, 1963; U.S. Navy Department, Office of Naval Intelligence, 1968) provide no information other than distribution, leaving the question of which species was being referred to open to discussion. Given the influential nature and wide availability of the publications of Boulenger (1896) and J.A. Peters (1960), and the relative obscurity of the original description of *pulcher* by Peters (1862), it seems likely that many subsequent authors meant the western form described under the name *pulcher* by Boulenger (1896) and J.A. Peters (1960), and copied the erroneous locality indication from J.A. Peters (1960). Furthermore, all four of these publications also include separate accounts of the eastern species under the unambiguous names *albocarinatus* Shreve, 1934 and *alticolus* Parker, 1934, suggesting that none of the authors regarded *pulcher* as conspecific with *albocarinatus* and *alticolus*. Consequently, I regard the inference that they were in fact referring to the eastern species as described by Peters (1862) as unproven, and the hypothesis that they were following Boulenger (1896) and Peters (1960) in referring to the western species as *pulcher*, albeit with erroneous locality information, as equally probable. The name *albocarinatus* has been used as valid for the eastern species on at least 22 occasions since 1947, as noted in Kuch's comment. In the absence of any post-1947 publications irrefutably associating the name *pulcher* with the eastern species, as evidenced by descriptions, morphological data or illustrations, I conclude that there are no obstacles to the conservation of the name *albocarinatus* under Article 79. The Code states explicitly that 'The Principle of Priority is to be used to promote stability and is not intended to be used to upset a long-accepted name in its accustomed meaning through the introduction of an unused name...' (Article 23b). In this case, a strict interpretation of the Principle of Priority would not just lead to a well-known, unambiguous name (*albocarinatus*) simply being supplanted by a senior name (*pulcher*) rarely used for the species, but would lead to further confusion because the senior name has been used extensively for another species. This clearly contravenes the intent of the Code.

9. The Commission is accordingly asked:

(1) to reject the proposal of Schätti & Smith for the designation of a neotype for *Trigonocephalus pulcher* Peters, 1862;

(2) to suppress the name *pulcher* Peters, 1862, as published in the binomen *Trigonocephalus pulcher*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(3) to place the following names on the Official List of Specific Names in Zoology:
(a) *albocarinatus* Shreve, 1934, as published in the binomen *Bothrops albocarinata*;
(b) *campbelli* Freire, 1991, as published in the binomen *Bothrops campbelli*.

The consequence of this would be that the western species would bear the unambiguous name *campbelli* Freire, 1991, as defined by the holotype INHMT 1956 in the collection of the Instituto Nacional de Higiene y Medicina Tropical 'Leopoldo Izquieta Pérez' in Guayaquil, Ecuador. The name *almawebi* Schätti & Kramer, 1993, is a junior subjective synonym of *campbelli* Freire, 1991. The eastern species would bear the name *albocarinatus* Shreve, 1934, which is defined by holotype (MCZ 36989 in the collection of the Museum of Comparative Zoology, Cambridge, Massachusetts) with *alticolus* as its junior subjective synonym.

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I wish to thank Ulrich Kuch and Ronald L. Gutberlet, Jr., for valuable discussions, and for allowing me access to the texts of their comments prior to publication. I also thank Jonathan A. Campbell, William W. Lamar and Patrick David for helpful suggestions and information.

Additional reference

Pérez-Santos, C. & Moreno, A.G. 1988. *Ofidios de Colombia*. 576 pp. Museo Regionale di Scienze Naturali, Torino.

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In this case there are now three solutions in front of us in solving the problem of uniform name application: (1) keeping the specific name of *Trigonocephalus pulcher* Peters, 1862 for the eastern species in conformance with the identity of the type, and adopting *campbelli* Freire, 1991 for the western species, as suggested by Drs Kuch (BZN **54**: 245–249) and Gutberlet & Harvey (above); (2) keeping Boulenger's application of *pulcher* to the western species, and using *albocarinatus* Shreve, 1934 for the eastern species, as proposed in the application submitted by Dr Schätti and myself; or (3) suppressing *pulcher* completely, thus using *albocarinatus* for the eastern species and *campbelli* for the western, as suggested by Dr Wüster (above). Which solution provides the most stable and universal nomenclature?

Each has at least some following already. The information provided at present by various commentators leads me to the conclusion that the Boulengerian application of *pulcher* has had the greatest following, in spite of the fact that at least some misinterpretations have plagued most commentators.

However, if that conclusion is valid, then the steps proposed in the application should be taken to ensure pertinence of the name *pulcher* to the western species (i.e. designation of a neotype in that sense) and hence *albocarinatus* to the eastern species. Regardless, the ultimate decision should be based on the majority perception of the solution that would be least disturbing to nomenclatural stability.

Comments on the proposed conservation of the specific name of *Varanus teriae* Sprackland, 1991 (Reptilia, Squamata)
(Case 3043; see BZN **54**: 100–103, 250–251)

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We believe that the specific name of *Varanus teriae* Sprackland, 1991 should not be conserved, and that for the following reasons the appropriate name is *Varanus keithhornei* (Wells & Wellington, 1985).

1. There is no reason to suspend the application of the Principle of Priority to conserve the specific name of *V. teriae*. In terms of common usage the case is weak. The history of *V. teriae* is short (only six years); notwithstanding the fact that it has been used more frequently than the prior name *V. keithhornei*, we believe that usage does not justify the conservation of *V. teriae*.

2. As the Commission declined to vote on the application to suppress the work by Wells & Wellington (see BZN **48**: 337–338, December 1991), the name *V. keithhornei* is available. Though the description is poor, it is detailed enough to ensure that no confusion exists (or ever could exist) about either the taxon so named or the holotype. Wells & Wellington (1985, p. 21) clearly identify Queensland Museum specimen J31566 as the holotype of *Odatria keithhornei* and describe the species as '. . . readily identified by referring to the excellent diagnostic and descriptive data in Czechura (1980)'. Czechura had provided a very detailed description and illustration of this specimen, under the name *Varanus prasinus* Schlegel, 1839, and *V. keithhornei* (Wells & Wellington, 1985) is available under Article 13a(ii) of the Code. The same specimen is also the holotype of *V. teriae* Sprackland, 1991.

3. We (Covacevich & Couper, 1994) have already formally treated *V. teriae* as a synonym of *V. keithhornei*, in accordance with the Principle of Priority; Sprackland, Smith & Strimple do not mention this in their application to conserve *V. teriae* (although they have done so in their reply (BZN **54**: 250) to a comment by Prof L.B. Holthuis on this case). The synonymy has now been recognised several times: Irwin (1996); Kirschner, Müller & Seufer (1996); Irwin & Irwin (1997); and in the Queensland Nature Conservation Regulations, 1997.

4. In our view the name *V. keithhornei* was not 'obscurely published', as stated by Sprackland et al. in their application. The Wells & Wellington (1985) work became an international *cause celèbre*, creating (initially at least) fears of impending taxonomic havoc. If only because these authors rejected 'virtually every tenet of the voluntary Code of Ethics' (BZN **48**: 338) and achieved something approaching notoriety, their work was both extremely well known and widely discussed. Sprackland et al. allude at length (para. 4 of their application) to difficulties in obtaining a copy of Wells & Wellington (1985) where '... new varanid names might exist ...'. However understandable, even excusable, ignorance of the literature may sometimes be for taxonomists, it should not (we believe) be used as a rationale to overthrow the Principle of Priority. Furthermore, one letter to any herpetological

taxonomist in Australia would have secured a copy of the work prior to Sprackland's (1991) introduction of the name *V. teriae*.

5. The statement by Sprackland et al. (para. 6 of their application) that 'the specific name of *Varanus teriae* Sprackland, 1991 has consistently been used for the mainland species of tree monitor' is in error: as mentioned in para. 3 above, the older objective synonym *V. keithornei* has been used several times. A number of the usages of *V. teriae* cited by Sprackland et al. date from after the publication of the synonymy by Covacevich & Couper (1994) in a widely circulated journal (indeed the same one in which the name *V. teriae* was published), and thus are not in accord with the Code.

The International Commission on Zoological Nomenclature is accordingly asked to reject the application by Sprackland, Smith & Strimple to suppress the specific name of *Odatria keithhornei* Wells & Wellington, 1985, and instead to place this name on the Official List of Specific Names in Zoology. The specific name of *Varanus teriae* Sprackland, 1991 should be placed on the Official Index as being a junior objective synonym of *O. keithhornei*.

Acknowledgements

Dr Allen Greer (Australian Museum, Sydney), Dr Glenn Shea (University of Sydney), Dr Glenn Ingram (Queensland Museum, Brisbane) and Mr David Pepin (Washington University, St Louis, Missouri) made constructive suggestions on this comment.

Additional references

Irwin, S. 1996. Capture, field observations and husbandry of the rare Canopy Goanna. *Journal of the Australasian Society of Zoo Keeping, Thylacinus*, **21**(3): 12–19.

Irwin, S. & Irwin, T. 1997. *The crocodile hunter. The birthday present was a python and other adventures*. 144 pp. Penguin Books, Auckland.

Kirschner, A., Müller, T. & Seufer, H. 1996. *Faszination Warane*. 254 pp. Kirschner & Seufer Verlag, Kelten-Weiler.

Queensland Nature Conservation Regulation. 1997. *Queensland Subordinate Legislation, Nature Conservation Act 1992*. Queensland Government, Brisbane.

(2) Glenn M. Shea

Department of Veterinary Anatomy and Pathology, University of Sydney, NSW 2006, Australia

I am writing to oppose the proposal to conserve the specific name of *Varanus teriae* Sprackland, 1991 by suppression of an earlier synonym.

1. The case for the suppression of *Odatria keithhornei* Wells & Wellington, 1985 rests upon two premises. The major argument is that the junior synonym, *Varanus teriae*, is in common usage, and hence that use of the earlier name would cause considerable confusion. The minor argument is that the publication by Wells & Wellington (1985) in which *Odatria keithhornei* was established is not readily obtainable.

2. The species concerned, an arboreal varanid lizard from Cape York Peninsula, Australia, was first formally reported by Czechura (1980), and tentatively identified

by him as an Australian occurrence of *Varanus prasinus* (Schlegel, 1839), a species otherwise known only from New Guinea and associated islands. Between 1980 and 1992 this name was used in nine publications; they included all but one (Cogger, 1992, who used *V. teriae*) of the general reference works to the Australian herpetofauna which mentioned the species. In 1985 Wells & Wellington (p. 21) proposed the specific name *keithhornei*, basing it on one of the specimens described by Czechura; they placed the species in the genus *Odatria* Gray, 1838. Within two years an application was published (BZN **44**: 116–121, June 1987) seeking the suppression of three entire works by Wells & Wellington, including that in which *O. keithhornei* was published. After publication of many comments (as mentioned in the application) this case was only resolved in December 1991, when the Commission published (BZN **48**: 337–338) its refusal to vote on the issue. In 1991 Sprackland described *Varanus teriae*, without mentioning the work by Wells & Wellington (of which he was apparently unaware until 1995: para. 4 of the application); the holotype of *V. teriae* was the same Czechura specimen mentioned for *O. keithhornei*.

3. In their application for the suppression of *O. keithhornei* Sprackland et al. did not note any usage of the name *Odatria* (or *Varanus*) *keithhornei* between 1991 and 1997. Such uses have been the formal synonymy of *V. teriae* and *O. keithhornei* by Covacevich & Couper (1994) and the subsequent use of the combination *Varanus keithhornei* by Irwin (1996), Kirschner, Müller & Seufer (1996) and Irwin & Irwin (1997).

4. Despite the use of three names for the Australian lizard since 1980 there is no prospect of any taxonomic confusion. The species is confined to a small remote area of rainforest in northern Australia and is little known. Apart from conservation aspects, the species is of significance mostly to herpetological taxonomists and varanid enthusiasts.

5. Sprackland et al. refer in their application to the difficulty experienced in obtaining copies of Wells & Wellington (1985), and imply that it was poorly known. However, they cite several publications that referred (before the publication of *V. teriae* in 1991) to the work, negating the suggestion that it was readily overlooked. However obscure the Wells & Wellington paper may be, it contains validly published names. Within Australia, the country to which it is mostly relevant, it was widely distributed, either in the original form or as photocopies, and several institutional libraries have copies. Sprackland's difficulty in obtaining a copy is irrelevant to the argument for suppressing the name *O. keithhornei*.

6. In summary, the specific names *keithhornei* and *teriae* are both available and are objective synonyms. Their history is short, and I believe that the Principle of Priority should be followed in this case.

Comments on the proposed conservation of the specific name of *Cnemidophorus neomexicanus* Lowe & Zweifel, 1952 (Reptilia, Squamata)
(Case 3049; see BZN **54**: 167–171)

(1) Charles J. Cole

Department of Herpetology, American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024, U.S.A.

I fully support the proposals of Prof Smith and his coauthors for suppression of the name *Cnemidophorus perplexus* Baird & Girard, 1852 and conservation of the name *Cnemidophorus neomexicanus* Lowe & Zweifel, 1952. They have correctly and properly pointed out the many problems associated with the name *C. perplexus* (inconsistent and ambiguous usage; virtual abandonment in the last 30 years; problematical lectotype; problematical type series involving two taxa; uncertain type locality). They have also indicated well why *C. neomexicanus* should be conserved (consistent, unambiguous usage, particularly throughout the last 30 years) rather than be threatened by *C. perplexus*.

I quibble with only one minor point as stated by Smith et al. This does not change the conclusions to be reached, but further illustrates the complexities of this case and the need for this judgment, for otherwise specialists may suggest switching these names back and forth in a confusing fashion for many years.

My quibble is with the statement of Smith et al. that Taylor & Walker (1996) showed 'conclusively' that USNM 3060 (the supposed lectotype of *C. perplexus*) is not a hybrid (para. 5 of the application). Taylor & Walker presented strong new evidence consistent with this conclusion, based on morphology, but the most conclusive evidence would be genetic data, and given the history and state of preservation of the lectotype, no experimental methods exist for obtaining such conclusive evidence from this specimen today.

The name *C. neomexicanus* is applied to a taxon of hybrid origin that consists of several clones of unisexual whiptail lizards which reproduce parthenogenetically. The clones originated through hybridization among two previously existing bisexual taxa: *Cnemidophorus tigris marmoratus* ♀ x *C. inornatus* ♂. The genetic evidence for this is overwhelming (based on karyotypes, protein electrophoresis of about three dozen nuclear gene products, and mitochondrial DNA analyses), provided in some of the references presented by Smith et al. and particularly in the list of additional references presented below.

The nomenclatural problems can be resolved by supporting the proposals of Smith et al.

Additional references

Brown, W.M. & Wright, J.W. 1979. Mitochondrial DNA analyses and the origin and relative age of parthenogenetic lizards (genus *Cnemidophorus*). *Science*, **203**: 1247–1249.

Cole, C.J., Dessauer, H.C. & Barrowclough, G.F. 1988. Hybrid origin of a unisexual species of whiptail lizard, *Cnemidophorus neomexicanus*, in western North America: new evidence and a review. *American Museum Novitates*, **2905**: 1–38.

Densmore, L.D., III, Wright, J.W. & Brown, W.M. 1989. Mitochondrial-DNA analyses and the origin and relative age of parthenogenetic lizards (genus *Cnemidophorus*). II. *C. neomexicanus* and the *C. tesselatus* complex. *Evolution*, **43**: 943–957.

Dessauer, H.C. & Cole, C.J. 1986. Clonal inheritance in parthenogenetic whiptail lizards: biochemical evidence. *Journal of Heredity*, **77**: 8–12.

Dessauer, H.C. & Cole, C.J. 1989. Diversity between and within nominal forms of unisexual teiid lizards. *In*: Dawley, R.M. & Bogart, J.P. (Eds.), 'Evolution and ecology of unisexual vertebrates'. *New York State Museum Bulletin*, **466**: 49–71.

Dessauer, H.C., Reeder, T.W., Cole, C.J. & Knight, A. 1996. Rapid screening of DNA diversity using dot-blot technology and allele-specific oligonucleotides: maternity of hybrids and

unisexual clones of hybrid origin (lizards, *Cnemidophorus*). *Molecular Phylogenetics and Evolution*, **6**: 366–372.

Parker, E.D., Jr. & Selander, R.K. 1984. Low clonal diversity in the parthenogenetic lizard *Cnemidophorus neomexicanus* (Sauria: Teiidae). *Herpetologica*, **40**: 245–252.

(2) Philip A. Medica

U.S. Geological Survey, U.S. Department of the Interior, Biological Resources Division, California Science Center, Las Vegas Field Station, 4765 W. Vegas Drive, Las Vegas, Nevada 89108, U.S.A.

I wish to express my support for this application and endorse the acceptance of the specific name of *Cnemidophorus neomexicanus* Lowe & Zweifel, 1952.

Having conducted research in the field of herpetology for the past 35 years in the southwestern United States I am familiar with the nomenclatural problems and the general acceptance of *neomexicanus* by professional herpetologists. During the mid-1960's my research focused on a study of four sympatric species of whiptail lizards in the southern Rio Grande Valley of New Mexico. The species were *Cnemidophorus neomexicanus*, *C. inornatus*, *C. exsangus* and *C. tigris* and the work was subsequently published (Medica, 1967).

Since the mid-1960's I have accepted the usage of the name *neomexicanus*, rather than *perplexus*, for the species of *Cnemidophorus* in question. Likewise, virtually all of the texts and field guides referring to this taxon now use *neomexicanus*. Therefore, I wholeheartedly support Prof Hobart Smith and his colleagues and request that *neomexicanus* be approved and *perplexus* be abandoned.

Additional reference

Medica, P.A. 1967. Food habits, habitat preference, reproduction, and diurnal activity in four sympatric species of whiptail lizards (*Cnemidophorus*) in south Central New Mexico. *Bulletin of the Southern California Academy of Sciences*, **66**(4): 251–276.

(3) Harold A. Dundee

Tulane University of Natural History, Belle Chasse, Louisiana 70037–3098, U.S.A.

I wish to support Case 3049. It seems to me to be a very meritorious proposal.

A reader might well conclude that, with 11 authors who are all specialists in the enigma of parthenogenetic species of *Cnemidophorus*, the application clearly carries the full weight of specialist opinion. I would like to have seen John Wright's and C.W. Lowe's names also included because of their knowledge of *Cnemidophorus*, and because of Wright's (1969) proposal for suppression of the name *perplexus* (not submitted to the Commission; para. 5 of the application) after his (1967) paper with Lowe concluded that specimen USNM 3060, taken to be the lectotype, was a hybrid.

The authors of the application have certainly presented sufficient evidence of the desirability of conservation of the name *neomexicanus*, particularly the confusing history of *perplexus* prior to the consistent use of *neomexicanus* during the past 30 years or more. I therefore recommend that the Commissioners recognise the significance of specialist authority and that the name *neomexicanus* be conserved.

(4) Robert G. Webb

Department of Biological Sciences, University of Texas at El Paso, El Paso, Texas 79968-0519, U.S.A.

This note is written in support of the application by Smith et al. to conserve the specific name of *Cnemidophorus neomexicanus* Lowe & Zweifel, 1952 as the valid name for the species of whiptail lizard, and to reject the name *C. perplexus* Baird & Girard, 1852. My herpetological colleague, Dr Carl S. Lieb, who is interested in the taxonomy of lizards in the southwestern United States, is also in agreement with the proposal.

It would be helpful for the former syntypes of *C. perplexus*, listed in para. 3 of the application, to be clearly documented as paralectotypes (i.e. lacking any name-bearing function) and representing a different species, *C. inornatus* Baird, 1858: USNM 30885 (Gambel specimen collected with lectotype), USNM 3050 and USNM 248691 (Churchill-Rio Grande), and USNM 3020 (lost, species unknown, Graham & Clark-Rio San Pedro [= Devils River, Val Verde County, Texas]).

(5) Wilmer W. Tanner

Monte L. Bean Life Science Museum, Brigham Young University, 290 MLBM, P.O. Box 20200, Provo, Utah 84602-0200, U.S.A.

When I was completing a study on the lizards of the Mexican State of Chihuahua I was confronted with the dilemma of the scientific name *Cnemidophorus perplexus* Baird & Girard, 1852 and concluded then that the most logical scientific name for the species was *C. neomexicanus* Lowe & Zweifel, 1952.

There is ample justification for the suppression of *perplexus* and confirmation of *neomexicanus* as the valid name for the taxon in question.

(6) David B. Wake

Museum of Vertebrate Zoology, University of California, Berkeley, 3101 Valley Life Science Building No. 3160, Berkeley, California 94720-3160, U.S.A.

I write to support the argument of Prof Hobart Smith and 10 coauthors that the specific name of *Cnemidophorus perplexus* Baird & Girard, 1852 be suppressed in favor of the name *C. neomexicanus* Lowe & Zweifel, 1952.

The name '*perplexus*' is apt, for the status of this name has been in question for many years and it now seems certain, as these authors agree, that it cannot now or in the future be resolved.

(7) Beth E. Leuck

Department of Biology, Centenary College of Louisiana, 2911 Centenary Boulevard, Shreveport, Louisiana 71104, U.S.A.

I am writing in support of the requested suppression of the specific name of *Cnemidophorus perplexus* Baird & Girard, 1852. I have researched and published on

the behavior of this species, more commonly known as *C. neomexicanus* Lowe & Zweifel, 1952, so I feel qualified to support the application. The name *perplexus* has not been used by researchers in recent years and, given the controversy surrounding its historical use, it should be officially suppressed.

I earnestly and enthusiastically support the authors's proposal to place *neomexicanus* on the Official List and *perplexus* on the Index. I thank the Commission for their help in this very important nomenclatural matter.

(8) Support for the application has also been received from Prof Robert C. Stebbins (*Museum of Vertebrate Zoology, University of California, Berkeley, California 94720, U.S.A.*), Prof James L. Christiansen (*Department of Biology, Drake University, Olin Hall, Des Moines, Iowa 50311, U.S.A.*), Prof Roger Conant (*Department of Biology, 167 Castetter Hall, The University of New Mexico, Albuquerque, New Mexico 87131 1091, U.S.A.*) and Dr Joseph T. Collins (*The Center for North American Amphibians and Reptiles, 1502 Medinah Circle, Lawrence, Kansas 66047, U.S.A.*).

Comment on the proposed conservation of usage of 15 mammal specific names based on wild species which are antedated by or contemporary with those based on domestic animals

(Case 3010; see BZN **53**: 28–37, 125, 192–200, 286–288; **54**: 119–129, 189)

I. Lehr Brisbin, Jr.

Savannah River Ecology Laboratory, The University of Georgia, P.O. Drawer E, Aiken, South Carolina 29802, U.S.A.

I would like to express my strong support for the application by A. Gentry, J. Clutton-Brock and C.P. Groves, published in BZN **53**: 28–37 (March 1996). My views are based on more than 30 years of experience as a vertebrate ecologist and wildlife conservation biologist conducting research into the ecology of domestication (Brisbin, 1974) and the conservation biology of the wild ancestors of domestic animals (Brisbin, 1995, 1996) and unique forms of feral (domestic returned to the wild state) wildlife (Brisbin, 1989, 1990; and Brisbin et al., 1994). Considering my background, I believe that I disprove the earlier claim of Schodde (BZN **54**: 123; June 1997) that support for Case 3010 'comes largely from a relatively small group of archaeozoologists', and that the proposal brings 'confusing complications' to the 'very large world of ecologists, conservation biologists and wildlife managers'. On the contrary, as a person who works extensively in these three latter fields, I welcome this proposal and the clarification/simplification that it brings to my work. My position in this regard also serves to disprove a similar claim by Bock (BZN **54**: 125) that this proposal would have the 'potential for creating considerable confusion ... for the large number of ecologists, wildlife biologists and conservationists dealing with these species'.

My work in these areas focuses particularly on the wild ancestors and feral counterparts of the domestic dog (Brisbin et al., 1994; Brisbin & Risch, 1997), pig (Brisbin, 1990; Mayer & Brisbin, 1991; and Oliver & Brisbin, 1993) and chicken (Brisbin, 1996; Peterson & Brisbin, in press). This work has been supported by a Financial Assistance Award between the U.S. Department of Energy and the University of Georgia (DE-FC09-96SR18546) and will form the basis for most of my comments concerning this proposal.

Much of my work has related to documenting the unique components of global biodiversity that are embodied in populations of the surviving genetically pure wild ancestors, primitive domestic breeds and long-term feral forms of species such as those named above. It is with regard to mustering support for the conservation of these underappreciated and often unrecognized components of biodiversity that the adoption of Case 3010 becomes a particularly critical issue. As pointed out by Gentry, Clutton-Brock & Groves (BZN **54**: 127–129; June 1997), failure to adopt this proposal will have a considerably negative impact upon those of us who are tryng to make a case for the conservation of these elements of biodiversity. The case to defend this biodiversity must be made to national and international regulatory bodies which act under the mandates of legislation and international agreements such as the United States' Endangered Species Act, the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), etc. Consider for example the negative impacts on public relations efforts, not to mention legal hindrances, that would be associated with a nomenclatural designation indicating that remnant free-ranging populations of wild wolves are really (taxonomically speaking) nothing more than domestic dogs (*Canis familiaris*)!

Since the best available evidence suggests that the domestic dog and wild wolf are indeed one species, designating both as *Canis lupus* could still solve the above problem. However, this has the consequence of producing confusion and problems for a number of issues such as law enforcement against the keeping of wolf hybrids by members of the public, and legal mandates in Australia for control of dingoes. I personally prefer the solution suggested by Wolsan (BZN **54**: 189; September 1997), who advocated 'excluding domesticated forms from their ancestral wild species and labeling them with distinct names of full specific rank based on domestic animals'. My work with the ecology of the domestication of the species noted above strongly supports the scientific validity of this proposal. Such a separate specific designation would go a long way towards eliminating the present potential for confusion associated with taxonomic citations in scientific literature where the derivation of the particular animals used in the research is not otherwise indicated. For example, a study which describes the aggressive behavior of '*Canis familiaris*' towards humans under certain conditions would be interpreted quite differently if the subject involved was a wolf as opposed to some breed of domestic dog. The importance of such distinctions to ethologists has been clearly described by Mungall (BZN **54**: 120–121; June 1997) in her commentary in support of Case 3010. I strongly support the assignment of separate taxonomic designations for domestic vs. wild ancestral forms of the same species as suggested by Gardner (BZN **54**: 125–126; June 1997), who points out that 'domesticated mammals in most cases are reproductively isolated from their wild progenitors and warrant species status'. The problem is that in many cases there are still simply not enough data to say for sure whether a full species or

perhaps subspecies-level distinction is warranted between a given wild ancestor and certain of its related long-term feral and/or primitive domestic counterparts (Brisbin et al., 1994). As in other unsettled questions of taxonomic affiliation however, additional data, when collected in future studies, will hopefully clarify these relationships and thus settle disputes concerning such nomenclatural designations.

Schodde (BZN **54**: 123–124; June 1994) has a good point when he raises the question as to just what taxonomic designation should be given to feral forms. I suggest that the answer to this question should be on a case-by-case basis and depend on the findings of long-term thorough studies of the archaeozoology, biogeography and ecology of the wild ancestor and the most primitive/long-term feral and domestic forms of the species in question. In cases of well-defined long-term primitive feral forms such as the Australian dingo / New Guinea singing dog (Brisbin et al., 1994) or the Andaman Island pig (Brisbin, 1990; Mayer & Brisbin, 1991; and Oliver & Brisbin, 1993), the case could well be made for a separate taxonomic designation at the species or subspecies level. This would largely depend, I would suggest, on the eventual determination of genetic distances using molecular genetic techniques. It should be pointed out however that Schodde (BZN **54**: 121–122; June 1997) is not correct in stating that feral forms tend to reapproach wild ancestral stock in form through a long period of 'free out-breeding'. The longest-term feral pigs (those of the Andaman Islands and Ossabaw Island, Georgia, U.S.A.) have remained distinctive from wild boar in both external body form and cranial morphology (Mayer & Brisbin, 1991) and the longest-term feral dogs (the New Guinea singing dog and the Australian dingo) have in no ways come to resemble the body morphology of the wolf (Brisbin et al., 1994; Brisbin & Risch, 1997). In any case, this whole matter of feral animal taxonomy is certainly not resolved by opposing Case 3010. In fact, failing to support Case 3010 serves only to further muddy already troubled taxonomic waters.

Animal domestication has been one of the most important processes ever devised by humans to help promote their own survival and well-being across evolutionary time. The varied applications of this process with a variety of animal species have created an incredibly broad array of biodiversity, which is largely underappreciated by most conservation biologists. Many of the animal groups that embody the most unique and primitive expressions of this biodiversity are currently threatened with genetic extinction in the free-ranging state (Brisbin, 1995; Brisbin, 1996; and Peterson & Brisbin, in press). This problem has been exacerbated as human civilization and free-ranging/escaped modern domesticates continue to invade the ever-shrinking ranges of the last genetically pure remnants of the wild ancestors or long-term primitive feral counterparts of these forms. I urge the Commission to consider the potential negative impacts which a failure to support Case 3010 could have upon efforts to conserve and study these last unique remnants of the process that brought us our modern-day domestic animals and the dependence which we have upon them.

Additional references

Brisbin, I.L., Jr. 1974. The ecology of animal domestication: its relevance to man's environmental crises — past, present and future. *ASB Bulletin*, **21**(1): 3–8.

Brisbin, I.L., Jr. 1989. Feral animals and zoological parks: conservation concerns for a neglected component of the world's biodiversity. Pp. 523–530 *in*: *American Association of*

Zoological Parks & Aquariums, 1989 Proceedings, Southern Regional Conference, Atlanta, Georgia.

Brisbin, I.L., Jr. 1990. A consideration of feral swine (*Sus scrofa*) as a component of conservation concerns and research priorities for the Suidae. *Bongo*, **18**: 281–293.

Brisbin, I.L., Jr. 1995. Conservation of the wild ancestors of domestic animals. *Conservation Biology*, **9**(5): 1327–1328.

Brisbin, I.L., Jr. 1996. Concerns for the genetic integrity and conservation status of the Red Junglefowl. *Tragopan*, **4**: 11–12.

Brisbin, I.L., Jr. & Risch, T.S. 1997. Primitive dogs, their ecology and behavior: unique opportunities to study the early development of the human-canine bond. *Journal of the American Veterinary Medical Association*, **210**(8): 1122–1126.

Brisbin, I.L., Jr., Coppinger, R.P., Feinstein, M.H., Austad, S.N. & Mayer, J.J. 1994. The New Guinea Singing Dog: taxonomy, captive studies and conservation priorities. *Science in New Guinea*, **20**(1): 27–38.

Mayer, J.J. & Brisbin, I.L., Jr. 1991. *Wild Pigs of the United States: their history, morphology, and current status*. University of Georgia Press, Athens, Georgia.

Oliver, W.L.R. & Brisbin, I.L., Jr. 1993. Introduced and feral pigs: problems, policy, and priorities. Pp. 179–191 *in* Oliver, W.L.R. (Ed.), *Pigs, peccaries and hippos. Status survey and conservation action plan*. IUCN World Conservation Union, Gland, Switzerland.

Peterson, A.T. & Brisbin, I.L., Jr. In press. Genetic endangerment of wild Red Junglefowl *Gallus gallus*. *Bird Conservation International*.

OPINION 1886

Plumularia Lamarck, 1816 (Cnidaria, Hydrozoa): conserved by the designation of *Sertularia setacea* Linnaeus, 1758 as the type species

Keywords. Nomenclature; taxonomy; Hydrozoa; PLUMULARIIDAE; hydroids; *Plumularia*; *Plumularia setacea*.

Ruling

(1) Under the plenary powers all designations of type species for the nominal genus *Plumularia* Lamarck, 1816 prior to that by Broch (1918) of *Sertularia setacea* Linnaeus, 1758 are hereby set aside.

(2) The name *Plumularia* Lamarck, 1816 (gender: feminine), type species by subsequent designation by Broch (1918) *Sertularia setacea* Linnaeus, 1758, as ruled under the plenary powers in (1) above, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *setacea* Linnaeus, 1758, as published in the binomen *Sertularia setacea* (specific name of the type species of *Plumularia* Lamarck, 1816) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2978

An application for the designation of *Sertularia setacea* Linnaeus, 1758 as the type species of *Plumularia* Lamarck, 1816 was received from Dr Dale R. Calder (*Royal Ontario Museum, Toronto, Ontario, Canada*; *University of Toronto, Toronto, Ontario, Canada*) and Dr Paul F.S. Cornelius (*The Natural History Museum, London, U.K.*) on 12 April 1995. After correspondence the case was published in BZN **53**: 167–170 (September 1996). Notice of the case was sent to appropriate journals.

A comment from Prof L.B. Holthuis (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*), published in BZN **54**: 39 (March 1997), pointed out that a type species designation for *Plumularia* made by H. Milne Edwards (1836–1849) was earlier than that by Busk (1851) (cf. para. 5 of the application). Prof Holthuis added that this earlier designation did not affect the proposals made in the application.

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 169. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes — 25: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

Ride was on leave of absence.

Original references

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

Plumularia Lamarck, 1816, *Histoire naturelle des animaux sans vertèbres*, vol. 2, p. 123. *setacea*, *Sertularia*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 813.

The following is the reference for the designation of *Sertularia setacea* Linnaeus, 1758 as the type species of the nominal genus *Plumularia* Lamarck, 1816:

Broch, H. 1918. *Danish Ingolf-Expedition*, **5**(7): 195.

OPINION 1887

Arca pectunculoides Scacchi, 1834 and *A. philippiana* Nyst, 1848 (currently *Bathyarca pectunculoides* and *B. philippiana*; Mollusca, Bivalvia): specific names conserved

Keywords. Nomenclature; taxonomy; Mollusca; Bivalvia; *Bathyarca*; *Bathyarca pectunculoides*; *B. philippiana*; *B. grenophia*.

Ruling

(1) Under the plenary powers the specific name *grenophia* Risso, 1826, as published in the binomen *Arca grenophia*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Bathyarca* Kobelt, 1891 (gender: feminine), type species by original designation *Arca pectunculoides* Scacchi, 1834, is hereby placed on the Official List of Generic Names in Zoology.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *pectunculoides* Scacchi, 1834, as published in the binomen *Arca pectunculoides* (specific name of the type species of *Bathyarca* Kobelt, 1891);

(b) *philippiana* Nyst, 1848, as published in the binomen *Arca philippiana*.

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:

(a) *grenophia* Risso, 1826, as published in the binomen *Arca grenophia* and as suppressed in (1) above;

(b) *obliqua* Philippi, 1844, as published in the binomen *Arca obliqua* (a junior homonym of *Arca obliqua* Portlock, 1843 and of *A. obliqua* Reeve, 1844);

(c) *obliquata* Locard, 1899, as published in the binomen *Arca obliquata* (a junior objective synonym of *Arca obliqua* Philippi, 1844 and of *A. philippiana* Nyst, 1848, and a junior homonym of *Arca obliquata* Wood, 1828 and of *A. obliquata* Zieten, 1833);

(d) *obliquatula* Dautzenberg, 1927, as published in the binomen *Arca obliquatula* (a junior objective synonym of *Arca philippiana* Nyst, 1848).

History of Case 2977

An application for the conservation of the specific names of *Arca pectunculoides* Scacchi, 1834 and *A. philippiana* Nyst, 1848 was received from Dr Carmen Salas (*Universidad de Málaga, Málaga, Spain*) and Dr Serge Gofas (*Muséum National d'Histoire Naturelle, Paris, France*) on 10 April 1995. After correspondence the case was published in BZN **53**: 173–177 (September 1996). Notice of the case was sent to appropriate journals.

A comment in support from Dr Anders Warén (*Swedish Museum of Natural History, Stockholm, Sweden*) was published in BZN **54**: 46 (March 1997).

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 175. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes — 23: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song

Negative votes — 2: Dupuis and Štys.

Ride was on leave of absence.

Original references

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

Bathyarca Kobelt, 1891, Die Gattung *Arca* L. *In*: *Martini & Chemnitz Systematisches Conchylien Cabinet* (Küster, H.C., Ed.), vol. 8, part 2, p. 213.

grenophia, *Arca*, Risso, 1826, *Histoire naturelle des principales productions de l'Europe Méridionale et particulièrement de celles des environs de Nice et des Alpes Maritimes*, vol. 4, p. 313.

obliqua, *Arca*, Philippi, 1844, *Enumeratio molluscorum Siciliae cum viventium tum in tellure tertiaria fossilium* ..., vol. 2, p. 43.

obliquata, *Arca*, Locard, 1899, *Les coquilles marines au large des côtes de France*, p. 158.

obliquatula, *Arca*, Dautzenberg, 1927, *Résultats des Campagnes Scientifiques Accomplies sur son Yacht par Albert 1er, Prince Souverain de Monaco*, **72**: 281.

pectunculoides, *Arca*, Scacchi, 1834, *Annali Civili del Regno delle due Sicilie*, **6**: 82.

philippiana, *Arca*, Nyst, 1848, *Mémoires de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique*, **22**: 54.

The following is the reference for the designation of the lectotype of *Arca grenophia* Risso, 1826:

Arnaud, P. 1978. *Annales du Muséum d'Histoire Naturelle de Nice*, **5**: 119.

OPINION 1888

Lirobarleeia Ponder, 1983 (Mollusca, Gastropoda): *Alvania nigrescens* Bartsch & Rehder, 1939 designated as the type species

Keywords. Nomenclature; taxonomy; Gastropoda; BARLEEIDAE; *Lirobarleeia*; *Lirobarleeia nigrescens*; *Lirobarleeia galapagensis*; Galapagos Islands.

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Lirobarleeia* Ponder, 1983 are hereby set aside and *Alvania nigrescens* Bartsch & Rehder, 1939 is designated as the type species.

(2) The name *Lirobarleeia* Ponder, 1983 (gender: feminine), type species by designation under the plenary powers in (1) above *Alvania nigrescens* Bartsch & Rehder, 1939, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *nigrescens* Bartsch & Rehder, 1939, as published in the binomen *Alvania nigrescens* (specific name of the type species of *Lirobarleeia* Ponder, 1983) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2935

An application for the designation of *Alvania nigrescens* Bartsch & Rehder, 1939 as the type species of *Lirobarleeia* Ponder, 1983 was received from Dr Jules Hertz (*Santa Barbara Museum of Natural History, Santa Barbara, California, U.S.A.*) and Dr Winston Ponder (*Australian Museum, Sydney South, Australia*) on 19 April 1994. After correspondence the case was published in BZN **53**: 171 172 (September 1996). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 172. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes — 24: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song

Negative votes — 1: Štys.

Ride was on leave of absence.

Original references

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

Lirobarleeia Ponder, 1983, *Records of the Australian Museum*, **35**(6): 243.

nigrescens, *Alvania*, Bartsch & Rehder, 1939, *Smithsonian Miscellaneous Collections*, **98**(10): 8.

OPINION 1889

Parapronoe crustulum Claus, 1879 (Crustacea, Amphipoda): specific name conserved

Keywords. Nomenclature; taxonomy; Amphipoda; PRONOIDAE; PLATYSCELIDAE; *Parapronoe crustulum*; *Hemityphis tenuimanus*; *Hemityphis rapax*; pelagic amphipods.

Ruling

(1) Under the plenary powers the specific name *rapax* Milne-Edwards, 1830, as published in the binomen *Typhis rapax*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *crustulum* Claus, 1879, as published in the binomen *Parapronoe crustulum*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *rapax* Milne-Edwards, 1830, as published in the binomen *Typhis rapax* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2992

An application for the conservation of the specific name of *Parapronoe crustulum* Claus, 1879 was received from Dr Wolfgang Zeidler (*South Australian Museum, Adelaide, Australia*) on 4 July 1995. After correspondence the case was published in BZN **53**: 178–181 (September 1996). Notice of the case was sent to appropriate journals.

Further information relevant to the application was supplied by the author in BZN **54**: 47 (March 1997). A note of support from Prof L.B. Holthuis (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) was published at the same time.

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 179. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes — 24: Bock, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — 1: Bouchet.

Ride was on leave of absence.

Bouchet commented: 'I admit that using *rapax* in a sense different from the currently accepted one would be destabilising but I oppose the suppression of the name. A more elegant solution to the problem would have been the designation of type material (if any exists) of *Hemityphis tenuimanus* Claus, 1879 as the neotype of *rapax*'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

crustulum, *Parapronoe*, Claus, 1879, *Arbeiten aus dem Zoologischen Institut der Universität zu Wien*, **2**: 31.

rapax, *Typhis*, Milne-Edwards, 1830, *Annales des Sciences Naturelles*, **20**: 395.

The following is the reference for the designation of the lectotype of *Typhis rapax* Milne-Edwards, 1830:

Zeidler, W. 1996. *Crustaceana*, **69**(6): 737.

OPINION 1890

Scarabaeus rufus Moll, 1782 (currently *Aphodius rufus*), *Scarabaeus rufus* Fabricius, 1792 (currently *Aegialia rufa*) and *Scarabaeus foetidus* Herbst, 1783 (currently *Aphodius foetidus*) (Insecta, Coleoptera): specific names conserved

Keywords. Nomenclature; taxonomy; Coleoptera; SCARABAEIDAE; CETONIINAE; APHODIINAE; AEGIALIINAE; scarab beetles; *Dischista rufa*; *Aphodius rufus*; *Aegialia rufa*; *Aphodius foetidus*.

Ruling

(1) Under the plenary powers:

(a) the specific name *scybalarius* Fabricius, 1781, as published in the binomen *Scarabaeus scybalarius*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(b) it is hereby ruled that the following specific names are not invalid:

(i) *rufus* Moll, 1782, as published in the binomen *Scarabaeus rufus*, by reason of being a junior primary homonym of *Scarabaeus rufus* De Geer, 1778;

(ii) *rufus* Fabricius, 1792, as published in the binomen *Scarabaeus rufus*, by reason of being a junior primary homonym of *Scarabaeus rufus* De Geer, 1778 and of *S. rufus* Moll, 1782.

(2) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *rufus* De Geer, 1778, as published in the binomen *Scarabaeus rufus* and as defined by the male lectotype in the Swedish Museum of Natural History, Stockholm, designated by Holm (1994);

(b) *rufus* Moll, 1782, as published in the binomen *Scarabaeus rufus* (not invalid by reason of being a junior primary homonym of *Scarabaeus rufus* De Geer, 1778);

(c) *rufus* Fabricius, 1792, as published in the binomen *Scarabaeus rufus* and as defined by the lectotype in the Zoological Museum, University of Copenhagen, designated by Landin (1956) (not invalid by reason of being a junior primary homonym of *Scarabaeus rufus* De Geer, 1778 and of *S. rufus* Moll, 1782);

(d) *foetidus* Herbst, 1783, as published in the binomen *Scarabaeus foetidus*.

(3) The name *scybalarius* Fabricius, 1781, as published in the binomen *Scarabaeus scybalarius* 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 2878

An application for the conservation of the specific names of *Scarabaeus rufus* Moll, 1782, *S. rufus* Fabricius, 1792 and *S. foetidus* Herbst, 1783 was received from Dr Frank-Thorsten Krell (*Theodor-Boveri-Institut für Biowissenschaften der Universität, Würzburg, Germany*), Dr Zdzisława Stebnicka (*Polish Academy of Sciences, Institute*

of Systematics and Evolution of Animals, Krakow, Poland) and Dr Erik Holm (*University of Pretoria, Pretoria, South Africa*) on 16 February 1993. After correspondence the case was published in BZN **51**: 121–127 (June 1994). Notice of the case was sent to appropriate journals.

Landin (1956, 1957) had pointed out both the nomenclatural difficulties inherent in the present case and the best pragmatic solution, but he never applied to the Commission (para. 3 of the application). Some 20 years later, in 1979, an application was received from Dr Z. Stebnicka to conserve the names *Aphodius rufus* (Moll, 1782), *Aegialia rufa* (Fabricius, 1792) and *Aphodius foetidus* (Herbst, 1783) by suppressing *Scarabaeus scybalarius* Fabricius, 1781. After a long delay the case was published in BZN **41**: 265–266 (November 1984) but was not proceeded with because there was at that time some doubt over the availability of *Dischista rufa* (De Geer, 1778). Stebnicka's proposals were the course which had been advocated by Landin, and the current application reiterated the same.

Although *Dischistus rufus* (De Geer, 1778), *Aphodius rufus* (Moll, 1782) and *Aegialia rufa* (Fabricius, 1792) were primary homonyms in *Scarabaeus*, the three species have not been treated as congeneric for 150 years (para. 8 of the current application).

Following publication of the current application in June 1994, alternative proposals by Dr Giovanni Dellacasa (*Genoa, Italy*) and by Dr Hans Silfverberg (*Zoological Museum, Helsinki University, Finland*) were published in BZN **51**: 340–341 (December 1994) and **52**: 71–72 (March 1995) respectively. Replies by two authors of the application, Drs F.-T. Krell and Z. Stebnicka, were published in BZN **52**: 72–73.

The application was sent to the Commission for voting on 1 September 1995. The proposals received a majority of the votes cast (15 in favour, 10 against; two Commissioners did not vote) but failed to reach the two-thirds majority required for approval. Voting against, Lehtinen commented on his voting paper: 'As *Scarabaeus scybalarius* Fabricius, 1781 is an available name and the species is defined by an existing lectotype, and *S. rufus* Moll, 1782 has no preserved original material and the name is also both a junior synonym of *S. scybalarius* and a junior primary homonym of *S. rufus* De Geer, 1778, then only the choice of the name *S. scybalarius* can be recommended for this species. Names are often incorrectly used but the results of careless work by early authors can be and should be corrected when essential information is available to a reviser. Junior primary homonyms can be conserved in exceptional circumstances but I cannot accept this in the case of repeated homonymy in *Scarabaeus*. Since the nomenclatural clarification of the taxa involved (Silfverberg, 1977, 1979), a number of authors have used either the specific name *spissipes* LeConte, 1878 or *rufina* Silfverberg, 1977 in place of *S. rufus* Fabricius, 1792. I am in favour of the retention of *S. foetidus* Herbst, 1783 but this can be done without Commission intervention'.

A comment from Dr Przemslaw Szwalko (*Agricultural University, Kraków, Poland*), published in BZN **53**: 123–124 (June 1996), supported the conservation of the specific name of *Aphodius rufus* (Moll, 1782), despite it being a junior primary homonym of *Dischistus rufus* (De Geer), and of *A. foetidus* (Herbst, 1783). He proposed, however, that the name *Aegialia spissipes* should be adopted in place of *A. rufa* (Fabricius, 1792).

A further comment from Dr Krell, published in BZN **53**: 124–125, and a comment from Dr David Král (*Charles University, Praha, Czech Republic*), published in BZN **53**: 191 (September 1996), supported the original application. Dr Krell provided further evidence (54 references since 1990) of the continued extensive usage of *Aphodius rufus* (Moll, 1782).

In a further comment (BZN **54**: 48–49; March 1997) Dr Dellacasa proposed the use of *Aphodius scybalarius* (Fabricius, 1781) in place of *A. foetidus*, and the adoption of *A. arcuatus* (Moll, 1785) in place of *A. rufus* (Moll, 1782).

Dr Dellacasa and Dr Szwalko provided schemes of nomenclature which were in partial agreement with the application. Dr Krell pointed out (BZN **52**: 72) that some aspects of Dr Dellacasa's schemes had not been adopted by any author. Dr Silfverberg's scheme followed the individual provisions of the Code but did not maintain stability of established nomenclature. Under the Byelaws the application was sent for a revote. It was noted on the voting paper that, because the case involved several taxonomic species and even more names, there were a considerable number of possible or partial solutions, only two of which appeared tenable: (a) the proposals in the application, based on the long usage of names and the dual sense of the name *scybalarius*, and (b) the strict application of the individual provisions of the Code. Both solutions included the placing of the specific names *rufus* De Geer, 1778 and *foetidus* Herbst, 1783 on the Official List. Under (a), *rufus* Moll, 1782 and *rufus* Fabricius, 1792 would be placed on the Official List; under (b), *rufus* Moll and *rufus* Fabricius would be replaced by the specific names of *Scarabaeus scybalarius* Fabricius, 1781 (in the taxonomic sense of *Aphodius rufus* (Moll, 1782) rather than that of *A. foetidus* (Herbst, 1783)) and of *Aegialia spissipes* LeConte, 1878. The proposals in the application required a two-thirds majority in the revote.

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to revote on the proposals published in BZN **51**: 124–125. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes 17: Bock, Bouchet, Brothers, Cocks, Cogger, Heppell, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Mawatari, Nielsen, Nye, Patterson, Song, Štys

Negative votes 8: Dupuis, Eschmeyer, Kabata, Lehtinen, Minelli, Papp, Savage and Schuster.

Ride was on leave of absence.

Papp commented: 'I am almost always in favour of the concept of 'names in use'. However, I think that this case is an exception. I found Dr Lehtinen's comment on his earlier voting paper convincing. If conservation of the name *rufus* Moll, 1782 were so important, why have specialists not designated a neotype to define the taxon?'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

foetidus, *Scarabaeus*, Herbst, 1783, *Achiv der Insectengeschichte*, **4**: 7.

rufus, *Scarabaeus*, De Geer, 1778, *Mémoires pour servir à l'histoire des insectes*, vol. 7, pp. 640, 946.

rufus, *Scarabaeus*, Fabricius, 1792, *Entomologia systematica ...*, vol. 1, part 2, p. 39.
rufus, *Scarabaeus*, Moll, 1782, *Neues Magazin für die Liebhaber der Entomologie*, **1**(4): 372.
scybalarius, *Scarabaeus*, Fabricius, 1781, *Species insectorum*, vol. 1, p. 16.

The following is the reference for the designation of the lectotype of *Scarabaeus rufus* De Geer, 1778:

Holm, E. 1994. BZN **51**: 122.

The following is the reference for the designation of the lectotype of *Scarabaeus rufus* Fabricius, 1792:

Landin, B.O. 1956. *Opuscula Entomologica*, **21**: 223.

OPINION 1891

Crenitis Bedel, 1881, *Georissus* Latreille, 1809 and *Oosternum* Sharp, 1882 (Insecta, Coleoptera): conserved

Keywords. Nomenclature; taxonomy; Coleoptera; HYDROPHILIDAE; *Crenitis*; *Georissus*; *Oosternum*.

Ruling

(1) Under the plenary powers the following names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *Fontiscrutor* Pandellé, 1876;
   (b) *Cathammistes* Illiger, 1807;
   (c) *Crypteuna* Motschulsky, 1863.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
   (a) *Georissus* Latreille, 1809 (gender: masculine), type species by monotypy *Pimelia pygmaea* Fabricius, 1798 (a junior subjective synonym of *Byrrhus crenulatus* Rossi, 1794);
   (b) *Oosternum* Sharp, 1882 (gender: neuter), type species by monotypy *Oosternum costatum* Sharp, 1882.

(3) To the entry for *Crenitis* Bedel, 1881 on the Official List of Generic Names in Zoology is hereby added a record of the present ruling, and the entry is hereby emended to read 'gender: feminine'.

(4) The following names are hereby placed on the Official List of Specific Names in Zoology:
   (a) *crenulatus* Rossi, 1794, as published in the binomen *Byrrhus crenulatus* and as defined by the lectotype designated by Bameul (1991) (senior subjective synonym of *Pimelia pygmaea* Fabricius, 1798, the type species of *Georissus* Latreille, 1809);
   (b) *costatum* Sharp, 1882, as published in the binomen *Oosternum costatum* (specific name of the type species of *Oosternum* Sharp, 1882).

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
   (a) *Fontiscrutor* Pandellé, 1876, as suppressed in (1)(a) above;
   (b) *Cathammistes* Illiger, 1807, as suppressed in (1)(b) above;
   (c) *Crypteuna* Motschulsky, 1863, as suppressed in (1)(c) above;
   (d) *Georyssus* Stephens, 1828 (a junior objective synonym of *Georissus* Latreille, 1809).

History of Case 2925

An application for the conservation of the names *Crenitis* Bedel, 1881, *Georissus* Latreille, 1809 and *Oosternum* Sharp, 1882 was received from Dr M. Hansen (*Zoological Museum, Copenhagen, Denmark*) on 14 January 1994. After correspondence the case was published in BZN **53**: 99–103 (June 1996). Notice of the case was sent to appropriate journals.

A comment from Dr A. Smetana (*Eastern Cereal and Oilseed Research Centre, Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada*), published in BZN **53**: 278 (December 1996), supported the conservation of all three generic names and the citation of *Crenitis* as feminine.

The name *Crenitis*, and that of its type species *Hydrobius punctatostriatus* Letzner, 1840, were placed on Official Lists in Opinion 583 (September 1960). However, the senior synonym *Fontiscrutor* Pandellé, 1876 was not then considered.

Proposals for the conservation of each of the names *Crenitis*, *Georissus* and *Oosternum* were offered separately for voting.

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 101–102. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes — 25: Bock, Bouchet (part), Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata (part), Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

Ride was on leave of absence.

Bouchet voted for the conservation of *Crenitis* and *Georissus* but against that of *Oosternum*; he commented: 'Thirteen references by eight authors (para. 14 of the application) do not demonstrate usage of the name *Oosternum* outside a restricted taxonomic literature. In the case of this name priority should apply. I vote for the conservation of *Crenitis* to maintain continuity of Opinion 583'. Kabata voted for the conservation of *Crenitis* but against that of *Georissus* and *Oosternum*; he commented: 'In my view this application demonstrates the author's overestimation of the importance of the group with which he works. For each of the three names he anticipates 'considerable confusion' if the senior synonym were to be restored to use. Yet for *Georissus* he is able to mention only 21 references in its 200-year-long history. For *Oosternum* there are only 13. I see little chance of confusion in such a small volume of literature. I vote for the proposal relating to *Crenitis* out of deference for the Commission's earlier ruling'.

Original references

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

Cathammistes Illiger, 1807, *Magazin für Insektenkunde*, **6**: 297.

costatum, *Oosternum*, Sharp, 1882, Insecta. Coleoptera. Vol. 1, part 2 *in* Godman, F.D. & Salvin, O., *Biologia Centrali-Americana*, vol. 16, p. 112.

crenulatus, *Byrrhus*, Rossi, 1794, *Mantissa Insectorum, exhibens species nuper in Etruria collectas, adjectis faunae Etruscae illustrationibus ac emendationibus*, vol. 2, p. 81.

Crypteuna Motschulsky, 1863, *Bulletin de la Société Impériale des Naturalistes de Moscou*, **36**(1): 448.

Fontiscrutor Pandellé, 1876, *Anales de la Sociedad Espanola de Historia Natural*, **5**: 58.

Georissus Latreille, 1809, *Genera Crustaceorum et Insectorum, secundum ordinem naturalem in Familias disposita, iconibus exemplisque plurimus explicata*, vol. 4, p. 377.

Georyssus Stephens, 1828, *Illustrations of British Entomology ... Mandibulata*, vol. 2, p. 105.

Oosternum Sharp, 1882, Insecta. Coleoptera. Vol. 1, part 2 *in* Godman, F.D. & Salvin, O., *Biologia Centrali-Americana*, vol. 16, p. 112.

The following is the reference for the designation of the lectotype of *Byrrhus crenulatus* Rossi, 1794:

Bameul, F. 1991. *Bulletin de la Société Entomologique de France*, **95**: 257.

OPINION 1892

Alcyonidium mytili Dalyell, 1848 (Bryozoa): neotype replaced

Keywords. Nomenclature; taxonomy; Bryozoa; *Alcyonidium*; *Alcyonidium mytili*.

Ruling

(1) Under the plenary powers all previous designations of neotype for the nominal species *Alcyonidium mytili* Dalyell, 1848 are hereby set aside and the specimen numbered BM(NH) 1994.4.5.1, collected from Longniddry, East Lothian, Scotland, and deposited in the Natural History Museum, London, is designated as the neotype.

(2) The name *mytili* Dalyell, 1848, as published in the binomen *Alcyonidium mytili* 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 2961

An application for the designation of a replacement neotype for *Alcyonidium mytili* Dalyell, 1848 was received from Prof John S. Ryland and Dr Peter S. Cadman (*University of Wales Swansea, Swansea, Wales, U.K.*) on 12 January 1995. After correspondence the case was published in BZN **53**: 92–95 (June 1996). Notice of the case was sent to appropriate journals.

A comment from Prof Jean-Loup d'Hondt (*Laboratoire de Biologie des Invertébrés Marins et Malacologie, Muséum National d'Histoire Naturelle, Paris, France*) was published in BZN **54**: 49–50 (March 1997). Prof d'Hondt, who with Prof M. Goyffon had designated (1992) a neotype for *Alcyonidium mytili* which belonged to a different taxonomic species, supported the proposal to designate a neotype in accord with Dalyell's (1848) original description and locality.

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 94. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes — 25: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

Ride was on leave of absence.

Original references

The following is the original reference to the name placed on an Official List by the ruling given in the present Opinion:

mytili, *Alcyonidium*, Dalyell, 1848, *Rare and remarkable animals of Scotland, represented from living subjects with practical observations on their nature*, vol. 2, p. 36.

OPINION 1893

Bombycilla cedrorum Vieillot, [1808] and *Troglodytes aedon* Vieillot, [1809] (Aves, Passeriformes): specific names conserved

Keywords. Nomenclature; taxonomy; Aves; BOMBYCILLIDAE; TROGLODYTIDAE; cedar waxwing; North American house wren; *Bombycilla cedrorum*; *Troglodytes aedon*.

Ruling

(1) Under the plenary powers the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *americana* Wilson, 1808, as published in the binomen *Ampelis americana*;
   (b) *domestica* Wilson, 1808, as published in the binomen *Sylvia domestica*.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
   (a) *Bombycilla* Vieillot, [1808] (gender: feminine), type species by monotypy *Bombycilla cedrorum* Vieillot, [1808];
   (b) *Troglodytes* Vieillot, [1809] (gender: masculine), type species by subsequent designation by Baird (1858) *Troglodytes aedon* Vieillot, [1809].

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
   (a) *cedrorum* Vieillot, [1808], as published in the binomen *Bombycilla cedrorum* (specific name of the type species of *Bombycilla* Vieillot, [1808]);
   (b) *aedon* Vieillot, [1809], as published in the binomen *Troglodytes aedon* (specific name of the type species of *Troglodytes* Vieillot, [1809]).

(4) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
   (a) *americana* Wilson, 1808, as published in the binomen *Ampelis americana* and as suppressed in (1)(a) above;
   (b) *domestica* Wilson, 1808, as published in the binomen *Sylvia domestica* and as suppressed in (1)(b) above.

History of Case 2969

An application for the conservation of the specific names of *Bombycilla cedrorum* Vieillot, [1808] and *Troglodytes aedon* Vieillot, [1809] was received from Dr M. Ralph Browning and Dr Richard C. Banks (*National Biological Service, National Museum of Natural History, Washington, D.C., U.S.A.*) on 20 February 1995. After correspondence the case was published in BZN **53**: 187–190 (September 1996). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 188–189. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes – 24: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys (part)

Negative votes — 1: Kabata.

Ride was on leave of absence.

Štys voted for the conservation of *Bombycilla cedrorum* but against that of *Troglodytes aedon*.

Original references

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

aedon, *Troglodytes*, Vieillot, [1809], *Histoire naturelle des oiseaux de l'Amérique septentrionale* ..., vol. 2, p. 52.

americana, *Ampelis*, Wilson, 1808, *American ornithology; or, the natural history of the birds of the United States*, vol. 1, p. 107.

Bombycilla Vieillot, [1808], *Histoire naturelle des oiseaux de l'Amérique septentrionale* ..., vol. 1, p. 88.

cedrorum, *Bombycilla*, Vieillot, [1808], *Histoire naturelle des oiseaux de l'Amérique septentrionale* ..., vol. 1, p. 88.

domestica, *Sylvia*, Wilson, 1808, *American ornithology; or, the natural history of the birds of the United States*, vol. 1, p. 129.

Troglodytes Vieillot, [1809], *Histoire naturelle des oiseaux de l'Amérique septentrionale* ..., vol. 2, p. 52.

The following is the reference for the designation of *Troglodytes aedon* Vieillot, [1809] as the type species of the nominal genus *Troglodytes* Vieillot, [1809]:

Baird, S.F. 1858. *Pacific Railroad Reports. Reports of Explorations and Surveys for a Railroad from the Mississippi River to the Pacific Ocean, 1853–6*, **9**(2): 366.

OPINION 1894

Regnum Animale ..., Ed. 2 (M.J. Brisson, 1762): rejected for nomenclatural purposes, with the conservation of the mammalian generic names *Philander* (Marsupialia), *Pteropus* (Chiroptera), *Glis*, *Cuniculus* and *Hydrochoerus* (Rodentia), *Meles*, *Lutra* and *Hyaena* (Carnivora), *Tapirus* (Perissodactyla), *Tragulus* and *Giraffa* (Artiodactyla)

Keywords. Nomenclature; taxonomy; Mammalia; Marsupialia; Chiroptera; Rodentia; Carnivora; Perissodactyla; Artiodactyla; *Philander*; *Pteropus*; *Glis*; *Cuniculus*; *Hydrochoerus*; *Meles*; *Lutra*; *Hyaena*; *Tapirus*; *Tragulus*; *Giraffa*; opossums; fruit bats; dormice; pacas; capybaras; badgers; otters; hyaenas; tapirs; chevrotains; giraffes.

Ruling

(1) It is hereby ruled that the work by M.J. Brisson (1762) entitled *Regnum Animale in classes IX distributum, sive synopsis methodica*, Ed. 2, is rejected for nomenclatural purposes, i.e. for nomenclatural acts and for names other than *Odobenus* (previously conserved in Opinion 467, May 1957) and those conserved in (2)(a) below.

(2) Under the plenary powers:

(a) it is hereby ruled that the following generic names are to be taken as first available from Brisson (1762) despite that being a rejected work, and not from any other work previously published:

(i) *Philander*;
(ii) *Pteropus*;
(iii) *Glis*;
(iv) *Cuniculus*;
(v) *Hydrochoerus*;
(vi) *Meles*;
(vii) *Lutra*;
(viii) *Hyaena*;
(ix) *Tapirus*;
(x) *Tragulus*;
(xi) *Giraffa*;

(b) all previous fixations of type species are hereby set aside for the following nominal genera and the nominal species listed are designated as the respective type species:

(i) *Philander* Brisson, 1762: type species *Didelphis opossum* Linnaeus, 1758;
(ii) *Pteropus* Brisson, 1762: type species *Vespertilio niger* Kerr, 1792;
(iii) *Glis* Brisson, 1762: type species *Sciurus glis* Linnaeus, 1766;
(iv) *Cuniculus* Brisson, 1762: type species *Mus paca* Linnaeus, 1766;
(v) *Hydrochoerus* Brisson, 1762: type species *Sus hydrochaeris* Linnaeus, 1766;

(vi) *Meles* Brisson, 1762: type species *Ursus meles* Linnaeus, 1758;
(vii) *Lutra* Brisson, 1762: type species *Mustela lutra* Linnaeus, 1758;
(viii) *Hyaena* Brisson, 1762: type species *Canis hyaena* Linnaeus, 1758;
(ix) *Tapirus* Brisson, 1762: type species *Hippopotamus terrestris* Linnaeus, 1758;
(x) *Tragulus* Brisson, 1762: type species *Cervus javanicus* Osbeck, 1765;
(xi) *Giraffa* Brisson, 1762: type species *Cervus camelopardalis* Linnaeus, 1758.

(3) The following names are hereby placed on the Official List of Generic Names in Zoology:
(a) *Philander* Brisson, 1762 (gender: masculine), type species by designation under the plenary powers in (2)(b)(i) above *Didelphis opossum* Linnaeus, 1758;
(b) *Pteropus* Brisson, 1762 (gender: masculine), type species by designation under the plenary powers in (2)(b)(ii) above *Vespertilio niger* Kerr, 1792;
(c) *Glis* Brisson, 1762 (gender: masculine), type species by designation under the plenary powers in (2)(b)(iii) above *Sciurus glis* Linnaeus, 1766;
(d) *Cuniculus* Brisson, 1762 (gender: masculine), type species by designation under the plenary powers in (2)(b)(iv) above *Mus paca* Linnaeus, 1766;
(e) *Hydrochoerus* Brisson, 1762 (gender: masculine), type species by designation under the plenary powers in (2)(b)(v) above *Sus hydrochaeris* Linnaeus, 1766;
(f) *Meles* Brisson, 1762 (gender: masculine), type species by designation under the plenary powers in (2)(b)(vi) above *Ursus meles* Linnaeus, 1758;
(g) *Lutra* Brisson, 1762 (gender: feminine), type species by designation under the plenary powers in (2)(b)(vii) above *Mustela lutra* Linnaeus, 1758;
(h) *Hyaena* Brisson, 1762 (gender: feminine), type species by designation under the plenary powers in (2)(b)(viii) above *Canis hyaena* Linnaeus, 1758;
(i) *Tapirus* Brisson, 1762 (gender: masculine), type species by designation under the plenary powers in (2)(b)(ix) above *Hippopotamus terrestris* Linnaeus, 1758;
(j) *Tragulus* Brisson, 1762 (gender: masculine), type species by designation under the plenary powers in (2)(b)(x) above *Cervus javanicus* Osbeck, 1765;
(k) *Giraffa* Brisson, 1762 (gender: feminine), type species by designation under the plenary powers in (2)(b)(xi) above *Cervus camelopardalis* Linnaeus, 1758.

(4) The following names are hereby placed on the Official List of Specific Names in Zoology:
(a) *opossum* Linnaeus, 1758, as published in the binomen *Didelphis opossum* (specific name of the type species of *Philander* Brisson, 1762);
(b) *niger* Kerr, 1792, as published in the trinomen *Vespertilio vampirus niger* (specific name of the type species of *Pteropus* Brisson, 1762);
(c) *glis* Linnaeus, 1766, as published in the binomen *Sciurus glis* (specific name of the type species of *Glis* Brisson, 1762);
(d) *paca* Linnaeus, 1766, as published in the binomen *Mus paca* (specific name of the type species of *Cuniculus* Brisson, 1762);

(e) *hydrochaeris* Linnaeus, 1766, as published in the binomen *Sus hydrochaeris* (specific name of the type species of *Hydrochoerus* Brisson, 1762);
(f) *meles* Linnaeus, 1758, as published in the binomen *Ursus meles* (specific name of the type species of *Meles* Brisson, 1762);
(g) *lutra* Linnaeus, 1758, as published in the binomen *Mustela lutra* (specific name of the type species of *Lutra* Brisson, 1762);
(h) *hyaena* Linnaeus, 1758, as published in the binomen *Canis hyaena* (specific name of the type species of *Hyaena* Brisson, 1762);
(i) *terrestris* Linnaeus, 1758, as published in the binomen *Hippopotamus terrestris* (specific name of the type species of *Tapirus* Brisson, 1762);
(j) *javanicus* Osbeck, 1765, as published in the binomen *Cervus javanicus* (specific name of the type species of *Tragulus* Brisson, 1762);
(k) *camelopardalis* Linnaeus, 1758, as published in the binomen *Cervus camelopardalis* (specific name of the type species of *Giraffa* Brisson, 1762);

(5) The work entitled *Regnum Animale in classes IX distributum, sive synopsis methodica*, Ed. 2 by M.J. Brisson (1762) is hereby placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature, as rejected for nomenclatural purposes in (1) above.

(6) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
(a) *Agouti* Lacepède, 1799 (a junior objective synonym of *Cuniculus* Brisson, 1762);
(b) *Myoxus* Zimmermann, 1780 (a junior objective synonym of *Glis* Brisson, 1762);
(c) *Glis* Erxleben, 1777 (a junior homonym of *Glis* Brisson, 1762);
(d) *Cuniculus* Meyer, 1790 (a junior homonym of *Cuniculus* Brisson, 1762);
(e) *Cuniculus* Wagler, 1830 (a junior homonym of *Cuniculus* Brisson, 1762);
(f) *Euhyaena* Falconer, 1868 (a junior objective synonym of *Hyaena* Brisson, 1762);
(g) *Tragulus* Pallas, 1767 (a junior homonym of *Tragulus* Brisson, 1762);
(h) *Tragulus* Boddaert, 1785 (a junior homonym of *Tragulus* Brisson, 1762).
(i) *Taxus* Cuvier & Geoffroy Saint-Hilaire, 1795 (a junior objective synonym of *Meles* Brisson, 1762);
(j) *Melesium* Rafinesque, 1815 (a junior objective synonym of *Meles* Brisson, 1762).

History of Case 2928

An application for the conservation of 11 mammal generic names first published by Brisson (1762), together with placement of the *Regnum Animale* (Ed. 2) on the Official Index as a non-binominal work, was received from Mrs Anthea Gentry (*c/o The Secretariat, ICZN, The Natural History Museum, London, U.K.*) on 14 February 1994. The case was published in BZN **51**: 135–146 (June 1994). Notice of the case was sent to appropriate journals.

