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THE WILTSHIRE ARCHAEOLOGICAL AND NATURAL HISTORY SOCIETY

The Society was founded in 1853. Its activities include the promotion of archaeological and historical work and of the study of all branches of Natural History within the county; the safeguarding and conservation of the antiquities and the flora and the fauna of the region; the issue of a Magazine and other publications; excursions to places of archaeological and historical interest; and the maintenance of a Museum and Library.

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The object of this Section is to promote the study of all branches of Natural History in the County by encouraging field observations, maintaining records, arranging field and other meetings and by putting observers in touch with each other. Members and others who wish for particulars of the Section and its activities should write to the Hon. Treasurer of the Section: Arnold Smith, Esq., 49 Clarendon Avenue, Trowbridge.

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THE MACROLEPIDOPTERA OF WILTSHIRE by Baron de Worms; 1962. £1.25. (Members £1.00.)

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THE
WILTSHIRE ARCHAEOLOGICAL AND
NATURAL HISTORY MAGAZINE

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PART A: NATURAL HISTORY



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THE DINOSAURS OF WILTSHIRE

by I. B. DELAIR

WILTSHIRE ARCHÆOLOGICAL SOCIETY

NATURAL HISTORY SECTION

It is sixteen years since the 'Flora of Wiltshire' was published. It is now proposed that a supplement containing all the subsequent Plant Notes up to 1972 together with several articles of original botanical work be produced. We feel that many members will wish to support this publication.

Contributions will be gratefully acknowledged by Arnold Smith, 49 Clarendon Avenue, Trowbridge, Wilts.

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it will be useful to of the ancient Greek lizard"—which has being applicable to dinosaurs *were* large (orn terrier dogs) also external appearance, ally inaccurate as a the very widest sense "ria" later proved to *Ornithischia*. The only reading is required to scussed in relation to before, essentially a

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THE DINOSAURS OF WILTSHIRE

by J. B. DELAIR

Wiltshire is not the county which first springs to mind when British dinosaurs are mentioned, for Oxfordshire, Cambridgeshire, Sussex, Dorset and, the Isle of Wight all surpass it as far as numbers and variety of dinosaurian remains are concerned. Nonetheless, several notable finds of dinosaurs have occurred in Wiltshire from time to time, including the discovery of unique forms, so that a general review of them may not be inappropriate here.

Before considering the Wiltshire evidence for these great reptiles, it will be useful to discuss the proper use of the term "dinosaur"—a word compounded of the ancient Greek words *Deinos*="great" or "terrible", and *Sauros*="reptile" or "lizard"—which has become firmly but erroneously entrenched in popular imagination as being applicable to any large prehistoric reptile, terrestrial or marine. Although many dinosaurs *were* large and some *were* terrible, many small forms (some no bigger than modern terrier dogs) also existed and the greater number were, despite an often forbidding external appearance, inoffensive plant-eaters. The term "dinosaur", therefore, is generally inaccurate as a descriptive term, and, strictly speaking, should only be used in the very widest sense because the reptiles originally grouped under the heading "dinosauria" later proved to belong to two quite distinct reptilian orders—the *Saurischia* and the *Ornithischia*. The only permissible use of the word "dinosaur", then, occurs when a brief heading is required to cover both these orders whenever they are jointly compared with or discussed in relation to other reptilian and animal groups; the heading "dinosauria" is, therefore, essentially a collective term.

Order SAURISCHIA

All the reptilian forms included in this order—which first appeared over 170 million years ago in Triassic times and persisted until the close of the Cretaceous nearly 100 million years later—possessed a type of pelvis having a lizard-like arrangement of its component bones, hence the origin of the name Saurischia. Various modifications of this arrangement are known, reflecting the fact that some Saurischians were habitually quadrupedal and that others were habitually bipedal. Of these, the quadrupedal group (which appears to have been mainly herbivorous, and which include the largest land-dwelling vertebrates ever known) is called the *Sauropodomorpha*, while the bipedal group (which was predominantly carnivorous, and which numbered in its ranks the most fearsome flesh-eating animals of all time) is known as the *Theropoda*. Both these groups include further sub-groups, the precise relationships of each of which have given rise in recent years to several alternative classifications of more or less equal merit. Readers interested in pursuing the intricacies of Saurischian classification for themselves should consult the works of Huene (1956), Romer (1956), Colbert (1964), Charig, Attridge and Crompton (1965), Bonaparte (1969), and Swinton (1970) listed at the end of this paper; in the meantime, the classification adopted here is that proposed by Charig *et al* in 1965.

Sub-order THEROPODA

This sub-order embraces all the known carnivorous Saurischians, of which the earliest representatives appeared during late Triassic times. These reptiles are assignable to either of two infra-orders, the Coelurosauria and the Carnosauria—characterized by small and large forms respectively. Only Carnosaurian remains have so far been found in Wiltshire, and even these are very fragmentary. Nevertheless, by comparison with more complete

Stratigraphical Distribution of Wiltshire Dinosaurs

	Lower Oolite	Forest Marble	Oxford Clay	Kimmeridge Clay	Portland Beds	Purbeck Beds	Upper Greensand	
<i>Megalosaurus bucklandi</i>		×		×				Theropoda
„ <i>insignis</i>				×				
? <i>Megalosaurus</i> sp.				×				
<i>Nuthetes</i> sp.						×		Sauropoda
<i>Cetiosaurus</i> sp.	×		×					
<i>Cardiodon rugulosus</i>		×						
<i>Bothriospondylus robustus</i>		×						
„ <i>suffosus</i>				×				Stegosauria
<i>Dacentrurus armatus</i>				×				
„ <i>hastiger</i>				×				
Indet. <i>Stegosaur</i> (species A)				×				
„ „ (species B)					×			
„ genera							×	

similar remains discovered elsewhere, we know that these Wiltshire Carnosaurs were large, powerfully built bipedal saurians possessing large skulls equipped with formidable sharp teeth; that their forelimbs, although clawed, were comparatively diminutive and of limited use; that locomotion was accomplished by strong hind limbs terminating in heavily clawed three toed feet; and that the long tail acted as a counterbalance to the rest of the body, the centre of equilibrium being situated in the pelvis.

In Wiltshire, Carnosaurs are represented by the genera *Megalosaurus* and, rather doubtfully, *Nuthetes*.

Genus Megalosaurus

Historically, *Megalosaurus* is the most important of all “dinosaurs” because it was the first to be scientifically described, an account of the type remains (from the Stonesfield Slate of Stonesfield, Oxfordshire) being published by Buckland as long ago as 1824. Buckland, however, did not give his Stonesfield bones a specific name and it was not until 1832 that Meyer (1832: p. 110) bestowed upon them the specific title *bucklandi*, in honour of their original describer. Since then, remains of *Megalosaurus bucklandi* have been reported from many counties and even from some continental European localities. In Wiltshire it is represented by a tooth, now preserved in the national collection (no: 39476 BMNH), from the Forest Marble beds at Stanton, and, according to Phillips (1871: p. 333), by unspecified remains from the Kimmeridge Clay of Swindon.

The crown of a very large tooth (46388 BMNH), also in the national collection, and belonging to the related species *Megalosaurus insignis*, is known from the Kimmeridge Clay of Foxhangers, near Devizes. It is almost identical with the corresponding part of a tooth from France figured under that name by Sauvage (1874: pl. v, fig. 1), and is of particular interest in that it is the only specimen of this species identified from Britain.

Specifically indeterminable *Megalosaur* remains, not necessarily of *Megalosaurus* itself, have also been found in Wiltshire. These include phalangeal bones and an associated claw (no: 3009, Devizes Museum) from the Kimmeridge Clay of an unnoted locality, and a megalosaurian tooth recorded by Moore from the Upper Purbeck “pebbly” beds of Town Gardens (or Great) Quarry, Swindon (Huddleston: 1876).

Genus Nuthetes

This is a very small, little-known genus, also recorded from Dorset and Sussex, not yet certainly established as a true megalosaur but which, on available evidence, seems best referred to this group. A tooth of *Nuthetes* is alleged to have occurred at the same horizon and in the same quarry at Swindon as that yielding the *Megalosaurus* tooth noted above, but, like that specimen, is now lost or misplaced (Sylvester-Bradley: 1940).

Sub-order SAUROPODA

Of the two known sub-orders comprising the Sauropodomorpha, only the Sauropoda has been recorded from Wiltshire, where it is represented by the Jurassic forms *Cetiosaurus*, *Cardiodon*, and *Bothriospondylus*. As a group, the Sauropoda was characterized by large or very large secondarily quadrupedal reptiles, by habit herbivorous and almost certainly amphibious, possessing a relatively short and robust trunk and long, occasionally very long, neck and tail. Where known, the skull was lightly built and proportionately very small, the dentition being but feebly developed. The vertebrae were notable for their cavernous construction, which made them unusually light and, simultaneously, exceptionally strong for their actual size. Both pairs of limbs were powerfully developed, the hinder pair usually, but not invariably, being the longer of the two. All the feet, which were plantigrade, were five toed, some of the digits terminating in blunt claws.

Of the several known Sauropod families, only two, the Cetiosauridae and the Brachiosauridae, have so far been recognized in Wiltshire.

Family Cetiosauridae

The principal features of this, geologically the oldest sauropod family, may be summarized as follows: teeth broad, spatulate, and constricted at the base; presacral vertebrae slightly opisthocoelous; caudal vertebrae amphicoelous or amphiplatyan, except at the distal end of the series where they possess conical extremities; neural spines simple; pubis very broad throughout, the ischium being less so.

Genus Cetiosaurus

Although the generic name *Cetiosaurus* was not invented until 1841 (Owen: p. 457), a thigh bone probably of this reptile was figured as early as 1758 (Platt: fig. 19), the genus, therefore, being one of the very first fossil saurians known to science. Owen, and other early palaeontologists, originally regarded *Cetiosaurus* as a monstrous crocodile, but later discoveries conclusively demonstrated the true affinities of the animal. Today, the genus is known from numerous rather fragmentary remains from the middle Jurassic rocks of England and Europe so that, even though complete skeletons have yet to be discovered, our knowledge of it is reasonably complete. *Cetiosaurus* is distinguished from other Sauropodous genera by the fact that its humerus and femur were of almost equal length, and that the distally contracted ischium was smaller than the pubis.

The genus is represented in Wiltshire by five associated caudal vertebrae from the lower Oolite of Malmesbury, which are preserved in the University Museum, Oxford (nos: J.1631/1-5 OUM). Owing to their low stratigraphical occurrence, these specimens are among the geologically oldest known British sauropod fossils, and, as such, are of great interest.

Less certainly referable to *Cetiosaurus*, but perhaps best recorded under that name, were the unspecified bones from the Oxford Clay of the railway cutting at Ham Fields, near Trowbridge, ascribed to this genus by R. N. Mantell (1850: p. 316). The whereabouts of these bones is unknown, so there is at present no way by which these remains can be generically identified.

Genus *Cardiodon*

In his book "Odontography", Owen (1841a, p. 291) gave the name *Cardiodon rugulosus* to some Cetiosaurian teeth, now in the national collection, from the Forest Marble of Bradford-on-Avon. Since the dentition of *Cetiosaurus* and other contemporary sauropods is imperfectly known, and because it is a fact that the shapes and sizes of teeth change in different parts of sauropod jaws (where the dentitions are fully known), it is arguable whether the name *Cardiodon* is validly established. This possibility was raised by Swinton in 1934 (table of British Dinosaurs), when it was suggested that *Cardiodon* and *Cetiosaurus* might be identical. Nonetheless, the teeth named *Cardiodon* do exhibit differences from the few that can be confidently assigned to *Cetiosaurus* (a genus in which the complete dentition is unknown), thus for the time being it is, perhaps, best to retain *Cardiodon* as a separate genus.

Family *Brachiosauridae*

In general characters this family differs from the Cetiosauridae only in that the vertebrae are more cavernous, that the neural spines—which are sometimes paired—are more buttressed, and that the forelimbs, which are usually as long as or longer than the hind-limbs, are comparatively slender. *Bothriospondylus* is the only representative of this family recorded from Wiltshire.

Genus *Bothriospondylus*

This sauropod, evidently of somewhat smaller proportions than *Cetiosaurus*, is known only from vertebrae preserved in the national collection. Some of these specimens (nos: 44589–44595 BMNH) were found in the Forest Marble at Bradford-on-Avon, and were named *Bothriospondylus robustus* by Owen (1875), who, like Lydekker (1888: pt. i, p. 171), initially regarded the genus as a megalosaur. The true affinities of these remains, are, however, now well established and, if they be correctly assigned to the Brachiosauridae, constitute the earliest occurrence yet known of that family. According to Lydekker (1888, pt. i, p. 170), the cervical vertebrae of *Bothriospondylus* were probably opisthocelous, and the post-cervical vertebrae had centra greatly constricted inferiorly and laterally, with a large pit-like depression on either side below the neuro-central suture.

Other vertebrae from the Kimmeridge Clay of the "Swindon Brick and Tile Works", adjacent to the Wilts.–Berks. Canal, Swindon, but smaller than those of *Bothriospondylus robustus*, were named *B. suffosus* by Owen (1875: pt. ii, p. 15), who again regarded the animal as a megalosaur. It is highly probable that these vertebrae were the same as the unspecified remains from the same horizon and locality recorded as *Cetiosaurus* by Woodward (1895: p. 164) and by Hawkins and Pringle (1923: p. 240), who stated that they had been obtained from the *Rasenia* zone of the Kimmeridge Clay in a brickpit near Swindon railway station. If so, then they should certainly not be referred to *Cetiosaurus*.

No additional sauropod remains have been recorded from Wiltshire.

Order ORNITHISCHIA

This reptilian order, which was already well established by late Triassic times and which flourished until the very close of the Cretaceous period, is represented by a variety of more or less massive quadrupedal and semi-quadrupedal reptiles all possessing a bird-like arrangement of the pelvic bones. All ornithischians had a beak-like predentary bone at the anterior end of the lower jaw, for which reason some of the older authorities called the order the *Predentata*. The ornithischian fore-limb was always shorter than the hind-limb and, in the semi-quadrupedal forms, the hand was freely prehensile. Unlike the theropod fore-limb the ornithischian equivalent was obviously often used for progression in the semi-bipedal forms, and, of course, continuously so in the quadrupedal representatives. A deep, laterally compressed tail of considerable length existed in several genera, suggesting amphibious

habits, while in other forms elaborate defensive armour was present, the owners being in many instances probably upland dwellers. Some small ornithischians, of alleged arboreal habits, are also known.

Animals adapted to such a wide range of probable habits inevitably fall into several distinct groups or sub-orders, of which only the *Stegosauria* has so far been recorded from Wiltshire.

Sub-order STEGOSAURIA

All the known members of this sub-order possessed small, elongated skulls lacking antorbital openings, but with large narial openings situated very far forwards. The teeth—absent from the premaxillary bone—were compressed laterally and of leaf-like outline, while the vertebrae were either amphicoelian or amphiplatyan. The short and massive fore-limb possessed a manus having five short robust digits, while the longer and more slender hind-limb terminated in feet having small hoof-like unguis phalanges. A well developed exoskeleton—consisting of dermal plates, scutes, ossicles, and tail spines—was nearly always present.

Although fragmentary stegosaur remains occur in late Triassic rocks, this sub-order is essentially a Jurassic one, numerous material occurring in the upper-Middle and Late Jurassic formations. As a group, however, stegosaurs did not long survive the advent of the Cretaceous period. Two families only are recognized, the Scelidosauridae and the Stegosauridae, of which only the second has been found in Wiltshire to date.

Family Stegosauridae

Two stegosaurian genera, *Dacentrurus* and a unique undescribed form, are known from Wiltshire. Indications of further indeterminate forms also occur, the known evidence being unfortunately too fragmentary for classification.

Genus Dacentrurus

In 1874, various associated bones, including a femur having an inner trochanter, were found in the upper beds of the Kimmeridge Clay in the "Swindon Brick and Tile Company's" pit at the foot of Old Swindon Hill, and subsequently deposited in the national collection. One year later, the specimens (nos: 46013 and 46013a-s BMNH) were described by Owen under the name *Omosaurus armatus* (1875: pt. ii, p. 45). Now a closely similar reptile, lacking a inner femoral trochanter, was erected on American material two years later by Marsh (1877), who named the remains *Stegosaurus armatus*. Some years afterwards, Marsh (1889) drew attention to the fact that the generic name *Omosaurus* had been used to distinguish certain crocodilian fossils before Owen used it for the Swindon stegosaur bones, whereupon Lydekker (1890: pt. iv, p. 251), following Marsh, transferred the Wiltshire species to the American *Stegosaurus* as *Stegosaurus armatus*, quite oblivious to the fact there already existed an American species of that name. This meant that two *Stegosaurus* species named *armatus* existed, one characterized by the presence of an inner femoral trochanter, the other lacking that feature. Recognizing this discrepancy, Lucas later erected the new generic appellation *Dacentrurus* for the Swindon species (1902: p. 435), which has ever since been known as *Dacentrurus armatus*.

The principal features of this reptile were: four sacral vertebrae only; limb bones solid; femur with an inner trochanter and much longer than the tibia; humerus only slightly shorter than the tibia, with a short, thick shaft possessing much expanded extremities; astragalus ankylosed to the tibia. Foot plantigrade, with five digits. Dermal armour consisting of free-standing bony plates arranged in two parallel or nearly parallel rows, and caudal spines in pairs.

A centrum (no: 47329 BMNH) in the national collection, and two dermal spines (nos: J.1644 and J.1645 OUM) in the Oxford collection, all from the Kimmeridge Clay of Swindon, also probably belong to this species, which, it may be remarked, is as yet known only from this county.

A second species of this genus also occurs in Wiltshire. This is *Dacentrurus hastiger*, first described and named by Owen (1877: pt. iii, p. 1) on the evidence of some dermal spines (nos:46320-46322 BMNH) from the Kimmeridge Clay at Wootton-Basset. Once again, this species is unique to Wiltshire, although whether a species founded upon such slender material as detached spines should be regarded as truly valid is presently debatable.

Undescribed Stegosaur (species A)

Four dermal scutes, some reminiscent of those of *Polacanthus* (a later stegosaur from the Wealden formation of Sussex and the Isle of Wight) exist in the Oxford collection (nos: J.1682a-d OUM) and appear to represent an undescribed form. All are from the Kimmeridge Clay of Rodbourne.

Undescribed Stegosaur (species B)

A caudal spine of novel shape and proportions, also in the Oxford collection (no: J.1666 OUM), from the Portland beds at Swindon, exemplifies a second undescribed stegosaur, apparently having certain affinities with an East African stegosaur called *Kentrurosaurus*. A cast of this unique specimen also exists in the collection at Devizes Museum. The writer hopes on some future occasion to publish a proper description of both it and the Rodbourne bones just mentioned.

INDETERMINATE "DINOSAURS"

Portions of several large but unidentifiable bones which, from their dimensions or preserved features, probably represent "dinosaurs" have been found at various Wiltshire localities. In order to provide as comprehensive a record as possible these are listed below. J.1664 OUM. A large bone fragment (in Oxford University Museum), from the Kimmeridge Clay at the site of the Theatre, Swindon.

J.12059 OUM. The distal end of a right ?scapula, from the same horizon at Swindon.

G.23 SM. A large bone fragment (in Swindon Museum), from the same horizon and locality.

G.24 SM. Portion of the shaft of an immense limb bone, from the same horizon and locality.

3010 DM. Portion of a ?fibula (in Devizes Museum), from an unnoted (but probably Kimmeridgian) horizon and locality.

850-855 DM. Associated fragments of a large limb bone(?), from the Upper Greensand of Warminster.

SUMMARY

At present, twelve named and two unnamed "dinosaurs" are certainly known from Wiltshire, and of these no less than eight (including *all* the stegosaurs) are unique to the county. This is a remarkably high percentage, and is a fact which should encourage further careful exploration of the Mesozoic strata of Wiltshire for additional remains of these spectacular fossils. That further important finds of "dinosaur" remains have still to be made in Wiltshire cannot be doubted.

References cited in the text

BONAPARTE, J. 1969. *Zool. J. Linn. Soc.*, 48, pp. 471-480.

BUCKLAND, W. 1824. *Trans. Geol. Soc. Lond.*, (2) 1, p. 390.

CHARIG, A. J., ATTRIDGE, J., and CROMPTON, A. W. 1965. *Proc. Linn. Soc. Lond.*, 176 (2), pp. 197-221.

COLBERT, E. H. 1964. *Am. Mus. Novit.*, 2181, pp. 1-24.

HAWKINS, H. L., and PRINGLE, J. 1923. *Proc. Geol. Assoc.*, 34, pp. 223-241.

HUDDLESTONE, W. H. 1876. *Proc. Geol. Assoc.*, 4, pp. 544-545.

HUENE, F. VON. 1956. "Paläontologie und Phylogenie der Niederen Tetrapoden", (Jena).

LUCAS, F. 1902. *Science*, 16, p. 435.

- LYDEKKER, R. 1888. "Catalogue of the Fossil Reptilia and Amphibia in the British Museum (Natural History)", vol. i.
- LYDEKKER, R. 1890. *Ibid.*, vol. iv (supplement).
- MANTELL, R. N. 1850. *Quart. J. Geol. Soc. Lond.*, 6, pp. 310-319.
- MARSH, O. C. 1877. *Am. J. Sci.*, 3, 14, p. 457.
- MEYER, H. VON. 1832. "Palaeologica", p. 110.
- OWEN, R. 1841. *Proc. Geol. Soc. Lond.*, 3, p. 457.
- OWEN, R. 1841a. "Odontography", (London).
- OWEN, R. 1875. "Mesozoic Reptilia" *Mon. Pal. Soc.*, pt. ii.
- OWEN, R. 1877. *Ibid.*, pt. iii.
- PHILLIPS, J. 1871. "Geology of Oxford and the Valley of the Thames", (Oxford).
- PLATT, J. 1758. *Phil. Trans. Roy. Soc. Lond.*, L, (2), pp. 524-527.
- ROMER, A. S. 1956. "Osteology of the Reptiles" (Chicago).
- SAUVAGE, E. H. 1874. *Mém. Géol. Soc. France*, (2), 10, p. 50.
- SWINTON, W. E. 1934. "The Dinosaurs", (London).
- SWINTON, W. E. 1970. *Ibid.*, 2nd edition, (London).
- SYLVESTER-BRADLEY, P. C. 1940. *Proc. Geol. Assoc.*, 51, pp. 349-372.
- WOODWARD, H. B. 1895. *Mem. Geol. Surv. United Kingdom*.

AMPHIBIA, REPTILE AND MAMMAL NOTES 1970-1972

compiled by BEATRICE GILLAM

Insufficient notes on these groups of animals have been received in the past to warrant their publication. The following, covering three years' observations, have been compiled for future record and as an encouragement to readers to submit written notes in subsequent years.

PELLET ANALYSES

Year	Predator	No. pellets	Species of mammal skull present	No.	Locality 10 Km. sq.
1970	Barn Owl	1	Bank Vole	3	SU 06
			Short-tailed Field Vole	1	
1970	Barn Owl	1	Common Shrew	1	SU 06
			Pygmy Shrew	1	
1971	Long-eared Owl	5	Bank Vole	5	SU 06
			Wood Mouse	1	
1971	Short-eared Owl	15	Rabbit	1	SU 06
			Short-tailed Field Vole	8	
			Wood Mouse	11	
	<i>All the above analysed by DG.</i>				
1972	Long-eared Owl	5½	Short-tailed Field Vole	2	SU 17
			Wood Mouse	6	
	<i>Analysed by MCNHS.</i>				
1972	Barn Owl	1	Common Shrew	1	SU 06
			Short-tailed Field Vole	3	
	<i>Analysed by BG.</i>				

Records have not been extracted from the monthly bulletins of the Salisbury and District Natural History Society.

The following abbreviations are used in the text: KAC, Kennet and Avon Canal; GP, Gravel Pit; SF, Sewage Farm.

AMPHIBIA

Crested Newt (*Triturus cristatus*). 1972. Recorded from 3 areas of the KAC east of Devizes.

Common Frog (*Rana temporaria*). 1972. Tadpoles abundant in the KAC near Semington: adults recorded from 7 areas of canal east of Devizes and from a small garden pool, Roundway. 5 Palmer Gardens, Trowbridge in April and 6 Salisbury in Sept. (CEJ).

Common Toad (*Bufo bufo*). Animals of various ages present each year in a Roundway garden throughout the summer, where, on 6 July 1970, a large one was observed by the light of a torch for $\frac{3}{4}$ hr. feeding on any invertebrate that came within 6 in. of it. One Spider, one woodlouse and many earwigs were taken (BG). 1972. Seen in 4 areas of the KAC east of Devizes, 4 Palmer Gardens, Trowbridge in June and 2 Seend Cleeve in August (CEJ).

REPTILES

Slow Worm (*Anguis fragilis*). 1971. Several Seend Cleeve, August (CEJ).

Common Lizard (*Lacerta vivipara*). 1972. Two records from the KAC east of Devizes and 3 animals on Crofton lock gates, 4th June (CEJ).

Grass Snake (*Natrix natrix*). 1971. One Home Covert, Roundway, 17th March and one, freshly killed, on Imber road near Bratton, 28th August (BG).

Adder (*Vipera berus*). 1972. One curled up in the sun Grovely Wood, 5th March (BG).

MAMMALS

The order is that followed in "The Handbook of British Mammals".

Hedgehog (*Erinaceus europaeus*). 1970. An animal moving very slowly across a road near Roundway and liable to be run over, was placed in a nest of leaves under a nearby shed. It had gone by morning, 15-16th Dec. (BG). 1971-72. Droppings regularly found in gardens Roundway and W. Kington. An animal at W. Kington began hibernating in a shed but moved after three weeks. Early in 1972 one was found drowned in a pond here (MB). 1972. An animal heard screaming at 01.00 hrs. in a Devizes garden was found to be a hedgehog being attacked by a badger, 5th October (RB).

Common Shrew (*Sorex araneus*). Common in banks and walls W. Kington and frequently brought in by cats (MB). 1972. Live-trapped Hardenhuish Lane, Chippenham, Feb. (AW). See PELLETS ANALYSES.

Pygmy Shrew (*Sorex minutus*). 1972. Live-trapped Bradford-on-Avon, June (SJ). See PELLETS ANALYSES.

Water Shrew (*Neomys fodiens*). 1972. Live-trapped Hardenhuish Brook, Chippenham, spring (AW). An unconfirmed report for the KAC near Wilcot.

Lesser Horseshoe Bat (*Rhinolophus hipposideros*). 1968-69. Caught in mist nets while netting birds for ringing, Christian Malford GP, July-August (JCR).

Pipistrelle Bat (*Pipistrellus pipistrellus*). 1972. Present in a door-post crack in a new building Devizes, Oct. (ALS). The number using a summer roost in a porch at Kington Langley has decreased since 1970. In 1972, only c.5 were present for a few days (BG).

Two unidentified species caught by Burmese cat W. Kington. The method of capture was not observed (MB). Bat droppings found on a bookcase and a series of sooty imprints of a flying bat on the wallpaper the next day, suggested that a bat had come and gone via the chimney, Roundway, Sept. (BG).

Common Long-Eared Bat (*Plecotus auritus*). 1968-71. Caught in mist nets while netting birds for ringing, Christian Malford GP, July-August (JCR). 1971. One found dead, Devizes (ALS). 1972. One found dead Durnford, 31st May (ARGU), Seend, 15th July (RG) and Beckhampton, July (WR).

Bank Vole (*Clethrionomys glareolus*). 1972. Three live-trapped Oxenwood, 3rd March (CEJ). See PELLETS ANALYSES.

Short-Tailed Vole (*Microtus agrestis*). Common W. Kington (MB). 1970. Animal walked over observer's feet Home Covert, Roundway 9th June (BG). 1972. Nest under shed floor

Devizes, Sept. (ALS). One watched climbing a Red Campion plant, biting off the flower stalk on which it swung so that both fell, and seen eating 2 flowers, Cliffe Pypard Wood, 15th June (BG). See PELLETS ANALYSES.

Water Vole (*Arvicola amphibius*). 1970. Male caught by cat in tributary of the By Brook, 27th April (MF). Skin kept (BG). 1971. One swam from bank of R. Kennet onto a Coot's nest in mid-stream and settled down to feed on nest material. When it left, the Coot returned and began adding fresh material, 4th Sept. (BG). 1972. Widely reported: whole length of KAC; Bristol Avon 3 localities, Salisbury Avon 2, R. Wylde 6 and By Brook 5 (ST); R. Thames 2, R. Churn 1 and Aldbourne (NEK); Corsham Lake (JCR) and Bratton (RC).

Wood Mouse (*Apodemus sylvaticus*). 1972. Common W. Kington (MB). Live-trapped Beacon Farm, Oxenwood (CEJ) and Devizes, Sept. (ALS). Regularly feeds on peanuts in garden shed in winter, Roundway (BG). See PELLETS ANALYSES.

Harvest Mouse (*Micromys minutus*). 1972. Bullen Hill Farm. Ashton Common (EGS). Ten nests in *Phragmites*, Swindon SF, 1st Nov. No mice or nests found here in previous 20 yrs. (GLW). One killed by cat Lacock, 27th Dec. (MF). Skin kept (BG).

Dormouse (*Muscardinus avellanarius*). ?1970. One found hibernating in the closed glove-box of an unused car in a garage, Calstone (GHDE).

Stoat (*Mustela erminea*). 1970. One Calstone Mill, 9th April and one hunting hedgerow Oare, 17th May. During torrential rain one emerged from adjacent wood on to a lawn Roundway, 25th Sept. (BG). Present W. Kington; 2 killed by Burmese cat (MB). Hunting a downland bank Middle Winterslow, 21st March and in a rabbit warren near Oare, 20th April. Dead animal on road Stanton St. Bernard, 7th August and 3-4 crossing road, nose to tail, at the same spot the following day (BG). One swimming KAC at New Mill (HEMK).

Weasel (*Mustela nivalis*). 1970. One carrying young rabbit along road Patney April (FM). One Crossing road Wooton Bassett, 19th July (BG). 1971. One hunting leaf litter Everleigh Ashes, 10th Jan., one crossing road Ashton Keynes, 15th July, W. Tytherton, 16th July and Alton Barnes, 11th Sept. Male and female amongst tree fellings, female repeatedly following the same track to observe the intruder Allington, Devizes, 25th March (BG). 1972. Female dead on road Stert, 2nd April. Uterus contained 5 well-developed embryos (DJ). Skin kept (BG). Several roadside sightings W. Kington-Tormarton; one passed 2 ins. from observer. One killed by Burmese cat (MB). One Seagry, Oct. (RGB). Two Casterley Camp, 18th Oct. (BG).

Badger (*Meles meles*). Sets for which details have been obtained number 285. Of these, 180 are in 10 of the 40 Km. squares in the county from which they have been recorded. The total number is probably over 500. Little idea of the population can be calculated from a given number of sets but the number of animals is known to be on the decrease in some parts of the country for a variety of reasons. Road casualties account for a large number and reports of dead animals killed in this way are required.

Otter (*Lutra lutra*). Records have been received from two areas.

Muntjac Deer (*Muntiacus reevesi*). 1970. Buck Bowood, 10th August (JCR). 1971. Few-mets Potterne Wood, 8th April (BG). Known to be well distributed across the county in suitable habitats.

Fallow Deer (*Dama dama*). 1970. Doe and fawn Bowood, 10th August (JCR). 1972. An animal reported as a Red Deer was probably this species, near Trowbridge (EGS). Oakhill Wood, Fosbury, March (CEJ). Seen at Upham, May, Savernake Column and West Woods, Sept. (NEK).

Roe Deer (*Capreolus capreolus*). 1972. Melsome Wood, Jan. (DGB). Two adults and two kids disturbed by a Rough-legged Buzzard Rushall Down, 1 Jan. (GLW). West Woods, Sept. (NEK). Angrove Wood RGB and regular sightings near Kingston Deverill.

Records also received for Mole, Rabbit, Hare, Grey Squirrel, House Mouse, Brown Rat and Red Fox.

No records received for Mink, Yellow-necked Mouse and Red Deer.

CONTRIBUTORS

Mrs. R. Barker	RB	F. Mead	FM
D. G. Barnes	DGB	J. C. Rolls	JCR
Mrs. R. G. Barnes	RGB	W. Ruttledge	WR
Mrs. M. Browne	MB	E. G. Smith	EGS
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Miss R. Goddard	RG	Marlborough College	
D. James	DJ	Natural History Society	MCNHS
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C. E. Jennings	CEJ		
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Acknowledgement is also made to those who contributed records through the Kennet and Avon canal survey, 1972.

WILTSHIRE BIRD NOTES FOR 1972

RECORDER: G. L. Webber. RECORDS COMMITTEE: Mrs. R. G. Barnes, M.B.O.U., G. L. Boyle; E. A. R. Ennion, M.A., M.B.O.U.

The early months of the year were once again mild with virtually no severe weather and many resident species were nest building quite early. The most interesting bird of this period was a Rough-legged Buzzard near Rushall early in January. Unfortunately the spring was long delayed, cool and windy conditions persisting well into June. For the third consecutive year it was difficult to establish when summer migrants had arrived as they were remarkably silent except in sheltered localities. Breeding success of smaller passerines appeared to be generally low with the possible exception of the later breeders.