Comments in support of the application were received from the late Mr J.E. Hill, Dr D.W. Yalden (*University of Manchester, Manchester, U.K.*) and the late Mr W.F.H. Ansell, published in BZN **51**: 266–267 (September 1994); Dr Colin P. Groves (*Australian National University, Canberra, A.C.T., Australia*), Dr Robert S. Voss

(*American Museum of Natural History, New York, N.Y., U.S.A.*), Dr P.A. Morris (*Royal Holloway College, University of London, Egham, Surrey, U.K.*), Dr Peter Grubb (*London, U.K.*), Drs David L. Harrison & Paul J.J. Bates (*Harrison Zoological Museum* (*Foundation for Systematic Research*), *Sevenoaks, Kent, U.K.*) and Prof Zdzislaw Pucek (*Polish Academy of Sciences, Mammal Research Institute, Bialowieza, Poland*), published in BZN **51**: 342–348 (December 1994); Prof Alvaro Mones (*Museo Nacional de Historia Natural, Montevideo, Uruguay*), Dr Francis Petter ('*Mammalia*' (*Morphologie, Biologie, Systématiques des Mammifères*), *Paris, France*; *Muséum National d'Histoire Naturelle, Paris, France*), Dr Alan Turner (*University of Liverpool, Liverpool, U.K.*), Mr N. Sivasothi (*National University of Singapore, Kent Ridge, Republic of Singapore*), Dr Bernard Sigé (*Institut des Sciences de l'Evolution, Université des Sciences et Techniques du Languedoc, Montpellier, France*), Dr Stéphane Aulagnier (*Institut National de la Recherche Agronomique, Toulouse, France*), Dr G.B. Corbet (*The Natural History Museum, London, U.K.; Upper Largo, Fife, U.K.*), Dr Jean-Louis Hartenberger (*Institut des Sciences de l'Evolution, Université des Sciences et Techniques du Languedoc, Montpellier, France*), Dr Hans de Bruijn (*Institut voor Aardwetenschappen, Universiteit Utrecht, Utrecht, The Netherlands*), Dr Monique Vianey-Liaud (*Institut des Sciences de L'Évolution, Université de Montpellier, Montpellier, France*) and Dr J.J. Hooker (*The Natural History Museum, London, U.K.*), published in BZN **52**: 78–89 (March 1995); Dr Mary R. Dawson (*The Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, U.S.A.*), Mr Keith Seaman (*Hertfordshire and Middlesex Wildlife Trust, St Alban's, Hertfordshire, U.K.*), Dr José Roberto Moreira (*Wildlife Conservation Research Unit, University of Oxford, Oxford, U.K.*), Dr Alan W. Gentry (*The Natural History Museum, London, U.K.*), Dr Enrique Roberto Justo (*Santa Rosa - La Pampa, Argentina*), Drs Volker Fahlbusch, Kurt Heissig, Helmut Mayr & Gertrud Rössner (*Bayerische Staatssammlung für Paläontologie und historische Geologie, Munich, Germany*), Prof Patrick J. Boylan (*City University, London, U.K.*), Dr D. Kock (*Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt am Main, Germany*) and Drs Pierre Mein, M. Hugueney, C. Guérin & R. Ballesio (*Centre des Sciences de la Terre, Université Claude Bernard, Lyon, France*), published in BZN **52**: 187 192 (June 1995); Mr Andrew Currant (*The Natural History Museum, London, U.K.*), Dr M. Freudenthal (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) and Dr Mieczyslaw Wolsan (*Instytut Paleobiologii, Polska Akademia Nauk, Warsaw, Poland*), published in BZN **52**: 271 -273 (September 1995); Dr Hugh H. Kolb (*Torphichen, West Lothian, Scotland, U.K.*; formerly of the *Scottish Agricultural Science Agency, Edinburgh, Scotland*) and Dr Peter Lüps (*Naturhistorisches Museum, Bern, Switzerland*), published in BZN **53**: 191 192 (September 1996); Prof Vladimir E. Sokolov (*Russian Academy of Sciences, Moscow, Russia*), published in BZN **53**: 286 (December 1996); Dr Jorge J. Cherem (*Universidade Federal de Santa Catarina, Florianópolis, Santa Catarina, Brazil*), published in BZN **54**: 52 (March 1997).

Comments supporting the rejection of Brisson's (1762) work as non-binominal but not the conservation of 11 mammal generic names in use were received from Dr Don E. Wilson (*National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.*), Prof John H. Wahlert (*American Museum of Natural History, New York, N.Y., U.S.A.*) and Dr Sydney Anderson (*American Museum of Natural History, New York, N.Y., U.S.A.*), published in BZN **51**: 343–346 (December

1994); Dr Alfred L. Gardner (*National Museum of Natural History, Washington, D.C., U.S.A.*), Prof Clyde Jones (*Texas Tech University, Lubbock, Texas, U.S.A.*), Dr Judith L. Eger (*Royal Ontario Museum, Toronto, Ontario, Canada*) and Dr Mary Ellen Holden (*American Museum of Natural History, New York, N.Y., U.S.A.*), published in BZN **52**: 79–86 (March 1995). A reply to these comments by the author of the application was published in BZN **52**: 90–93 (March 1995).

Comments from Drs F. de Beaufort, L. Granjon, J.M. Pons & M. Tranier (*Muséum National d'Histoire Naturelle, Paris, France*), published in BZN **52**: 82–83 (March 1995), and from Prof Claude Dupuis (*Muséum National d'Histoire Naturelle, Paris, France*), published in BZN **52**: 273–275 (September 1995), supported the conservation of the 11 Brisson mammal generic names mentioned in the application but not the proposed rejection for nomenclatural purposes of Brisson's (1762) work. A reply by the author of the application was published in BZN **52**: 347–350 (December 1995). A further comment from Prof Dupuis, and a reply by the author of the application, were published in BZN **53**: 278–285 (December 1996).

It was noted on the voting paper that the application sought to resolve long-term uncertainty in the usage of 11 new generic names established by Brisson (1762) in his *Regnum Animale* (one such name, *Odobenus* for the walrus, had already been conserved in Opinion 467, May 1957). A majority of authors, both past and present, accepted the names with Brisson's (1762) authorship and date and, despite some authors noting that the *Regnum Animale* was not completely binominal, the names had been in continual use for well over 200 years. A few authors had taken the names from various later citations, where these existed, or had substituted other names (for example, *Myoxus* Zimmermann, 1780 for *Glis* Brisson, 1762 and *Agouti* Lacepède, 1799 for *Cuniculus* Brisson, 1762) and a different spelling (*Hydrochaeris* Brünnich, 1771 for *Hydrochoerus* Brisson, 1762). These name changes resulted in problems with family-group names and the names for other taxa (for example, failure to accept *Cuniculus* Brisson, 1762 as available for the paca would result in *Cuniculus* Meyer, 1790 becoming the valid name for the European rabbit, for which *Oryctolagus* Lilljeborg, 1874 is universally in use). There was a particular problem with *Tragulus* Brisson, 1762 (family TRAGULIDAE) since the next two uses of the generic name '*Tragulus*' relate taxonomically to *Neotragus* H. Smith, 1827 (family BOVIDAE). Rejection of the 11 generic names for which conservation was proposed would result in the need for at least five further applications for action by the Commission to maintain other names currently in use (BZN **52**: 92).

In two comments (BZN **52**: 273–273 and **53**: 278–283) Prof Dupuis supported the conservation of Brisson's generic names but not the rejection of the (1762) *Regnum Animale* for nomenclatural purposes; he suggested that the names could be taken from Brisson's *Tabula Synoptica Quadrupedum* (pp. 12–13 of the *Regnum Animale*). This could be done under Articles 11c(iii) and 12b(2) of the Code, but a further ruling would be required to deal with the nine generic names therein which, since Merriam (1895), have been treated as junior synonyms of Linnaeus's (1758) names (BZN **52**: 348–349). Without rejection of the work or explicit suppression of the names they could be reintroduced for taxa which have been generically differentiated since Brisson's time, displacing later names in use (BZN **53**: 284–285). Rejection of Brisson's (1762) work as non-binominal and its placement on the Official Index, at the same time as conserving the 11 generic names (and *Odobenus*) in current use (i.e.

the course proposed in the application), would not entail the individual suppression of the nine names not in use.

Prof Dupuis also proposed that Brisson's names might be taken from the *Dictionnaire raisonné et universel des animaux* by F.A.A. de la Chesnaye des Bois (1759). However, names are not unambiguously available from this work in the absence of a Commission ruling. None of the names has ever been cited from this work and date. Acceptance of the additional 11 generic names from Brisson (1762) would be consistent with the ruling on *Odobenus* (Opinion 467) published in 1957. Procedurally it would be a precedent to place both Brisson's *Tabula Synoptica* (1762) and the 1759 *Dictionnaire raisonné* on the Official List.

The name *Glis* Erxleben, 1777 was rendered a junior subjective synonym of the mole rat name *Spalax* Güldenstaedt, 1770 by Ellerman's (1949) type species designation (para. 5 on p. 138 of the application and BZN **52**: 90–91). It was proposed on the voting paper that the name *Glis* Erxleben, a junior homonym of *Glis* Brisson, 1762, be added to those for placement on the Official Index (para. 9(6) on BZN **51**: 144).

The case was offered for voting in two parts. Vote (1) was the proposal to place the *Regnum Animale* on the Official Index as a non-binominal work (proposal (5) on BZN **51**: 143); vote (2) was the conservation under the plenary powers of 11 of Brisson's (1762) generic names in use, and placement of some junior names on the Official Index (proposals (2)(a), (2)(b), (3), (4) and (6) on BZN **51**: 142–144, with the addition of *Glis* Erxleben, 1777 to (6)).

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **51**: 142–144. At the close of the voting period on 10 December 1997 the votes were as follows:

Vote 1. Affirmative votes — 22: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Nielsen, Nye, Papp, Patterson, Savage, Song, Štys

Negative votes — 3: Dupuis, Minelli and Schuster.

Vote 2. Affirmative votes — 23: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Schuster, Song, Štys

Negative votes — 2: Dupuis and Savage.

Ride was on leave of absence.

Dupuis commented: 'Je vote contre l'affligeante idée de mettre à l'Index Brisson (1762) car: (a) monuments historiques de la taxinomie, les ouvrages de ce zoologiste sont depuis longtemps tenus 'as next in authority to the Linnean productions' (Casey Wood, 1931); (b) considérant que seules sont admissibles les 'rejections of names' je réprouve toute 'rejection of works' (et même le mot 'rejection'); (c) il est fâcheux que la validité des *noms de genres* dans les premières taxinomies *binaires* cohérentes dépendent de quelques épithètes spécifiques *occasionnellement* plurinominales (inévitables aux débuts du Linnéanisme, cf. Pucek in BZN **51**: 348. Voir le code des botanistes et les regrets de Melville cités in BZN **53**: 281); (d) ma contre-proposition sérieuse et précise (BZN **53**: 282–283) aurait dû être présentée à égalité de choix avec

la proposition de BZN **51**: 143, or cette dernière seule est soumise au vote. Les arguments avancés pour esquiver cette simultanéité me semblent un refus d'examiner les noms à mettre à l'Index (ce que je demandais in BZN **52**: 275, alinea 3) et une dérobade sous prétexte d'un 'précédent' non autrement explicité. Je vote contre la conservation en bloc des 11 noms considérés car les commentaires publiés ne sont pas unanimes, notamment au sujet de *Glis*, *Cuniculus* et *Tragulus*. Je persiste donc à réclamer autant de votes distincts que de noms (cf. BZN **52**: 273, 275: 'chacun des cas', 'les noms pris un par un')'.

Savage commented: 'I would favor separate consideration for conservation of those Brisson names whose status would seriously affect current usage if they were to be permanently rejected. These appear to be *Tragulus*, *Glis* and *Cuniculus*'.

Original references

The following is the original reference to the work placed on the Official Index by the ruling given in the present Opinion:

Brisson, M.J. 1762. *Regnum Animale in classes IX distributum, sive synopsis methodica*, Ed. 2.

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

Agouti Lacepède, 1799, *Tableau des divisions, sous-divisions, ordres et genres des mammifères. In: Discours de l'ouverture et de clôture du cours d'Histoire Naturelle donné dans le Muséum National d'Histoire Naturelle ..., l'an VII de la République, et Tableaux méthodiques des Mammifères et des Oiseaux*, p. 9.

camelopardalis, *Cervus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 66.

Cuniculus Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 13, 98.

Cuniculus Meyer, 1790, *Magazin für Thiergeschichte, Thieranatomie und Thierarzneykunde*, vol. 1, part 1, p. 52.

Cuniculus Wagler, 1830, *Natürliches System der Amphibien, mit vorangehender Classification der Säugthiere und Vögel*, p. 21.

Euhyaena Falconer, 1868, *Palaeontological memoirs and notes*, vol. 2, p. 464.

Giraffa Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 12, 37.

Glis Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 13, 113.

Glis Erxleben, 1777, *Systema regni animalis* ... Classis 1 (Mammalia), p. 358.

glis, *Sciurus*, Linnaeus, 1766, *Systema Naturae*, Ed. 12, vol. 1, p. 87.

Hyaena Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 13, 169.

hyaena, *Canis*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 40.

hydrochaeris, *Sus*, Linnaeus, 1766, *Systema Naturae*, Ed. 12, vol. 1, p. 103.

Hydrochoerus Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 12, 80.

javanicus, *Cervus*, Osbeck, 1765, *Reisenach Ostindien und China*, Ed. 2, p. 357.

Lutra Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 13, 201.

lutra, *Mustela*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 45.

Meles Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 13, 183.

meles, *Ursus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 48.

Melesium Rafinesque, 1815, *Analyse de la nature* ..., p. 59.

Myoxus Zimmermann, 1780, *Geographische Geschichte des Menschen, und der allgemein verbreiteten vierfüssigen Thiere*, vol. 2, p. 351.

niger, *Vespertilio*, Kerr, 1792, *The animal kingdom or zoological system of the celebrated Sir Charles Linnaeus. Class 1, Mammalia*, p. 90.

opossum, *Didelphis*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 55.

paca, *Mus*, Linnaeus, 1766, *Systema Naturae*, Ed. 12, vol. 1, p. 81.

Philander Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 13, 207.

Pteropus Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 13, 153.

Tapirus, Brisson 1762, *Regnum Animale* ..., Ed. 2, pp. 12, 81.

Taxus Cuvier & Geoffroy Saint-Hilaire, 1795, *Magazin Encyclopédique*, 2: 184, 187.
terrestris, *Hippopotamus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 74.
Tragulus Boddaert, 1785, *Elenchus Animalium*, vol. 1 (Sistens Quadrupedia), pp. 49, 131.
Tragulus Brisson, 1762, *Regnum Animale* ..., Ed. 2, pp. 12, 65.
Tragulus Pallas, 1767, *Spicilegia Zoologica*, fasc. 1, p. 6.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

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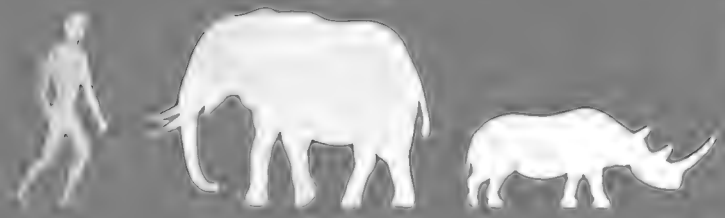

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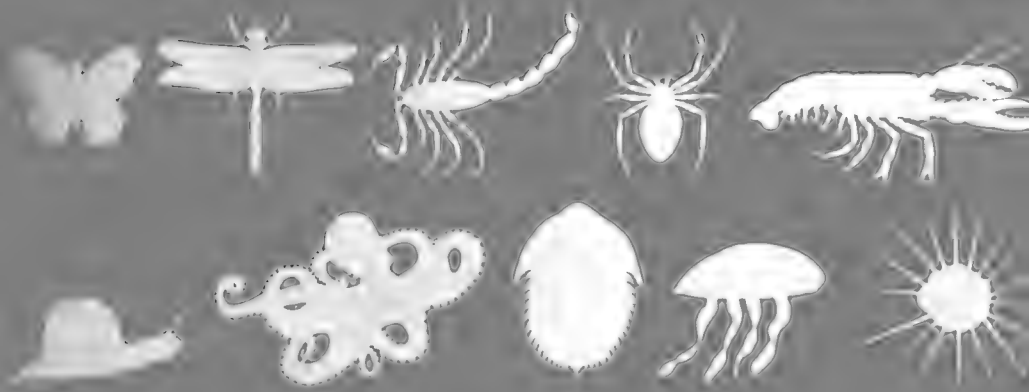

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 55, part 2 (pp. 73–136) 30 June 1998

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 55, part 1 (published on 31 March 1998). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Diastylis* Say, 1818 (Crustacea, Cumacea): proposed designation of *Cuma rathkii* (Krøyer, 1841 as the type species. (Case 3078). S. Gerken.

(2) *Leptocaris* Scott, 1899 (Crustacea, Mysidacea): proposed conservation. (Case 3079). R. Huys.

(3) *Polydora websteri* Hartman, 1943 (Annelida, Polychaeta): proposed ruling that the specific name is not to be treated as a replacement name for *P. caeca* Webster, 1879, and designation of a lectotype. (Case 3080). V.I. Radashevsky & J.D. Williams.

(4) *Pyghalictus* Warncke, 1975 (Insecta, Hymenoptera): proposed designation of *Hylaeus politus* Schenck, 1853 as the type species, and proposed conservation of the specific name of *H. politus*. (Case 3082). Yu.A. Pesenko.

(5) *Vestitohalictus* Blüthgen, 1961 (Insecta, Hymenoptera): proposed designation of *Halictus tectus* Radoszkowski, 1875 as the type species. (Case 3083). Yu.A. Pesenko.

(6) *Musca geniculata* De Geer, 1776 and *Stomoxys cristata* Fabricius, 1805 (currently *Siphona geniculata* and *Siphona cristata*; Insecta, Diptera): proposed conservation of usage of the specific names by the designation of a neotype for *M. geniculata*. (Case 3084). B. Herting, J.E. O'Hara & H.-P. Tschorsnig.

(7) *Lacerta undata* A. Smith, 1838 (currently *Pedioplanis undata*; Reptilia, Sauria): proposed conservation of usage of the specific name by the designation of a neotype. (Case 3085). W. Mayer & W. Böhme.

(8) *Hyalinia villae adamii* Westerlund, 1886 (currently *Oxychilus adamii*; Mollusca, Gastropoda): proposed conservation of the specific name *adamii* by the designation of a neotype. (Case 3086). G. Manganelli & F. Giusti.

(9) *Hydrobia* Hartmann, 1821 and *Cyclostoma acutum* Draparnaud, 1805 (Mollusca, Gastropoda): proposed conservation of usage of *Hydrobia* and of the specific name of *C. acutum* by the designation of a neotype. (Case 3087). F. Giusti, G. Manganelli & M. Bodon.

(10) *Doris verrucosa* Linnaeus, 1758 (Mollusca, Gastropoda): proposed conservation of usage of the generic and specific names by the designation of a neotype. (Case 3088). P. Bouchet & A. Valdés.

(11) *Leucocytozoon* (Protista, Haemosporida): proposed adoption of Berestneff, 1904 as the author and fixation of '*Leukocytozoen*' *danilewskyi* Ziemann, 1898 as the type species. (Case 3089). G. Valkiūnas.

(12) *Musca arcuata* Linnaeus, 1758 and *M. festiva* Linnaeus, 1758 (currently *Chrysotoxum arcuatum* and *C. festivum*) and *M. citrofasciata* De Geer, 1776 (currently *Xanthogramma citrofasciatum*) (Insecta, Diptera): proposed conservation of usage of the specific names. (Case 3090). D.A. Iliff & P.J. Chandler.

(13) *Coccudina costata* Dujardin, 1841 (currently *Aspidisca costata*; Ciliophora, Hypotrichida): proposed conservation of the specific name. (Case 3091). C.W. Heckman.

(d) *Rulings of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

The International Code of Zoological Nomenclature

The new (4th) edition of the International Code of Zoological Nomenclature will be published in 1998. A notice about some new provisions in it was published in BZN **54**: 216–218. Meanwhile, copies of the 3rd edition (published 1985) are still available. Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) *or* A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu).

The cost is £19 or $35 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £15 or $29. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals – a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 x 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to 1995. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) *or* A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu).

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Official Lists and Indexes of Names and Works in Zoology

The Official Lists and Indexes of Names and Works in Zoology was published in 1987. This book gives details of all the names and works (about 9,900) on which the Commission has ruled since it was set up in 1895, up to 1985. A supplement giving the 946 names and five works added in the five years up to 1990 is also available.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) *or* A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu).

The cost is £60 or $110 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £40 or $75. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

Case 2956

Campeloma Rafinesque, 1819 (Mollusca, Gastropoda): proposed conservation

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Abstract. The purpose of this application is to conserve the name *Campeloma* Rafinesque, 1819 for a genus of Tertiary and Recent freshwater prosobranch gastropods (family VIVIPARIDAE) from the eastern United States. This name has been continually used for over 130 years but is threatened by a senior subjective synonym *Ambloxis* established by Rafinesque one year earlier. *Ambloxis* has been little used, and then mainly in lists; the names of its included species have never been adopted.

Keywords. Nomenclature; taxonomy; Gastropoda; VIVIPARIDAE; Tertiary and Recent freshwater prosobranch gastropods; *Campeloma*; *Campeloma crassula*.

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1. Rafinesque (1818a, p. 355) briefly described a new genus *Ambloxis* and included in it two new nominal species *A. eburnea* and *A. ventricosa*. He did not describe or figure these two species and their names are therefore nomina nuda. In another paper the same year he (Rafinesque, 1818b, p. 107) listed *Ambloxis* as a new genus with four species which he did not name. The following year he (Rafinesque, 1819, p. 423) established the genus *Campeloma* and described a single species *C. crassula* Rafinesque, 1819 which is, therefore, the type species of *Campeloma* by monotypy.

2. Gill (1864, p. 152) identified *Ambloxis* as congeneric with *Campeloma* Rafinesque, 1819, but noted that 'the insufficiency of the generic diagnosis as well as the want of connection with any described species will prevent its adoption'. Binney (1865, p. 45) copied figures of *Lymnula ventricosa* (Binney, 1865, pp. 42, 45, fig. 91) and *Lymnea eburnea* (Binney, 1865, pp. 45 46, fig. 92) from Rafinesque's unpublished manuscript *Conchologia Ohiensis*. The names of these two species were placed in the synonymy of *Melantho decisa* (Say, 1817), and Pilsbry (1917, p. 111) designated the nominal species *L. eburnea* as the type species of *Ambloxis* Rafinesque, 1818. Tryon (1865, p. 82) identified *Ambloxis* as the same as the genus *Melantho* Bowditch, 1822 as used by American authors.

3. Walker (1918, pp. 127, 163) rejected the use of *Ambloxis* and used *Campeloma*. Baker (1928, p. 56) noted Pilsbry's suggested priority of *Ambloxis* over *Campeloma* but rejected the generic change as unwarranted, following Walker (1918, pp. 127,

163). Morrison (1947, p. 29) is the only subsequent author to have used *Ambloxis* as a valid genus in place of *Campeloma*. Parodiz (1956, p. 391) questioned Pilsbry's action in recognizing *Ambloxis*. Recently, Burch (1982a, p. 210; 1982b, p. 264) noted that *Ambloxis* Rafinesque, 1818 was an unidentifiable name and 'occasionally mentioned as possibly being the same as *Campeloma* Rafinesque, 1819'. Sherborn (1923, p. 252) and Neave (1939, p. 137) are the only two nomenclators to list *Ambloxis*.

4. The name *Campeloma* has been extensively used since Gill (1864). Meek & Hayden (1865) were the first to use *Campeloma* for fossil species, and numerous fossil species have been referred to *Campeloma* (Meek, 1871a, 1871b, 1876; Meek & Hayden, 1865; Henderson, 1935). Meek (1876) gave a succinct account of the genus and from this date forward the use of the generic name *Campeloma* was essentially unquestioned. Call (1883) reviewed the history of the use of the generic name *Campeloma* and rejected the use of both *Paludina* 'Lamarck' Férussac, 1812 and *Melantho* Bowditch, 1822 for this group of North American species.

5. Pilsbry (1917, p. 113) noted that *Campeloma crassula* Rafinesque, 1819 was the type species of *Campeloma* by original monotypy and placed *Campeloma* Rafinesque, 1819 as a junior synonym of *Ambloxis* Rafinesque, 1818. Pilsbry claimed that *crassula* could not be recognized from its description, but this belief was based on an inadequate reading of Rafinesque's diagnosis. *C. crassula* has been used by various workers, such as Burch & Tottenham (1980, p. 86, figs. 42, 54–55). Thiele (1931, p. 116) tentatively listed *Ambloxis* as a synonym of *Campeloma*. Clench (1962, pp. 273–274) listed *Ambloxis* as a synonym of *Campeloma* but failed to understand why Pilsbry chose to substitute *Ambloxis* for the commonly used *Campeloma*. He observed (p. 276): 'The generic name *Campeloma* has been in general use for nearly one hundred years, while *Ambloxis* has never been used, other than casually mentioned as being possibly the same as *Campeloma*'. Baker (1964, pp. 166–167) catalogued a number of species, using *Ambloxis* as a 'preferred genus' which he used 'in a broad sense'. Clarke (1973, p. 216) and Vaught (1989, p. 17) tentatively listed *Ambloxis* as a synonym of *Campeloma*. *Campeloma* has been used extensively in molluscan literature (Gill, 1864; Call, 1883, 1886, 1888a, 1888b, 1894; Pilsbry, 1898; Baker, 1902; Pilsbry, 1917; van Cleave & Altringer, 1937; Hubricht, 1943; van der Schalie, 1964; Anderson, 1966; Vail, 1979a, 1979b; Karlin et al., 1980; Karlin, 1981; Kotrla & Dougherty, 1984). *Campeloma* appears as a genus in the standard nomenclators (Agassiz, 1842–1846, 1846; Herrmannsen, 1846; Scudder, 1882; Sherborn, 1924; Neave, 1939). *Campeloma* has been used exclusively in the studies of the gastropod faunas in North America (Baker, 1902; Hannibal, 1912; Baker, 1928; Goodrich & van der Schalie, 1944; Robertson & Blakeslee, 1948; Clench & Turner, 1956; Harman & Berg, 1971; Clarke, 1973; Wood, 1982; Thompson, 1984; Jokinen, 1983, 1992; Smith, 1991), and in systematic guides (Walker, 1918; Prashad, 1928; Thiele, 1931; La Rocque, 1953, 1968; Parodiz, 1956; Clench, 1959, 1962; Leonard, 1959; Starobogatov, 1970; Barnes, 1974; Burch, 1978, 1979, 1982a; Burch & Tottenham, 1980; Clarke, 1981; Boss, 1982; Turgeon et al., 1988; Vaught, 1989; Brown, 1991).

6. In order to avoid undesirable changes in nomenclature and to preserve the stability of generic names in the VIVIPARIDAE we propose that the generic name *Campeloma* Rafinesque, 1819 be conserved by suppression of *Ambloxis* Rafinesque, 1818.

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

(1) to use its plenary powers to suppress the name *Ambloxis* Rafinesque, 1818 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 *Campeloma* Rafinesque, 1819 (gender: neuter), type species by monotypy *Campeloma crassula* Rafinesque, 1819;

(3) to place on the Official List of Specific Names in Zoology the name *crassula* Rafinesque, 1819, as published in the binomen *Campeloma crassula* (specific name of the type species of *Campeloma*);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Ambloxis* Rafinesque, 1818, as suppressed in (1) above.

References

Agassiz, L. 1842–1846. Nomina systemica generum molluscorum (recognoverunt J.E. Gray, C.Th. Menke, et H.E. Strickland), *in: Nomenclator zoologicus, continenes nomina systematica generum animalium, tam viventium quam fossilium*. xiv, 98 pp. Jent & Gassmann.

Agassiz, L. 1846. Nomeclatoris zoologici; index universalis, *in: Nomenclator zoologicus, continens nomina systematica generum animalium, tam viventium quam fossilium*. viii, 393 pp. Jent & Gassmann.

Anderson, B.E. 1966. Studies on the molluscan genus *Campeloma* Rafinesque, 1819. *Sterkiana*, **23**: 9–18.

Baker, F.C. 1902. The Mollusca of the Chicago area. The Gastropoda. *Bulletin of the Natural History Survey of the Chicago Academy of Sciences*, **3**(2): 137–410.

Baker, F.C. 1928. The fresh-water Mollusca of Wisconsin. Part I. Gastropoda. *Bulletin of the Wisconsin Geological and Natural History Survey*, **70**(1): i–xx, 1–494.

Baker, H.B. 1964. Type land snails in the Academy of Natural Sciences of Philadelphia. Part 3. Limnophile and thalassophile Pulmonata. Part 4. Land and freshwater Prosobranchia. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **116**: 149–193.

Barnes, R.D. 1974. *Invertebrate Zoology*, (Ed. 3). W.B. Saunders, Philadelphia.

Binney, W.G. 1865. Land and fresh-water shells of North America, part 3. Ampullariidae, Valvatidae, Viviparidae, fresh-water Rissoidae, Cyclophoridae, Truncatellidae, fresh-water Neritidae, Helicinidae. *Smithsonian Miscellaneous Collections*, **7**(144): i–viii, 1–120.

Boss, K.J. 1982. Mollusca. Pp. 945–1166 *in* Parker, S.P. (Ed.) *Synopsis and classification of living organisms*. McGraw-Hill, New York.

Brown, K.M. 1991. Mollusca: Gastropoda. Pp. 285–314 *in* Thorp, J.H. & Covich, A.P. *Ecology and classification of North American freshwater invertebrates*. Academic Press, San Diego.

Burch, J.B. 1978. An outline of classification of the Recent freshwater gastropods of North America (North of Mexico). *Journal de Conchyliologie*, **115**(1–2): 3–9.

Burch, J.B. 1979. Genera and subgenera of Recent freshwater gastropods of North America (North of Mexico). *Malacological Review*, **12**: 97–100.

Burch, J.B. 1982a. *Freshwater snails (Mollusca: Gastropoda) of North America*. Environmental Monitoring and Support Laboratory, Office of Research and Development. EPA-600/3 82 026. 294 pp., 775 figs. United States Environmental Protection Agency, Cincinnati, Ohio.

Burch, J.B. 1982b. North American freshwater snails. Identification keys, generic synonymy, supplemental notes, glossary, references, index. *Walkerana, Transactions of the POETS Society*, **4**: 217–365.

Burch, J.B. & Tottenham, J.L. 1980. North American freshwater snails. Species list, ranges and illustrations. *Transactions of the Physiological, Oecological, Experimental Taxonomic and Systematics Society*, **3**: 81–215.

Call, R.E. 1883. Note on the genus *Campeloma* of Rafinesque. *American Naturalist*, **17**(6): 603–608.

Call, R.E. 1886. On the genus *Campeloma*, Rafinesque, with a revision of the species, Recent and fossil. *Bulletin of the Washburn College Laboratory of Natural History*, **1**(5): 149–165.

Call, R.E. 1888a. On the gross anatomy of *Campeloma*. *American Naturalist*, **22**: 491–497.

Call, R.E. 1888b. Notes on the gross anatomy of *Campeloma*. *Proceedings of the Iowa Academy of Sciences*, **1888**: 16–17.

Call, R.E. 1894. On the geographic and hyposmetric distribution of North American Viviparidae. *American Journal of Science*, **48**: 132–141.

Clarke, A.H. 1973. The freshwater molluscs of the Canadian Interior Basin. *Malacologia*, **13**(1–2): 1–509.

Clarke, A.H. 1981. *The freshwater molluscs of Canada*. 446 pp. National Museum of Natural Sciences, National Museum of Canada, Ottawa.

Clench, W.J. 1959. Mollusca. Pp. 1117–1160 *in* Edmondson, W.T (Ed.), *Freshwater Biology*. John Wiley & Sons, New York.

Clench, W.J. 1962. A catalogue of the Viviparidae of North America with notes on the distribution of *Viviparus georgianus*, Lea. *Occasional Papers on Mollusca, Museum of Comparative Zoology*, **2**(27): 261–287.

Clench, W.J. & Turner, R.D. 1956. Freshwater mollusks of Alabama, Georgia, and Florida from the Escambia to the Suwannee River. *Bulletin of the Florida State Museum, Biological Sciences*, **1**(3): 97–239.

Gill, T. 1864. Several points in ichthyology and conchology. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **16**: 151–152.

Goodrich, C. & van der Schalie, H. 1944. A revision of the Mollusca of Indiana. *American Midland Naturalist*, **32**(2): 257–326.

Hannibal, H. 1912. A synopsis of the Recent and Tertiary freshwater Mollusca of the California Province, based upon ontogenetic classification. *Proceedings of the Malacological Society*, **10**(2–3): 112–211.

Harman, W.N. & Berg, C.O. 1971. The freshwater snails of Central New York, with illustrated keys to the genera and species. *Search, (Cornell University Agricultural Experiment Station, Ithaca, New York)*, **1**(4): 1–68.

Henderson, J. 1935. Fossil non-marine Mollusca of North America. *Geological Society of America, Special Papers*, no. 3: i–vii, 1–313.

Herrmannsen, A.N. 1846. *Indicis Generum Malacozoorum Primordia*, vol. 1. 637 pp. Theodori Fischeri, Cassellis.

Hubricht, L. 1943. Notes on the sex ratios in *Campeloma*. *Nautilus*, **56**(4): 138–139.

Jokinen, E.H. 1983. The freshwater snails of Connecticut. State Geological and Natural History Survey of Connecticut. *Department of Environmental Protection Bulletin*, **109**: 1–83.

Jokinen, E.H. 1992. The freshwater snails (Mollusca: Gastropoda) of New York State. *New York State Museum Bulletin*, no. 482: i–vi, 1–112.

Karlin, A.A. 1981. Genetic variation and parthenogenesis in *Campeloma* (Viviparidae). *Bulletin of the American Malacological Union*, **1981**: 37.

Karlin, A.A., Vail, V.A. & Heard, W.H. 1980. Parthenogenesis and biochemical variation in southeastern *Campeloma geniculum* (Gastropoda: Viviparidae). *Malacological Review*, **13**: 7–15.

Kotrla, M.B. & Dougherty, B.J. 1984. A comparative study of shell shape in four populations of *Campeloma* (Gastropoda: Viviparidae) [Abstract]. *Program for the Fiftieth Annual Meeting of the American Malacological Union*, **1984**: 29.

La Rocque, A. 1953. Catalogue of the Recent Mollusca of Canada. *National Museum of Canada Bulletin*, **129**: 1–406.

La Rocque, A. 1968. Pleistocene Mollusca of Ohio. *Ohio Division of Geological Survey, Bulletin*, **62**(3): xvii–xxiv, 357–553.

Leonard, A.B. 1959. Handbook of gastropods in Kansas. *University of Kansas Museum of Natural History, Miscellaneous Publication*, no. 20: 1–224.

Meek, F.B. 1871a. Descriptions of new species of fossils from Ohio and other western states and territories. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **23**: 159–184.

Meek, F.B. 1871b. Preliminary paleontological report, consisting of lists of fossils, with descriptions of some new types, etc. Pp. 287 318 *in* Hayden, F.V., *Preliminary report of the United States Geological Survey of Wyoming, and portions of contiguous territories*, being a second annual report of progress, [Vol. 4] conducted under the authority of the Secretary of the Interior. Government Printing Office, Washington.

Meek, F.B. 1876. A report on the invertebrate Cretaceous and Tertiary fossils of the Upper Missouri Country, *in* Hayden, F.V. *Report of the United States Geological Survey of the Territories*, **9**: i–lxiv, 1–629.

Meek, F.B. & Hayden, F.V. 1865. Palaeontology of the Upper Missouri; invertebrates. *Smithsonian Contributions to Knowledge*, 14(Art. 5)(172); 135 pp.

Morrison, J.P.E. 1947. Notes on the Philippine snail, *Viviparus burroughianus* Lea. *Nautilus*, **61**(1): 29–30.

Neave, S.A. 1939. *Nomenclator Zoologicus*. Vol. 1 (A-C), 957 pp.; vol. 2 (D-L), 1025 pp. Zoological Society of London, London.

Parodiz, J.J. 1956. Notes on the fresh-water snail *Leptoxis* (*Mudalia*) *carinata* (Bruguière). *Annals of the Carnegie Museum*, **33**(23): 391–405.

Pilsbry, H.A. 1898. *Campeloma decisum* Say, reversed. *Nautilus*, **10**: 118.

Pilsbry, H.A. 1917. Rafinesque's genera of fresh-water snails. *Nautilus*, **30**(10): 109–114.

Prashad, B. 1928. Recent and fossil Viviparidae. A study in distribution, evolution and paleogeography. *Memoirs of the Indian Museum*, **8**(4): 153–251.

Rafinesque, C.S. 1818a. Art. 3. Museum of Natural History. Discoveries in natural history, made during a journey through the western region of the United States, by Constantine Samuel Rafinesque, Esq. Addressed to Samuel L. Mitchill, President, and the other members of the Lyceum of Natural History, in a letter dated at Louisville, Falls of Ohio, 20th July, 1818. *American Monthly Magazine and Critical Review*, **3**(5): 354–356.

Rafinesque, C.S. 1818b. Art. 3. Museum of Natural History. General account of the discoveries made in the zoology of the Western States. *American Monthly Magazine and Critical Review*, **4**(2): 106–107.

Rafinesque, C.S. 1819. Prodrome de 70 nouveaux genres d'animaux découverts dans l'intérieur des Etats-Unis d'Amerique, durant l'année 1818. *Journal de Physique, de Chimie, d'Histoire Naturelle*, **88**: 287–322.

Robertson, I.C.S. & Blakeslee, C.L. 1948. The Mollusca of the Niagara Frontier Region. *Bulletin of the Buffalo Society of Natural Sciences*, **19**(3): xi, 1–191.

Scudder, S.H. 1882. II. Universal index to genera in zoology. Complete list of generic names employed in zoology and paleontology to the close of the year 1879, contained in the nomenclators of Agassiz, Marschall, and Scudder, and in the Zoological Record. In: S.H. Scudder, Nomenclator Zoologicus. An alphabetical list of all generic names that have been employed by naturalists for Recent and fossil animals from the earliest time to the close of the year 1879. *Bulletin of the United States National Museum*, **19**(2): 1–340.

Sherborn, C.D. 1923 1924. *Index Animalium*. Sectio secunda, 1801–1850. Part 2, Index Aff-Anus, pp. 129–384 (1923); part 5, Index C-Ceyl, pp. 945–1196 (1924). British Museum, London.

Smith, D.G. 1991. *Keys to the freshwater macroinvertebrates of Massachusetts*. Privately published, Amherst, MA.

Starobogatov, Ya.I. 1970. *Mollusk fauna and zoogeographical partitioning of continental water reservoirs of the World*. 372 pp., 39 figs. Akademiya Nauk SSSR, Zoologischeskii Instituti Nauka, Leningrad. [In Russian].

Thiele, J. 1931. *Handbuch der systematischen Weichtierkunde*, vol. 1. 778 pp., 782 figures. Fischer, Jena.

Thompson, F.G. 1984. *The freshwater snails of Florida. A manual for identification*. 94 pp. University of Florida Press, Gainesville, Florida.

Tryon, G.W. 1865. Complete writings of Constantine Schmaltz Rafinesque on Recent and fossil conchology. *American Journal of Conchology*, **1**: 79–84.

Turgeon, D.D., Bogan, A.E., Coan, E.V, Emerson, W.K., Lyons, W.G., Pratt, W.L., Roper, C.F.E., Scheltema, A., Thompson, F.G. & Williams, J.D. 1988. Common and scientific names of aquatic invertebrates from the United States and Canada: Mollusks. *American Fisheries Society Special Publication*, **16**: vii, 1–277.

Vail, V.A. 1979a. The species problem in *Campeloma* (Gastropoda, Viviparidae). *Bulletin of the American Malacological Union*, **1979**: 67.

Vail, V.A. 1979b. *Campeloma parthenum* (Gastropoda: Viviparidae), a new species from North Florida. *Malacological Review*, **12**: 85–86.

van Cleave, H.J. & Altringer, D.A. 1937. Studies on the life cycle of *Campeloma rufum*, a fresh-water snail. *American Naturalist*, **71**: 167–184.

van der Schalie, H. 1964. Notes on the sex of *Campeloma*. *American Malacological Union, Annual Reports*, **1964**: 24–25.

Vaught, K.C. 1989. *A classification of the living Mollusca*. xii, 195 pp. American Malacologists, Melbourne, Florida.

Walker, B. 1918. A synopsis of the classification of the freshwater Mollusca of North America, North of Mexico, and a catalogue of the more recently described species, with notes. *University of Michigan, Museum of Zoology, Miscellaneous Publications*, no. 6.

Wood, D.H. 1982. *The aquatic snails (Gastropoda) of the Savannah River Plant Aiken, South Carolina*. 46 pp. Savannah River Plant, SRO-NERP-10.

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Case 3008

Euchilus Sandberger, 1870 and *Stalioa* Brusina, 1870 (Mollusca, Gastropoda): proposed designation of *Bithinia deschiensiana* Deshayes, 1862 and *Paludina desmarestii* Prévost, 1821 as the respective type species, with the conservation of *Bania* Brusina, 1896

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Abstract. The purpose of this application is to conserve the names of three fresh- and brackish-water Tertiary prosobranch gastropod genera in their accustomed usage. *Bithinia deschiensiana* Deshayes, 1862 is proposed as the type species of *Euchilus* Sandberger, 1870 and *Paludina desmarestii* Prévost, 1821 as the type species of *Stalioa* Brusina, 1870. These actions, and the suppression of *Stoliva* Fuchs, 1877 and *Stalioia* Fischer, 1885, are proposed to conserve *Bania* Brusina, 1896, to avoid the need for a new name for *Euchilus* as used in its accustomed sense, and to prevent the names *Euchilus* and *Stalioa* being applied to taxa other than those used by the majority of authors.

Keywords. Nomenclature; taxonomy; Gastropoda; HYDROBIIDAE; Tertiary prosobranch gastropods; *Euchilus*; *Stalioa*; *Bania*; *Euchilus deschiensianus*; *Stalioa desmarestii*; *Bania prototypica*.

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1. The nominal genera *Euchilus* Sandberger, 1870, *Stalioa* Brusina, 1870 and *Bania* Brusina, 1896 were reviewed by Kabat & Hershler (1993) and by Kadolsky (1993). The position of each name is here considered in turn, and Commission action is proposed to conserve those names in their accustomed usage.

Euchilus Sandberger, 1870

2. The nominal genus *Euchilus* was established by Sandberger in a large work entitled *The Land and Freshwater Molluscs of the Past World*. This appeared in 12 livraisons between 1870 and 1875, the plates with species names engraved usually preceding the text. In livraison 2/3 (published in 1870) the name '*Euchilus Desmarestii* Prév. sp.' was published as legend to plate 11, figure 10, thereby making *Paludina desmarestii* Prévost, 1821 (p. 426) type species of *Euchilus* by monotypy. In livraison 4/5 (1871) Sandberger introduced the binomen '*Euchilus Deschiensianum* Deshayes, sp.' in the legend to plate 13, figure 8. The first time the name *Euchilus* appeared in the text (as opposed to the plates) was in livraison 6/8 (1872) where (p. 225) *Bithinia deschiensiana* Deshayes, 1862 (p. 492) was given as 'type'.

3. Subsequent authors have variously considered *Paludina desmarestii* Prévost, 1821 or *Bithinia deschiensiana* Deshayes, 1862 as the type species of *Euchilus*. The majority of authors (e.g. Clessin, 1880; Cossmann, 1888; Schlickum, 1968 (but not 1961, 1965); Kabat & Hershler, 1993; Kadolsky, 1993) accept *Bithinia deschiensiana*

as the type species, even though the fixation of *Paludina desmarestii* has priority; it is all the more desirable to maintain this use as there is no alternative name available for a genus-group taxon including *Bithinia deschiensiana* (see Kadolsky, 1993). It is therefore proposed that *B. deschiensiana* should be taken as the type species of *Euchilus*.

***Stalioa* Brusina, 1870**

4. Brusina (1870, p. 937) established the nominal genus *Stalioa* with a brief description, here translated from the German, of an unnamed new fossil species from Dalmatia: '... [Together] with *Emmericia canaliculata* [a new species described in the same paper] I also found a single, globular, completely smooth species, with a strongly folded aperture margin, often with 1 2 folds on the spira, which belongs neither to *Emmericia* nor to *Fossarulus* and has only with *Amnicola* some similarity; for this [species] I propose a new genus'. This unnamed new species is the only one definitely included in *Stalioa*, which was therefore established without originally included nominal species. Brusina mentioned several species as most likely belonging to *Stalioa* but refrained from including them definitely because he had not himself seen specimens; amongst such species were *Bithinia deschiensiana* Deshayes and *Paludina desmarestii* Prévost, but under Article 67g of the Code they are not 'originally included species'.

5. The first subsequent inclusion of a nominal species was made by Brusina (1872, p. 144) when he gave a name to the unnamed species of his 1870 paper. He wrote (translation from Serbo-Croatian): '*Stalioa prototypica* Brus., about 20 individuals, is not only a new species, but I also took the liberty to make a new genus from this species (l.c. p. 937) ...'. This was the first unqualified inclusion of a nominal species in *Stalioa*; the specific name is made available by reference to the description of 1870. Another specific name mentioned in this paper, that of *Stalioa valvatoides*, was a nomen nudum. Under Article 69a(vii) of the Code *Stalioa prototypica* Brusina, 1872 is type species of *Stalioa* by subsequent monotypy.

6. Brusina (1874) described more fully and figured *Stalioa prototypica* (pp. 43–44, pl. 4, figs. 11–12); he also for the first time described and figured *S. valvatoides* (p. 44, figs. 9–10), thereby making it available. Brusina again only provisionally attributed *desmarestii* Prévost, *deschiensiana* Deshayes and other species to *Stalioa*, as he still had no material for study. Clessin (1880, p. 183) designated *Stalioa valvatoides* as type species of *Stalioa*. This designation is invalid since *S. valvatoides* was not an available name when first (1872) included in *Stalioa* and, furthermore, through Brusina (1872) the type species was already established by monotypy as *Stalioa prototypica*.

7. Cossmann (1893, p. 15) gave *Paludina desmarestii* Prévost as type species of *Stalioa*, apparently after correspondence with Brusina. This type designation has been generally accepted (e.g. Dollfus, 1912; Roman, 1912; Cossmann & Peyrot, 1919; Cossmann, 1921; Wenz, 1926, 1939; Glibert, 1949, 1962; Kabat & Hershler, 1993; Kadolsky, 1993). It is proposed that *Paludina desmarestii* should be taken as the type species of *Stalioa*, because of this usage and because of the situation described in para. 8 below. Schlickum (1968, p. 53) proposed the subgeneric name *Sandbergeriella* with *P. desmarestii* as type species. This action was based on the erroneous assumption that a replacement name for *Stalioa* Auctorum was needed, because

Schlickum (1960, 1961) thought *Emmericia canaliculata* Brusina to be the type species of *Stalioa* by monotypy. This is clearly an error, although it is easy to see how Brusina's wording, quoted in para. 4 above in literal translation, gave rise to such a misunderstanding. *Stalioia* Fischer, 1885 (p. 731) was an unnecessary replacement name for *Stalioa*, introduced for linguistic reasons, and hence a junior objective synonym available with its own author and date. *Stalioia* predates *Bania* Brusina, 1896 (see below), but the designation of *Paludina desmarestii* as the type species of *Stalioa*, and hence of *Stalioia*, means that *Bania* is not invalidated.

***Bania* Brusina, 1896**

8. Brusina (1896, p. 130), in a complete reversal of his earlier actions, introduced a new generic name *Bania* with *Stalioa prototypica* as type species by monotypy. However, *S. prototypica* is formally the type species of *Stalioa* (see para. 5 above), making *Bania* a junior objective synonym of *Stalioa*. *Bania* is in current, albeit infrequent, use (e.g. Wenz, 1926, 1939; Kabat & Hershler, 1993; Kadolsky, 1993), and will be conserved by the designation proposed in para. 7 above of *Paludina desmarestii* as type species of *Stalioa* instead of *S. prototypica*. *Bania* is threatened by the nominal genus *Stoliva* Fuchs, 1877 (p. 682 and table opposite p. 700), which was introduced in the combinations *Stoliva prototypica* Brusina and *Stoliva valvatoides* Brusina. *Stoliva* could be interpreted as an incorrect subsequent spelling of *Stalioa*, but could alternatively be treated as a new nominal genus in which case it would be a senior subjective synonym of *Bania*; its suppression is proposed.

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

(1) to use its plenary powers:
  (a) to set aside all fixations of type species for the following nominal genera:
    (i) *Euchilus* Sandberger, 1870 prior to that by Sandberger (1872) of *Bithinia deschiensiana* Deshayes, 1862;
    (ii) *Stalioa* Brusina, 1870 prior to that by Cossmann (1893) of *Paludina desmarestii* Prévost, 1821;
  (b) to suppress the generic name *Stoliva* Fuchs, 1877 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;

(2) to place the following names on the Official List of Generic Names in Zoology:
  (a) *Euchilus* Sandberger, 1870 (gender: masculine), type species by subsequent designation by Sandberger (1872) *Bithinia deschiensiana* Deshayes, 1862 by the ruling in (1)(a)(i) above;
  (b) *Stalioa* Brusina, 1870 (gender: feminine), type species by subsequent designation by Cossmann (1893) *Paludina desmarestii* Prévost, 1821 by the ruling in (1)(a)(ii) above;
  (c) *Bania* Brusina, 1896 (gender: feminine), type species by monotypy *Stalioa prototypica* Brusina, 1872;

(3) to place the following names on the Official List of Specific Names in Zoology:
  (a) *deschiensiana* Deshayes, 1862, as published in the binomen *Bithinia deschiensiana* (specific name of the type species of *Euchilus* Sandberger, 1870);

(b) *desmarestii* Prévost, 1821, as published in the binomen *Paludina desmarestii* (specific name of the type species of *Stalioa* Brusina, 1870);
(c) *prototypica* Brusina, 1872, as published in the binomen *Stalioa prototypica* (specific name of the type species of *Bania* Brusina, 1896);

(4) to place the following names on the Official Index of Rejected and Invalid Names in Zoology:
(a) *Stoliva* Fuchs, 1877, as suppressed in (1)(b) above;
(b) *Sandbergeriella* Schlickum, 1968 (a junior objective synonym of *Stalioa* Brusina, 1870);
(c) *Stalioia* Fischer, 1885 (an unnecessary replacement name and junior objective synonym of *Stalioa* Brusina, 1870).

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References

Brusina, S. 1870. Monographie der Gattungen *Emmericia* und *Fossarulus*. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien*, **20**: 925–938.

Brusina, S. 1872. Naravoslovne crtice sa sjevero-istočne obale jadranskoga mora sabrao god. 1868 i 1871. *Rad Jugoslavenske Akademije Znanosti i Umjetnosti*, **19**: 105–177.

Brusina, S. 1874. Prilozi paleontologiji hrvatskoj ili kopnene i sladkovodne terciarne izkopine Dalmacije, Hrvatske i Slavonije. *Rad Jugoslavenske Akademije Znanosti i Umjetnosti*, **28**: 1–109.

Brusina, S. 1896. La collection Néogène de Hongrie, de Croatie, de Slavonie et de Dalmatie à l'exposition de Budapest. *Glasnika Hrvatskoga Naravoslovnoga Drustva*, **9**: 98–150. [In Serbo-Croatian and French].

Clessin, S. 1880. Studien über die Familie der Paludinen. *Malakozoologische Blätter*, (n.s.)**2**: 161–196.

Cossmann, M. 1888. Catalogue illustré des coquilles fossiles de l'Éocène des environs de Paris, faisant suite aux travaux paléontologiques de G.P. Deshayes, part 3. *Annales de la Société Royale Malacologique de Belgique*, **23**: 3–324.

Cossmann, M. 1893. Catalogue illustré des coquilles fossiles de l'Éocène des environs de Paris, faisant suite aux travaux paléontologiques de G.P. Deshayes. Appendice no. 1. *Annales de la Société Royale Malacologique de Belgique*, **28**: 1–18.

Cossmann, M. 1921. *Essais de paléoconchologie comparée*, vol. 12. 348 pp., 6 pls. Privately published, Paris.

Cossmann, M. & Peyrot, A. 1919. Conchologie Néogénique de l'Aquitaine. *Actes de la Société Linnéenne de Bordeaux*, **70**(4): 357–491.

Deshayes, G.P. 1862. Pp. 433–640 *in*: *Description des animaux sans vertèbres du Bassin de Paris*. 2. Baillière, Paris.

Dollfus, G. 1912. Recherches critiques sur quelques genres et espèces d'*Hydrobia* vivants ou fossiles. *Journal de Conchyliologie*, **59**(3): 179–270.

Fischer, P.H. 1885. Pp. 689–896 *in*: *Manuel de conchyliologie et de paléontologie conchyliologique ou histoire naturelle des mollusques vivants et fossiles*. Savy, Paris.

Fuchs, T. 1877. Geologische Uebersicht der jüngeren Tertiärbildungen des Wiener Beckens und des ungarisch-steierischen Tieflandes. *Zeitschrift der Deutschen Geologischen Gesellschaft*, **29**(4): 653–709.

Glibert, M. 1949. Gastropodes du Miocène du Bassin de la Loire. *Mémoires de l'Institut Royal des Sciences Naturelles de Belgique*, (2)**30**: 1–240.

Glibert, M. 1962. Les Mesogastropoda fossiles du Cénozoique étranger des collections de l'Institut royal des Sciences Naturelles de Belgique. 1e partie. Cyclophoridae à Stiliferidae (inclus). *Mémoires de l'Institut Royal des Sciences Naturelles de Belgique*, (2)**69**: 1–305.

Kabat, A. R. & Hershler, R. 1993. The prosobranch snail family Hydrobiidae (Gastropoda Rissooidea): review of classification and supraspecific taxa. *Smithsonian Contributions to Zoology*, no. 547. 94 pp. Smithsonian Institution Press, Washington, D.C.

Kadolsky, D. 1993. Der Gattung *Nystia* zugeordnete Arten im Tertiär des mittleren und westlichen Europas (Gastropoda: Rissooidea). *Archiv für Molluskenkunde*, **122**: 335 402.

Prévost, C. 1821. Sur un nouvel exemple de la réunion de coquilles marines et de coquilles fluviatiles dans les mèmes couches. *Journal de Physique, de Chimie, d'Histoire naturelle et des Arts*, **92**: 418–427.

Roman, F. 1912. Faune saumâtre du Sannoisien du Gard. *Bulletin de la Société Géologique de France*, (4)**10**: 927–955.

Sandberger, C.L.F. von. 1870–1872. *Die Land-und Süsswasser-Conchylien der Vorwelt*. Livraison 2/3: pp. 33–96, pls. 5–12 (1870); Livraison 4/5: pp. 97–160, pls. 13–20 (1871); Livraison 6/8: pp. 161–256, pls. 21–32 (1872). Kreidel, Wiesbaden.

Schlickum, R.W. 1960. Die Gattung *Nematurella* Sandberger. *Archiv für Molluskenkunde*, **89**(4–6): 203–214.

Schlickum, R.W. 1961. Die Gattung *Euchilus* Sandberger. *Archiv für Molluskenkunde*, **90**(1–3): 59–68.

Schlickum, R.W. 1965. Zur Gattung *Euchilus* Sandberger. *Archiv für Molluskenkunde*, **94**(3–5): 99–104.

Schlickum, R.W. 1968. Zur Nomenklatur von *Staliopsis* Rzehak 1893. *Archiv für Molluskenkunde*, **98**(1–2): 53–54.

Wenz, W. 1926. Gastropoda extramarina tertiaria. *Fossilium Catalogus*, I (Animalia), part 32. Pp. 1863–2230. Junk, Berlin.

Wenz, W. 1939. Pp. 481–720 *in*: *Handbuch der Paläozoologie*, vol. 6. Gastropoda. 1. Allgemeiner Teil und Streptoneura. Borntraeger, Berlin.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3047

Holospira Martens, 1860 (Molluca, Gastropoda): proposed designation of *Cylindrella goldfussi* Menke, 1847 as the type species

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Abstract. The purpose of this application is the designation of *Cylindrella goldfussi* Menke, 1847 as the type species of the North American pulmonate genus *Holospira* Martens, 1860 (family UROCOPTIDAE). The holotype of the present type species, *C. pilocerei* Pfeiffer, 1841, no longer exists, and from its description that species could belong not only to *Holospira* (as at present used) but also to *Malinchea*, *Stalactella* or perhaps other genera. Stability of nomenclature in the subfamily HOLOSPIRINAE Pilsbry, 1946 would be maintained by the proposed type species designation.

Keywords. Nomenclature; taxonomy; Gastropoda; UROCOPTIDAE; HOLOSPIRINAE; *Holospira*; *Holospira goldfussi*.

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1. Albers (1850, p. 209) proposed the generic name *Acera* for five nominal species, including *Cylindrella pilocerei* Pfeiffer, 1841 (p. 47) and *C. goldfussi* Menke, 1847 (p. 2); no type species was designated.

2. Because *Acera* Albers is a junior homonym of *Acera* Cuvier, 1810 and a 'virtual homonym' of *Akera* Müller, 1776, the new replacement name *Holospira* was proposed by Martens (1860, p. 39). *Holospira* remains a potentially valid name because the suppression in Opinion 1079 (July 1977) of *Acera* Cuvier retained that name as available for purposes of homonymy, thus continuing to disqualify *Acera* Albers.

3. Martens (1860) designated *Cylindrella pilocerei* as the type species of *Holospira*, and retained in it some of the other species (including *C. goldfussi*) which Albers (1850) had placed in his genus *Acera*.

4. The name *Holospira* has remained in use, and it is the type genus of the subfamily HOLOSPIRINAE Pilsbry, 1946 of the family UROCOPTIDAE. At present (see e.g. Pilsbry, 1946, 1953) the subfamily contains 16 genus-group taxa and approximately 135 described species. Most species are confined to very small geographic ranges (less than a few sq. km.) because they are obligate inhabitants of limestone outcrops. Important diagnostic characters for genus, subgenus and species identifications include the number and configuration of lamellae that comprise the internal barrier within the last three whorls. Convergence in external shell characters is common in the subfamily; these characters have no relationship to the internal lamellar barrier, and seldom are they useful for generic diagnoses.

5. The internal barrier of *Cylindrella pilocerei*, the type species of *Holospira*, was never described. The external shell characters (as described by Pfeiffer (1841, p. 47) and illustrated by Philippi (1845, p. 183, pl. 1, fig. 7)) comply with any of three

genus-group taxa that occur in the general region of its type locality: *Holospira*, *Stalactella* Bartsch, 1906 and *Malinchea* Bartsch, 1945. The species may also belong to some other genus. *Holospira* (as currently understood) has four smooth internal lamellae, whereas *Malinchea* has three and *Stalactella* has only two, one of which is spinose. The holotype of *C. pilocerei* has not been located in the collections where it might be expected (the Berlin Museum, the Senckenberg Museum, or the Natural History Museum, London), and it was probably destroyed during World War II together with most of the Pfeiffer collection in Berlin. Attempts in 1992 to collect the species at the type locality (Cuantla de las Amilpas, Puebla [Morelas], Mexico) were unsuccessful. The area is over-grazed by goat herding and intensely disturbed by other human uses; no population of any holospirid was found, and *C. pilocerei* is presumed to be extinct at its type locality.

6. The name *Cylindrella pilocerei* must be regarded as a nomen dubium, and the nominal species is of no utility for characterizing *Holospira*. The current concept of the genus is based on the morphology of other species that have long been associated with it (Pilsbry, 1902 (p. 666), 1946 (p. 115), 1953 (p. 141); Gilbertson, 1993 (p. 79)). Amongst these is the Texan *Cylindrella goldfussi* Menke, 1847, which is an originally included species of *Holospira* (paras. 1 and 3 above) and has since always been placed in the genus. The diagnostic features of the internal barrier of this species have been well described (see Pilsbry, 1946, p. 115) and syntypes are in the Natural History Museum, London. Nomenclatural stability in *Holospira* and more generally in the HOLOSPIRINAE would be maintained by the designation of *Cylindrella goldfussi* as the type species.

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

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Holospira* Martens, 1860 and to designate *Cylindrella goldfussi* Menke, 1847 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Holospira* Martens, 1860 (gender: feminine), type species by designation in (1) above *Cylindrella goldfussi* Menke, 1847;

(3) to place on the Official List of Specific Names in Zoology the name *goldfussi* Menke, 1847, as published in the binomen *Cylindrella goldfussi* (specific name of the type species of *Holospira* Martens, 1860).

References

Albers, J.C. 1850. *Die Heliceen, nach natürlicher Vervandtschaft systematisch geordnet*. 262 pp. Berlin.

Gilbertson, L.H. 1993. Reproductive anatomies of *Holospira* spp. (Gastropoda: Pulmonata: Urocoptidae) from Arizona and Sonora, with a new subgenus and a new subspecies. *American Malacological Bulletin*, **10**: 71–81.

Martens, E. von. 1860. *In* Albers, J.C., *Die Heliceen, nach natürlicher Vervandtschaft systematisch geordnet*, Ed. 2. 359 pp. Engelmann, Leipzig.

Menke, K.T. 1847. Vier neue Arten der Gattung *Cylindrella* Pfr. *Zeitschrift für Malakozoologie*, **1847**(1): 1–3.

Pfeiffer, L. 1841. *Symbolae ad historium Heliceorum*. 88 pp. Casselis.

Philippi, R.A. [1842] 1851. *Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien*, vol. 1. 204 pp. Cassel.

Pilsbry, H.A. 1902. *Manual of Conchology*, ser. 2, vol. 15. 323 pp. Philadelphia.

Pilsbry, H.A. 1946. *Land Mollusca of North America (north of Mexico)*. Monograph, Academy of Natural Sciences of Philadelphia, 3, vol. 2, part 1. v, 520 pp.

Pilsbry, H.A. 1953. Inland Mollusca of northern Mexico. II. Urocoptidae, Pupillidae, Strobilopsidae, Valloniidae, and Cionellidae. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **105**: 133–167.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3039

Thamnotettix nigropictus Stål, 1870 (currently *Nephotettix nigropictus*; Insecta, Homoptera): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the specific name of *Nephotettix nigropictus* (Stål, 1870), an Asian cicadellid leafhopper which is a vector of virus diseases of rice. *Pediopsis nigromaculatus* Motschulsky, 1859 has been identified as a senior synonym of *N. nigropictus*, but its introduction would cause confusion in the extensive economic literature and its suppression is proposed.

Keywords. Nomenclature; taxonomy; Homoptera; CICADELLOIDEA; *Nephotettix nigropictus*; *Pediopsis nigromaculatus*; leafhoppers; rice pests.

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1. Stål (1870, p. 740) described the rice leafhopper *Thamnotettix nigropicta* (recte *nigropictus*, since *tettix* is masculine) from the Philippines. Ghauri (1971) revised the cicadellid genus *Nephotettix* Matsumura, 1902, in which the species is now placed, and reported (p. 482) that the male holotype and a female 'allotype' are well preserved in the Riksmuseum, Stockholm (specimens 345,69 and 346,69 respectively). Ghauri used the 'well-defined and authentic concept' of *nigropictus* Stål as the valid name for the species.

2. Motschulsky (1859, p. 111) described *Pediopsis nigromaculatus* from Ceylon (now Sri Lanka). The type material in Moscow consists of fragments (see para. 4 below).

3. Ghauri (1971) was aware that the description of *Pediopsis nigromaculatus* by Motschulsky would place this nominal species in *Nephotettix*, but he had been informed that the type material had been destroyed and accordingly treated the name as a nomen dubium. Five species of *Nephotettix* are known from Sri Lanka; the correct determination of the species is reliant on the male genitalia, although wing and body coloration is accurate for many specimens of both sexes.

4. Vilbaste (1975, p. 233) found 'two fragments of fore wings, the end of a female abdomen and three fragments of the thorax with legs' of *P. nigromaculatus* in the remains of Motschulsky's collection in the Zoological Institute of Moscow State University. He concluded that the markings of the fore wings showed that this material was conspecific with *Nephotettix nigropictus*, and he noted that the original description of *P. nigromaculatus* was in accord with that of *N. nigropictus*. Vilbaste accordingly synonymised *nigropictus* Stål, 1870 with *nigromaculatus* Motschulsky, 1859.

5. *Nephotettix* species are vectors of pathogenic plant viruses; they are major pests of rice in Asia and elsewhere in the Old World, and the literature is considerable. Various names for the more important species were used before the revision by Ghauri (1971) stabilised the economic literature. Since 1975 (the date of the synonymy made by Vilbaste) there have been at least 500 publications which have used the name *Nephotettix nigropictus*; some recent examples are Inoue (1986), Cook & Perfect (1989), Heong, Aquino & Barrion (1991) and Waterhouse (1993), and a list of a further 20 has been given to the Commission Secretariat. In contrast to this, the synonymy by Vilbaste appears to have been cited in just two catalogues of Australian leafhoppers, those by Evans (1977, p. 118) and Day & Fletcher (1994, p. 1208). Wilson & Claridge (1991) were aware of the synonymy, but in their handbook they used (p. 82) the name *N. nigropictus* (Stål, 1870) because of the extensive economic literature. Any further resurrection of the barely used name *nigromaculatus* Motschulsky, 1859 would cause very considerable confusion in the literature concerning rice pests.

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

(1) to use its plenary powers to suppress the name *nigromaculatus* Motschulsky, 1859, as published in the binomen *Pediopsis nigromaculatus*, 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 *nigropictus* Stål, 1870, as published in the binomen *Thamnotettix nigropicta* [sic];

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *nigromaculatus* Motschulsky, 1859, as published in the binomen *Pediopsis nigromaculatus* and as suppressed in (1) above.

References

Cook, A.G. & Perfect, T.J. 1989. Population dynamics of three leafhopper vectors of rice tungro viruses, *Nephotettix virescens* (Distant), *N. nigropictus* (Stål) and *Recilia dorsalis* (Motschulsky) (Hemiptera: Cicadellidae), in farmers' fields in the Philippines. *Bulletin of Entomological Research*, **79**: 437–451.

Day, M. & Fletcher, M. 1994. An annotated catalogue of the Australian Cicadelloidea (Hemiptera: Auchenorrhyncha). *Invertebrate Taxonomy*, **8**: 1117–1288.

Evans, J.W. 1977. The leafhoppers and froghoppers of Australia and New Zealand (Homoptera: Cicadelloidea and Cercopoidea). Part 2. *Records of the Australian Museum*, **31**: 83–129.

Ghauri, M.S.K. 1971. Revision of the genus *Nephotettix* Matsumura (Homoptera: Cicadelloidea: Euscelidae) based on the type material. *Bulletin of Entomological Research*, **60**: 481–512.

Heong, K.L., Aquino, G.B. & Barrion, A.T. 1991. Arthropod community structures of rice ecosystems in the Philippines. *Bulletin of Entomological Research*, **81**: 407–416.

Inoue, H. 1986. Biosystematic study on the genus *Nephotettix* occurring in Asia. *Bulletin of the Kyushu Agricultural Experiment Station*, **24**: 149–237.

Motschulsky, V. de. 1859. Insectes des Indes Orientales, et des contrées analogues. Pp. 25–118 *in*: *Études Entomologiques, redigées par Victor de Motschulsky*, vol. 8. Helsingfors.

Stål, C. 1870. Hemiptera insularum Philippinarum. Bidrag till Philippinska öarnes Hemipter-fauna. *Öfversigt af Kongliga Svenska Vetenskaps-Akademiens Förhandlingar*, **27**: 607–776.

Vilbaste, J. 1975. On some species of Homoptera Cicadinea described by V. Motschulsky. *Eesty NSV Teaduste Akadeemia Toimetised* (Biologia), **24**: 228–236.

Waterhouse, D.F. 1993. *The major arthropod pests and weeds of agriculture in Southeast Asia.* 141 pp. ACIAR, Canberra.

Wilson, M.R. & Claridge, M.F. 1991. *Handbook for the identification of leafhoppers and planthoppers of rice.* 142 pp. CAB International, Wallingford, U.K.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3040

Cicada clavicornis Fabricius, 1794 (currently *Asiraca clavicornis*; Insecta, Homoptera): proposed conservation of the specific name

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Abstract. The purpose of this application is the conservation of the specific name of the widely distributed delphacid planthopper *Asiraca clavicornis* (Fabricius, 1794), the type species of *Asiraca* Latreille, [1796]. It has recently been suggested that *Cimex aequinoctialis* Scopoli, 1763 and *Cicada quadristriata* Gmelin, 1790 are senior synonyms of *A. clavicornis*, and that the former should be adopted; however, the introduction of either of these unused names would disturb the settled nomenclature of more than 200 years and their suppression is proposed.

Keywords. Nomenclature; taxonomy; Homoptera; DELPHACIDAE; *Asiraca clavicornis*; *Cimex aequinoctialis*; planthoppers.

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1. Fabricius (1794, p. 41) described the delphacid planthopper *Cicada clavicornis* from France, and the female holotype is preserved at the Muséum National d'Histoire Naturelle in Paris (T. Bourgoin, pers. comm.); it is the type species of *Asiraca* Latreille, [1796] (pp. xii, 202) by the subsequent designation of Latreille (1810, p. 434). *A. clavicornis* is now known to be a widely distributed although seldom common species, and is found in most Western Palearctic countries (Nast, 1972). Metcalf (1943) listed 213 literature citations from 1794 to 1940 (the last year of his catalogue), and there are now over 300; examples include Lindberg (1948), Le Quesne (1960), Servadei (1967), Asche (1985) and Kirby (1992), and a list of 15 recent ones has been given to the Commission Secretariat. *A. clavicornis* is easy to identify and has not been called by any other name since the 18th century.

2. Scopoli (1763, p. 132) described *Cimex aequinoctialis* for a species that has remained doubtful ever since. Dolling (1996) has recently argued that Scopoli's description can only refer to *Asiraca clavicornis*, although he notes that the accompanying woodcut is 'so crude as to give no clue to its identity' and that no type material exists. Despite these drawbacks Dolling suggested that the specific name *aequinoctialis* should be adopted.