During the late summer the mainly anti-cyclonic weather with predominantly easterly winds saw the arrival of at least two Bluethroats and an Aquatic Warbler at the Swindon SF. Autumn wader records were fewer than usual due in part to the lack of suitable habitat although many must have overflowed the county in the excellent weather.

September produced a flurry of Stork sightings in the Ashton Keynes area and although most of these may refer to the bird released from Rowde, on one occasion two birds were seen together.

October saw the addition of a new bird to the Wiltshire list, a Yellow-browed Warbler being discovered in an observer's garden in Trowbridge.

During the same month the county shared in the Bearded Tit invasion with records from Corsham Lake and Swindon SF. Redpolls, Siskins and Bramblings were all prominent from early October up to the end of the year. A single Twite was present at the Swindon SF in the November, this being only the second record for the county.

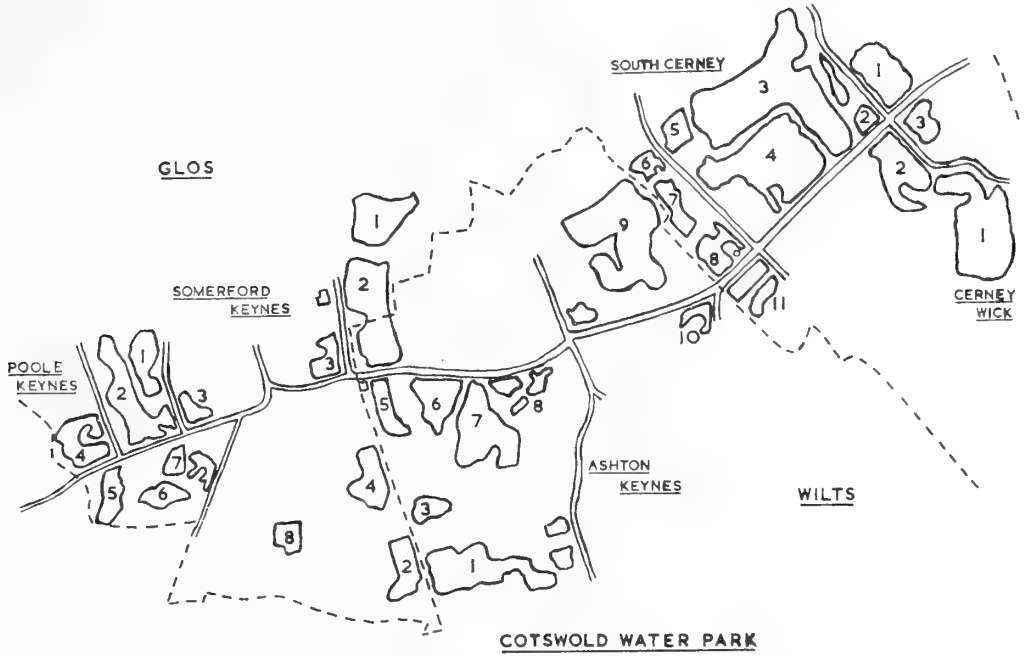
A Black-throated Diver spent a few days in mid December at a Ashton Keynes GP, there are only three previous records of this species.

Although only two Firecrests were noted during the year I would hope that contributors to these notes keep an eye open for this species during the breeding season.

A species for which records are diminishing is the Cirl Bunting, until recently it could generally be found in the eastern parts of the county particularly south of Tidworth. It would be interesting to know if the paucity of records does represent a real decline in numbers.

As the Cotswold Water Park continues to expand it is becoming increasingly difficult to allocate records neatly to either county, some areas are actually divided by the county

boundary. In this report a sketch map of the major water areas attempts to clarify the position with regard to the county boundary and provides a means of identifying the various pits. A full record of water park birds will be published in the Gloucestershire report.



The sketch map above shows the major areas of water in the western part of the Cotswold Water Park.

The map divides the area into five sections, Cerney Wick, South Cerney, Ashton Keynes, Somerford Keynes and Poole Keynes. Each of the sections has its larger pits or groups of smaller pits numbered.

When observers are supplying records for future reports it is hoped they will identify the pit by the initial letters of the section concerned followed by the number of the pit.

It is intended to redraw the map periodically to keep pace with developments in the Water Park.

LIST OF CONTRIBUTORS

T. Andrews	TA	R. Henly	RH2
Miss J. M. Baker	JMB	J. Higham	JH
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Miss S. Bailey	SB	P. J. Horton	PJH
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LIST OF CONTRIBUTORS—*continued*

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A. Smith	AS	M. J. Wyatt	MJW
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M. H. Smith	MHS	I. W. Young	IWY
Bentley School	BS	Lady Young	RMY
D. A. Thelwell	DAT	Salisbury Natural History Society ..	SNHS
P. Toynton	PT		

1. **Black-throated Diver.** An immature spent at least three days at a gravel pit near Ashton Keynes. First noted on 16 Dec. (DM); 17 Dec. (BG, GLW, MGW); 18 Dec. (GLB, EGS, MHS). The bird seemed to have difficulty in closing its bill and may have been injured.
4. **Red-throated Diver.** A single bird noted on several occasions during the winter months usually on the same gravel pit at Ashton Keynes, last seen 2 Apl. (RCH, CM, MGW, GLW). One present at Erlestoke Lake from 30 Jan. until 7 Apl. (PT). On the latter date the bird was seen to be moulting into summer plumage.
5. **Great Crested Grebe.** Noted during the breeding season on all major waters and breeding attempted at eleven of these. Display noted by birds in full winter plumage during Dec. (JRG).
9. **Little Grebe.** From records received this species appears to be a little less common. Does not nest on the larger waters even those with suitable cover.
27. **Gannet.** One found dead near Battery Hill, 25 Jul. (PJH).
28. **Cormorant.** Noted at Ashton Keynes 2, 3 Sep.; 2, 15 Oct.; single birds 17 Sep. and 5 Oct. (BG, GLW, MGW). 4 in flight at Bodenham 29 Dec. (RJH).
30. **Heron.** There were at least 111 occupied nests at 11 heronries these figures compare favourably with 1971.
40. **White Stork.** One spent some time in the Ashton Keynes area during Sep. First noted at Kent End 6 Sep. by Dr. A. Chapel, also there on 7/8 Sep. Seen by (BM, GLW, MGW, IWY) 10 Sep. Two were seen feeding together in meadows near the village of Ashton Keynes, 14 Sep. (Dr. and Mrs. Raynes). Noted at South Cerney and Cerney Wick 20/22 Sep., both these localities just over the county boundary in Glos.
Sacred Ibis. One seen near Calne, 24 Apl. (RH2). Probably the bird seen later in the year in the Midlands. Presumably an escape but apparently not local.
45. **Mallard.** Maximum counts at some of the larger waters: *c.* 1300 Bowood Lake, 17 Sep., *c.* 277 Chilton Foliat, 22 Oct., 97 Corsham Lake, 1 Jan. (MJ, and JCR); *c.* 70 Ramsbury Lake, 27 Feb., *c.* 100 Wilton Water, 31 Sep. (MCNHS); *c.* 200 Fonthill Lake, 12 Nov. (PT).
46. **Teal.** This is the second successive year in which numbers of this species have been extremely low. The largest groups were 21 Corsham Lake, 24 Dec. (MJ and JCR); 20 Fonthill, 15 Oct. (PT). Numbers up to 10 were recorded from most of the usual waters.
47. **Garganey.** A male at Swindon SF, 6 Oct. (RCH).
49. **Gadwall.** More records received than last year and the total at Fonthill Lake rose to 46 on 8 Dec. (GLB). Up to 6 at Stourhead (MHS); 5 Chilton Foliat, 9 Jan., 4 Corsham Lake, 31 Dec. (MJ & JCR); a pair Clarendon Lake, 9 Dec. (DEF, AJH); single male Wilton Water, 9 Jan. (BG).
50. **Wigeon.** The only large flocks were at Clarendon Lake, *c.* 100 in Feb. and *c.* 150 in Dec. (DEF, AJH); 25 Chilton Foliat, 9 Jan. (MJ & JCR). Quite large numbers, up to *c.* 400 use the Cotswold Water Park along the county boundary.
52. **Pintail.** Two males at Ashton Keynes, 13 Feb. (BG); 2 males on flood water near Everleigh, 12 Mar., single male Ashton Keynes, 18 Mar. (GLB). A female at Cole Park, 26 Sep. (EJMB).

53. **Shoveler.** Now regular in small numbers on all waters, largest number 6 at Coate Water, 22 Jan. (GLW). Breeding suspected at one site and young were reared in the Cotswold Water Park a few yards from the county boundary.
54. **Red-crested Pochard.** Female at Coate Water, 29 Mar. (GLW).
55. **Scaup.** A first winter male at Corsham Lake, 8/9 Jan. (MJ & JCR).
56. **Tufted Duck.** Bred at Corsham Lake, Edington Lake and Wilton Water (MJ & JCR, GLB, MCNHS). Larger counts: *c.* 230 Chilton Foliat, 9 Jan. (MJ & JCR); *c.* 100 Fonthill Lake, 17 Dec. (PT); *c.* 90 Stourhead, 23 Jan. (MHS).
Tufted Duck/Pochard. An unusual duck at Corsham Lake was presumed to be a hybrid between these two species. Size and jizz of a Tufted but head and neck resembled that of a female Pochard. (MJ & JCR).
57. **Pochard.** No breeding records received. Larger counts: *c.* 60 Fonthill Lake, 23 Jan. (SPMK); *c.* 90 Braydon Pond, 10 Sep. (MJ & JCR); up to 150 Ashton Keynes (BG).
60. **Goldeneye.** Regular visitor to Ashton Keynes and other Cotswold Water Park areas during the winter months. A pair there 26 Mar., 4 brown heads 24 Dec. (MGW, GLW); other records of single birds (BG, CM, MJ & JCR).
Ruddy Duck. Again only recorded from Corsham Lake, a single male being seen there 30 Mar., 30 Jun. & 8 Jul. (MJ & JCR).
70. **Goosander.** An adult male at Corsham Lake, 5 Jan. (JCR).
73. **Shelduck.** Three at Coate Water, 19 Nov. and a single bird there 1 Jan. (RCH); single birds at Fonthill Lake, 27 Mar. (SPMK); Calne sand pits, 11 Nov. (AJR).
82. **Canada Goose.** Up to 70 in the Ramsbury area (VCL). Maximum numbers at Wilton Water 47, 2 Sep. (MCNHS). A nest at Ashton Keynes contained 3 eggs on 16 Apl. (BM, GLW, MGW). Irregular visitor to other parts of the county.
86. **Bewick's Swan.** Six in water meadows at Britford, 18 Nov. (AJH, DEF); a single bird at Erlestoke Lake, 31 Dec. (PT).
91. **Buzzard.** Seen regularly throughout the year and there were three definite breeding records.
92. **Rough-legged Buzzard.** A bird of this species near Rushall, 1 Jan. Full description submitted, amongst points noted were the dark breast and greyish white tail unmarked except for dark tip. Watched hovering like a ponderous Kestrel. (BM, GLW, MGW).
93. **Sparrowhawk.** Seen regularly throughout the year but no breeding records received. From the number of sight records it must be breeding widely either in the county or nearby.
100. **Hen Harrier.** A male in flight Rushall, 9 Jan. and a ringtail at Tilshead, 10 Dec. (GLB). A male caught a weasel north of the "Bustard", 29 Jan. (BM, GLW, MGW); a female in flight Waterdene Bottom, 26 Feb. (BG); 1 regularly seen in the Clarendon area Jan./Feb. and 2 in Mar. East Grinstead (SNHS).
104. **Hobby.** Two definite breeding records and over twenty sight records some of these involving juveniles. First noted 7 May (GLB); last date 18 Sep. (BG).
105. **Merlin.** Several records of single birds, one in flight Rushall, 1 Jan., a female near Downton, 29 Jan., a male over Swindon beating steadily into a gale force wind, 27 Oct. (BM, GLW, MGW). One in flight near Tilshead, 27 Feb. (GLB); a male near Pewsey, 11 Mar. (BG); 1 East Grinstead in Apl. (SNHS).
110. **Kestrel.** Six definite breeding records but from the number of sight records this species must be breeding fairly successfully. Over sixty sight records were received but many observers just state that the species is common or regular in their area.
115. **Red-legged Partridge.** Records from Wishford (DEMP); Allington (BG, JRG); Wroughton (IWY); Westbury and Edington (GLB); Stanton St. Bernard (BG); South Marston (RCH). Seen with chicks, Walkers Hill Jul. (MC).
116. **Partridge.** One noted sitting on a six feet high fence for between two and three hours (CR). Only two large coveys noted *c.* 20 Fyfield Down (MCNHS); 23 on Bulford Ranges (GLB).

117. **Quail.** Few records this year, 1 calling Milk Hill, 29 Jul. (BG); 5 calling Rushall Down, 16 Jun. (GLB); single birds at Great Cheverell, 14 May (PT); Steeple Ashton, 15 Jul. (MHS) and Dean Bottom, 25 Jul. (MC).
118. **Pheasant.** A male lying on its side with one wing raised, apparently sunbathing (JCR).
120. **Water Rail.** Seen regularly throughout the county during the winter months. There were no records for the period Apl./Sep.
125. **Corncrake.** Four records, three unfortunately represented by corpses. One heard calling at Rockley Warren, 4 Jun. (MC); 1 found dead on the plain, 13 May (PT); a juvenile found dead on the road at Kington St. Michael (GLB); one found dead near Everleigh early May (RH).
126. **Moorhen.** 116 counted at Corsham Lake, 22 Jan. (JCR); 21 noted at Edington Lake, 5 Jan. (GLB).
127. **Coot.** Wintering flocks noted; *c.* 130 Stourhead, 30 Jan. (MHS); *c.* 250 Fonthill Lake, 12 Nov. (PT); *c.* 50 Lower Woodford, 6 Feb. (RJH).
131. **Oystercatcher.** A single bird flying over Keevil airfield, 24 Dec. (GLB).
133. **Lapwing.** Few large flocks were noted but numbers seem to be well up to normal. Larger flocks: *c.* 600 Hawthorn, 6 Aug., *c.* 1500 Wilsford, 27 Dec. (MJ & JCR); *c.* 1000 Stourhead, 23 Jan. (MHS); *c.* 650 Broadtown, 12 Nov., *c.* 2000 between Beckhampton and Broad Hinton, 10 Dec. (BG). Some passage at Trowbridge on 30 Jan. *c.* 300 passing in 30 minutes (JRG).
135. **Little Ringed Plover.** Regular in the Cotswold Water Park area, did not breed in the county this year.
140. **Golden Plover.** Majority of flocks rather smaller than usual. The last record of the spring was a flock of *c.* 300 comprising both southern and northern forms, 30 Mar. (MHS, EGS). First noted in autumn Stourhead and Cotswold Water Park, 10 Sep. (MHS, IWY). Larger flocks: *c.* 1000 Wroughton, 22 Feb. (IWY); *c.* 500 Stourhead, Jan./Mar., Nov./Dec. (MHS, EGS); *c.* 150 Tytherington, 27 Dec. (GLB); *c.* 200 Ashton Keynes, 12 Dec. (GLW, MGW); *c.* 50 Westwood near Bradford, 12 Jan. (JRG).
145. **Snipe.** Mainly small numbers reported and there were no breeding records. 25 were seen at Lacock, 23 Jan. (JCR). Display noted at Standlynch (SNHS).
147. **Jack Snipe.** Records were received from only three sites. Swindon SF., 3, 30 Sep., 5, 7 Oct., 8, 28 Oct., 9, 12 Nov., 3 still present 26 Nov. (CM, RCH, GLW, MGW). Lacock GP., 4, 1 Jan., 6, 23 Jan., 1, 26 Feb., 1, 4 Oct. (MJ & JCR); 1 at Great Bedwyn, 3 Jan. (MCNHS).
148. **Woodcock.** Noted roding at Savernake and Warminster (MCNHS, MHS, EGS). Present at Erlestoke and Franchises Woods in winter (RJH, PT).
150. **Curlew.** Display noted at a new site in the north west of the county (CR). Noted regularly at Landford during Aug. in small parties up to 11 in number (RJH).
151. **Whimbrel.** Two on Bulford Ranges, 4 Jun. (GLB).
156. **Green Sandpiper.** Winter records from Swindon SF., Hill Deverill and Landford (GLB, RCH, DAT, PT, GLW). Maximum at Swindon SF. 5.
157. **Wood Sandpiper.** A single bird at Longbridge Deverell, 27 Aug. (MHS).
159. **Common Sandpiper.** Several early spring records that may refer to overwintering birds, 1 Longbridge Deverell, 13 Feb. (MHS); Great Bedwyn, 20 Mar. (MCNHS); Coate Water, 31 Mar. (GLW, MGW). Main passage appeared to be during the last week of Apl. Up to 7 at Coate during the autumn and the latest date was 1 at Swindon SF., 1 Oct. (GLW, MGW).
161. **Redshank.** Display noted at two sites but no definite breeding records (SPMK, PT). Four pairs noted at Everleigh in spring (EGS, MHS, PT).
165. **Greenshank.** Several sight records all in autumn, 3 Christian Malford, 3 Aug. (MJ & JCR); 1 Longbridge Deverell, 27 Aug. (EGS, MHS). The following were seen at Swindon SF., 1, 20 Aug., 1, 23 Aug., 3, 28/29 Aug., 1, 2 Sep. (CM, RCH, GLW, MGW). A single bird at Ashton Keynes, 17 Sep. (GLW, MGW).

178. **Dunlin.** Two on gravel flash at Kent end from 17 Dec. until the end of the year (GLW, MGW).
184. **Ruff.** One at Swindon SF., 29 Aug. and 1 at Ashton Keynes, 17 Sep. (BM, GLW, MGW).
189. **Stone Curlew.** Only two breeding records (BG, GLW, MGW). A very few sight records (GLB, RJJH, SPMK).
198. **Great Black-backed Gull.** An adult near Salisbury, 28 Nov. (JCR).
199. **Lesser Black-backed Gull.** Regular in the north and west of the county but apparently uncommon in the south. Up to 350 at Swindon SF. (GLW); *c.* 140 Great Cheverell, 3 Mar. (PT); *c.* 150 Seend, 25 Jan. (JCR); *c.* 140 Maiden Bradley, 15 Oct. (MHS); a single bird at Steeple Langford, 13 May (RJJH).
200. **Herring Gull.** Numbers higher than in recent years. Regular at Swindon SF. up to 60 (GLW); *c.* 100 Great Cheverell (PT); 60 Beanacre, 50 Lacock, 30 Corsham Lake, 30 Seend, *c.* 60 West Lavington (JCR).
223. **Sandwich Tern.** One present at Steeple Langford GP., 20 May (DEF, AJH). This was the only tern reported this year.
234. **Wood Pigeon.** *c.* 1000 Wilsford, 30 Jan. (JCR); *c.* 600 Standlynch Down, 29 Feb. (RJJH).
235. **Turtle Dove.** First noted Steeple Ashton, 2 May (EGS, MHS); general by mid May. Last date Hilperton, 9 Oct. (EGS, MHS).
- Collared Dove.** A flock of *c.* 100 Wadswick (JCR).
237. **Cuckoo.** First noted 9 Apl. Allington (SNHS). Several observers commented that numbers were lower than in previous year. A hepatic female seen at Wilton (DEMP). Last date 30 Sep., Steeple Ashton (EGS, MHS).
241. **Barn Owl.** Only three records indicating breeding (BG, JEM, DEMP). Fewer sight records than in the past two years, an unwelcome situation when this species was apparently increasing.
246. **Little Owl.** Widely reported and at least seven pairs reared young. Probably little change in status.
247. **Tawny Owl.** Two definite breeding records, apparently little change in status.
248. **Long-eared Owl.** Three sight records (BG, MCNHS, SPMK). One pair known to have bred (RH).
249. **Short-eared Owl.** Fewer records than usual, 1 at Devils Den, 23 Feb., 1 Fyfield Down, 9 Dec. (MCNHS); 1 Everleigh, 23 Mar. (SPMK).
252. **Nightjar.** Noted near Warminster in suitable breeding habitat (GLB, MHS, EGS); song heard at Somerford Common 14 Jul. and a male displaying there 16 Jul. (GLW, MGW). One seen at Porton, 31 Aug. (SNHS).
255. **Swift.** A general movement apparently took place 30 Apl./1 May as the majority of early records refer to this period. Very poor breeding season in the Swindon area few young reared. Last date 1 at Swindon, 11 Sep. (GLW, MGW).
258. **Kingfisher.** A good number of sight records and at least three pairs known to have bred.
262. **Green Woodpecker.** More sight records than in recent years and one definite breeding record. Slowly increasing its numbers and returning to areas previously occupied.
263. **Great Spotted Woodpecker.** A large number of sight records many of these relating to juveniles. A common visitor to bird tables especially in well wooded districts.
264. **Lesser Spotted Woodpecker.** Pairs at Coate Water, Little Durnford, Corsham and Great Cheverell (RCH, DEF, AJH, CM, PT, JCR). Sight records of single birds Landford, Franchises Wood, Britford, Wilton, Axford and Rabley (DEMP, DAT, MC, RJJH).
274. **Swallow.** Earliest date 31 Mar. Coate Water, Standlynch and Imber (GLW, SNHS, EGS, MHS). Majority of spring records were in the period 6/14 Apl. Only one roost reported *c.* 400 at Christian Malford, 2 Sep. (JCR). Still wide spread up to 14 Oct., last date 22 Oct. Upavon (SPMK).

276. **House Martin**. Earliest date 1 Apl. Grittleton (MJW). Spring passage was rather protracted, birds not generally distributed until early May. Breeding success appeared to be rather low and young were still being fed in the nest during the second week of Oct. Records were frequent up to the 10 Oct., last date 27 Oct. 11 over Swindon (GLW, MGW).
277. **Sand Martin**. Fewer records than usual the earliest date, 31 Mar., Coate Water (BM, GLW, MGW). *c.* 50 pairs bred at Calne sand pits (MJ & JCR); a small colony discovered at Edington this seems to be a new site (PT). Latest date 24 Sep., Corsham Lake (MJ & JCR).
281. **Hooded Crow**. One feeding with other corvids on plough near East Knoyle, 6 Apl. (MPR).
293. **Willow Tit**. Rather fewer records this year and only one definite breeding record, Semley (JEM). The other records for the south of the county occurred only in the winter months (RJH, DAT). Would seem to be commoner in the north and east of the county.
294. **Long-tailed Tit**. Extremely common, flocks of up to 30 seen during the autumn.
295. **Bearded Tit**. A single female at Corsham Lake, 30 Sep. (JCR); a pair at Swindon SF., 6 Oct. (RCH); a single male there, 7 Oct. (CM, GLW, MGW). A party of 6 at the SF., 8 Oct., 2 males and 4 females (RCH). Finally a pair were again present at the same site, 18 Nov. (GLW, MGW).
296. **Nuthatch**. Only ten sight records but five definite breeding records (MCNHS, RJH, CR, JCR).
298. **Tree Creeper**. One noted sunbathing on lawn at Seagry, 12 Jul. (RGB).
300. **Dipper**. Present in breeding haunts on the Bybrook (BS), Stratford Tony and Bishopstone (DEMP, RMY). A new breeding site reported this year (JSB). One seen on R. Kennet near Littlecote in Mar. (SB).
302. **Fieldfare**. Last in spring *c.* 50 Chisenbury Clump, 22 Apl. (SPMK). First in autumn Steeple Ashton, 26 Sep. (EGS, MHS). Generally early arrival and birds recorded throughout the county by 15 Oct.
304. **Redwing**. Last in spring Chippenham, 5 Apl. (TA). First in autumn Nettleton, 24 Sep. (CR). Distributed throughout the county by 6 Oct., rather earlier than usual.
311. **Wheatear**. First in spring Westbury Downs, 27 Mar. (GLB). No marked spring passage or breeding records. Last in autumn near Wansdyke, 15 Oct. (MC).
317. **Stonechat**. Regular in autumn and winter months and one possible breeding record. Most records from downland areas and Swindon SF.
318. **Whinchat**. No marked spring passage, first date Chippenham, 3 May (TA). Bred in at least four areas (GLB, BG, SPMK, GLW). General passage during Sep. and early Oct. Last date 2 at Swindon SF., 7 Oct. (CM).
320. **Redstart**. First noted Marlborough, 30 Apl. (MCNHS). Several singing males located in late May but no proven breeding records. Several late Aug. and early Sep. records. Latest date Swindon SF., 7 Oct. (GLW, MGW).
321. **Black Redstart**. Only two records, a male near Tilshead, 27 Feb. (GLB), at same site where one was recorded in 1971. Possibly same bird at Tisbury, 7 Mar. (SNHS).
322. **Nightingale**. Very few records, either a decrease in numbers or the cold spring inhibited song.
324. **Bluethroat**. A female seen at Swindon SF., 28 Aug. and trapped late on the same day (RCH, GLW, MGW, BM). On the 13 Sep. a male of the race *L.s.cyanecula* seen at edge of a reed bed at the same site (RCH). This bird was also noted 30 Sep. and briefly 7 Oct. (GLW). Also seen by (CM) on this latter date. These are only the second and third records for the county.
327. **Grasshopper Warbler**. Much less in evidence this year, several observers commented on lack of song. First noted Somerford Common and Marlborough, 27 Apl. (IWY, MCNHS).

328. **Aquatic Warbler.** A bird of this species at Swindon SF., 30 Sep./1 Oct., full descriptive notes supplied and the record accepted by the British Birds Rarities Committee. (EGS, MHS, GLW).
333. **Reed Warbler.** Very few records this year, first noted Bowood Lake, 20 Apl. (GLB, EGS, MHS). 12 pairs bred at Corsham Lake, 2 pairs Christian Malford (MJ & JCR). *c.* 20 pairs bred at Coate Water (GLW). Last seen 16 Sep. Corsham Lake (JCR). 2 pairs noted at a new breeding site in the Wylye Valley (SJT).
337. **Sedge Warbler.** No early records, *c.* 7 pairs bred at Coate Water (GLW); 3 pairs at Corsham Lake, 2 pairs Christian Malford (MJ & JCR); several pairs along canal at Great Bedwyn (MCNHS). Last in autumn Corsham Lake, 3 Sep. (MJ & JCR).
343. **Blackcap.** Overwintering birds were recorded at Beckhampton, a female Dec. (WR); Devizes, a male Nov./Dec. (BG); Swindon, a female Feb./Mar. (CM); Trowbridge, a male Jan. (EGS, MHS); Ludwell, Jan. (RH); Corsham, Jan. (DGS). Singing males were widespread by the second week of Apl.
346. **Garden Warbler.** First record Chippenham, 1 May (TA), Few records received and the last date 3 Sep., Westbury (MHS).
347. **Whitethroat.** Still extremely scarce, more singing males but apparently few females. First noted 13 Apl. Corsham (CR) and last seen Steeple Ashton, 25 Sep. (EGS).
348. **Lesser Whitethroat.** Not as many records as usual, first noted 21 Apl. Chippenham and last seen there 24 Sep. (TA).
354. **Willow Warbler.** Singing at Erlestoke 31 Mar. (MJ & JCR). A nest retrieved by a dog was found to contain uninjured young, the nest was replaced and the young successfully fledged. (RGB). Last noted, 1 trapped at Christian Malford (MJ & JCR).
356. **Chiffchaff.** First noted Clarendon and Upavon, 14 Mar. (DEF, AJH, SPMK). Generally distributed by 25 Mar. Latest date Corsham Lake, 7 Oct. (MJ & JCR).
357. **Wood Warbler.** Very few records, singing near Devizes 7/10 May (BG); Franchises Wood and Hamptworth Wood in Jun. (RJJH); Savernake, Jun. (MCNHS).
360. **Yellow-browed Warbler.** A bird of this species watched at close range in observers garden at Trowbridge, 19 Oct. (JRG). A full description was submitted and amongst points noted were, small size and very active behaviour. Double whitish wing bars, prominent creamy superciliary stripe. This is the first record of this species for the county.
364. **Goldcrest.** Very numerous in all suitable localities throughout the county.
365. **Firecrest.** Two records, one at Odstock in Jan. and the other at Savernake, 18 Mar. (SNHS)
366. **Spotted Flycatcher.** First noted 30 Apl. Grittleton (MJW). Rather scarce this year and main body late in arriving. Last seen Landford, 2 Oct. (RJJH). A pair took over a deserted Chaffinch nest containing 2 eggs and laid 3 of their own. The nest was finally deserted (EJMB).
376. **Tree Pipit.** Recorded from many suitable localities, earliest record 23 Apl. Great Cheverell (PT).
379. **Water Pipit.** A male in full breeding plumage feeding in a water cress bed at Hill Deverill, 29 Mar. (GLB).
380. **Pied/White Wagtail.** There were four records of *Motacilla a. alba*, 1 Westbury, 6 Apl., 1 Everleigh, 1 May, 2 males Coate Water, 25 Mar., 2 males Lacock, 28 Apl. (GLB, GLW, MGW, JCR). Roosts of *Motacilla alba* were located at Lacock *c.* 200, Christian Malford *c.* 150, Corsham Lake *c.* 60 (MJ & JCR); on two buildings in Devizes *c.* 100 (BG); at least 150 in Pressed Steel Fisher workshops Swindon (DB).
381. **Grey Wagtail.** Noted breeding near Semley beside a slow muddy stream (JEM); also bred some distance from water near Iford in an ornamental garden urn (JRG). Regular on faster rivers during the breeding season and more general in the winter months.

382. **Yellow Wagtail.** Fewer records than usual, first seen Salisbury, 11 Apl. (RJJH). Distinctly uncommon in some of its regular breeding haunts. At least 2 pairs bred at Stratford, a new area (DEF, AJH). Latest date Chippenham, 24 Sep. (TA).
384. **Great Grey Shrike.** The Great Bedwyn bird reported in 1971 was last seen early in Mar. (JGC, JW). Probably the same bird reappeared at Crofton, 31 Sep. (MCNHS) and was present into Dec. (JGC). What was probably a bird of this species seen briefly near West Woods in Dec. (MC).
389. **Starling.** Seven noted anting together at Seagry, placing ants under wing (RGB). A pair mating at Trowbridge, 20 Feb. (GLB).
390. **Rose Coloured Starling.** An adult feeding in a garden at Bishopstone, 23 Jul. (SC).
391. **Hawfinch.** One in flight Barton Down, 23 Jan. (BM, GLW, MGW).
392. **Greenfinch.** Male feeding female with peanuts, 11 Jan. (AS).
393. **Goldfinch.** One noted at bird table Trowbridge, 29 Nov. (AS).
394. **Siskin.** A great number of records, seen regularly at Landford Manor during Jan., Feb., Nov. and Dec. in numbers up to *c.* 50 (DAT); Fonthill *c.* 25, 23 Jan. (SPMK); Hilmarton *c.* 30, 26 Feb. (WR); Barford Down *c.* 50, 7 Mar. (RJJH); up to *c.* 30 Bowood (BS, JCR); *c.* 10 Clarendon 10 Feb., *c.* 20, 18 Nov. (DEF, AJH); 11 Fonthill, 17 Dec., 16 Erlestoke, 23 Dec. (PT); 15 Lacock, 23 Jan. (MJ & JCR). Smaller flocks were seen in other areas and pairs were noted during the breeding season in a suitable breeding habitat. (MCNHS).
396. **Twite.** A single bird with other finches at Swindon SF., 9 Dec. (GLW). Points noted included, a small buffish darkly streaked finch with a pinkish rump. Faint dirty white wing bar and in flight primaries and secondaries and outer tail feathers narrowly fringed white. Bill straw coloured. Call note heard.
397. **Redpoll.** Several records of small parties and *c.* 150 were seen at Clarendon, 15 Dec. (DEF, AJH); *c.* 60 Swindon SF., 26 Nov. (BM, MGW, GLW). There were no breeding records.
404. **Crossbill.** Three records, *c.* 60 at Clarendon, 16 Sep. (DEF, AJH); 1 Landford Manor, 24 Nov. (DAT); 1 near Shrewton, 22 Oct. (GLB).
407. **Chaffinch.** A juvenile was watched being fed by a Mistle Thrush at Seagry. The chaffinch was perched on the roof ridge of a building, it finally overbalanced and fell when the thrush tried to push in an extremely large beakful. The two species had nested in adjacent apple trees in the garden (RGB).
408. **Brambling.** Spring flocks were mainly small with the exception of *c.* 40 Bowood, 12 Mar., *c.* 50 Wishford, 14 Mar. (JCR); *c.* 60 Erlestoke, 24 Jan. (PT). The latest spring date, 26 Mar. (GLW). Autumn records were numerous several referring to quite large flocks, *c.* 300 Stourhead, 29 Oct. (MHS); *c.* 150 Wilton, 12/25 Nov. (DEMP); *c.* 200 Highpost, 26 Dec. (DEF, AJH).
410. **Corn Bunting.** *c.* 20 on power cables near Tilshead, 9 Jan. (GLB); *c.* 200 feeding in a loose flock on newly ploughed land near Rockley, 14 May (GLW, MGW); *c.* 30 near Stanton St. Bernard, 26 Feb. (BG). One singing on Milk Hill near the highest point of the county. Noted roosting with Chaffinches in Roundway Hill Covert, Dec. (BG).
421. **Reed Bunting.** Two records of birds on downland far from water in May, most probably breeding (GLB, GLW). *c.* 50 roosting Corsham Lake, Nov./Dec. (MJ & JCR).
425. **Tree Sparrow.** Not many winter records the days of the large flocks appear to have gone. *c.* 40 feeding on spilt grain at Stanton St. Bernard (BG); *c.* 40 Whitley (MJ & JCR).