3. Dolling (1996) also argued that the name *Cicada quadristriata* Gmelin, 1790 (p. 2111) refers to *A. clavicornis*; this was given to a species described but not named

by Zschach (1788). Zschach's description (reproduced and translated by Dolling) might apply to *A. clavicornis*, and the crude woodcut illustration does at least show the tibial spur on the hind leg which is diagnostic of delphacid planthoppers. Dolling said that in the absence of *aequinoctialis* the name *quadristriata* should be used.

4. Dolling proposed that since the species can be readily recognised and is of no economic importance there is no advantage in conserving the specific name *clavicornis* Fabricius, 1794. We would argue the contrary. The species is very well known, and has been universally called *Asiraca clavicornis* for more than 200 years; we consider that there is a prima facie case that this stable usage should continue rather than that specific names should be resurrected from total obscurity and cause confusion in the literature.

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

(1) to use its plenary powers to suppress for the purposes of the Principle of Priority but not for those of the Principle of Homonymy the following specific names:
   (a) *aequinoctialis* Scopoli, 1763, as published in the binomen *Cimex aequinoctialis*;
   (b) *quadristriata* Gmelin, 1790, as published in the binomen *Cicada quadristriata*;

(2) to place on the Official List of Generic Names in Zoology the name *Asiraca* Latreille, [1796] (gender: feminine), type species by subsequent designation by Latreille (1810) *Cicada clavicornis* Fabricius, 1794;

(3) to place on the Official List of Specific Names in Zoology the name *clavicornis* Fabricius, 1794, as published in the binomen *Cicada clavicornis* (specific name of the type species of *Asiraca* Latreille, [1796]);

(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following names:
   (a) *aequinoctialis* Scopoli, 1763, as published in the binomen *Cimex aequinoctialis* and as suppressed in (1)(a) above;
   (b) *quadristriata* Gmelin, 1790, as published in the binomen *Cicada quadristriata* and as suppressed in (1)(b) above.

References

Asche, M. 1985. Zur Phylogenie der Delphacidae Leach, 1815 (Homoptera, Cicadina, Fulgoromorpha). *Marburger Entomologische Publikationen*, **2**(1): 1–398.

Dolling, W.R. 1996. The identity of *Cimex aequinoctialis* Scopoli (Hem., Delphacidae). *Entomologist's Monthly Magazine*, **132**: 49–50.

Gmelin, J.F. 1790. *Caroli a Linne Systema Naturae*, Ed. 13 (pp. 1517 2224). Lipsiae.

Fabricius, J.C. 1794. Ryngota. *Entomologia systematica emendata et aucta ...*, vol. 4. 472 pp. Proft, Hafniae.

Kirby, P. 1992. *A review of the scarce and threatened Hemiptera of Great Britain*. 267 pp. Joint Nature Conservation Committee, Peterborough.

Latreille, P.A. [1796]. *Précis des caractéres générales des insectes, disposés dans un ordre naturel*. xvi, 208 pp. Bourdeaux, Brive.

Latreille, P.A. 1810. *Considérations générales sur l'ordre naturel des animaux composant les classes des crustacés, des arachnides, et des insectes*. 444 pp. Schoell, Paris.

Le Quesne, W.J. 1960. Hemiptera Fulgoromorpha. Pp. 1-68 *in*: *Handbooks for the identification of British insects*, vol. 2(3).

Lindberg, H. 1948. On the insect fauna of Cyprus. Results of the expedition of 1939 by Harald, Haken and P.H. Lindberg. II. Heteroptera und Homoptera Cicadina der Insel Zypern. *Commentationes Biologicae*, **10**(7): 123.

Metcalf, Z.P. 1943. Fulguroidea. Part 3. Araeopidae (Delphacidae). *In* China, W.E. & Parshley, H.M. (Eds.), *General Catalogue of the Hemiptera*, Fascicle 4. 552 pp. Smith College, Northampton, Massachusetts.

Nast, J. 1972. *Palaearctic Auchenorrhyncha (Homoptera). An annotated check list*. Polish Scientific Publishers, Warszawa.

Scopoli, J.A. 1763. *Entomologia carniolica*. xxxvi, 420 pp., 43 pls. Vindobonae.

Servadei, A. 1967. P. 569 *in*: *Fauna d'Italia. Rhynchota (Heteroptera, Homoptera Auchenorrhyncha). Catalogo topographico e sinonimico*. Bologna.

Zschach, J.J. 1788. *Museum N.G. Leskeanum, Pars Entomologica ad systema Cl. Fabricii ordinata*. (2), 136 pp., 3 pls. Müller, Lipsiae.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3068

Musca rosae Fabricius, 1794 (currently *Psila* or *Chamaepsila rosae*; Insecta, Diptera): proposed conservation of the specific name

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Abstract. The purpose of this application is the conservation of the specific name of *Psila* (or *Chamaepsila*) *rosae* (Fabricius, 1794). This name has been in universal use for more than 200 years for the carrot fly (family PSILIDAE), which is an economically serious pest of carrots and other crops. It has no synonyms, but is a junior primary homonym of *Musca rosae* De Geer, 1776, which is an invalid junior synonym of *Scaeva pyrastri* (Linnaeus, 1758) in the SYRPHIDAE and has always been treated as such. The new name *Chamaepsila hennigi* Thompson & Pont, 1994 was put forward to replace *rosae* Fabricius because of the homonymy, but this name has not been used and its introduction would cause confusion in the economic and taxonomic literature.

Keywords. Nomenclature; taxonomy; Diptera; PSILIDAE; *Psila*; *Chamaepsila*; *Psila rosae*; *Chamaepsila rosae*; *Chamaepsila hennigi*; carrot fly.

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1. Fabricius (1794, p. 356) established the nominal species *Musca rosae* for a fly later classified in the family PSILIDAE; he noted that the adult insect was found on flowers. The specific name has been consistently used both in taxonomic and economic literature for the 'carrot fly', a serious pest of carrots and of other crops belonging to the family Apiaceae (alternatively called the Umbelliferae).

2. The generic placement of the species is not yet fully resolved. It has often, especially in the economic literature (a bibliography of which has been provided by Hardman, Ellis & Stanley, 1985) and in biological works (e.g. Petherbridge & Wright, 1943; Ashby & Wright, 1946; Osborne, 1961; Brindle, 1965; Smith, 1989) been included in *Psila* Meigen, 1803 (type species *Musca fimetaria* Linnaeus, 1761 by designation of Westwood (1840, p. 146)). However, many recent works have placed it in *Chamaepsila* Hendel, 1917 (p. 37), of which it is the type species by original designation.

3. The genus *Chamaepsila* has been recognized by Frey (1925), Hennig (1941), Shatalkin (1983), Soós (1984) and Wang (1988), and in many other recent papers dealing with various species of that genus. The division of *Psila* into four genera by Hennig (1941) was based mainly on chaetotactic characters which have uncertain significance, and it has not been accepted by some authors (e.g. Collin, 1944; Lyneborg, 1964; Shatalkin, 1986; Iwasa, 1991). These authors recognized several subgenera of *Psila* but all placed *rosae* Fabricius in the nominotypical subgenus *Psila* sensu stricto. In the case of the first two authors this was on the assumption that *Pelethophila* Hagenbach, 1822 was the correct name for the group containing *Psila fimetaria* (the type species of *Psila*; see para. 2 above), while the two more recent

authors placed both the *rosae* and *fimetaria* groups in *Psila* s. str., thus synonymizing *Psila* and *Chamaepsila*.

4. This application does not seek to address the taxonomic placement of *rosae* Fabricius, 1794, but rather its conservation as the valid specific name for the important carrot fly pest species, which has always been denoted by the name for more than 200 years.

5. Thompson & Pont (1994) examined the status of specific names which had been originally published in combination with the generic name *Musca* Linnaeus, 1758; in the 18th-century *Musca* was used as a 'catch-all' genus for many species of Diptera which later were recognized as very different. Thompson & Pont (p. 161) noted that *M. rosae* Fabricius, 1794 was a junior primary homonym of *M. rosae* De Geer, 1776 (p. 108). The species concerned have not been placed in the same genus or even family for nearly two centuries, and De Geer's name was invalid from the beginning: he himself noted in 1776 that Linnaeus had previously used the name *M. pyrastri*. Early authors (e.g. Stephens, 1829, p. 286; Walker, 1851, p. 287) also recorded that *M. rosae* De Geer is a junior synonym of *M. pyrastri* Linnaeus, 1758 (p. 594), now known as *Scaeva pyrastri* (family SYRPHIDAE). Despite these facts, Thompson & Pont (1994) rejected the universally used name *rosae* Fabricius. In the absence of any synonym, they proposed the new name *Chamaepsila hennigi* for the carrot fly; apart from being listed in the Zoological Record two years later the name *hennigi* has so far remained unused.

6. The replacement (which would certainly not be universal) of the specific name of *Psila* (or *Chamaepsila*) *rosae* (Fabricius, 1794) by the new name *hennigi* Thompson & Pont, 1994 would be contrary to the Preamble of the Code, which states that 'The object of the Code is to promote stability and universality ... All its provisions and recommendations are subservient to these ends'. It is important, and in the circumstances urgent, that the universally accepted specific name is conserved for the carrot fly pest, and that it is not rejected just because it was a primary homonym in *Musca* of a name which has always been invalid. There is a prima facie case under Article 79c of the Code for its conservation.

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

(1) to use its plenary powers to rule that the specific name *rosae* Fabricius, 1794, as published in the binomen *Musca rosae*, is not invalid by reason of being a junior primary homonym of *Musca rosae* De Geer, 1776;

(2) to place on the Official List of Generic Names in Zoology the name *Chamaepsila* Hendel, 1917 (gender: feminine), type species by original designation *Musca rosae* Fabricius, 1794;

(3) to place on the Official List of Specific Names in Zoology the name *rosae* Fabricius, 1794, as published in the binomen *Musca rosae* (specific name of the type species of *Chamaepsila* Hendel, 1917), ruled in (1) above not invalid by reason of being a junior primary homonym of *Musca rosae* De Geer, 1776;

(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *hennigi* Thompson & Pont, 1994, as published in the binomen *Chamaepsila hennigi* (a junior objective synonym of *Musca rosae* Fabricius, 1794).

References

Ashby, D.G. & Wright, D.W. 1946. The immature stages of the carrot fly. *Transactions of the Royal Entomological Society of London*, **97**: 355–379.

Brindle, A. 1965. Taxonomic notes on the larvae of British Diptera. No. 22 — Psilidae. *The Entomologist*, **98**: 169–173.

Collin, J.E. 1944. The British species of Psilidae (Diptera). *Entomologist's Monthly Magazine*, (4)**80**: 214–224.

De Geer, C. 1776. *Mémoires pour servir à l'histoire des insectes*, vol. 6. viii, 523 pp., 30 pls. Hesselberg, Stockholm.

Fabricius, J.C. 1794. *Entomologia systematica emendata et aucta*, vol. 4. [6], 472 pp.

Frey, R. 1925. Zur Systematik der paläarktischen Psiliden. *Notulae Entomologicae*, **5**: 47–50.

Hardman, J.A., Ellis, P.R. & Stanley, E.A. 1985. Bibliography of the carrot fly *Psila rosae* (F.). Wellesbourne.

Hendel, F. 1917. Beiträge zur Kenntnis der acalypteraten Musciden. *Deutsche Entomologische Zeitschrift* (Berlin), **1917**: 33–47.

Hennig, W. 1941. Psilidae. Pp. 1–38 *in* Lindner, E. (Ed.), *Die Fliegen der paläarktischen Region*, no. 41.

Iwasa, M. 1991. Taxonomic study of the genus *Psila* Meigen (Diptera, Psilidae) from Japan, Sakhalin and the Kurile Islands. *Japanese Journal of Entomology*, **59**: 389–408.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Lyneborg, L. 1964. Danske acalypterate fluer. 2. Psilidae, Platystomidae og Otitidae (Diptera). *Entomologiske Meddelelser*, **32**: 367–377.

Osborne, P. 1961. Comparative external morphology of *Psila rosae* (F.) and *P. nigricornis* Mg. (Dipt., Psilidae) third instar larvae and puparia. *Entomologist's Monthly Magazine*, (4)**97**: 124–127.

Petherbridge, F.R. & Wright, D.W. 1943. Further investigations on the biology and control of the carrot fly (*Psila rosae* F.). *Annals of Applied Biology*, **30**: 348–358.

Shatalkin, A. 1983. New flies of the family Psilidae from the Far East. *Entomological Review* (Washington), **62**: 127–134.

Shatalkin, A. 1986. Review of the East Palaearctic flies of *Psila* Mg. (Diptera, Psilidae), with the key of the Palaearctic species. *Proceedings of the Zoological Institute, Leningrad*, **146**: 25–43.

Smith, K.G.V. 1989. An introduction to the immature stages of British flies. *Handbooks for the identification of British insects*, vol. 10, part 14. 280 pp. Royal Entomological Society of London.

Soós, A. 1974. Taxonomische und faunistische Untersuchungen über die Psiliden (Diptera) aus der Mongolei. *Annales historico-naturales Musei Nationalis Hungaricae*, **66**: 241–250.

Soós, A. 1984. Family Psilidae. Pp. 28 35 *in* Soós, A. & Papp, L. (Eds.), *Catalogue of Palaearctic Diptera*, vol. 9.

Stephens, J.F. 1829. *A systematic catalogue of British insects. Insecta Haustellata*. 388 pp.

Thompson, F.C. & Pont, A.C. 1994. Systematic database of *Musca* names (Diptera). *Theses Zoologicae*, **20**: 1–219.

Walker, F. 1851. *Insecta Britannica Diptera*, vol. 1. 313 pp. Reave & Benham, London.

Wang, X. 1988. Bestimmungstabellen der westpaläarktischen *Chamaepsila*-Arten (Diptera: Psilidae). *Stuttgarter Beiträge zur Naturkunde*, Serie A (Biologie), no. 417. 13 pp.

Westwood, J.O. 1840. *Synopsis of the genera of British insects*. 158 pp. London.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3037

Iguanodon Mantell, 1825 (Reptilia, Ornithischia): proposed designation of *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type species, and proposed designation of a lectotype

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Abstract. The purpose of this application is to designate the well known nominal species *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type of the Cretaceous ornithopod *Iguanodon* Mantell, 1825 (family IGUANODONTIDAE Huxley, 1870). At present *Iguanodon anglicus* Holl, 1829 is the valid type species but this is known only from fragmentary and non-associated teeth which show a complete lack of diagnostic characters. It is also proposed that a virtually complete and mounted skeleton in the Institut Royal des Sciences Naturelles de Belgique, Brussels, be designated the lectotype of *I. bernissartensis*.

Keywords. Taxonomy; nomenclature; Ornithischia; IGUANODONTIDAE; iguanodons; Lower Cretaceous; *Iguanodon*; *Iguanodon bernissartensis*.

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1. During the period 1822–25 Mantell and his correspondent Cuvier (Cuvier's letter to Mantell, 20 June 1824) were the first to recognise the previously unsuspected existence of gigantic herbivorous terrestrial reptiles of Mesozoic age; this recognition was based on Mantell's discovery in the Wealden (Lower Cretaceous) rocks of Sussex, U.K., of large teeth resembling the much smaller teeth of modern iguanas (see Dean, 1993). However, it was not until 1842 (p. 103) that Owen published the name Dinosauria for three Mesozoic reptiles, *Iguanodon* and *Hylaeosaurus* (herbivores) and *Megalosaurus* (a carnivore).

2. In 1825 Mantell (p. 184) established the genus *Iguanodon* for his herbivore teeth but did not mention any nominal species. He did not specify a type specimen of the genus but noted that the name was derived from the form of the teeth. He described and illustrated (1825, pp. 182–183, pl. 14, figs. 1–7) seven teeth from the sandstone of the Tilgate Forest Beds at Cuckfield, West Sussex. He mentioned also (pp. 184–185) that there were gigantic bones in the same deposits, some doubtless attributable to *Megalosaurus* Buckland, 1824 and others to *Iguanodon*. He considered that the former could be recognised by their similarity to the material described by Buckland (1824, p. 391) from Stonesfield, Oxfordshire, in which locality *Iguanodon* teeth were not known to occur. Therefore, argued Mantell, the other large bones and some vertebrae from the Tilgate Forest Beds, that could not be referred to *Megalosaurus*, could probably be assigned to *Iguanodon*. These bones and vertebrae are not identifiable in the Mantell Collection in the Natural History Museum, London.

3. In 1829 Holl (p. 84) proposed the nominal species *Iguanodon anglicum*, which thus became the type species of *Iguanodon* by subsequent monotypy (Article 69a(i)(1)

of the Code). The species was said to be based on teeth, several limb bones and vertebrae from the ferruginous Cretaceous sandstone of the Tilgate Forest in Sussex, as described by Mantell, but none of the specimens was described, illustrated or specified by its catalogue number. Holl referred to 'Philosophic. Transact. Tom. 115. pl. XIV' (the illustrations of the seven teeth in Mantell's work of 1825). Holl did not select a holotype from among these teeth. Recently Norman (1986, p. 284) corrected *anglicum* to *anglicus* because *Iguanodon* is masculine, and designated the dentary (lower) tooth depicted by Mantell (1825, pl. 14, figs. 1a, 1b) as the lectotype of *I. anglicus*.

4. Norman (1986) tentatively identified his lectotype tooth of *Iguanodon anglicus* Holl, 1829 as no. BMNH 2392 in the Palaeontology Department of the Natural History Museum in London. The tooth appears under that number (not BMNH R 2392 as cited by Norman) in Mantell's own catalogue and subsequently in the Natural History Museum register (after the purchase of the Mantell collection), where the handwritten entry reads 'The tooth of the *Iguanodon* figured as vignette in Mantell's Catal.' However, the identification of this tooth with the figures in Mantell (1825), referred to by Norman, cannot be verified absolutely; there are some differences between them. Lydekker (1888, p. 227), in his cataloguing of tooth no. BMNH 2392, does not mention Mantell (1825) but notes instead that the specimen is figured in Mantell's publications of 1827 (pl. 4, fig. 4 and pl. 17, figs. 6a and 6b) and 1833 (p. 272, figs. 4 and 5), as well as in some later works. An examination of all these figures and of tooth no. BMNH 2392 leads to the conclusion that the figures might be of several different teeth, possibly none of them being 2392. They all represent complete, fully grown dentary (lower) teeth of *Iguanodon*, somewhat worn down at their occlusal surface, but apparently differing in detail. Some are partly encased in rock, others are not; some of the drawings may have been reversed. Much depends upon the accuracy of the artist(s) who drew them.

5. In 1832 von Meyer (p. 110) proposed another nominal species, *Iguanodon mantelli*, again based mainly on Mantell's seven teeth. However, he stated that it was based also on various additional fragments described or mentioned by other workers:

(1) Cuvier (1825, pp. 350–352) had illustrated (pl. 21, figs. 28–33) six unnumbered and unspecified teeth of Mantell's; three of those figures (28–30) represented some of the teeth sent by Mantell to Cuvier while the other three (31–33) were copies of a plate supplied by Mantell from a work that he was intending to publish.

(2) Murchison (1826, pp. 103–104) had mentioned and figured (pl. 15, fig. 9) an incomplete large femur from Headfoldwood Common, near Loxwood, West Sussex, at the western end of the outcrop of the Hastings Sand. He mentioned and figured also (pl. 15, figs. 1–7) a 'lumbar' vertebra, a sacrum, four caudal vertebrae, a rib, and a specimen identified as a false rib or branch of a hyoid, all from northeast of Loxwood. All this material is incomplete, unnumbered and not specified in any way. Murchison wrote of these specimens that it was 'not impossible that some of these bones may have belonged to that animal [*Iguanodon*]'.

(3) Mantell (1827, pp. 71–79) had described (and illustrated in pls. 10–12, 14, 16–18 and 20, legend on pp. 89–92) various unnumbered and unspecified teeth, vertebrae, ribs, a chevron bone, part of a supposed femur, two metatarsals and a 'horn' (actually a thumb spike), all except the chevron being subsequently listed by von Meyer.

6. The nominal species *Iguanodon anglicus* Holl, 1829 and *I. mantelli* von Meyer, 1832, being based in part upon the same material, are subjective synonyms. The species described by von Meyer is much better known than that of Holl, which had been proposed in a relatively obscure publication; in consequence, for more than 150 years *I. anglicus* remained unknown to most authors, and *I. mantelli* was generally regarded as the type species of *Iguanodon* (see, for example, Lydekker, 1888, p. 218). However, both nominal species are clearly indeterminate.

7. The situation was further complicated when the first associated remains of *Iguanodon* in some quantity were found at Maidstone, Kent, in 1834; Mantell's friends bought the specimen for him but the first adequate description was by Owen (1851, pp. 105–118). The specimen is now in the Natural History Museum, London. It still bears its original Mantell catalogue number 3791 but does not appear in the Natural History Museum register, where the number 3791 (although within the block of numbers allocated to the Mantell Collection) is blank. Until recently it was generally regarded, although incorrectly, as the type specimen of *I. mantelli* von Meyer, 1832: first by Hulke (1876, p. 364), then by Dollo (1882, p. 170), Lydekker (1888, p. 219: 'This specimen may be taken as the type of the species'), Woodward & Sherborn (1890, p. 241) and many others. Swinton (1970, p. 208) recorded, without comment, that Lydekker regarded '3791' as the type specimen. Indeed, the Maidstone *Iguanodon* is still displayed as the 'holotype' of *I. mantelli* in the present exhibition in the Natural History Museum, London. The specimen, which is now referred to *Iguanodon atherfieldensis* Hooley, 1925 (see Norman, 1993, pp. 236–237 and para. 9 below), is from a much higher horizon (Kentish Rag = Hythe Beds of the Lower Greensand = Aptian) than that of most other *Iguanodon* specimens from southeast England, the vast majority of which come from various levels in the Wealden; Mantell's teeth, for example, are from the Hauterivian.

8. Mantell's (1825) seven syntype teeth (the lectotype of *I. anglicus*, designated by Norman, 1986, and six paralectotypes) are highly unsatisfactory as type material for the genus *Iguanodon*. The illustrations have been identified with actual specimens only tentatively and there is no evidence of their provenance (except in so far as, if the identifications are correct, some of them were listed by Lydekker in 1888 as being from Cuckfield, West Sussex); it is therefore impossible to determine whether or not they are all from the same locality. Likewise, since all the specimens are isolated teeth, it is uncertain as to whether they belong to the same individual or even to the same species. In any case, the several known species of *Iguanodon* have no features of the teeth by which they might be distinguished one from the other, and these teeth of *I. anglicus* could be conspecific with any of them. In brief, these teeth are indeterminate specifically, and the name *I. anglicus* must be considered a nomen dubium. No other material has ever been referred to the species, nor could that be done. In these circumstances the appropriate course of action is to designate a new type species for the genus, after which the inadequacies of the *I. anglicus* material will be irrelevant.

9. There are two common and sympatric supposedly distinct species of *Iguanodon* in the Weald of southeastern England and in Belgium, *I. bernissartensis* Boulenger in Beneden, 1881 (p. 606) and *I. atherfieldensis* Hooley, 1925 (p. 3); both are represented by almost complete articulated skeletons (many such in the case of *I. bernissartensis*; see De Pauw, 1902, and Norman, 1987, for an account of the 1878 discovery, recovery, preparation and display of specimens in the Institut Royal des Sciences

Naturelles de Belgique, Brussels). The deposits in which they occur abundantly (Bernissart in Belgium, Ockley in Surrey, and the Isle of Wight) are of Barremian to Lower Aptian age, a little younger than the Hauterivian 'Tilgate Grit' of Cuckfield in which *I. anglicus* was found. The existence of two distinct osteological forms at Bernissart had been observed by Boulenger (1881, p. 605); Nopcsa (1915, 1918, 1929) noted that several deposits have yielded what appear to be two species of ornithopod dinosaur and suggested that in each case (including that of *Iguanodon*) the two might actually represent sexual dimorphs of a single biological species, but Norman (1986, p. 362) believed that the status of *I. bernissartensis* and *I. atherfieldensis* cannot be resolved. In these circumstances it seems prudent to choose the senior of the two nominal species, *I. bernissartensis*, as the type species of *Iguanodon*.

10. Beneden (1881, p. 601) referred to 'une vingtaine d'individus de différentes grandeurs ont été mis au jour' from the Bernissart Wealden deposits in the Institut Royal in Brussels. Boulenger (in Beneden, 1881, p. 606) described the anatomy of the pelvis of *Iguanodon* and considered that the greater number of sacral vertebrae (six) in the Bernissart fossils, compared with the five that Owen had demonstrated in *I. mantelli* von Meyer, 1832, merited the establishment of a new species, *I. bernissartensis*. No particular specimens were mentioned. Dollo further described the species in 1882 (p. 177, pl. 9, figs. 3–4) and in a series of 25 additional papers between 1883 and 1923. In more recent times detailed studies have been made by Norman (1980, 1986).

11. Among the 26 skeletons of *Iguanodon bernissartensis* from Bernissart now known, the first virtually complete and articulated specimen (specimen Q; catalogue no. IRSNB 1534) to be mounted and displayed in the Institut Royal in Brussels has traditionally been considered to be the type. This specimen was cited as the holotype by Casier (1960, p. 126, pls. 5, 6, 11; 1978, p. 158, pls. 5, 6, 11) and by Norman (1980, p. 13, figs. 61, 63 65, 67–72; 1986, pp. 366; 1987, p. 71) but, under Article 74b of the Code, it would be the lectotype. De Pauw mounted the skeleton during 1882–1883 and sent a drawing of it to several eminent naturalists (see De Pauw, 1902, p. 24, pl. 6). The specimen was referred to by Dollo (1883a, p. 85) and the drawing was published by De Pauw (in Dollo, 1883a, pl. 5) and it has been almost completely internationally recognised as the type since that time. In a 1925 posthumous publication, Hooley (pp. 11, 51) referred to a further specimen figured by Dollo (1883b, pl. 9) as the 'type-skull'. This is skeleton N, catalogue no. IRSNB 1535 in the Institut Royal, which is less complete and embedded on the right side in matrix (see Casier, 1960, p. 123, pl. 12; 1978, p. 155, pl. 12; and Norman, 1986, p. 366). It was assembled for display in 1905. Hooley's action constitutes a (possibly inadvertent) lectotype designation but to accept it would be destabilising and we now propose that skeleton Q, no. IRSNB 1534 in the Institut Royal des Sciences Naturelles de Belgique, be fixed as the lectotype of *I. bernissartensis*.

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

(1) to use its plenary powers:

(a) to set aside all previous fixations of type species for the nominal genus *Iguanodon* Mantell, 1825 and to designate *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type species;

(b) to set aside all previous fixations of type specimens for the nominal species *Iguanodon bernissartensis* Boulenger in Beneden, 1881 and to designate skeleton Q, catalogue no. IRSNB 1534 in the Institut Royal des Sciences Naturelles de Belgique, Brussels, as the lectotype;

(2) to place on the Official List of Generic Names in Zoology the name *Iguanodon* Mantell, 1825 (gender: masculine), type species by designation in (1)(a) above *Iguanodon bernissartensis* Boulenger in Beneden, 1881;

(3) to place on the Official List of Specific Names in Zoology the name *bernissartensis* Boulenger in Beneden, 1881, as published in the binomen *Iguanodon bernissartensis* and as defined by the lectotype designated in (1)(b) above (specific name of the type species of *Iguanodon* Mantell, 1825).

References

Beneden, P.-J. van. 1881. Sur l'arc pelvien chez les dinosauriens de Bernissart. *Bulletins de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique*, Classe des Sciences, (3)**1**(5): 600–608.

Boulenger, G.A. 1881. *Iguanodon bernissartensis*. Page 606 *in* P.-J. van Beneden, Sur l'arc pelvien chez les dinosauriens de Bernissart. *Bulletins de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique*, Classe des Sciences, (3)**1**(5): 600–608.

Buckland, W. 1824. Notice on the *Megalosaurus* or great fossil lizard of Stonesfield. *Transactions of the Geological Society of London*, (2)**1**(2): 390–396.

Casier, E. 1960, 1978. *Les iguanodons de Bernissart*. 134 pp., 28 pls. (1960); 166 pp., 28 pls. (1978, Ed. 2). Institut Royal des Sciences Naturelles de Belgique, Brussels.

Cuvier, G.L.C.F.D. 1824. Letter to Gideon Mantell, dated 20 June; original in Earth Sciences Library, The Natural History Museum, London. Frequently quoted by Mantell, e.g. in his works cited below: in 1825, pp. 180–181; in 1827, pp. 71–72; and in 1833, pp. 269–271. The excerpts are not always completely identical.

Cuvier, G.L.C.F.D. 1825. *Recherches sur les ossemens fossiles*, Ed. 3, vol. 5, part 2. 547 pp., 33 pls. Dufour & D'Ocagne, Paris & Amsterdam.

Dean, D.R. 1993. Gideon Mantell and the discovery of *Iguandon*. *Modern Geology*, **18**(2): 209–219.

De Pauw, L.F. 1902. *Notes sur les fouilles du charbonnage de Bernissart. Découverte, solidification et montage des iguanodons*. Jumpertz, Etterbeek-Brussels.

Dollo, L. 1882. Première note sur les dinosauriens de Bernissart. *Bulletin du Musée Royal d'Histoire Naturelle de Belgique*, **1**(2): 161–180.

Dollo, L. 1883a. Troisième note sur les dinosauriens de Bernissart. *Bulletin du Musée Royal d'Histoire Naturelle de Belgique*, **2**: 85–120.

Dollo, L. 1883b. Quatrième note sur les dinosauriens de Bernissart. *Bulletin du Musée Royal d'Histoire Naturelle de Belgique*, **2**: 223–248.

Holl, F. 1829. *Handbuch der Petrefactenkunde*, part 1. 115 pp. Hilscher, Dresden.

Hooley, R.W. 1925. On the skeleton of *Iguanodon atherfieldensis* sp. nov., from the Wealden shales of Atherfield (Isle of Wight). *Quarterly Journal of the Geological Society of London*, **81**(1): 1–61.

Hulke, J.W. 1876. Appendix to 'Note on a modified form of dinosaurian ilium, hitherto reputed scapula'. *Quarterly Journal of the Geological Society of London*, **32**: 364–366.

Lydekker, R. 1888. *Catalogue of the fossil Reptilia and Amphibia in the British Museum (Natural History)*, part 1. xxviii, 309 pp. British Museum (Natural History), London.

Mantell, G.A. 1825. Notice on the *Iguanodon*, a newly discovered fossil reptile, from the sandstone of Tilgate Forest, in Sussex. *Philosophical Transactions of the Royal Society*, **115**(1): 179–186.

Mantell, G.A. 1827. *Illustrations of the geology of Sussex: with figures and descriptions of the fossils of Tilgate Forest*. xii, 92 pp., 20 pls. Lupton Relfe, London.

Mantell, G.A. 1833. *The geology of the south-east of England*. xix, 415 pp. Longman, Rees, Orme, Brown, Green & Longman, London.

Meyer, H. von. 1832. *Palaeologica zur Geschichte der Erde und ihrer Geschöpfe*. xii, 560 pp. Schmerber, Frankfurt am Main.

Murchison, R.I. 1826 [not 1829, as printed on title-page]. Geological sketch of the north-western extremity of Sussex, and the adjoining parts of Hants and Surrey. *Transactions of the Geological Society of London*, (2)**2**(9): 97–107.

Nopcsa, Baron F. 1915. Über Geschlechtsunterschiede bei Dinosauriern. *Centralblatt für Mineralogie, Geologie und Paläontologie*, **1915**(13): 385–388.

Nopcsa, Baron F. 1918. Über Dinosaurier. Neues über Geschlechtsunterschiede bei Orthopoden. *Centralblatt für Mineralogie, Geologie und Paläontologie*, **1918**(11-12): 186–198.

Nopcsa, Baron F. 1929. Sexual differences in ornithopodous dinosaurs. *Palaeobiologica*, **2**(4–5): 187–200.

Norman, D.B. 1980. On the ornithischian dinosaur *Iguanodon bernissartensis* from the Lower Cretaceous of Bernissart (Belgium). *Mémoires de l'Institut Royal des Sciences Naturelles de Belgique*, **178**: 1–105.

Norman, D.B. 1986. On the anatomy of *Iguanodon atherfieldensis* (Ornithischia: Ornithopoda). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique, Sciences de la Terre*, **56**: 281–372.

Norman, D.B. 1987. On the history of the discovery of fossils at Bernissart in Belgium. *Archives of Natural History*, **14**(1): 59–75.

Norman, D.B. 1993. Gideon Mantell's 'Mantel-piece': the earliest well-preserved ornithischian dinosaur. *Modern Geology*, **18**(2): 225–245.

Owen, R. 1842. Report on British fossil reptiles, part 2. *Report of the British Association for the Advancement of Science*, **1841**: 60–204.

Owen, R. 1851. *Monograph on the fossil Reptilia of the Cretaceous formations*, part 1. xii, 118 pp. Palaeontographical Society, London.

Swinton, W.E. 1970. *The dinosaurs*. 331 pp., 8 pls. Allen & Unwin, London.

Woodward, A.S. & Sherborn, C.D. 1890. *A catalogue of British fossil Vertebrata*. xxxv, 396 pp. Dulau, London.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comment on the proposed conservation of *Disparalona* Fryer, 1968 (Crustacea, Branchiopoda)
(Case 2990; see BZN **54**: 89–91)

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I oppose Fryer's proposal to set aside priority and conserve the chydorid water flea generic name *Disparalona* Fryer, 1968. This name is threatened by the recent discovery of the true nature of the problematical *Phrixura rectirostris* Müller, 1867, *Phrixura* Müller, 1867 being the senior generic synonym. However, *Disparalona* appears to be a name important to only a few taxonomic specialists who can easily keep track of a change. Fryer presents no evidence that this problem is of any wider urgency for other biologists or ecologists (such as a threat to the name *Daphnia* would engender, for instance). Although, as Fryer notes, the senior name was based on a deformed specimen and is morphologically inappropriate, this is no cause for rejecting it (Articles 18 and 23m of the Code).

Fryer's citation (para. 7 of the application) of Article 23b is hardly applicable because *Disparalona* is not 'long-established', having been proposed only 30 years ago. In my view Fryer has failed to present convincing reasons for upsetting priority in this case.

Comment on the proposed conservation of the specific name of *Papilio sylvanus* Esper, [1777] (currently *Ochlodes venata* or *Augiades sylvanus*; Insecta, Lepidoptera)
(Case 3046; see BZN **54**: 231–235)

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I can well understand that Dr Devyatkin has found nomenclatural problems in the course of his work on the *Ochlodes venata*-group of Palaearctic butterflies. My colleagues and I were not happy with using the name *venata* in our book on the butterflies of Turkey (Hesselbarth, van Ooorschot & Wagener, 1995, pp. 177 178) and I think that the proposal put forward by Dr Devyatkin, to use the name *sylvanus* Esper, [1777], is the best solution to the problem of a name for the Large Skipper.

Following Dr Devyatkin's finding that *O. venata* (Bremer & Grey, 1853) and *O. sylvanus* (Esper, [1777]) represent distinct species (paras. 6 and 7 of the application), I support the proposed conservation of the name *sylvanus* for the taxon recently, but possibly incorrectly, known as *O. venata faunus* (Turati, 1905).

In relation to para. 2, I should like to point out that pl. 36 in Esper's work, which includes the figure of *Papilio sylvanus* and from which the name is available (Article 12b(7) of the Code), was published in 1777, and the corresponding description in 1779 (see Heppner, 1981), and that the text of *Augiades sylvanus* by Mabille (in Seitz, vol. 1, pp. 1–347) was published in 1909 (not 1906).

To the works cited as using the specific name *sylvanus* (paras. 2 and 5 of the application) may be added the widely known handbooks of Staudinger (1901, p. 115), Spuler (1902, pp. 72–73), Rebel (1909, pp. 79 80), Eckstein (1913, p. 115), Lampert (1923, p. 108) and Lempke (1936, p. 312).

Additional references

Eckstein, K. 1913. *Die Schmetterlinge Deutschlands mit besonderer Berücksichtigung ihrer Biologie*, Th. 1, 1. Lutz, Stuttgart.

Hesselbarth, G., van Ooorschot, H. & Wagener, S. 1995. *Die Tagfalter der Türkei*, vol. 1.

Lampert, K. 1923. *Die Grossschmetterlinge und Raupen Mitteleuropas mit besonderer Berücksichtigung der biologischen Verhältnisse*. Schreiber, Munich.

Lempke, B.J. 1936. Catalogus der Nederlandsche Macrolepidoptera. 1. *Tijdschrift voor Entomologie*, **79**.

Rebel, H. 1909. *Fr. Berge's Schmetterlingsbuch nach dem gegenwärtigen Stande der Lepidopterologie neu bearbeitet*. 9. Augflage. Schweizerbartsche, Stuttgart.

Spuler, A. 1902. *Die Schmetterlinge Europas*, vol. 1. Schweizerbartsche, Stuttgart.

Staudinger, O. 1901. Famil. Papilionidae - Hepialidae. *In* Staudinger, O. & Rebel, H., *Catalog der Lepidopteren des palaearctischen Faunengebietes*. 1. Friedländer, Berlin.

Comment on the proposed conservation of the names *Hydrosaurus gouldii* Gray, 1838 and *Varanus panoptes* Storr, 1980 (Reptilia, Squamata) by the designation of a neotype for *Hydrosaurus gouldii*

(Case 3042; see BZN **54**: 95–99, 249–250).

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1. We are writing in support of the purpose of the application, published in BZN **54**: 95–99 (June 1997) by Prof Robert Sprackland, Prof Hobart Smith and Dr Peter Strimple, to maintain existing usage of the names *Varanus gouldii* (Gray, 1838) and *V. panoptes* Storr, 1980, threatened by the discovery by Böhme (1991) that the putative lectotype of *Hydrosaurus gouldii* Gray, 1838 is conspecific with *V. panoptes* and not with the species to which the name *V. gouldii* has usually been applied.

2. We offer evidence, not presented in the original application, that the lectotype designated by Mertens (1958) may not have been part of the original type series and hence that the designation was not valid, and further that Gray's original concept of the species *H. gouldii* may have included, or been based upon, the species to which the name is usually applied. We also argue that the neotype proposed for *H. gouldii* by Sprackland et al. is inappropriate and we nominate a new specimen to serve as neotype.

3. We also point out that both of the names proposed for conservation are potentially threatened by two unused senior synonyms, both of which are made available only by the provision of measurements. *Tupinambis endrachtensis* was

described by Péron (1807, p. 118) from Bernier Island in Shark Bay, Western Australia, collected by the Baudin Expedition. Douglas & Ride (1962), Cogger, Cameron & Cogger (1983) and Böhme (1991), the only authors who have mentioned the name, recommended it be treated as either a nomen nudum or a nomen oblitum (in the sense of the 1961 and 1964 editions of the Code). Although two specimens were apparently collected on Bernier Island by the expedition (Baudin, 1974), neither is now extant (Roux-Esteve, 1979; Brygoo, 1987). However, the identity of the species is beyond doubt, as *V. gouldii* is the only lizard present on Bernier Island of the size given by Péron (see Storr & Harold, 1978; Storr, 1980). Consequently, and without a ruling to the contrary by the Commission, it is almost certainly an available name and remains a potential threat to the long-established name *Varanus gouldii*. The name *Hydrosaurus ocellarius* appeared in a catalogue of reptiles in the museum of the Asiatic Society of Bengal (Theobald, 1868, p. 21). The name was ascribed to Blyth, and was associated with a stuffed specimen ('in bad state') from an unspecified locality in Australia, collected by Dr J. MacClelland. Prior to the recognition of *V. panoptes* as a distinct species, *Hydrosaurus ocellarius* was synonymised with *V. gouldii* by Mertens (1942), on the basis of the locality, original generic assignment and species name. Mertens (1963) later regarded the name as a nomen dubium. Cogger et al. (1983) subsequently noted Mertens's conclusion while retaining it in the synonymy of *Varanus gouldii*. We have not been able to locate the holotype to confirm the identity of the species. However, two sources of circumstantial evidence suggest that *Hydrosaurus ocellarius* is a senior synonym of *Varanus panoptes*. Firstly, the specific epithet better fits *V. panoptes* than *V. gouldii* (indeed, the specific epithet *panoptes* also refers to the numerous distinct 'ocelli' on the dorsum of the species). Secondly, a single specimen of *Varanus panoptes* (BMNH 68.4.3.58), supposedly from Pegu, Burma (well beyond the range of the species) and donated by Theobald, is present in the Natural History Museum, London. Although this specimen, preserved in alcohol, cannot be the type (despite closely approximating the measurements given for Blyth's specimen), it does indicate that material of the species was available on the Indian subcontinent at the time.

4. Gray's (1838) description of *Hydrosaurus gouldii* is brief ('... with two yellow streaks on the sides of the neck; scales over the orbits small, flat'), and he neither nominated type specimens nor specified where the type material had been deposited, although he had stated in the introduction to his paper that the new species he described were 'either in the National Collection or Museum of the Army Medical Board at Chatham' (Gray, 1838, p. 275). The description fits both *V. gouldii* and *V. panoptes* in the senses in which both names have been subsequently applied.

5. The application of the name *gouldii* to the species, though not explicitly stated in the original description, is presumed to honour the ornithologist John Gould, one of Gray's peers. At the time of the description, Gould was Ornithologist at the Museum of the Zoological Society of London, which has since been disbanded. However, there is no basis for assuming that Gould was directly connected with the species named in his honour. Gray frequently named species after his colleagues at the British Museum and other institutions.

6. As John Gray was employed at the Natural History Museum, London (then part of the British Museum), it is likely that any specimens of *V. gouldii* or

V. panoptes in that collection prior to 1838 could be considered type specimens. The other possible depository of the types, the Museum of the Army Medical Board at Chatham, is no longer extant.

7. In the first catalogue of the lizards in the British Museum, Gray (1845) listed 15 specimens of *V. gouldii* (as *Monitor gouldi*) in that collection. Of these, six (h-j, Port Essington, Capt. Chambers; k, Port Essington, Mr Gould; l-m, Adelaide, C.D. Fortnum) cannot be part of the type series, as they could not have been collected until 1840 or later (see Musgrave, 1932; Calaby, 1974). Of the remaining nine specimens, only four can be clearly identified in the second catalogue of lizards in the collection (Boulenger, 1885), viz. Gray's specimens a-d, half-grown, stuffed, north-west Australia, Gould collection (= b-e of Boulenger). Significantly, neither Gray or Boulenger identified any of these or any other specimens of *V. gouldii* in the British Museum collection as part of the type series of that species.

8. One of these four specimens a-d, BMNH 1946.9.7.61 (formerly identified as 1.17a, and corresponding to Gray's specimen a) was nominated as lectotype of *H. gouldii* by Mertens (1958), who based his identification of the specimen as part of the type series on the basis of a pencilled annotation 'Feb. 1837' on the underside of the board on which the specimen is mounted. This is the specimen subsequently identified by Böhme (1991) as *V. panoptes*, a species known predominantly from northern Australia and parts of the south-western interior of the continent.

9. However, John Gould and his collector John Gilbert did not arrive in Australia until September 1838, and neither collected outside south-western and south-eastern Australia until Gilbert travelled to Port Essington in January 1840 (see Whittell, 1954).

10. From 1836 to 1839, prior to leaving England for Australia, Gould had received material from Australia, describing a number of bird species (see, for example, Gould, 1836). However, all of the species described by Gould prior to his Australian expedition were either explicitly noted to have been collected in southern Australia (Swan River, Murrumbidgee River, or Tasmania) or are of species found in this region, sometimes exclusively. Prior to 1838, Gould did not describe any species of bird from Australian material that was found exclusively within the range of *V. panoptes*.

11. Gould is known to have offered a collection of seven specimens, representing five species of reptiles from Australia, to the Zoological Society of London in February 1837 (Datta, 1997, p. 50), and it may be from this collection that the lectotype is derived. However, the locality and identification subsequently attributed to the lectotype do not concord with the possible sources of Gould's collection at that time. Further, other reptile specimens which bear the same pencilled date on their mounts were not described by Gray until 1845, suggesting that they did not arrive at the British Museum until much later than 1837. Hence, there must remain some considerable doubt that the pencilled date on the specimen represents the date of their acquisition by the British Museum. There is no other evidence that the specimen formed part of Gray's type series for *H. gouldii*.

12. One of us (G.M.S.) has recently searched through the donations books for the British Museum for the period 1823 to 1839 and found only two donations of Australian material from Gould, both of birds only (February 25, 1837; April 8,

1837). However, an entry on January 27, 1838, six months prior to the publication (July 1838) of the description of *Hydrosaurus gouldii*, reads: 'A specimen of *Monitor Gouldii* Gray and *Trachydosaurus rugosus* Gray from New Holland. From Walter Buchanan esq.'. This entry is also annotated: 'Reg Jan 19 1838 No. 230 231', resulting in a registration number in the then recently-commenced system of 38.1.19.230–231 for these two specimens. Buchanan donated several lots of specimens to the British Museum, either explicitly from the locality 'Swan River', or which could only have come from south-western Australia, in which the Swan River settlement was located. The varanid specimen was not cited by Gray (1845) seven years after its acquisition by the British Museum, nor is it now able to be identified in the collections of the Natural History Museum, London. However, it does provide evidence that Gray's concept of the species, prior to its description, could have included the species now known as *V. gouldii*. Two members of the *V. gouldii* complex occur in the vicinity of the Swan River, *V. gouldii* and *V. rosenbergi* Mertens, 1957.

13. To designate a neotype for *Hydrosaurus gouldii* is clearly the most suitable way to stabilise application of the name, and we agree with the sentiment expressed by Sprackland et al. in their application that the neotype should be in the collection worked on by Gray and in which the former supposed lectotype was located. However, we believe that the specimen proposed as neotype by Sprackland and his colleagues is inappropriate. *Varanus gouldii* occurs across much of the Australian continent and shows considerable geographically-based variation (see Mertens, 1958; Houston, 1978; Storr, 1980). It is likely that when this variation is formally analysed, the species will be further subdivided. The neotype proposed for *H. gouldii* has no specific location associated with it, and is an old, discoloured, stuffed and mounted specimen not suitable for accurate measurement or for loan to specialists. As there has been, until recently, no well-preserved material of this species with precise locality data in the collection of the Natural History Museum, London, we have arranged, through the courtesy of Dr Graham Thompson of Edith Cowan University and Mr Laurie Smith of the Western Australian Museum, and following consultation with Prof Sprackland, for a preserved subadult *V. gouldii* (BMNH 1997.1, formerly Western Australian Museum R131792) to be lodged in the Natural History Museum to serve as the neotype. This specimen, from Karrakatta, Perth, Western Australia, collected by G. Thompson on 29 September 1997, is from a population that is well-studied ecologically (see Thompson, 1992, 1994, 1995, 1996a, 1996b; Thompson & Withers, 1992; Thompson, Withers & Thompson, 1992) and is concordant with the locality for Walter Buchanan's specimen that was available to Gray prior to the publication of the description. A manuscript thoroughly describing and illustrating this specimen is in preparation.

14. We therefore propose that the specimen put forward as the neotype of *Varanus gouldii* Gray, 1838 by Sprackland, Smith & Strimple in their application (BZN **54**: 98) should be replaced by specimen no. BMNH 1997.1 from Karrakatta, Perth, Western Australia and now in the Natural History Museum, London. This proposal has been welcomed by the authors of the application.

15. We further propose that the suppression of the specific names of *Tupinambis endrachtensis* Péron, 1807 and *Hydrosaurus ocellarius* Blyth, 1868 should be added to the original application.

16. The International Commission on Zoological Nomenclature is asked:
(1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
   (a) *endrachtensis* Péron, 1807, as published in the binomen *Tupinambis endrachtensis*;
   (b) *ocellarius* Blyth, 1868, as published in the binomen *Hydrosaurus ocellarius*;
(2) to place on the Official Index of Rejected and Invalid Names in Zoology the following names:
   (a) *endrachtensis* Péron, 1807, as published in the binomen *Tupinambis endrachtensis*, as suppressed in (1)(a) above;
   (b) *ocellarius* Blyth, 1868, as published in the binomen *Hydrosaurus ocellarius*, as suppressed in (1)(b) above.

Additional references

Baudin, N. 1974. *The Journal of Post Captain Nicolas Baudin, Commander-in-Chief of the Corvettes* Géographe *and* Naturaliste. *Assigned by order of the Government to a voyage of discovery*. (Translated by C. Cornell). 609 pp. Libraries Board South Australia, Adelaide.

Blyth, [E.]. 1868. *Hydrosaurus ocellarius*. P. 21 *in* Theobald, W., Catalogue of reptiles in the Museum of the Asiatic Society of Bengal. *Journal of the Asiatic Society of Bengal*, **37**(2) (extra number): 1–88

Boulenger, G.A. 1885. *Catalogue of the lizards in the British Museum (Natural History)*, vol. 2. xiii, 497 pp. British Museum (Natural History), London.

Brygoo, E.-R. 1987. Les types de Varanidés (Reptiles, Sauriens) du Muséum national d'Histoire naturelle. Catalogue critique. *Bulletin du Muséum National d'Histoire Naturelle*, Paris, (4,A9)**2** Suppl.: 21–38.

Calaby, J.H. 1974. Historical background. Pp. 7–19 *in* Frith, H.J. & Calaby, J.H. (Eds.), Fauna survey of the Port Essington district, Cobourg Peninsula, Northern Territory of Australia. *CSIRO Division of Wildlife Research Technical Paper*, **28**: 1–208.

Datta, A. 1997. *John Gould in Australia. Letters and drawings*. 502 pp. Miegunyah Press, Carlton South.

Douglas, A.M. & Ride, W.D.L. 1962. Reptiles. Pp. 113–119 *in* Fraser, A.J. (Ed.), The results of an expedition to Bernier and Dorre Islands Shark Bay, Western Australia in July, 1959. *Western Australia Fisheries Department Fauna Bulletin*, **2**: 1–131.

Gould, J. 1836. [Specimens exhibited of numerous birds, chiefly from the Society's collections]. *Proceedings of the Zoological Society of London*, **1836**: 5–7.

Gray, J.E. 1845. *Catalogue of the specimens of lizards in the collection of the British Museum*. xxvii, 289 pp. Newman, London.

Houston, T.F. 1978. *Dragon lizards and goannas of South Australia*. 84 pp. South Australian Museum, Adelaide.

Mertens, R. 1942. Die Familie der Warane. *Abhandlungen der Senckenbergischen Gesellschaft*, **462**, **465–466**: 1–391.

Mertens, R. 1963. Liste der rezenten Amphibien und Reptilien; Helodermatidae, Varanidae, Lanthanotidae. *Das Tierreich*, **79**: 1–26.

Musgrave, A. 1932. *Bibliography of Australian entomology 1775 1930 with biographical notes on authors and collectors*. 380 pp. Royal Zoological Society of New South Wales, Sydney.

Péron, F. 1807. *Voyage de découvertes aux Terres Australes, exécuté par ordre de Sa Majesté l'Empereur et Roi, sur les Corvettes le Géographe, le Naturaliste, et la Goélette le Casuarina, pendant les années 1800, 1801, 1802, 1803 et 1804*, vol. I. 496 pp. Imprimerie Impériale, Paris.

Roux-Esteve, R. 1979. Liste des amphibiens et reptiles des collections du Muséum National d'Histoire Naturelle de Paris, récoltés par Lesueur (1778–1846). *Bulletin Trimestriel de la Société Géologique de Normandie et des Amis du Muséum du Havre*, **66**(3): 25–29.

Theobald, W. 1868. Catalogue of reptiles in the Museum of the Asiatic Society of Bengal. *Journal of the Asiatic Society of Bengal*, **37**(2) (extra number): 1–88.

Thompson, G.G. 1992. Daily distance travelled and foraging areas of *Varanus gouldii* (Reptilia: Varanidae) in an urban environment. *Wildlife Research*, **19**: 743–753.

Thompson, G.G. 1994. Activity area during the breeding season of *Varanus gouldii* (Reptilia: Varanidae) in an urban environment. *Wildlife Research*, **21**: 633–641.

Thompson, G.G. 1995. Foraging patterns and behaviours, body postures and movement speed for goannas, *Varanus gouldii* (Reptilia: Varanidae), in a semi-urban environment. *Journal of the Royal Society of Western Australia*, **78**: 107–114.

Thompson, G.G. 1996a. Notes on the diet of *Varanus gouldii* in a semi-urban environment. *Western Australian Naturalist*, **21**: 49–54.

Thompson, G.G. 1996b. Goannas in the graveyard. *Nature Australia*, **25**(7): 30–37.

Thompson, G.G. & Withers, P.C. 1992. Effects of body mass and temperature on standard metabolic rates for two Australian varanid lizards (*Varanus gouldii* and *Varanus panoptes*). *Copeia*, **1992**: 343–350.

Thompson, G.G., Withers, P.C. & Thompson, S.A. 1992. The combat ritual of two monitor lizards, *Varanus caudolineatus* and *Varanus gouldii*. *Western Australian Naturalist*, **19**: 21–25.

Whittell, H.M. 1954. *The literature of Australian birds: a history and a bibliography of Australian ornithology*. Paterson Brokensha Pty Ltd., Perth.

Comments on the proposed conservation of the specific name of *Varanus teriae* Sprackland, 1991 (Reptilia, Squamata)

(Case 3043; see BZN **54**: 100–103, 250–251; **55**: 37–39)

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We should like to argue against the application by Prof Robert Sprackland, Prof Hobart Smith and Dr Peter Strimple, published in BZN **54**: 100–103 (June 1997).

1. Wells & Wellington (1985a) described *Odatria keithhornei* based on the holotype QM (= Queensland Museum) J31566 from Buthen Buthen, Nesbit River, Cape York Peninsula, Queensland, collected by Gregory Czechura in August 1978. They 'diagnosed' their new species only by referring to Czechura's (1980) paper (which had recorded emerald monitors from Australia for the first time): 'A member of the *Odatria prasinus* complex, believed confined to Cape York Peninsula, Queensland and readily identified by referring to the excellent diagnostic and descriptive data in Czechura (1980). The holotype of *Odatria keithhornei* is also figured by Czechura (1980: Plate 1)' and concluded with the etymological derivation: 'Named for Mr. Keith Horne, herpetologist of Sydney, New South Wales'.

2. In June 1987 the President of the Australian Society of Herpetologists proposed the suppression for nomenclatural purposes (Case 2531, BZN **44**: 116–121) of three works by Richard W. Wells and C. Ross Wellington (Wells & Wellington, 1984, 1985a, 1985b) — one of them (Wells & Wellington, 1985a) including the description of *Odatria keithhornei*. Reasons for the proposed suppression included the facts that Wells & Wellington (1984, 1985a, 1985b) published their concepts in their own journal independent of any expert opinion and, it was stated, largely without any solid taxonomic basis. Several comments concerning this application appeared in the

Bulletin from 1987 to 1990. Eventually the Commission decided (see BZN **48**: 337–338, December 1991) 'that it will not vote on this application, which it considers to be outside its remit', and pointed out 'that the provisions of the Code apply to all names directly and indirectly involved in this case'. *Odatria keithhornei* Wells & Wellington, 1985 is thus an available name.

3. Unaware of the article by Wells & Wellington (1985a) and their description of *Odatria keithhornei*, Sprackland (1991) described the same varanid species as *Varanus teriae*. His description was also based on QMJ31566 as holotype, thus rendering *V. teriae* a junior objective synonym of *Odatria keithhornei*, currently cited as *Varanus* (*Euprepiosaurus*) *keithhornei* (see Böhme, 1988; Sprackland, 1991; and Ziegler & Böhme, 1997).

4. The Commission also concluded in its 1991 decision on the 1987 case (BZN **48**: 337–338) 'that the aim of the application would be best achieved by leaving the issues to specialists to be settled through usage, any submissions to the Commission being confined to names rather than to works'. This means that the name *V. teriae* has to fall under the synonymy of *V. keithhornei*.

5. Covacevich & Couper (1994) recorded the synonymy of *Odatria keithhornei* and *Varanus teriae* but did not indicate which name was valid. The name *V. keithhornei* with its junior synonym *V. teriae* can be found in Bennett (1996 [wrongly spelled as '*Varanus keithhorni*'] and 1998 — two of the most recent general references dealing with monitor lizards on a world-wide scale), Kirschner, Müller & Seufer (1996), Lemm (1997), Ziegler & Böhme (1997), Böhme (1997) and Böhme & Ziegler (1998). Additionally, in our systematic work (Ziegler & Böhme, 1997), in which we cite all valid subspecies, species and subgenera of the genus *Varanus*, we have drawn attention to the consequences of the works by Wells & Wellington (1984, 1985a) concerning varanid systematics. We have extensively discussed (pp. 15–16, 158–160) the nomenclatural situation of *V. keithhornei* in the light of the 1991 Commission decision. The purely taxonomic and nomenclatural work of Böhme (1997), an updated and revised checklist complementing the famous 'Tierreich' list by Robert Mertens (1963), lists *V. keithhornei* with its junior synonym *V. teriae*.

6. Finally, a particularly weak argument of Sprackland and colleagues (para. 3 of their application) is that the lizard 'features in documentation relating to conservation of protected species ... and is listed under the name *Varanus teriae* in the *World checklist of threatened amphibians and reptiles* (1993, p. 50) and in the most recent publication (1996) issued by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)'. We would like to emphasize that conservation and legislative authorities are users rather than creators of taxonomic progress and possible nomenclatural consequences. Because of this they should rely on scientific reasoning and not vice versa.

7. From the reasons outlined above we request that the application 3043 be formally rejected.

Additional references

Bennett, D. 1996. *Warane der Welt — Welt der Warane*. 383 pp. Edition Chimaira, Frankfurt am Main.

Bennett, D. 1998. *Monitor lizards: natural history, biology and husbandry*. 352 pp. Edition Chimaira, Frankfurt am Main.

Böhme, W. 1997. *Robert Mertens' Systematik und Klassifikation der Warane: Aktualisierung seiner 1942er Monographie und eine revidierte Checkliste. Addendum to the reprint of Mertens, R. (1942): Die Familie der Warane (Varanidae). Erster bis dritter Teil.* Pp. i–xxii. Edition Chimaira, Frankfurt am Main.

Böhme, W. & Ziegler, T. 1998. *Varanus melinus* sp. n., ein neuer Waran aus der *V. indicus*-Gruppe von den Molukken, Indonesien. *Herpetofauna*, **19**(111): 26–34.

Lemm, J. 1997. Reptile dreamtime. *Reptiles*, **5**(9): 32–45.

Mertens, R. 1963. Liste der rezenten Amphibien und Reptilien: Helodermatidae, Varanidae, Lanthanotidae. *Das Tierreich*, **79**: 1–26.

Ziegler, T. & Böhme, W. 1997. Genitalstrukturen und Paarungsbiologie bei squamaten Reptilien, speziell den *Platynota*, mit Bemerkungen zur Systematik. *Mertensiella*, **8**: 1–207.

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I agree with most of the facts given in Case 3043 on the taxonomic history of *Varanus keithhornei* (Wells & Wellington, 1985). However, for the reasons given below, I disagree with the application.

1. Alleged difficulties by the senior author (Sprackland) in obtaining the original description of *Odatria keithhornei* are not grounds for suppression of the name. The publications of Wells & Wellington (1984, 1985a, 1985b) were held by a number of major institutions and the Commission Secretariat, so obtaining a copy was by no means an insurmountable problem. Many older descriptions were published in rare, obscure and little known publications, which in my view present far greater accessibility problems.

2. It is unfortunate that Sprackland (1991) later described the same taxon as Wells & Wellington (1985a) under a different name, but these events have occurred many times throughout history and I see no reason why this case should be different from others. In crude terms, *teriae* is a junior synonym and that is it. A perusal of Cogger, Cameron & Cogger (1983) shows that junior synonyms (invalid names) have often been frequently used (particularly in earlier times, when for one reason or another an author failed to be aware of earlier and often obscure publications), only to be replaced later. The Australian herpetological community has had no trouble adapting to newly-realised correct names brought to their attention. This has been reflected in the benchmark publications of Cogger (1975, 1979, 1986, 1992) in which frequently used names are discarded with great regularity. Use of previously little known or unheard-of names by a single author such as Cogger often precedes their almost immediate and wider acceptance by the herpetological community.

3. Sprackland could not have been unaware that the (1985a, 1985b) Wells & Wellington publications were taxonomic in nature and that they described many new nominal species, or at least purported to. I therefore submit that he should have made further inquiries about these publications and obtained copies before describing a new Australian taxon.

4. I agree that for the past six years common usage has favored *Varanus teriae* over *V. keithhornei*, as noted by the authors of the application and others. However I believe that the name *keithhornei* is now gaining wider acceptance, particularly since publication and circulation of Covacevich & Couper (1994), and without adverse Commission intervention it will become the preferred and generally used name by

most authors within a relatively short period, since it is the senior synonym. The three most recent publications listing the species all gave its name as *keithhornei* and noted that this is a senior synonym of *teriae* (see Bennett, 1996, 1998; and Lemm, 1997). All three publications have very high circulation, the last appearing in the most widely circulated herpetological periodical in the world, the magazine *Reptiles*. Lemm (1997) listed 'a relatively recent herp find, the canopy monitor (*Varanus keithhornei* — formerly *teriae*)'. General acceptance of a newly-realised correct name over an incorrect one has occurred many times in recent history (certainly in Australian herpetology) and this case should not be treated any differently.

5. The authors of Case 3043 cite Bennett's (1995) use of *teriae* as evidence in favor of their common usage argument. They appear to have overlooked the fact that the same author's subsequent publication, Bennett (1996), correctly used *keithhornei*, citing *teriae* as a junior synonym. Bennett (1998) again used the name *keithhornei*. Contention by Sprackland and colleagues (see BZN **54**: 250 51) that 'nor has the name *keithhornei* ever been recorded' is patently incorrect as demonstrated by Bennett (1996, 1998) and Lemm (1997); at least one of these publications appeared well before Case 3043.

6. The argument by Sprackland et. al (BZN **54**: 250) that some authors may inadvertently think *V. keithhornei* and *V. teriae* are separate species lacks credibility. The same argument could be applied to all other taxa for which synonyms have ever existed, and the Commission could be called on to suppress each and every invalid name.

7. The need to consult an original description when writing about a species or recording new information about biology, taxonomy or other matters is clearly not always necessary. A statement (see BZN **54**: 251) by the authors of Case 3043 that 'Sprackland's (1991) work must be consulted as the original study giving a full description ...' has no relevance as to what the taxon should be called. Taxonomic revisions and analyses are common in zoology, particularly when the original description may be brief, old or inadequate, but such studies do not give the later authors the right to rename species in violation of well established nomenclatural rules.

8. Suppression of *Odatria keithhornei* Wells & Wellington, 1985 in line with Case 3043 would cause confusion for herpetologists both within and outside Australia. Most now recognise the species as *Varanus keithhornei*, and that it was also formerly known as *V. teriae*. I propose that Case 3043 be rejected.

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Additional references

Cogger, H.G. 1975, 1979, 1986, 1992. *Reptiles and amphibians of Australia*, (1975), 584 pp. Reed, Sydney; Ed. 2 (1979), 608 pp. Reed, Sydney; Ed. 4 (1986), xxi, 688 pp., Reed, Sydney; Ed. 5 (1992), 775 pp., Cornell University Press, Comstock.

Cogger, H.G., Cameron, E.E. & Cogger, H.M. 1983. *Zoological catalogue of Australia*, vol. 1 (Amphibia and Reptilia). vi, 313 pp. Australian Government Publishing Service, Canberra.

Comment on the proposed conservation of the specific name of *Diemenia atra* Macleay, 1884 (currently *Demansia atra*; Reptilia, Serpentes)
(Case 2920; see BZN **54**: 31–34).

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I am writing to oppose the proposal by Prof Hobart Smith and Dr Van Wallach. They argue that the change of name of the Black Whip snake from *Demansia atra* to *D. vestigiata* would threaten nomenclatural stability for five reasons related to the long history and frequent usage of the former name, the desirability of stability in the nomenclature of venomous snakes, and the relative condition of the type material and accuracy of type localities. I disagree with several of their arguments, which do not take into account the unusually complex nomenclatural history and difficult taxonomy of the genus.

1. Smith & Wallach argue that herpetologists have long been familiar with the name *Demansia atra*, and indeed it has been frequently used for the species in question. However, for over a century, from Krefft (1869) to Cogger (1971), the species was most commonly known as *Demansia* (or *Diemenia*) *olivacea* (Gray, 1842). That name was transferred to a different, much smaller species by Cogger & Lindner (1974). The latter species had been known as *D. ornaticeps* for the same period. Smith & Wallach do not make it clear that the name *olivacea* was changed in its application from one species to another. During this period, specimens now referred to the larger species, the Black Whip snake, were also variously identified as *D. psammophis* (see Krefft, 1869; Boulenger, 1896); and *D. psammophis* (or *olivacea*) *papuensis* (see Slater, 1956, 1968; Klemmer, 1963). North-eastern Queensland populations of the Black Whip snake were treated as varietally distinct (*D. olivacea* var. *atra*) from populations elsewhere in Australia by Kinghorn (1929) and Worrell (1952). The works cited above include the major standard Australian and international reference works and checklists of the time. Early venom studies (Kellaway, 1934) also used the name *D. olivacea* for the species.

The resurrection of *Diemenia atra* from synonymy by Cogger & Lindner (1974) was necessary because the name *D. olivacea* was demonstrated to be applied to the wrong species. However, because of uncertainty about the identity of New Guinea populations of *Demansia*, the name *D. atra* was 'arbitrarily' used (see Cogger & Lindner, 1974, p. 93) for Australian populations, and *D. papuensis* (Macleay, 1877) was applied to New Guinea populations. Cogger & Lindner did not report examining type specimens. New Guinea populations have since been referred to on several occasions (Storr, 1978; Parker, 1982; Wells & Wellington, 1985; Wilson & Knowles, 1988; Cogger, 1992, 1996; Ehmann, 1992) as *D. papuensis*.

A taxonomic complication was revealed by Storr (1978), who demonstrated that there were two species of Black Whip snakes in north-western Australia, to which he applied the names *D. atra* and *D. papuensis melaena*. Subsequent workers (Longmore, 1986; Wilson & Knowles, 1988; Cogger, 1992; Ehmann, 1992) have been uncertain as to the differentiation of these two species in north-eastern Australia, and consequently the extent of their distribution. Storr (1978) also reidentified the

only Black Whip snake examined by Cogger & Lindner (1974) as *D. papuensis melaena*.

A recent study (Shea, in press) of variation in Black Whip snakes throughout their range has revealed that the two species are widespread with broadly overlapping distributions across northern Australia, and that all previous Australian studies for which the specimen basis is identifiable were based on composite series of the two species. These include both taxonomic accounts (Thomson, 1935) and ecological studies (Shine, 1980). Moreover, and providing further potential confusion, there is no good evidence that *D. papuensis* occurs in Papua New Guinea since all New Guinean specimens appear unequivocally referrable to the species that is the subject of this case.

It is apparent that there is both little stability in the names applied to the Black Whip snakes and great confusion as to the identification of the different species of Black Whip snakes. The argument that the name *D. atra* has been consistently applied to a single species is spurious; the resurrection of *D. atra* by Cogger & Lindner (1974) was based on a single incorrectly identified specimen, and an arbitrary, unsupported and ultimately incorrect decision to recognise Australian and New Guinean populations as distinct.

2. Against this background of uncertain and inconsistent application of names, Ingram (1990) demonstrated that the name *Hoplocephalus vestigiatus* De Vis, 1884 antedated *D. atra* Macleay, 1884. Smith & Wallach maintain that *H. vestigiatus* remained in the synonymy of *Austrelaps superbus* until 1990, when Ingram resurrected it. However, its identity with the species previously known as *Demansia olivacea* and then as *Demansia atra* was clearly noted by Mack & Gunn (1953), Covacevich (1971) and Cogger, Cameron & Cogger (1983). Smith & Wallach further argue that since its resurrection, *D. vestigiata* has been used as the available name for the species concerned on only three occasions (although they give the full reference to only two of these). However, since 1990, the name has also been used in papers on ecology (Covacevich, Roberts & McKinna, 1994), vertebrate survey reports (Williams, Pearson & Burnett, 1993a, 1993b), field guides (Covacevich & Wilson, 1995), popular books (Healey, 1997) and international checklists (Golay, 1993). In contrast, since 1990 the name *D. atra* has been used for the species in seven publications (Cogger, 1992, 1996; Ehmann, 1992; Mirtschin & Davis, 1992; Shea, Shine & Covacevich, 1993; Swan, 1995; O'Shea, 1996). Hence, there is no clear preference for one name over the other in recent literature.

3. Smith & Wallach argue that the type material of *D. atra* is in better condition than that of *H. vestigiatus* and that the type locality is more precise. They did not examine the types concerned, and base their argument on the literature. The type specimens of both names are illustrated by Shea (in press). The holotype of *H. vestigiatus*, although having suffered some damage, is still easily identifiable as belonging to the same species as that of *D. atra*. Indeed, discounting points of damage to the tail, neck and throat (which do not hamper identification), the holotype is in a similar state of preservation as the lectotype of *D. atra*. Despite the lack of a type locality, there is no doubt of the species to which the name *H. vestigiata* applies: a species widespread across northern Australia and in southern New Guinea (not just northern Queensland, contra Smith & Wallach).