RINGING REPORT FOR 1972

Roderick C. Faulkner

1972 saw a slight increase in Wiltshire ringing totals (2094 free flying and 538 nestlings) but saw also the removal abroad of one active ringer. The continuing low totals probably reflect the ever increasing costs of ringing equipment, thus restricting activity.

The following ringers have submitted information and their initials may appear in the text:

E. J. M. Buxton	EJMB	Dr. S. Tyler & P. Smith	T & S
R. F. Coomber	RFC	J. L. A. Tyler	JLAT
D. E. Fry & A. J. Horner	F & H	P. Toynton	PT
F. J. Hulbert	FJH	G. L. Webber	GLW
J. J. Latham	JJL	M. J. Wyatt	MJW
M. J. & J. C. Rolls	R & R	I. W. Young	IWY

List of Selected Recoveries of Birds Ringed in Wiltshire

Pull = nestlings; 1Y = first year; FG = full grown; Ad = adult; X = found dead; V = found and released; M = male.

SWALLOW	1Y	Lacock	18.8.70	R & R
JB 51165	X	Morannes, Maine et Loire, France	29.4.72	
STARLING	1Y	Chippenham SF.	3.11.63	JLAT
CA 70214	V	Corsham Lake (Roost)	18.5.71	R & R
GOLDFINCH	1Y	Swindon SF.	18.11.72	GLW
JJ 76294	V	Brownsea, Island Poole, Dorset	15.12.72	90km SSW
SEDGE WARBLER	FG	Wilton, Salisbury	8.5.71	FJH
JC 46940	V	Freemans Marsh, Hungerford, Berks.	7.5.72	35km NW

Recovery of Bird Ringed outside Wiltshire

GREENFINCH	Ad.m.	Sway Hants.	29.12.71	EJMB
BN 44029	V	Cole Park, Malmesbury	9.4.72	99km NWW

Interesting Local Recoveries

BLACKBIRD	Ad.m.	Cole Park, Malmesbury	16.4.65	EJMB
96646 X	V	Cole Park	8.8.72	
BLACKBIRD	Ad.m.	Cole Park	17.8.66	EJMB
96697 X	X	Cole Park	2.4.72	
ROBIN	Ad.	Cole Park	23.12.68	EJMB
HR 04868	V	Cole Park	20.9.72	
REED WARBLER	Ad.	Corsham Lake	25.5.65	R & R
AS 73754	V	Corsham Lake	23.7.72	
CHAFFINCH	Ad.m.	Cole Park	7.6.65	EJMB
AS 49253	V	Cole Park	5.8.72	
	V	Cole Park	25.11.72	

A PRELIMINARY ACCOUNT OF THE WEEVILS OF WILTSHIRE (COLEOPTERA, CURCULIONOIDEA)

by M. G. MORRIS

Monks Wood Experimental Station (The Nature Conservancy), Abbots Ripton, Huntingdon

Wiltshire has been badly neglected by coleopterists. This is very surprising, not only because the county contains much fine collecting country, particularly on the Chalk, but also because it includes the reputed sites for three extremely rare British weevils recorded by Sidebotham during the nineteenth century. The occurrence of these three species,

Lixus elongatus, *Sibinia pellucens* and *Baris chlorizans*, is mentioned by Fowler (1891). These records, and a negligible number of others, would constitute our entire meagre knowledge of the weevils of Wiltshire were it not for the excellent list of species compiled for the Marlborough district by successive generations of the boys of Marlborough College. Inspired by the famous lepidopterist Edward Meyrick a steady stream of records, beginning with Meyrick's own list (1874), has appeared in the pages of the annual *Report of the Marlborough College Natural History Society*. In 1939 the anonymous *Handlist of the Coleoptera of the Marlborough district (10 miles radius)* was published. This, together with a number of more recent records, is a most useful account of the weevils, and other beetles, of the area. Valuable though the *Handlist* is, however, it covers only a small part of Wiltshire. Unfortunately, too, its existence is almost unknown to coleopterists as a whole, a matter of concern since many rare or otherwise interesting species are recorded in its pages.

For some years I have been interested in compiling records of the distribution of weevils in Britain, using the vice-county system (Dandy, 1969) which divides Wiltshire into two recording areas. The Marlborough College records are mostly from sites in the northern vice-county (V.C.7), leaving the southern vice-county (V.C.8) as practically unknown territory. Since 1965 I have recorded weevils from various parts of Wiltshire, but particularly from V.C.8. Many species were taken in samples of the fauna of chalk grassland collected during the course of my work for the Nature Conservancy. Consequently, this habitat has been more thoroughly studied than any other. There can be no doubt that more species remain to be discovered in Wiltshire. Woodland, the few areas of heathland, and particularly marshes and waterside habitats can be expected to yield interesting additions to the Wiltshire weevil fauna if they are worked in the future. The present undoubtedly incomplete list is published for several reasons. First, no general account of the weevils of the county has appeared; it is hoped that this attempt at a comprehensive list will be of interest to entomologists and perhaps other naturalists. Secondly, it is hoped to publish shortly maps of the distribution of British weevils as shown by published records; thus the new vice-county records included here need to appear in print. Thirdly, publication of an interim account may stimulate coleopterists to greater activity in what is certainly a very rich county entomologically.

All lists of species tend to be lengthy and to occupy valuable space in journals and reports. In order to be as concise as possible I have omitted nearly all dates and methods of capture. Most weevils are to be found as adults in spring and early summer after overwintering and again in autumn when the new generation becomes adult. The season of occurrence, however, is governed in many species by the time of appearance of those plant structures in which the larvae feed. Thus, adults of many species of *Dorytomus*, which feed as larvae in catkins of Salicaceae, are usually found in winter and very early spring, before and during mating and egg-laying, and again in May and June after emergence from the pupal stage. Generally, however, most weevils may be found throughout spring, summer and autumn, and indeed often in winter too, so that dates of capture are not usually of great significance. Adult weevils occur most frequently, but by no means invariably, on their foodplants. They are often collected, however, by indiscriminate methods such as 'general beating' of trees and shrubs or 'general sweeping' of herbaceous vegetation. Instead of listing these often very uninformative methods of capture I have included a very brief note of the larval feeding biology of each species, in the hope that this will be of somewhat greater interest. Much remains to be done in working out the details of larval biology for many species, and not all the details are entirely reliable. Quite frequently larval foodplants vary from region to region and details of the biology may also differ slightly from place to place and time to time. In cases where I have been uncertain of the larval habits I have used the most comprehensive account of weevil feeding biology available (Scherf, 1964), but have supplemented his work with both published and unpublished information. Details of scolytid biology are based on Duffy (1953).

Only quite a small number of sites has been visited, and the location of each one is included in most cases only the first time it is mentioned, for the sake of brevity. Several

Wiltshire sites have the same name; for instance there is more than one Thorny Down. Of these the only one referred to in this account is that included in the experimental range of the Chemical Defence Establishment, Porton. The Whitesheet Hill of these notes is the down near Mere and not the one near Berwick St. John. Localities are listed by vice-county, NORTH being V.C.7 and SOUTH V.C.8. An asterisk indicates a species not previously recorded from Wiltshire. As far as possible the names of weevils, and the order in which they appear, are those of Kloet & Hincks (1945). Names of plants follow Clapham et al. (1962).

It is a pleasure to acknowledge the help I have received, when visiting Wiltshire, from the staff of the South region of the Nature Conservancy. I am especially indebted to Mr. Noel King for assistance when recording from the Wiltshire sites he knows so well. Many landowners and occupiers have readily given me permission to collect weevils on their property. I owe a particular debt of gratitude to the authorities at the Chemical Defence Establishment, Porton, especially Mr. Bruce Whatley, for facilities to collect and record on the Experimental Range there.

References cited in the text

- ANON., 1882. Entomological Section—Coleoptera, *Rep. Marlboro. Coll. nat. Hist. Soc.*, 30, (1881): 131–5.
- ANON., 1939. Handlist of the Coleoptera of the Marlborough district (10 miles radius), *Rep. Marlboro. Coll. nat. Hist. Soc.*, 87, (1938): 54–86.
- BUCK, F. D., 1956. Wiltshire Coleoptera, *Entomologist's mon. Mag.*, 92: 360.
- CLAPHAM, A. R., TUTIN, T. G. and WARBURG, E. F., 1962. *Flora of the British Isles* (2nd ed.), C.U.P., Cambridge.
- DANDY, J. E., 1969. *Watsonian Vice-counties of Great Britain*, Ray Society, London.
- DUFFY, E. A. J., 1953. Coleoptera Scolytidae and Platypodidae, *Handk. Ideni. Br. Insects V* (15): 1–20.
- FOWLER, W. W., 1891. *The Coleoptera of the British Islands* 5, L. Reeve & Co., London.
- HISLOP, R., 1871. Notes on Wiltshire Coleoptera, *Entomologist's mon. Mag.*, 7: 229–30.
- HOLMES, J. R. S. & TENNANT, P. L., 1947. Insect list, *Rep. Marlboro. Coll. nat. Hist. Soc.*, 95 (1946): 19–21.
- HURST, C. P., 1927. Natural History notes round Great Bedwyn, *Wilts. archaeol. nat. Hist. Mag.*, 44: 23–9.
- KEYS, J. H., 1903. Some northern and hill-country Coleoptera of the Plymouth district, *Rep. Trans. Plymouth Instn.*, 13: 239–45.
- KLOET, G. S. & HINCKS, W. D., 1945. *A check list of British Insects*, Kloet & Hincks, Stockport.
- KNIGHT, J. D. S., 1940. Insect list: Coleoptera, *Rep. Marlboro. Coll. nat. Hist. Soc.*, 88, (1939): 23.
- MEYRICK, E., 1874. Entomological Report. Coleoptera, *Rep. Marlboro. Coll. nat. Hist. Soc.*, 9 (1873): 41–9.
- MEYRICK, E., 1902. Entomological Section—Coleoptera, *Rep. Marlboro. Coll. nat. Hist. Soc.*, 50 (1901): 69.
- MEYRICK, E., 1906. List of Coleoptera of the district, *Rep. Marlboro. Coll. nat. Hist. Soc.*, 54 (1905): 76–96.
- MORRIS, M. G., 1968a. *Ceuthorhynchus unguicularis* Thomson (Col., Curculionidae) in Wiltshire and Suffolk, *Entomologist's mon. Mag.*, 104: 45.
- MORRIS, M. G., 1968b. What is the usual food-plant of *Apion waltoni* Stephens (Col., Apionidae) in Britain? *Entomologist's mon. Mag.*, 104: 95.
- RYE, E. C., 1865. Coleoptera, *Entomologist's Annual*, 1865, p. 75.
- SCHERF, H., 1964. Die Entwicklungsstadien der Mitteleuropäischen Curculioniden (Morphologie, Bionomie, Ökologie), *Abh. senckenb. naturforsch. Ges.*, 506: 1–335.
- SIDEBOTHAM, J., 1868. Localities for *Mesites tardii*, *Entomologist's mon. Mag.*, 5: 99.
- WILLIAMSON, K. & COWIN, W. S., 1941. Some Wiltshire insects, *Entomologist* 74: 174–6.

ATTELABIDAE

- Lasiorrhynchites cavifrons* (Gyll.), larvae in young twigs of *Quercus* spp. NORTH: Marlborough district (Anon., 1939).
- Caenorhinus tomentosus* (Gyll.), larvae in leaf buds of *Salix* spp. NORTH: Bedwyn Common (Holmes & Tennant, 1947).
- C. germanicus* (Herbst), larvae in 'ringed' stems and petioles of herbaceous Rosaceae. NORTH: Marlborough district (Wernham) (Anon., 1939).
- **C. aeneovirens* (Marsh.), larvae in buds of *Quercus* spp. SOUTH: Whiteparish Common.
- C. aequatus* (L.), larvae in fruits of *Crataegus* spp. NORTH: Marlborough district (Savernake Forest) (Anon., 1939). SOUTH: Thorny Down, Porton Range.

- Rhynchites caeruleus* (Deg.), larvae in 'ringed' twigs of *Crataegus* and *Malus* spp. NORTH: West Woods, Marlborough (Holmes & Tennant, 1947).
- Deporaus betulae* (L.), larvae in leaf-rolls on *Betula*, *Alnus* and *Corylus* spp. NORTH: Marlborough district (Pumphrey's Wood) (Anon., 1939); Fyfield Down National Nature Reserve, nr. Marlborough. SOUTH: Stockton Down, nr. Chilmark; Thorny Down.
- Apoderus coryli* ((L.), larvae in leaf-rolls on *Corylus avellana*. NORTH: Marlborough district (Ramsbury; West Woods) (Anon., 1939).

APIONIDAE

- Apion violaceum* Kirby, larvae in stems of *Rumex* spp. NORTH: Marlborough district (Anon., 1939); Savernake Forest; Fyfield Down N.N.R., Silbury Hill, nr. Avebury. SOUTH: Salisbury.
- A. hydrolapathi* (Marsh.), larvae probably in stems of *Rumex hydrolapathum* and probably other *Rumex* spp. NORTH: Marlborough district (Manton) (Anon., 1939); Gopher Wood, Huish.
- A. curtirostre* Germ., larvae in stems of *Rumex acetosa* and *R. acetosella* agg. Marlborough district (Combe Farm) (Anon., 1939); Fyfield Down N.N.R.; Roundway Camp, nr. Devizes (Buck, 1956); Silbury Hill. SOUTH: Martin Down [Hants]; Rox Hill, Lake; Old Sarum; Prescombe Down, nr. Swallowcliffe.
- A. aeneum* (F.), larvae in stems of *Malva sylvestris*. NORTH: Marlborough district (Anon., 1939). SOUTH: Wylde; Barford St. Martin, nr. Wilton.
- **A. radiolus* Kirby, larvae in stems of *Malva sylvestris* and other Malvaceae. SOUTH: Wylde; Barford St. Martin.
- A. rufirostre* (F.), larvae in seed-heads of *Malva sylvestris*. NORTH: Marlborough district (Anon., 1939). SOUTH: Wylde Barford St. Martin.
- A. ulicis* (Forst.), larvae in pods of *Ulex europaeus*. NORTH: Marlborough district (Graham Hill) (Anon., 1939). Savernake Forest; Fyfield Down N.N.R. SOUTH: Stockton Wood, nr. Chilmark; Brimsdown Hill, nr. Maiden Bradley; Prescombe Down; Chirton Gorse, Salisbury Plain; Whiteparish Common.
- A. miniatum* Germ., larvae on *Rumex* spp., apparently in roots, stems and midribs of leaves. NORTH: Marlborough district (Anon., 1939). SOUTH: Wylde.
- A. haematodes* Kirby (*A. frumentarium* (Payk.)), larvae in petioles and midribs of *Rumex acetosella* agg. NORTH: Marlborough district (Anon., 1939).
- A. minimum* Herbst, larvae inquilines in sawfly galls (of *Pontania* spp.) on *Salix* spp. NORTH: Marlborough district (Ramsbury) (Anon., 1939).
- **A. pallipes* Kirby, larvae in stems of *Mercurialis perennis*. NORTH: Fyfield Down N.N.R. SOUTH: Happy Valley, Porton Ranges.
- A. urticarium* (Herbst), larvae in stems of *Urtica dioica*. NORTH: Marlborough district (Anon., 1939).
- **A. atomarium* Kirby, larvae in galls on stems of *Thymus* spp. NORTH: Walker's Hill, Pewsey Downs National Nature Reserve, nr. Alton Priors. SOUTH: Brimsdown Hill; Whitesheet Hill, nr. Mere; Prescombe Down; Porton Range; Cotley Hill, nr. Heytesbury; Knapp Down, nr. Broad Chalke; Knighton Hill, nr. Stoke Farthing; Steeple Langford Cow Down, Steeple Langford; Trow Down, nr. Berwick St. John.
- **A. seniculus* Kirby, larvae in stems of *Trifolium* spp. NORTH: Hackpen Hill, nr. Marlborough; Fyfield Down N.N.R.; Pewsey Downs N.N.R.; Oldbury Castle, nr. Cherhill. SOUTH: Cotley Hill; Brimsdown Hill; Camp Down, nr. Salisbury; Bulford Down, Bulford; Knapp Down; Knighton Hill; Parsonage Down, nr. Winterbourne Stoke; Starveall Down, nr. Codford St. Mary; Steeple Langford Cow Down; Stratford Tony Down, Stratford Tony; Trow Down; Woodminton Down, nr. Bowerchalke; Whitesheet Hill; Wylde Down; Martin Down.
- **A. pubescens* Kirby, larvae in stem-bases of *Trifolium* spp. SOUTH: Wylde Down.

- A. onopordi* Kirby, larvae in stems of various Compositae. NORTH: Marlborough (Anon., 1939); Windmill Hill, nr. Avebury; Pewsey Downs N.N.R. SOUTH: Bagshot (Anon., 1939); Little Woodbury, nr. Salisbury; Stockton Down; Old Sarum; Cotley Hill; Fore Hill, nr. West Lavington; Porton Range; Starveall Down.
- A. carduorum* Kirby, larvae in stems of "thistles" (*Cirsium* and *Carduus* spp.). NORTH: Marlborough district (Anon., 1939); Gopher Wood; Fyfield Down N.N.R.; Pewsey Downs N.N.R. SOUTH: Chirton Gorse; Cotley Hill; Fore Hill; Whitesheet Hill; Yarnbury Castle, nr. Wylke.
- A. hookeri* Kirby, larvae in seed-heads of *Tripleurospermum maritimum*. NORTH: Marlborough district (Anon., 1939). SOUTH: Little Woodbury; Prescombe Down; Compton Chamberlayne.
- A. eberinum* Kirby, larvae probably in stems of *Lotus pedunculatus*. NORTH: Marlborough district (Anon., 1939).
- **A. meliloti* Kirby, larvae in stems of *Melilotus* spp. NORTH: Clouts Wood, Wroughton, nr. Swindon.
- A. waltoni* Steph., larvae almost certainly on *Hippocrepis comosa*, feeding site unknown. NORTH: Morgan's Hill; Pewsey Downs N.N.R. (Morris, 1968b). SOUTH: Bratton Castle; Yarnbury Castle; Whitesheet Hill (Morris, 1968b); Fore Hill; Bulford Down; Cotley Hill; Knighton Hill; Prescombe Down; Woodminton Down; Starveall Down; Steeple Langford Cow Down; Stratford Tony Down; Trow Down; Wylke Down.
- A. loti* Kirby, larvae in pods of *Lotus corniculatus*. NORTH: Marlborough district (Anon., 1939); Clout's Wood; Fyfield Down N.N.R.; Gopher Wood; Morgan's Hill; Oldbury Castle; Pewsey Downs N.N.R. SOUTH: Brimsdown Hill; Bulford Down; Camp Down; Cotley Hill; Bratton Castle; Knapp Down; Knighton Hill; Parsonage Down, Prescombe Down; Redhorn Hill, nr. Urchfont; Starveall Down; Steeple Langford Cow Down; Stockton Down; Stratford Tony Down; Trow Down; Yarnbury Castle; Porton Range; Martin Down.
- **A. tenue* Kirby, larvae in stems of *Medicago* and *Trifolium* spp. NORTH: Clout's Wood; Pewsey Downs N.N.R. SOUTH: Brimsdown Hill; Cotley Hill; Knapp Down, Knighton Hill; Prescombe Down; Redhorn Hill; Stratford Tony Down; Whitesheet Hill; Woodminton Down.
- A. striatum* Kirby, larvae in shoots of *Sarothamnus*, and probably also of *Ulex* and perhaps *Genista* spp. NORTH: Marlborough district (Anon., 1939). SOUTH: Collingbourne Wood (Anon., 1939); Brimsdown Hill.
- A. immune* Kirby, larvae in shoots of *Sarothamnus scoparius* and *Genista tinctoria*. NORTH: Marlborough district (Martinsell) (Anon., 1939).
- **A. platalea* Germ., larvae probably in stems of *Vicia* and *Lathyrus* spp. NORTH: Morgan's Hill. SOUTH: Woodminton Down.
- A. pisi* F., larvae in vegetative buds of several papilionaceous species. NORTH: Marlborough Downs (Knight, 1940); Fyfield Down N.N.R. SOUTH: Camp Down; Knapp Down; Prescombe Down; Stratford Tony Down.
- A. aethiops* Herbst, larvae in stems of *Vicia* spp. NORTH: Marlborough district (Ramsbury) (Anon., 1939).
- **A. spencei* Kirby, larvae almost certainly on species of *Lathyrus* and *Vicia* but feeding site not known. NORTH: Windmill Hill.
- A. punctigerum* (Payk.), *Vicia sepium* is probably the main foodplant but the larvae are unknown. NORTH: Marlborough district (Love's Wood, West Woods) (Anon., 1939); Clout's Wood.
- **A. vorax* Herbst, larvae almost certainly on various Papilionaceae. SOUTH: Happy Valley, Porton Range.
- **A. ononis* Kirby, larvae in pods of *Ononis* spp. SOUTH: Bratton Castle; Bulford Down; Camp Down; Cotley Hill; Little Durnford, nr. Salisbury; Parsonage Down; Starveall Down; Steeple Langford Cow Down; Stratford Tony Down.

- **A. viciae* (Payk.), larvae in pods of *Vicia* spp. NORTH: Windmill Hill. SOUTH: Bulford Down; Redhorn Hill.
- A. ervi* Kirby, larvae in pods of *Lathyrus pratensis* and perhaps other Papilionaceae. NORTH: Marlborough district (Wernham) (Anon., 1939); Hackpen Hill; Clout's Wood; Gopher Wood. SOUTH: Bratton Castle; Broadchalke, nr. Wilton; Camp Down; Redhorn Hill; Stockton Down.
- A. subulatum* Kirby, larvae in pods of *Lathyrus pratensis*. NORTH: Marlborough district (Anon., 1939); Clout's Wood. SOUTH: Knighton Hill; Orcheston Down, Salisbury Plain.
- A. cracca* (L.), larvae in pods of *Vicia* and *Lathyrus* spp. NORTH: Marlborough district (Anon., 1939).
- A. pomonae* (F.), larvae in pods of *Vicia* and *Lathyrus* spp. NORTH: Marlborough district (Savernake Forest). SOUTH: Bagshot (Anon., 1939).
- A. virens* Herbst, larvae in stems of *Trifolium repens*. NORTH: Marlborough district (Anon., 1939); Gopher Wood. SOUTH: Camp Down; Cotley Hill; Knapp Down; Knighton Hill; Parsonage Down; Prescombe Down; Starveall Down; Stratford Tony Down; Tidworth Pennings; Trow Down; Woodminton Down; Wylde Down.
- A. dichroum* Bed. (*A. flavipes* (Payk.)), larvae in seedheads of *Trifolium repens*. NORTH: Marlborough district (West Woods); Fyfield Down N.N.R.; Morgan's Hill; Pewsey Downs N.N.R. SOUTH: Bulford Down; Knapp Down; Knighton Hill; Little Woodbury; Parsonage Down; Prescombe Down; Porton Range; Starveall Down; Steeple Langford Cow Down; Stratford Tony Down; Woodminton Down; Wylde Down.
- A. nigritarse* Kirby, larvae probably in seedheads of *Trifolium* spp. NORTH: Marlborough district (Anon., 1939). SOUTH: Cotley Hill; Redhorn Hill.
- **A. filirostre* Kirby, larvae unknown, possibly on *Medicago* spp. SOUTH: Brimsdown Hill; Cotley Hill; Knapp Down; Knighton Hill; Porton Range; Stratford Tony Down.
- **A. aestivum* Germ., larvae in flowerheads of *Trifolium* spp. NORTH: Oldbury Castle. SOUTH: Bulford Down; Camp Down; Knighton Hill; Porton Range; Stratford Tony Down; Tidworth Pennings; Wylde Down.
- A. apricans* Herbst, larvae in flowerheads of *Trifolium pratense* and probably other *Trifolium* spp. NORTH: Marlborough district (Anon., 1939); Clout's Wood; Gopher Wood; Hackpen Hill; Morgan's Hill; Oldbury Castle; Pewsey Downs N.N.R. SOUTH: Bratton Castle; Brimsdown Hill; Camp Down; Cotley Hill; Knapp Down; Knighton Hill; Martin Down; Parsonage Down; Redhorn Hill; Starveall Down; Steeple Langford Cow Down; Stratford Tony Down; Tidworth Pennings; Trow Down; Woodminton Down; Wylde Down.
- A. varipes* Germ., larvae in flowerheads of *Trifolium* spp. SOUTH: Folly Farm (Marlborough district; Knight, 1940); Knighton Hill; Parsonage Down.
- A. assimile* Kirby, larvae in flowerheads of *Trifolium pratense* and probably other *Trifolium* spp. The record of this generally common species from the Marlborough district (Anon., 1939) should possibly refer to *A. ononicola*. NORTH: Clout's Wood; Fyfield Down N.N.R.; Monkton Down; Morgan's Hill; Oldbury Castle; Pewsey Downs N.N.R.; Roundway Camp (Buck, 1956). SOUTH: Bratton Castle; Brimsdown Hill; Camp Down; Cotley Hill; Knapp Down; Knighton Hill; Little Woodbury; Parsonage Down; Porton Range; Redhorn Hill; Starveall Down; Steeple Langford Cow Down; Woodminton Down; Wylde Down.
- A. ononicola* Bach, larvae in pods of *Ononis* spp. NORTH: Marlborough district (Wernham; Bedwyn) (Anon., 1939).
- A. difforme* Ahrens. It is uncertain whether *Trifolium* or *Polygonum* spp. are the hosts of this species. NORTH: Marlborough district (Gore Copse) (Anon., 1939).

To be concluded

ENTOMOLOGICAL REPORT FOR 1972

Recorder BOWMONT WEDDELL

Assisted by DAVID BROTHERIDGE, PHILIP HORTON, B.Sc.,
and ALAN STONELL

Few indeed will find a good word to say about the past season. It surely was the worst ever. At no point was there any promise. Possibly a succession of mild wet winters was the main contributory cause, for it is damp, rather than extreme cold, that kills insects.

After a bitterly cold and wet spell, March brought a short burst of activity when the hibernators were tempted out in fair strength. However, April and May were wet and cold, while June was also disappointing.

No immigrants were reported at all, though some few must have arrived, for very scattered sightings of the Red Admiral and Painted Lady were recorded in Autumn. One of the latter appeared on our Buddlea, and none of the former, which is abundant in normal years. Even the natives, Peacock and Tortoiseshell were scarce. The only one which seems to be holding on to the ground gained in the last few years is the Holly Blue. It was noteworthy that after a very late start, both Meadow Browns and Chalkhill Blues were still on the wing on November 1st (CGL).

Moths continue to be observed almost exclusively by means of the mercury vapour lamp or the ultraviolet tube. This means has no doubt revealed many species previously unknown in a certain district. At the same time there is more satisfaction in studying insects in their natural environment and training our eyes to penetrate their protective camouflage.

We have often expressed the hope that some of the other orders of insects should receive attention, so it is with considerable satisfaction that we welcome a report from Mr. Philip Horton, on the order Orthoptera, which appears below.

Thanks again for all the interest and trouble so many observers go to keep us posted.

Contributors

DB	Mr. David Brotheridge, Wroughton
RB	Mrs. Barnes, Seagry
EJMB	Mr. John Buxton, Malmesbury
JN	Mr. John Newton, visiting Somerford Common
MC	Marlborough College N.H.S.
FM	Mr. Frank Mead, Devizes
BG	Miss Beatrice Gillam, Devizes
JNK	Lt. Col. J. N. Kirkaldy, W. Lavington
PC	Mr. Philip Cleverly, Bromham
*MHC	Mr. Mark Heath, Chippenham
PH	Mr. Philip Horton, Urchfont
BC	Miss Barbara Cowley, Seend
BW	Mr. B. W. Weddell, Trowbridge
KM	Mr. Keith Moore, Trowbridge
CGL	Major Gen. C. G. Lipscomb, C.B.E., Crockerton
HGP	Mr. H. G. Phelps, Crockerton
CMRP	Mr. C. M. R. Pitman, Salisbury
SNHS	Salisbury & District N.H.S.
JBH	Mr. J. B. Hindley, Swallowcliffe

*This contributor's name was regrettably omitted from the list of contributors in the 1971 report, and the Moths records shown against MH should have been to the credit of this contributor.

PHENOLOGICAL REPORT

	Average Date	1972 Emergence	Difference
Large White	25.4	3.5	-8
Marbled White	25.6	7.7	-12
Meadow Brown	15.6	28.6	-13
Cinnabar	19.5	23.6	-34
Garden Carpet	29.4	22.5	-23
Brimstone Moth	12.5	22.5	-10
Small White	<i>Pieris rapae</i>	MC 22.3	Early record
Orange Tip	<i>Anthocharis cardamines</i>	MC 10.5	EJMB 1.5 FM 2.5
Grayling	<i>Eumenis semele</i>	MC 10.8	PH 21.7 24.8
Purple Emperor	<i>Apatura iris</i>	CGL 24.7	FM 26.7-2.8
Red Admiral	<i>Vanessa atalanta</i>	MC 6.7	SNHS 16.7 JNK 7 BG 19.10 All single sightings
Painted Lady	<i>V. cardui</i>	MC 18.7	SNHS 16.7 EJMB 7.10
Comma	<i>Polygonia c-album</i>	EJMB 21.10	FM 12.8
Pearl-bordered Fritillary	<i>Clossiana ephrosyne</i>	MC 30.6	
Marsh Fritillary	<i>Euphydryas aurinea</i>	CMRP Larvae plentiful 2.4	MC 17.6 BW 15.6
Duke of Burgundy Fritillary	<i>Hamearis lucina</i>	BW 15.6	
White-letter Hairstreak	<i>Strymonidia w-album</i>	EJMB 28.7	FM 23.7
Silver-studded Blue	<i>Plebejus argus</i>	MC 16.7	Quite a rarity in the north of the county
Common Blue	<i>Polyommatus icarus</i>	MC 20.6	
Adonis Blue	<i>Lysandra bellargus</i>	BW 26.6	PH 26.9 Bratton Both broods very scarce
Holly Blue	<i>Celastrina argiolus</i>	SNHS 9.4	Abundant FM 2.5 2.9 MC 2.5 EJMB 22.5 BG 25.4 22.9
Eyed Hawk	<i>Smerinthus ocellata</i>	MC 15.6	
Death's Head Hawk	<i>Acherontia atropos</i>	SNHS 2	Larvae pupated 20.10 Spring emergence hoped for.
Privet Hawk	<i>Sphinx ligustri</i>	MC 11.7	Scarce for several years
Pine Hawk	<i>Hyloicus pinastri</i>	SNHS 30.7	
Humming-bird Hawk	<i>Macroglossam stellatarum</i>	SNHS 26.9	JBH 1.7
Great Prominent	<i>Notodonta trepida</i>	MC 9.6	
Buff Arches	<i>Habrosyne pyritoides</i>	MHC 25.7	
Figure of Eighty	<i>Tethea ocularis</i>	MC 13.7	
Black Arches	<i>Lymantria monacha</i>	MHC	Abundant at Birds Marsh
Small Eggar	<i>Eriogaster lanestris</i>	SNHS	Larval Webs 1.7
Buff Footman	<i>Eilema deplana</i>	MHC 26.8	
Wood Leopard	<i>Zeuzera pyrina</i>	KM 28.7	
Garden Dart	<i>Euxoa nigricans</i>	JN 12.7	
Heart and Club	<i>Agrotis claviv</i>	BW 21.6	MC 7.6
Plain Clay	<i>Amathes depuncta</i>	BW 7.7	Very rare in South
Green Arches	<i>Anaplectoides prasina</i>	KM 4.7	
Hedge Gothic	<i>Tholera cespitis</i>	MC 18.7	
Small Wainscot	<i>Arenostola pygima</i>	MHC 27.8	
Large Clouded Brindle	<i>Apamea epomidion</i>	JN 14.7	
Small Angleshades	<i>Euplexia lucipara</i>	MC 5.7	
Small Dotted Buff	<i>Petilampa minima</i>	MC 18.6	
Small Yellow Underwing	<i>Panemeria tenebrata</i>	MC 22.6	