4. Notwithstanding the above discussion, it is clear that the present situation where two names are currently applied to one species is undesirable. However, the

instability and confusion as to the application of names and identity of species is a reflection of a lack of previous detailed taxonomic studies using large samples (Shea, in press). Given that the first thorough analysis and discussion of the taxonomic and nomenclatural issues is about to appear, I believe that the application of strict priority in this case will best facilitate future stability of nomenclature of the species, and appreciation of its complex and historically unstable nomenclature. Consequently, I urge the Commission to reject the application by Smith & Wallach to suppress the name *vestigiatus* for the purposes of the Principle of Priority.

Additional references

Cogger, H.G. 1971. The venomous snakes of Australia and Melanesia. Pp. 35–77 *in* Bücherl, W. & Buckley, E. (Eds.), *Venomous animals and their venoms*, vol. 2 (Venomous vertebrates). Academic Press, New York.

Cogger, H.G. 1996. *Reptiles and amphibians of Australia*, Ed. 6. 796 pp. Reed Books, Port Melbourne.

Cogger, H.G., Cameron, E.E. & Cogger, H.M. 1983. *Zoological catalogue of Australia*, vol. 1 (Amphibia & Reptilia). vi, 313 pp. Australian Government Publishing Service, Canberra.

Covacevich, J.A., Roberts, L. & McKinna, I. 1994. Male combat in the black whip snake, *Demansia vestigiata*. *Memoirs of the Queensland Museum*, **37**(1): 52.

Covacevich, J.A. & Wilson, S. 1995. Land snakes. Pp. 191–216 *in* Ryan, M. (Ed.), *Wildlife of Greater Brisbane*. Queensland Museum, Brisbane.

Golay, P. 1993. *Demansia* Gray, 1842. Pp. 124–127 *in* Golay, P. (Ed.), *Endoglyphs and other major venomous snakes of the world. A checklist*. Azemiops S.A., Geneva.

Healey, J. (Ed.). 1997. *Encyclopedia of Australian wildlife*. 624 pp. Reader's Digest, Sydney.

Kellaway, C.H. 1934. The venoms of some of the small and rare Australian venomous snakes. *Medical Journal of Australia*, **2**: 74–78.

Klemmer, K. 1963. Liste der rezenten Giftschlangen: Elapidae, Hydropheidae, Viperidae und Crotalidae. Pp. 255 464 *in*: *Die Giftschlangen der Erde*. N.G. Elwert, Universitäts- und Verlagsbuchhandlung, Marburg.

Krefft, G. 1869. *The snakes of Australia; an illustrated and descriptive catalogue of all the known species*. xxv, 100 pp. Government Printer, Sydney.

Macleay, W. 1877. The Ophidians of the Chevert Expedition. *Proceedings of the Linnean Society of New South Wales*, **2**(1): 33–41.

Mirtschin, P. & Davis, R. 1992. *Snakes of Australia. Dangerous and harmless*. 216 pp. Hill of Content, Melbourne.

O'Shea, M. 1996. *A guide to the snakes of Papua New Guinea*. xii, 239 pp. Independent Publishing, Port Moresby.

Parker, F. 1982. The snakes of Western Province. *Wildlife in Papua New Guinea*, **82/1**: 1–78.

Shea, G.M. In press. Geographic variation in scalation and size of the Black Whip snakes (Squamata: Elapidae: *Demansia vestigiata* complex): evidence for two broadly sympatric species. *The Beagle. Records of the Museums and Art Galleries of the Northern Territory*, **14**.

Shea, G.M., Shine, R. & Covacevich, J.C. 1993. Family Elapidae. Pp. 295 309 *in* Glasby, C.J., Ross, G.J.B. & Beesley, P.L. (Eds.), *Fauna of Australia*, vol. 2A (Amphibia and Reptilia). Australian Government Publishing Service, Canberra.

Shine, R. 1980. Ecology of eastern Australian whipsnakes of the genus *Demansia*. *Journal of Herpetology*, **14**(4): 381–389.

Slater, K.R. 1956. *A guide to the dangerous snakes of Papua*. 18 pp. Government Printer, New Guinea.

Slater, K.R. 1968. *A guide to the dangerous snakes of Papua*, Ed. 2. 22 pp. Government Printer, New Guinea.

Storr, G.M. 1978. Whip snakes (*Demansia*, Elapidae) of Western Australia. *Records of the Western Australian Museum*, **6**(3): 287–301.

Swan, G. 1995. *A photographic guide to snakes and other reptiles of Australia*. 144 pp. New Holland, Frenchs Forest.

Thomson, D.F. 1935. Preliminary notes on a collection of snakes from Cape York Peninsula. *Proceedings of the Zoological Society of London*, **1935**: 723–731.

Wells, R.W. & Wellington, C.R. 1985. A classification of the Amphibia and Reptilia of Australia. *Australian Journal of Herpetology Supplementary Series*, **1**: 1–61.

Williams, S., Pearson, R. & Burnett, S. 1993a. Survey of the vertebrate fauna of the Dotswood area, north Queensland. *Memoirs of the Queensland Museum*, **33**(1): 361–378.

Williams, S., Pearson, R. & Burnett, S. 1993b. Vertebrate fauna of three mountain tops in the Townsville region, north Queensland: Mount Cleveland, Mount Elliot and Mount Halifax. *Memoirs of the Queensland Museum*, **33**(1): 379–387.

Comment on the proposed conservation of the name *Loris* E. Geoffroy Saint-Hilaire, 1796 (Mammalia, Primates)

(Case 2953; see BZN **51**: 332–335; **52**: 193)

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Our application to conserve the generic name *Loris* E. Geoffroy Saint-Hilaire, 1796 for the slender loris, co-authored also by the late John E. Hill, was published in December 1994. We recorded that the type species of the genus is *Lemur tardigradus* Linnaeus, 1758. One of us (C.P.G.) had seen the stuffed specimen of *L. tardigradus* in the Linnaeus House in Uppsala and we accepted (para. 4) this as original type material. Wallin (1991, p. 71 and 1994, p. 47), however, recorded the Uppsala specimen as 'Not type' and has noted (in litt., September 1997) that it was a post-Linnaeus addition to the Linnaean collection.

The species *L. tardigradus* was originally described (under the heading '*Simia acauda* ...') by Linnaeus (1746, reprinted in Linnaeus, 1749) on a complete specimen but Linnaeus recorded (1746, p. 3; 1749, p. 279) that the specimen in the Uppsala Museum at the time was a skull ('Hujus tantum Cranium in museo habetur'). Linnaeus's (1758) description of *L. tardigradus* referred to Ray (1693), Seba (1734), Linnaeus's (1748) *Systema Naturae* Ed. 6, and Linnaeus's (1754) *Museum Adolphi Friderici*. The last included a reference to the work of 1749 (p. 279). The specimen currently in the Zoological Museum in Uppsala is a complete, dry specimen and Löwegren (1952, p. 327) produced evidence that this had been an exchange for the original skull by C.P. Thunberg (Linnaeus's successor at the University of Uppsala). The skull may still be present in the osteological collections of the Museum but there are no means of indentifying it.

In 1911 Oldfield Thomas noted that 'The specimen [of *Lemur tardigradus*] referred to in *Mus*[eum] *Ad*[olphi] *Frid*[erici] and redescribed in the 10th edition [of *Systema Naturae*] is still in the Stockholm Museum, and, as Dr Lönnberg informs me, is the Cinghalese Slender Loris'. Dr Sven Kullander (Swedish Museum of Natural History, Stockholm) has located three Linnaean specimens of *L. tardigradus* in Stockholm. One of these, catalogue no. NRM 532011, is particularly well documented (including an original label from Ulriksdal Castle where the Crown Prince Adolf Friderik's collection was kept) and we now designate this as the lectotype. There is a photograph of the specimen on the Website (Linnaeus server) in Stockholm (http://linnaeus.nrm.se/zool).

In our application (para. 1) we cited *Bradypus didactylus* Linnaeus, 1758, the two-toed sloth, as the type species of *Choloepus* Illiger, 1811 by subsequent designation by Gray (1827). The name *Choloepus* was placed on the Official List in Opinion 91 (October 1926), and that of the type species *B. didactylus* was placed on the Official List in Direction 22 (November 1955). However, the method of type designation was recorded (Direction 24, November 1955) as subsequent designation by Miller & Rehn (1901), a designation many years later than that of Gray (1827). We propose that the entry on the Official List should be emended.

The International Commission on Zoological Nomenclature is accordingly asked:

(1) to emend the entry on the Official List of Generic Names in Zoology for *Choloepus* Illiger, 1811 to record *Bradypus didactylus* Linnaeus, 1758 as the type species by subsequent designation by Gray (1827).

Additional references

Linnaeus, C. 1746. *Museum Adolpho-Fridericianum*. Dissertation (respondent L. Balk). 50 pp., 2 pls. Holmiae.

Linnaeus, C. 1749. Museum principis. Pp. 277–326 *in*: *Amoenitates academicae*, vol. 1. Holmiae & Lipsiae.

Löwegren, Y. 1952. *Naturaliekabinett i Sverige under 1700-talet. Ett bidrag till zoologiens historia*. 407 pp. Lynchnos-Bibliotek, Lund.

Wallin, L. 1991. *Catalogue of type specimens*. 4. Linnaean specimens. 233 pp. University Zoological Museum, Uppsala. (Revised version 3 published in 1994).

Comment on the proposed conservation of usage of 15 mammal specific names based on wild species which are antedated by or contemporary with those based on domestic animals

(Case 3010; see BZN **53**: 28–37, 125, 192–200, 286–288; **54**: 119–129, 189; **55**: 43–46)

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My interests are systematics, evolution and ecology (for all of which the fashionable word is biodiversity) and I am involved in the study of animals such as the highly distinctive feral goats of Mallorca (Altaba, 1996; in press). I have examined carefully the application and the comments that have followed, and I support the proposals.

The wild ancestors of domestic animals are an immensely valuable component of global biodiversity. Unfortunately, the current status of such wild populations is often critical, and some are already extinct, either effectively exterminated or lost through extensive hybridization with domestic stocks. Thus, conservation actions should be implemented in order to preserve the resource and heritage they represent. In this sense, Case 3010 highlights a nomenclatural problem that may have serious consequences: when a name based on a domestic animal is applied to its wild ancestor the latter may be removed from protected species lists.

The solution proposed by Gentry, Clutton-Brock & Groves intends to solve this problem by keeping the use of names based on wild animals for truly wild (i.e. not feral, which are of domestic decent) populations. This procedure requires placing on the Official List a total of 15 specific names which are antedated or contemporary with others based on domestic animals. In reply to questions as to whether earlier names based on domestic stock are to be maintained (comments by Schodde, Bock, Gardner and Handley in BZN **54**: 123–127), the authors of the application have made it clear that their proposal is not intended to affect the naming of domestic animals (BZN **54**: 127–129). Indeed, it is aimed at maintaining stability in nomenclature, because most authors have adopted the first available name based on the wild species as valid for that wild taxon. Several authors have pointed out that there are practical advantages in having a recognised and distinct name for the wild ancestor and for its domestic derivate, irrespective of debate about their 'conspecificity'; this is true in the fields of archaeology, ethology and conservation biology.

Additional references

Altaba, C.R. 1996. Counting species names. *Nature*, **380**: 488–489.

Altaba, C.R. (In press). *La diversitat biològica: una perspectiva des de Mallorca*. Moll, Palma de Mallorca.

OPINION 1895

Riisea and *riisei* Duchassaing & Michelotti, 1860 (Cnidaria, Anthozoa): conserved as the correct original spellings of generic and specific names based on the surname Riise

Keywords. Nomenclature; taxonomy; Anthozoa; corals; *Riisea*; *Carijoa riisei*; *Thalamophyllia riisei*.

Ruling

(1) Under the plenary powers it is hereby ruled that:
  (a) the correct original spelling of the generic name *Rusea* Duchassaing & Michelotti, 1860 is *Riisea*;
  (b) for the following specific names:
    (i) the correct original spelling of *rusei* Duchassaing & Michelotti, 1860, as published in the binomen *Clavularia rusei*, is *riisei*;
    (ii) the correct original spelling of *rusei* Duchassaing & Michelotti, 1860, as published in the binomen *Desmophyllum rusei*, is *riisei*.

(2) The name *Riisea* Duchassaing & Michelotti, 1860 (gender: feminine), type species by monotypy *Riisea paniculata* Duchassaing & Michelotti, 1860, is hereby placed on the Official List of Generic Names in Zoology (spelling emended by the ruling in (1)(a) above).

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *paniculata* Duchassaing & Michelotti, 1860, as published in the binomen *Rusea* (sic) *paniculata* (specific name of the type species of *Riisea* Duchassaing & Michelotti, 1860);
  (b) *riisei* Duchassaing & Michelotti, 1960, as published in the binomen *Clavularia rusei* (spelling emended by the ruling in (1)(b)(i) above);
  (c) *riisei* Duchassaing & Michelotti, 1960, as published in the binomen *Desmophyllum rusei* (spelling emended by the ruling in (1)(b)(ii) above).

(4) The name *Rusea* Duchassaing & Michelotti, 1860 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (ruled in (1)(a) above to be an incorrect original spelling of *Riisea*).

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *rusei* Duchassaing & Michelotti, 1860, as published in the binomen *Clavularia rusei* (ruled in (1)(b)(i) above to be an incorrect original spelling of *riisei*);
  (b) *rusei* Duchassaing & Michelotti, 1860, as published in the binomen *Desmophyllum rusei* (ruled in (1)(b)(ii) above to be an incorrect original spelling of *riisei*).

History of Case 2940

An application to conserve *Riisea* and the specific names of *Clavularia riisei* and *Thalamophyllia riisei*, all of Duchassaing & Michelotti (1860), as the correct original

spellings of names first published as *Rusea*, *C. rusei* and *T. rusei* was received from Dr Frederick M. Bayer (*National Museum of Natural History, Washington, D.C., U.S.A.*) and Dr Manfred Grasshoff (*Forschungsinstitut und Museum Senckenberg, Frankfurt am Main, Germany*) on 13 June 1994. After correspondence the case was published in BZN **54**: 11–13 (March 1997). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1997 the members of the Commission were invited to vote on the proposals published in BZN **54**: 12–13. At the close of the voting period on 1 March 1998 the votes were as follows:

Affirmative votes — 21: Bock, Bouchet, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Song

Negative votes — 1: Štys.

No votes were received from Dupuis and Schuster.

Cogger and Ride were on leave of absence.

Original references

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

paniculata, *Riisea*, Duchassaing & Michelotti, 1860, *Memorie della Reale Accademia delle Scienze di Torino*, (2)**19**: 294. (Also issued as a separate, p. 18).

Riisea Duchassaing & Michelotti, 1860, *Memorie della Reale Accademia delle Scienze di Torino*, (2)**19**: 294 (Also issued as a separate, p. 18) (incorrectly spelled as *Rusea*).

riisei, *Clavularia*, Duchassaing & Michelotti, 1960, *Memorie della Reale Accademia delle Scienze di Torino*, (2)**19**: 310 (Also issued as a separate, p. 34) (incorrectly spelled as *rusei*).

riisei, *Desmophyllum*, Duchassaing & Michelotti, 1960, *Memorie della Reale Accademia delle Scienze di Torino*, (2)**19**: 337 (Also issued as a separate, p. 61) (incorrectly spelled as *rusei*).

Rusea Duchassaing & Michelotti, 1860, *Memorie della Reale Accademia delle Scienze di Torino*, (2)**19**: 294 (Also issued as a separate, p. 18) (an incorrect original spelling of *Riisea*).

rusei, *Clavularia*, Duchassaing & Michelotti, 1860, *Memorie della Reale Accademia delle Scienze di Torino*, (2)**19**: 310 (Also issued as a separate, p. 34) (an incorrect original spelling of *riisei*).

rusei, *Desmophyllum*, Duchassaing & Michelotti, 1860, *Memorie della Reale Accademia delle Scienze di Torino*, (2)**19**: 337 (Also issued as a separate, p. 61) (an incorrect original spelling of *riisei*).

OPINION 1896

Galba Schrank, 1803 (Mollusca, Gastropoda): *Buccinum truncatulum* Müller, 1774 designated as the type species

Keywords. Nomenclature; taxonomy; Gastropoda; LYMNAEIDAE; *Galba*; *Galba truncatula*; parasitology.

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Galba* Schrank, 1803 are hereby set aside and *Buccinum truncatulum* Müller, 1774 is designated as the type species.

(2) The name *Galba* Schrank, 1803 (gender: feminine), type species by designation under the plenary powers in (1) above *Buccinum truncatulum* Müller, 1774, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *truncatulum* Müller, 1774, as published in the binomen *Buccinum truncatulum* (specific name of the type species of *Galba* Schrank, 1803), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Truncatuliana* Servain, 1881 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (a junior objective synonym of *Galba* Schrank, 1803).

History of Case 2939

An application for the designation of *Buccinum truncatulum* Müller, 1774 as the type species of *Galba* Schrank, 1803 was received from Prof Ya.I. Starobogatov (*Zoological Institute, Russian Academy of Sciences, St Petersburg, Russia*) on 3 June 1994. After correspondence the case was published in BZN **54**: 19–21 (March 1997). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1997 the members of the Commission were invited to vote on the proposals published in BZN **54**: 20. At the close of the voting period on 1 March 1998 the votes were as follows:

Affirmative votes — 22: Bock, Bouchet, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Song, Štys

Negative votes — none.

No votes were received from Dupuis and Schuster.

Cogger and Ride were on leave of absence.

Original references

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

Galba Schrank, 1803, *Fauna Boica. Durchgedachte Geschichte der in Baiern einheimischen und zahmen Thiere*, Band 3, Heft 2, p. 262.

Truncatuliana Servain, 1881, *Histoire malacologique du lac Balaton en Hongrie*, p. 63.

truncatulum, *Buccinum*, Müller, 1774, *Vermium terrestrium et fluviatilium, seu animalium infusoriorum, helminthicorum et testaceorum, non marinorum, succincta historia*, vol. 2, p. 130.

OPINION 1897

Glomeris Latreille, 1802 (Diplopoda), *Armadillo* Latreille, 1802, *Armadillidium* Brandt in Brandt & Ratzeburg, [1831] and *Armadillo vulgaris* Latreille, 1804 (currently *Armadillidium vulgare*) (Crustacea, Isopoda): generic and specific names conserved

Keywords. Nomenclature; taxonomy; Diplopoda; Isopoda; GLOMERIDAE; ARMADILLIDAE; ARMADILLIDIIDAE; millipedes; woodlice; *Glomeris*; *Armadillo*; *Armadillidium*; *Armadillidium vulgare*; Europe; North Africa; western Asia.

Ruling

(1) Under the plenary powers:
  (a) all previous fixations of type species for the nominal genus *Armadillo* Latreille, 1802 are hereby set aside and *Armadillo officinalis* Duméril, 1816 is designated as the type species;
  (b) the following names are hereby suppressed:
    (i) the generic name *Armadillo* Cuvier, 1792, and all uses of the name *Armadillo* prior to the publication of *Armadillo* Latreille, 1802, for the purposes of both the Principle of Priority and the Principle of Homonymy;
    (ii) the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
      (A) *armadillo* Linnaeus, 1758, as published in the binomen *Oniscus armadillo*;
      (B) *variegatus* Villers, 1789, as published in the binomen *Oniscus variegatus*;
      (C) *cinereus* Zenker in Panzer, 1799, as published in the binomen *Oniscus cinereus*.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Glomeris* Latreille, 1802 (gender: feminine), type species by subsequent designation by Jeekel (1971) *Oniscus pustulatus* Fabricius, 1781;
  (b) *Armadillo* Latreille, 1802 (gender: masculine), type species by designation in (1)(a) above *Armadillo officinalis* Duméril, 1816;
  (c) *Armadillidium* Brandt in Brandt & Ratzeburg, [1831] (gender: neuter), type species by subsequent designation by Fowler (1912) *Armadillidium commutatum* Brandt in Brandt & Ratzeburg, [1831] (a junior subjective synonym of *Armadillo vulgaris* Latreille, 1804).

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *pustulatus* Fabricius, 1781, as published in the binomen *Oniscus pustulatus* (specific name of the type species of *Glomeris* Latreille, 1802);
  (b) *officinalis* Duméril, 1816, as published in the binomen *Armadillo officinalis* (specific name of the type species of *Armadillo* Latreille, 1802);
  (c) *vulgaris* Latreille, 1804, as published in the binomen *Armadillo vulgaris* (senior subjective synonym of *Armadillidium commutatum* Brandt in

Brandt & Ratzeburg, [1831], the type species of *Armadillidium* Brandt in Brandt & Ratzeburg, [1831]).

(4) The following names are hereby placed on the Official List of Family-Group Names in Zoology:
   (a) ARMADILLIDAE Brandt, [1831] (type genus *Armadillo* Latreille, 1802);
   (b) ARMADILLIDIIDAE Brandt, 1833 (type genus *Armadillidium* Brandt, [1831]).

(5) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
   (a) *Armadillo* Cuvier, 1792, as suppressed in (1)(b)(i) above;
   (b) *Orthonus* Miers, [1878] (a junior objective synonym of *Armadillo* Latreille, 1802).

(6) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
   (a) *armadillo* Linnaeus, 1758, as published in the binomen *Oniscus armadillo* and as suppressed in (1)(b)(ii)(A) above;
   (b) *variegatus* Villers, 1789, as published in the binomen *Oniscus variegatus* and as suppressed in (1)(b)(ii)(B) above;
   (c) *cinereus* Zenker in Panzer, 1799, as published in the binomen *Oniscus cinereus* and as suppressed in (1)(b)(ii)(C) above;
   (d) *globator* Cuvier, 1792, as published in the binomen *Oniscus globator* (a junior homonym of *Oniscus globator* Pallas, 1772).

History of Case 2909

An application for the conservation of the generic names *Glomeris* Latreille, 1802 and *Armadillidium* Brandt in Brandt & Ratzeburg, [1831] and the specific name of *Armadillo vulgaris* Latreille, 1804, and for a ruling on the status of the generic name *Armadillo* Latreille, 1802, was received from Dr Pekka T. Lehtinen (*Zoological Museum, University of Turku, Turku, Finland*) and Prof Lipke B. Holthuis (*Nationaal Natuurhistorisch Museum, Leiden, The Netherlands*) on 1 November 1993. After correspondence the case was published in BZN **52**: 236–244 (September 1995). Notice of the case was sent to appropriate journals.

Comments in support of the conservation of the name *Armadillo* Latreille, 1802 from three members of the Nomenclature Committee of The Crustacean Society (Dr Marcos Tavares, *Universidade Santa Ursula, Rio de Janeiro, Brazil*; Prof Gary C.B. Poore, *Museum of Victoria, Abbotsford, Victoria, Australia*; and Dr A.B. Williams, *NOAA/NMFS Smithsonian Institution, Washington, D.C., U.S.A.*) were published in BZN **53**: 120 122 (June 1996). A reply by Dr P.T. Lehtinen to the comments was published in BZN **53**: 277–278 (December 1996).

It was noted on the voting paper that the application had been presented in three sections. The first section sought the conservation of the generic names *Glomeris* Latreille, 1802 (Diplopoda, family GLOMERIDAE Brandt, 1833) and *Armadillidium* Brandt in Brandt & Ratzeburg, [1831] and, by suppression of the unused specific name of *Oniscus armadillo* Linnaeus, 1758, the conservation of the specific name of *Armadillo vulgaris* Latreille, 1804 (Crustacea, Isopoda, family ARMADILLIDIIDAE Brandt, 1833). This section was common ground to both authors and was submitted jointly. The second section, which advocated the adoption of *Pentheus* C.L. Koch, [1841] in place of *Armadillo* Latreille, 1802 (Crustacea, Isopoda, family

ARMADILLIDAE Brandt in Brandt & Ratzeburg, [1831]) was submitted by Dr P.T. Lehtinen. The final part, an alternative which sought the conservation of *Armadillo* Latreille, was by Prof L.B. Holthuis.

Cuvier (1792) used the name *Armadillo* for a diplopod genus. This had remained unused, whilst *Glomeris* had consistently been used for the genus. Jeekel's (1971) type species designation rendered *Glomeris* a junior objective synonym of *Armadillo* Cuvier but he strongly advised the continued usage of *Glomeris*. This was followed by Hoffmann (1979; para. 8 of the application), who cited Jeekel. The suppression of *Armadillo* Cuvier was proposed to maintain the usage of *Glomeris*.

In 1802 Latreille used the name *Armadillo* for an isopod, citing *Oniscus armadillo* Linnaeus. He did not mention Cuvier and clearly indicated that it was a new genus. As noted in para. 9, *Armadillo* Latreille must be considered a new name. As such it is a junior homonym of *Armadillo* Cuvier.

Latreille (1804) included in *Armadillo* the nominal species *A. vulgaris*, which was probably a renaming (to avoid tautonymy) of *O. armadillo*. Duméril (1816) also used *Armadillo* for an isopod genus and included *vulgaris* and the new taxon *A. officinalis*. Brandt ([1831]) retained *Armadillo* for the single species *officinalis* and placed *vulgaris* in the new genus *Armadillidium*. This taxonomic arrangement, although resulting in nomenclature which is incorrect according to modern rules, has been followed by all subsequent authors, who continued to use both generic names and the family names ARMADILLIDAE and ARMADILLIDIIDAE without confusion. Budde-Lund (1904) designated *officinalis* Duméril, 1816 as the type species of *Armadillo*, a designation which was invalid (since *officinalis* was not mentioned by Latreille) but which reflected the sense in which *Armadillo* had been used since the very early 19th century. *Pentheus* C.L. Koch, [1841] was the first available junior synonym of *Armadillo* Latreille as used since Brandt, [1831].

The case was offered for a ruling by means of two votes. Vote (1) related to the conservation, proposed by both applicants, of the generic names *Glomeris* Latreille, 1802 and *Armadillidium* Brandt in Brandt & Ratzeburg, [1831], and of the specific name of *Armadillo vulgaris* Latreille, 1804 (items (1)(b)(i) (iii), (2)(a)–(b), (3)(a)–(b), (4), (5)(a) and (6)(a)–(d) in para. 13 on BZN **52**: 241). Vote (2) was for either:

Proposal A - the suppression for priority but not homonymy of the name *Armadillo* Cuvier, 1792 and replacement of *Armadillo* Latreille, 1802 by *Pentheus* C.L. Koch, [1841], as proposed by Dr Lehtinen (items (1)(a), (2)(c), (3)(c) and (5)(b) in para. 13 on BZN **52**: 241); or:

Proposal B - the total suppression of *Armadillo* Cuvier and the conservation of *Armadillo* Latreille with the designation under the plenary powers of *Armadillo officinalis* Duméril, 1816 as the type species, in accordance with usage, as proposed by Prof Holthuis (items (1)(a)–(b), (2)(b), (3)(b), (4)(a) and (5)(b) in para. 15 on BZN **52**: 242).

Decision of the Commission

On 1 December 1997 the members of the Commission were invited to vote. At the close of the voting period on 1 March 1998 the votes were as follows:

Vote 1. Affirmative votes – 22: Bock, Bouchet, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Song, Štys

Negative votes — none.

Vote 2. *Proposal A* — 3: Lehtinen, Papp, Savage

Proposal B — 19: Bock, Bouchet, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Patterson, Song and Štys.

No votes were received from Dupuis and Schuster.

Cogger and Ride were on leave of absence.

Voting for Proposal (2)(B), Heppell commented: 'I agree that the solution proposed by Holthuis is the better one to resolve the nomenclatural problems surrounding *Armadillo* Latreille, but I believe that some general issues raised in this case have never been seriously addressed by the Commission. It does seem unscientific to place the conserved name *Armadillo* on the Official List still attached to its original date and authorship 'Latreille, 1802'. As pointed out by Lehtinen, *Armadillo* Latreille was based on the species now known as *Armadillidium vulgare*, and the proposed type species *Armadillo officinalis* was not originally included and possibly not known to Latreille. We are manifestly dealing with what is actually a new nominal genus defined not by any description or nomenclatural act by Latreille. I suggest that in such cases, which are not infrequent among applications to the Commission, the conserved name should be attributed to [ICZN, Opinion No., date], rather than to the original author and date. This would draw attention to the revised concept in which the original composition of the taxon is no longer relevant, and for which reference to the original author and date is misleading'. Voting for Proposal (2)(A), Lehtinen commented: 'The name *Armadillo* Latreille originally referred to the genus that is now known as *Armadillidium*. Wide use of *Armadillo* in a different sense is not in accord with the Code, and involves the abandonment of basic principles of nomenclature. No current species of *Armadillo* was originally included in the genus'. Savage commented: 'Since 'armadillo' is the common name of an entire group of mammals, use of the name *Pentheus* C.L. Koch, [1841] seems logical'.

Editorial note. Commissioners Heppell and Lehtinen have commented adversely on the fact that *Armadillo*, as defined by the type species *Armadillo officinalis* Duméril, 1816 designated in the present ruling, is different from the original concept of the nominal genus by Latreille (1802), and yet the latter's authorship and date are being retained. It is indeed the case that this procedure is an artificial device, but it is one which has been used for some 70 years in order to maintain entrenched usage (and authorship and date attribution) of names. The citation of a name (in this case *Armadillo*) with the authorship of the Commission and the date of the ruling would have considerable disadvantages: apart from being a new procedure (and thus inconsistent with all the many precedents), the late date would not signify the precedence of the name, and the name would have to be explicitly protected from previously published synonyms and homonyms. Zoologists might reasonably object to the Commission becoming the 'author' of a name which had actually been published and adopted long ago.

Two methods have been used by the Commission to stabilize nomenclature in cases where a name has been accepted in a sense different from that of the original author. In cases where the difference is relatively minor, having regard to the taxonomy of the relevant period, an appropriate name-bearing type has been designated under the plenary powers but the authorship and date have been retained. In cases where the taxonomic change has been more radical, the later application of the name has been

conserved by the suppression of all previous uses for purposes of both priority and homonymy. In the present instance a possible course would have been to conserve *Armadillo* with the authorship of Brandt ([1831]), but the name has never been cited in that way and it was not proposed that it should be.

Original references

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

ARMADILLIDAE Brandt, [1831], *in* Brandt & Ratzeburg, *Medizinische Zoologie oder getreue Darstellung und Beschreibung der Thiere die in der Arzneimittellehre in Betracht kommen, in systematischer Folge herausgegeben*, vol. 2, p. 80.

ARMADILLIDIIDAE Brandt, 1833, *Bulletin de la Société Impériale des Naturalistes de Moscou*, **6**: 184.

Armadillidium Brandt, [1831], *in* Brandt & Ratzeburg, *Medizinische Zoologie oder getreue Darstellung und Beschreibung der Thiere die in der Arzneimittellehre in Betracht kommen, in systematischer Folge herausgegeben*, vol. 2, p. 81.

Armadillo Cuvier, 1792, *Journal d'Histoire Naturelle* (Paris), **2**(13): 27.

Armadillo Latreille, 1802, *Histoire naturelle, générale et particulière des crustacés et des insectes*, vol. 3, p. 43.

armadillo, *Oniscus*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 637.

cinereus, *Oniscus*, Zenker in Panzer, 1799, *Fauna insectorum Germanicae initia, oder Deutschlands Insecten* ... Heft 62, no. 22.

globator, *Oniscus*, Cuvier, 1792, *Journal d'Histoire Naturelle* (Paris), **2**(13): 24.

Glomeris Latreille, 1802, *Histoire naturelle, générale et particulière des crustacés et des insectes*, vol. 3, p. 44.

officinalis, *Armadillo*, Duméril, 1816, *Dictionnaire des Sciences Naturelles*, Ed. 2, vol. 3, p. 117.

Orthonus Miers, [1878], *Proceedings of the Zoological Society of London*, **1877**(43): 664.

pustulatus, *Oniscus*, Fabricius, 1781, *Species insectorum* ..., vol. 1, p. 379.

variegatus, *Oniscus*, Villers, 1789, *Caroli Linnaei entomologia, faunae Suecicae descriptionibus aucta*, vol. 4, p. 188.

vulgaris, *Armadillo*, Latreille, 1804, *Histoire naturelle, générale et particulière des crustacés et des insectes*, vol. 7, p. 47.

The following is the reference for the designation of *Oniscus pustulatus* Fabricius, 1781 as the type species of the nominal genus *Glomeris* Latreille, 1802:

Jeekel, C.A.W. 1971. *Monografieën van de Nederlandse Emtomologische Vereniging*, **5**: 14.

The following is the reference for the designation of *Armadillidium commutatum* Brandt in Brandt & Ratzeburg, [1831] (a junior subjective synonym of *Armadillo vulgaris* Latreille, 1804) as the type species of the nominal genus *Armadillidium* Brandt in Brandt & Ratzeburg, [1831]:

Fowler, H.W. 1912. *Report of the New Jersey State Museum*, **1911**: 225.

OPINION 1898

Metaphycus Mercet, 1917 (Insecta, Hymenoptera): given precedence over *Aenasioidea* Girault, 1911

Keywords. Nomenclature; taxonomy; Hymenoptera; CHALCIDOIDEA; ENCYRTIDAE; parasitic wasps; *Metaphycus*.

Ruling

(1) Under the plenary powers the generic name *Metaphycus* Mercet, 1917 is hereby given precedence over *Aenasioidea* Girault, 1911 whenever the two names are considered to be synonyms.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Metaphycus* Mercet, 1917 (gender: masculine), type species by monotypy *Aphycus zebratus* Mercet, 1917, with the endorsement that it is to be given precedence over *Aenasioidea* Girault, 1911 whenever the two names are considered to be synonyms;

(b) *Aenasioidea* Girault, 1911 (gender: feminine), type species by monotypy *Aenasioidea latiscapus* Girault, 1911, with the endorsement that it is not to be given priority over *Metaphycus* Mercet, 1917 whenever the two names are considered to be synonyms.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *zebratus* Mercet, 1917, as published in the binomen *Aphycus zebratus* (specific name of the type species of *Metaphycus* Mercet, 1917);

(b) *latiscapus* Girault, 1911, as published in the binomen *Aenasioidea latiscapus* Girault, 1911 (specific name of the type species of *Aenasioidea* Girault, 1911).

History of Case 2975

An application for the conservation of the generic name *Metaphycus* Mercet, 1917 by giving it precedence over *Aenasioidea* Girault, 1911 was received from Dr John S. Noyes (*The Natural History Museum, London, U.K.*) and Dr James B. Woolley (*Texas A & M University, Texas, U.S.A.*) on 25 January 1995. After correspondence the case was published in BZN **52**: 313–315 (December 1995). Notice of the case was sent to appropriate journals.

A comment in support from Dr Zdenek Bouček (*The Natural History Museum, London, U.K.*), Dr John LaSalle & Dr Andrew Polaszek (*International Institute of Entomology, c/o The Natural History Museum, London, U.K.*) was published in BZN **54**: 105–106 (June 1997).

Decision of the Commission

On 1 December 1997 the members of the Commission were invited to vote on the proposals published in BZN **52**: 314. At the close of the voting period on 1 March 1998 the votes were as follows:

Affirmative votes — 20: Bock, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Song

Negative votes — 2: Bouchet and Štys.

No votes were received from Dupuis and Schuster.

Cogger and Ride were on leave of absence.

Original references

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

Aenasioidea Girault, 1911, *Canadian Entomologist*, **43**(5): 171.

latiscapus, *Aenasioidea*, Girault, 1911, *Canadian Entomologist*, **43**(5): 173.

Metaphycus Mercet, 1917, *Boletín de la Real Sociedad Española de Historia Natural*, **17**(2): 138.

zebratus, *Aphycus*, Mercet, 1917, *Boletín de la Real Sociedad Española de Historia Natural*, **17**(2): 138.

The following is the reference for the designation of the lectotype of *Aenasioidea latiscapus* Girault, 1911:

Frison, T.H. 1927. *Bulletin of the Illinois State Natural History Survey*, **16**: 217.

OPINION 1899

Meristella Hall, 1859 (Brachiopoda): *Atrypa laevis* Vanuxem, 1842 designated as the type species

Keywords. Nomenclature; taxonomy; Brachiopoda; Lower Devonian; *Meristella*; *Meristella laevis*.

Ruling

(1) Under the plenary powers all fixations of type species for the nominal genus *Meristella* Hall, 1859 prior to the designation by Miller (1889) of *Atrypa laevis* Vanuxem, 1842 are hereby set aside.

(2) The name *Meristella* Hall, 1859 (gender: feminine), type species by subsequent designation by Miller (1889) *Atrypa laevis* Vanuxem, 1842, as ruled in (1) above, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *laevis* Vanuxem, 1842, as published in the binomen *Atrypa laevis* (specific name of the type species of *Meristella* Hall, 1859), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 3003

An application for the designation of *Atrypa laevis* Vanuxem, 1842 as the type species of *Meristella* Hall, 1859 was received from Dr F. Alvarez (*Universidad de Oviedo, Oviedo, Spain*) on 13 November 1995. After correspondence the case was published in BZN **53**: 182–183 (September 1996). Notice of the case was sent to appropriate journals.

Comments in support from Prof A.J. Boucot (*Oregon State University, Corvallis, Oregon, U.S.A.*), from Dr C.H.C. Brunton (*The Natural History Museum, London, U.K.*) and from Prof A.D. Wright (*Queen's University of Belfast, Belfast, Northern Ireland, U.K.*) were published in BZN **54**: 50–51 (March 1997).

A further comment in support from Dr Sandra J. Carlson (*University of California, Davis, California, U.S.A.*) was published in BZN **54**: 104 (June 1997).

Decision of the Commission

On 10 September 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 183. At the close of the voting period on 10 December 1997 the votes were as follows:

Affirmative votes — 24: Bock, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

Bouchet abstained.

Ride was on leave of absence.

Abstaining, Bouchet commented: 'The application fails to document the consequences of adopting *Atrypa naviformis* Hall, 1843 as the type species of *Meristella* Hall, 1859. Is there type material in existence? I feel that there is insufficient

information for a vote'. Voting for, Cocks commented: 'I strongly support this application. The status of *Meristella* has been uncertain for too long'.

Original references

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

laevis, *Atrypa*, Vanuxem, 1842, *Natural History of New York*, p. 120.

Meristella Hall, 1859, *Palaeontology of New York. New York State Cabinet of Natural History, Annual Report*, **12**: 78.

The following is the reference for the designation of *Atrypa laevis* Vanuxem, 1842 as the type of the nominal genus *Meristella* Hall, 1859:

Miller, S.A. 1889. *North American geology and paleontology for the use of amateurs, students and scientists*, p. 354.

OPINION 1900

Trematospira Hall, 1859 (Brachiopoda): *Spirifer multistriatus* Hall, 1857 designated as the type species

Keywords. Nomenclature; taxonomy; Brachiopoda; Lower Devonian; North America; *Trematospira*; *Trematospira multistriatus*.

Ruling

(1) Under the plenary powers:
  (a) the name *Trematospira* Hall in Davidson, 1858 and all uses of the name prior to the publication of *Trematospira* Hall, 1859 are hereby suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy;
  (b) all previous designations of type species for the nominal genus *Trematospira* Hall, 1859 prior to that by Hall & Clarke (1893) of *Spirifer multistriatus* Hall, 1857 are hereby set aside.

(2) The name *Trematospira* Hall, 1859 (gender: feminine), type species by subsequent designation by Hall & Clarke (1893) *Spirifer multistriatus* Hall, 1857, as ruled under the plenary powers in (1)(b) above, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *multistriatus* Hall, 1857, as published in the binomen *Spirifer multistriatus* (specific name of the type species of *Trematospira* Hall, 1859), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Trematospira* Hall in Davidson, 1858 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology, as suppressed in (1)(a) above.

History of Case 3007

An application for the designation of *Spirifer multistriatus* Hall, 1857 as the type species of *Trematospira* Hall, 1859 was received from Dr F. Alvarez (*Universidad de Oviedo, Oviedo, Spain*) on 5 December 1995. After correspondence the case was published in BZN **53**: 264–266 (December 1996). Notice of the case was sent to appropriate journals.

Comments in support from Prof Arthur J. Boucot (*Oregon State University, Corvallis, Oregon, U.S.A.*), from Dr Sandra J. Carlson (*University of California, Davis, California, U.S.A.*) and from Dr C.H.C. Brunton (*The Natural History Museum, London, U.K.*) were published in BZN **54**: 105 (June 1997).

Decision of the Commission

On 1 December 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 265. At the close of the voting period on 1 March 1998 the votes were as follows:

Affirmative votes — 22: Bock, Bouchet, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Song, Štys

Negative votes — none.

No votes were received from Dupuis and Schuster.

Cogger and Ride were on leave of absence.

Original references

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

multistriatus, *Spirifer*, Hall, 1857, *New York State Cabinet of Natural History, Annual Report*, **10**: 59.

Trematospira Hall, 1858, *in* Davidson, *The Geologist*, **1**: 412.

Trematospira Hall, 1859, *New York State Cabinet of Natural History, Annual Report*, **12**: 27.

The following is the reference for the designation of *Spirifer multistriatus* Hall, 1857 as the type species of *Trematospira* Hall, 1859:

Hall, J. & Clarke, J.M. 1893. *Paleontology of New York*, **8**(2): 126.

OPINION 1901

Gladiolites geinitzianus Barrande, 1850 (currently *Retiolites geinitzianus*; Graptolithina): lectotype replaced by a neotype

Keywords. Nomenclature; taxonomy; Graptolithina; Silurian; *Retiolites geinitzianus*.

Ruling

(1) Under the plenary powers all previous fixations of type specimens for the nominal species *Gladiolites geinitzianus* Barrande, 1850 are hereby set aside and specimen no. L31612 in the National Museum, Prague, figured by Bouček & Münch (1944), is designated as the neotype.

(2) The entry for *Gladiolites geinitzianus* Barrande, 1850 on the Official List of Specific Names in Zoology is hereby emended to record its establishment on p. 69 (not p. 68), and an endorsement is added that it is defined by the neotype designated in (1) above.

History of Case 3016

An application to replace the lectotype of *Gladiolites geinitzianus* Barrande, 1850 with a neotype was received from Dr D.K. Loydell (*University of Portsmouth, Portsmouth, U.K.*) and Dr P. Štorch (*Geological Institute, Academy of Sciences of the Czech Republic, Praha, Czech Republic*) on 19 March 1996. After correspondence the case was published in BZN **53**: 267–269 (December 1996). Notice of the case was sent to appropriate journals.

The name *Retiolites* Barrande, 1850, and that of its type species *Gladiolites geinitzianus* Barrande, 1850, were placed on Official Lists in Opinion 199 (January 1954). However, the identity of the type material of *R. geinitzianus* was not then considered.

Decision of the Commission

On 1 December 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 268. At the close of the voting period on 1 March 1998 the votes were as follows:

Affirmative votes — 22: Bock, Bouchet, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Song, Štys

Negative votes — none.

No votes were received from Dupuis and Schuster.

Cogger and Ride were on leave of absence.

Original references

The following is the original reference to the name on an Official List, the entry for which is emended and endorsed by the ruling given in the present Opinion:

geinitzianus, *Gladiolites*, Barrande, 1850, *Graptolites de Bohême*, p. 69.

The following is the reference for the illustration of the neotype of *Gladiolites geinitzianus* Barrande, 1850:

Bouček, B. & Münch, A. 1944. *Rozpravy II. Třídy České Akademie*, **53**: pl. 3, figs. 2–4.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

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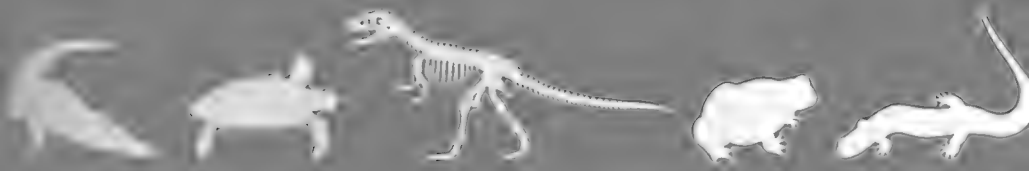

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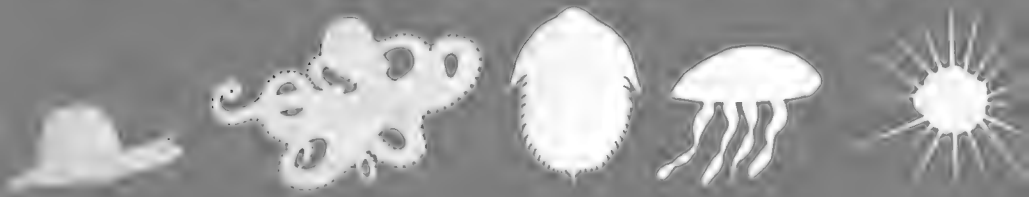

THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

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Notices

(a) *Invitation to comment*. The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles*. At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications*. The following new applications have been received since going to press for volume 55, part 2 (published on 30 June 1998). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Alucita ochrodactyla* [Denis & Schiffermüller], 1775 (currently *Platyptilia ochrodactyla*; Insecta, Lepidoptera): proposed conservation of usage of the specific name by the designation of a neotype for *Phalaena tetradactyla* Linnaeus, 1758. (Case 3081). D.J.L. Agassiz.

(2) *Cimberis* Gozis, 1881 (Insecta, Coleoptera): proposed conservation, and proposed precedence of NEMONYCHIDAE Bedel, (November) 1882 over CIMBERIDIDAE Gozis, (March) 1882. (Case 3093). C.H.C. Lyal & M.A. Alonso-Zarazaga.

(3) *Terebratula* Müller, 1776 (Brachiopoda): proposed designation of *Anomia terebratula* Linnaeus, 1758 as the type species. (Case 3094). D.E. Lee & C.H.C. Brunton.

(d) *Rulings of the Commission*. Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

Election of the Vice-President of the International Commission on Zoological Nomenclature

The members of the Commission have elected Dr W. N. ESCHMEYER as Vice-President, to serve until August 2004. Dr Eschmeyer is from the Department of Ichthyology, California Academy of Science, San Francisco, and is the author of *Genera of Recent Fishes* and the *Catalog of Fishes.*

The International Code of Zoological Nomenclature

The Commission is at present voting on the adoption of the final text of the new (4th) edition of the International Code of Zoological Nomenclature and, subject to this adoption and its ratification by the International Union of Biological Sciences, the edition will be published in late 1998 or early 1999. Its provisions will come into effect on 1 January 2000. As soon as the publication date is known it will be announced on the Commission's Web Site (http://www.iczn.org), together with details of how the new Code may be bought.

Meanwhile, copies of the 3rd edition (published 1985) are still available from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) or from A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu). The cost is £19 or $35 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £15 or $29. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 x 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to 1995. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) *or* A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu).

The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

Case 3087

Hydrobia Hartmann, 1821 and *Cyclostoma acutum* Draparnaud, 1805 (currently *Hydrobia acuta*; Mollusca, Gastropoda): proposed conservation by replacement of the lectotype of *H. acuta* with a neotype; *Ventrosia* Radoman, 1977: proposed designation of *Turbo ventrosus* Montagu, 1803 as the type species; and HYDROBIINA Mulsant, 1844 (Insecta, Coleoptera): proposed emendation of spelling to HYDROBIUSINA, so removing the homonymy with HYDROBIIDAE Troschel, 1857 (Mollusca)

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Abstract. The purpose of this application is to stabilise the usage of the name *Hydrobia* Hartmann, 1821 for a genus of prosobranch brackish-water gastropods. At present the type species, *Cyclostoma acutum* Draparnaud, 1805, is typified by a lectotype which represents another species, *Turbo ventrosus* Montagu, 1803. It is proposed that the lectotype be replaced by a neotype which accords with the established understanding of *H. acuta*. *Ventrosia* Radoman, 1977 was based on *Helix stagnorum* Gmelin, 1791 but recognition of this nominal species as the type would render the generic name a junior subjective synonym. It is likely that Radoman misidentified Gmelin's taxon and it is proposed that *Turbo ventrosus* be designated the type species to maintain existing usage of *Ventrosia*. The family-group name HYDROBIIDAE Troschel, 1857 (Mollusca) is a junior homonym of HYDROBIINA Mulsant, 1844 (Insecta). The names relate, respectively, to a gastropod family of some 100 genera and more than 1000 Recent species occurring almost world wide and to a subtribe of five coleopteran genera (family HYDROPHILIDAE). It is proposed that the homonymy should be removed by emending the stem of the generic name *Hydrobius* Leach, 1815, on which the insect family-group name is based, to give HYDROBIUSINA, while leaving the mollusc name (based on *Hydrobia*) unchanged.

Keywords. Nomenclature; taxonomy; Gastropoda; Coleoptera; *Hydrobia*; *Hydrobius*; *Ventrosia*; *Hydrobia acuta*; *Hydrobia ventrosa*; *Ventrosia ventrosa*; HYDROBIIDAE; HYDROPHILIDAE; HYDROBIUSINA.

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1. The mollusc genus *Hydrobia* Hartmann, 1821, its type species *Cyclostoma acutum* Draparnaud, 1805, and the family HYDROBIIDAE Troschel, 1857, were described long ago and have been much cited in the literature but there has been continuing discussion on their taxonomic and nomenclatural status. The HYDROBIIDAE comprise a well known and very large family of mainly non-marine prosobranch gastropods of some 100 genera and more than 1000 Recent species occurring virtually world wide (see Kabat & Herschler, 1993, p. 1).

2. In 1951 A.E. Ellis (BZN **2**: 119–125) proposed an addition to the Official List of 47 names for non-marine mollusc genera. Most were subsequently placed on the List (Opinion 335, March 1955) but among those not accepted were eight names, including *Hydrobia* Hartmann, 1821, which were set aside pending further study. Many years later G. Rosenberg and G.M. Davis submitted (BZN **47**: 104–109, June 1990) an application which, although primarily concerned with the family groups RISSOIDAE Gray, 1847 and TRUNCATELLIDAE Gray, 1840, included proposals to place on Official Lists the names HYDROBIIDAE, *Hydrobia* and *Cyclostoma acutum*. These last three names were subsequently withdrawn from the case for further consideration (see Opinion 1664, March 1992).

3. Draparnaud (1805, p. 40, pl. 1, fig. 23) established the nominal species *Cyclostoma acutum*. He described and illustrated the taxon but did not mention specimens or give an indication of locality within France. Hartmann (1821a, p. 258) included *C. acutum*, *Hydrobia thermarum* (sic; a misspelling of *Turbo thermalis* Linnaeus, 1758, now placed in the hydrobiid genus *Belgrandia* Bourguignat, 1869), and '*diaphana*' (a nomen nudum) in the new genus *Hydrobia*, rendering the generic name available, and later (1821b, pp. 47–48; see Opinion 344, pp. 324–326, June 1955) described the genus. Gray subsequently (1847, p. 151) designated *C. acutum* as the type species of *Hydrobia*.

4. The status of *Hydrobia acuta* has remained controversial because of the impossibility of correct determination in the absence of anatomical information. The original description (including fig. 23 of pl. 1) by Draparnaud does not contain any feature permitting unambiguous identification. Boeters (1984) was unable to locate type material of *H. acuta* in what remains of Draparnaud's collection at the Naturhistorisches Museum in Vienna, although there were 78 syntypes in 1894 (see Locard, 1895, p. 20). K. Edlinger (personal communication, March 1996) recently found two series of syntypes in Vienna, one with 11, the other with 62, shells. They had been on loan until 1989 and this is presumably the reason why Boeters did not find them. Three additional syntypes were given to Bischof von Hohenwarth by the Museum in Vienna before 1894 (see Locard, 1895), but the fate of this material is unknown.

5. Radoman (1977) was the first modern author to revise *Hydrobia acuta*. He assumed that Draparnaud, who lived in Montpellier, had collected his hydrobiid material in one of the lagoons south of the town and (p. 207) gave the type locality as 'Étang du Prévost, Palavas, französische Mittelmeerküste'. Radoman recognized *Hydrobia acuta* as having a shell with flat (not convex) whorls and males with a large fan-like lobe at the apex.

6. Boeters (1984, p. 4, pl. 1a, fig. 1) selected a lectotype for *Hydrobia acuta* from two putative syntypes found at the Museum National d'Histoire Naturelle in Paris. He regarded them as syntypes because when Dollfus (1912, pl. 4, figs. 5–8) figured them he wrote '*Hydrobia acuta* Draparnaud sp. (types: Muséum de Vienne)' in the caption; whether they were actually original specimens is impossible to determine. Boeters compared the lectotype with recent material from the Étang du Prévost near Palavas-les-Flots (the type locality as given by Radoman, 1977) and recognized one of the two species living in the Étang as corresponding to the lectotype, namely that with males having an elongated, pointed penis with a small lateral lobe approximately half way from the base to the apex. Unfortunately this is *Turbo ventrosus*

Montagu, 1803 (p. 317, pl. 12, fig. 13), described on shells from 'the Kentish coast, at Folkstone and Sandwich', and defined by the lectotype (catalogue no. BMNH 197872) designated by Bank, Butot & Gittenberger (1979, p. 57, fig. 3) from among 13 syntypes, all from Sandwich, in the Natural History Museum, London. Montagu's name was proposed in synonymy and is available under Article 11e of the Code; the species is currently placed in *Hydrobia* or in *Ventrosia* Radoman, 1977 (see para. 10 below). Boeters (1984) recorded the other species in the Étang, namely *Hydrobia acuta* in the sense of Radoman (1977), as *Hydrobia* sp.

7. Giusti & Pezzoli (1984, p. 124, footnote 13) originally claimed that the shells designated as lectotype and paralectotype of *Hydrobia acuta* could be identified as *Hydrobia acuta* as perceived by Radoman (1977) by virtue of their flat (not convex) whorls. However, the upper part of the spire of the lectotype was encrusted, preventing observation of the convexity of the whorls and the depth of the sutures, characters useful for determining species of *Hydrobia*. With the encrustations now removed the convexity of the whorls and depth of the sutures suggest that it belongs to *H. ventrosa* (Montagu, 1803). On the other hand, the paralectotype can clearly be identified as *Hydrobia acuta* sensu Radoman (1977). The refound type material in the Naturhistorisches Museum in Vienna also includes both species.

8. Following Radoman (1977) all authors (except Boeters, 1984; 1988, pp. 254–255, fig. 5) who have cited *Hydrobia acuta* have interpreted it in the same way (see, for example, Radoman, 1983; Giusti & Pezzoli, 1984; Cesari, 1988; Sabelli, Giannuzzi-Savelli & Bedulli, 1990, 1992; Haase, 1993; Bodon, Manganelli, Favilli & Giusti, 1995; Giusti, Manganelli & Schembri, 1995; Cachia, Mifsud & Sammut, 1996; Giannuzzi-Savelli, Pusateri, Palmeri & Ebreo, 1997; and Hoeksema, 1998). Recognition of Boeters's (1984) lectotype designation would mean that the name *H. acuta* (Draparnaud, 1805) would become a junior subjective synonym of *H. ventrosa* (Montagu, 1803) and a new name would be required for *H. acuta* as currently understood. Moreover, if the proposed designation of *ventrosa* as the accepted type species of *Ventrosia* Radoman, 1977 is approved by the Commission (see para. 10 below), recognition of *ventrosa* as a senior synonym of *acuta* would render the name *Hydrobia* a senior synonym of *Ventrosia* and a new name would be needed for the much-used *Hydrobia* of authors. These changes would cause much unnecessary confusion.

9. In order to settle this problem, and in view of the taxonomic and nomenclatural importance of this taxon, we propose that the current understanding of the name *H. acuta* be conserved by setting aside the type designation of Boeters (1984) and designating a neotype in accord with the earlier and more widely accepted use of the name and with exact locality data. Since this hydrobiid species is most easily identified by male anatomical characters, a male specimen has been selected as the neotype. The proposed neotype (a shell and anterior portion of body with penis) was collected in the Étang du Prévost near Palavas-les-Flots, Hérault, France (the type locality as restricted by Radoman, 1977) and is deposited in the Naturhistorisches Museum in Vienna (catalogue no. 90616). A full description and illustrations of this specimen were given by Giusti, Manganelli & Bodon (1998).

10. In 1977 Radoman (p. 208) established the genus *Ventrosia* with four included species, among them *Helix stagnorum* Gmelin, 1791 (p. 3653) which he designated as

the type species. *H. stagnorum* is a replacement name for *Turbo stagnalis* Baster, 1765 (pp. 77, 97, index, pl. 7, fig. 4a; described from the Kaaskenswater, near Zierikzee, The Netherlands) which was no doubt proposed to remove the secondary homonymy with *Helix stagnalis* Linnaeus, 1758 (currently *Lymnaea stagnalis*) that occurred within *Helix* in Linnaeus (1767, pp. 1248, 1249). Bank, Butot & Gittenberger (1979, p. 54), Giusti & Pezzoli (1984, p. 131) and Haase (1993, p. 390) considered that Radoman's (1977) use of the name *H. stagnorum* was not that of Gmelin (1791, i.e. *Turbo stagnalis* Baster) but that it actually represented *T. ventrosus* Montagu, 1803 and, indeed, Radoman (1977, p. 209, pl. 21, figs. 11–13; 1979, p. 204) had recorded *H. stagnorum* 'Gmelin, 1791' as a senior synonym of *T. ventrosus*. Bank et al. (1979) considered the two species to be distinct and designated a lectotype for *T. ventrosus* (see para. 6 above) and (1979, p. 52, fig. 1) a neotype for *Helix stagnorum* (catalogue no. 55361 in the Nationaal Natuurhistorisch Museum, Leiden) which separated them. The species have since been placed in different subfamilies (HYDROBIINAE and LITTORIDININAE respectively; see Giusti & Pezzoli, 1984, pp. 131, 140; Smith & Heppell, 1991, pp. 20 and 82). Bank & Butot (1984, p. 10) placed *H. stagnorum* in *Semisalsa* Radoman, 1974, and Giusti & Pezzoli (1984, p. 140) included *Semisalsa* in the genus *Heleobia* Stimpson, 1865, at the same time as adopting *Ventrosia* Radoman, 1977 for some of the species, including *T. ventrosus* Montagu, hitherto placed in *Hydrobia*. Falniowski (1987), Davis, McKee & Lopez (1989) and Haase (1993) retained *T. ventrosus* in *Hydrobia* but a number of recent authors (Cesari, 1988; Sabelli, Giannuzzi-Savelli & Bedulli, 1990, 1992; Cachia, Mifsud & Sammut, 1996; Giannuzzi-Savelli, Pusateri, Palmeri & Ebreo, 1997, for example) have invalidly treated *ventrosus* as the type species of *Ventrosia* and adopted the latter as a distinct genus. In order to maintain the current usage of *Ventrosia* Radoman, 1977 in the HYDROBIINAE we now propose that *Turbo ventrosus* Montagu, 1803 be designated the type species of the genus.

11. The mollusc family group HYDROBIAE was established by Troschel (1857, p. 106; see Robertson, 1957, p. 137 for the date of publication) and included five nominal genera, among them *Hydrobia* Hartman, 1821. The name was emended to HYDROBIINAE by Stimpson (1865) and adopted at family rank by Fischer (1885, p. 723). Newton & Thayer (BZN **47**: 286–287, December 1990) pointed out that HYDROBIIDAE Troschel, 1857 is a junior homonym of HYDROBIINAE Mulsant, 1844 (p. 116; type genus *Hydrobius* Leach, 1815), a name which has been in use in the Insecta (Coleoptera) for either a tribe or a subfamily of the HYDROPHILIDAE. These authors noted that at the higher rank the subfamily HYDROBIINAE in Coleoptera includes 'about 30 genera and over 700 described species', and that 'since we are not familiar with available junior synonyms or other potential solutions concerning the use of HYDROBIIDAE in Mollusca we refrain from making any specific proposal here, and refer this problem to malacologists for further action'. Kabat & Herschler (1993, p. 28) recorded that in recent publications (Hansen, 1991, pp. 160–164, 295; Newton & Thayer, 1992, p. 83) (see also Hansen, 1995, pp. 335, 342) the insect name has been used for a subtribe within the HYDROPHILIDAE which comprises only five genera. In comparison, the gastropod name is used for a large and well-known family which includes over 100 valid genera (see para. 1 above). We therefore propose that the homonymy between the insect and the mollusc family-group names should be removed by emending the insect subtribe name to HYDROBIUSINA, while leaving the

mollusc name unaltered. The name *Hydrobius* Leach, 1815, and that of the type species of the genus *Dytiscus fuscipes* Linnaeus, 1758, were placed on Official Lists in Opinion 1577 (March 1990).

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

(1) to use its plenary powers:
  (a) to set aside all previous type fixations for the nominal species *Cyclostoma acutum* Draparnaud, 1805 and to designate as neotype the specimen no. 90616 in the Naturhistorisches Museum in Vienna;
  (b) to set aside all previous type fixations for the nominal genus *Ventrosia* Radoman, 1977 and to designate *Turbo ventrosus* Montagu, 1803 as the type species;
  (c) to rule that for the purposes of Article 29 of the Code the stem of the generic name *Hydrobius* Leach, 1815 (Insecta) is HYDROBIUS-;

(2) to place on the Official List of Generic Names in Zoology the following names:
  (a) *Hydrobia* Hartman, 1821 (gender: feminine), type species by subsequent designation by Gray (1847) *Cyclostoma acutum* Draparnaud, 1805;
  (b) *Ventrosia* Radoman, 1977 (gender: feminine), type species by designation under the plenary powers in (1)(b) above *Turbo ventrosus* Montagu, 1803;

(3) to place on the Official List of Specific Names in Zoology the following names:
  (a) *acutum* Draparnaud, 1805, as published in the binomen *Cyclostoma acutum* and as defined by the neotype designated in (1)(a) above (specific name of the type species of *Hydrobia* Hartman, 1821);
  (b) *ventrosus* Montagu, 1803, as published in the binomen *Turbo ventrosus* and as defined by the lectotype designated by Bank, Butot & Gittenberger (1979) (specific name of the type species of *Ventrosia* Radoman, 1977);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
  (a) HYDROBIUSINA Mulsant, 1844, type genus *Hydrobius* Leach, 1815 (Insecta);
  (b) HYDROBIIDAE Troschel, 1857, type genus *Hydrobia* Hartmann, 1821 (Mollusca);

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name HYDROBIINA Mulsant, 1844 (spelling emended to HYDROBIUSINA by the ruling in (1)(c) above) (Insecta).

References

Bank, R.A. & Butot, L.J.M. 1984. Some more data on *Hydrobia ventrosa* (Montagu, 1803) and '*Hydrobia*' *stagnorum* (Gmelin, 1791) with remarks on the genus *Semisalsa* Radoman, 1974 (Gastropoda, Prosobranchia, Hydrobioidea). *Malakologische Abhandlungen*, **10**(2): 5–15.

Bank, R.A., Butot, L.J.M. & Gittenberger, E. 1979. On the identity of *Helix stagnorum* Gmelin, 1791, and *Turbo ventrosus* Montagu, 1803 (Prosobranchia, Hydrobiidae). *Basteria*, **43**(1–4): 51–60.

Baster, J. 1765. *Opuscula subseciva, observationes miscellaneas de animaliculis et plantis* ... vol. 2, part 2. Pp. 49–100, pls. 5–9. Bosch, Haarlem.

Bodon, M., Manganelli, G., Favilli, L. & Giusti, F. 1995. Prosobranchia Archaeogastropoda Neritimorpha (generi 013–014); Prosobranchia Caenogastropoda Architaenioglossa (generi 060–065); Prosobranchia Caenogastropoda Neotaenioglossa p.p. (generi 070–071,

077, 095–126); Heterobranchia Heterostropha p.p. (genere 294). *In* Minelli, A., Ruffo, S. & La Posta, S. [Eds.], *Checklist delle specie della fauna d'Italia*, part 14 (Gastropoda Prosobranchia, Heterobranchia). 60 pp.

Boeters, H.D. 1984. Zur Identität des *Hydrobia*-Typus (Prosobranchia: Hydrobiidae). *Heldia*, **1**(1): 3–5.

Boeters, H.D. 1988. Westeuropäische Moitessieriidae, 2 und Westeuropäische Hydrobiidae, 7. Moitessieriidae und Hydrobiidae in Spanien und Portugal (Gastropoda: Prosobranchia). *Archiv für Molluskenkunde*, **118**(4–6): 181–261.

Cachia, C., Mifsud, C. & Sammut, P.M. 1996. *The marine Mollusca of the Maltese Islands*, part 2 (Neotaenioglossa). 228 pp. Backhuys, Leiden.

Cesari, P. 1988. La malacofauna della Laguna Veneta. 1. Gasteropodi terrestri, dulciacquicoli e salmastri dei litorali di Pellestrina, Lido e Cavallino (Mollusca Prosobranchia e Pulmonata). *Bollettino del Museo Civico di Storia Naturale di Venezia*, **38**: 7–42.

Davis, G.M., McKee, M. & Lopez, G. 1989. The identity of *Hydrobia truncata* (Gastropoda: Hydrobiinae): comparative anatomy, molecular genetics, ecology. *Proceedings of the Academy of Natural Sciences of Philadelphia*, **141**: 333–359.

Dollfus, G.F. 1912. Recherches critiques sur quelques genres et espèces d'*Hydrobia* vivants ou fossiles. *Journal de Conchyliologie*, **59**(3): 179–270.

Draparnaud, J.P.R. 1805. *Histoire naturelle des mollusques terrestres et fluviatiles de la France*. viii, 164, [1] pp., 13 pls. Paris.

Falniowski, A. 1987. Hydrobioidea of Poland (Prosobranchia: Gastropoda). *Folia Malacologica*, **1**: 1–122.

Fischer, P. 1885. *Manuel de conchyliologie et de paléontologie conchyliologique ou histoire naturelle des mollusques vivants et fossiles*, fasc. 8. Pp. 723 752 (Hydrobiidae). Savy, Paris.

Giannuzzi-Savelli, R., Pusateri, F., Palmeri, A. & Ebreo, C. 1997. *Atlante delle conchiglie marine del Mediterraneo*, vol. 2 (Caenogastropoda parte 1: Discopoda Heteropoda). 258 pp. Edizioni La Conchiglia, Roma.

Giusti, F., Manganelli, G. & Bodon, M. 1998. A neotype for *Hydrobia acuta* (Draparnaud, 1805). *Journal of Conchology*, **3**(3): 1–8.

Giusti, F., Manganelli, G. & Schembri, P.J. 1995. *The non-marine molluscs of the Maltese Islands*. Monografie No. 15. 607 pp. Museo Regionale di Scienze Naturali, Torino.

Giusti, F. & Pezzoli, E. 1984. Notulae Malacologicae, xxix. Gli Hydrobiidae salmastri delle acque costiere italiane: primi cenni sulla sistematica del gruppo e sui caratteri distintivi delle singole morfospecie. *Lavori della Società Italiana di Malacologia* (Atti del Simposio di Bologna, 24–26.9.1982), **21**: 117–148.

Gmelin, J.F. [1791]. *Caroli a Linné Systema Naturae*, Ed. 13, vol. 1 (6, Vermes). Pp. 3021 3910. Lipsiae.

Gray, J.E. 1847. A list of the genera of Recent Mollusca, their synonyma and types. *Proceedings of the Zoological Society of London*, **15**: 129–219.

Haase, M. 1993. The genetic differentiation in three species of the genus *Hydrobia* and systematic implications (Caenogastropoda, Hydrobiidae). *Malacologia*, **35**(2): 389–398.

Hansen, M. 1991. The hydrophiloid beetles. Phylogeny, classification and a revision of the genera (Coleoptera, Hydrophiloidea). *Kongelige Danske Videnskabernes Selskab, Biologiske Skrifter*, **40**: 1–367.

Hansen, M. 1995. Evolution and classification of the Hydrophiloidea — a systematic review. Pp. 321–353 *in* Pakaluk, J. & Ślipiński, S.A. (Eds.), *Biology, phylogeny and classification of Coleoptera: papers celebrating the 80th birthday of Roy A. Crowson*, vol. 1. Muzeum i Instytut Zoologii PAN, Warsaw.

Hartmann, J.D.W. 1821a. System der Erd- und Flussschnecken der Schweiz, mit vergleichender Aufzählung aller auch in den benachbarten Ländern, Deutschland, Frankreich und Italien sich vorfindenden Arten. *Neue Alpina, Eine Schrift der Schweizerischen Naturgeschichte, Alpen- und Landwirthschaft Gewiedmet, Winterthur*, **1**: 194–268.

Hartmann, J.D.W. 1821b. System der Erd und Süsswasser-Gasteropoden Europa's. In besonderer Hinsicht auf biejenigen Gattungen, welche in Deutschland und der Schweitz

angetroffen werden. Heft 5 *in* Sturm, J., *Deutschlands Fauna in Abbildungen nach der Natur mit Beschreibungen*. 60 pp., 3 pls. Nürnberg.

Hoeksema, D.F. 1998. Note on the occurrence of *Hydrobia acuta* (Draparnaud, 1805) (Gastropoda, Prosobranchia: Hydrobiidae) in western Europe, with special reference to a record from S. Brittany, France. *Basteria*, **61**(4–6): 101–113.

Kabat, A.R. & Herschler, R. 1993. The prosobranch snail family Hydrobiidae (Gastropoda, Rissooidae): review of classification and supraspecific taxa. *Smithsonian Contributions to Zoology*, **547**: 1–94.

Linnaeus, C. 1767. *Systema Naturae*, Ed. 12, vol. 1, part 2. Pp. 533–1328, [1 36]. Salvii, Holmiae.

Locard, A. 1895. *Ipsa Draparnaudi Conchylia. Étude sur la collection conchyliologique de Draparnaud, au Musée Impérial et Royal d'Histoire Naturelle de Vienne*. 190 pp., Paris. (Also published in 1897, in *Annales de la Société d'Agriculture, Sciences et Industrie de Lyon*, **4**: 5–190).

Montagu, G. 1803. *Testacea Britannica or natural history of British shells* ..., vol. 2. Pp. 293–606. 16 pls. Author, London.

Mulsant, E. 1844. *Histoire naturelle des coléoptères de France*, vol. 3. vii, 196 pp., 1 pl. Maison, Paris.

Newton, A.F., Jr. & Thayer, M.K. 1992. Current classification and family-group names in Staphyliniformia (Coleoptera). *Fieldiana*, Zoology, n.s. **67**: 1–92.

Radoman, P. 1977. Hydrobiidae auf der Balkanhalbinsel und in Kleinasien. *Archiv für Molluskenkunde*, **107**(4–6): 203–233.

Radoman, P. 1979. Once again on the relations of *Helix stagnorum* Gmelin 1791 and *Turbo ventrosus* Montagu 1803. *Bulletin du Muséum d'Histoire Naturelle de Belgrade*, (B)**34**: 201–205.

Radoman, P. 1983. Hydrobioidea – a superfamily of Prosobranchia. 1 (Systematics). Monograph 547. *Serbian Academy of Sciences and Arts Monographs Department of Sciences*, **57**: 1–256.

Robertson, R. 1957. Publication dates of Troschel's 'Das Gebiss der Schnecken'. *Nautilus*, **70**(4): 136–138.

Sabelli, B., Giannuzzi-Savelli, R. & Bedulli, D. 1990, 1992. *Catalogo annotato dei molluschi marini del Mediterraneo*, part 1, pp. 1–348 (1990); part 2, pp. 349–498 (1992); part 3, pp. 499–781 (1992). Società Italiana di Malacologia. Edizioni Libreria Naturalistica Bolognese, Bologna.

Smith, S.M. & Heppell, D. 1991. Checklist of British marine Mollusca. *National Museums of Scotland Information Series*, **11**: 1–114.

Stimpson, W. 1865. Diagnoses of newly discovered genera of gasteropodes, belonging to the sub.-fam. Hydrobiinae, of the family Rissoidae. *American Journal of Conchology*, **1**(1): 52–54.

Troschel, F.H. 1857. *Das Gebiss der Schnecken zur Begründung einer natürlichen Classification*, vol. 1, part 2. Pp. 73–112, pls. 5–8. Nicola, Berlin.

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Case 3050

Pachylops Fieber, 1858 (Insecta, Heteroptera): proposed designation of *Capsus chloropterus* Kirschbaum, 1856 (currently *Orthotylus virescens* (Douglas & Scott, 1865)) as the type species

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Abstract. The purpose of this application is to conserve the heteropteran subgeneric name *Pachylops* Fieber, 1858 (family MIRIDAE; genus *Orthotylus* Fieber, 1858) in its original concept with *Capsus chloropterus* Kirschbaum, 1856 (an invalid subjective synonym of *Orthotylus virescens* (Douglas & Scott, 1865)) as its type species. The Commission's designation (Opinion 253, 1954) of *Litosoma bicolor* Douglas & Scott, 1868 as the type was based on the wrong assumption that Fieber had misidentified the type species, and because it results in instability of the nomenclature of several genus-group taxa it is proposed that Opinion 253 be set aside.

Keywords. Nomenclature; taxonomy; Heteroptera; MIRIDAE; *Hypsitylus*; *Neopachylops*; *Orthotylus*; *Pachylops*; *Platycranus*; *Orthotylus virescens*.

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1. Kirschbaum (1856, p. 249) described the mirid bug *Capsus chloropterus* from Germany (Wiesbaden), basing the species on specimens of both sexes. Fieber (1858, p. 314) established the genus *Pachylops* in a key with *Capsus chloropterus* Kirschbaum as the only included species. Later Fieber (1861, pp. 285, 286) gave a description of the species, based on both sexes, and recorded it from S.E. France (Hyères) in addition to Germany. He compared *Pachylops* with a new genus *Hypsitylus* he described in the same paper (p. 286).

2. Douglas & Scott (1865, p. 339) described *Litosoma virescens* from England (Bromley and Weybridge) based on specimens of both sexes. Kirschbaum's and Douglas & Scott's names are subjective synonyms, as first shown by Reuter (1877, p. 128) and confirmed by Wagner (1939, pp. 47, 69) who examined syntypes of *Capsus chloropterus* Kirschbaum in the Wiesbaden Museum. Kirschbaum's name is a junior primary homonym of *Capsus chloropterus* Herrich-Schaeffer, 1853 and cannot be used as a valid name; the species is currently named *Orthotylus* (*Neopachylops*) *virescens* (Douglas & Scott, 1865).

3. Douglas & Scott (1865, p. 345) recorded '*Litosoma chloropterus* Kirschbaum' from England, stating that it was 'not an uncommon species on broom [*Sarothamnus scoparius*] near Blackheath and at Charlton, in July'. These authors were assisted

by Fieber in the identification of specimens, and their description of *Litosoma chloropterus* agrees with *Capsus chloropterus* Kirschbaum, and also with their own species *L. virescens* (see para. 2 above).

4. Later, Douglas & Scott (1868, p. 267) described a new species *Litosoma bicolor* from specimens of both sexes stating that it was 'not uncommon by beating furze bushes [*Ulex europaeus*] at Esher [England] in August'. In 1875 (p. 185), Douglas & Scott synonymized *L. bicolor* with *Capsus chloropterus* Kirschbaum. This was surprising, as they stated that some males of *L. bicolor* sent by them to Fieber had been identified by him as a species different from *L. chloropterus*. They speculated that Fieber did not know the males of *Capsus chloropterus* and that Kirschbaum, in his original description, had failed to note the characteristic coloration of males; both these assumptions are incorrect. It is possible that a female of *L. bicolor* from England sent by Douglas and Scott, apparently after 1865 and certainly long after the description of *Pachylops*, had been misidentified by Fieber as *chloropterus*; this may be the source of the subsequent confusion.

5. Reuter (1877, pp. 128–129) showed that *Capsus chloropterus* Kirschbaum was not synonymous with *Litosoma bicolor* Douglas & Scott. He also noted that 'It [*Litosoma bicolor*] is probably identical with the *Pachylops chloropterus*, Fieber (Eur. Hem. p. 285), of which I have not seen a typical specimen', but did not indicate his reason for this belief. He speculated that possibly Kirschbaum had sent to Fieber a specimen of *L. bicolor* misidentified as *C. chloropterus*; in point of fact, *L. bicolor* does not occur in Germany and Kirschbaum apparently did not collect abroad.

6. In 1883 Reuter (p. 342) transferred *L. bicolor* to the genus *Hypsitylus* Fieber, 1861 (type species *H. prasinus*). He treated *Pachylops chloropterus* sensu Fieber (see para. 1 above) as a probable misidentification of *L. bicolor* Douglas & Scott, and used *Hypsitylus* as the valid name, with the earlier name *Pachylops* in synonymy. This nomenclature was followed by later authors (e.g. Reuter, 1910, p. 149; Oshanin, 1910, pp. 837, 848 and 1912, p. 74; Seabra, 1926, pp. 13, 37).

7. However, Kirkaldy (1906, p. 127) accepted *Pachylops* as the valid name with the type species stated to be '*chloropterus* [sensu] Fieb. (= *bicolor* D. & S.)', and placed *Hypsitylus* in synonymy under *Pachylops*. China (1943, pp. 266, 323–324) feared that if *C. chloropterus* were accepted as type species of *Pachylops*, the latter name would become a senior synonym of *Orthotylus* Fieber, 1858 on the grounds of page priority (see para. 1 above), even though (pp. 269, 270, 272) he correctly noted that page priority had no nomenclatural significance. China, without trying to justify his claim, stated that 'the Kirschbaum species [*Capsus chloropterus*] agrees neither with Fieber's generic description [of *Pachylops*] nor with the description of the type species given by Fieber' and that the species actually involved as the type of *Pachylops* was *Litosoma bicolor*. On these grounds China (1947, p. 285) asked the Commission to rule 'that the type of *Pachylops* Fieber, 1858, is *Litosoma bicolor* Douglas & Scott, 1868, and not *Capsus chloropterus* Kirschbaum, 1855, the single species included in the genus by Fieber ...'. China's request was accepted by the Commission in Opinion 253 (1954).

8. This type fixation, as is now clear, was based on the misinterpretation of facts. Claims that Fieber had misidentified *Capsus chloropterus* Kirschbaum were never debated. Careful examination of Fieber's 1858 and 1861 works shows without any

doubt that his identification of this species was correct. According to characters shown by Reuter (1883, p. 342) to distinguish '*Orthotylus virescens*' from '*Hypsitylus bicolor*', Fieber's (1861, p. 285) description (coloration of both sexes grass green; rostrum not reaching apex of mesosternum; apices of tibiae blackish; tibial spines blackish) fits *Litosoma virescens* and not *L. bicolor* (coloration pale green, in males with a brownish longitudinal stripe; rostrum surpassing mesosternum; tibiae unicolorous; tibial spines pale). The short rostrum is noted in the original description of *Pachylops*, and the accompanying figure of the head and rostrum fits a female of *L. virescens*. It is noteworthy also that *L. virescens* is known from both regions indicated by Fieber (Germany and the eastern half of the Mediterranean coast of France), while *L. bicolor* does not occur in either region (Wagner, 1956; Ehanno, 1983). It is, therefore, clear that Fieber's (1858, 1861) identification of *Capsus chloropterus* Kirschbaum was correct and the name *Pachylops* was given by him to the taxon currently called *Neopachylops* Wagner, 1956 (a subgenus of *Orthotylus* Fieber, 1858).

9. The species *Litosoma bicolor* Douglas & Scott, 1868 is relatively rare and has a limited distribution; it has never been subject to serious taxonomic study. Figures attributed to '*Pachylops bicolor*' in monographs by Wagner & Weber (1964, p. 310) and Wagner (1974, p. 170) are of *Hypsitylus prasinus* Fieber, 1861. Recent examination of *L. bicolor* by one of us (A.C.) based on specimens from England and France show that this species is not congeneric with other species currently placed in *Pachylops* (or *Neopachylops*) and undoubtedly belongs to the genus *Platycranus* Fieber, 1870, subgenus *Genistocapsus* Wagner, 1956.

10. The nomenclatural problems following from paras. 8 and 9 (above) concern several genus-group names of European and Mediterranean ORTHOTYLINAE (MIRIDAE). All species of these genera and subgenera live on Fabaceae (*Sarothamnus*, *Ulex*, *Genista*, etc.); none of them is of economic importance. The implications of the Commission's ruling in Opinion 253 are wide ranging. If it were to be followed, *Pachylops* Fieber, 1858 would replace the long-used generic name *Platycranus* Fieber, 1870 (p. 252; type species *P. erberi* Fieber, 1870; 16 species) and the name of its subgenus *Genistocapsus* Wagner, 1956 (p. 424; type species *P. metriorrhynchus* Reuter, 1883; 10 species).

11. The name *Hypsitylus* Fieber, 1861 (p. 286; type species *H. prasinus* Fieber, 1861) used before 1943 (see para. 7 above) should be restored for a monotypic genus. If the ruling in Opinion 253 were to be set aside, the original concept of *Pachylops* would be restored and this name would replace the relatively recent name *Neopachylops* Wagner, 1956 (p. 394; type species *Capsus concolor* Kirschbaum, 1856) for a subgenus of *Orthotylus*; this subgenus contains 15 species.

12. In order to obtain the views of specialists, a questionnaire with all possible solutions to the problem (including suppression of the name *Pachylops* or designation for it of another type species) was sent to nine specialists from France (C. Dupuis, B. Ehanno, A. Matocq, J. Péricart), Spain (M. Goula, J. Ribes), Austria (E. Heiss), the Netherlands (B. Aukema) and Italy (F. Faraci). All of them voted for setting aside Opinion 253. Based on this unanimous vote, we have not followed the ruling given in that Opinion and have accepted the original fixation of *Capsus chloropterus* Kirschbaum as the type species of *Pachylops* (Carapezza, 1997; Kerzhner & Josifov, in press).

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

(1) to use its plenary powers to set aside the designation in Opinion 253 of *Litosoma bicolor* Douglas & Scott, 1868 as the type species of *Pachylops* Fieber, 1858;

(2) to emend the entry for *Pachylops* Fieber, 1858 in the Official List of Generic Names in Zoology to record the type species as *Capsus chloropterus* Kirschbaum, 1856 by monotypy;

(3) to emend the entry for *bicolor*, *Litosoma*, Douglas & Scott, 1868, in the Official List of Specific Names in Zoology to delete reference to it as the specific name of the type species of *Pachylops* Fieber, 1858;

(4) to place on the Official List of Specific Names in Zoology the name *virescens* Douglas & Scott, 1865, as published in the binomen *Litosoma virescens* (valid subjective synonym of the specific name of *Capsus chloropterus* Kirschbaum, 1856, the type species of *Pachylops* Fieber, 1858).

References

Carapezza, A. 1997. Heteroptera of Tunisia. *Naturalista Siciliano*, (4)**21**, supplement A: 1–331.

China, W.E. 1943. The generic names of the British Hemiptera Heteroptera, with a check list of the British species, part 8. Pp. 211–342 *in*: *The generic names of British insects*. Royal Entomological Society of London, London.

China, W.E. 1947. Proposed suspension of the Règles for *Pachylops* Fieber, 1858 (Class Insecta, Order Hemiptera), a genus based upon an erroneously determined species. *Bulletin of Zoological Nomenclature*, **1**: 285.

Douglas, J.W. & Scott, J. 1865. *The British Hemiptera-Heteroptera*. 627 pp. Ray Society, London.

Douglas, J.W. & Scott, J. 1868. British Hemiptera: additions and corrections. *Entomologist's Monthly Magazine*, **4**: 265–269.

Douglas, J.W. & Scott, J. 1875. Hemiptera: synonymic notes. *Entomologist's Monthly Magazine*, **11**: 184–186.

Ehanno, B. 1983. *Les Hétéroptères Mirides de France. Vol. 1. Les secteurs biogéographiques*. 603 pp. Paris.

Fieber, F.X. 1858. Criterien zur generischen Theilung der Phytocoriden (Capsini aut.). *Wiener entomologische Monatschrift*, **2**: 289–327, 329–347, 388.

Fieber, F.X. 1860–1861. *Die europäischen Hemiptera. Halbflügler. (Rhynchota Heteroptera)*. Pp. i–vi, 1–112 (1860); pp. 113–444 (1861). Gerold's Sohn, Wien.

International Commission on Zoological Nomenclature. 1954. Opinion 253. Designation, under the plenary powers, of a type species for the nominal genus '*Pachylops*' Fieber, 1858 (Class Insecta, Order Hemiptera) in harmony with accustomed nomenclatorial usage. *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature*, **5**: 163–174.

Kerzhner, I.M. & Josifov, M. (In press). Family Miridae. *In*: Aukema, B. & Rieger, Chr. (Eds.), *Catalogue of the Heteroptera of the Palaearctic Region*, vol. 3. Netherlands Entomological Society.

Kirkaldy, G.W. 1906. List of the genera of the pagiopodous Hemiptera-Heteroptera, with their type species, from 1758 to 1904 (and also of the aquatic and semi-aquatic Trochalopoda). *Transactions of the American Entomological Society*, **32**: 117–156.

Kirschbaum, C.L. 1856. Rhynchotographische Beiträge. I. Die Capsinen der Gegend von Wiesbaden. *Jahrbuch des Vereins für Naturkunde im Herzogthum Nassau*, **10**: 163–348 (also published separately).

Oshanin, B. 1910. Verzeichnis der Paläarktischen Hemipteren mit besonderer Berücksichtigung ihrer Verteilung im Russischen Reiche, vol. 1, part 3. *Ezhegodnik Zoologicheskago Muzeya Imperatorskaya Akademiya Nauk*, **14**, supplement: 587–1087.

Oshanin, B. 1912. *Katalog der paläarktischen Hemipteren (Heteroptera, Homoptera-Auchenorrhyncha und Psylloidea)*. xvi, 187 pp. Friedländer & Sohn, Berlin.

Reuter, O.M. 1877. Remarks on some British Hemiptera-Heteroptera. *Entomologist's Monthly Magazine*, **14**: 127–131.

Reuter, O.M. 1883. *Hemiptera Gymnocerata Europae. Hémiptères Gymnocérates d'Europe, du bassin de la Méditerranée et de l'Asie Russe*, **3**: 313–496. Helsingfors. (Also published in *Acta Societatis Scientiarum Fennicae*, **13**(1884): 313–496).

Reuter, O.M. 1910. Neue Beiträge zur Phylogenie und Systematik der Miriden nebst einleitenden Bemerkungen über die Phylogenie der Heteropteren-Familien. *Acta Societatis Scientiarum Fennicae*, **37**(3): i–iv, 1–172.

Seabra, A.F. de. 1926. Hémiptères Hétéroptères de la province de 'Tras-os-Montes'. *Memorias e Estudos do Museu Zoologico da Universidade de Coimbra*, **1**(8): 1–39.

Wagner, E. 1939. Die Wanzen der Sammlung Kirschbaum. *Jahrbücher des Nassauischen Vereins für Naturkunde*, **86**: 34–75.

Wagner, E. 1956. 21. Familie: Miridae (Capsidae auct.), Fortsetzung. Pp. 321–480 *in*: Gulde, J., *Die Wanzen Mitteleuropas*, vol. 11. Huss, Frankfurt am Main.

Wagner, E. 1974. Die Miridae Hahn, 1831, des Mittelmeerraumes und der Makaronesischen Inseln (Hemiptera: Heteroptera), part 2. *Entomologische Abhandlungen herausgegeben vom Staatlichen Museum für Tierkunde Dresden*, **39**, Supplement: 1–421.

Wagner, E. & Weber, H.H. 1964. Hétéroptères Miridae. *Faune de France*, vol. 67. 591 pp. Fédération Française des Sociétés de Sciences Naturelles, Paris.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3051

Scarus chrysopterus Bloch & Schneider, 1801 (currently *Sparisoma chrysopterum*; Osteichthyes, Perciformes): proposed conservation of the specific name and designation as the type species of *Sparisoma* Swainson, 1839

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Abstract. The main purpose of this application is to conserve the specific name of *Sparisoma chrysopterum* (Bloch & Schneider, 1801) for the Redtail Parrotfish of the Caribbean and tropical Western Atlantic. An earlier specific name, that of *Sparus abildgaardi* Bloch, 1791, has been treated as a junior synonym of *Sparisoma viride* (Bonnaterre, 1788), the Stoplight Parrotfish, but it is now known to refer to the initial phase (male or female) of *S. chrysopterum*. It is also proposed that *S. chrysopterum* be designated as the type species of *Sparisoma* Swainson, 1839 in place of the nominal species *Sparus abildgaardi*.

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; SCARIDAE; parrotfishes; *Sparisoma*; *Sparisoma abildgaardi*; *Sparisoma chrysopterum*; *Sparisoma viride*; Caribbean; Western Atlantic.

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1. Bloch (1791, p. 22, pl. 259) described and illustrated in color a specimen of a scarid fish from St Croix, Virgin Islands, and named it *Sparus abildgaardi*. The description and figure are of a moderately elongate, yellowish parrotfish with a lunate caudal fin; the dried skin (337mm SL) is preserved as specimen ZMU 8584 in the Museum für Naturkunde der Humboldt Universität in Berlin.

2. Bloch & Schneider (1801, p. 286, pl. 57) described and illustrated *Scarus chrysopterus* from 'mare Americanum'. The illustration shows a moderately elongate body and lunate caudal fin; this and the color description (body green, fins orange, the caudal orange in the middle and laterally green) refer to a terminal male of the species which has long been known as *Sparisoma chrysopterum* (Bloch & Schneider, 1801) and, in English, the Redtail Parrotfish.

3. Swainson (1839, p. 227) briefly described the new nominal genus *Sparisoma* and cited '*Sparus Abildgardii* [sic] Bloch, pl. 259' as the only species. He noted that 'Cuvier terms this singular fish a *Scarus* and Bloch a *Sparus*', but in the absence of any other statements one has to assume that the specific name was used in Bloch's original sense.

4. Valenciennes (in Cuvier & Valenciennes, [1840], p. 175) applied the name *Scarus abildgaardii* to a scarid from St Thomas, Virgin Islands, where it was known as 'red-fish'; he said that this common name was well justified by the description of the color (when fresh) that accompanied the specimen, and that Bloch (1791) must have had 'un individu décoloré'. Although the description by Valenciennes did not match the original one by Bloch, later authors (such as Jordan & Evermann, 1898, p. 1635; Evermann & Marsh, 1900, p. 239, pl. 30; Meek & Hildebrand, 1925, p. 748; Townsend, 1929, pl. 19; Longley & Hildebrand, 1940, p. 207, pls. 17, 28) used the name *Sparisoma abildgaardi* (Bloch, 1791) for the red parrotfish described by Valenciennes under the name *Scarus abildgaardii*.

5. Schultz (1958) reviewed the family SCARIDAE. Like Valenciennes and the other authors listed in para. 4 above, he regarded *Sparisoma abildgaardi* as a valid species; he did not examine Bloch's specimen (para. 1 above), and diagnosed *S. abildgaardi* principally on color (pectoral base same color as remainder of fin; six vertical rows of white spots on body; belly blood red; posterior margin of gill cover black (reddish brown when alive); caudal fin red except basally). Schultz was aware of sexual dimorphism in the SCARIDAE from the paper by Brock & Yamaguchi (1954) on the Hawaiian *Chlorurus perspicillatus* (Steindachner, 1839), but he did not realize how extensive this is in the family; nor did he know of the protogynous hermaphroditism of scarids which was first shown by Randall & Randall (1963) for *Sparisoma rubripinne* (Valenciennes, [1840]).

6. Winn & Bardach (1960) concluded that *S. abildgaardi*, as used by authors, did not refer to a valid species, and wrote '*Sparisoma abildgaairdi* [sic] (Bloch) (female and immature) appears to be a synonym of *Sparisoma viride* (Bonnaterre) (male).' Others have agreed with Winn & Bardach, such as Böhlke & Chaplin (1968), Randall (1968) and Schultz (1969, in his second major paper on scarids) and numerous more recent workers. It is now clear that the red parrotfish called *Scarus* or *Sparisoma abildgaardi* by Valenciennes and the other authors listed in para. 4 above, together with Schultz (1958), is the initial phase (which may be male or female) of *Sparisoma viride* (Bonnaterre, 1788, p. 96), known in English as the Stoplight Parrotfish.

7. While studying the parrotfishes of Brazil, the first author (R.L.M.) of the present application examined the original descriptions of western Atlantic species. Bloch's (1791) original description and illustration of *Sparus abildgaardi* seemed much more like *Sparisoma chrysopterum* (see para. 2 above) than the deeper-bodied '*abildgaardi*' initial phase of *S. viride*. The second author (J.E.R.) agreed, and at our request H.-J. Paepke examined the skin of Bloch's specimen in Berlin (see para. 1 above) and supplied a photograph. We now conclude that *Sparus abildgaardi* Bloch, 1791 (as originally published and represented by the holotype) is an earlier synonym of *Sparisoma chrysopterum* (Bloch & Schneider, 1801), and not a later synonym of *S. viride* (Bonaterre, 1788) as has been supposed by many authors since Winn & Bardach (1960).

8. The specific name *abildgaardi* Bloch, 1791 has apparently not been used in its original taxonomic sense (i.e. that of *S. chrysopterum*) since Swainson (1839) established *Sparisoma*. After Valenciennes ([1840]), *abildgaardi* was applied to what is now known to be the initial phase of *Sparisoma viride*, and following the recognition of this fact by Winn & Bardach (1960; see para. 6 above) the name has dropped out of use. In contrast, the name *Sparisoma chrysopterum* (Bloch & Schneider, 1801) has

always been correctly used. It would be very confusing to now replace *S. chrysopterum* by *S. abildgaardi*, and there is a prima facie case for the suppression of *abildgaardi*.

9. As noted in para. 3 above, the type species of *Sparisoma* Swainson, 1839 is, by monotypy, *Sparus abildgaardi* Bloch, 1791. Since this name was consistently misapplied and has now dropped out of use, and its suppression is therefore now proposed, we suggest that the type species should be denoted by the valid name of the taxon on which Swainson must be assumed to have based the genus. An alternative course would be to designate the congeneric *Scarus viridis* Bonnaterre, 1788 as the type species, but we see no reason for preferring this.

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

(1) to use its plenary powers:
  (a) to suppress the specific name *abildgaardi* Bloch, 1791, as published in the binomen *Sparus abildgaardi*, for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
  (b) to set aside all previous fixations of type species for the nominal genus *Sparisoma* Swainson, 1791, and to designate *Scarus chrysopterus* Bloch & Schneider, 1801 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Sparisoma* Swainson, 1839 (gender: neuter), type species by designation in (1)(b) above *Scarus chrysopterus* Bloch & Schneider, 1801;

(3) to place on the Official List of Specific Names in Zoology the name *chrysopterus* Bloch & Schneider, 1801, as published in the binomen *Scarus chrysopterus* (specific name of the type species of *Sparisoma* Swainson, 1839);

(4) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *abildgaardi* Bloch, 1791, as published in the binomen *Sparus abildgaardi* and as suppressed in (1)(a) above.

Acknowledgements

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References

Bloch, M.E. 1791. *Naturgeschichte der ausländischen Fische*, part 4. 152 pp. Berlin.

Bloch, M.E. & Schneider, J.G. 1801. *Systema Ichthyologiae iconibus cx illustratum*. lx, 584 pp. Sanderiano, Berolini.

Böhlke, J.E. & Chaplin, C.C.G. 1968. *Fishes of the Bahamas and adjacent tropical waters*. 771 pp. Livingston Publishing Co., Wynnewood, Pennsylvania.

Bonnaterre, J.P. 1788. *Tableau encyclopédique et méthodique des trois règnes de la nature*. Ichthyologie. lvi, 215 pp., 102 pls. Panckoucke, Paris.

Brock, V.E. & Yamaguchi, Y. 1954. The identity of the parrotfish *Scarus ahula*, the female of *Scarus perspicillatus*. *Copeia*, **1954**(2): 154–155.

Cuvier, G. & Valenciennes, A. [1840]. *Histoire naturelle de poissons*, vol. 14. xxii, 464 pp. Pitois-Levrault, Paris.

Evermann, B.W. & Marsh, M.C. 1900. The fishes of Porto Rico. *Bulletin of the U.S. Fish Commission*, **20**(1): 51–350.

Jordan, D.S. & Evermann, B.W. 1898. The fishes of Middle and North America. *Bulletin of the U.S. National Museum*, **47**: 1241–2183.

Longley, W.H. & Hildebrand, S.F. 1940. Systematic catalogue of the fishes of Tortugas, Florida. *Papers of the Tortugas Laboratory*, no. 34 (Carnegie Institute, Washington, publication 535). xii, 331 pp.

Meek, S.E. & Hildebrand, S.P. 1925. The marine fishes of Panama. *Publications of the Field Museum of Natural History*, Zoology **14**(3): 709–1045.

Randall, J.E. 1968. *Caribbean reef fishes*. 318 pp., 324 figs. T.F.H. Publications, Jersey City, New Jersey.

Randall, J.E. & Randall, H.A. 1963. The spawning and early development of the Atlantic parrotfish *Sparisoma rubripinne*, with notes on other scarid and labrid fishes. *Zoologica* (New York), **48**(2): 49–69.

Schultz, L.P. 1958. Review of the parrotfishes, family Scaridae. *Bulletin of the U.S. National Museum*, **214**: 1–143.

Schultz, L.P. 1969. The taxonomic status of controversial genera and species of parrotfishes, with a descriptive list (family Scaridae). *Smithsonian Contributions to Zoology*, **17**: 1–49.

Swainson, W. 1839. *The natural history and classification of fishes, amphibians, & reptiles, or monocardian animals*, vol. 2. vi, 448 pp. London.

Townsend, C.H. 1929. *Records of changes in color among fishes*. 56 pp. New York Zoological Society, New York.

Winn, H.E. & Bardach, J.E. 1960. Some aspects of the comparative biology of parrot fishes at Bermuda. *Zoologica* (New York), **45**: 29–34.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3071

Osphronemus deissneri Bleeker, 1859 (currently *Parosphromenus deissneri*; Osteichthyes, Perciformes): proposed replacement of holotype by a neotype

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Abstract. The purpose of this application is to clarify the identity of *Osphronemus deissneri* Bleeker, 1859, the type species of *Parosphromenus* Bleeker, 1877, a genus of licorice gouramies from the freshwater and peat swamps of Southeast Asia important both in the aquarium trade and as environmental bioindicators. The holotype of *O. deissneri* is badly damaged and lacks the characters necessary for identification. It is proposed that it be replaced with a neotype in order to stabilise the taxonomy of *Parosphromenus*.

Keywords. Nomenclature; taxonomy; Osteichthyes; Perciformes; licorice gouramies; BELONTIIDAE; *Parosphromenus*; *Parosphromenus deissneri*.

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1. In 1801 (p. 116), the nominal genus *Osphronemus* was established by Lacepède (spelt La Cepède in the publication) with two species, *O. goramy* (p. 116, pl. 8, fig. 2) and *O. gallus* (p. 116). *O. goramy* was subsequently designated as the type species by Bleeker (1879, pp. 16–17 — for date of publication see Lamme, 1975). Cuvier (1829, p. 228) referred to '*Osphromenus gourami* [sic]' Lacepède but he did not mention the original spelling *Osphronemus*, although two years later (Cuvier in Cuvier & Valenciennes, 1831, p. 377) he explained that the name 'osphromène' had been used by Commerson in an unpublished manuscript, and that Lacepède had published this name as 'osphronème'.

2. Bleeker (1859, p. 376) established the species *Osphromenus* [sic] *deissneri*, and in 1877 (pl. 395, caption of fig. 1) established the nominal genus *Parosphromenus*, with *Osphromenus deissneri* as type species by monotypy. This plate appeared in 1877 and predates the earliest description of *Parosphromenus* generally quoted in the literature, i.e. Bleeker, 1879, p. 19 (see Boeseman, 1983, p. 4).

3. The licorice gouramies of *Parosphromenus* are widely distributed in the freshwater and peat swamps of Southeast Asia, and 11 nominal species are now recognised (Kottelat, 1991; Kottelat et al., 1993). These fishes are important not only in the aquarium trade but also as environmental bioindicators (Ng, Tay & Lim, 1994). The taxonomy of species of *Parosphromenus* is difficult as there are very few

morphological or meristic characters which can be used to separate taxa. Adult male specimens are necessary before most of the species can be identified with certainty, and even then they must be well preserved and ideally their live colours indicated. The useful diagnostic features are characters such as the structure of the paired and unpaired fins, the body and fin colouration and the colour patterning; these characters are discernible only in well preserved material. Many of the older specimens attributed to species of *Parosphromenus* are poorly preserved, being twisted, shrunken and/or dried, with their fin rays badly damaged and often frayed or broken. *Parosphromenus* species are typically in the size range 15 20 mm in standard length, and need to be preserved carefully if good specimens are to be obtained for study or long-term curation. Furthermore, several nominal species have been poorly described, with vague and imprecise type localities and ambiguously designated type material (see Schaller & Kottelat, 1989).

4. Although the species *Parosphromenus deissneri* has been reported frequently in scientific and popular literature, the actual identity of the species has only very recently been clarified (Kottelat & Ng, 1998). We have been aware for some time that several conspicuously different species have been identified as '*P. deissneri*' by a number of authors, including ourselves. *Parosphromenus deissneri* was originally described by Bleeker from a single specimen reportedly 34 mm in total length from the island of Banka (now Bangka), off eastern Sumatra, Indonesia. The species has not until recently been reported from Bangka since its original discovery, and nothing was known about it except from Bleeker's papers. Bleeker's figure (1877, pl. 395, fig. 1) of the species is schematic and apparently full-size, and appears to depict a large female. The colours are faded and not useful except for confirming the generic identification of recent material, since preserved females of nearly all species of *Parosphromenus* have the same colour pattern. It cannot be determined whether the colour was based on a fresh or preserved specimen and whether it was accurate.

5. We recently obtained fresh material of *Parosphromenus* from various localities on Bangka, including Sungai Baturussa, the stream running through Baturussa which is the type locality of *Parosphromenus deissneri*. Our study of this material shows that two species occur on Bangka, the adult males of each being distinguished by the form of their caudal fins and live colouration. The presence or absence of a filamentous median caudal-fin ray allows us to identify large adults of both sexes. One of the two species is certainly *Parosphromenus deissneri* and we have described the second as a new species, *P. bintan* (Kottelat & Ng, 1998, p. 265, fig. 3). Although the two species were not collected together, the close proximity of their localities (only a few kilometres apart) suggests that both species will probably be found together once more detailed sampling is conducted throughout the island.

6. Examination of the holotype of *Parosphromenus deissneri* in the Nationaal Natuurhistorisch Museum in Leiden shows that it is completely discoloured and in relatively poor condition, being shrunken and with all its fins damaged; the taxonomically important caudal fin is completely missing. The condition of the caudal fin and its rays was not described by Bleeker and cannot be determined with certainty from his 1877 figure (pl. 395, fig. 1). One interpretation of this figure is that it is accurate and shows the median caudal-fin ray unbranched and somewhat narrower than the others. Alternatively, the figure is not accurate and the other rays, while appearing thicker, are not depicted as being branched, which

they should be. Our conclusion is that the holotype of *Parosphromenus deissneri* possesses no characters by which it can be identified with any of the known species of the genus.

7. We are currently completing a revisionary study of the genus, in which the identities of three poorly known species are to be clarified and at least six new species described. All, at some time or another, have been called '*Parosphromenus deissneri*'. In addition, we have obtained specimens of the second Bangka species (*P. bintan*) from Pulau Bintan in the Riau Archipelago, this species being the subject of conservation efforts (Kottelat & Ng, 1998). Our revisionary study is hindered by the absence of a usable type specimen for *Parosphromenus deissneri*. As pointed out in para. 6 above the extant holotype possesses no useful characters, and could belong to *P. bintan* or even to any of the other taxa from nearby islands. Considering the confused taxonomic history of the group, we believe that continued uncertainty about the holotype of *Parosphromenus deissneri* would pose serious problems for future systematic and biological studies on the genus and its members.

8. To ensure taxonomic stability in the genus and its type species we propose under Article 75b(iii) and Recommendation 75E of the Code the designation of an intact fresh specimen as neotype to replace the damaged and unusable holotype of *Parosphromenus deissneri*. The original type locality, Baturussa, is now a small city where no suitable habitat containing this species could be found. However, the proposed neotype comes from very near the original type locality, and certainly from the same hydrographic basin. The proposed neotype is a male specimen (20.2 mm standard length, 27.1 mm total length), collected on 6 March 1993 by M. Kottelat, N. Sivasothi and T. Tan, from Sungai Baturussa basin, 8 km from Pudingbesar on the road to Kampong Simpan, in Bangka. It is deposited in the Zoological Reference Collection (ZRC), National University of Singapore, under the catalogue number ZRC 31377. Colour photographs of the freshly preserved proposed neotype of *P. deissneri* are published in Kottelat & Ng (1998, p. 265, fig. 3) as well as of live male and female specimens of both that species and *P. bintan*.

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

(1) to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Osphronemus deissneri* Bleeker, 1859 and to designate as neotype the specimen ZRC 31377 in the National University of Singapore;

(2) to place on the Official List of Specific Names in Zoology the name *deissneri* Bleeker, 1859, as published in the binomen *Osphromenus* [sic] *deissneri* and as defined by the neotype designated in (1) above (specific name of the type species of *Parosphromenus* Bleeker, 1877).

References

Bleeker, P. 1859. Negende bijdrage (I) tot de kennis der vischfauna van Banka. *Natuurkundig Tijdschrift voor Nederlandsch Indië*, **18**: 359–378.

Bleeker, P. 1877–1878. *Atlas ichthyologique des Indes orientales néêrlandaises*, vol. 9. Percoides III. 80 pp., pls. 355–420. Muller, Amsterdam.

Bleeker, P. 1879. Mémoire sur les poissons à pharyngiens labyrinthiformes de l'Inde archipélagique. *Natuurkunde Verhandelingen Koninklijke Akademie van Wetenschappen te Amsterdam*, **19**: 1–56.

Boeseman, M. 1983. Introduction. Pp. 1–22 *in* Bleeker, P., *Atlas ichthyologique des Indes orientales néêrlandaises. Plates originally prepared for planned tomes XI XIV published here for the first time*. 22 pp., pls. 421–575. Smithsonian Institution Press, Washington.

Cuvier, G. 1829. *Le règne animal distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée*, Ed. 2, vol. 2. xviii, 532 pp. Déterville, Paris.

Cuvier, G. & Valenciennes, A. 1831. *Histoire naturelle des poissons*, vol. 7. 531 pp. Paris.

Kottelat, M. 1991. Notes on the taxonomy and distribution of some Western Indonesian freshwater fishes, with diagnoses of a new genus and six new species (Pisces: Cyprinidae, Belontiidae, and Chaudhuriidae). *Ichthyological Exploration of Freshwaters*, **2**(3): 273–287.

Kottelat, M. & Ng, P.K.L. 1998. *Parosphromenus bintan*, a new belontiid fish from Bintan and Bangka islands, Indonesia, with redescription of *P. deissneri* Bleeker, 1859 (Teleostei: Osphronemidae). *Ichthyological Exploration of Freshwaters*, **8**(3): 263–272.

Kottelat, M., Whitten, A.J., Kartikasari, S.N. & Wirjoatmodjo, S. 1993. *Freshwater fishes of Western Indonesia and Sulawesi*. 221 pp., 84 pls. Periplus, Hong Kong.

Lacepède, B.G.E. 1801. *Histoire naturelle des poissons*, vol. 3. lxvi, 558 pp., 34 pls. Plassan, Paris.

Lamme, W.H. 1975. *Collected fish papers of Pieter Bleeker*, vol. 7. Junk, The Hague.

Ng, P.K.L., Tay, J.B. & Lim, K.K.P. 1994. Diversity and conservation of blackwater fishes in Peninsular Malaysia, particularly in the North Selangor peat swamp forest. *Hydrobiologia*, **285**: 203–218.

Schaller, D. & Kottelat, M. 1989. *Betta strohi* sp. n., ein neuer Kampffisch aus Südborneo (Osteichthyes: Belontiidae). *Die Aquarien- und Terrarien-Zeitschrift*, **43**(1): 31–37.

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Case 1647

Cacatua Vieillot, 1817 and CACATUINAE Gray, 1840 (Aves, Psittaciformes): proposed conservation

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Abstract. The purpose of this application is to conserve the generic name *Cacatua* Vieillot, 1817 (family PSITTACIDAE Rafinesque, 1815) and the subfamily name CACATUINAE Gray, 1840. *Cacatua* has wide currency for the white cockatoos of Australasia and the southwest Pacific but is threatened by the little-used senior synonyms *Kakatoe* Cuvier, 1800, *Cacatoes* Duméril, [1805], *Catacus* Rafinesque, 1815 and *Plyctolophus* Vieillot, 1816. It is proposed that these earlier names be suppressed. The subfamily name CACATUINAE Gray, 1840, based on *Cacatua* and universally used for the five or seven genera of the world's cockatoos, is threatened by PLYCTOLOPHINAE Vigors, 1825, which has remained unused. Suppression of *Plyctolophus* will render the name PLYCTOLOPHINAE invalid.

Keywords. Nomenclature; taxonomy; Aves; PSITTACIDAE; CACATUINAE; cockatoos; *Cacatua*; *Cacatua alba*; Australasia; southwest Pacific; Indonesia.

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1. Since Salvadori (1891), the generic name *Cacatua* has been adopted almost universally for the white cockatoos of Australasia and the southwest Pacific, as has the family-group name CACATUINAE (or CACATUIDAE) for cockatoos in general. This group of birds has a high profile in southern hemisphere biogeography and global aviculture and several species have a significant impact on rural industry in Australia. The name *Cacatua* is found in all relevant basic biological references for white-plumaged cockatoos: formal checklists (e.g. Mayr, 1941; Condon, 1975; Wolters, 1975; Beehler & Finch, 1985; White & Bruce, 1986; Sibley & Monroe, 1990; Christidis & Boles, 1994; Schodde in Schodde & Mason, 1997), handbooks and manuals (e.g. Rand & Gilliard, 1967; Forshaw, 1978; Coates, 1985; Schodde & Tidemann, 1986; Higgins & Davies, in press), and field guides (e.g. Beehler, Pratt & Zimmerman, 1986; Simpson & Day, 1995; Pizzey & Knight, 1997; Coates & Bishop, 1997). It is also the name established in national and international legislation for the protection of cockatoos (for example, Garnett, 1992; IUCN and Conservation International (1996) *Red List of Threatened Animals*; World Conservation Monitoring Centre (1996) *Checklist of CITES Species*).

2. The name 'cacatua' was first introduced to ornithological literature in 1760 by Brisson (p. 204, pl. 21) and was there used for a species of *Psittacus* Linnaeus, 1758. The Commission's ruling in Direction 105 (1963) restricted the availability which had been given to Brisson's (1760) generic names in Opinion 37 (1911) and again in Direction 16 (1955), after the Commission recognised Brisson's *Ornithologia* as non-binominal, to those 115 names in Latin which were listed in his *Tabula synoptica* (vol. 1, pp. 24–61); 'cacatua' was not included and is not available as a generic name from Brisson (1760). The first use of *Cacatua* as an available generic name is to be found in Vieillot's account of the cockatoos in the *Nouveau Dictionnaire* (1817, p. 6). By 1817, however, four other names had been published for the white cockatoos (see para. 5 below).

3. In 1964 Mayr, Keast & Serventy proposed (BZN **21**: 372 374) that *Cacatua* be conserved as a generic name from Brisson (1760). Members of the Standing Committee on Ornithological Nomenclature (SCON) of the International Ornithological Congress reviewed the case and concluded that conservation of the name from Brisson (1760) would establish a precedent for accepting names not included for genera in the *Tabula synoptica* and that this would lead to instability. In 1965 (BZN **22**: 156–161) the SCON revised the original application and proposed that *Cacatua* be taken from Vieillot (1817), and that the four synonyms published between 1760 and 1817 be suppressed. The revised proposal was supported by the original applicants and by the Checklist Committee of the Royal Australasian Ornithological Union (BZN **22**: 156, footnote); there was one objection (BZN **23**: 6; 1966). The Commission approved (November 1966) the revised application by 19 votes in favour to two against. However, it was subsequently recognised that the citation of *Psittacus albus* Müller, 1776 as the type species of *Cacatua* was invalid because Vieillot (1817) had not included this nominal species in the genus, and no Opinion giving a Commission ruling was ever published. Neither the original application nor the revision dealt with the family-group name for the cockatoos. Conservation of the name *Cacatua* from Vieillot (1817) was again advocated by the SCON at the XX International Ornithological Congress at Christchurch in December 1990.

4. Vieillot (1817) attributed the name *Cacatua* to Brisson; he noted that the only cockatoos known to Brisson were white. In the second half of the 19th century, however, authors (see, for example, Gray, 1870, p. 169; Salvadori, 1891, p. 115; Sharpe, 1900, p. 10) gave Vieillot himself as the author of the generic name. Brisson (1760) had applied the name 'cacatua' to a species of *Psittacus* from the Moluccas; authors accepted the taxonomic species denoted by this unavailable name as the type and recognised *Psittacus albus* Müller, 1776 (p. 76), described from the Molucca islands, as the first available name for the species. Vieillot (1817) had included 12 species in *Cacatua*; among them was (p. 10) *Cacatua cristata* from the Molucca islands, which was stated to be *Psittacus cristatus* 'Latham'. Vieillot applied this name to the 'Kakatoës, des Moluques' illustrated in pl. 263 of Buffon's *Planches enluminées* (cited in Buffon, 1779, p. 92 as 'Le Kakatoës à huppe blanche' with a reference to Brisson, p. 204) and to *Psittacus cristatus* as used by Latham (1790). Both Buffon's (1779) and Latham's (1781, 'Great White Cockatoo') vernacular names refer unambiguously to the white-crested north Moluccan cockatoo known today as *Cacatua alba* (Müller, 1776).

Latham (1790) listed 'cacatua' of Brisson in the synonymy of *P. cristatus*, but he attributed the specific name *cristatus* to Linnaeus (1758, p. 99; 1766, p. 143) wherein *cristatus* is composite and includes yellow-crested cockatoos such as Wallacean *C. sulphurea* (Gmelin, 1788). Vieillot (1817) did not indicate a type species for *Cacatua* but in 1891 Salvadori (p. 115) nominated *P. albus* Müller, 1776, placing (on p. 124) in its synonymy Vieillot's included species *C. cristata* (see above); under Article 69a(v) of the Code this is a valid designation of *Cacatua cristata* Vieillot, 1817 as the type species. Salvadori (1891, p. 124, footnote) recorded the uncertain and composite identity of Linnaeus's *P. cristatus* and noted 'for this reason I think that his name ought to be discarded'. No such uncertainty attaches to the description of *C. cristata* by Vieillot, which matches *C. alba* (Müller, 1776) in all respects. We believe that stability will be served by the suppression of the specific name of *Psittacus cristatus* Linnaeus, 1758, which for more than a century has remained unused for a taxon.

5. There are four synonyms for *Cacatua* earlier than Vieillot (1817), three of which have family-group names based on them (para. 6 below).

(a) *Kakatoe* Cuvier, 1800 (table 2). In 1912 the Commission ruled in Opinion 39 that Cuvier's (1800) generic names were made available by their association with French vernacular names and thus identification by bibliographic reference. Gray (1855, p. 89) adopted *Kakatoe* and designated *Psittacus philippinarum* Gmelin, 1788 (a junior synonym of *P. haematuropygius* Müller, 1776) as the type species. Mathews (1917, pp. 160–164; 1920, p. 81; 1927, p. 312), the Checklist Committee of the Royal Australasian Ornithologists' Union (1926) and Peters (1937, p. 173) adopted *Kakatoe*, and a number of later authors followed Peters, despite *Cacatua* having by then been in wide use for over 100 years. The statement by Wolters (1975, p. 68), reported by Sibley & Monroe (1990, p. 112), that the name *Kakatoe* has been suppressed is incorrect.

(b) *Cacatoes* Duméril, [1805] (pp. 50, 51). Duméril's *Zoologie Analytique*, in which *Cacatoes* appeared as an available name, is commonly quoted as 1806 from its title page (Mathews, 1912, p. 264; 1917, p. 160) but it evidently appeared in late 1805, before 6 December (Mathews, 1925, p. 37; Schodde in Schodde & Mason, 1997, p. 89) and possibly on 14 November (Mathews, 1920, p. 81; 1927, p. 312). Duméril did not include any nominal species in *Cacatoes*, but Froriep's (1806) translation included the single species *Psittacus cristatus* Linnaeus, 1758 and this is therefore the type species by subsequent monotypy; Mathews's (1912, p. 261) designation of *Psittacus galeritus* Latham, 1790 is invalid. The name *Cacatoes* Duméril was occasionally used, but not in modern times.

(c) *Catacus* Rafinesque, 1815 (p. 64). This name was introduced as a replacement for *Cacatoes* Duméril. It seems likely that the name was misspelled but there is no clear evidence from the work that it is a lapsus and it was not corrected under 'Additions and corrections' (p. 219). To our knowledge the name has not been used.

(d) *Plyctolophus* Vieillot, 1816 (p. 26). Vieillot introduced this name for parrots with folding crests but in 1817 he rejected it as inappropriate for all the newly discovered 'cockatoos' and adopted *Cacatua* (paras. 2 and 4 above). The name was used (sometimes spelt '*Plictolophus*') by some authors in the 19th century and the early part of the 20th centuries, and a number of new species were described under it (see Salvadori, 1891).

We propose that these four senior synonyms of *Cacatua* Vieillot, 1817 be suppressed.

6. CACATUINAE Gray, 1840 (p. 53) was based on *Cacatua* and is in universal use (see Bock, 1994, p. 140) for the cockatoos at family level or, more usually, as a subfamily of the PSITTACIDAE. The senior name PLYCTOLOPHINAE Vigors, 1825 (p. 41), based on *Plyctolophus* Vieillot, 1816, refers to the same group of birds but has remained unused. Suppression of *Plyctolophus* will render the name PLYCTOLOPHINAE invalid. The family-group names CACATOIDAE Mathews, 1912 (p. 261; based on *Cacatoes* Duméril) and KAKATOEIDAE Mathews, 1916 (p. 8; based on *Kakatoe* Cuvier, 1800 and adopted by Peters, 1937, p. 170) are both junior to CACATUINAE Gray, 1840.

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

(1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  (a) the generic names:
    (i) *Kakatoe* Cuvier, 1800;
    (ii) *Cacatoes* Duméril, [1805];
    (iii) *Catacus* Rafinesque, 1815;
    (iv) *Plyctolophus* Vieillot, 1816;
  (b) the specific name *cristatus* Linnaeus, 1758, as published in the binomen *Psittacus cristatus*;

(2) to place on the Official List of Generic Names in Zoology the name *Cacatua* Vieillot, 1817 (gender: feminine), type species by subsequent designation by Salvadori (1891) *Cacatua cristata* Vieillot, 1817 (a junior subjective synonym of *Psittacus albus* Müller, 1776);

(3) to place on the Official List of Specific Names in Zoology the name *albus* Müller, 1776, as published in the binomen *Psittacus albus* (senior subjective synonym of the specific name of *Cacatua cristata* Vieillot, 1817, the type species of *Cacatua* Vieillot, 1817);

(4) to place on the Official List of Family-Group Names in Zoology the name CACATUINAE Gray, 1840 (type genus *Cacatua* Vieillot, 1817);

(5) to place the following names on the Official Index of Rejected and Invalid Generic Names in Zoology:
  (a) *Kakatoe* Cuvier, 1800, as suppressed in (1)(a)(i) above;
  (b) *Cacatoes* Duméril, [1805], as suppressed in (1)(a)(ii) above;
  (c) *Catacus* Rafinesque, 1815, as suppressed in (1)(a)(iii) above;
  (d) *Plyctolophus* Vieillot, 1816, as suppressed in (1)(a)(iv) above;

(6) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *cristatus* Linnaeus, 1758, as published in the binomen *Psittacus cristatus* and as suppressed in (1)(b) above;

(7) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name PLYCTOLOPHINAE Vigors, 1825 (invalid because the name of the type genus, *Plyctolophus* Vieillot, 1816, has been suppressed in (1)(a)(iv) above).

References

Beehler, B.M. & Finch, B.W. 1985. *Species-checklist of the birds of New Guinea*. Australasian Ornithological Monographs, No. 1. iii, 126 pp. Royal Australasian Ornithologists Union, Moonee Ponds, Victoria.

Beehler, B.M., Pratt, T.K. & Zimmerman, D.A. 1986. *Birds of New Guinea*. Handbook of the Wau Ecology Institute, No. 9. xiii, 293 pp., 55 pls. Princeton University Press, Princeton.

Bock, W.J. 1994. History and nomenclature of avian family-group names. *Bulletin of the American Museum of Natural History*, **222**: 1–281.

Brisson, M.J. 1760. *Ornithologia sive Synopsis methodica sistens Avium Divisionem in Ordines, Sectiones, Genera, Species, ipsarumque varietates*, vol. 4. liv, 578 pp., 66 pls. Bauche, Paris.

Buffon, G.L.L. de. 1779. *Histoire naturelle, générale et particulière, avec la description du cabinet du Roi*, vol. 21 (*Histoire naturelle des oiseaux*, vol. 6). xvi, 702 pp., 24 pls. Paris.

Checklist Committee, Royal Australasian Ornithologists Union. 1926. *Official Checklist of the birds of Australia*, Ed. 2. x, 212 pp. Royal Australasian Ornithologists Union, Melbourne.

Christidis, L. & Boles, W.E. 1994. *The taxonomy and species of birds of Australia and its territories*. Royal Australasian Ornithologists Union Monographs, no. 2. iv, 112 pp. Royal Australasian Ornithologists Union, Hawthorn East, Victoria.

Coates, B.J. 1985. *The birds of Papua New Guinea*, vol. 1. 464 pp. Dove Publications, Alderley, Queensland.

Coates, B.J. & Bishop, K.D. 1997. *A guide to the birds of Wallacea. Sulawesi, the Moluccas and Lesser Sunda Islands, Indonesia*. 535 pp., 64 pls. Dove Publications, Alderley, Queensland.

Condon, H.T. 1975. *Checklist of the birds of Australia*, part 1 (non-passerines). xx, 311 pp. Royal Australasian Ornithologists Union, Melbourne.

Cuvier, G. 1800. *Leçons d'anatomie comparée de G. Cuvier, recueilles et publiées sous ses yeux par C. Duméril et G.-L. Duvernoy*, vol. 1. xxxi, 521 pp., 9 tables. Baudouin, Paris.

Duméril, A.M.C. [1805]. *Zoologie analytique, ou méthode naturelle de classification des animaux*. xxxii, 344 pp. Paris.

Forshaw, J.M. 1978. *Parrots of the world*, Ed. 2. 616 pp., 158 pls. Lansdowne Editions, Melbourne.

Froriep, L.F. 1806. *C. Duméril's Analytische Zoologie: aus dem Französischen, mit Zusätzen*. vi, 343, i pp. Weimar.

Garnett, S. 1992. *The action plan for Australian birds*. 262 pp. Australian National Parks & Wildlife Service, Canberra.

Gray, G.R. 1840. *A list of the genera of birds, with an indication of the typical species of each genus*. viii, 80, ii pp. Taylor, London.

Gray, G.R. 1855. *Catalogue of the genera and subgenera of birds contained in the British Museum*. [iv], 192 pp. British Museum, London.

Gray, G.R. 1870. *Hand-list of genera and species of birds, distinguishing those contained in the British Museum*, part 2. xv, 278 pp. British Museum, London.

Higgins, P.J. & Davies, S.J.J.F. In press. *Handbook of Australian, New Zealand & Antarctic birds*, vol. 4. Oxford University Press, Melbourne.

IUCN & Conservation International. 1996. *1996 IUCN Red List of threatened animals*. 70, 368, 10 pp. Gland & Washington, D.C.

Latham, J. 1781. *A general synopsis of birds*, vol. 1. vi, 416 pp., 16 pls. London.

Latham, J. 1790. *Index ornithologicus, sive systema ornithologiae; complectens avium divisionem in classes, ordines, genera, species ...*, vol. 1. Pp. xviii, 1–466. Author, London.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Linnaeus, C. 1766. *Systema Naturae*, Ed. 12, part 1. Pp. 1–530. Salvii, Holmiae.

Mathews, G.M. 1912. A reference-list to the birds of Australia. *Novitates Zoologicae*, **18**: 171–455.

Mathews, G.M. 1916, 1917. *The birds of Australia*, vol. 6. Pp. 1–104, pls. 275–282 (1916); pp. 105–516, pls. 283–290 (1917). Witherby, London.

Mathews, G.M. 1920. *Checklist of the Birds of Australia*, part 1 (issued as Supplement 1 to *The birds of Australia*). iv, 116 pp. Witherby, London.

Mathews, G.M. 1925. *Bibliography of the Birds of Australia*, parts 1 and 2 (issued as Supplements 4 and 5 to *The birds of Australia*). viii, 149 pp. Witherby, London.

Mathews, G.M. 1927. *Systema Avium Australasianarum*, part 1. iv, 426 pp. British Ornithologists' Union, London.

Mayr, E. 1941. *List of New Guinea birds*. xi, 260 pp. American Museum of Natural History, New York.

Müller, P.L.S. 1776. *Des Ritters Carl von Linné Natursystems Supplements und Register Band*. [10], 536 pp. Nürnberg.

Peters, J.L. 1937. *Checklist of birds of the world*, vol. 3. xiii, 311 pp. Harvard University Press, Cambridge.

Pizzey, G. & Knight, F. 1997. *The Graham Pizzey & Frank Knight field guide to the birds of Australia*. 576 pp. Angus & Robertson, Sydney.

Rafinesque, C.S. 1815. *Analyse de la Nature, ou Tableau de l'Univers et des Corps Organisés*. 224 pp. Rafinesque, Palerme.

Rand, A.L. & Gilliard, E.T. 1967. *Handbook of New Guinea birds*. x, 612 pp., 53 pls. Weidenfeld & Nicolson, London.

Salvadori, T. 1891. Catalogue of the Psittaci, or parrots. *In* Sharpe, R.D. (Ed.), *Catalogue of the birds in the collection of the British Museum*, vol. 20. xvii, 658 pp., 18 pls. British Museum (Natural History), London.

Schodde, R. & Mason, I.J. 1997. Aves (Columbidae to Coraciidae). *In* Houston, W.W.K. & Wells, A. (Eds.), *Zoological catalogue of Australia*, vol. 37.2. xiii, 440 pp. CSIRO Publishing, Melbourne.

Schodde, R. & Tidemann, S.C. (Eds.). 1986. *Readers' Digest complete book of Australian birds*. Ed. 2. 615 pp. Readers' Digest Services, Sydney.

Sharpe, R.B. 1900. *A hand-list of the genera and species of birds*. vol. 2. xv, 312 pp. British Museum (Natural History), London.

Sibley, C.G. & Monroe, B.L. Jr. 1990. *Distribution and taxonomy of birds of the world*. xxiv, 1111 pp. Yale University, New Haven.

Simpson, K.G. & Day, N. 1995. *Field guide to the birds of Australia*. Viking, Ringwood, Victoria.

Vieillot, L.P. 1816. *Analyse d'une nouvelle ornithologie élémentaire*. 70 pp. Déterville, Paris.

Vieillot, L.P. 1817. Kakatoès. Pp. 6–13 *in*: *Nouveau Dictionnaire d'Histoire Naturelle*, vol. 17 (KAA-LIG). 622 pp. Déterville, Paris.

Vigors, N.A. 1825. Sketches in ornithology; or, observations on the leading affinities of some of the more extensive group of birds. *Zoological Journal*, **2**: 368–405.

White, C.M.N. & Bruce, M.D. 1986. *The birds of Wallacea (Sulawesi, The Moluccas & Lesser Sunda Islands, Indonesia)*. B.O.U. Check-list No. 7. 524 pp. British Ornithologists' Union, London.

Wolters, H.E. 1975. *Die Vogelarten der Erde*, Lief. 1. 80 pp. Parey, Hamburg.

World Conservation Monitoring Centre. 1996. *Checklist of CITES species. A reference to the appendices to the Convention on International Trade in Endangered Species of Wild Fauna and Flora*. 400 pp. CITES Secretariat and World Conservation Monitoring Centre, Cambridge, U.K.

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Case 3004

LORISIDAE Gray, 1821 and GALAGIDAE Gray, 1825 (Mammalia, Primates): proposed conservation as the correct original spellings

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Abstract. The purpose of this application is to conserve the family names LORISIDAE Gray, 1821 and GALAGIDAE Gray, 1825 which are in use for two groups of prosimian primates, the lorises of Asia, East Indies and Africa, and the bushbabies of Africa. The families are based on the genera *Loris* and *Galago*, both of E. Geoffroy Saint-Hilaire (1796), and were first published as LORIDAE and GALAGONINA.

Keywords. Nomenclature; taxonomy; Mammalia; Primates; LORISIDAE; LORIDAE; GALAGIDAE; GALAGONIDAE; lorises; bushbabies; Asia; East Indies; Africa.

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1. Since Gregory's (1915) classification of Primates the subfamily names LORISINAE and GALAGINAE, based on the genera *Loris* and *Galago*, both of E. Geoffroy Saint-Hilaire (1796, pp. 48 and 49 respectively), have been widely used. Among the major works employing either or both of these names are Gregory (1922), Hollister (1924), Allen (1939), Pocock (1939), Chasen (1940), Hill (1953), Simpson (1965, 1967), Walker (1970, 1974), Kingdon (1971), Bearder & Doyle (1974), Charles-Dominique (1974), Groves (1974), Marechal, Goffart, Reznik & Gerebtzoof (1976), McArdle (1978), Schwartz & Tattersall (1985), MacPhee & Jacobs (1986), Masters (1988), Zimmermann (1988), Zimmermann, Bearder, Doyle & Andersson (1988), Gebo (1989), Schwartz (1992), Crovella, Masters & Rumpler (1994), Masters et al. (1994), Schwartz & Beutel (1995). Texts and works of reference in wide current use

that use these names include Simpson (1945), Szalay & Delson (1979), Simons (1982), Anderson & Jones (1984), Fleagle (1988) and Martin (1990). The names have also been used for families, LORISIDAE and GALAGIDAE.

2. Recently, Jenkins (1987, p. 1) pointed out that since both *Loris* and *Galago* are neither Latin nor Greek names, the nomenclatural stem is that determined by the author who established the family-group name (Article 29b(ii) of the Code). Thus, in making available the family name LORIDAE and the tribe name GALAGONINA, Gray (1821, p. 298) and (1825, p. 338) respectively determined the stems as '*Lor-*' and '*Galagon-*'.

3. Use of family-group names based on the stems '*Lor-*' and '*Galagon-*' has been very uncommon. Only Mivart (1864) used GALAGININAE (sic) for the bushbabies and Corbet & Hill (1992) used LORIDAE for the lorises. The names LORISINAE and GALAGINAE were both first used by Flower & Lydekker (1891, pp. 691 and 689 respectively). Simpson (1945, p. 62, footnote) recorded that 'Many authors use 'Loridae' for the family and 'Lorisinae' for the subfamily, which is inconsistent'. He incorrectly stated the generic name stem to be '*Loris-*' and retained the '*-is*' in the family-group names.

4. An application for the conservation of the generic name *Loris* E. Geoffroy Saint-Hilaire, 1796 by Gentry, Groves, Jenkins & Hill was published in BZN **51**: 332–335 (December 1994). These authors have proposed that *Loris*, and the name of its type species *Lemur tardigradus* Linnaeus, 1758, which refers to the slender loris from Sri Lanka and southern India, be placed on Official Lists, and that *Tardigradus* Boddaert, 1785, a virtually unused senior synonym of *Loris*, should be suppressed. The outcome of that case will not affect the current application since a family-group name based on *Loris* will remain valid independently of the validity of *Loris* itself. The type species by monotypy of *Galago* is *G. senegalensis* E. Geoffroy Saint-Hilaire, 1796, the bushbaby from Senegal, Ethiopia, Angola and South Africa.

5. The names LORIDAE and GALAGONIDAE are formally correct but have been very rarely used. To introduce now these names in place of the virtually universally used LORISIDAE and GALAGIDAE would result in confusion and would not be in accord with the Code, which urges stability in nomenclature.

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

(1) to rule that for the purposes of Article 29 the stems of the following generic names are as shown:
   (a) *Loris* E. Geoffroy Saint-Hilaire, 1796: the stem is LORIS-;
   (b) *Galago* E. Geoffroy Saint-Hilaire, 1796: the stem is GALAG-;

(2) to place on the Official List of Generic Names in Zoology the name *Galago* E. Geoffroy Saint-Hilaire, 1796 (gender: masculine), type species by monotypy *Galago senegalensis* E. Geoffroy Saint-Hilaire, 1796;

(3) to place on the Official List of Specific Names in Zoology the name *senegalensis* E. Geoffroy Saint-Hilaire, 1796, as published in the binomen *Galago senegalensis* (specific name of the type species of *Galago* E. Geoffroy Saint-Hilaire, 1796);

(4) to place on the Official List of Family-Group Names in Zoology the following names:
   (a) LORISIDAE Gray, 1821, type genus *Loris* E. Geoffroy Saint-Hilaire, 1796;
   (b) GALAGIDAE Gray, 1825, type genus *Galago* Geoffroy Saint-Hilaire, 1796;

(5) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the following names:
   (a) LORIDAE Gray, 1821 (spelling emended to LORISIDAE by the ruling in (1)(a) above);
   (b) GALAGONINA Gray, 1825 (spelling emended to GALAGIDAE by the ruling in (1)(b) above).

References

Allen, G.M. 1939. A checklist of African mammals. *Bulletin of the Museum of Comparative Zoology, Harvard College*, **83**: 1–763.

Anderson, S. & Jones, J.K. (Eds.). 1984. *Orders and families of recent mammals of the world.* xii, 686 pp. Wiley, New York.

Bearder, S.K. & Doyle, G.A. 1974. Ecology of bushbabies, *Galago senegalensis* and *Galago crassicaudatus*, with some notes on their behaviour in the field. Pp. 109–130 *in* Martin, R.D., Doyle, G.A. & Walker, A.C. (Eds.), *Prosimian biology*. Duckworth, London.

Charles-Dominique, P. 1974. Ecology and feeding behaviour of five sympatric lorisids in Gabon. Pp. 131–150 *in* Martin, R.D., Doyle, G.A. & Walker, A.C. (Eds.), *Prosimian biology*. Duckworth, London.

Chasen, F.N. 1940. A handlist of Malaysian mammals. *Bulletin of the Raffles Museum, Singapore, Straits Settlement*, **15**: 1–209.

Corbet, G.B. & Hill, J.E. 1992. *The mammals of the Indomalayan region: a systematic review.* 488 pp., 45 figs., 177 maps. Natural History Museum, London.

Crovella, S., Masters, J.C. & Rumpler, Y. 1994. Highly repeated DNA sequences as phylogenetic markers among the Galaginae. *American Journal of Primatology*, **32**: 177–185.

Fleagle, J.G. 1988. *Primate adaptation and evolution.* xix, 486 pp. Academic Press, New York.

Flower, W.H. & Lydekker, R. 1891. *An introduction to the study of mammals living and extinct.* xvi, 763 pp. Black, London.

Gebo, D.L. 1989. Postcranial adaptation and evolution in Lorisidae. *Primates*, **30**: 347–367.

Geoffroy Saint-Hilaire, E. 1796. Mémoire sur les rapports naturels des makis, *Lemur* L. et description d'une espèce nouvelle de mammifère. *Magasin Encyclopédique, ou journal des sciences, des lettres et des arts*, (2)**1**(1): 20–50.

Gray, J.E. 1821. On the natural arrangement of vertebrose animals. *London Medical Repository*, **15**(1): 296–310.

Gray, J.E. 1825. Outline of an attempt at the disposition of Mammalia into tribes and families, with a list of the genera apparently appertaining to each tribe. *Annals of Philosophy*, (N.S.) **10**: 337–344.

Gregory, W.K. 1915. On the classification and phylogeny of the Lemuroidea. *Bulletin of the Geological Society of America*, **26**: 426–446.

Gregory, W.K. 1922. *The origin and evolution of human dentition.* xviii, 548 pp., 14 pls. Williams & Wilkins, Baltimore.

Groves, C. 1974. Taxonomy and phylogeny of prosimians. Pp. 449–473 *in* Martin, R.D., Doyle, G.A. & Walker, A.C. (Eds.), *Prosimian biology*. Duckworth, London.

Hill, W.C.O. 1953. *Primates: comparative anatomy and taxonomy*, vol. 1 (Strepsirhini). xxiii, 798 pp. University of Edinburgh Press, Edinburgh.

Hollister, N. 1924. *East African mammals in the United States National Museum*, part 3 (Primates, Artiodactyla, Perissodactyla, Proboscidea, and Hyracoidea). *Bulletin of the United States National Museum*, **99**: 1–164.

Jenkins, P.D. 1987. *Catalogue of primates in the British Museum (Natural History) and elsewhere in the British Isles*, part 4 (suborder Strepsirrhini, including the subfossil Madagascan lemurs and family Tarsiidae). x, 189 pp. British Museum (Natural History), London.

Kingdon, J. 1971. *East African mammals: an atlas of evolution in Africa*, vol. 1. x, 446 pp. University of Chicago Press, Illinois.

MacArdle, J.E. 1978. Functional anatomy of the hip and thigh of the Lorisidae: correlations with behaviour and ecology. Pp. 133–138 *in* Chivers, D.J. & Joysey, K.A. (Eds.), *Recent advances in primatology*, vol. 3 (Evolution). Academic Press, London.

MacPhee, R.D.E. & Jacobs, L.L. 1986. *Nycticeboides simpsoni* and the morphology, adaptations, and relationships of Miocene Siwalik Lorisidae. Pp. 131–161 *in* Flanagan, K.M. & Lillegraven, J.A. (Eds.), *Vertebrates, phylogeny, and philosophy*. Contributions to Geology, University of Wyoming, Special Paper 3.

Marechal, G., Goffart, M., Reznik, M. & Gerebtzoof, M.A. 1976. The striated muscles in a slow-mover, *Perodicticus potto* (Prosimii, Lorisidae, Lorisinae). *Comparative Biochemistry and Physiology*, **54A**: 81–93.

Martin, R.D. 1990. *Primate origins and evolution*. xiv, 804 pp. Chapman & Hall, London.

Masters, J. 1988. Speciation in the greater galagos (Prosimii: Galaginae): review and synthesis. *Biological Journal of the Linnean Society*, **34**: 149–174.

Masters, J.C., Raynor, R.J., Ludewick, H., Zimmermann, E., Molez-Verriere, N., Vincent, F. & Nash, L.T. 1994. Phylogenetic relationships among the Galaginae as indicated by erythrocytic allozymes. *Primates*, **35**: 177–190.

Mivart, St.-G. 1864. Notes on the crania and dentition of the Lemuridae. *Proceedings of the Zoological Society of London*, **1864**: 611–648.

Pocock, R.I. 1939. *The fauna of British India, including Ceylon and Burma. Mammalia*, vol. 1 (Primates and Carnivora (in part), families Felidae and Viverridae). xxxiii, 463 pp. Taylor & Francis, London.