Marbled Vert	<i>Cryphia muralis</i>	MHC 20.8
Sycamore Dagger	<i>Apatele aceris</i>	SNHS 12.5
Chamomile Shark	<i>Cucullia chamomillae</i>	SNHS 6.5
Red Sword-grass	<i>Xylena vetusta</i>	CMRP 9.4 on Sallow
Common Sprawler	<i>Brachionycha sphinx</i>	DB 1.11
Deep Brown Rustic	<i>Aporophyla lutulenta</i>	DB 9.10
Mother Shipton	<i>Euclidimera mi</i>	MC 5.7 EJMB 12.6
Blackneck	<i>Lygephila pastinum</i>	JN 12.7
Blood Vein	<i>Calothysanis amata</i>	BW 25.9 Unusual 2nd brood
Clay Triple-lines	<i>Cosymbia linearia</i>	MHC 22.8
Streamer Carpet	<i>Anticlea derivata</i>	MHC 12.4
Pretty Chalk Carpet	<i>Melanthia procellata</i>	MC 28.6
Small Phoenix	<i>Ecliptoptera silacea</i>	MHC 23.8
Blue-bordered Carpet	<i>Plemymia rubiginata</i>	JN 14.7
Yellow Waved Carpet	<i>Hydrelia flammeolaria</i>	MHC 5.8
Bordered Pug	<i>Eupithecia succenturiata</i>	BW 8.8
Clouded Border	<i>Lomaspilis marginata</i>	MHC 3.5
White-pinion Spotted	<i>Bapta bimaculata</i>	MC 22.5
Orange Thorn	<i>Angerona prunaria</i>	MC 11.6 A scarce insect in the north of the county
Lunar Thorn	<i>Selenia lunaria</i>	BW 17.6
Oak Beauty	<i>Biston strataria</i>	KM 24.3
Pale Oak Beauty	<i>Pseudoboarmia punctinalis</i>	MC 11.7

ORTHOPTERA RECORDS 1972

BUSH CRICKETS (Tettigoniidae)

<i>Species</i>	<i>Location</i>	<i>Recorder</i>	<i>Date</i>
<i>Meconema thalassinum</i> (Degeer)	The Bottom, Urchfont	PJH	Sept. 1972
Oak Bush Cricket	Oakfrith Wood, „	PJH	12.11.72
<i>Tettigonia viridissima</i> (L)	Oliver's Castle	PJH	5.9.72
Great Green Bush Cricket	Lamb Down	PJH JLM	(August 1971)
<i>Decticus verrucivorus</i> (L)	Near Calne	PJH JLM	(August 1971)
Wart-biter			15.8.72
<i>Pholidoptera griseoptera</i> (Degeer)	Heard in most areas of tall vegetation and hedgerows throughout Wiltshire during Sept.		
Dark Bush Cricket	Bratton	BG	
	Urchfont Village	PJH	
	Gutch Common	PJH	
	Blackmoor Copse	PJH	
	Dundas Aqueduct & most banks along the Kennet and Avon Canal	PJH	
<i>Metrioptera brachyptera</i> (L)	Hamptworth Common	PJH	24.8.72
Bog Bush Cricket		JLM	(Sept. 1971)
<i>Leptophyes punctatissima</i> (Bosc)	The Bottom, Urchfont	PJH	(August 1971)
Speckled Bush Cricket			

GRASSHOPPERS (Acrididae)

Species	Location	Recorder	Date
<i>Stenobothrus lineatus</i> (Panzer) Stripe-winged Grasshopper	Calstone Down	JLM PJH	(August 1971)
	Starveall Down	JLM PJH	(August 1971)
	Prescombe Down	JLM PJH	(Sept. 1971)
	Whitesheet Hill	PJH	6.9.72
	Below Stonehill Copse	JLM PJH	24.8.72
	Longdean Bottom	JLM PJH	26.9.72
	Pewsey Downs	PJH	19.9.72
	Cheverell Down	JLM PJH	28.8.72
<i>Omocestus viridulus</i> (L) Common Green Grasshopper	Probably in all above sites but only definitely recorded from:		
	Calstone Down	Dates and recorders as above	
	Whitesheet Hill		
	Stonehill & Longdean		
Pewsey Downs			
<i>Omocestus rufipes</i> (Zetterstedt) Woodland Grasshopper	Great Ridge	JLM PJH	26.9.72
	The Bottom, Urchfont	PJH	(Sept. 1971)
	Whiteparish Common	PJH	30.7.72
<i>Chorthippus brunneus</i> (Thunberg) Common Field Grasshopper	Common on almost every down and on waste places. Occured in all sites with <i>lineatus</i> .		
<i>Chorthippus parallelus</i> (Zetterstedt) Meadow Grasshopper	as above		
<i>Myrmeleotettix maculatus</i> (Thunberg) Mottled Grasshopper	Below Stonehill Copse	JLM PJH	26.9.72
Contributors:			
BG	Miss B. Gillam		
JLM	Dr. J. L. Mason		
PJH	Mr. P. J. Horton		

THE SLOE PUG, *Chloroclystis chloërata* Mabilie (LEP. GEOMETRIDAE) IN WILTSHIRE

On a warm evening in the last week of April in 1944 I bicycled out from Salisbury to Clarendon Park where a few days earlier I had seen a fine bank of blackthorn in full bloom. I intended to see what moths the blossoms attracted, but working with a torch was somewhat hazardous in the war period. As soon as I started beating the flowers, I noticed in my tray several small stumpy larvae, nearly white in colour, with a short pink stripe running down the back. These I collected up, and in about a month's time they duly produced five small moths which I considered to be the fairly common Green Pug (*Chloroclystis rectangulata* Linn). They were then incorporated in my series of this species, where they remained without further thought until 1972. In 1971, Mr. E. C. Pelham Clinton of the Royal Scottish Museum in Edinburgh, bred out two specimens of a Pug which he also beat in the larval state from sloe blossom. He at once recognized them as a closely allied species. This was *Chloroclystis chloërata* Mabilie, not previously recorded in Great Britain. In April 1972 I, like

many others, also obtained larvae from the sloe which produced this new Pug moth. When I came to compare these 1972 specimens with the short series I had obtained in 1944 they seemed to be exactly similar. The authorities in the Natural History Museum in South Kensington also confirmed that my 1944 insects were in fact this new species which has since been named the Sloe Pug. Little did I imagine that those small larvae I beat on that evening in 1944 was a species new to the British Isles, and of course to Wiltshire as well. They had remained unrecognized in my collection for 28 years, and since then a few others have also turned up in old collections. This little insect has proved to be widespread on banks of blackthorn in southern and south-east England, and in several counties north of the Thames. It is well-known on the Continent, and especially in Denmark where Mr. Knud Juul well depicts the moth and its larva in "Nordens Eupitheciæ". What further surprises await us among our Lepidoptera?

BARON DE WORMS,
Three Oaks, Woking, Surrey
April, 1973

WILTSHIRE PLANT NOTES (33)

Compiled by JOAN SWANBOROUGH

(All records for 1972 unless otherwise stated)

- Ophioglossum vulgatum* L. Adder's Tongue. 2. Hill Wood. Mrs. B. Sheppard. 6. Near Everleigh. P. Horton
- Adonis annua* L. Pheasant's Eye. 5. Near Brickworth Garage. Miss Occomore. (1971).
- Mahonia aquifolium* (Pursh) Nutt. Oregon Grape. 10. Tollard Royal. Mrs. R. Hinton. (1971).
- Lepidium campestre* (L.) Field Pepperwort. 2. Canal Bank, Seend. Mrs. B. Sheppard.
- Nasturtium microphyllum* (Boenn.) Reichb. Brown leaved Watercress. 1. Canal at Martin-slade. Mrs. B. Sheppard.
- Sisymbrium altissimum* L. (*S. pannonicum* Jacq.) Tall Rocket. 2. Langley Burrell. Mrs. J. Swanborough.
- Silene noctiflora* L. Night-flowering Catchfly. 5. Twenty-four plants at edge of cornfield on S. side of A 36 from Pepperbox Hill. K. Grinstead. (1971).
- Dianthus barbatus* L. Sweet William. 2. Roach Wood, Compton Bassett, far from habitation. Miss B. Gillam.
- Montia perfoliata* (Willd.) Howell (*Claytonia perfoliata* Donn ex Willd.) 2. Persistent weed in College gardens at Lackham. O. Menhennick.
- Linum usitatissimum* L. Cultivated Flax. 2. Malmesbury Road, Chippenham. Mrs. J. Swanborough.
- Impatiens parviflora* DC. Small-flowered Balsam. 2. Large area colonized in Belvedere Woods, Devizes. Miss B. Gillam.
- Staphylea pinnata* L. 2. Belvedere Woods, Devizes, probably bird sown. Miss B. Gillam.
- Galega officinalis* L. Goat's Rue. 2. Mill Lane, Broughton Gifford. Mrs. B. Sheppard. (1971).
- Vicia sylvatica* L. Wood Vetch. 1. Oakfrith Wood. P. Horton.
- Lathyrus aphaca* L. Yellow Vetchling. 8. Battlesbury, Warminster. Mrs. E. Curtis.
- Lathyrus nissolia* L. Grass Vetchling. 2. On ex W.D. hut site, near Brown's Folly. Miss B. Gillam.
- Scorpiurus muricatus* L. subsp. *muricatus* var. *sulcatus* (L.) Fiori. Alien. 5. Vetch-like plant with pale orange flowers. Garden at Clarendon. C. M. R. Pitman. Det. J. E. Lousley. (1971).
- Rubus caesius* L. Dewberry. 2. Canal bank, Seend. Mrs. B. Sheppard.
- Chrysosplenium alternifolium* L. Alternate-leaved Golden Saxifrage. 9. Semley. Mrs. R. Hinton. (1971).

- Torilis arvensis* (Huds) Link. Spreading Hedge Parsley. 1. Roadside bank, Bratton. Mrs. J. Swanborough. Det. Brit. Mus.
- Cannabis sativa* L. Hemp. 5. One male plant on the outskirts of Newton Toney. Miss D. O. Cole. (1971).
- Juglans regia* L. Walnut. 2. Avon bank near Reybridge. Mrs. B. Sheppard. (1971).
- Amsinckia menziesii* (Lehm.) Nels. & Macbr. Casual. 2. Bromham. J. Sexton. Det. Brit. Mus.
- Pentaglottis sempervirens* (L.) Tausch. Evergreen Alkanet. 5. Brickworth Corner. E. G. Gange. (1971). 2. Mill Lane, Broughton Gifford. Mrs. B. Sheppard. (1971).
- Lycium halimifolium*. Mill. Duke of Argyll's Tea-tree. Alien. 2. Field wall at Sandridge. Mrs. B. Sheppard.
- Datura stramonium* L. Thorn Apple. 2. Garden at Broughton Gifford. Mrs. B. Sheppard. (1971).
- Verbascum virgatum* Stokes. Twiggy or Large-flowered Mullein. 5. Porton Ranges. S. Calliway. (1971).
- Veronica montana* L. Mountain Speedwell. 2. Privetts Wood, Box. Mrs. B. Sheppard.
- Veronica catenata* F. W. Pennell. 2. Dry pond at Shaw. Mrs. B. Sheppard.
- Mentha* × *smithiana* R. A. Graham (*M. aquatica* × *arvensis* × *spicata*) Red Mint. 5. Outskirts of Newton Toney. Miss A. M. Hutchinson. (1971).
- Mentha* × *gentilis* L. (*Mentha arvensis* × *spicata*) var. *gracilis* (Sole) Fraser. 2. Langley Burrell. Mrs. J. Swanborough. Det. Brit. Mus.
- Campanula persicifolia* L. Peach-leaved Bellflower. 7. Little Durnford. Mrs. F. D. Richards. Det. D. McClintock. (1971).
- Petasites japonicus* (Sieb. & Zucc.) F. Schmidt. Creamy Butterbur. Casual. Garden escape. 1. Erlestoke. P. Horton.
- Inula helenium* L. Elecampane. 3. Roadside, Shaw. P. Horton.
- Anthemis cotula*. L. Stinking Chamomile. 2. Canal tow-path near Seend Park Farm. Mrs. B. Sheppard.
- Matricaria recutita* L. Wild Chamomile. 2. Field at Mill Lane, Broughton Gifford. Mrs. B. Sheppard. (1971).
- Cirsium dissectum* (L.) Hill. Meadow Thistle. 1. Lydeaway. P. Horton.
- Centaurea cyanus* L. Cornflower. 2. Langley Burrell. Lower Swinley. Mrs. J. Swannorough.
- Cicerbita macrophylla* (Willd.) Wallr. Blue Sow-thistle. 9. Salisbury Race Course. Miss D. M. Wear. (1971).
- Hieracium maculatum* Sm. 5. One plant Hawks Grove. 10. Abundant on old railway track, Downton. P. J. Wormald. Det. P. Sell. (1971).
- Hieracium strumosum* (W. R. Linton) A. Ley. 10. Old railway track, Downton. P. J. Wormald. Det. P. Sell. (1971).
- Hieracium eboracense* Pugs. 5. Local in Hawks Grove. P. J. Wormald. Det. P. Sell. (1971).
- Hieracium perpropinquum* (Zahn) Druce. 5. Common in Hawks Grove. P. J. Wormald. Det. P. Sell. (1971).
- Hieracium auranticum* L. Fox & Cubs. 10. Alongside Odstock Road. Miss D. M. Wear. (1971).
- Potamogeton lucens* L. Shining Pondweed. 1. Canal, near Seend. Mrs. B. Sheppard.
- Potamogeton friesii*. Rupr. Flat-stalked Pondweed. 1. Canal, near Seend. Mrs. B. Sheppard. Det. J. E. Dandy.
- Potamogeton tricoides* Cham. & Schlecht. 1. Canal, near Seend. Mrs. B. Sheppard. Det. J. E. Dandy.
- Potamogeton crispus* L. Curled Pondweed. 1. Canal, near Seend. Mrs. B. Sheppard. Det. J. E. Dandy.
- Juncus acutiflorus* Hoffm. Sharp Flowered Rush. 3. Red Lodge. P. Horton.
- Luzula sylvatica* (Huds.) Gaud. Great Woodrush. 1. Oakfrith Wood. P. Horton.
- Allium oleraceum* L. Field Garlic. 2. Bridle path near Weavern Valley. Mrs. B. Sheppard.
- Crocus purpureus* Weston. Purple Crocus. 2. Field near Folly Lane, Shaw. Mrs. B. Sheppard.
- Orchis ustulata* L. Burnt Orchid. 8. Cheverell Down. Form with pure white flowers. Miss B. Gillam.

- Orchis ustulata* L. Burnt Orchid. 8. Near the Bustard. *P. Horton*. 8. Park Bottom. *P. Horton*.
Orchis morio L. Green-winged Orchid. 8. Orcheston Down. *P. Horton*. 10. Lower slopes of
 Martin Down. *Mrs. M. P. Wood*. (1971).
Orchis praetermissa (Druce). Common Marsh Orchid. 7. Coate. *Miss B. Gillam*.
Lemna gibba L. Gibbous Duckweed. 1. Canal at Seend Cleeve. *Mrs. B. Sheppard*. (1971).
Festulolium loliacium (Huds.) P. Fourn. Hybrid Fescue. 2. Bridle tow-path between Martin-
 slade and Seend. *Mrs. B. Sheppard*. 2. Langley Burrell. *Mrs. J. Swanborough*.
Phalaris canariensis L. Canary Grass. 2. Langley Burrell. *Mrs. J. Swanborough*.
Phalaris tuberosa L. 7. Large colony on derelict ground, Rampart Road, Salisbury, 1971.
 Site destroyed 1972. *C. M. R. Pitman*. *Mrs. M. P. Wood*. Det. *A. Melderis*. (1971).

THE CODE OF CONDUCT; A LIST OF RARE PLANTS

During 1970, members of the Botanical Society of the British Isles (B.S.B.I.) were circulated with a document entitled 'A Code of Conduct for the Conservation of Flowering Plants and Ferns'. This 'Code' of conduct, which was subsequently in great demand from other bodies and individuals, attempted to present a series of rules which, it was felt, should govern the behaviour of members of the Society with respect to Plant Conservation and, in particular, rarities. Under the first heading in the Code, 'Collecting', the following was stated: 'Members will not pick or collect any material of nationally rare species as defined in a list published by the Society.'

And in a footnote:

'This will be published in an early number of the journal *Watsonia* and may be subject to amendment from time to time.' The purpose of this paper is to publish the list of rare plants.

RARE PLANTS OF WILTSHIRE INCLUDED IN THE LIST

Daphne mezereum
Cyclamen hederifolium
Melampyrum arvense
Leucjum aestivum
Himantoglossum hircinum
Carex filiformis
Cirsium tuberosum

THE WEATHER FOR 1972

by T. E. ROGERS

<i>Month</i>	<i>Temperature</i>	<i>Rainfall</i>	<i>Sunshine</i>
J	○	○	—
F	+	○	—
M	++	++	++
A	+	++	○
M	—	○	—
J	---	○	—
J	○	○	○
A	○	---	+
S	---	---	○
O	+	---	○
N	○	○	+
D	++	++	○
<hr/>			
Totals for 1972	8.78°C (47.8°F)	815.0 mm. (32.1 inches)	1,351 hours
<hr/>			
Yearly average figures (Marlborough):	8.78 (47.8°F)	830.7 mm. (32.7 inches)	1,425 hours

N.B. In all three columns: ○ signifies 'average'; — means 'distinctly below average'; --- means 'very much below average'. The + and ++ signs have comparable positive meanings.