Schwartz, J.H. 1992. Phylogenetic relationships of African and Asian lorisids. Pp. 65–81 *in* Matano, S., Tuttle, R.H., Ishida, H. & Goodman, M. (Eds.), *Topics in primatology*, vol. 3 (Evolutionary biology, reproductive endocrinology, and virology). University of Tokyo Press, Tokyo.

Schwartz, J.H. & Beutel, J. 1995. Species diversity in lorisids; a preliminary analysis of *Arctocebus, Perodicticus*, and *Nycticebus*. Pp. 171–192 *in* Alterman, L., Doyle, G.A. & Ixard, M.K. (Eds.), *Creatures of the dark: the nocturnal prosimians*. Plenum, New York.

Schwartz, J.H. & Tattersall, I. 1985. Evolutionary relationships of the living lemurs and lorises and their potential affinities with the European Eocene Adapidae. *Anthropological Papers of the American Museum of Natural History*, **60**: 1–100.

Simons, E.L. 1982. *Primate evolution: an introduction to man's place in nature*. xii, 322 pp. Macmillan, New York.

Simpson, G.G. 1945. The principles of classification and a classification of mammals. *Bulletin of the American Museum of Natural History*, **85**: 1–350.

Simpson, G.G. 1965. Family Galagidae. Pp. 15–16 *in* Leakey, L.S.B., *Olduvai Gorge, 1951–1961*, vol. 1. University of Cambridge Press, Cambridge.

Simpson, G.G. 1967. The tertiary lorisiform primates of Africa. *Bulletin of the Museum of Comparative Zoology, Harvard College*, **136**: 39–61.

Szalay, F.S. & Delson, E. 1979. *Evolutionary history of the primates*. xv, 580 pp. Academic Press, New York.

Walker, A.C. 1970. Post-cranial remains of the Miocene Lorisidae of East Africa. *American Journal of Physical Anthropology*, **33**: 249–262.

Walker, A.C. 1974. Locomotor adaptations in past and present prosimian primates. Pp. 349–381 *in* Jenkins, F. (Ed.), *Primate locomotion*. Academic Press, New York.

Zimmermann, E. 1988. Zur Artenproblematic der Halbaffenfamilie Lorisidae-Bioakustik und Fortpflanzungsbiologie. Pp. 76–89 *in* Horn, H.G. (Ed.), *Erfolge und Probleme bei der Zucht von Wildtieren in Menschlicher Obhut*. Bundesverband für fachgerechten Natur und Artenschutz, Köln.

Zimmermann, E., Bearder, S.K., Doyle, G.A. & Andersson, A.B. 1988. Variations in vocal patterns of Senegal and South African lesser bushbabies and their implications for taxonomic relationships. *Folia Primatologica*, **51**: 87–105.

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Comment on the proposed conservation of *Disparalona* Fryer, 1968 (Crustacea, Branchiopoda)
(Case 2990; see BZN **54**: 89–91; **55**: 105)

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Grygier has opposed (BZN **55**: 105) the proposal to conserve the name *Disparalona* Fryer, 1968 and seeks to defend the adoption of *Phrixura* P.E. Müller, 1867, which he states is the senior generic synonym. However, on publication *Phrixura* immediately became a junior subjective synonym of *Alona* Baird, 1843, and since then it has become a junior synonym of *Lynceus* P.L.S. Müller, 1776, *Alonella* Sars, 1862 or *Alona*, depending on the generic placement of the species now called *Disparalona rostrata* (Koch, 1841) (see para. 2 of the application).

In 1867 Müller (pp. 182–183, pl. 4, fig. 12) recognised the branchiopod species *rostrata* and placed it in *Alona*. He also described an individual of the same species that was so grossly deformed that he failed to recognise it. For this he erected a new genus *Phrixura*, the definition of which is meaningless and misleading. Had he been aware of the true identity of *Phrixura rectirostris* (p. 184, pl. 4, fig. 15) he would have assigned it to *A. rostrata*.

Notwithstanding Grygier's opposition, it would be destabilising, and in direct contravention to Article 23 of the Code, to displace *Disparalona* by *Phrixura*. The name *Disparalona* has been used as valid since its publication and the numerous works in which it has appeared include important monographs (para. 7 of the application). *Phrixura* was not used at all for more than 120 years and to date has been adopted only twice (in 1989 and 1996).

I hope that my comment will clarify the nomenclatural situation and will lead to the suppression of the name *Phrixura*, the adoption of which would result in nothing but confusion.

Comment on the proposed conservation of the specific name of *Papilio sylvanus* Esper, [1777] (currently *Ochlodes venata* or *Augiades sylvanus*; Insecta, Lepidoptera)
(Case 3046; see BZN **54**: 231–235; **55**: 105–106)

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Devyatkin requests the conservation of the junior primary homonym *Papilio sylvanus* Esper, [1777], for two reasons: (1) the name *Augiades sylvanus* (Esper) has 'appeared in many guides and lists', and (2) the type specimen of the oldest available

name, *Augiades faunus* Turati, 1905, has been destroyed and the name could pertain to 'a different taxon (apparently meaning 'species'; see para. 7 of the application) from *Papilio sylvanus* Esper'. We wish to comment on both points.

The name *Augiades sylvanus* (Esper) has indeed been used in a number of guides and lists, but mainly by people who either had no access to recent information or chose to ignore it. Regrettable as limited access to current information may be, there should be an incentive to improve the situation rather than a sound reason for conserving a junior primary homonym. The use of Esper's name almost petered out some 30 years ago, but Devyatkin (1997) himself recently applied it.

Devyatkin correctly states (para. 5) that since Evans's (1949) work the European taxon has been known as *Ochlodes venata faunus* (Turati, 1905) in addition to the name *Augiades sylvanus* (Esper, [1777]) for the same taxon. He lists seven references for the application of Esper's name and only two for the application of Turati's name. In this way the impression has been created that Esper's name has appeared more often than Turati's name. The reverse is true. In addition to the (1983) field guide of Higgins & Riley mentioned by Devyatkin, which with many reprints has had an enormous impact on the study of European butterflies, many more guides and larger faunistic works can be cited. We mention just a number of books: Gómez Bustillo & Fernández-Rubio (1974), Forster & Wohlfahrt (1976), Lempke (1976), Lerault (1980, 1997), Collier et al. (1989), Bink (1992), Lukhtanov & Lukhtanov (1994), Vives Moreno (1994), Hesselbarth, van Oorschot & Wagener (1995), and Lepidopteren-Arbeitsgruppe (1997). Consequently, the name *faunus* in the combination *Ochlodes venata faunus* is well established. Changing it back to *sylvanus* would create much confusion.

Turati (1905, pp. 36–38, pl. 6, figs. 5 9, pl. 7, fig. 3) described '*Augiades Faunus*' as a new species from a single male caught at Gavarnie in the Central Pyrenees. Possibly because the journal in which the name was published was not widespread, or because no further specimens became known, the name was not related to the species known as *Augiades sylvanus* at the time, until Rondou (1932) and Verity (1940) applied it to a rare individual variety of the latter species. This action wrongly created the impression that Turati had described a variety and not a species. Evans (1949) correctly applied Turati's name to what was considered a subspecies of *Ochlodes venata* (Bremer & Grey, 1853). Kauffmann (1956) disapproved of this action because, with apparent reference to Verity (1940), he considered the specimen described by Turati to be an extreme individual variety. Kauffmann expected confusion if Evans's action were followed. In fact Kauffmann himself created confusion by suggesting that the type of a species should be 'typical'.

Although with different opinions about the ranking of *Augiades faunus* Turati, Rondou (1932) and all subsequent authors agree that Turati's name pertains to the same taxon as Esper's name. Devyatkin's suggestion that *Augiades faunus* Turati may prove to be specifically different is not supported by any evidence or by any author. The Lepidoptera of the Pyrenees are rather well known since Rondou (1932) published his catalogue. If two species of *Ochlodes* occur there together it is highly unlikely that one of them has always escaped the attention of all people who collected at Gavarnie (including the senior author of this comment). Thus there is no reason to suppose that the nominal taxa *Augiades faunus* Turati and *Papilio sylvanus* Esper pertain to different species. The fact that the type is lost does not pose any problem.

If there were reason to doubt the identity of Turati's type a neotype could be selected, but as matters stand, with almost complete agreement about the conspecificity of *Augiades faunus* and *Papilio sylvanus*, a neotype selection is superfluous.

Because of distributional overlap, Chiba & Tsukiyama (1996) concluded that *Ochlodes venata* (Bremer & Grey, 1853), thought to be a single species, actually comprised several distinct species. Apparently independently, Devyatkin (1997) came to the same conclusion. The only change needed, as far as Europe is concerned, is the upgrading of the well established subspecies *Ochlodes venata faunus* to species rank. Contrary to Devyatkin (1997), who used the invalid junior primary homonym of Esper ([1777]), Chiba & Tsukiyama (1996) acted according to the Code. There is no reason for confusion when applying the rules. Any different action certainly creates confusion.

In conclusion, we consider that no action by the Commission is required in this case.

Additional references

Bink, F. 1992. *Ecologische atlas van de dagvlinders van Noordwest-Europa*. 512 pp. Schuyt, Haarlem.

Chiba, H. & Tsukiyama, H. 1996. A review of the genus *Ochlodes* Scudder, 1872, with special reference to the Eurasian species (Lepidoptera: Hesperiidae). *Butterflies*, **14**: 3–16.

Collier, R.V., Emmet, A.M., Long, R., Looker, I.E., Porter, K.J., Shreeve, T.G. & Simcox, D.J. 1989. Hesperiidae. Pp. 50 72 *in* Emmet, A.M. & Heath, J., *The moths and butterflies of Great Britain and Ireland*, vol. 7, part 1.

Devyatkin, A.L. 1997. Family Hesperiidae. Pp. 105–133 *in* Tuzov, V.K. (Ed.), *Guide to the butterflies of Russia and adjacent territories (Lepidoptera, Rhopalocera)*. Pensoft, Sofia & Moscow.

Forster, W. & Wohlfahrt, T.A. 1976. *Die Schmetterlinge Mitteleuropas*. Band 2 (Tagfalter). Diurna (Rhopalocera und Hesperiidae), Ed. 2. 180 pp. Franckh, Stuttgart.

Gómez Bustillo, M.R. & Fernández-Rubio, F. 1974. *Mariposas de la Península Ibérica. Ropalocéros*, part 2. 258 pp. Ministerio de Agricultura, Madrid.

Kauffmann, G. 1956. Beobachtungen über eine Zucht 'ab ovo' von *Ochlodes venatum* Bremer & Grey (europaische Subspezies) nebst einigen systematischen Bemerkungen. *Entomologische Zeitschrift* (Stuttgart), **66**: 49–55.

Lempke, B.J. 1976. *Naamlijst van de Nederlandse Lepidoptera*. 100 pp. KNNV, Hoogwoud.

Lepidopterologen-Arbeitsgruppe. 1997. *Schmetterlinge und ihre Lebensräume. Arten, Gefährdung, Schutz. Schweiz und angrenzende Gebiete*, Band 2. ix, 679 pp. Pro Natura, Basel.

Lerault, P. 1980, 1997. *Liste sytématique et synonymique des Lépidoptères de France, Belgique et Corse*, Ed. 1 (1980), Ed. 2 (1997). Alexanor, Paris.

Lukhtanov, V. & Lukhtanov, A. 1994. Die Tagfalter Nordwestasiens. *Herbipoliana*, Band 3. 440 pp. Eitschberger, Marktleuthen.

Rondou, J.P. 1932. Catalogue des Lépidoptères des Pyrénées (1re partie). *Annales de la Société Entomologique de France*, **51**: 165–244.

Verity, R. 1940. *Le farfalle diurne d'Italia*. vol. 1. xxxiv, 131 pp. Marzocco, S.A., Florence.

Vives Moreno, A. 1994. *Catalogo sistematico y sinonimico de los lepidopteros de la Peninsula Iberica y Baleares (Insecta: Lepidoptera)*. part 2. x, 775 pp. Ministerio de Agricultura, Pesca y Alimentacion.

Comments on the proposed designation of *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type species of *Iguanodon* Mantell, 1825, and proposed designation of a lectotype (Reptilia, Ornithischia)
(Case 3037; see BZN **55**: 99–104)

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The name *Iguanodon* occupies an important position in the history of the Dinosaur group as a whole. *Iguanodon* was the second dinosaur taxon to be formally described and illustrated (Mantell, 1825) and was one of the three founding members of Richard Owen's Dinosauria (1842). Ever since Mantell's formal description this taxon has been the subject of minor, but important, nomenclatural dispute. In short, this was because Mantell failed to suggest a specific name for the material that he described, because Owen was fond of his own rather idiosyncratic nomenclature, because it has proved difficult to identify Mantell's original type series of teeth from the material that he sold to the Natural History Museum in London, and finally, but of greatest importance, because dinosaurian teeth of a type morphologically very similar to those described by Mantell have proved to be rather ubiquitous in late Mesozoic deposits worldwide.

Stabilisation of the name *Iguanodon* is therefore of considerable historical, taxonomic and nomenclatural importance. The action suggested in the application by Charig & Chapman cuts through the inevitable earlier subjectivity surrounding the name and is, to my mind, both prudent and sensible; it will combine the first well-established species of *Iguanodon* as the designated type of the genus with a virtually complete skeleton that has been long and internationally recognised in the literature associated with this dinosaur.

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The proposal to designate a type species in accord with usage for the genus *Iguanodon* resolves long-standing anomalies and misconceptions. It will be surprising to many that the formal systematics of such a well known genus as *Iguanodon* have been so confused and unsatisfactory for so many years.

The proposal to designate *Iguanodon bernissartensis* as the type species of *Iguanodon* is logical and obvious. It is the senior species based on diagnostic material, and it well fulfils the function of a type species under the Code. The designation of IRSNB 1534, skeleton Q, in the Institut Royal des Sciences Naturelles de Belgique as the lectotype of *I. bernissartensis* is also in accord with its (albeit invalid) citation as the type specimen.

I support this application to clarify, at last, the taxonomy and nomenclature of *Iguanodon*.

Comments on the proposed conservation of the names *Hydrosaurus gouldii* Gray, 1838 and *Varanus panoptes* Storr, 1980 (Reptilia, Squamata) by the designation of a neotype for *Hydrosaurus gouldii*
(Case 3042; see BZN **54**: 95–99, 249–250; **55**: 106–111)

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We should like to comment on the application by Dr Robert Sprackland, Prof Hobart Smith and Dr Peter Strimple, published in BZN **54**: 95–99 (June 1997), and on the subsequent comment made by Dr Glenn Shea and Dr Harold Cogger (BZN **55**: 106–111, June 1998).

1. The taxonomic situation of the taxa involved is clear and has been extensively described by Storr (1980), who first discovered the presence of two morphologically distinguishable sibling species of Australian sand goannas (*Varanus gouldii* auct.), the biological and ecological distinctness of which was subsequently shown by Shine (1986). The problem arose because Storr, before deciding which of his two sibling species would be the new, unnamed one, failed to investigate the putative type specimen of the form that had already been named and described, i.e. *Varanus gouldii* (Gray, 1838). Unfortunately, he renamed this species as *V. panoptes* Storr, 1980.

2. *Hydrosaurus gouldii* was not typified by its author (Gray, 1838) but much later the species was based by Mertens (1958) on a dry mounted specimen in the Natural History Museum, London (BMNH 1946.9.7.61), which he designated as the lectotype. The specimen accorded with the original description by Gray: 'two yellow streaks on the sides of the neck', which are still easily discernible (see Böhme, 1991, fig. 1). The specimen is labelled as originating from Northwest Australia, which is an area where both species occur in broad sympatry.

3. One of us (W.B.) demonstrated the lectotype of *H. gouldii* Gray, 1838 to be taxonomically identical with the holotype of *V. panoptes* Storr, 1980, the latter name becoming consequently a junior synonym of the former (see Böhme, 1991). Because of this situation, the next oldest available name had to be applied to the second, widespread species: *V. flavirufus* Mertens, 1958, first published as *V. gouldii flavirufus*.

4. In their application Sprackland et al. accepted that the actions of Mertens (1958) and Böhme (1991) were formally correct under the Code, but severe doubts have now been cast by Shea & Cogger on the validity of Mertens's lectotype designation. However, Shea & Cogger did not mention that Mertens stated: 'Mr J.C. Battersby verdanke ich die Festlegung des Lectotypus dieses Warans sowie einige Angaben darüber' ('I owe the designation of the lectotype of this monitor lizard to Mr J.C. Battersby, as well as some remarks on this matter'). Thus, Mertens's choice of lectotype was suggested to him by Mr Battersby, who worked in the Natural History Museum, London, and who should have been familiar with historical details of the BMNH collections.

5. In spite of what has been claimed by Sprackland et al. in Case 3042, the nomenclatural concept proposed by Böhme (1991) has been accepted by quite a number of authors, a fact ignored by Shea & Cogger. The most important recent

general references which deal with monitor lizards on a world-wide scale are Bennett (1995, 1996, 1998), de Lisle (1996), Eidenmüller (1996), Kirschner, Müller & Seufer (1996), Ziegler & Böhme (1997) and Böhme (1997). It may be noted that the two last-named references are purely taxonomic and nomenclatural works respectively, and moreover the only ones listing and discussing all living species and subspecies of the VARANIDAE; the last reference is an updated and revised checklist complementing the famous *Tierreich* list by Robert Mertens (1963). All these works use *V. gouldii* (including its junior synonym *panoptes*) for the disjunctly distributed species (northern, western Australia, New Guinea) and *V. flavirufus* for the widely distributed Australian species. It is therefore no longer tenable to state that 'the name *flavirufus* has rarely appeared and to our knowledge never been used in place of *gouldii*' (para. 7 of the application). On the contrary, great confusion would arise if the nomenclature of Böhme (1991) were to be altered again.

6. A particularly weak argument used by Sprackland et al. (para. 7 of their application) is that 'both *V. gouldii* and *V. panoptes* feature in documentation relating to conservation of protected species and their names are listed in the *World checklist of threatened amphibians and reptiles* (1993, pp. 48, 49) and in the most recent publication (1996) issued by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)'. We think that conservation and legislative authorities are users rather than creators of taxonomic progress and possible nomenclatural consequences involved. They should therefore rely on scientific reasoning and not vice versa.

7. In summary, the comment by Shea & Cogger has challenged the validity of the lectotype designation for *Varanus gouldii* by Mertens (1958), but some doubts still remain in their reasoning. We ask the Commission to consider our arguments before designating a neotype, as proposed by Sprackland et al. and Shea & Cogger. If the neotype is, indeed, designated, we prefer that it should be the specimen selected by Shea & Cogger. The tail tip, the pattern on which is an important diagnostic feature within the taxa concerned, is missing from the specimen proposed by Sprackland et al.

Additional references

Bennett, D. 1995. *A little book of monitor lizards*. 208 pp. Viper Press, Aberdeen.

Bennett, D. 1996. *Warane der Welt — Welt der Warane*. 383 pp. Edition Chimaira, Frankfurt am Main.

Bennett, D. 1998. *Monitor Lizards: natural history, biology and husbandry*. 352 pp. Edition Chimaira, Frankfurt am Main.

Böhme, W. 1997. *Robert Mertens' Systematik und Klassifikation der Warane: Aktualisierung seiner 1942er Monographie und eine revidierte Checkliste. Addendum to the reprint of Robert Mertens' 'Die Familie der Warane (Varanidae). Erster bis dritter Teil'*. Pp. 8, i–xxii. Edition Chimaira, Frankfurt am Main.

De Lisle, H.F. 1996. *The natural history of monitor lizards*. 201 pp. Krieger, Melbourne, Florida.

Eidenmüller, B. 1996. *Warane Lebensweise, Pflege, Zucht*. 157 pp. Herpeton, Hanau.

Kirschner, A., Müller, T. & Seufer, H. 1996. *Faszination Warane*. 254 pp. Kirschner & Seufer, Keltern-Weiler.

Mertens, R. 1963. Liste der rezenten Amphibien und Reptilien: Helodermatidae, Varanidae, Lanthanotidae. *Das Tierreich*, **79**: 1–26.

Ziegler, T. & Böhme, W. 1997. Genitalstrukturen und Paarungsbiologie bei squamaten Reptilien, speziell den Platynota, mit Bemerkungen zur Systematik. *Mertensiella*, **8**: 1–207.

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We welcome the support of Dr Glenn Shea and Dr Harold Cogger (their comment in BZN **55**: 106–111) for our application to stabilise the usage of the specific names of *Varanus gouldii* and *V. panoptes* in their accustomed senses. We are happy to accept a new, well-preserved specimen (BMNH 1997.1 in the Natural History Museum, London) as the proposed neotype for *V. gouldii*. Indeed, a specimen in good condition is greatly to be preferred to the dried mount with limited observable details that we proposed.

Drs Böhme and Ziegler are opposed (comment (1) above) to our application to retain the usage of *gouldii* for the widespread *Varanus* species, and *panoptes* for that with the more disjunct range. They are proposing that the well-known name *panoptes* be abandoned, that the name *gouldii* be switched from the one taxon to the other, and that the little-used name *flavirufus* be adopted in place of *gouldii* as currently understood by the great majority of authors.

Drs Böhme and Ziegler contend that their alternative system of nomenclature is gaining ground. However, the publications that they have cited in support of this are very few and very recent (1995–1998) and include three by a single author (Bennett), one by Ziegler & Böhme, and one by Böhme. In the draft of an application by Drs Shea and Cogger to maintain the name *gouldii* for the widespread species and *panoptes* for that with the more disjunct range (i.e. the traditional usages), written coincidentally with our own, these authors supplied a list of 57 references to demonstrate the use of *gouldii* since 1991 (the year of publication of Böhme's proposed new nomenclature), and one of 56 references for the use of *panoptes* since its publication. Where a publication used only *gouldii* this was considered to be the accustomed sense of the name when the locality cited was well outside the known range of *V. panoptes*. These lists, copies of which are held by the Commission Secretariat, 'were not meant to be exhaustive but to give an indication of the breadth of usage of the names, which includes anatomical, ecological, faunal survey, parasitological, phylogenetic, physiological and general literature, published in international and Australian professional and amateur herpetological and natural history, zoological and ecological journals, herpetological monographs, Australian government publications, and popular books'.

Shea & Cogger (BZN **55**: 106–111) have provided considerable evidence that Mertens's (1958) lectotype for *V. gouldii* was very unlikely to have been an original specimen seen by Gray (1838) when he described the taxon. Mertens himself (1958,

p. 248) pointed out that, although the specimen designated as the lectotype, which had been suggested to him by Mr J.C. Battersby in the Natural History Museum, London, was registered as from Gould's collection and dated 'Feb. 1837', Gould had not arrived in Australia by that date. Merten's lectotype designation is very probably invalid and there is thus no basis for Böhme's (1991) system of nomenclature.

Contrary to Böhme & Ziegler (their para. 6 above), we firmly believe that the use of stable nomenclature for the inclusion of species and subspecies in CITES and other legislative documentation is important. Taxonomists are the servants of the entire biological world that uses scientific names; we work to serve those needs, not to establish an authority to which everyone must subscribe whether convenient or not. Our own survival depends directly on the respect other biologists have for what we do; their interests — i.e. stability — determine our effectiveness. This seems not always to be adequately appreciated by other taxonomists.

We commend our application to the Commission.

Comment on the proposed suppression of all prior usages of generic and specific names of birds (Aves) by John Gould and others conventionally accepted as published in the *Proceedings of the Zoological Society of London*
(Case 3044; see BZN **54**: 172–182)

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The application of Schodde & Bock comes as a response to the paper of Bruce & McAllan (1990), who showed that numerous names of birds proposed by John Gould and other ornithologists in monographic works and in the *Proceedings of the Zoological Society of London* (*PZS*) had appeared earlier in more popular periodicals such as *The Athenaeum*, *The Literary Gazette*, and *The Analyst* (for the sake of brevity I shall refer to these as the 'ancillary' publications, with no intent of impugning their significance to nomenclature). I oppose this application, first of all on the general principle that there should be some reasonable curb to further additions to the gigantic subsidiary literature of suppressed names and works already created by the Commission. Such suppressions should be undertaken only when there is a very real need – when there is truly a threat to communication and understanding in the zoological community. This is definitely not the case with almost all parts of the application of Schodde & Bock, to which I expand my objection on the following points.

1. The application must be viewed in the context of the acrimonious confrontations that have enveloped the nomenclature of Australian vertebrates in recent years, during the course of which Schodde vs. Bruce and McAllan have occupied bitterly opposing camps (e.g. see Olson, 1990). Although Bruce & McAllan (1990) have produced an important contribution to the history and bibliography of Australian ornithology, this is marred by their rather disingenuously making claims of priority for a few names that are certainly nomina nuda and a few others that are little better.

This is not true, however, for the majority of names they discussed. The application of Schodde & Bock is plainly reactionary in nature and attempts to suppress everything that Bruce & McAllan (1990) uncovered that bears on nomenclature, regardless of the actual effect on names currently in use. The result is a poorly researched broadside that is likely to create as many problems as it proposes to resolve.

2. In an attempt to prejudice a ruling in their favor, Schodde & Bock have characterized the descriptions in the ancillary publications as 'sketchy and often ambiguous accounts' (para. 3, ii), which is at best exaggeration and at worst egregious dissembly. Bruce & McAllan (1990) reproduced all of these descriptions verbatim so that they may be more readily evaluated. Of the 43 species descriptions that Schodde and Bock wish to have suppressed, I would assess 30 as ranging from spare, but undeniably adequate, to wonderfully detailed (e.g. *Casuarius bennetti*). No fewer than 13 in my estimation are extremely good.

3. In continuing their dissembling, Schodde & Bock (para. 3, iii) portray 'many of the names' as being open 'to interpretation as nomina nuda and argument as to whether they are available,' citing the examples of *Ptiloris victoriae*, *Excalfa*[*c*]*toria minima*, and *Chrysococcyx minutillus*. The last two definitely are nomina nuda where they appear in the ancillary sources, as is also *Meleagris mexicana*, so these citations require no action by the Commission. Discounting the species of *Dinornis* attributed to Owen in the *Literary Gazette* of 1843, which present a separate set of problems, only six or seven of the specific names in contention (not 'many') might be disputed on grounds of equivocal descriptions, such as that of *Ptiloris victoriae* and those that essentially only repeat the specific name in English (e.g. *Odontophorus hyperythrus*, *Podiceps micropterus*, *Chordeiles pusillus*). As noted above, the rest constitute valid descriptions and must be evaluated on their merits.

4. Four of the generic and 39 of the specific citations from the ancillary literature proposed for suppression involve the same name, spelled the same way, by the same author, and used for the same taxon as those names currently in use. Thus they present no threat whatever to existing nomenclature and only require that the citation of the original description be changed. Suppressing the earlier publications actually increases the vulnerability of existing nomenclature to different competing names that may have been published between the first publication of the names in question and their subsequent appearance in publications that Schodde and Bock wish to conserve. In one case (*Anser serrirostris*), the lapse between first appearance in *The Literary Gazette* and subsequent publication in *PZS* was 19 years! Thus, when there is no difference in a name used in two or more publications, stability of nomenclature is actually enhanced by citing the earliest valid appearance of a name.

5. The extent to which names may have been cited in previous literature as dating from the ancillary publications has not received sufficient investigation by Schodde and Bock, who cite only two modern, highly derivative sources. It is certain that the ancillary publications have not always been overlooked. For example, Richmond (1992) discovered the publication of most of the names cited by Bruce & McAllan as dating from *The Athenaeum*. Although not published until the Richmond Index was made available on microfiche in 1992, Richmond corresponded widely with taxonomists with whom he doubtless shared his findings and who may in fact have cited various of the ancillary publications. Wetmore (1965, p. 322), for example, gives the

publication of *Odontophorus veraguensis* Gould in *The Athenaeum* precedence over that in *PZS*. Schodde & Bock note that the citation for *Balaeniceps rex* Gould is now accepted as of its appearance in *The Athenaeum*, and if that journal is of sufficient stature for so singular a bird as *Balaeniceps*, then why should it not be acceptable for others as well?

6. Although Wetmore (1968, p. 507) overlooked the appearance of the name *Aulacorhamphus caeruleogularis* Gould in *The Athenaeum* of 26 February 1853, he gives its publication in *The Zoologist* in April 1853 as the original citation for the species, rather than that in the *PZS* published 24 July 1854. Note that *Aulacorhamphus caeruleogularis* was also described as a 'new species' in *The Annals and Magazine of Natural History* in May 1855, although admittedly as a verbatim reprint of the description from *PZS*. So here we have four different publications containing what may be taken as the original description for the name *Aulacorhamphus caeruleogularis*. How does one decide which has precedence? Is this to be done by determining which of these serials is considered to be the least 'rare and inaccessible' (Schodde & Bock, para. 3, ii) in the 1990s, by the scientific prestige of a given journal in the 1850s, or should this determination in fact be made by the objective criterion of priority, which is supposed to be the cornerstone of the rules of zoological nomenclature?

7. The matter of the name cited above as dating from *The Zoologist* raises yet another issue, which is that Bruce and McAllan's investigations extended only to selected periodicals, whereas earlier citations than those cited for suppression by Schodde & Bock based on Bruce & McAllan certainly exist in other journals. Schodde & Bock (para. 8(1)(b)) propose to circumvent this problem by suppressing 'all uses of the names prior to the publication of the same names given' in their para. 8(2). The business of wholesale suppression of publications is bad enough, but I would particularly deplore its extension to works that have never been explicitly identified.

8. None of the authors involved has correctly resolved the name *Nyctidus pectoralis* published in *The Athenaeum* 18 November 1837, as all failed to note that Gould (1838, pl. xviii & text) shortly thereafter described a species *Nyctibius pectoralis* from northern Brazil. Thus Bruce & McAllan erred in considering the name in *The Athenaeum* to supplant the name now in use for the Haitian *Nyctibius*, as there was no connection in that publication between the drawing Gould exhibited of '*Nyctidus*' and specimens that he also exhibited from Turkey and Haiti. Nothing about the name *Nyctidus pectoralis* in *The Athenaeum* requires formal suppression because the name is utterly unidentifiable at that point, the only information given being that its tarsus was 'scarcely a quarter of an inch long.' Had it not specifically been stated to be a bird, even that much would have to be surmised. *Nyctidus* is clearly only a misspelling, but even if it were identifiable it would simply be a junior synonym of *Nyctibius* Vieillot, 1816.

9. The application of Schodde & Bock adds to what is already a vexatious mess regarding certain names of moas (*Dinornis*) described by Owen. Bruce & McAllan (1990, p. 458) claim that the names *Dinornis giganteus*, *D. struthoides*, *D. didiformis*, and *D. otidiformis* should date from *The Literary Gazette* of 2 December 1843 rather than *PZS* March 1844. Neither they nor Schodde & Bock make any mention of the new name *D. dromaeoides*, which also appears in both publications, although any

necessary action concerning the first four species seemingly ought to apply to this one as well. Bruce & McAllan (1990, p. 458) note that the descriptions in *The Literary Gazette* 'although superficial, are no more so than the accounts given in *PZS*'. This considerably misrepresents the case, as in both publications the names are absolute or virtual nomina nuda. Richmond (1992) regarded all the names in *PZS* as nomina nuda. Archey & Allan (1954) likewise regarded *D. struthoides* to be a nomen nudum as of its appearance in *PZS*, although they mistakenly stated that the name *D. ingens* appeared in this publication also. Proper descriptions of these species first appeared in the *Transactions of the Zoological Society* (1844) rather than the *PZS*.

The only species with any claim of dating from either of the publications earlier than the *Transactions* is *Dinornis gigantea*, which was described in *PZS* as having a tibiotarsus 2 feet 11 inches long (2 feet 10 inches long in *The Literary Gazette*) which is perhaps sufficient characterization of the species. This is the only species of the five for which Brodkorb (1963, p. 217) gives *PZS* as the original citation, all the rest being attributed to the *Transactions*. All of the other species are characterized in *The Literary Gazette* and *PZS* solely by extrapolations of their height relative to each other and to other large birds. These are inferences based on data that are not presented and cannot be considered to be descriptions.

Dinornis struthoides and *D. otidiformis* have already been placed on the Official List, with the *Transactions* cited as place of publication (Opinion 229; Opinion 1874 [not 1876 as in Schodde & Bock]). The application of Schodde & Bock proposes to add *D. giganteus* and *D. didiformis* to the Official List but as of their appearance in *PZS*. This should not be allowed because at least the latter is unquestionably a nomen nudum at that point.

10. I cannot see that the use of *Didus nazarenus* by Bartlett, either in *The Literary Gazette* (1851) or *PZS* (1854), is anything more than the identification of some bones supposedly from the island of Rodriguez with the name *Didus nazarenus* Gmelin, 1788, based on descriptions from an early Mascarene voyage. I certainly oppose placing the nonexistent name *Didus nazarenus* Bartlett, 1854 on an Official List over *Didus nazarenus* Gmelin, 1788, which latter name Schodde & Bock never mention or consider, although Bruce & McAllan at least refer to it.

11. In attempting to suppress *Somateria v-nigrum* G.R. Gray as of its appearance 1 December 1855 in *The Athenaeum*, Schodde & Bock fail to make any disposition of the earlier publication of this name for the same taxon by Bonaparte 22 October 1855 in a serial (*Comptes Rendus*) that certainly cannot be considered 'rare and inaccessible,' if that were really a consideration. The existence of Bonaparte's name was pointed out by Bruce & McAllan and was also known to Richmond (1992). That a name published by such a well-known author in such a prominent journal has remained overlooked is curious, but it is the earliest usage and involves no threat to current nomenclature.

12. Schodde & Bock engage in hyperbole in suggesting that the acceptance of names from the ancillary publications would 'displace a number of names in current use.' Of course, they do not specify the 'number', but it is actually very few. Out of the 54 suppressions they seek, 43 involve no change in existing nomenclature. Another six or so arise from obvious typographical errors that may be corrected (*Dendrochetta, ealconeri*), or easily comprehended variants in spelling that can be adopted without confusion, viz. *thibetanus* vs. *tibetanus*, *wallacei* vs. *wallacii*, *Aplornis*

vs. *Aplonis*, *Semeioptera* vs. *Semioptera*). The last two changes can be embraced on etymological grounds as well.

This leaves only two instances, out of this great farrago of potentially suppressed names, where existing nomenclature might change significantly, and one of these changes is not without its advantages.

Among Gould's many contributions to Australian ornithology was the description of the systematically important Noisy Scrub-bird. The first notice of this was in *The Athenaeum* for 27 January 1844 under the name *Atricha clamosa*. In Gould's *Birds of Australia* (1 March 1844) this species was again named as new, but as *Atrichia clamosa*, under which name it was recognized for 41 years, except for the mention by Sladen (1845), who used the first spelling, *Atricha*. When *Atrichia* Gould 1844 was found to be preoccupied by an insect, the name *Atrichornis* Stejneger, 1885 was substituted, and this still has currency. *Atricha*, however, is not preoccupied, and the publication of the name *Atricha clamosa* in *The Athenaeum* was prominently acknowledged nearly fifty years ago by Whitley (1938). It is curious that Bruce & McAllan do not cite Whitley, whereas Schodde & Bock do, although in an ambiguous manner not directly linked to the use of *Atricha*. That no one took up the use of *Atricha* from 1938 onward is inexplicable given that prominent authors were aware of it but ignored it while accepting names published in much more ephemeral sources (Bruce & McAllan, 1990, p. 459). *Atricha*, *Atrichia* and *Atrichornis* are all recognizably based on the same root and I do not consider that it would be overly confusing to revert to the earliest usage, thus bringing the attribution of the genus back to Gould where it rightly belongs. Why continue with a substitute name by a later author that must always be referred back to a preoccupied name, when an earlier and very similar name by the original author that is not preoccupied is available?

The only serious nomenclatural issue raised in the entire Bruce & McAllan paper is the ephemeral earlier use by Gould of the generic name *Pedionomus* for an utterly different bird from that to which it has been applied in all subsequent literature. Now this is an instance where suppression would be completely justified and here it is worth noting that Bruce & McAllan also supported suppression of 'the original publication of *Pedionomus* and *P. ocellatus* in *The Athenaeum*'. If these authors were unwilling to revive the earlier use of *Pedionomus*, then it seems unlikely that anyone else would, so the actual threat to stability of established nomenclature does not seem great. Nevertheless, if Schodde and Bock wish to go through the formality of specifically suppressing this first use of *Pedionomus*, there could be no reasonable grounds for opposition.

The rest of the application of Schodde & Bock, however, is too flawed, frivolous, expansive, and unnecessary to merit approval. Because it is so poorly researched and would have such undesirable effects as placing nomina nuda and nonexistent usages on the Official Lists, possibly along with other problems as yet unforeseen, it should be rejected in toto.

Additional references

Archey, G. & R.S. Allan. 1954. On the type of '*Dinornis novae-zealandiae*' Owen, 1843 (Class Aves, Order Dinornithiformes). Pp. 224–225 in Opinion 229, *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature*, **4**: 25–40.

Brodkorb, P. 1963. Catalogue of fossil birds, part 1 (Archaeopterygiformes through Ardeiformes). *Bulletin of the Florida State Museum, Biological Sciences*, **7**: 179–293.

Gould, J. 1838. *Icones Avium*. Part II. Author, London.

Olson, S.L. 1990. [Review of] I.A.W. McAllan and M.D. Bruce '*The birds of New South Wales. A working list*'. *Auk*, **107**: 458–459.

Richmond, C.W. 1992. *The Richmond Index to the genera and species of birds*. 107 microfiches, guide of xi, 7 unnumbered pages. Hall & Company, Boston.

Sladen, E.H.M. 1845. Where should *Atricha clamosa* be placed in the system? *The Zoologist*, **3**: 942.

Wetmore, A. 1965. Birds of the Republic of Panamá, part 1. *Smithsonian Miscellaneous Collections*, **150**(4): 1–483.

Wetmore, A. 1968. Birds of the Republic of Panamá, part 2. *Smithsonian Miscellaneous Collections*, **150**(5): 1–605.

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We respond to Olson's comment to correct misrepresentations of background and to place in more balanced perspective his interpretations of the status of names published for John Gould and others in London periodicals: *The Analyst*, *The Athenaeum* and *The Literary Gazette*.

1. As recorded by Schodde & Bock (1997, Case 3044, para. 4), suppression of unused references for Gould's and others' names unearthed by Bruce & McAllan (1990) in London periodicals was canvassed at the round-table meeting of the Standing Committee on Ornithological Nomenclature of the International Ornithological Committee in Vienna in 1994. Both Bruce and McAllan were participants. The Committee and ancillary attendants voted for blanket suppression without dissent, and left Schodde and Bock to prepare the application. It is in that context — and that context alone — that the submission was prepared.

2. In espousing the principle that suppression should be restricted to names and works that pose a 'threat to comprehension and understanding in the zoological community', Olson stands in self-appointed judgement. As we understand it, the Commission is charged with adjudicatory powers for a rather different purpose: to make rulings that effect stability and universal acceptance in nomenclature (Article 79(a) of the Code). The 'gigantic subsidiary literature of suppressed names and works already created by the Commission' (Olson) is the necessary record of those rulings; and, despite their size, the resulting lists in the Commission's compendia are quickly and easily worked through by any zoologist with a knowledge of the alphabet, and the classes and families of animals. That our application (Case 3044) serves nomenclatural stability is explained in the original para. 3 (Schodde & Bock, 1997), and the principles in all of its clauses still stand. Its services to stability are also re-emphasised in paras. 4 and 8 below.

3. Paras. 2 and 3 in Olson's response concern the validity of descriptions in the London periodicals. It opens the way to charge and counter-charge which would produce little. Suffice to say that:

(i) none of the descriptions is more detailed or as well-referenced to source specimen material as their currently accepted equivalents in the scientific literature, e.g. *Proceedings of the Zoological Society of London* (*PZS*);

(ii) most descriptions in the London periodicals are trivial and skimped, and many do verge on nomina nuda. Thus, in comparison with the formal and carefully specified descriptions in the scientific journals, those of 25 of the 43 specific names are limited to one or two phrases, a number no better than 'four times larger', 'colouring still more gorgeous', 'lighter colouring of the breast and the redder hue of the crest', 'small size' and 'very small wings'. Another 13 are limited to one or two anecdotal sentences.

4. Although Olson claims to know the difference between nomina nuda and skimpy but validating diagnoses (second sentence of his para. 3), he is less sure in the next sentence and then in para. 9 prevaricates with 'absolute or virtual nomina nuda'. When abridged diagnoses in media reports become shortened to 'the smallest species' in its group or 'named....from the silky texture of the plumage', it becomes a matter of individual (and subjective) conjecture as to whether the names attached to them are available. In these circumstances, it seems better to err on the side of caution and ask the Commission to suppress names that may be subject to such argument. *Nyctidus pectoralis* Gould, 1837, with 'tarsi ... scarcely a quarter of an inch long', falls into this category, pace Olson (para. 8).

5. Olson's claim in his paras. 4 and 12 that the great majority of names to be suppressed involve 'no threat whatever to existing nomenclature' fails to comprehend that zoological nomenclature is more than just a name; it is the bibliographic and typification apparatus supporting the name as well, effecting connection between name and taxon. Relatively few of the names per se may change if our application fails, but all citations of original publication prevailing in 20th century ornithological literature will, and more than a few of the years of publication; in one case, *Anser serrirostris*, there would be a change in author as well. This will necessitate change to nomenclatural references in global, and particularly Australasian, checklists and handbooks that will, we maintain, be as unsettling as they are unnecessary. Already the first published volume of the current full Australian checklist (Schodde & Mason, 1997) has proceeded on the assumption that the names and their references in the London periodicals will be suppressed, following decision of the Vienna meeting of the SCON and application to the Commission by Schodde & Bock (1997) — see Article 80 of the Code. Involved are *Psephotus chrysopterygius* Gould and *Chrysococcyx minutillus* Gould; the former is gazetted by legislation as threatened fauna in Australia.

6. In paras. 5 to 10 of his response, Olson takes us to task for not doing our homework. In several cases, he is quite correct, and we are grateful for correction; in others, however, he would have been unaware that we had considered the issues and found them irrelevant, such as Bonaparte's involvement in *Somateria v-nigrum*. Here his own homework suffers from the very faults of which he so facilely accuses others. Our reconsideration of such cases is detailed below and, for *Nyctidus pectoralis* Gould (Olson's para. 8), in our para. 4 above.

(i) In his para. 9, Olson points out that our submission made no mention of *Dinornis dromaeoides* Owen, 1843; we omitted it because it was the one name that was an absolute nomen nudum among those quoted in extracts from the London periodicals (Bruce & McAllan, 1990). Nevertheless we agree that for consistency it should have been included. Olson then proceeds to make his own contribution to the 'vexatious mess' involving the names of several moas. According to him, the only acceptable diagnosis of a *Dinornis* in *PZS* **1843**: 144–146 is that for *D. giganteus*: 'largest tibia ... of two feet eleven inches'. Yet on the next line that for *D. struthoides* — 'smaller tibia, about two feet long when entire' — is no less adequate; and even 'smaller than the *Din. didiformis* ... and similarity of stature to the great Bustard (*Otis tarda*)' is arguably sufficient for *D. otidiformis*. Only *D. didiformis* in the *PZS* — described as third in decreasing size from *D. giganteus* — is probably a virtual nomen nudum (cf. Olson l.c.). Nevertheless, we agree with Olson that both *D. dromaeoides* Owen and *D. didiformis* Owen should have as their place of publication the *Transactions of the Zoological Society of London*. Not only is publication there consistent with Opinions 229 and 1874 but also entries in current basic references: Brodkorb (1963) and the New Zealand checklist (Checklist Committee, Ornithological Society of New Zealand, 1990). Retaining that source serves stability best, whatever the arguments about priority and availability. For the same reason, however, *giganteus* should date from its publication in the *PZS* as we recommended, following acceptance of that reference by the New Zealand checklist (l.c.; contra Olson).

(ii) We accept Olson's view (para. 10) that *Didus nazarenus* in Bartlett in *PZS* **1851**: 284 is an application of *Didus nazarenus* Gmelin, 1788, however oblique the reference. Here the *Literary Gazette* (no. 1823: 923, 27 Dec. 1851) does service in making the connection clear.

(iii) Concerning *Somateria v-nigrum* Bonaparte, 1855, Olson's scorn for our research is better visited upon his own ineptitude. Bonaparte's oblique and anecdotal account, published on pp. 660–661 of vol. 41 of the *Comptes Rendus* (not p. 665 as stated by Bruce & McAllan, 1990), applies the briefest diagnosis — 'sous son menton la marque caractéristique de *Somateria spectabilis*' to 'un jeune oiseau, qui pouvait d'ailleurs être un hybride'. There is no explicit link between this or any other trait and the adults in the British Museum which Bonaparte, with G.R. Gray, named '*Somateria v.nigrum*'. The name there is thus a nomen nudum. Even if it were available, its authors would be Bonaparte and G.R. Gray jointly, revealing Olson's and Bruce & McAllan's research as particularly shoddy in this matter. So our original application in the matter of *S. v-nigrum* G.R. Gray should stand. Even though several modern references cite Bonaparte as author (e.g. Vaurie, 1965; Committee, American Ornithologists' Union, 1957; Cramp & Simmons, 1977), the most recent quote G.R. Gray in the *PZS* (Johnsgard, 1979; Sibley & Monroe, 1990).

(iv) Wetmore's (1968) acceptance of *The Zoologist* of April 1853 as the source for *Aulacoramphus caeruleogularis* Gould was followed by Haffer (1974) in his survey of the toucans. This decision should be allowed to stand.

7. Of the remaining names that Olson (paras. 5 and 7) claims have been taken up from the London periodicals or are available elsewhere, none except *Balaeniceps rex* Gould have been adopted in mainstream ornithological literature, not even *Aplornis* Gould (cf. Mathews, 1938). In attributing these and, indeed, all other newly available

names in the London periodicals to those sources, Olson would have us reject places and dates of publication long established in such basic references as the *Catalogue of Birds in the British Museum*, Peters' *Check-list of Birds of the World*, the current New Zealand and Australian checklists and Meyer de Schauensee's (1966) and Blake's (1977) treatises on South American and neotropical birds. The rhetoric is long, but the commonsense depressingly short. He would even (para. 12) replace *Atrichornis* Stejneger, 1885 for the Australian scrub-birds, a generic name that has been employed universally for this phylogenetically significant group throughout 20th century biological literature. It is a single-minded, blinkered application of priority confounding stability. If the periodical names are allowed to stand, what will be the reaction of handbooks, checklists and other references which cite source publications for names? We venture to suggest that some of the names will be accepted, others will be missed and still others avoided through uncertainty and mistrust of such trivial and frivolous publication. The potential for confusion and instability is patently obvious.

8. What is the solution, posed in Olson's (para. 6) question: how does one decide which has precedence? The solution, we maintain, lies in taking the course that disturbs stability least. The Standing Committee on Ornithological Nomenclature also took this view at its Vienna 1994 meeting. This would be effected most simply and transparently by blanket suppression of all avian names cited by Bruce & McAllan (1990) as first published in the London periodicals except for those already brought into use (Schodde & Bock, 1997). Olson complains that 'poor' research may have overlooked other prior citations of names slated for suppression under para. 8(1) of Schodde & Bock (l.c.). He misses the point; such prior citations, if they exist, are so little known that they have not been brought into 20th century literature. Dredging them up simply muddies the waters further. Given the confusion surrounding the sources of the names in dispute here, well illustrated in Olson's para. 6, our application simply clears the decks. In effect, it extends the available name principle to firming up an already established set of accessible and well-documented source references for names that are usually well- and often widely-known and used.

9. Accordingly, we ask the International Commission on Zoological Nomenclature to accept our original application (Schodde & Bock, 1997), with the following amendments:

(1) Add to 8(1)(a), suppression of generic names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy, and to 8(6), placement on the Official Index of Rejected and Invalid Generic Names in Zoology: *Marganetta* Gould, 4 December 1841, *The Literary Gazette*, no. 1298: 785. This name is validly published there (Article 12(b)(6) of the Code) and, without indication of misspelling, is senior to *Merganetta* Gould, March 1842;

(2) Add to 8(2), placement on the Official List of Generic Names in Zoology: *Merganetta* Gould, [March = 31 March] 1842, *Proceedings of the Zoological Society of London*, **1841**: 95 (gender: feminine), type species by monotypy: *Merganetta armata* Gould, 1842, *Proceedings of the Zoological Society of London*, **1841**: 95;

(3) Delete all entries for *Didus nazarenus* Bartlett from 8(1)(d) and 8(4);

(4) Add to 8(1)(d), suppression of specific names for both the Principle of Priority and the Principle of Homonymy: *dromaeoides*, *Dinornis*, Owen, 2 December 1843, *The Literary Gazette*, no. 1402: 778–779;

(5) Add to 8(4), placement on the Official List of Specific Names in Zoology: *dromaeoides*, *Dinornis*, Owen, 1844, *Transactions of the Zoological Society of London*, **3**(3): 253;

(6) Replace in 8(4), placement on the Official List of Specific Names in Zoology, the date and source publication for *Dinornis didiformis* Owen with: 1844, *Transactions of the Zoological Society of London*, **3**(3): 242;

(7) Delete the entry for *Nyctidus pectoralis* Gould from 8(1)(c), suppression for the purposes of the Principle of Priority but not for those of the Principle of Homonymy, and from 8(8), placement on the Official Index of Rejected and Invalid Names in Zoology;

(8) Add to 8(1)(d), suppression for both the Principle of Priority and the Principle of Homonymy: *pectoralis*, *Nyctidus*, Gould, 18 November 1837, *The Athenaeum*, no. 525: 851;

(9) Add to 8(4), placement on the Official List of Specific Names in Zoology: *pectoralis*, *Nyctibius*, Gould, 1838, *Icones Avium*, II: pl. xviii, text;

(10) Replace in 8(4), placement on the Official List of Specific Names in Zoology, the date and source publication for *Aulacoramphus caeruleogularis* Gould with: [April] 1853, *The Zoologist*, **11**: 3861.

Additional references

Blake, E.R. 1977. *Manual of Neotropical Birds, Vol. 1 Spheniscidae (Penguins) to Laridae (Gulls and Allies)*. xliv, 674 pp. University of Chicago Press.

Bonaparte, C.-L. 1855. 'Catalogue des genres et sous-genres d'oiseaux contenus dans le Muséum Britannique'. *Comptes Rendus des Séances de l'Académie des Sciences*, Paris, **41**: 649–661.

Checklist Committee, Ornithological Society of New Zealand. 1990. *Checklist of the birds of New Zealand and the Ross Dependency, Antarctica*, Ed. 3. Ornithological Society of New Zealand, Wellington.

Checklist Committee, American Ornithologists' Union. 1957. *Check-list of North American birds*, Ed. 5. American Ornithologists' Union.

Cramp, S. & Simmons, K.E.L. (Eds.). 1977. *Handbook of the birds of Europe the Middle East and North Africa. The birds of the Western Palearctic, Volume 1, Ostrich to Ducks*. 722 pp. Oxford University Press, Oxford.

Haffer, J. 1974. Avian speciation in tropical South America, with a systematic survey of the toucans (Ramphastidae) and jacamars (Galbulidae). *Publications of the Nuttall Ornithological Club*, **14**: i–viii, 1–390.

Johnsgard, P.A. 1979. Order Anseriformes, pp. 425–506 *In* Mayr, E. & Cottrell, G.W. (Eds.). *Check-list of birds of the World*, Ed. 2, vol. 1. Museum of Comparative Zoology, Cambridge, Massachusetts.

Mathews, G.M. 1938. *Aplornis* versus *Aplonis*. *Ibis*, (14)**2**: 342.

Meyer de Schauensee, R. 1966. *The species of birds of South America and their distribution*. xvii, 577 pp. Academy of Natural Sciences, Philadelphia.

Schodde, R. & Mason, I.J. 1997. Aves (Columbidae to Coraciidae). *In* Houston, W.W.K. & Wells, A. (Eds.). *Zoological Catalogue of Australia*, vol. 37. xiii, 440 pp. CSIRO Publishing, Melbourne.

Vaurie, C. 1965. *The birds of the Palearctic fauna. A systematic reference. Non-Passeriformes*. xx, 761 pp. Witherby, London.

OPINION 1902

Anomalina d'Orbigny, 1826 (Foraminiferida): *Anomalina ariminensis* d'Orbigny in Fornasini, 1902 designated as the type species

Keywords. Nomenclature; taxonomy; Foraminiferida; ANOMALINIDAE; *Anomalina*; *Anomalina punctulata*; *Anomalina ariminensis*.

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Anomalina* d'Orbigny, 1826 are hereby set aside and *Anomalina ariminensis* d'Orbigny in Fornasini, 1902 is designated as the type species:

(2) The name *Anomalina* d'Orbigny, 1826 (gender: feminine), type species by designation under the plenary powers in (1) above *Anomalina ariminensis* d'Orbigny in Fornasini, 1902, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *ariminensis* d'Orbigny in Fornasini, 1902, as published in the binomen *Anomalina ariminensis* and as defined by the holotype from Rimini, Italy (catalogue no. F0437 in the Muséum National d'Histoire Naturelle, Paris) (specific name of the type species of *Anomalina* d'Orbigny, 1826), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2906

An application for the designation of *Anomalina ariminensis* d'Orbigny in Fornasini, 1902 as the type species of *Anomalina* d'Orbigny, 1826 was received from Dr Stefan A. Revets (*University of Western Australia, Nedlands, Perth, Australia*) on 15 October 1993. After correspondence the case was published in BZN **54**: 6–10 (March 1997). Notice of the case was sent to appropriate journals.

A comment in support from Prof L.C. Hottinger (*Geologisch-Paläontologisches Institut der Universität Basel, Basel, Switzerland*) was published in BZN **54**: 183 (September 1997).

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **54**: 9. At the close of the voting period on 1 June 1998 the votes were as follows:

Affirmative votes — 23: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song

Negative votes — 1: Štys.

No vote was received from Macpherson.

Ride was on leave of absence.

Original references

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

Anomalina d'Orbigny, 1826, *Annales des Sciences Naturelles*, **7**: 282.

ariminensis, *Anomalina*, d'Orbigny in Fornasini, 1902, *Memorie della Reale Accademia della Scienze dell'Istituto di Bologna, Scienze Naturali*, (5)**10**: 63, fig. 62.

OPINION 1903

Umbellula Cuvier, [1797] (Cnidaria, Anthozoa): conserved as the correct original spelling, and corrections made to the entries relating to *Umbellularia* Lamarck, 1801 on the Official Lists and Indexes of Names in Zoology

Keywords. Nomenclature; taxonomy; Anthozoa; Pennatulacea; sea pens; UMBELLULIDAE; *Ombellula*; *Umbellula*; *Umbellularia*; *Umbellula encrinus*.

Ruling

(1) Under the plenary powers it is hereby ruled that the correct original spelling of the name *Ombellula* Cuvier, [1797] is *Umbellula*.

(2) The name *Umbellula* Cuvier, [1797] (gender: feminine), type species by subsequent monotypy by Gray (1870) *Isis encrinus* Linnaeus, 1758, is hereby placed on the Official List of Generic Names in Zoology (spelling emended by the ruling in (1) above).

(3) The entry on the Official List of Specific Names in Zoology for the name *encrinus* Linnaeus, 1758, as published in the binomen *Isis encrinus*, is hereby emended to record that *Isis encrinus* is the type species of *Umbellula* Cuvier, [1797].

(4) The name UMBELLULIDAE Lindahl, 1874 (1840) (type genus *Umbellula* Cuvier, [1797]) is hereby placed on the Official List of Family-Group Names in Zoology.

(5) The entry on the Official List of Generic Names in Zoology for the name *Umbellularia* Lamarck, 1801 is hereby deleted.

(6) The entry on the Official List of Family-Group Names in Zoology for the name UMBELLULARIIDAE Lindahl, 1874 is hereby deleted.

(7) The following names are hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology:
   (a) *Ombellula* Cuvier, [1797] (an incorrect original spelling of *Umbellula* by the ruling in (1) above);
   (b) *Umbellularia* Lamarck, 1801 (a junior objective synonym of *Umbellula* Cuvier, [1797]).

(8) The name UMBELLULARIIDAE Gray, 1840 (type genus *Umbellularia* Lamarck, 1801, a junior objective synonym of *Umbellula* Cuvier, [1797]) is hereby placed on the Official Index of Rejected and Invalid Family-Group Names in Zoology (replaced under Article 40 by UMBELLULIDAE Lindahl, 1874 (1840)).

(9) The inaccurate entries for the following names are hereby deleted from the Official Index of Rejected and Invalid Family-Group Names in Zoology:
   (a) UMBELLULAE Lindahl, 1874;
   (b) UMBELLULEAE Kölliker, 1875.

History of Case 2999

An application for the conservation of *Umbellula* Cuvier, [1797] as the correct spelling of the generic name, together with corrections to the entries on the Official

Lists and Indexes of Generic and Family-Group Names relating to *Umbellularia* Lamarck, 1801, was received from Dr Frederick M. Bayer (*National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.*) and Dr Manfred Grasshoff (*Forschungsinstitut und Museum Senckenberg, Frankfurt am Main, Germany*) on 3 October 1995. After correspondence the case was published in BZN **54**: 14–18 (March 1997). Notice of the case was sent to appropriate journals.

A comment in support from Dr P.F.S. Cornelius (*The Natural History Museum, London, U.K.*) was published in BZN **54**: 183 (September 1997).

The generic name *Umbellularia* Lamarck, 1801, the specific name of *Isis encrinus* Linnaeus, 1758, and the family name UMBELLULARIIDAE Lindahl, 1874, were placed on Official Lists in Opinion 636 (September 1962). Corrections to these entries are made in the present Opinion.

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **54**: 16–17. At the close of the voting period on 1 June 1998 the votes were as follows:

Affirmative votes – 24: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

No vote was received from Macpherson.

Ride was on leave of absence.

Original references

The following are the original references to the names placed on Official Lists and Official Indexes, and to emended entries for generic and family names relating to *Umbellularia* Lamarck, 1801, by the ruling given in the present Opinion:

encrinus, *Isis*, Linnaeus, 1758, *Systema Naturae*, Ed. 10, vol. 1, p. 800.

Ombellula Cuvier, [1797], *Tableau élémentaire de l'histoire naturelle des animaux*, p. 675 (an incorrect original spelling of *Umbellula*).

Umbellula Cuvier, [1797], *Tableau élémentaire de l'histoire naturelle des animaux*, p. 675 (incorrectly spelled as *Ombellula*).

Umbellularia Lamarck, 1801, *Système des animaux sans vertèbres* ..., p. 380.

UMBELLULARIIDAE Gray, 1840, *Synopsis of the contents of the British Museum*, Ed. 42, p. 75.

UMBELLULIDAE Lindahl, 1874, *Kongliga Svenska Vetenskapsakademiens Handlingar*, **13**(3): 25.

The following is the reference for the designation of *Isis encrinus* Linnaeus, 1758 as the type species of the nominal genus *Umbellula* Cuvier, [1797]:

Gray, J.E. 1870. *Catalogue of the sea-pens or Pennatulariidae in the collection of the British Museum*, p. 38.

OPINION 1904

Aporcelaimus Thorne & Swanger, 1936 (Nematoda): *Dorylaimus superbus* de Man, 1880 designated as the type species

Keywords. Nomenclature; taxonomy; Nematoda; soil nematodes; APORCELAIMIDAE; *Aporcelaimus*; *Aporcelaimus superbus*.

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Aporcelaimus* Thorne & Swanger, 1936 are hereby set aside and *Dorylaimus superbus* de Man, 1880 is designated as the type species.

(2) The name *Aporcelaimus* Thorne & Swanger, 1936 (gender: masculine), type species by designation under the plenary powers in (1) above *Dorylaimus superbus* de Man, 1880, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *superbus* de Man, 1880, as published in the binomen *Dorylaimus superbus* and as defined by the female lectotype from Katwijk, The Netherlands (catalogue no. V.As 253 in the Zoological Museum, Instituut voor Taxonomische Zoologie, Amsterdam) designated by Loof (1961) (specific name of the type species of *Aporcelaimus* Thorne & Swanger, 1936), is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2943

An application for the designation of *Dorylaimus superbus* de Man, 1880 as the type species of *Aporcelaimus* Thorne & Swanger, 1936 was received from Prof P.A.A. Loof (*Agricultural University, Wageningen, The Netherlands*) and Dr J. Heyns (*Johannesburg, South Africa*) on 23 June 1994. After correspondence the case was published in BZN **54**: 80–82 (June 1997). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **54**: 81. At the close of the voting period on 1 June 1998 the votes were as follows:

Affirmative votes — 23: Bock, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

Bouchet abstained.

No vote was received from Macpherson.

Ride was on leave of absence.

Abstaining, Bouchet commented: 'In my view the application is lacking in information for a vote. Was *Dorylaimus superbus* among the originally included species in *Apercelaimus*; is the name *D. superbus* commonly or rarely used; and what would be the consequences of designating the lectotype of *D. superbus* as the neotype of *D. regius*? This last action would give the same result as intended by the authors without Commission intervention'.

Original references

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

Aporcelaimus Thorne & Swanger, 1936, *Capita Zoologica*, **6**(4): 123.

superbus, *Dorylaimus*, de Man, 1880, *Tijdschrift der Nederlandsche Dierkundige Vereeniging*, **5**: 79.

The following is the reference for the designation of the lectotype of *Dorylaimus superbus* de Man, 1880:

Loof, P.A.A. 1961. *Beaufortia*, **8**: 237.

OPINION 1905

S.D. Kaicher (1973–1992), *Card Catalogue of World-Wide Shells*: not suppressed for nomenclatural purposes

Keywords. Nomenclature; taxonomy; S.D. Kaicher; *Card Catalogue of World-Wide Shells* (1973–1992); Mollusca; Gastropoda; Prosobranchia.

Ruling

(1) The work by S.D. Kaicher (1973–1992) entitled *Card Catalogue of World-Wide Shells* is not suppressed for nomenclatural purposes.

(2) The above work is hereby placed on the Official List of Works Approved as Available for Zoological Nomenclature.

History of Case 2964

An application for the suppression for nomenclatural purposes of the work by S.D. Kaicher (1973–1992) entitled *Card Catalogue of World-Wide Shells* was received from Dr Alan R. Kabat (*National Museum of Natural History, Smithsonian Institution, Washington, U.S.A.*) on 26 January 1995. After correspondence the case was published in BZN **53**: 96–98 (June 1996). Notice of the case was sent to appropriate journals.

Comments in support from Dr Y. Finet (*Muséum d'Histoire Naturelle, Genève, Switzerland*), Dr P. Bouchet (*Muséum National d'Histoire Naturelle, Paris, France*), Dr A.G. Beu (*Institute of Geological and Nuclear Sciences, Lower Hutt, New Zealand*), Dr A.J. Kohn (*University of Washington, Seattle, Washington, U.S.A.*) and Dr T. Schiøtte (*Zoological Museum, University of Copenhagen, Copenhagen, Denmark*) were published in BZN **53**: 273, 275–277 (December 1996). A further comment in support from Dr Anders Warén (*Swedish Museum of Natural History, Stockholm, Sweden*) was published in BZN **54**: 183–184 (September 1997).

A comment in opposition from Drs M.G. Harasewych & R.E. Petit (*National Museum of Natural History, Smithsonian Institution, Washington, U.S.A.*) was published in BZN **53**: 273–275 (December 1996). Further opposing comments from Dr Emily H. Vokes (*Tulane University, New Orleans, Louisiana, U.S.A.*), Dr William G. Lyons (*Florida Marine Research Institute, St Petersburg, Florida, U.S.A.*) and Dr José H. Leal (*The Bailey-Matthews Shell Museum, Sanibel Island, Florida, U.S.A.*) were published in BZN **54**: 39–44 (March 1997).

A reply by the author of the application to the opposing comments was published in BZN **54**: 44–46 (March 1997).

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **53**: 98. At the close of the voting period on 1 June 1998 the votes were as follows:

Affirmative votes — 11: Bouchet, Brothers, Kabata, Kerzhner, Kraus, Mahnert, Mawatari, Papp, Patterson, Schuster, Song

Negative votes — 12: Bock, Cocks, Dupuis, Eschmeyer, Heppell, Lehtinen, Martins de Souza, Minelli, Nielsen, Nye, Savage and Štys.

Cogger abstained.

No vote was received from Macpherson.

Ride was on leave of absence.

Voting for, Brothers commented: 'In voting in favour of the application I do have reservations, and my main motivation is the impression that Kaicher's (1973–1992) work was never intended to be used for revisionary nomenclatural purposes'. Voting against, Bock commented: 'In his application Kabat has not demonstrated any serious nomenclatural problems'. Cocks commented: 'This is a grey area. Following consultation with colleagues working on molluscs in The Natural History Museum, London, there seems to be no very substantial case for suppressing the publication (for such it undoubtedly is) for nomenclatural purposes'. Dupuis commented: "In spite of Kabat's emphasis (BZN **54**: 44) upon a 'suppression' for nomenclatural purposes only, I still think that such actions depreciate all other aspects of even the best of classical works. I am convinced by Lyon's comment (BZN **54**: 40)'. Eschmeyer commented: 'Kaicher should not have listed 'holotypes' when it was known that Dall, for example, often had multiple specimens of his new species. I agree with Harasewych & Petit (BZN **53**: 275) that 'lectotype designations ... should either be allowed to stand, or be evaluated in the course of systematic revisions on a taxon by taxon basis"'. Heppell commented: 'Although I was at first surprised that this case was brought to the Commission (as there is no doubt that the work in dispute is published in terms of the Code), the various comments for and against suppression show that an authoritative judgment on the status of the contained nomenclatural acts is necessary. I am familiar with the *Card Catalogue* (which from publication of the first issue has been formally catalogued by the library of the National Museums of Scotland) and have found it invaluable for curatorial purposes; its several shortcomings are no more than in many works by professional malacologists (in my view its worst feature is the lack of an index) and, as has been demonstrated, are often the result of unquestioned acceptance of the data supplied with the museum specimens illustrated. On balance I agree with those who have judged the applicant's case to be overstated. I therefore vote against the application'. Lehtinen commented: 'Kaicher's extensive publication, which several malacologists agree is useful in taxonomic work, has caused some confusion partly because some museum labels denoting lectotypes were not published by those responsible for the labelling and she did not check such information. I know a large number of taxonomic papers where the confusion is much greater but no one has even suggested their rejection for nomenclatural purposes'. In abstaining, Cogger commented: 'This application and the responses to it have included many emotionally charged statements in which nomenclatural issues have been overlooked. One of the arguments which is implicit in several comments is that because Kaicher was only perpetuating the practice widely adopted by other workers, including professional malacologists, her work should not be singled out for suppression. While I sympathise with the motives behind this view, I reject the nomenclatural arguments. It is clearly desirable that her unintended and/or erroneous lectotype designations be suppressed. The nature and purpose of the publication seems to me to have no relevance to the case. Even some supporters of the application concede that the work is an important contribution to systematic malacology and that the illustrations of many type specimens are correct, i.e. that the work has been valuable to nomenclaturists. If this is so, blanket

suppression of the entire work for nomenclatural purposes is inappropriate. With hindsight I would have preferred the application to have simply sought the setting aside in the Kaicher work of all type designations, whether explicit, or implicit under the Code. But this solution was not proposed by the applicant or any of the many commentators and so is not an option in the vote'.

Since there was a majority against the suppression for nomenclatural purposes of the work *Card Catalogue of World-Wide Shells* (S.D. Kaicher, 1973–1992), this publication is placed on the Official List as an available work.

Original reference

The following is the original reference to the work placed on an Official List by the ruling given in the present Opinion:

Kaicher, S.D. 1973–1992. *Card Catalogue of World-Wide Shells.* Pack 1 (cards 1–99) through Pack 60 (cards 6110–6215). Author, St Petersburg, Florida.

OPINION 1906

Euchroeus Latreille, 1809 (Insecta, Hymenoptera): conserved; *Chrysis purpurata* Fabricius, 1787 (currently *Euchroeus purpuratus*): specific name conserved; and *Chrysis gloriosa* Fabricius, 1793: specific name suppressed

Keywords. Nomenclature; taxonomy; Hymenoptera; cuckoo wasps; CHRYSIDIDAE; *Euchroeus*; *Euchroeus purpuratus*; *Chrysis gloriosa*; *Holopyga gloriosa*.

Ruling

(1) Under the plenary powers:
  (a) all previous type fixations for the nominal species *Chrysis purpurata* Fabricius, 1787 are hereby set aside;
  (b) the name *gloriosa* Fabricius, 1793, as published in the binomen *Chrysis gloriosa*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *Euchroeus* Latreille, 1809 (gender: masculine), type species by monotypy *Chrysis purpurata* Fabricius, 1787, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *purpurata* Fabricius, 1787, as published in the binomen *Chrysis purpurata* and as defined by the female neotype (a Latreille specimen in the Spinola collection in the Museo Regionale di Scienze Naturali in Turin, Italy) designated by Pavesi & Strumia (1998) (specific name of the type species of *Euchroeus* Latreille, 1809), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *gloriosa* Fabricius, 1793, as published in the binomen *Chrysis gloriosa* 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 2988

An application for the conservation of the generic name *Euchroeus* Latreille, 1809 and the specific name of *Chrysis purpurata* Fabricius, 1787, together with the suppression of *Chrysis gloriosa* Fabricius, 1793, was received from Dr Maurizio Pavesi (*Museo Civico di Storia Naturale, Milan, Italy*) and Prof Franco Strumia (*Università di Pisa, Pisa, Italy*) on 9 June 1995. After correspondence the case was published in BZN **54**: 26–30 (March 1997). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **54**: 29. At the close of the voting period on 1 June 1998 the votes were as given below, presented here in two parts. Part (1) relates to the conservation of *Euchroeus* Latreille, 1809 and the specific name of *Chrysis purpurata* Fabricius, 1787 (proposals (1)(a), (2) and (3)); part (2) relates to the suppression of the specific name of *C. gloriosa* Fabricius, 1793 (proposals (1)(b) and (4)).