Although 1972 was the driest year in London since records began 32 years ago, this was by no means true of the whole country and in Marlborough, despite a very dry spell in late summer and autumn, the rainfall was only marginally below average. It was, in fact, wetter than any of the previous three years. Looked at as a whole, 1972 was a remarkably unexceptional year, but the overall statistics do conceal one or two points of interest.

January and February were generally dull and unsettled, there being only about half the usual amount of sunshine for February. Temperatures kept well up to the norm, however, and there was only one fall of snow and a small one at that, for while places as far apart as Kent and Yorkshire recorded 20 cms. of snow on January 29th, we escaped with a mere 1 cm. But the last three days of January, with maximum and minimum temperatures of 1.8°C (35.2°F) and -11.5°C (11.3°F) respectively, constituted the coolest period of the whole year.

March began and ended in blustery fashion, with a warmer, drier spell sandwiched between. March 4th, with a fall of 30.7 mm. (1.21 ins.), was the wettest day of the year, and the following day brought a sprinkling of snow. However, although the last week of March was damp it was also warm, and we escaped the blizzards which blocked roads in Scotland and the North Pennines on the 27th and 28th.

With the storms of March behind us, though, we had a most satisfactory spring, April being particularly pleasant, and despite cool days in May we had only one air-frost and a

very mild one at that. Unfortunately, however, the mercury stubbornly refused to rise throughout the whole of June, and the mean temperature of 11.0°C (51.8°F) made it the coldest June in Marlborough since 1916, which was only fractionally cooler. Indeed, the maximum for the month of 17.5°C (63.5°F), on the 14th, was the lowest we have ever recorded since the station opened in 1865.

It was not a year for high maxima, the best temperatures being 24.8°C (76.6°F) and 24.9°C (76.8°F) on the 17th July and 14th August respectively; but August, with its very low rainfall and long settled spell which lasted from the 9th right through the month, was by far the best month of the summer, doing much to compensate for a poor June. In fact it was the driest August since 1947. No rain fell from August 8th to September 8th, and although 21.5 mm. (0.85 ins.) was recorded on September 8th, the total for the whole month was only 27.2 mm. (1.07 ins.), well below average. October brought with it a lot of fog, particularly in the first fortnight, but still no really significant amounts of rain. Our records show that the 1972 total of 84.1 mm. (3.31 ins.) for the three months August–October was the third driest such period in the last century.

Gales characterized the last two months of the year, with considerable rainfall in the first half of December, but temperatures kept well up and the year ended quietly.

SHORTER NOTES

VIXEN *vulpes vulpes* REARING NINE CUBS 1972

The vixen crossed the lane in front of my car on 18th April. This was the first time I had seen her. She had left a steep wooded bank and was travelling in a north-westerly direction making for her earth, about $\frac{1}{2}$ mile away. She was very large and fine, in superb condition, the colour of autumn bracken, with a cream tag. At the time I took her for a dog fox, solely on account of her size. She must in fact have had her cubs but had not yet reached full lactation as there was no sign of her being in milk. The farmer, whose land she had just left, told me that he had seen her several times, always crossing the lane in the same place.

On 6th May I found the earth, disturbing the vixen with one cub during the search. Along the top of a steep bank, facing north-west at a height of about 400 ft., there were 12 holes. The whole bank was covered with hawthorn bushes and there were 4 more holes lower down the bank, under or near bushes. The main earth was in a large bramble patch below the bushes and, later in the year, after the vegetation had died down, I counted 7 holes. Rough pasture, grazed by cattle, fell away steeply from the bramble patch to the brook about 200 yds. below. On the west side of the bramble was a large play area, beaten down by cubs and littered with droppings, old bones and feathers. There were the remains of meals inside several of the hawthorns and I once found myself sitting on a dead pigeon. Vixens are not good housekeepers.

On 7th May I waited inside a large hawthorn bush down-wind of the earth and about 30 ft. away from it. After a wait of $1\frac{1}{2}$ hours the vixen arrived at 17.45 hours. She came, carrying a rook, from a wood which holds a rookery, about $\frac{3}{4}$ mile west of the earth. She crossed a lane near a bridge, followed the south side of the brook for 100 yds., then came straight up the bank to the bramble patch. Later I was able to trace her path easily, from the rookery to the earth, by the trail of feathers along the narrow, well-worn track. As soon as she arrived the cubs emerged in ones and twos from the bramble until I could see nine. They were about 6 or 7 weeks old (this would put their age at about 3 or 4 weeks when I first saw the vixen). All suckled after greeting the vixen with a brief rub of the nose up the side of her face. However hungry they were as they grew older, I never saw them suckle without the nose-rub greeting first. Once, a cub in a hurry missed her face as he dashed round to feed, but returned to give a more satisfactory, though hurried, rub before feeding.

The cubs were continually breaking off to play as there was not room for all to feed at once. The vixen sat on her haunches with her front legs straddled while two cubs suckled from the front and others from both sides.

I watched them nearly every day for the rest of May from 15.00 hours onwards. Feeding time varied, probably according to hunting conditions, but was usually between 16.00 and 17.00 hours. She always fed them on the lee side of the bramble bush, for shelter and safety, so that, whichever quarter the wind was in, one could always be down-wind and have a good view from about 30 ft. Only once was the vixen aware of my presence and I have never been able to think of a reason for her awareness. As usual I was down-wind of her, motionless inside a thick hawthorn bush, but something made her hesitate as she approached the earth and, instead of following her usual path, she went up the bank behind me. This took her across my approach path and as soon as she got my scent she stopped, looked all round without seeing me, then went on up and along the top of the bank. I do not know how the cubs knew where she had gone, as she made no sound and they had not seen her, but they all rushed headlong up the bank and out of my sight. I could hear them feeding and tussling. The vixen left them after about 30 minutes although presumably she knew that I was there.

The vixen never approached from the east, which is heavily kept, but nearly always from the west and very occasionally from the north or south—all country which is hunted fairly hard during the winter.

By the time the cubs were about 11 weeks old the vixen had to stand for them to suckle. They were by then taking solid food as well but she still had plenty of milk and, in spite of all her hard work, she never lost condition. After feeding and playing the cubs dispersed in ones and twos to sleep. I once looked into one of the holes at the top of the bank and saw three of them curled up fast asleep just inside.

During the weeks that I watched the family I never saw another adult fox with them. Although I have a reliable record of a vixen adopting orphaned cubs and rearing nine including her own, I felt certain that my cubs were all one family, from their likeness to each other in appearance and size, and from their behaviour with the vixen. The highest recorded uterine count in *vulpes vulpes* is 13, and the vixen was well able to rear 9 without the usual loss of condition. I see no reason to think that they were not all her own cubs.

My last view of the vixen was in early September, after cubbing had started. She was in the rookery wood $\frac{3}{4}$ mile north-west of the earth with some cubs. Hounds killed 4 cubs, but I saw the vixen slip out of the covert and make for home. She was hunted for a short distance and then lost. She has not, to my knowledge, been hunted since and I hope that she has survived to breed again.

It would be interesting to know the largest litter recorded of cubs reared by the wild European red fox.

RENARDE

BLACK SPECIMENS OF *vulpes vulpes*

Black foxes are only on record from one covert. Two were seen, by me and others, during the 1971/72 hunting season, and one during the 72/73 season. I think that they are probably not truly black. It is more likely that the guard hairs are black, or extremely dark, and that the underfur is the usual brownish-red, giving the animal a rather rusty black appearance. The blackness would be intensified in wet weather if the fox was lying up in kale.

Another covert one mile to the south-east used to hold an exceptionally large dog fox which had the blackish colouring on his neck and shoulders, the rest of him being a brownish-red. He was in the same territory for four years, by which time he must have been about six years old. I have not seen him since July 1972 when I watched him at dusk with his vixen and 4 cubs. He had brought them some food and the cubs were fighting and squealing over it. Afterwards they all played and I could make out their shapes as they leaped and rushed about in the failing light, the dog unmistakable because of his size and very long legs. He passed the dark shoulder colour on to one cub in this litter.



Donald Grose and his wife with members of the Natural History Section on his 1964 botanical survey of garden plant survivals in the village of Imber.

Black specimens of the rabbit *oryctolagus cuniculus* are also on record in the second of these two coverts. I have seen one this year and two last year. They have also been known for a number of years in a larger wood $\frac{1}{4}$ mile to the east, but I have not seen them there myself.

RENARDE

DONALD GROSE

An Appreciation

The death of Mr. J. D. Grose, at the age of 72, in February 1973 removes from Wiltshire its most distinguished botanist, indeed it would be no disgrace to his predecessors to say the most eminent botanist that the county ever had. His quiet and self-effacing manner concealed a unique knowledge of the Wiltshire flora, and it was impossible to visit any part of the county however unpromising without his finding some hybrid or something unusual in that locality.

His dedication to the Natural History Section of the Wiltshire Archaeological Society was extreme, and having been present at the inaugural meeting on 9 October 1946, he continued to sit on the committee until failing health caused him to give up twenty-five years later. It may come as a surprise to many members of the Natural History Section that his first 'Plant Notes' under the title 'Notes on North Wilts Plants' appeared in the Wiltshire Archaeological Magazine in December 1937, the corresponding article on South Wilts being provided by Miss B. Gullick (later Mrs. Welch). In June 1939 he published Plant Notes for the whole county and continued to do so until 1969 although the issue for December 1942 was again a combined effort with Mrs. Welch. After the publication of the Flora in 1957 the Plant Notes became supplements to the Flora and it is hoped that these will one day be collected and published. Many articles on interesting aspects of botany appeared in the Wiltshire Archaeological Magazine, some the result of requests from the Nature Conservancy such as that for Spye Park in June 1954 and Colerne Park in June 1955, but perhaps the most important article of all, in that it caused the Wiltshire County Council to revise their ideas on spraying roadsides, was his 'Treatment of Roadside Verges in Wiltshire' published in December 1962 and illustrated with fine photographs by the late Mr. N. U. Grudgings. It was typical of his methodical approach that in 1947 when he published a list of botanical references in Saxon Charters, that he should have got an anglo-saxon dictionary and taught himself the language in order to read the charters, and the writer remembers well being with him at Imber when he said that he would like to climb a certain hill to see if there was a spindle tree there. On asking if it was a recent record he said it was last seen in A.D. 968.

The greatest work and the one by which he will always be remembered was the Flora of Wiltshire, published in July 1957 and the result of sixteen years of hard work. It has been said by many authorities that it is the best flora printed in modern times, and there is certainly no other flora which can compare with the second part on the Vegetation of Wiltshire. Its appearance was marked by a broadcast which he gave on the BBC. Although receiving records from others the whole business of checking them and putting them together was done single handed apart from the help received from his wife. Every five-kilometre square was visited, even those under military occupation, and all this without the use of computers or other modern devices of which later floras have made use. Towards the end a small committee was formed to help with the actual publication of the work, with Mrs. Ruth Barnes as Secretary followed by Miss Catherine Gurney and lastly Mr. R. E. Sandell. This relieved him of some of the trouble of arguing with the publishers, and when the great day came and the first advance copy was received the writer had the great pleasure of taking it to him. He had to take it by train because petrol was rationed at the time. Mr. Grose was a jeweller and was selling a wedding ring to an American serviceman, it was typical of his dedication to whatever matter he had in hand that he refused to look at it until he had finished doing this.

Anyone who has ever been on a botanical expedition with him will have many happy memories of interesting plants which he showed us, only once was one able to show him anything he had not seen and that was *Cephalanthera rubra* over the border in Gloucestershire.

Mr. Grose leaves a widow who was a great a help to him in his work not only on botanical expeditions but in drawing maps, and a son Donovan who helped to provide photographs for the Flora.

R.E.S.

OFFICERS' REPORTS FOR 1972

REPORT OF THE HON. SECRETARY—
BEATRICE GILLAM

Since the 1972 Annual General Meeting, Section membership has increased by twelve. Mr. E. V. Cleverly has been given the honour of Life Membership.

In February, 1973, the Section suffered a very great loss by the death of Donald Grose whose name has become synonymous with "The Flora of Wiltshire". An appreciation appears elsewhere.

Arrangements have been made, through the Society's treasurer, for subscriptions to be covenanted as from 1st January, 1973 when the annual subscription became £1. Mr. G. A. Wiltshire has undertaken to act as Covenanting Secretary.

The committee has sought ways of reducing the cost and lateness of W.A.M. Part A to Section members. After consultation with the Society's publications committee, it was agreed that the Section's Hon. Editor should be entirely responsible for its production. Mr. P. Horton, Mr. A. L. Stonell and Mr. D. Brotheridge have joined Mr. B. W. Wedell in compiling the Entomological Report.

The Section has been represented on the Calne and Chippenham Rural District Council's Environment Protection Committee on which three of its members also serve. The Section was represented at a meeting called by the Community Council for Wiltshire to discuss the terms of reference for an 'Environmental Adviser' to be appointed by the Council.

1972 was the fifth and final year of fieldwork in preparation for the production of the British Trust for Ornithology's 'Ornithological Atlas of Great Britain and Ireland'. Mrs. Ruth Barnes, as Regional Representative for the Trust, has organized the work, supported by a very enthusiastic team of Section members. A survey of the wildlife of the Kennet and Avon canal in Wiltshire was undertaken by a group of members, assisted by officers of the Nature Conservancy. Some of the results were displayed at the canal Trust's general meeting in Devizes. An article was written for inclusion in Nicholson's 'Guide to the Waterways—South-West'.

A working party, elected by the committee, met in January, 1973 to look for ways of achieving better communication between members, liaison with schools and the diversification of Section activities in the future.

After seven years as the Section's very hard-working Chairman, Mr. R. S. Barron retires at the Annual General Meeting 1973. He has served on the Society's council and its finance and house committees. Here he has not only given his sound advice, but has sought and helped to obtain for the Section—covenanted subscriptions, W.A.M. Part A, library accommodation at the museum and a fuller understanding of the work of the Section by the Society. For the last six years, the business of the committee has been carried out under his wise guidance in the comfort of Hungerdown House. At the close of my term of office, I should like to express the sincere thanks of the Section to Mr. and Mrs. E. C. Barnes for their very generous hospitality.

JUNIOR SECTION REPORT 1972

1972 started well for the Junior Section with two meetings in January. Pond clearance at Devizes provided an opportunity to help in some practical conservation work. The Wild Fowl Trust, Slimbridge was our next visit where an enthusiastic group spent a very cold but enjoyable day out.

April found us in Bird's Marsh Wood, Chippenham studying the flora and fauna with particular emphasis on recording methods. A line transect was made to compare light intensity with plant distribution. Collections of woodland material was made by some juniors.

The summer meetings were rather disappointing as only one keen junior attended the two August meetings, fresh water life at the Bradford-on-Avon canal, and later Downland School, Devizes. We also had no entries for the Annual Competition.

Many of the main section meetings have been well attended by junior members. The Dawn Chorus at Erlestoke in May, and Keyhaven Marshes in November attracted keen bird watching groups.

In conclusion I should like to thank all those who have assisted me throughout the year or have provided transport.

A. L. STONELL

REPORT OF THE HON. MEETINGS SECRETARIES

During the year 20 outdoor and 7 indoor meetings were held. The summer ones were generally very poorly attended. Studland Heath and Whiteparish attracted 2 and 4 members respectively. Other summer meetings were to Bratton Ranges led by Mr. Bennett, to Porton Down in torrential rain, to North Wraxall for a walk led by Miss Cardus and to Fyfield Down for a meeting on snail predation led by Mr. Dowdeswell.

Popular summer outings were to Chippenham for evening bird song, to Roundway to study moths and to the Kennet and Avon to conduct a survey.

Other well-attended meetings were to Hungerford Marsh led by Mr. and Mrs. Frankum, Grovely Wood led by Mrs. Balfe, to Wilton Water, and an outing led by Mr. Barron to see the Mere Fault. Miss Stevenson led a meeting on mosses and Mr. Stonell to the Kennet and Avon. There was the usual botanical recording at Hazeland Railway, a Fungus Foray at Longleat and a meeting at Westbury Ponds. The Dawn Chorus was a complete washout with torrential rain. Keyhaven Marshes, led by David Peart, was the most popular outing of the year with 33 people.

Indoor meetings were held on Geology, Snail Predation, St. Kilda and Canals and Conservation. 2 members' evenings were held.

Our thanks go out to all the leaders of expeditions and to speakers and we hope that suggestions for further meetings, particularly for summer meetings will be sent to us by members of the Natural History Section.