Part 1. Affirmative votes — 24: Bock, Bouchet, Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

Part 2. Affirmative votes — 21: Bock, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song

Negative votes — 2: Bouchet and Štys.

Dupuis abstained.

No votes were received from Macpherson.

Ride was on leave of absence.

Cogger commented: 'My vote in favour of setting aside Kimsey's (1988) lectotype for *Chrysis purpurata* Fabricius, 1787 is conditional on the designation of a neotype, a possibility mentioned at the end of para. 9 of the application'. Kerzhner commented: 'I would prefer that a neotype for *C. purpurata* be designated. Setting aside the lectotype without designation of a neotype would not prevent a future author from designating again as the lectotype one of the three specimens in Fabricius's collection'. [*Editorial note*. The selection of a neotype for *C. purpurata* was suggested to the authors of the application (M. Pavesi and F. Strumia). They replied (in litt., July 1998): 'We fully agree with this suggestion. The designation of a neotype for *C. purpurata* would make the Commission ruling more secure. We have visited the Turin Museum and examined the four female Latreille specimens in the Spinola collection mentioned in para. 9 of the application. A label on the bottom of the box records '*Euchroeus purpureus* Latr. // - *purpuratus* (Chr.) Fab. // Coll. Latr. Fr. mérid.'. Of the four specimens, one with a handwritten label '1706' was possibly a later addition to the collection; two others are badly damaged and headless; the last one fits Fabricius's (1787) description well and is the most appropriate for designation as the neotype. We designate this specimen as the neotype of *Chrysis purpurata* Fabricius, 1787'. This designation has been recorded in the ruling above. Fabricius (1787) described *Chrysis purpurata* from Halle, Germany; Latreille (1805, 1809) recorded his specimens from 'aux environs de Paris']. Lehtinen commented: 'The suppression of *Chrysis gloriosa* Fabricius, 1793 is not necessary and possibly not even desirable. A study of North African material would probably solve its identity and a well documented neotype from this area could be designated. Kimsey's (1988) careless lectotype designation (para. 14 of the application) should be set aside, as proposed for that of *C. purpurata*'. Bouchet commented: 'The application fails to document the consequences of the rejection of the name *C. gloriosa*. It states (para. 12; also para. 15) that it 'has long been used, although mistakenly, as the valid synonym of *Holopyga amoenula* Dahlbom, 1845'. Would it not have been preferable to stabilise *gloriosa* in this accustomed sense by a neotype designation? The Commission has been asked to suppress the name without exploring any other alternative'.

Original references

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

Euchroeus Latreille, 1809, *Genera Crustaceorum et Insectorum*, vol. 4, p. 49.
gloriosa, *Chrysis*, Fabricius, 1793, *Entomologia Systematica emendata et aucta*, vol. 2, p. 242.
purpurata, *Chrysis*, Fabricius, 1787, *Mantissa Insectorum*, vol. 1, p. 283.

The following is the reference for the designation of the neotype of *Chrysis purpurata* Fabricius, 1787:
Pavesi, M. & Strumia, F. 1998. BZN **55**: 195.

OPINION 1907

Nothosaurus Münster, 1834 (Reptilia, Sauropterygia): given precedence over *Conchiosaurus* Meyer, [1833]

Keywords. Nomenclature; taxonomy; Reptilia; Sauropterygia; Lower-Middle Triassic; *Nothosaurus*; *Conchiosaurus*.

Ruling

(1) Under the plenary powers the generic name *Nothosaurus* Münster, 1834 is hereby given precedence over *Conchiosaurus* Meyer, [1833] whenever the two names are considered to be synonyms.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:

(a) *Nothosaurus* Münster, 1834 (gender: masculine), type species by monotypy *Nothosaurus mirabilis* Münster, 1834, with the endorsement that it is to be given precedence over *Conchiosaurus* Meyer, [1833] whenever the two names are considered to be synonyms;

(b) *Conchiosaurus* Meyer, [1833] (gender: masculine), type species by monotypy *Conchiosaurus clavatus* Meyer, [1833], with the endorsement that it is not to be given priority over *Nothosaurus* Münster, 1834 whenever the two names are considered to be synonyms.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *mirabilis* Münster, 1834, as published in the binomen *Nothosaurus mirabilis* (specific name of the type species of *Nothosaurus* Münster, 1834);

(b) *clavatus* Meyer, [1833], as published in the binomen *Conchiosaurus clavatus* (specific name of the type species of *Conchiosaurus* Meyer, [1833]).

History of Case 2994

An application for the conservation of the generic name *Nothosaurus* Münster, 1834 by giving it precedence over *Conchiosaurus* Meyer, [1833] was received from Dr Olivier Rieppel (*Field Museum, Chicago, Illinois, U.S.A.*) and Dr Paul D. Brinkman (*Arizona State University, Tempe, Arizona, U.S.A.*) on 20 July 1995. After correspondence the case was published in BZN **53**: 270–272 (December 1996). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 December 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 271–272. At the close of the voting period on 1 March 1998 the votes were as follows:

Affirmative votes — 21: Bock, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Song, Štys

Negative votes — 1: Bouchet.

No votes were received from Dupuis and Schuster.

Cogger and Ride were on leave of absence.

Minelli commented: 'There is a compelling reason to vote in favour: the problematic identity of the type species of *Conchiosaurus*'.

Original references

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

clavatus, *Conchiosaurus*, Meyer, [1833], *Museum Senckenbergianum. Abhandlungen aus dem Gebiete der beschriebenden Naturgeschichte*, **1**(1): 8.

Conchiosaurus Meyer, [1833], *Museum Senckenbergianum. Abhandlungen aus dem Gebiete der beschriebenden Naturgeschichte*, **1**(1): 8.

mirabilis, *Nothosaurus*, Münster, 1834, *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefaktenkunde*, **1834**: 525.

Nothosaurus Münster, 1834, *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefaktenkunde*, **1834**: 525.

OPINION 1908

Hemidactylus garnotii Duméril & Bibron, 1836 (Reptilia, Squamata): specific name conserved

Keywords. Nomenclature; taxonomy; Reptilia; Squamata; GEKKONIDAE; gecko; *Hemidactylus garnotii*.

Ruling

(1) Under the plenary powers the specific name *peruvianus* Wiegmann, 1835, as published in the binomen *Hemidactylus peruvianus*, is hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy.

(2) The name *garnotii* Duméril & Bibron, 1836, as published in the binomen *Hemidactylus garnotii*, is hereby placed on the Official List of Specific Names in Zoology.

(3) The name *peruvianus* Wiegmann, 1835, as published in the binomen *Hemidactylus peruvianus* and as suppressed in (1) above, is hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology.

History of Case 2960

An application for the conservation of the specific name of *Hemidactylus garnotii* Duméril & Bibron, 1836 was received from Prof Hobart M. Smith (*University of Colorado, Boulder, Colorado, U.S.A.*), Prof Arnold G. Kluge (*Museum of Zoology, University of Michigan, Ann Arbor, Michigan, U.S.A.*), Prof Aaron M. Bauer (*Villanova University, Villanova, Pennsylvania, U.S.A.*) and Prof David Chiszar (*University of Colorado, Boulder, Colorado, U.S.A.*) on 12 January 1995. After correspondence the case was published in BZN **53**: 184–186 (September 1996). Notice of the case was sent to appropriate journals.

Comments in support from Dr Hidetosho Ota (*University of the Ryukyus, Okinawa, Japan*) and from Dr Peter Paul van Dijk (*University College Galway, Galway, Ireland* and *Chulalongkorn University, Bangkok, Thailand*) were published in BZN **54**: 51–52 (March 1997) and in **54**: 116 (June 1997) respectively.

Decision of the Commission

On 1 December 1997 the members of the Commission were invited to vote on the proposals published in BZN **53**: 185. At the close of the voting period on 1 March 1998 the votes were as follows:

Affirmative votes — 22: Bock, Bouchet, Brothers, Cocks, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Macpherson, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Song, Štys

Negative votes — none.

No votes were received from Dupuis and Schuster.

Cogger and Ride were on leave of absence.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

garnotii, *Hemidactylus*, Duméril & Bibron, 1836, *Erpétologie générale ou histoire naturelle complète des reptiles*, vol. 3, p. 368.

peruvianus, *Hemidactylus*, Wiegmann, 1835, *Verhandlungen der Kaiserlichen Leopoldinisch-Carolinischen Akademie de Naturforscher*, **17**(1): 240.

OPINION 1909

Holotropis herminieri Duméril & Bibron, 1837 (currently *Leiocephalus herminieri*), *Proctotretus bibronii* T. Bell, 1842 (currently *Liolaemus bibronii*) (Reptilia, Squamata): specific names conserved, and *Liolaemus bellii* Gray, 1845 placed on the Official List

Keywords. Nomenclature; taxonomy; Reptilia; TROPIDURIDAE; *Leiocephalus herminieri*; *Liolaemus bibronii*; *Liolaemus bellii*; Martinique; South America.

Ruling

(1) Under the plenary powers:
  (a) the following specific names are hereby suppressed for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
    (i) *aculeatus* Gray, 1831, as published in the binomen *Tropidolepis aculeatus*;
    (ii) *fasciatus* Gray, 1831, as published in the binomen *Tropidolepis fasciatus*;
  (b) the name *bellii* Gray, 1831, as published in the binomen *Tropidolepis bellii*, 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) *herminieri* Duméril & Bibron, 1837, as published in the binomen *Holotropis herminieri*;
  (b) *bibronii* T. Bell, 1842, as published in the binomen *Proctotretus bibronii*;
  (c) *bellii* Gray, 1845, as published in the binomen *Liolaemus bellii*.

(3) The following names are hereby placed on the Official Index of Rejected and Invalid Specific Names in Zoology:
  (a) *aculeatus* Gray, 1831, as published in the binomen *Tropidolepis aculeatus* and as suppressed in (1)(a)(i) above;
  (b) *fasciatus* Gray, 1831, as published in the binomen *Tropidolepis fasciatus* and as suppressed in (1)(a)(ii) above;
  (c) *bellii* Gray, 1831, as published in the binomen *Tropidolepis bellii* and as suppressed in (1)(b) above.

History of Case 2976

An application for the conservation of the specific names of *Holotropis herminieri* Duméril & Bibron, 1837 and *Proctotretus bibronii* T. Bell, 1842 was received from Prof Hobart M. Smith (*University of Colorado, Boulder, Colorado, U.S.A.*) and Dr Edwin L. Bell (*Albright College, Reading, Pennsylvania, U.S.A.*) on 24 March 1995. After correspondence the case was published in BZN **53**: 112–115 (June 1996). Notice of the case was sent to appropriate journals.

A comment from Dr Richard Etheridge (*San Diego State University, San Diego, California, U.S.A.*), published in BZN **54**: 117–119 (June 1997), gave further information on the taxonomic identities of *Tropidolepis bellii* Gray, 1831 and

Liolaemus bellii Gray, 1845 (cf. para. 8 of the application), and proposed (p. 118) that the specific name of *L. bellii* Gray, 1845 be placed on the Official List. In a reply published at the same time, the authors of the application supported this proposal.

Dr Etheridge noted (p. 117, para. 2) that the name *T. bellii* Gray, 1831 is likely to be a junior synonym of *Liolaemus chiliensis* (Lesson, 1828), and considered that it should be treated as a nomen dubium. Suppression for priority and placement on the Official Index of *T. bellii* Gray, 1831 had been proposed in the application (paras. 9(1)(b) and 9(3)(b)). Since *T. bellii* Gray, 1831 may well be a senior secondary homonym within *Liolaemus* of *L. bellii* Gray, 1845, to conserve the latter name it was proposed on the voting paper that *T. bellii* Gray, 1831 be suppressed for both priority and homonymy.

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **53**: 114, with the addition of the specific name of *Liolaemus bellii* Gray, 1845 to proposal (2), published in BZN **54**: 118, para. 6, and the emendment (suppression of *Tropidolepis bellii* Gray, 1831 for both priority and homonymy) to proposal (1)(b). At the close of the voting period on 1 June 1998 the votes were as follows:

Affirmative votes — 23: Bock, Bouchet, Brothers, Cocks, Cogger, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen (part), Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — 1: Dupuis.

No vote was received from Macpherson.

Ride was on leave of absence.

Lehtinen voted for the conservation of the specific name of *Proctotretus bibronii* and for the placement of *Liolaemus bellii* Gray, 1845 on the Official List, but not for the conservation of *Holotropis herminieri*. Bouchet commented: 'In addition to the references cited in para. 5 of the application to document usage of the name *Leiocephalus herminieri*, it may be noted that the species is listed under that name in the 1994 and 1996 editions of the *IUCN Red List of Threatened Animals*'.

Original references

The following are the original references to the names placed on an Official List and an Official Index by the ruling given in the present Opinion:

aculeatus, *Tropidolepis*, Gray, 1831, *in* Griffith, E. & Pidgeon, E. (Eds.), *The animal kingdom arranged in conformity with its organization, by the Baron Cuvier, with additional descriptions of all the species hitherto named, and of many not before noticed*, vol. 9 (Supplement), p. 43.

bellii, *Liolaemus*, Gray, 1845, *Catalogue of the specimens of lizards in the collection of the British Museum*, p. 212.

bellii, *Tropidolepis*, Gray, 1831, *in* Griffith, E. & Pidgeon, E. (Eds.), *The animal kingdom arranged in conformity with its organization, by the Baron Cuvier, with additional descriptions of all the species hitherto named, and of many not before noticed*, vol. 9 (Supplement), p. 44.

bibronii, *Proctotretus*, T. Bell, 1842, *in* Darwin, C. (Ed.), *The zoology of the voyage of H.M.S. Beagle, under the command of Captain Fitzroy, R.N., during the years 1832–1836*, part 5, p. 6.

fasciatus, *Tropidolepis*, Gray, 1831, *in* Griffith, E. & Pidgeon, E. (Eds.), *The animal kingdom arranged in conformity with its organization, by the Baron Cuvier, with additional descriptions of all the species hitherto named, and of many not before noticed*, vol. 9 (Supplement), p. 44.

herminieri, *Holotropis*, Duméril & Bibron, 1837, *Erpétologie générale ou histoire naturelle complète des reptiles*, vol. 4, p. 261.

INFORMATION AND INSTRUCTIONS FOR AUTHORS

The following notes are primarily for those preparing applications; other authors should comply with the relevant sections. Applications should be prepared in the format of recent parts of the Bulletin; manuscripts not prepared in accordance with these guidelines may be returned.

General. Applications are requests to the Commission to set aside or modify the Code's provisions as they relate to a particular name or group of names when this appears to be in the interest of stability of nomenclature. Authors submitting cases should regard themselves as acting on behalf of the zoological community and the Commission will treat applications on this basis. Applicants are advised to discuss their cases with other workers in the same field before submitting applications, so that they are aware of any wider implications and the likely reactions of other zoologists.

Text. Typed in double spacing, this should consist of numbered paragraphs setting out the details of the case and leading to a final paragraph of formal proposals. Text references should give dates and page numbers in parentheses, e.g. 'Daudin (1800, p. 39) described . . .'. The Abstract will be prepared by the Secretariat.

References. These should be given for all authors cited. Where possible, ten or more relatively recent references should be given illustrating the usage of names which are to be conserved or given precedence over older names. The title of periodicals should be in full and be underlined; numbers of volumes, parts, etc. should be in arabic figures, separated by a colon from page numbers. Book titles should be underlined and followed by the number of pages and plates, the publisher and place of publication.

Submission of Application. Two copies should be sent to: The Executive Secretary, The International Commission on Zoological Nomenclature, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. It would help to reduce the time that it takes to process the large number of applications received if the typescript could be accompanied by a disk with copy in IBM PC compatible format, preferably in ASCII text. It would also be helpful if applications were accompanied by photocopies of relevant pages of the main references where this is possible.

The Commission's Secretariat is very willing to advise on all aspects of the formulation of an application.

Rulings of the Commission

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Continued on Inside Back Cover

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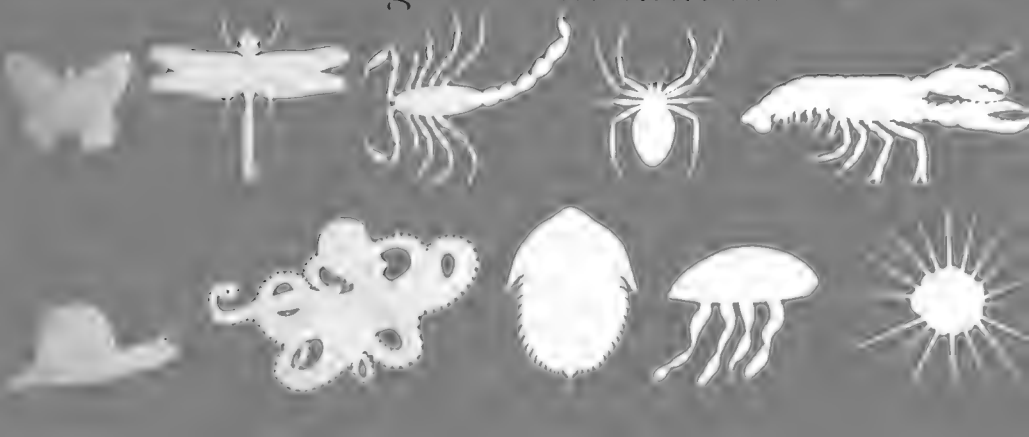
The Bulletin of Zoological Nomenclature

[ICZN] The Official Periodical of the International Commission on Zoological Nomenclature



THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The *Bulletin* is published four times a year for the International Commission on Zoological Nomenclature by the International Trust for Zoological Nomenclature, a charity (no. 211944) registered in England. The annual subscription for 1999 is £102 or $180, postage included. All manuscripts, letters and orders should be sent to:

The Executive Secretary,
International Commission on Zoological Nomenclature,
c/o The Natural History Museum,
Cromwell Road,
London, SW7 5BD, U.K. (Tel. 0171-938 9387)
(e-mail: iczn@nhm.ac.uk)
(http://www.iczn.org)

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 55, part 4 (pp. 205 263) 18 December 1998

Notices

(a) *Invitation to comment.* The Commission is authorised to vote on applications published in the *Bulletin of Zoological Nomenclature* six months after their publication but this period is normally extended to enable comments to be submitted. Any zoologist who wishes to comment on any of the applications is invited to send his contribution to the Executive Secretary of the Commission as quickly as possible.

(b) *Invitation to contribute general articles.* At present the *Bulletin* comprises mainly applications concerning names of particular animals or groups of animals, resulting comments and the Commission's eventual rulings (Opinions). Proposed amendments to the Code are also published for discussion.

Articles or notes of a more general nature are actively welcomed provided that they raise nomenclatural issues, although they may well deal with taxonomic matters for illustrative purposes. It should be the aim of such contributions to interest an audience wider than some small group of specialists.

(c) *Receipt of new applications.* The following new applications have been received since going to press for volume 55, part 3 (published on 30 September 1998). Under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published.

(1) *Mystacina* Gray, 1843, *Chalinolobus* Peters, 1866, *Mystacina tuberculata* Gray, 1843 and *Vespertilio tuberculatus* J.R. Forster, 1844 (currently *Chalinolobus tuberculatus*; Mammalia, Chiroptera): proposed conservation of usage. (Case 3095). H.G. Spencer & D.E. Lee.

(2) *Dichrorampha* Guenée, 1845 (Insecta, Lepidoptera): proposed precedence over *Amaurosetia* Stephens, 1835. (Case 3096). L. Aarvik.

(3) *Bolboceras* Kirby, [1819] (Insecta, Coleoptera): proposed conservation. (Case 3097). M.L. Jameson & H.F. Howden.

(4) *Ophidium maculatum* Tschudi, 1846 (currently *Genypterus maculatus*; Osteichthyes, Gadiformes): proposed conservation of the specific name. (Case 3098). M.H. Wilson.

(5) *Titanodamon johnstonii* Pocock, 1894 (currently *Damon johnstonii*; Arachnida, Amblypygi): proposed conservation of the specific name. (Case 3099). P. Weygoldt.

(d) *Rulings of the Commission.* Each Opinion published in the *Bulletin* constitutes an official ruling of the International Commission on Zoological Nomenclature, by virtue of the votes recorded, and comes into force on the day of publication of the *Bulletin*.

The International Code of Zoological Nomenclature

The Commission is at present voting on the adoption of the final text of the new (4th) edition of the International Code of Zoological Nomenclature and, subject to this adoption and its ratification by the International Union of Biological Sciences, the edition will be published in early 1999. Its provisions will come into effect on 1 January 2000. As soon as the publication date is known it will be announced on the Commission's Web Site (http://www.iczn.org), together with details of how the new Code may be bought.

Meanwhile, copies of the 3rd edition (published 1985) are still available from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) or from A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu). The cost is £19 or $35 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £15 or $29. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

Towards Stability in the Names of Animals

The International Commission on Zoological Nomenclature was founded on 18 September 1895. In recognition of its Centenary a history of the development of nomenclature since the 18th century and of the Commission has been published entitled '*Towards Stability in the Names of Animals — a History of the International Commission on Zoological Nomenclature 1895–1995*' (ISBN 0 85301 005 6). It is 104 pages (250 x 174 mm) with 18 full-page illustrations, 14 being of eminent zoologists who played a crucial part in the evolution of the system of animal nomenclature as universally accepted today. The book contains a list of all the Commissioners from 1895 to 1995. The main text was written by R.V. Melville (former Secretary of the Commission) and has been completed and updated following his death.

Copies may be ordered from I.T.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk) *or* A.A.Z.N., Attn. Dr D.G. Smith, MRC-159, National Museum of Natural History, Washington, D.C. 20560, U.S.A. (e-mail: smithd@nmnh.si.edu).

The cost is £30 or $50 (including surface postage); members of the American and European Associations for Zoological Nomenclature are offered the reduced price of £20 or $35. Payment (cheques made out to 'ITZN' or 'AAZN') should accompany orders or should follow if the order is made by electronic means.

International Trust for Zoological Nomenclature

Financial Report for 1997

The Trust's deficit of £5051 for 1997 was significantly higher than the deficit of £984 for 1996, and higher than the £4441 deficit for 1995. A fall in the number of donors was the main reason for the increased deficit, though some significant large donations remained to keep the deficit within bounds - - these included the substantial amounts of £10,000 from the Royal Society of London, £4157 from the American Association for Zoological Nomenclature and £1500 from the Palaeontological Association. The work of the Trust is only possible because of the support from these and the other donors that are listed at the end of this report, to whom we extend our thanks. The deficit would have been £3119 higher had the Trust not found it necessary to obtain £10,000 from its investments in order to maintain cashflow during the year, £3119 of that amount being capital gain on the original cost of the investments that were cashed; this capital gain appears as income in the accounts.

Nearly half the Trust's income came from sales of publications, mainly from the *Bulletin of Zoological Nomenclature* which yielded an income of £25,707. Sales of the *Official Lists and Indexes*, the *International Code of Zoological Nomenclature* and the Centenary History of the Commission brought the total income from publications to £29,412. Income from grants and donations of £18,505, interest and investment income of £10,235, and capital gain of £3119 brought the total income for the year to £61,271.

The main expenditure was £56,228 for the salaries and National Insurance of the Secretariat of the International Commission on Zoological Nomenclature. Printing of the *Bulletin of Zoological Nomenclature* and distribution of all publications amounted to £8830. Other costs for office expenses (£894) and depreciation of office equipment (£370) brought the total expenditure to £66,322.

The Commission Secretariat 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 contributed to its work during the year. Continuing support of this kind is vital if the Commission is to carry out its work for the international zoological and palaeontological community.

M.K. HOWARTH
Secretary and Managing Director
29 April 1998

List of donations and grants received during the year 1997

American Association for Zoological Nomenclature	£4157
Australian Academy of Sciences	£524
European Association for Zoological Nomenclature	£973
Palaeontological Association, U.K.	£1500
Royal Danish Academy of Sciences and Letters	£96
Royal Entomological Society of London	£300
Royal Society of London	£10000

St John's College, Cambridge	£250
Zoological Museum, Copenhagen	£500
Zoological Societies of Japan	£55
Zoological Society of London	£150
Total	£18505

INTERNATIONAL TRUST FOR ZOOLOGICAL NOMENCLATURE INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 1997

Income		
SALE OF PUBLICATIONS		
Bulletin of Zoological Nomenclature	£25707	
International Code of Zoological Nomenclature	1329	
Official Lists and Indexes	506	
Centenary History	1870	
	29412	
GRANTS AND DONATIONS		18505
BANK AND INVESTMENT INTEREST		10235
CAPITAL GAIN ON INVESTMENTS		3119
		61271
Expenditure		
SALARIES, NATIONAL INSURANCE AND FEES	56228	
OFFICE EXPENSES	894	
PRINTING AND DISTRIBUTION OF PUBLICATIONS	8830	
DEPRECIATION OF OFFICE EQUIPMENT	370	
		66322
Deficit for the year		£5051

Case 3036

Haliotis clathrata Reeve, 1846 (non Lichtenstein, 1794) and *H. elegans* Philippi, 1844 (Mollusca, Gastropoda): proposed conservation of the specific names

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Abstract. The purpose of this application is to conserve the specific names of two prosobranch gastropods — *Haliotis clathrata* Reeve, 1846 and *H. elegans* Philippi, 1844. These two names are threatened by the unused name *Haliotis clathrata* Lichtenstein, 1794, which is a senior homonym of the first and a senior subjective synonym of the second.

Keywords. Nomenclature; taxonomy; Gastropoda; Prosobranchia; HALIOTIDAE; *Haliotis clathrata*; *Haliotis elegans*.

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1. Lichtenstein's *Catalogus rerum naturalium rarissimum* was published as a catalogue in three parts — the first in 1793 dealt with mammals and birds, the second (1794) with mollusks, and the third in 1796 with insects. The catalogue meets all the requirements for publication and is an available work. Kerzhner (1994) described the history of the catalogue and proposed that the third part should be suppressed for nomenclatural purposes with the conservation of a number of insect names; the Commission accepted this proposal in Opinion 1820 (1995).

2. In the second part of his catalogue (1794), Lichtenstein described 16 new mollusks including *Haliotis clathrata* (p. 105). This name was overlooked in the large monographs of the genus *Haliotis* by Reeve (1846), Sowerby (1882), Weinkauff (1883), Pilsbry (1890) and Kaicher (1981). This century, the name has been included in lists by Sherborn (1902), Pickery (1991), Prado & Abreu (1993) and Ubaldi (1993). Wagner & Abbott (1978) listed '*Haliotis clathrata* Lichtenstein, 1794. Undetermined species' (see also Geiger, 1998a, p. 100).

3. Reeve (1846, pl. 17, fig. 71) established the name *Haliotis clathrata* for a shallow water prosobranch ranging from Madagascar to American Samoa and from Southern Japan to Southeastern Australia. It is a fairly well recognized species with one holotype and two paratypes in the Natural History Museum, London (see Yen, 1942, p. 175). Although poorly described in the literature, the name has been used by a small number of authors (e.g., Yen, 1942; Ladd, 1966; Kaicher, 1981; Gosliner et al., 1996). In a forthcoming paper, we (Stewart & Geiger, 1999) demonstrate that *H. clathrata* Reeve is a valid name and is not (contra Talmadge, 1957) a juvenile of *H. rubra* Leach, 1814 (see also Geiger, 1998a, p. 100).

4. Philippi (1844, p. 119, pl. 1, fig. 1) established the name *Haliotis elegans*, which is quite well known in the scientific as well as the popular literature (e.g., Hinton, 1978; Kaicher, 1981; Abbott & Dance, 1983; Wilson, 1993). Authorship of this species is sometimes attributed to 'Koch in Philippi', but it is apparent that Philippi wrote the description, where he only made reference to Koch (see Geiger, 1998b, pp. 158–159). One of us (Geiger, 1998b, pp. 158–159) has presented the arguments for synonymy between *H. elegans* and *H. clathrata* Lichtenstein, and concluded that 'the overwhelming majority of the clear evidence indisputably indicates that *H. clathrata* Lichtenstein is synonymous with *H. elegans*' (see also Stewart & Geiger, 1999).

5. The name *Haliotis clathrata* Lichtenstein has not been used other than in lists for over a century. Under Article 23.9 of the proposed 4th Edition of the Code (due to come into effect on 1 January 2000), the fact that a name had not been used as valid after 1899 would require maintenance of prevailing usage of its junior homonym or synonym provided the junior name had been used as valid in at least 25 works published by at least 10 authors in the preceding 50 years. This requirement of usage would not be met for *H. clathrata* Reeve and probably not for *H. elegans*. The Lichtenstein name, therefore, poses a threat to two nominal species — *H. clathrata* Reeve (a junior homonym) and *H. elegans* (a junior synonym). We believe that, after publication of a recent series of papers (Geiger, 1998a; Geiger, 1998b; Stewart & Geiger, 1999; Geiger & Groves, under review), the name *H. clathrata* Reeve will be used as valid much more than at present. We therefore propose the suppression of *H. clathrata* Lichtenstein in order to conserve the current names of the nominal species *H. clathrata* Reeve and *H. elegans* Philippi.

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

(1) to use its plenary powers to suppress the name *clathrata* Lichtenstein, 1794, as published in the binomen *Haliotis clathrata*, and all uses of the name *Haliotis clathrata* prior to the publication of *Haliotis clathrata* Reeve, 1848, 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) *clathrata* Reeve, 1846, as published in the binomen *Haliotis clathrata*;
(b) *elegans* Philippi, 1844, as published in the binomen *Haliotis elegans*;

(3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *clathrata* Lichtenstein, 1794, as published in the binomen *Haliotis clathrata* and as suppressed in (1) above.

Acknowledgements

Gary Rosenberg offered his valued opinion on the present case. Lindsey T. Groves and James H. McLean critically read the manuscript.

References

Abbott, R.T. & Dance, S.P. 1983. *Compendium of seashells*. 411 pp. Dutton, New York.

Geiger, D.L. 1998a. Recent genera and species of the family Haliotidae Rafinesque, 1815 (Gastropoda: Vetigastropoda). *The Nautilus*, **111**(3): 85–116.

Geiger, D.L. 1998b. Note on the identity of *Haliotis clathrata* Lichtenstein, 1794 (not Reeve, 1846). *Molluscan Research*, **19**(1): 157–159.

Geiger, D.L. & Groves, L.T. Under review. Review of fossil Abalone (Gastropoda: Vetigastropoda: Haliotidae) with comparison to Recent species. *Journal of Paleontology*.

Gosliner, T.M., Behrens, D.W. & Williams, G.C. 1996. *Coral reef animals of the Indo-Pacific*. 314 pp. Sea Challengers, Monterey.

Hinton, A.G. 1978. *Guide to Australian shells*. 82 pp. Brown, Port Moresby, Papua New Guinea.

Kaicher, S.D. 1981. *Card catalogue of world-wide shells*, pack no. 28 (Haliotidae). Privately published, St. Petersburg, Florida.

Kerzhner, I.M. 1994. Case 2862. A.A.H. Lichtenstein's (1796, 1797) *Catalogus musei zoologici ... Sectio tertia. Continens Insecta* and D.H. Schneider's (1800) *Verzeichniss einer Parthei Insekten ...*: proposed suppression, with conservation of some Lichtenstein (1796) names (Insecta and Arachnida). *Bulletin of Zoological Nomenclature*, **51**: 108–115.

Ladd, H.S. 1966. Chitons and gastropods (Haliotidae through Aderobidae) from the western Pacific islands. *U.S. Geological Survey Professional Paper*, **531**: 1–98.

Lichtenstein, A.A.H. 1794. *Catalogus rerum naturalium rarissimum. Sectio secunda continens Conchylia, item mineralia, ligna exotica, & arte parata*. 118 pp. Schniebes, Hamburg.

International Commission on Zoological Nomenclature. 1995. Opinion 1820. A.A.H. Lichtenstein's (1796, 1797) *Catalogus musei zoologici ... Sectio tertia. Continens Insecta* and D.H. Schneider's (1800) *Verzeichniss einer Parthei Insekten ...*: suppressed, with conservation of some Lichtenstein (1796) names (Insecta and Arachnida). *Bulletin of Zoological Nomenclature*, **52**: 283–285.

Philippi, R.A. 1844. *Abbildung und Beschreibungen neuer oder weniger gekannter Conchylien*, vol. 1, part 5. Pp. 103–130. Fischer, Cassel.

Pickery, R. 1991. Chronological list of the references to the original descriptions of Recent subgenera and species belonging to the family Haliotidae. *Gloria Maris*, **29**: 105–118.

Pilsbry, H.A. 1890. *Manual of conchology; structural and systematic. Vol. 12. Haliotidae*. Pp. 72–126, pls. 1, 3–24, 46–50. Academy of Natural Sciences, Philadelphia.

Prado, A.C.G. & Abreu, O.S. de. 1993. Global list of the family Haliotidae Rafinesque, 1815 (Gastropoda: Pleurotomariacea). *Publicações Ocasionais Conquiliologistas do Brazil*, **001**: 1–7.

Reeve, L. 1846. Monograph of the genus *Haliotis*. 22 pp., 17 pls. *in*: *Conchologia Iconica*, vol. 3. Reeve, London.

Sherborn, C.D. 1902. *Index Animalium 1758–1800*. 1195 pp. Cambridge University Press, Cambridge.

Sowerby, G.B. 1882. Monograph of the genus *Haliotis*. Pp. 17–37, pls. 428–440 *in*: *Thesaurus Conchyliorum*, vol. 5. London.

Stewart, K.A. & Geiger, D.L. 1999. Designation of lectotype for *Haliotis crebrisculpta* Sowerby, 1914, with a discussion of *H. clathrata* Reeve, 1846 (*non* Lichtenstein, 1794). *The Veliger*, **42**(1).

Talmadge, R.R. 1957. Proposed revision of *Haliotis* Ruber. *The Nautilus*, **71**: 57–60.

Ubaldi, R. 1993. *Atlas of the living abalone shells of the world*. 21 pp., 4 pls. Associazione Malacologica, Rome.

Wagner, R.J.L. & Abbott, R.T. 1978. *Standard catalog of shells*, Ed. 3. American Malacologists, Greenville.

Weinkauff, H.C. 1883. Die Gattung *Haliotis*. In: Systematisches Conchylien-Cabinet von Martini and Chemnitz. 2(6)B: 1–83, pls. 1–30.

Wilson, B. 1993. *Australian marine shells*. Part 1. 408 pp. Odyssey Publishing, Kallaroo.

Yen, T.-C. 1942. A review of the Chinese gastropods in the British Museum. *Proceedings of the Malacological Society of London*, **24**: 170–289.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3080

Polydora websteri Hartman in Loosanoff & Engle, 1943 (Annelida, Polychaeta): proposed conservation of the specific name by a ruling that it is not to be treated as a replacement for *P. caeca* Webster, 1879, and designation of a lectotype for *P. websteri*

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Abstract. The purpose of this application is to conserve the specific name of *Polydora websteri* Hartman in Loosanoff & Engle, 1943 for a boring mudworm (family SPIONIDAE) from coasts of North America. The name was proposed as a replacement for *P. caeca* Webster, 1879, a junior secondary homonym of *P. coeca* (Örsted, 1843), which relates to a tube-dwelling spionid. However, *P. websteri* was based on different material from *P. caeca* Webster and the names are now known to refer to distinct species. It is proposed that *P. websteri* should not be treated as a replacement name for *P. caeca* Webster, and that a lectotype be designated in accord with accustomed usage. *Polydora websteri* is well known as a borer in the shells of oysters and other commercially important molluscs.

Keywords. Nomenclature; taxonomy; Polychaeta; SPIONIDAE; *Polydora caeca*; *Polydora websteri*; mudworms; marine; North America.

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1. Örsted (1843, p. 39) described a new polychaete species, *Leucodorum coecum*, a tube-dwelling spionid from the Øresund, Denmark.

2. Claparède (1869, pp. 53–54) referred the genus *Leucodore* Johnston, 1838 (used by some authors as *Leucodora* or *Leucodorum*) to synonymy with *Polydora* Bosc, 1802, and Örsted's species thus became *Polydora coeca* (Örsted, 1843). The name is currently in use and the species is known from the eastern Atlantic and the Arctic.

3. Webster (1879, pp. 252–253, pl. 9, figs. 119–122) described and illustrated a new polychaete species, *Polydora caeca*, a shell-boring spionid from the coast of Virginia, U.S.A. Despite the description being brief and based on one specimen, Webster (1879, p. 253) noted that 'This species can readily be distinguished from any previously described from our coast by the purple markings on the tentacles'. Another characteristic feature provided by Webster (p. 252) was the caruncle extending 'from the head to the anterior margin of the 4th segment'. Until recently *Polydora* specimens with these characteristic features have not been subsequently

reported from the Atlantic coast of North America (see *Polydora* revisions by Blake, 1971, 1996).

4. Hartman (in Loosanoff & Engle, 1943, pp. 70–72) proposed the replacement name *Polydora websteri* to replace the name *P. caeca* Webster (under Article 58 of the Code *coeca* and *caeca* are deemed to be homonyms). However, Hartman redescribed and illustrated the species based upon her own material because Webster's single specimen was 'not known to exist' (1943, p. 72). Hartman also recorded (p. 70) that Webster's 'description is faulty and misleading in all essential respects' and (p. 72) 'the original description of *P. caeca* Webster is incomplete in some important details and erroneous in some others'. Hartman's material was deposited in the Allan Hancock Foundation of the University of Southern California but no types were designated. These specimens (collected by J.B. Engle from vesicles on empty oyster shells, in the mouth of Milford River, Long Island Sound, Connecticut) are now kept in the Los Angeles County Museum of Natural History (LACM-AHF POLY 1628). They have been examined and found to include 13 specimens in good condition. No individuals with bands on the palps or a caruncle extending beyond segment 2 have been found that would have suggested the presence of *P. caeca* Webster.

5. *Polydora* specimens matching Hartman's (1943) description are very common along the east, west, and gulf coasts of North America, along the west coast of South America (Hartman, 1945, 1951, 1954, 1959, 1961; Foster, 1971, pp. 26–27; Blake, 1983, p. 257), and Australia (Blake & Kudenov, 1978, pp. 258–259). *Polydora websteri* was redescribed by Blake (1971, pp. 6–8) and has become the subject of numerous investigations due to its importance as a borer in shells of commercially important molluscs (Medcof, 1946; Owen, 1957; Hopkins, 1958; Mackenzie & Shearer, 1959; Hartman, 1966; Davis, 1967, 1969; Haigler, 1969; Evans, 1969; Jeffries, 1972; Blake & Evans, 1973; Zottoli & Carriker, 1974; Kojima & Imajima, 1982; Bailey-Brock & Ringwood, 1982; Bergman, Elner & Risk, 1982; Sato-Okoshi & Okoshi, 1993).

6. Recently, *Polydora* specimens matching Webster's (1879) description of *P. caeca* were found boring into gastropod shells from Rhode Island (Williams & Radashevsky, in press). The length of caruncle was shown to be size-dependent, reaching the middle of segment 4 in the largest specimens. Although body pigmentation was variable, black bars on the palps were present in all specimens (the purple pigmentation reported by Webster, 1879 for *P. caeca* is actually black; purple pigment has not been described in any spionid species by modern zoologists although this color was reported by researchers in the 19th century). Specimens with the same characteristic features were collected by S.H. Hopkins from oyster shells off Virginia (the type locality for *P. caeca*) and deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM 45201). Specimens from Rhode Island and Virginia represent the only shell-boring *Polydora* species with banded palps and caruncle extending beyond segment 2 on the Atlantic coast of North America.

7. The United States National Museum (USNM) is the only museum to which Webster sent material (Linda Ward, personal communication). Webster (1879) described 27 new taxa, and types for 14 of these are at the USNM. There is no information concerning the whereabouts of the remaining 13 species, including *P. caeca*. The only other museums that would be likely candidates to have received Webster's material are the Peabody Museum of Natural History, Yale University,

New Haven; the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts; and the American Museum of Natural History, New York. Requests for Webster's *P. caeca* material were made at all of these museums and each indicated *P. caeca* was not deposited.

8. Hartman (1943) thought that she was dealing with the species *Polydora caeca* Webster, 1879. She knew the name *P. caeca* was a junior secondary homonym and she therefore published *P. websteri* as a replacement name. However, it is now known that *P. websteri* is different taxonomically from *P. caeca* Webster. Despite this, under Article 72 of the Code the type material of *P. websteri* is Webster's (lost) single specimen; *websteri* is the valid name for Webster's species and a new name would be required for Hartman's species. This switch of the name *websteri* from one species to the other, and adoption of a new name for *websteri* as currently understood, would cause considerable confusion because the name *websteri* has long been associated with Hartman's species and has been cited in numerous publications concerning commercially important shell-boring spionids (para. 5 above).

9. We urge that the specific name *Polydora websteri* be conserved for the species that Hartman (1943) described. We propose that Article 72 of the Code be set aside in this case and that the Commission be asked to rule that the specific name of *P. websteri* Hartman, 1943 is no longer to be treated as a replacement name (and therefore a junior objective synonym) of *P. caeca* Webster, 1879. Approval of this proposal will allow the designation of a lectotype for *P. websteri* from among Hartman's original material in the Los Angeles County Museum of Natural History (para. 4 above), thereby maintaining the name in its accustomed usage. Information on Hartman's specimens was supplied (in litt., December 1997) by Leslie H. Harris, Collection Manager of the LACM-Allan Hancock Foundation Polychaete Collection: 'The data for Hartman's (1943) material, LACM-AHF 1628 (N1929), comes from three sources: (1) data on the labels inside the vial; (2) Hartman in Loosanoff & Engle, 1943, pp. 70 72; and (3) the entry in Hartman's personal catalogue, which reads 'N1929 *Polydora websteri*, n[ew] name, Milford, Conn. Dug from vesicles on empty oyster shells, in mouth of Milford River, by J.B. Engle, Jan. 4 1943, sent by Thurlow Nelson''. One of us (V.I.R.) has examined Hartman's (1943) original specimens, described and illustrated one of them (Radashevsky, in press), and we propose that this specimen (catalog no. LACM-AHF POLY 1628) be designated as the lectotype of *P. websteri*.

10. Blake (1996, p. 181) resurrected and redefined the genus *Dipolydora* Verrill, 1879. He retained *websteri* Hartman in *Polydora* Bosc, 1802 and referred *coeca* Örsted to *Dipolydora*. Article 59 of the Code states that *P. caeca* Webster is permanently invalid since it is a junior secondary homonym replaced before 1961. We have therefore proposed (Williams & Radashevsky, in press) a new nominal species for specimens matching Webster's description. A specimen collected from a shell fragment of *Mya arenaria* Linnaeus, 1758 off Rhode Island is the holotype.

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

(1) to use its plenary powers to rule that the specific name *websteri* Hartman in Loosanoff & Engle, 1943, as published in the binomen *Polydora websteri*, is to be treated as the specific name of a then new nominal species and not as a replacement name for *Polydora caeca* Webster, 1879;

(2) to designate specimen LACM-AHF POLY 1628 in the Allan Hancock Foundation Polychaete Collection, Los Angeles County Museum of Natural History, as the lectotype of *Polydora websteri* Hartman in Loosanoff & Engle, 1943;

(3) to place on the Official List of Specific Names in Zoology the name *websteri* Hartman in Loosanoff & Engle, 1943, as published in the binomen *Polydora websteri* and as defined by the lectotype designated in (2) above.

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We are grateful to Fredrik Pleijel (*Tjärnö Marine Biological Laboratory*) who inspired this publication and discussed the problem, to Linda Ward (*National Museum of Natural History, Smithsonian Institution*) who discussed and edited the manuscript and provided information about Webster's materials, and to Leslie H. Harris (*Los Angeles County Museum of Natural History*) for providing the information and access to Hartman's material. The case was also discussed with Kristian Fauchald, Frederick M. Bayer, James A. Blake, Amélie H. Scheltema, and Christopher B. Boyko. Our sincere thanks to Eric A. Lazo-Wazem (*Peabody Museum of Natural History, Yale University*), Ardis B. Johnston (*Museum of Comparative Zoology, Harvard University*), and Marie E. Lawrence (*American Museum of Natural History*), who kindly provided information about Webster's material in the museums. The investigation was supported by the Research Grant 97 04–49731 from the Russian Foundation for Basic Research, and by a Visiting Scientist Fellowship (to V.I.R. for the year 1997) from the National Museum of Natural History, Smithsonian Institution.

References

Bailey-Brock, J.H. & Ringwood, A. 1982. Methods for control of the mud blister worm, *Polydora websteri*, in Hawaiian oyster culture. *Sea Grant Quarterly*, **4**: 1–6.

Bergman, K.M., Elner, R.W. & Risk, M.J. 1982. The influence of *Polydora websteri* borings on the strength of the shell of the sea scallop, *Placopecten magellanicus*. *Canadian Journal of Zoology*, **60**: 2551–2556.

Blake, J.A. 1971. Revision of the genus *Polydora* from the east coast of North America (Polychaeta: Spionidae). *Smithsonian Contributions to Zoology*, **75**: 1–32.

Blake, J.A. 1983. Polychaetes of the family Spionidae from South America, Antarctica, and adjacent seas and islands. *Biology of the Antarctic Seas 14. Antarctic Research Series*, **39**: 205–288.

Blake, J.A. 1996. Family Spionidae Grube, 1850. Including a review of the genera and species from California and a revision of the genus *Polydora* Bosc, 1802. Pp. 81–223 *in* Blake, J.A., Hilbig, B. & Scott, P.H. (Eds.), *Taxonomic atlas of the benthic fauna of the Santa Maria Basin and Western Santa Barbara Channel*, vol. 6 (The Annelida), part 3 (Polychaeta: Orbiniidae to Cossuridae). Santa Barbara Museum of Natural History, Santa Barbara, California.

Blake, J.A. & Evans, J.W. 1973. *Polydora* and related genera as borers in mollusk shells and other calcareous substrates (Polychaeta: Spionidae). *Veliger*, **15**: 235–249.

Blake, J.A. & Kudenov, J.D. 1978. The Spionidae (Polychaeta) from southeastern Australia and adjacent areas with a revision of the genera. *Memoirs of the National Museum of Victoria*, **39**: 171–280.

Claparède, E. 1869. Les Annélides Chétopodes du Golfe de Naples. Seconde partie. Annélides sédentaires. *Mémoires de la Société de Physique et d'Histoire Naturelle de Genève*, **20**: 1–225.

Davis, J.D. 1967. *Polydora* infestation of arctic wedge-clams: a pattern of selective attack. *Proceedings of the National Shellfisheries Association*, **57**: 67–72.

Davis, J.D. 1969. *Polydora* infestation of *Mercenaria mercenaria*. *Nautilus*, **83**: 74.

Evans, J.W. 1969. Borers in the shell of the sea scallop, *Placopecten magellanicus*. *American Zoologist*, **9**: 775–782.

Foster, N.M. 1971. Spionidae (Polychaeta) of the Gulf of Mexico and the Caribbean Sea. *Studies on the Fauna of Curaçao and other Caribbean Islands*, **36**: 1–183.

Haigler, S.A. 1969. Boring mechanism of *Polydora websteri* inhabiting *Crassostrea virginica*. *American Zoologist*, **9**: 821–828.

Hartman, O. 1943. Description of *Polydora websteri*. *In* Loosanoff, V.L. & J.B. Engle, *Polydora* in oysters suspended in the water. *Biological Bulletin*, **85**: 69–78.

Hartman, O. 1945. The marine annelids of North Carolina. *Bulletin of the Duke University Marine Station*, **2**: 1–54.

Hartman, O. 1951. The littoral marine annelids of the Gulf of Mexico. *Publications of the Institute of Marine Science*, Port Aransas, Texas, **2**: 7–124.

Hartman, O. 1954. Polychaetous annelids of the Gulf of Mexico. *Fishery Bulletin*, **89**: 413–417.

Hartman, O. 1959. Catalogue of the polychaetous annelids of the world. *Allan Hancock Foundation Publications, Occasional Paper*, **23**: 1–628.

Hartman, O. 1961. Polychaetous annelids from California. *Allan Hancock Pacific Expeditions*, **25**: 1–226.

Hartman, O. 1966. Polychaetous annelids of the Hawaiian Islands. *Occasional Papers of the Bernice P. Bishop Museum*, **23**: 163–252.

Hopkins, S.H. 1958. The planktonic larvae of *Polydora websteri* Hartman (Annelida, Polychaeta) and their settling on oysters. *Bulletin of Marine Science of the Gulf and Caribbean*, **8**: 268–277.

Jeffries, H.P. 1972. A stress syndrome in the hard clam, *Mercenaria mercenaria*. *Journal of Invertebrate Pathology*, **20**: 242–251.

Kojima, H. & Imajima, M. 1982. Burrowing polychaetes in the shells of the abalone *Haliotis diversicolor aquatilis*, chiefly on the species of *Polydora*. *Bulletin of the Japanese Society of Scientific Fisheries*, **48**: 31–35.

Mackenzie, C.L. & Shearer, L.W. 1959. Chemical control of *Polydora websteri* and other annelids inhabiting oyster shells. *Proceedings of the National Shellfisheries Association*, **50**: 105–111.

Medcof, J.C. 1946. The mud-blister worm, *Polydora*, in Canadian oysters. *Journal of the Fisheries Research Board of Canada*, **6**: 498–505.

Örsted, A.S. 1843. *Annulatorum danicorum conspectus*. Fasc. 1 (Maricolae). 52 pp., 7 pls. Sumtibus Librariae Wahlianae, Hafniae.

Owen, H.M. 1957. Etiological studies on oyster mortality. 2. *Polydora websteri* Hartman (Polychaeta: Spionidae). *Bulletin of Marine Science of the Gulf and Caribbean*, **7**: 35–46.

Radashevsky, V.I. In press. Description of the proposed lectotype of *Polydora websteri* Hartman, 1943 (Polychaeta: Spionidae). *Ophelia*.

Sato-Okoshi, W. & Okoshi, K. 1993. Microstructure of scallop and oyster shells infested with boring *Polydora*. *Nippon Suisan Gakkaishi*, **59**: 1243–1247.

Webster, H.E. 1879. Annelida Chaetopoda of the Virginian coast. *Transactions of the Albany Institute, New York*, **9**: 202–269.

Williams, J.D. & Radashevsky, V.I. In press. Morphology, ecology, and reproduction of a new *Polydora* species (Polychaeta: Spionidae) from the east coast of North America. *Ophelia*.

Zottoli, R.A. & Carriker, M.R. 1974. Burrow morphology, tube formation, and microarchitecture of shell dissolution by the spionid polychaete *Polydora websteri*. *Marine Biology*, **27**: 307–316.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 2911

Spherillo Dana, 1852 (Crustacea, Isopoda): proposed designation of *S. vitiensis* Dana, 1853 as the type species, with designation of a neotype

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Abstract. The purpose of this application is to stabilise the nomenclature of the nominal genus *Spherillo* Dana, 1852 for a widespread genus of woodlice. Confusion arises from the absence of a type species designation and a tradition of neglect of the rules of nomenclature by isopod taxonomists. A neotype is designated for *Spherillo vitiensis* Dana, 1853, which is proposed as the type species of *Spherillo*.

Keywords. Nomenclature; taxonomy; Crustacea; Isopoda; ONISCIDEA; *Spherillo*; *Spherillo vitiensis*; woodlice.

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1. Dana (1852, p. 301) described a genus of woodlice from some of the Pacific islands; he named the genus *Spherillo* but did not name any species. The nominal genus is available from 1852, although some authors attribute it to 1853 when Dana described four species in *Spherillo*: *S. monolinus* (p. 719) from New Zealand; *S. vitiensis* (p. 721) from Fiji; *S. hawaiensis* (p. 722) from Hawaii; and *S. spinosus* (p. 723) from New Zealand. He did not designate any of these species as the type. No later author has referred to Dana's material, which was believed lost when the ship *Peacock*, carrying most of the Dana types, sank off the mouth of the Columbia River, Oregon, in the last century (in litt., Dr Brian Kensley, Smithsonian Institution, Washington).

2. Budde-Lund (1904) widened the concept of *Spherillo* to include 65 species including Dana's four original species; he grouped these 65 species into 13 un-named sections, nominating a type for each section. *Spherillo monolinus* and *S. vitiensis* were placed in Section VIII, with *S. bifrons* Budde-Lund, 1885 as the type of that section. Such designations have no validity under the Code, and do not constitute a type species designation for *Spherillo*.

3. Verhoeff (1926, p. 250) split Dana's genus *Spherillo* into several genera, but did not designate a type species for any of them. He renamed the genus *Sphaerillo* on the grounds that the name was derived from the Greek *Sphaira* (a ball), referring to its shape and ability to roll up. Under Article 33b(iii) of the Code *Sphaerillo* is an unjustified emendation (replacement name) and a junior objective synonym of *Spherillo*. He did not designate type species for *Spherillo* or *Sphaerillo*. Considerable

confusion has resulted from widespread disagreement on the validity of Verhoeff's renaming of the genus, and the two spellings *Spherillo* and *Sphaerillo* have been extensively used, sometimes as synonyms and sometimes, contrary to the Code, for different taxa. Jackson (1941, p. 3) wrote: 'Past and present workers on the assemblage of terrestrial isopods under consideration have so consistently neglected to apply the International Rules of Nomenclature that it is too late to do more than protest formally and, in the interest of clarity, accept the status quo. On these grounds it is suggested that *Sphaerillo* Verhoeff be retained as the generic name of the forms included under Budde-Lund's section XIII and that *Spherillo* should be allowed to die out, as its species are absorbed into new or already existing genera'. However, Jackson used *Spherillo* for 21 species and *Sphaerillo* for 13, with the former name as the overall heading. Vandel (1973, p. 131) proposed to resolve the problem by interpreting *Spherillo* Dana as a nomen nudum — an action at variance with Dana's quite detailed description of the genus (1852) and his inclusion (1853) of well characterized species. Both spellings have been used by recent authors; *Spherillo* has been used by Green, Ferrara & Taiti (1990) and by Kwon & Taiti (1993) and *Sphaerillo* has been used by Nunomura (1991) and by Yamamoto, Nakane & Takahashi (1992). To resolve this confusion we propose that the name *Sphaerillo* Verhoeff, 1926 be placed on the Official Index as an unjustified emendation of *Spherillo* Dana, 1852.

4. The first indication of type species for named genera, rather than Budde-Lund's 'sections', was by Jackson (1941, p. 19). He listed 'Type, ? *Spherillo vitiensis* Dana' for the genus *Spherillo* Dana, and 'Type, *Spherillo danae* Heller' for *Sphaerillo* Verhoeff; the designation of *S. danae* is not valid under Article 67h because it was not one of the four species first included in *Spherillo*. Jackson's listing of *Spherillo vitiensis* with a question mark is not a valid type species designation under Article 67c(3). Green (1961, p. 352) designated *Sphaerillo pygmaeus* Verhoeff, 1926 (p. 296) as the type species of *Sphaerillo* Verhoeff, but specifically excluded *Spherillo* Dana from the synonymy.

5. To achieve stability in the nomenclature of this group we propose that the Commission should designate *Spherillo vitiensis* Dana, 1853 as type species of *Spherillo* Dana, 1852; it was one of the nominal species first included in the genus (para. 1 above), and was tentatively given as the type by Jackson (1941; see para. 4 above). We also herewith designate as neotype for *S. vitiensis* the female holotype of *Melanesillo scamnorum* Verhoeff, 1938 (p. 2) from Fiji Island, Viti Levu, Kaba, barrier reef, 10.VIII.1917, leg. S. Bock, coll. no. 7635, Naturhistoriska Riksmuseet, Stockholm. This action serves to make *Melanesillo scamnorum* a junior objective synonym of *Spherillo vitiensis*. The specific name *scamnorum* has not been used since its establishment except for its mention in a check-list (Jackson, 1941, p. 18).

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

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Spherillo* Dana, 1852 and to designate *Spherillo vitiensis* Dana, 1853 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Spherillo* Dana, 1852 (gender: masculine), type species by designation in (1) above *Spherillo vitiensis* Dana, 1853;

(3) to place on the Official List of Specific Names in Zoology the name *vitiensis* Dana, 1853, as published in the binomen *Spherillo vitiensis* and as defined by the neotype designated by Lehtinen, Taiti and Ferrara in para. 5 above (specific name of the type species of *Spherillo* Dana, 1852);

(4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Sphaerillo* Verhoeff, 1926 (an unjustified emendation of *Spherillo* Dana, 1852);

(5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *scannorum* Verhoeff, 1938, as published in the binomen *Melanesillo scannorum* (a junior objective synonym of *Spherillo vitiensis* Dana, 1853).

References

Budde-Lund, G. 1904. *A revision of 'Crustacea Isopoda Terrestria' with additions and illustrations. 2. Spherilloninae. 3. Armadillo*. Pp. 33–144, pls. 6–10. Hagerup, Copenhagen.

Dana, J.D. 1852. On the classification of the Crustacea Choristopoda or Tetradecapoda. *American Journal of Science and Arts*, (2)**14**: 297–316.

Dana, J.D. 1853. Isopoda. Pp. 696 805 *in*: *United States exploring expedition during the years 1838, 1839, 1840, 1841, 1842, under the command of Charles Wilkes, U.S.N.*, vol. 14, Crustacea 2.

Green, A.J.A. 1961. A study of Tasmanian Oniscoidea (Crustacea: Isopoda). *Australian Journal of Zoology*, **9**: 258–365.

Green, A.J.A., Ferrara, F. & Taiti, S. 1990. Terrestrial Isopoda from the Krakatau Islands, South Sumatra and West Java. *Memoirs of the Museum of Victoria*, **50**(2): 417–436.

Jackson, H.G. 1941. Check-list of the terrestrial and fresh-water Isopoda of Oceania. *Smithsonian Miscellaneous Collections*, **99**(8): 1–35.

Kwon, D.H. & Taiti, S. 1993. Terrestrial Isopoda (Crustacea) from Southern China, Macao and Hong Kong. *Stuttgarter Beiträge zur Naturkunde*, Serie A (Biologie), **490**: 1–83.

Nunomura, N. 1991. Studies on the terrestrial isopod crustaceans in Japan. 6. Further supplements to the taxonomy. *Bulletin of the Toyama Science Museum*, **14**: 1–26.

Vandel, A. 1973. Les Isopodes terrestres de l'Australie. Étude systématique et biogéographique. *Mémoires du Muséum National d'Histoire Naturelle*, (n.s.), Zoologie, **82**: 1–171.

Verhoeff, K.W. 1926. Isopoda terrestria von Neu-Caledonien und den Loyalty-Inseln. *Nova Caledonia, Zoologie*, **4**(2): 243–366.

Verhoeff, K.W. 1938. Über einige polynesische Oniscoideen von Prof. Sixten Bock's Pazifik-Expedition 1917–1918. *Arkiv för Zoologi*, A **30**(16): 1–14.

Yamamoto, T., Nakane, K. & Takahashi, F. 1992. An experimental analysis of the effects of soil-macrofauna on the phosphorus cycling in a Japanese Red Pine forest. *Japanese Journal of Ecology*, **42**(1): 31–43. [In Japanese, English summary].

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3094

Terebratula Müller, 1776 (Brachiopoda): proposed designation of *Anomia terebratula* Linnaeus, 1758 as the type species

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Abstract. The purpose of this application is to stabilise the current usage of the Miocene-Pliocene brachiopod genus *Terebratula* Müller, 1776. Lamarck (1799) gave *Anomia terebratula* Linnaeus, 1758 as the typical species of *Terebratula*, but this was not an originally included nominal species. It is proposed that *A. terebratula* be designated as the type species. Linnaeus based this species on a specimen figured by Colonna (1616); this specimen is now lost and a neotype from the type locality is designated.

Keywords. Nomenclature; taxonomy; Brachiopoda; Pliocene; brachiopods; *Terebratula*; *Terebratula terebratula*.

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1. The nominal genus *Terebratula* was established by Müller (1776, p. 249) with three new species — *T. cranium*, *T. pubescens* and *T. nucleus* - none of which was given as the type species. The name *Terebratula* had been used in pre-Linnaean publications by Lhwyd (1699) and Klein (1753). Some 19th century authors have attributed *Terebratula* to Lhwyd (e.g. Davidson, 1853, p. 62) or to Klein (e.g. Douvillé, 1880, p. 264). Dall (1877, p. 70) was the first to accept Müller as the author.

2. The nominal species *Anomia terebratula* was described by Linnaeus (1758, p. 703). He provided no illustration but referred to figures in Colonna (1616), Lister (1678) and Klein (1753). Linnaeus's description reads: 'A. testa obovata laevi convexa: valvula altera triplicata, altera biplicata. Column. purp. 22. f. 1. List. angl. 240 t. 8. f. 46. Klein ostr. t. 11. f. 74. Habitat ... fossilis. Natis alterius testae prominens pertusa est; extus plicae duae'. The Colonna figure referred to by Linnaeus is reproduced by Muir-Wood (1955, p. 3); the Klein figure is a copy of the same Colonna illustration, taken from a later (1675) edition of Colonna's work. Thus Linnaeus gave two separate references to the same Colonna illustration of a plicate Tertiary shell from Italy. The third figure mentioned by Linnaeus (Lister, 1678) is of a non-plicate Jurassic shell from England. Buckman (1907, p. 528) pointed out that Lister's figure did not agree with Linnaeus's description, and wrote that the Colonna-Klein figure 'must be taken as the holotype, which, in fact, has been the usual practice'.

3. Müller did not include *Anomia terebratula* Linnaeus as one of his original nominal species, but he raised the question of whether one of his three included species was the same taxon as that of the authors cited by Linnaeus ('3006. Terebratula *Cranium* testa laevi ventricosa, transversim subtiliter striata. Haec *Terebratula* auctorum, an vero Linnaei? valvulas enim nec bi-nec triplicatas invenio').

4. Lamarck (1799, p. 89) indicated *Anomia terebratula* Linnaeus as being the type, or at least the example, of *Terebratula* with the description 'Terebratule. *Terebratula*. Coq. inéquivale [sic], se fixant par un ligament ou un tube court; la plus grande valve perforée ou échancrée à son crochet, qui est prominent, presqu'en forme de bec; charniére à deux dents. *Anomia terebratula*. Lin.'. However, this statement was not generally noted. Dall (1877, p. 70) wrote: '*Terebratula* O.F. Müller 1776 ... Müller cannot be said to have settled the type ... *T. vitrea*, Lam., and *T. perovalis*, Sow., are generally accepted as the types of the genus as now restricted'. Douvillé (1880) was the first person after Lamarck to state unequivocally, though invalidly, that the type species of *Terebratula* was '*Terebratula terebratula*, Linné sp.'. The species is not fixed by tautonymy since it was not originally included by Müller. Hall & Clarke (1894, p. 875) commented that *Anomia terebratula* 'is a fossil from the Mesozoic or Tertiary formations, though its geological horizon is not more precisely known'. They reproduced the Colonna-Klein figure, assigning it the name '*Terebratula simplex*'. Schuchert (1900, p. 329) wrote '*Terebratula*, Klein, 1753. Genus not well known. Mesozoic or Tertiary', and appended a figure labelled '*Terebratula Phillipsi*, Morris'. Since none of the authors mentioned above gave one of Müller's originally included species as the type, no valid designation has been made.

5. In an attempt to resolve the confusion surrounding *Terebratula terebratula* (Linnaeus), Buckman (1907, p. 529, pl. 12) selected and figured a specimen from the collections of the British Museum (Natural History) from Monte Mario, a Pliocene locality near Rome (about 350 km from the actual type locality near Andria), and described this as *T. terebratula* (Linnaeus). He did not formally designate this specimen, 'which might almost be the original drawn by Colonna, so like is it to his figure', as a neotype (i.e. type specimen), but regarded it as a reference specimen for future workers. This specimen, figured by Muir-Wood in the *Treatise on Invertebrate Paleontology* (1965, fig. 635.1a-c), is somewhat deformed by crushing, which has accentuated the similarity to the Colonna illustration. Muir-Wood noted that a case for ratification of *Anomia terebratula* as the type species for *Terebratula* should be submitted to the Commission, but this has not been done until now. Brunton, Cocks & Dance (1967, p. 174) noted that none of the brachiopod specimens recorded as *Anomia terebratula* remaining in the Linnean collections was the same as the Colonna figure mentioned by Linnaeus; they suggested that the specimen figured by Buckman should be designated as neotype, but noted that this would require a Commission ruling since the localities were not the same.

6. Until the present study, no attempt seems to have been made either to find the specimen illustrated by Colonna or to collect topotypes from his type locality. Colonna's specimen may have been held in Naples, but we have been unable to locate it and conclude that it is lost. Colonna (1616, p. 23) gave considerable detail on the type locality of his specimen(s) of 'Concha anomia', from (in translation) 'tuffaceous concretions in the small valley or ditch a little below the Church of Our Lady of Andria which is situated a mile outside the city' of Andria, Italy. In 1993 and 1998,

Dr Massimo Caldera and Dr Oronzo Simone from the Dipartimento di Geologia e Geofisica at Bari, Italy, collected a number of specimens of *Terebratula* from the 'tophacea concretione' (Calcarenite di Gravina Formation) situated near the church of St Maria di Andria as described by Colonna (latitude 41° 13′ 52″ N; longitude 16° 16′ 00″ E). The age of this calcarenite is almost certainly Pliocene, and thus the age of the type locality and of the type specimen of *Terebratula terebratula* is established as Pliocene. A detailed account of the rediscovery of the type locality will be presented elsewhere (Lee, Caldera & Simone, in preparation). We hereby designate as neotype of *Anomia terebratula* Linnaeus an undeformed, although incomplete, specimen from this locality numbered BM(NH) BG152 in the collections of the Natural History Museum, London.

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

(1) to use its plenary powers to set aside all previous fixations of type species for the nominal genus *Terebratula* Müller, 1776 and to designate *Anomia terebratula* Linnaeus, 1758 as the type species;

(2) to place on the Official List of Generic Names in Zoology the name *Terebratula* Müller, 1776 (gender: feminine), type species by designation in (1) above *Anomia terebratula* Linnaeus, 1758;

(3) to place on the Official List of Specific Names in Zoology the name *terebratula* Linnaeus, 1758, as published in the binomen *Anomia terebratula* and as defined by the neotype designated by Lee & Brunton in para. 6 above (specific name of the type species of *Terebratula* Müller, 1776).

Acknowledgements

We wish to thank the following people and institutions for assistance with this application: Mrs Eileen Brunton and librarians at the Natural History Museum, London; Professor J. Barsby, Department of Classics, University of Otago for his assistance in providing a translation of Colonna's work; and library staff at the Science Library, University of Otago. Drs Massimo Caldara and Oronzo Simone, University of Bari, Italy, rediscovered the Colonna locality at the request of the first author and collected topotypic material.

References

Brunton, C.H.C., Cocks, L.R.M. & Dance, S.P. 1967. Brachiopods in the Linnaean collection. *Proceedings of the Linnean Society of London*, **178**: 161–183.

Buckman, S.S. 1907. Brachiopod nomenclature: the genotype of *Terebratula*. *Annals and Magazine of Natural History*, (7)**19**: 525–531.

Colonna, F. 1616. *Purpura. Hoc est de purpura ab animali testaceo fusa, de hoc ipso animali, aliisquibus rarioribus testaceis quibusdam*. iv, 42 pp., 2 pls. Romae.

Colonna, F. 1675. *Opusculum de purpura ... iterum luci datum opera ac studio J.D. Majoris ... cujus ... accesserunt annotationes quaedam. (Doctrinae de testaceis, in ordinem congruum redactae specimen, tabulis aliquot comprehensum ... cum brevi dictionario ostracologico, de partibus testaceorum, autore J. D. M. Med.D.* xii, 72 pp. Kiliae.

Dall, W.H. 1877. Index to the names which have been applied to the subdivisions of the Class Brachiopoda. *Bulletin of the United States National Museum*, **8**: 3–88.

Davidson, T. 1853. British fossil Brachiopoda. Chapter 3. On the classification of the Brachiopoda. *Palaeontographical Society (Monograph)*, **1**: 41–136.

Douvillé, H. 1880. Note sur quelques genres de brachiopodes (Terebratulidae et Waldheimiidae). *Bulletin de la Société Géologique de France*, (3)7: 251–277.

Hall, J. & Clarke, J.M. 1894. Introduction to the study of the Brachiopoda. Pp. 751 943 *in*: *13th annual report of the New York State Geologist for the year 1893. Palaeontology*, part 2. Albany.

Klein, J.T. 1753. *J.T. Klein tentamen methodi ostracologicae, sive dispositio naturalis cochlidum et concharum*. 177 pp., 12 pls. Lugduni Batavorum.

Lamarck, J.B.P.A. de M. 1799. Prodrome d'une nouvelle classification des coquilles. *Mémoires de la Société d'Histoire Naturelle de Paris*, **1**: 63–91.

Lhwyd, E. 1699. *Lithophylacii Britannici ichnographia, sive Lapidum aliorumq; fossilium Britannicorum singulari figura insignium*. 145 pp., 17 pls. Londini & Lipsiae.

Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.

Lister, M. 1678. *Historia Animalium Angliae ... de lapidibus ejusdem insulae ad cochlearum quandum imaginem figuratis*. vi, 250 pp., 9 pls. Londini.

Muir-Wood, H.M. 1955. *History of the classification of the Phylum Brachiopoda*. 124 pp. British Museum (Natural History), London.

Muir-Wood, H.M. 1965. Mesozoic and Cenozoic Terebratulidina. Pp. 762 816 *in* Moore, R.C. (Ed.), *Treatise on Invertebrate Paleontology*, Part H, Brachiopoda, vol. 2. Geological Society of America and University of Kansas Press, Lawrence.

Müller, O.F. 1776. *Zoologiae Danicae prodromus seu animalium Daniae et Norvegiae indigenarum characteres, nomina, et synonyma imprimis popularium*. xxxii, 282 pp. Havniae.

Schuchert, C. 1900. *In* Zittel, K.A. *Textbook of Palaeontology* (translated Eastman, C.R.), vol. 1. 706 pp., 1476 text-figs. Macmillan, London.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3012

Coluber infernalis Blainville, 1835 and *Eutaenia sirtalis tetrataenia* Cope in Yarrow, 1875 (currently *Thamnophis sirtalis infernalis* and *T. s. tetrataenia*; Reptilia, Squamata): proposed conservation of the subspecific names by the designation of a neotype for *T. s. infernalis*

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Abstract. The purpose of this application is to conserve the usage of the subspecific names of *Thamnophis sirtalis infernalis* (Blainville, 1835) for the California red-sided garter snake (family COLUBRIDAE) which is found along the Californian coast, and of *T. s. tetrataenia* (Cope in Yarrow, 1875) for the San Francisco garter snake from the restricted area of the San Francisco Peninsula. It is possible that the holotype of *T. s. infernalis* is a specimen of *T. s. tetrataenia*, formally rendering the name *tetrataenia* a junior synonym of *infernalis*. It is proposed that the holotype of *infernalis* be set aside and a neotype designated in accord with accustomed usage.

Keywords. Nomenclature; taxonomy; Reptilia; Squamata; COLUBRIDAE; California red-sided garter snake; San Francisco garter snake; *Thamnophis sirtalis infernalis*; *Thamnophis sirtalis tetrataenia*; California.

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1. In 1835 Blainville (pp. 291–292, pl. 26, figs. 3, 3a) described *Coluber infernalis*, a garter snake, from a specimen collected by Paolo Emilio Botta in 1827 or 1828 (Museum National d'Histoire Naturelle, Paris, catalog no. MNHN 846) from an indeterminate locality in California. Baird & Girard (1853, p. 26) and Bocourt (1892, p. 40) subsequently placed *C. infernalis* in *Eutaenia* Baird & Girard, 1853. Van Denburgh & Slevin (1918, p. 198) treated *infernalis* as a subspecies of *Thamnophis sirtalis* (Linnaeus, 1758), and Fitch (1941) restricted the distribution of *T. s. infernalis* to the Pacific coast region of California, based on Botta's supposed collecting sites and on consistent taxonomic differences between coastal and interior or northern *T. sirtalis*.

2. In 1875 Cope (in Yarrow, p. 546) described *Eutaenia sirtalis tetrataenia* sufficiently to make the name available. No locality or specimens were mentioned, but later in the same year Cope's *Checklist of North American Batrachia and Reptilia* was published and recorded (1875, p. 41) that *tetrataenia* had been collected from Pitt (Pit) River, northeastern California. Yarrow (1883, p. 128) and Cope (1892, p. 665; 1900, p. 1081) listed *E. s. tetrataenia* and recorded two specimens from 'Pitt River, Cal.' (catalogued as no. 866 in the National Museum of Natural History, Washington; renumbered USNM 21383, 21384); the specimens are labeled as collected by Dr J.S. Newberry (see Fitch, 1941, p. 581; Fox, 1951, p. 259). Unlike these, a third specimen from Puget Sound, Washington, listed by Cope (1892, 1900), is probably not an original syntype (see Fitch, 1941, pp. 584–585; Fox, 1951, pp. 258 259). Garman (1883) included *tetrataenia* in *E. s. parietalis*, and Bocourt (1892) and Van Denburgh & Slevin (1918, p. 199) included it in *E. (Thamnophis) s. infernalis*. Fitch (1941, pp. 581 585) showed that the distinctive red-striped color patterns of the syntypes of *T. s. tetrataenia* were unlike the patterns of any *T. sirtalis* obtained since Newberry's time from the Pit River, but could not explain the origin of the syntypes. He resurrected *tetrataenia* as the valid name for the Pit River and similar populations because they differed taxonomically from the California coast *T. sirtalis infernalis*, and (pp. 581, 585) designated specimen USNM 21384, which was probably that figured by Cope (1900, p. 1080, fig. 305), as the lectotype of *tetrataenia*. Fox (1951) discovered populations of distinctively-striped *T. sirtalis*, identical to Cope's 'Pitt River' *E. s. tetrataenia*, on the San Francisco Peninsula of northern California, and cited expedition records to show that Newberry had remained in San Francisco and collected vigorously while the rest of the expedition traveled to the Pit River. Fox (1951, pp. 260–264) then reassigned the name *T. s. tetrataenia* to the population of *T. sirtalis* which occupies the San Francisco Peninsula, excluding the San Francisco Peninsula population from the coastal *T. s. infernalis*, and renamed the inland populations (which had been called *T. s. tetrataenia* by Fitch, 1941) as *T. s. fitchi*.

3. For nearly 50 years, since the mystery of the provenance of Cope's (in Yarrow, 1875) *T. s. tetrataenia* was solved, the nomenclature of the subspecies of *T. sirtalis* has remained stable. With the exception of Boundy & Rossman (1995; see para. 5 below) and Rossman, Ford & Seigel (1996), all authors known to us have adopted Fitch's (1941) taxonomic arrangement for *T. s. infernalis* and *T. s. tetrataenia* with Fox's (1951) locality restrictions (i.e. *infernalis* from the Pacific coast and *tetrataenia* from the San Francisco Peninsula).

4. The literature in which the name *T. s. tetrataenia* appears is voluminous and diverse. We have deposited with the Commission Secretariat a representative list of 127 titles that have appeared since Fox's (1951) revision, only about a quarter of which are technical books and papers. Numerous field guides (for example, Stebbins, 1985), popular accounts (for example, Mattison, 1988), general textbooks (for example, Storer, Usinger, Stebbins & Nybakken, 1972), major newspaper articles (for example, Smith, 1978), legal publications (for example, California Department of Fish and Game, 1993), and particularly papers and books from the conservation literature (for example, Thelander & Crabtree, 1994) discuss *T. s. tetrataenia* as an inhabitant solely of the San Francisco Peninsula, and much of the same literature refers to *T. s. infernalis* as an allopatric form that does not occur on the San Francisco

Peninsula. Furthermore, literature citations of (San Francisco Peninsula) *T. s. tetrataenia* have increased dramatically during the past 25 years because of increasing popular/conservationist interest. The name *tetrataenia* is established in national (Allen, 1988) and international legislation for the protection of the San Francisco Peninsula subspecies (1993, *World checklist of threatened amphibians and reptiles*; and 1996, *Red List of Threatened Animals*).

5. Boundy & Rossman (1995) showed that the holotype of *T. s. infernalis* (MNHN 846 in the Muséum National d'Histoire Naturelle, Paris) is similar in coloration to Cope's (in Yarrow, 1875) *E. s. tetrataenia*. They demonstrated by color pattern evaluation that this specimen may have originated on the San Francisco Peninsula, which was within reach of Botta's (MS) recorded collecting sites. On this basis, Boundy & Rossman (1995) proposed that *tetrataenia* be treated as a junior synonym of *infernalis*, that the name *infernalis* be restricted to the San Francisco Peninsula snake population, and that the California coast subspecies of *T. sirtalis* (exclusive of the San Francisco Peninsula snakes), hitherto called *infernalis*, be included in *T. s. concinnus* Hallowell, 1852, which is currently applied to the red-headed subspecies of *T. sirtalis* of coastal Oregon. This last proposal is based solely on the red head characteristic of *T. s. concinnus* and *T. s. infernalis* (and Cope's *T. s. tetrataenia*), and is not based on any published systematic re-evaluation.

6. Adoption of the rearrangement of the subspecific names for western garter snakes proposed by Boundy & Rossman (1995) would significantly and unnecessarily affect well-established nomenclature, would confuse the lay audience (which is very interested in *T. s. tetrataenia* because of its endangered status), and would complicate conservation programs for *T. s. tetrataenia*. We propose that the current usage of the name *T. s. tetrataenia* (Cope in Yarrow, 1875) be retained on the basis of the regular, frequent and unambiguous usage since 1951, summarized in the list held by the Secretariat. We also propose that the current usage of *T. s. infernalis*, following Fitch (1941), be retained because we feel that the same arguments for nomenclatural stability that support the retention of *T. s. tetrataenia* rightly apply to the current usage of *T. s. infernalis*. Synonymy lists published by Fitch (1941, p. 585) and by Fox (1951, p. 260) demonstrate that no name other than *infernalis* is available for the California coast subspecies of *T. sirtalis*. (The name *Eutaenia imperialis* was included by both authors but is a nomen nudum. It was published in the synonymy of *Eutaenia proxima* by Coues & Yarrow, 1878, and was based on a subadult specimen, USNM 864, of *T. s. infernalis*). The current usage of *T. s. infernalis* can be retained by setting aside the type status of the holotype MNHN 846 and designating a neotype that is consistent with Fitch's (1941) diagnosis of the subspecies. This action would remove *infernalis* from the synonymy of *tetrataenia*, so allowing the usages of both names to continue.

7. We propose that the specimen 39197 in the California Academy of Sciences, San Francisco, be designated as the neotype of *T. s. infernalis*. This is a male, collected by Joseph Richard Slevin at Pacific Grove, Monterey County, California, in May 1914. The specimen was figured and fully described by Van Denburgh & Slevin (1918, p. 201, pl. 7) as a typical specimen of *T. s. infernalis*. Fitch (1941) included this specimen in his evaluation and diagnosis of *T. s. infernalis* and thus this was the first specimen of *T. s. infernalis* sensu Fitch (1941) with accurate locality data to be figured and described under that name. Furthermore, the locality is sufficiently distant from

the San Francisco Peninsula to eliminate any confusion with *T. s. tetrataenia*, and our examination of the specimen confirms that it does not overlap Cope's (in Yarrow, 1875) concept of *T. s. tetrataenia*.

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

(1) to use its plenary powers to set aside all previous fixations of type specimens for the nominal species *Coluber infernalis* Blainville, 1835 and to designate the male specimen, catalog no. 39197 in the California Academy of Sciences, San Francisco, as the neotype;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *infernalis* Blainville, 1835, as published in the binomen *Coluber infernalis* and as defined by the neotype designated in (1) above;
   (b) *tetrataenia* Cope in Yarrow, 1875, as published in the trinomen *Eutaenia sirtalis tetrataenia*, and as defined by the lectotype USNM 21384 in the United States National Museum, Washington, D.C., designated by Fitch (1941).

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References

Allen, W.B., Jr. 1988. *State lists of endangered and threatened species of reptiles and amphibians including laws and regulations of each state*. iv, 86 pp. Chicago Herpetological Society, Chicago.

Baird, S.F. & Girard, C. 1853. Catalogue of North American reptiles in the museum of the Smithsonian Institution, part 1 (Serpents). *Smithsonian Miscellaneous Collections*, **2**(5): 1–72.

Blainville, H.D. de. 1835. Description de quelques espèces de reptiles de la Californie, précédée de l'analyse d'un system général d'erpétologie et d'amphibiologie. *Nouvelles Annales du Museum d'Histoire Naturelle*, Paris, (3)**4**: 233–296.

Bocourt, M.-F. 1892. Note sur la variabilité dans le nombre de plaques céphaliques chez certains ophidiens. *Bulletin de la Société Zoologique de France*, **17**: 40–41.

Botta, P.E. MS, holograph 1826–1829. The Bancroft Library, University of California, Berkeley.

Boundy, J. & Rossman, D.A. 1995. Allocation and status of the garter snake *Coluber infernalis* Blainville, *Eutaenia sirtalis tetrataenia* Cope, and *Eutaenia imperialis* Coues & Yarrow. *Copeia*, **1995**(1): 236–240.

California Department of Fish and Game. 1993. *California sport fishing regulations. Effective March 1, 1994 through February 29, 1996*. 40 pp. State of California, Resources Agency, California Department of Fish and Game, Sacramento, California.

Cope, E.D. 1875. Checklist of the North American Batrachia and Reptilia; with a systematic list of the higher groups, and an essay on geographical distribution, based on the specimens in the U.S. National Museum. *Bulletin of the United States National Museum*, **1**: 1–104.

Cope, E.D. 1892. A critical review of the characters and variations of the snakes of North America. *Proceedings of the United States National Museum*, **14**: 589–694.

Cope, E.D. 1900. The crocodilians, lizards, and snakes of North America. *Report of the United States National Museum*, **1898**: 150–1294.

Coues, E. & Yarrow, H. 1878. Notes on the herpetology of Dakota and Montana. *Bulletin of the United States Geological and Geographical Survey of the Territories*, **4**: 589–694.

Fitch, H.S. 1941. Geographic variation in garter snakes of the species *Thamnophis sirtalis* in the Pacific Coast region of North America. *American Midland Naturalist*, **26**(3): 570–592.

Fox, W. 1951. The status of the gartersnake *Thamnophis sirtalis tetrataenia*. *Copeia*, **1951**(4): 257–267.

Garman, S. 1883. The reptiles and batrachians of North America. *Memoirs of the Museum of Comparative Zoology*, **8**: 1–85.

IUCN & Conservation International. 1996. *1996 IUCN Red List of threatened animals*. 70, 368, 10 pp. Gland & Washington, D.C.

Mattison, C. 1988. *Keeping and breeding snakes*. 184 pp. Blandford Press, London.

Rossman, D.A., Ford, N.B. & Seigel, R.A. 1996. *The garter snakes: evolution and ecology*. xx, 332 pp. University of Oklahoma, Norman, Oklahoma.

Smith, M. 1978. A snake called San Francisco. *San Francisco Sunday Examiner and Chronicle*. Supplement, p. 12. 12 March 1978.

Stebbins, R.C. 1985. *A field guide to western reptiles and amphibians*. Ed. 2. xiv, 336 pp. Houghton Mifflin, Boston.

Storer, T.I., Usinger, R., Stebbins, R.C. & Nybakken, J.W. 1972. *General zoology*. Ed. 5. ix, 899 pp. McGraw-Hill, New York.

Thelander, C.G. & Crabtree, M. (Eds.). 1994. *Life on the edge: a guide to California's endangered natural resources: wildlife*. xvi, 550 pp. Biosystems, Santa Cruz, California.

Van Denburgh, J. & Slevin, J.R. 1918. The garter snakes of western North America. *Proceedings of the California Academy of Sciences*, (4)**8**: 181–270.

World Conservation Monitoring Centre. 1993. *World checklist of threatened amphibians and reptiles*. vi, 99 pp. Joint Nature Conservation Committee, Peterborough.

Yarrow, H.C. 1875. Report upon the collections of batrachians and reptiles made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, during the years 1871, 1872, 1873 and 1874. Pp. 509–584 *in* Engineer Dept., U.S.A. (Ed.), *Report upon geographical and geological explorations and surveys west of the one hundredth meridian*, vol. 5 (Zoology), part 4.

Yarrow, H.C. 1882. Check list of North American Reptilia and Batrachia with catalogue of specimens in the U.S. National Museum. *Bulletin of the United States National Museum*, **24**: 1–249.

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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Case 3005

Crotalus ruber Cope, 1892 (Reptilia, Serpentes): proposed precedence of the specific name over that of *Crotalus exsul* Garman, 1884

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Abstract. The purpose of this application is to conserve the long used and well known specific name of *Crotalus ruber* Cope, 1892 for the red diamond rattlesnake (family VIPERIDAE) of southern California, the peninsula of Baja California and some offshore islands, by giving it precedence over the less widely used name *C. exsul* Garman, 1884. The latter name refers to the rattlesnake of the Isla de Cedros, Baja California, Mexico, which some authors now consider to be conspecific with *C. ruber*.

Keywords. Nomenclature; taxonomy; Reptilia; Serpentes; VIPERIDAE; rattlesnakes; *Crotalus ruber*; *Crotalus exsul*; California; Mexico.

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1. In 1884 Garman (p. 114) described a rattlesnake *Crotalus exsul* from the Isla de Cedros, Baja California, Mexico. He mentioned two specimens (catalog no. MCZ 652 in the Museum of Comparative Zoology at Harvard University, Cambridge, Massachusetts). Garman's publication was printed in 1883 but not issued until July 1884 (see the MCZ Annual Report for 1883–1884, pp. 23, 32; the MCZ library copy is stamped '19 June 1884'). In 1892 Cope (p. 690) described a rattlesnake which is commonly known as the red diamond rattlesnake. This was originally published as *Crotalus adamanteus ruber* and was based on a single specimen, catalog no. USNM 9209 in the U.S. National Museum, Washington. No locality was mentioned and subsequently Smith & Taylor (1950, p. 356) restricted the type locality to Dulzura, San Diego Co., California.

2. For nearly 70 years (since Klauber, 1930, pp. 20–21) the range of *Crotalus exsul* Garman, 1884 has been accepted as solely the Isla de Cedros, whereas its close relative, the red diamond rattlesnake, *C. ruber* Cope, 1892 has been understood to extend from southern California throughout the peninsula of Baja California and on some of its offshore islands.

3. The two taxa have, however, long been regarded as only weakly differentiated (see, for example, Brattstrom, 1964, p. 244; Campbell & Lamar, 1989, p. 348). Grismer, McGuire & Hollingsworth (1994, p. 69) regarded Minton (1992, who used the name *Crotalus exsul*) as the earliest author to regard them as conspecific, but this was an error, as pointed out by Murphy et al. (1995) and confirmed by Minton himself (personal communication); he had only a single specimen, from Isla de Cedros. Possibly following that misinterpretation, Grismer (1993, p. 4) implied conspecificity by using the trinomen *C. exsul exsul* without comment. Grismer & Mellink (1994, p. 124) subsequently mentioned that they regarded the two taxa as

conspecific, but it remained for three of the authors of the present application (see Grismer, McGuire & Hollingsworth, 1994, p. 71) and Murphy et al. (1995) to defend that conclusion. In both the latter works, and in Grismer (1994a, p. 81; 1994b, pp. 20–21), the name *C. exsul* Garman, 1884 was adopted for the species.

4. Murphy et al. (1995, p. 271) noted that change of a long-recognized name for a species is sure to create extensive confusion and should be avoided if at all possible. Yet the same authors were forced to the conclusion that the two nominal species are inseparable and, with obvious reluctance, they adopted (p. 278) the name *C. exsul* for the single species. They also argued for the recognition of the subspecies *C. exsul ruber* from southern California and Baja California, and the insular *C. e. lorenzoensis* Radcliffe & Maslin, 1975, in addition to the nominotypical *C. e. exsul* limited to Isla de Cedros. On the other hand, Grismer, McGuire & Hollingsworth (1994) concluded that no subspecies of the taxon, with the possible exception of *C. e. lorenzoensis*, warranted recognition, and that interpretation would mean the complete elimination of the specific name *ruber*.

5. The name *Crotalus exsul* for the Isla de Cedros snakes has a long history of usage to the present time, but unquestionably the literature using *C. ruber* is profoundly more abundant and significant than that using *C. exsul*. *Crotalus ruber* has been far more prominent in medical, experimental, biochemical, anatomical and ecological works than *C. exsul*, and as an inhabitant of southern California the species has been the subject of a large number of popular, pedagogical and governmental publications. The difference in the amount of literature can be documented by a tabulation of the references of the two nominal taxa listed in the index volumes for Mexican herpetology (Smith & Smith, 1976, 1993), which are nearly exhaustive for the literature on Mexico (though less so for adjacent areas). For various name combinations of *C. ruber*, 428 different works by some 414 authors are listed for the years 1892–1990; and for *C. exsul*, 100 works by 80 authors during the period 1883–1989. The coverage for Mexico was made as complete as possible, but the difference in usages of the names undoubtedly is considerably greater than here indicated because no attempt was made to exhaust the literature on the species as a whole. References for the use of the names in California would surely yield a much higher proportion of those for *C. ruber* because this species alone occurs there. Representative lists of 31 additional references for the usage of *ruber* from 1989 to 1998, and 16 additional references for *exsul* from 1988 to 1998, are held by the Commission Secretariat. Both names are used in the following recent international works of reference: Weidensaul (1991), Welch (1994), Frank & Ramus (1995), Mara (1995), Mattison (1995) and Wüster, Golay & Warrell (1997).

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

(1) to use its plenary powers to give the name *ruber* Cope, 1892, as published in the trinomen *Crotalus adamanteus ruber*, precedence over the name *exsul* Garman, 1884, as published in the binomen *Crotalus exsul*, whenever the two are considered to be synonyms;

(2) to place on the Official List of Specific Names in Zoology the following names:
   (a) *ruber* Cope, 1892, as published in the trinomen *Crotalus adamanteus ruber*, with the endorsement that it is to be given precedence over the name *exsul*

Garman, 1884, as published in the binomen *Crotalus exsul*, whenever the two are considered to be synonyms;

(b) *exsul* Garman, 1884, as published in the binomen *Crotalus exsul*, with the endorsement that it is not to be given priority over *ruber* Cope, 1892, as published in the trinomen *Crotalus adamanteus ruber*, whenever the two are considered to be synonyms.

References

Brattstrom, B.H. 1964. Evolution of the pit vipers. *Transactions of the San Diego Society of Natural History*, **13**(11): 185–268.

Campbell, J.A. & Lamar, W.W. 1989. *The venomous reptiles of Latin America*. xii, 425 pp., 568 col. figs. Cornell University, Ithaca, New York.

Cope, E.D. 1892. A critical review of the characters and variations of the snakes of North America. *Proceedings of the United States National Museum*, **14**: 589–694.

Frank, N. & Ramus, E. 1995. *A complete guide to scientific and common names of reptiles and amphibians of the world*. 377 pp. NG Publishing, Pottsville, Pennsylvania.

Garman, S. 1884. The reptiles and batrachians of North America. *Memoirs of the Museum of Comparative Zoology of Harvard College*, **8**(3): 1–185.

Grismer, L.L. 1993. The insular herpetofauna of the Pacific coast of Baja California, México. *Herpetological Natural History*, **1**(2): 1–10.

Grismer, L.L. 1994a. The origin and evolution of the peninsular herpetofauna of Baja California, México. *Herpetological Natural History*, **2**(1): 51–106.

Grismer, L.L. 1994b. Geographic origins for the reptiles on islands in the Gulf of California, México. *Herpetological Natural History*, **2**(2): 17–40.

Grismer, L.L., McGuire, J.A. & Hollingsworth, B.D. 1994. A report on the herpetofauna of the Vizcaino Peninsula, Baja California, México, with a discussion of its biogeographic and taxonomic implications. *Bulletin of the Southern California Academy of Sciences*, **93**(2): 45–80.

Grismer, L.L. & Mellink, E. 1994. The addition of *Sceloporus occidentalis* to the herpetofauna of Isla de Cedros, Baja California, México and its historical and taxonomic implications. *Journal of Herpetology*, **28**(1): 120–126.

Klauber, L.M. 1930. Differential characteristics of southwestern rattlesnakes allied to *Crotalus atrox*. *Bulletin of the Zoological Society of San Diego*, **6**: 1–58.

Mara, W.P. 1995. *Venomous snakes of the world*. 224 pp. T.F.H. Publications, Neptune City, New Jersey.

Mattison, C. 1995. *The encyclopedia of snakes*. 256 pp. Facts on File, New York.

Minton, S.A. 1992. Serological relationships among pitvipers: evidence from plasma albumins and immunodiffusion. Pp. 155–161 *in* Campbell, J.A. & Brodie, E.D. Jr. (Eds.), *Biology of the pitvipers*. Selva, Tyler, Texas.

Murphy, R.W., Kovac, V., Haddrath, O., Allen, G.S., Fishbein, A. & Mandrak, N.E. 1995. mtDNA gene sequence, allozyme and morphological uniformity among red diamond rattlesnakes, *Crotalus ruber* and *Crotalus exsul*. *Canadian Journal of Zoology*, **73**: 270–281.

Smith, H.M. & Smith, R.B. 1976. *Synopsis of the herpetofauna of Mexico*, vol. 3 (Source analysis and index for Mexican reptiles). John Johnson, North Bennington, Vermont.

Smith, H.M. & Smith, R.B. 1993. *Synopsis of the herpetofauna of Mexico*, vol. 7 (Bibliographic addendum 4 and index, bibliographic addenda 2–4, 1979–1991). University Press of Colorado, Niwot, Colorado.

Smith, H.M. & Taylor, E.H. 1950. Type localities of Mexican reptiles and amphibians. *Kansas University Science Bulletin*, **33**(8): 313–380.

Weidensaul, S. 1991. *Snakes of the world*. 128 pp. Apple Press, London.

Welch, K.R.G. 1994. *Snakes of the world: a checklist*. 89 pp. R & A Research & Information, Taunton, U.K.

Wüster, W., Golay, P. & Warrell, D.A. 1997. Synopsis of recent developments in venomous snake systematics. *Toxicon*, **35**(3): 319–340.

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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 The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).

Comments on the proposed conservation of the specific names of *Strombidium gyrans* Stokes, 1887 (currently *Strobilidium gyrans*) and *Strobilidium caudatum* Kahl, 1932 (Ciliophora, Oligotrichida)
(Case 3011; see BZN **55**: 6–8)

(1) Wilhelm Foissner

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In his application to conserve the specific names of *Strombidium gyrans* Stokes, 1887 and *Strobilidium caudatum* Kahl, 1932, Charles Heckman describes the facts correctly. However, I do not agree with his proposed action for the following reasons.

1. The ciliates are an extremely understudied group with few workers. For this reason, it is important not to apply too great an importance to current usage of junior homonyms or synonyms, but rather to maintain the principle of priority wherever possible.

2. *Strombidion caudatum* Fromentel, 1876 was not strictly speaking a forgotten name, but the two revisers — Kahl (1932) and Maeda (1986), who overlooked Fromentel's species preferred the later name given by Stokes. Accordingly, this is not a true nomenclatural problem, but rather a problem of synonymy and ignorance.

3. There are precedents for handling similar situations in the ciliates. Brown (1968) recognized that *Aspidisca costata* (Dujardin, 1841) Stein, 1859 was a junior synonym of *Aspidisca cicada* (Müller, 1786) Claparède & Lachmann, 1858. The junior name was used in hundreds of publications, while the senior name was 'forgotten'. Brown's proposal that the senior name, *A. cicada*, should be resurrected was not at first welcomed, but soon became fully accepted (see Curds, 1977). The same principle should be followed in the present case.

In summary, I recommend that this application should be rejected, and that priority should be followed.

Additional references

Brown, T.J. 1968. A reconsideration of the nomenclature and taxonomy of *Aspidisca costata* (Dujardin, 1842) (Ciliata). *Acta Protozoologica*, **5**: 245–252.

Curds, C.R. 1977. Notes on the morphology and nomenclature of three members of the Euplotidae (Protozoa: Ciliatea). *Bulletin of the British Museum (Natural History), Zoology*, **31**: 267–278.

Maeda, M. 1986. An illustrated guide to the species of the families Halteriidae and Strobilidiidae (Oligotrichida, Ciliophora), free swimming protozoa common in the aquatic environment. *Bulletin of the Ocean Research Institute of the University of Tokyo*, **21**: 1–67.

(2) John O. Corliss

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I am opposed to what is being asked of the Commission in this application, in effect, to use its plenary powers to conserve the names of two oligotrichous ciliates,

Strobilidium gyrans (Stokes, 1887) Kahl, 1932 and *Strobilidium caudatum* Kahl, 1932, in the alleged interest of widespread usage and nomenclatural stability. The matter is a rather complicated one, so a little background discussion is needed before I turn to the specific points in question.

1. In the broad field of protozoology, there are few taxonomists and even fewer ecologists who are nomenclaturists. In fact, the protozoological literature is replete with clearcut examples of widespread disinterest in (if not ignorance of) the rules of nomenclature (Corliss, 1962). There is no convincing evidence of much change in this regard in recent decades, despite repeated emphasis by the writer (e.g., Corliss, 1992) and others on the continuing need for better interfacing between taxonomy (including its indispensable nomenclatural aspects) and ecology.

2. Because of this lack of general interest in proper nomenclatural usage of many protozoological names, the few and widely scattered specialists in such technical matters have been obliged periodically to assume the burden of publishing lists of corrections in cases of organisms in which they may have a particular interest. In ciliate taxonomy, two examples of this include the papers by Corliss (1960; and see appropriate section in Corliss, 1979) and Foissner (1987).

3. Contrary, perhaps, to common opinion, nomenclaturists are not always interested in preservation of only the oldest available name in every case; that is, all of them are not solely 'priority purists'. For example, two very well known generic names (junior synonyms or homonyms) among the ciliated protozoa which have been 'saved' by the actions of 'conservationists' are *Tetrahymena* (see Corliss & Dougherty, 1967) and *Stentor* (Kirby, 1954); others could be cited as well, including one (*Trachelocerca*) in a petition to the Commission now pending (Corliss & Foissner, 1997).

4. Wilhelm Foissner and associates at Salzburg have been carrying out thorough systematic and ecological studies of major taxonomic groups of ciliates for the past 20 years, with much needed attention to matters nomenclatural. Consistent treatment of cases of synonymy and homonymy has been invoked, with priority the usual basis for their proposals. Although on occasion such actions have caused temporary sorrow among others of us who may have become accustomed to more 'popular' names for certain specific organisms, in the long run the Foissner decisions have brought and are bringing about needed stability to the field. With thousands of species involved and only a relative handful of ciliatologists with interest and training in taxonomic/nomenclatural problems, decades may pass before some names, in correct or incorrect form, ever appear again in the published literature.

5. With respect to the specific subject here under consideration, some 12 years ago Foissner (1987) painstakingly produced a paper in the well known journal *Archiv für Protistenkunde* correcting numerous nomenclatural errors in past taxonomic works on ciliates. Unfortunately, few (at most!) protozoologists (taxonomists and ecologists alike) seem to have taken note of this publication with regard to their own subsequent investigations involving some of the same organisms. On grounds of priority, Foissner proposed the name *Strobilidium caudatum* (Fromentel, 1876) as replacement of *Strobilidium gyrans* (Stokes, 1887) Kahl, 1932, the latter name relatively popular in the literature of the past 50 years or so (although the identification of the exact freshwater oligotrichous species to which the name has been applied has not always been clearly determined, an important point to mention here). Within the past

decade, *Strobilidium caudatum*, as a substitute for *Strobilidium gyrans*, has appeared in several papers by Foissner and colleagues, particularly in the major — if perhaps often overlooked — monographic series in German commonly referred to as 'The Ciliate Atlas,' appearing in four huge volumes during the period 1991 1995 (see especially Volume 1, by Foissner et al., 1991, which contains a section on the order Oligotrichida, of direct pertinence to the present case). Also note the use of Fromentel's specific name in the recent and well received book edited by Hausmann & Bradbury (1996).

6. During the same period, other works by other protozoan taxonomists have appeared that have used the name *Strobilidium gyrans*; but they have offered no discussion of the matter and, indeed, have shown complete unawareness of the decisions proposed by the Foissner group. An outstanding example is Puytorac (1994), editor of the systematic volume on the ciliates in the well known French *Traité de Zoologie* series.

7. Neglect of or carelessness in nomenclatural details is all too common in the protozoological literature (see paragraphs 1 and 2 above), but this is no valid excuse for failure to appreciate conscientious efforts made by others to promote long-lasting stability in nomenclatural matters.

8. Incidentally, the potential confusion caused by the fact that Kahl (1932) gave the name *Strobilidium caudatum* to a new species of a brackish water oligotrich has been overcome by a nomenclatural action of Petz & Foissner (1992): these workers replaced what to them was a junior synonym by a new name for the latter rarely seen organism, viz., *Strobilidium kahli*.

9. The purpose of the present application by the noted ecologist C.W. Heckman is clear and understandable. Because the name *Strobilidium gyrans* has been used — ever since Kahl (1932) — by various taxonomists and ecologists (including himself: Heckman, 1990), he proposes that it be conserved for the major species involved in order to prevent further confusion in the literature following the different name, *S. caudatum* Fromentel, 1876, applied by Foissner (1987). Heckman has also proposed that a relatively rare species could retain its original name, *Strobilidium caudatum* Kahl, 1932 (although note the alternative solution in paragraph 8, above, for this particular organism).

10. Not only has Foissner et al. (1991) been overlooked in the petition, but also the door has been opened for the preservation in the future, from time to time and with perhaps debatable justification, of junior synonyms in relatively popular use without regard for the possible advantage for long-range stability in many instances of recognizing the priority of senior synonyms whether or not the latter have been noted and already treated in (likely neglected) modern taxonomic/nomenclatural monographs.

Additional references

Corliss, J.O. 1960. The problem of homonyms among generic names of ciliated protozoa, with proposal of several new names. *Journal of Protozoology*, **7**: 269–278.

Corliss, J.O. 1962. Taxonomic-nomenclatural practices in protozoology and the new International Code of Zoological Nomenclature. *Journal of Protozoology*, **9**: 307 324.

Corliss, J.O. 1979. *The ciliated protozoa: characterization, classification, and guide to the literature*. Ed. 2. 455 pp. Pergamon Press, Oxford and New York.

Corliss, J.O. 1992. The interface between taxonomy and ecology in modern studies on the protists. *Acta Protozoologica*, **31**: 1–9.

Corliss, J.O. & Dougherty, E.C. 1967. An appeal for stabilization of certain names in the protozoan family Tetrahymenidae (subphylum Ciliophora, order Hymenostomatida), with special reference to the generic name *Tetrahymena* Furgason, 1940. *Bulletin of Zoological Nomenclature*, **24**: 155–185.

Corliss, J.O. & Foissner, W. 1997. *Trachelocerca* Ehrenberg (Ciliophora): proposed conservation of authorship as Ehrenberg (1840), with fixation of *Vibrio sagitta* Müller, 1786 as the type species. *Bulletin of Zoological Nomenclature*, **54**: 219–221.

Foissner, W., Blatterer, H., Berger, H. & Kohmann, F. 1991. Taxonomische und ökologische Revision der Ciliaten des Saprobiensystems. Band I. Cyrtophorida, Oligotrichida, Hypotrichia, Colpodea. *Informationsberichte des Bayerisches Landesamtes für Wasserwirtschaft 1/91, Munich*. 471 pp.

Hausmann, K. & Bradbury, P.C. (Eds.) 1996. *Ciliates: cells as organisms*. 485 pp. G. Fischer, Stuttgart.

Kirby, H. 1954. On the need for validating the name *Stentor* Oken, 1815 (class Ciliophora) for use in its accustomed sense. *Bulletin of Zoological Nomenclature*, **9**: 208–214.

Puytorac, P. de. 1994. Infusoires ciliés, systématique. Vol. 2, fasc. 2. 880 pp. In Grassé, P.-P. (Ed.). *Traité de Zoologie, Anatomie, Systématique, Biologie*. Masson, Paris.

Comment on the proposed designation of *Cylindrella goldfussi* Menke, 1847 as the type species of *Holospira* Martens, 1860 (Mollusca, Gastropoda)

(Case 3047; see BZN **55**: 87–89)

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I wish to express my support for the proposed designation of *Cylindrella goldfussi* Menke, 1847 as the type species of the pulmonate snail genus *Holospira* Martens, 1860. *C. goldfussi* is a well-documented species that has been known for over 150 years. It nicely exhibits the classic *Holospira* quadrilamellate internal shell condition. Unlike the present type, specimens of *C. goldfussi* are found in the collections of several major archival institutions and are alive at the type locality.

I urge the Commission's expeditious approval of this application. It will eliminate a major obstacle regarding the classification of species assigned to the subfamily HOLOSPIRINAE.

Comment on the proposed conservation of the specific name of *Corisa propinqua* Fieber, 1860 (currently *Glaenocorisa propinqua*; Insecta, Heteroptera)

(Case 2958; see BZN **55**: 20–21)

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I fully support the application by A. Jansson and the solution proposed. The name *Glaenocorisa propinqua* is universally used in the modern European taxonomic and

faunistical literature, in manuals for identification of Heteroptera and aquatic fauna, and is often quoted in textbooks on zoogeography as an example of an aquatic insect with a boreo-montane distribution. I could add numerous further references, but it does not seem to be necessary.

It should be noted that the institution holding the neotype of *Corisa propinqua* is the Department of Entomology, National Museum, Prague (there is no 'Prague Museum'). Details of the locality, as confirmed by Dr V. Švihla of the National Museum, should read 'Jezero Plöckensteinské. Dr Štolc'.

Comment on the proposed conservation of the specific name of *Cicada clavicornis* Fabricius, 1794 (currently *Asiraca clavicornis*; Insecta, Homoptera)
(Case 3040; see BZN **55**: 93–95)

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We support the proposed conservation of the specific name of *Cicada clavicornis* Fabricius, 1794, the type species of *Asiraca* Latreille, [1796], by the suppression of two senior synonyms, *Cimex aequinoctialis* Scopoli, 1763 and *Cicada quadristriata* Gmelin, 1790. Both *Cicada clavicornis* and *Asiraca* were placed on Official Lists in Opinion 602 (August 1961), so the action proposed will accord with earlier Commission decisions.

Comment on the proposed conservation of the names *Labrus* Linnaeus, 1758, *Cichlasoma* Swainson, 1839 and *Polycentrus* Müller & Troschel, 1849 by the designation of neotypes for *Labrus bimaculatus* Linnaeus, 1758 and *L. punctatus* Linnaeus, 1758 (Osteichthyes, Perciformes)
(Cases 2880 and 2905; see BZN **50**: 215–218 and **53**: 106–111; **54**: 106–116, 187–189)

(1) Maurice Kottelat
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I fully support Dr Sven Kullander's comments and proposals (published in BZN **54**: 109–115, June 1997), in contrast to those made by Drs R. Fricke & C.J. Ferraris (BZN **53**: 106–111, June 1996). I see Dr Kullander's proposals as the most appropriate way to handle the problems outlined by Fricke & Ferraris and by Kullander (BZN **54**: 109–110). Kullander's proposals take into account historical facts and are most suited to maintain stability and universality in the nomenclature. I therefore ask the Commission to accept them.

I am also in favour of retaining *Labrus punctatus* Linnaeus, 1758 in the NANDIDAE, as defined by Kullander's (1983) lectotype. I have read Dr H.-J. Paepke's comments (published in BZN **54**: 187–189, September 1997) on *Labrus punctatus* and *Polycentrus schomburgkii* Müller & Troschel, 1849 and do not agree with his proposals (revised from those in Case 2880; BZN **50**: 215–218) to give the name *schomburgkii* precedence over *punctatus*. I do not consider the exercise of counting

publications in which a name is used is an intellectually sound argument on which to decide whether a name is worth conserving or not. In the case of names which appear in non-scientific literature, I see even less meaning in this exercise. Do we wish to value more the use of the correct name in a few careful scientific publications, or the use of an incorrect name in a number of non-technical papers in which the authors just list a name because they must? I do not have the time to study the list of 54 uses of the name *schomburgkii* compiled by Paepke. How many are primary scientific literature (that is, they include new, original observations), and how many are mere lists of names (compiled from earlier such lists)?

Kullander's proposal (BZN **54**: 110–111) to retain both the names *L. punctatus* and *P. schomburgkii* has the great advantage of not requiring the use of the Commission's plenary powers and of simply following the Code. I do not wish to speculate on whether a nominal species originally described from Surinam (*punctatus*) could turn out to be identical with one described from Guyana (*schomburgkii*); this would be better left to researchers with first hand information on the area. World wide we discover that the total freshwater fish fauna is grossly underestimated and we should therefore refrain from a hasty conclusion. This is even more true of areas which are still very superficially known.

If the Commission were to decide not to follow Kullander's proposals, I believe it should not adopt Paepke's revised proposals. The name *punctatus* should either be available or not; this case is already complicated enough and should not be made more so by a ruling on the 'relative precedence' of names. Few users of zoological information understand the Code.

(2) Alwyne Wheeler

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It is clear that there are problems with the names of some major fish genera and that Commission action is necessary to deal with them. However, I do not agree with Fricke & Ferraris's intended solution.

Contrary to Fricke & Ferraris's assertion (para. 7 of their application), the name *Labrus mixtus* Linnaeus, 1758 has been, and continues to be, used by the majority of authors for the labrid species and *L. bimaculatus* Linnaeus, 1758 is very much in use for the South American cichlid. Moreover, the cichlid is an aquarium fish and is mentioned, as *Cichlasoma bimaculatum*, in many aquarist publications. To the best of my knowledge the name *Labrus punctatus* Linnaeus, 1758 has never been used since its original publication.

It is clear that in designating *L. bimaculatus* as the type species of *Labrus*, Jordan (1891) misidentified the taxon; he regarded the species called by that name as the female of *L. mixtus* and adopted the name *bimaculatus*. Jordan referred to Günther (1862) and noted: 'We follow Günther ... in regarding the species called *carneus* [Ascanius, 1772] and *bimaculatus* as the female of *Labrus mixtus*. The name *bimaculatus* stands first in the *Systema Naturae*, for which reason we have adopted it, although it is by no means an appropriate one'. In fact Günther (1862, p. 74) used the name *mixtus* for the labrid species and (pp. 276, 277) *bimaculatus* (with references to *Museum Adolphi*, I, p. 66 and Gronovius, p. 36, no. 87 included among the

synonymies; see paras. 1 and 2 of the application) for the cichlid. Günther also included 'a variety of female, *L. bimaculatus*' in the synonymy of *mixtus*, which undoubtedly confused Jordan.

For the labrid species the authoritative checklist of European marine fishes (Hureau & Monod, 1973) lists 36 usages (1810–1969) of the specific name *mixtus*, but only 15 usages (1788–1973) of *bimaculatus*. In 1992, in providing a list of recommended scientific and common names for British fishes, I noted (p. 21): '*Labrus mixtus*. The cuckoo wrasse [has been] given three binominal names, [attributed to] Linnaeus (1758). Of these, *Labrus bimaculatus* and *L. ossifragus* (amendation for *ossifagus*) have page priority over *L. mixtus* (pp. 285, 286 and 287 respectively). *L. ossifagus* has been used very infrequently; of the other two names *L. mixtus* has been used considerably more than *L. bimaculatus* (*vide* Bauchot & Quignard, 1973). The first revisor to restrict this multiplicity of names is hard to identify but Cuvier & Valenciennes (1839) synonymized *L. ossifragus* under *L. mixtus*, thus partially restricting its use. Günther (1862) also used *L. mixtus* and regarded *L. bimaculatus* as a synonym. The usage by these critical and authoritative workers of *L. mixtus* in preference to the other names, and the more frequent use of *L. mixtus* in recent literature, make a strong case for recommending the adoption of the name *Labrus mixtus* for continued use'. In the preface to the (1992) publication I also noted: 'Both common and scientific names reflect my own concern to retain widely used and often familiar names for fishes wherever possible. Taxonomists may have little difficulty in juggling with name changes or the reorganization of sequence to reflect current views on phylogeny; fishery workers, ecologists, environmental archaeologists and naturalists frequently find them perplexing and difficult to cope with'.

I therefore approve, and very much endorse, the proposals set out by Kullander (BZN **54**: 113–114; June 1997) to designate *L. mixtus* (defined by the neotype designated by Kullander in June 1997; see BZN **54**: 113) as the type species of *Labrus* and *L. bimaculatus* as the type species of *Cichlasoma*, thereby maintaining stability in the usages of the names for these genera and species.

Additional reference

Hureau, J.C. & Monod, Th. (Eds.). 1973. *Checklist of the fishes of the north-eastern Atlantic and of the Mediterranean*. UNESCO, Paris.

Comments on the proposed designation of *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type species of *Iguanodon* Mantell, 1825, and proposed designation of a lectotype

(Case 3037; see BZN **55**: 99–104, 172)

(1) Paul M. Barrett

Department of Earth Sciences, Downing Street, Cambridge CB2 3EQ, U.K.

I support Charig & Chapman's proposal (published in June 1998) to designate *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type species of *Iguanodon* Mantell, 1825, and I further support the designation of the Belgian skeleton IRSNB 1534 as the lectotype.

The material of the present type species, *I. anglicus* Holl, 1829, is undiagnostic at the species level and the name *anglicus* should be regarded as a nomen dubium (para. 8 of the application).

An abundance of material has been referred to the genus *Iguanodon*, and the vast majority of this material clearly belongs to the same genus of iguanodontid ornithopod. The name *Iguanodon* has been firmly established in the literature since its initial publication (Mantell, 1825) and it is inextricably associated with a great many specimens. The species *I. bernissartensis* is known from many complete specimens, is readily diagnosable, and a great deal of material can be referred to this species with a high level of confidence (see Norman, 1980). For this reason it seems most reasonable to designate *bernissartensis* as the type species rather than any of the other nominal species of *Iguanodon* (*atherfieldensis*, *hoggi*, *dawsoni*, *fittoni*, *lakotaensis*) which are known from less complete material (see Norman & Weishampel, 1992). Furthermore, the name *bernissartensis* was the third specific name to be erected for the genus *Iguanodon*, the first being *anglicus* and the second *mantelli* (a junior subjective synonym of *anglicus*; para. 6 of the application), and *bernissartensis* therefore appears to be the most appropriate type species as it is the senior species with diagnostic material.

Additional reference

Norman, D.B. & Weishampel, D.B. 1992. Iguanodontidae and related ornithopods. Pp. 510–533 in Weishampel, D.B., Dodson, P. & Osmólska, H. (Eds.), *The Dinosauria* (paperback edition). University of California Press, Berkeley.

(2) Kenneth Carpenter

Department of Earth Sciences, Denver Museum of Natural History, 2001 Colorado Boulevard, Denver, Colorado 80205, U.S.A.

I have read the application and I congratulate the authors. It is time that the *Iguanodon* problem was resolved and I strongly support the proposals.

(3) Hans-Dieter Sues

Department of Palaeobiology, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6

I do not support the recent application by Charig & Chapman to designate *Iguanodon bernissartensis* Boulenger in Beneden, 1881 as the type species of *Iguanodon* Mantell, 1825, a well known genus of Cretaceous ornithopod dinosaur.

Mantell (1825) did not designate a type species for *Iguanodon* and it was left to Holl (1829) to propose the specific designation *I. anglicus* (originally as '*anglicum*') for Mantell's material. Although *I. bernissartensis* is now clearly the best known species of the genus, Norman (1986) accepted *I. anglicus* as the type species.

Charig & Chapman claim (para. 8 of the application) that the 'teeth [of *Iguanodon anglicus*] are indeterminate specifically, and the name *I. anglicus* must be considered a nomen dubium'. While I concur with their assessment that the disassociated teeth of *I. anglicus* are not diagnostic based on our current knowledge, they were

considered distinctive and informative by Mantell, Huxley, Owen and other early students of *Iguanodon*. Indeed, Mantell explicitly based his concept of *Iguanodon* on these teeth. For palaeontologists the problem is unfortunately a very common one: in the course of time incomplete but once distinctive type material has become inadequate for identifying the taxon under discussion.

Charig & Chapman propose that *Iguanodon bernissartensis* be designated as the type species, but this proposal is not without problems. Recent authors have recognized the presence of at least two closely related species of *Iguanodon* in Early Cretaceous strata from southeastern England, *I. bernissartensis* and *I. atherfieldensis* Hooley, 1925. David Norman, the foremost student of the genus, believes that the status of these two taxa cannot be resolved (see Norman, 1986; para. 9 of the application) and retains both as well as *I. anglicus* (see Norman & Weishampel, 1992, p. 530). The teeth attributed to *I. anglicus* may yet prove referable to either species (and thus the name *I. anglicus* could become the senior subjective synonym of either) as future work may establish diagnostic features for distinguishing between the teeth of the various species of *Iguanodon*.

In conclusion, I propose that *I. anglicus* be retained as the type species of *Iguanodon*. The tooth BMNH 2392 should be designated the lectotype of *I. anglicus* following Norman (1986; paras. 3 and 4 of the application). The formerly more widely used name *I. mantelli* von Meyer, 1832 (based on Mantell's original material as well as subsequently discovered teeth and bones) is a junior subjective synonym of *I. anglicus* (para. 6 of the application).

I support the proposal by Charig & Chapman to formalize the traditional but informal designation of the almost complete skeleton IRSNB 1534 (specimen Q) from the collections of the Institut Royal des Sciences Naturelles de Belgique in Brussels as the lectotype of *Iguanodon bernissartensis*.

Comments on the proposed conservation of the specific name of *Australopithecus afarensis* Johanson, 1978 (Mammalia, Primates)
(Case 2998; see BZN **53**: 24–27)

(1) Tim White

Department of Integrative Biology, Museum of Vertebrate Zoology, University of California, Berkeley, California, U.S.A.

Colin Groves has done anthropology and archaeology a service by bringing this case to the attention of the Commission and other colleagues. As he recognizes, the specific name of *Australopithecus afarensis* Johanson has been entrenched in both the scientific and popular literature since the species was described in 1978. It is nearly universally accepted as intended — to represent a set of Pliocene fossils from Ethiopia and Tanzania. Equally entrenched is the name *A. africanus* Dart, 1925 for a different species represented by South African fossils.

Serious confusion would result from identical specific names (*africanus* Dart, 1925 and *africanus* Weinert, 1950, a senior subjective synonym of *afarensis* Johanson, 1978) being used in different ways by different workers as the fossils comprising these species are shifted from genus to genus. There is no need for this.

Grove's presentation of the case is accurate, his reasonings regarding the potential for confusion and freedom of classification sound, and his solution to the problem workable and timely. I urge the Commission to adopt it.

(2) Paul Renne

Geochronology Center, Berkeley, California, U.S.A. and *Department of Geology, University of California, Berkeley, California, U.S.A.*

I write concerning the proposal by Colin Groves to conserve the specific name of *Australopithecus afarensis*.

I strongly support Groves's proposal, as this would avert needless nomenclatural confusion. A departure from Groves's proposal would be particularly unfortunate (and difficult to implement) because the fossils currently assigned to *A. afarensis* are discussed widely in the geological literature. This literature tends to be less attuned to rigorous formal taxonomic nomenclature than paleontologic literature and replacing the name *afarensis* would virtually guarantee the simultaneous use of different names for the same taxon in different disciplines.

(3) Christopher Stringer

Department of Palaeontology, The Natural History Museum, London SW7 5BD, U.K.

I have read Colin Groves's application.

I certainly agree with him that there would be considerable potential for confusion were the specific name of *Australopithecus afarensis* Johanson, 1978 to become *africanus* Weinert, 1950 on transferal of the species from *Australopithecus* Dart, 1925 to another genus (para. 6 of the application).

I support the proposal to retain the name *afarensis* whatever the generic placement and to suppress *africanus* Weinert, 1950.

(4) James C. Ohman

Hominid Palaeontology Research Group, Department of Human Anatomy and Cell Biology, New Medical School, University of Liverpool, Ashton Street, Liverpool L69 3GE

Groves has presented a well-argued and accurate case in bringing to light a potentially very serious problem. All those interested in hominid research can be thankful that Groves has called this case to the attention of the Commission and colleagues.

For nearly 75 years the name *Australopithecus africanus* Dart, 1925 has referred to a group of South African fossils. For 20 years the name *A. afarensis* Johanson, 1978 (a junior subjective synonym of *Meganthropus africanus* Weinert, 1950) has meant a group of Pliocene fossils from Ethiopia and Tanzania that clearly represent a different species. Both the names *africanus* Dart and *afarensis* are well-established in both the scientific and popular literature.

Needless confusion would result if these separate species, even though placed in different genera, were to have the same specific name (i.e. *africanus*), as Groves states (para. 6 of the application). I firmly believe that the wise nomenclatural judgement is to accept Groves's proposal to maintain the usage of *afarensis*. I urge the Commission to adopt it.

OPINION 1910

Roeslerstammia Zeller, 1839 and *Acrolepiopsis* Gaedike, 1970 (Insecta, Lepidoptera): conserved by the designation of *Alucita erxlebella* Fabricius, 1787 as the type species of *Roeslerstammia*; and *A. erxlebella* and *Tinea imella* Hübner, [1813] (currently *Roeslerstammia erxlebella* and *Monopis imella*): specific names conserved by the designation of a neotype for *A. erxlebella*

Keywords. Nomenclature; taxonomy; Lepidoptera; micromoths; ROESLERSTAMMIIDAE; ACROLEPIIDAE; TINEIDAE; *Roeslerstammia*; *Acrolepiopsis*; *Roeslerstammia erxlebella*; *Acrolepiopsis assectella*; *Monopis imella*; Palaearctic.

Ruling

(1) Under the plenary powers all previous type fixations are hereby set aside:
  (a) for the nominal species *Alucita erxlebella* Fabricius, 1787 and the male specimen in the Zoological Museum, Copenhagen, labelled 'WÜRTTEMBERG Grossbottwar Wunnenstein 22.5.69 L. Süssner', with its genitalia on a slide labelled 'TIN 58 ♂ P. Huemer', is designated as the neotype;
  (b) for the nominal genus *Roeslerstammia* Zeller, 1839 and *Alucita erxlebella* Fabricius, 1787 is designated as the type species.

(2) The following names are hereby placed on the Official List of Generic Names in Zoology:
  (a) *Roeslerstammia* Zeller, 1839 (gender: feminine), type species by designation under the plenary powers in (1)(b) above *Alucita erxlebella* Fabricius, 1787;
  (b) *Acrolepiopsis* Gaedike, 1970 (gender: feminine), type species by original designation *Roeslerstammia assectella* Zeller, 1839.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:
  (a) *erxlebella* Fabricius, 1787, as published in the binomen *Alucita erxlebella* and as defined by the neotype designated in (1)(a) above (specific name of the type species of *Roeslerstammia* Zeller, 1839);
  (b) *assectella* Zeller, 1839, as published in the binomen *Roeslerstammia assectella* (specific name of the type species of *Acrolepiopsis* Gaedike, 1970);
  (c) *imella* Hübner, [1813], as published in the binomen *Tinea imella*.

(3) The name *Chrysitella* Zeller, 1839 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (an unused objective synonym of *Roeslerstammia* Zeller, 1839).

History of Case 2963

An application for the designation of *Alucita erxlebella* Fabricius, 1787 as the type species of *Roeslerstammia* Zeller, 1839, thereby conserving both *Roeslerstammia* and *Acrolepiopsis* Gaedike, 1970, and for the replacement of the syntype of *A. erxlebella* with a neotype, so conserving the specific names of *A. erxlebella* and *Monopis imella* (Hübner, [1813]), was received from Dr Peter Huemer (*Tiroler Landesmuseum*

Ferdinandeum, Naturwissenschaften, Innsbruck, Austria) on 25 January 1995. After correspondence the case was published in BZN **54**: 22–25 (March 1997). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **54**: 24. At the close of the voting period on 1 June 1998 the votes were as follows:

Affirmative votes — 24: Bock, Bouchet (part), Brothers, Cocks, Cogger, Dupuis, Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

No vote was received from Macpherson.

Ride was on leave of absence.

Bouchet voted against placing the specific name of *Tinea imella* Hübner, [1813] on the Official List. Lehtinen commented: 'I am voting for this case because action by the Commission is necessary. This is an example of the long usage of names being based on a history of misidentification and mistakes in applying the basic rules of nomenclature'.

Original references

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

Acrolepiopsis Gaedike, 1970, *Entomologische Abhandlungen. Staatliche Museum für Tierkunde in Dresden*, **38**(1): 32.

assectella, *Roeslerstammia*, Zeller, 1839, *Isis* (von Oken), **1839**(3): col. 203.

Chrysitella Zeller, 1839, *Isis* (von Oken), **1839**(3): col. 203.

erxlebella, *Alucita*, Fabricius, 1787, *Mantissa insectorum*, vol. 2, p. 256.

imella, *Tinea*, Hübner, [1813], *Sammlung europäischer Schmetterlinge*, Lepidoptera part 8, *Tinea* part 4, pl. 50, fig. 347.

Roeslerstammia Zeller, 1839, *Isis* (von Oken), **1839**(3): col. 202.

OPINION 1911

Dasineura Rondani, 1840 (Insecta, Diptera): *Tipula sisymbrii* Schrank, 1803 designated as the type species

Keywords. Nomenclature; taxonomy; Diptera; CECIDOMYIIDAE; gall midges; agricultural pests; *Dasineura*; *Dasineura sisymbrii*.

Ruling

(1) Under the plenary powers all fixations of type species for the nominal genus *Dasineura* Rondani, 1840 prior to that by Rondani (1860) of *Tipula sisymbrii* Schrank, 1803 are hereby set aside.

(2) The name *Dasineura* Rondani, 1840 (gender: feminine), type species by subsequent designation by Rondani (1860) *Tipula sisymbrii* Schrank, 1803, as ruled under the plenary powers in (1) above, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *sisymbrii* Schrank, 1803, as published in the binomen *Tipula sisymbrii* (specific name of the type species of *Dasineura* Rondani, 1840), is hereby placed on the Official List of Specific Names in Zoology.

(4) The name *Dasyneura* Agassiz, 1846 is hereby placed on the Official Index of Rejected and Invalid Generic Names in Zoology (an unjustified emendation of *Dasineura* Rondani, 1840 and a junior homonym of *Dasyneura* Saunders, 1842).

History of Case 2986

An application for the designation of *Tipula sisymbrii* Schrank, 1803 as the type species of *Dasineura* Rondani, 1840 was received from Dr Raymond J. Gagné (*Plant Species Institute, Agricultural Research Service, USDA, c/o U.S. National Museum, Washington, D.C., U.S.A.*), Dr Keith M. Harris (*International Institute of Entomology, London, U.K.*), Dr Marcela Skuhravá (*Praha, Czech Republic*), Dr Mario Solinas (*Istituto di Entomologia Agraria, Università degli Studi di Perugia, Perugia, Italy*) and Dr Edvard Sylvén (*Swedish Museum of Natural History, Stockholm, Sweden*) on 16 May 1995. After correspondence the case was published in BZN **54**: 92–94 (June 1997). Notice of the case was sent to appropriate journals.

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **54**: 93–94. At the close of the voting period on 1 June 1998 the votes were as follows:

Affirmative votes — 23: Bock, Brothers, Cocks, Cogger, Dupuis (part), Eschmeyer, Heppell, Kabata, Kerzhner, Kraus, Lehtinen, Mahnert, Martins de Souza, Mawatari, Minelli, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song, Štys

Negative votes — none.

Bouchet abstained.

No vote was received from Macpherson.

Ride was on leave of absence.

Dupuis voted in favour of the designation of *Tipula sisymbrii* Schrank, 1803 as the type species of *Dasineura* Rondani, 1840 and placement of the generic and specific names on Official Lists, but not for the placement of *Dasyneura* Agassiz, 1846 on the Official Index. Abstaining, Bouchet commented: 'I approve the intention of the application but not the method chosen. The authors could have achieved the same result without Commission intervention by designating the holotype of *T. sisymbrii* (if type material exists) as the neotype of *D. obscura* Rondani, 1840'.

Original references

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

Dasineura Rondani, 1840, *Memoria per servire alla ditterologia italiana*. No. 2 (Sopra alcuni nuovi generi di insetti ditteri), p. 12.

Dasyneura Agassiz, 1846, *Nomenclator Zoologicus. Nomina Systematica Generum Dipterorum*, p. 11.

sisymbrii, *Tipula*, Schrank, 1803, *Fauna Boica. Durchgedachte Geschichte der in Baiern einheimischen und zahmen Thiere*, vol. 3, part 1, p. 83.

The following is the reference for the designation of *Tipula sisymbrii* Schrank, 1803 as the type species of the nominal genus *Dasineura* Rondani, 1840:

Rondani, C. 1860. *Atti della Società Italiana di Scienze Naturali*, **2**: 288.

OPINION 1912

Pseudofoenus Kieffer, 1902 (Insecta, Hymenoptera): *Foenus unguiculatus* Westwood, 1841 designated as the type species

Keywords. Nomenclature; taxonomy; Hymenoptera; GASTERUPTIIDAE; parasitic wasps; *Pseudofoenus*; *Pseudofoenus unguiculatus*; New Zealand.

Ruling

(1) Under the plenary powers all previous fixations of type species for the nominal genus *Pseudofoenus* Kieffer, 1902 are hereby set aside and *Foenus unguiculatus* Westwood, 1841 is designated as the type species.

(2) The name *Pseudofoenus* Kieffer, 1902 (gender: masculine), type species by designation under the plenary powers in (1) above *Foenus unguiculatus* Westwood, 1841, is hereby placed on the Official List of Generic Names in Zoology.

(3) The name *unguiculatus* Westwood, 1841, as published in the binomen *Foenus unguiculatus* (specific name of the type species of *Pseudofoenus* Kieffer, 1902) is hereby placed on the Official List of Specific Names in Zoology.

History of Case 2950

An application for the designation of *Foenus unguiculatus* Westwood, 1841 as the type species of *Pseudofoenus* Kieffer, 1902 was received from Drs A.D. Austin & J.T. Jennings (*The University of Adelaide, South Australia, Australia*) and Dr M.S. Harvey (*Western Australian Museum, Perth, Western Australia, Australia*) on 9 September 1994. After correspondence the case was published in BZN **53**: 261–263 (December 1996). Notice of the case was sent to appropriate journals.

An opposing comment from Dr R.W. Crosskey (*The Natural History Museum, London, U.K.*) was published in BZN **54**: 185–186 (September 1997), together with a reply by the authors of the application. Dr Crosskey suggested retaining *Gasteruption pedunculatum* Schletterer, 1889 as the type species of *Pseudofoenus* but, by designating a neotype, fixing it as a junior synonym of *Foenus unguiculatus* Westwood, 1841. The authors considered that this artificial allocation of a taxonomic meaning to *G. pedunculatum* would serve no real purpose and that there would be no disadvantage in *pedunculatum* remaining as a name of undefined application since, inevitably, it would be a junior synonym.

Decision of the Commission

On 1 March 1998 the members of the Commission were invited to vote on the proposals published in BZN **53**: 262–263. At the close of the voting period on 1 June 1998 the votes were as follows:

Affirmative votes — 15: Bock, Bouchet, Brothers, Cocks, Eschmeyer, Heppell, Mahnert, Mawatari, Nielsen, Nye, Papp, Patterson, Savage, Schuster, Song

Negative votes — 7: Cogger, Kabata, Kerzhner, Kraus, Martins de Souza, Minelli and Štys.

Dupuis and Lehtinen abstained.

No vote was received from Macpherson.

Ride was on leave of absence.

Voting against, Cogger commented: 'The proposed solution is unsatisfactory because it leaves *Gasteruption pedunculatum* (a nomem dubium) unresolved. The applicants argue (BZN **54**: 187) that 'it is inevitably invalid as a junior synonym of either *Foenus unguiculatus* or of *F. crassipes*' simply because the most recent taxonomic revision recognises only two taxonomic species in the genus *Pseudofoenus*. Consequently the proposal ensures that *pedunculatum*, as a nomen dubium, continues to have the potential to disturb nomenclatural stability in the future. Further, as a nomen dubium it clearly cannot be assigned with confidence to the synonymy of either of the currently recognised taxonomic species, and it is senior to one of the nominal species (*P. nocticolor* Kieffer, 1911) in the genus. There appears to be no dispute as to the identity of *F. unguiculatus* and its presumed holotype, and Dr Crosskey's final suggestions (to set aside the existing presumed syntype of *pedunculatus* and designate the holotype of *unguiculatus* as the neotype of *pedunculatus*) would fix *Pseudofoenus* in its accustomed usage'. Kerzhner commented: 'As there is no doubt that *pedunculatus* belongs in *Pseudofoenus* and there is no intention to place the two taxonomic species of *Pseudofoenus* in different genera or subgenera, *pedunculatus* may function as the type species of the genus. The probability exists of the subsequent discovery of additional surviving syntype(s) or of additional characters by which to distinguish males'. Kraus commented: 'I vote against the application because I feel that the arguments put forward by Dr R.W. Crosskey are important and because the applicants did not provide any information on the usage of the names concerned'. Abstaining, Lehtinen commented: 'Solving problems arising from inadequate taxonomic knowledge is not a task for the Commission. There was no need for an application or decision as long as specialists cannot correlate the males and females of the five recognized nominal species from New Zealand'.

Original references

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

Pseudofoenus Kieffer, 1902, Hymenoptera, Fam. Evaniidae *in* Wytsman, P. (Ed.), *Genera Insectorum*, fascicle 2, p. 6.

unguiculatus, *Foenus*, Westwood, 1841, *Annals and Magazine of Natural History*, **7**: 537.

AUTHORS IN VOLUME 55 (1998)

NAMES AND WORKS PLACED ON OFFICIAL LISTS AND INDEXES IN RULINGS OF THE COMMISSION PUBLISHED IN VOLUME 55 (1998)

Names and Works placed on the Official Lists and Indexes in Volume 55, and amendments of existing entries, are listed below under four headings: Family-Group Names, Generic Names, Specific Names and Works. Entries on the Official Lists are in bold type and those on the Official Indexes in non-bold type.

Family-Group Names

ARMADILLIDAE Brandt, [1831] (Isopoda) Op. 1897
ARMADILLIDIIDAE Brandt, 1833 (Isopoda) Op. 1897
UMBELLULAE Lindahl, 1874 (Anthozoa) Op. 1903
UMBELLULARIIDAE Gray, 1840 (Anthozoa) Op. 1903
UMBELLULARIIDAE Lindahl, 1874 (Anthozoa) Op. 1903
UMBELLULEAE Kölliker, 1875 (Anthozoa) Op. 1903
UMBELLULIDAE Lindahl, 1874 (1840) (Anthozoa) Op. 1903

Generic Names

Acrolepiopsis Gaedike, 1970 (Lepidoptera) Op. 1910
Aenasioidea Girault, 1911 (Hymenoptera) Op. 1898
Agouti Lacepède, 1799 (Mammalia) Op. 1894
Anomalina d'Orbigny, 1826 (Foraminiferida) Op. 1902
Aporcelaimus Thorne & Swanger, 1936 (Nematoda) Op. 1904
Armadillidium Brandt in Brandt & Ratzeburg, [1831] (Isopoda) Op. 1897
Armadillo Cuvier, 1792 (Diplopoda) Op. 1897
Armadillo Latreille, 1802 (Isopoda) Op. 1897
Bathyarca Kobelt, 1891 (Bivalvia) Op. 1887
Bombycilla Vieillot, [1808] (Aves) Op. 1893
Cathammistes Illiger, 1807 (Coleoptera) Op. 1891
Chrysitella Zeller, 1839 (Lepidoptera) Op. 1910
Conchiosaurus Meyer, [1833] (Reptilia) Op. 1907
Crenitis Bedel, 1881 (Coleoptera) Op. 1891
Crypteuna Motschulsky, 1863 (Coleoptera) Op. 1891
Cuniculus Brisson, 1762 (Mammalia) Op. 1894
Cuniculus Meyer, 1790 (Mammalia) Op. 1894
Cuniculus Wagler, 1830 (Mammalia) Op. 1894
Dasineura Rondani, 1840 (Diptera) Op. 1911
Dasyneura Agassiz, 1846 (Diptera) Op. 1911
Euchroeus Latreille, 1809 (Hymenoptera) Op. 1906
Euhyaena Falconer, 1868 (Mammalia) Op. 1894
Fontiscrutor Pandellé, 1876 (Coleoptera) Op. 1891
Galba Schrank, 1803 (Gastropoda) Op. 1896
Georissus Latreille, 1809 (Coleoptera) Op. 1891
Georyssus Stephens, 1828 (Coleoptera) Op. 1891
Giraffa Brisson, 1762 (Mammalia) Op. 1894
Glis Brisson, 1762 (Mammalia) Op. 1894

Glis Erxleben, 1777 (Mammalia) Op. 1894
Glomeris Latreille, 1802 (Diplopoda) Op. 1897
Hyaena Brisson, 1762 (Mammalia) Op. 1894
Hydrochoerus Brisson, 1762 (Mammalia) Op. 1894
Lirobarleeia Ponder, 1983 (Gastropoda) Op. 1888
Lutra Brisson, 1762 (Mammalia) Op. 1894
Meles Brisson, 1762 (Mammalia) Op. 1894
Melesium Rafinesque, 1815 (Mammalia) Op. 1894
Meristella Hall, 1859 (Brachiopoda) Op. 1899
Metaphycus Mercet, 1917 (Hymenoptera) Op. 1898
Myoxus Zimmermann, 1780 (Mammalia) Op. 1894
Nothosaurus Münster, 1834 (Reptilia) Op. 1907
Ombellula Cuvier, [1797] (Anthozoa) Op. 1903
Oosternum Sharp, 1882 (Coleoptera) Op. 1891
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Works placed on the Official List of Works Approved as Available or the Official Index of Rejected and Invalid Works

Brisson, M.J. 1762. *Regnum Animale in classes IX distributum, sive synopsis methodica*, Ed. 2. Op. 1894

Kaicher, S.D. 1973–1992. *Card Catalogue of World-Wide Shells*. Pack 1 (cards 1–99) through Pack 60 (cards 6110–6215). Op. 1905

KEY NAMES IN APPLICATIONS AND COMMENTS PUBLISHED IN VOLUME 55 (1998)

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