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EDITORIAL

This edition reflects the growing interest in bat studies and the rapidly accumulating literature of this field. There has been some discussion about the possibility of an international journal on bat studies. This sort of growth leads me to pose a question about the role and usefulness of this humble newsletter. I know from correspondence and personal contacts with many readers that they find it useful - but I also notice that contributions are relatively few in the last couple of years.

I would welcome further contributions but also suggestions on the kind of role this newsletter could most usefully fill - in other words, should we change it in any way? Let me also appeal to readers to draw my attention to any papers which I overlook in the abstracts section - several are listed in this issue which were published some years ago and which have only recently come to my notice. The starting date for these was 1957, and I would hope that we provide reasonably comprehensive lists since that date.

THIRD INTERNATIONAL BAT RESEARCH CONFERENCE

A preliminary programme has been circulated for this conference, being held at Plitvice, Yugoslavia during September 5-10, 1972. A total of sixty-two papers are listed in the preliminary programme.

Some titles of Australian interest include Bob Copley's report on his studies of Miniopterus maternity colonies in Southern Africa ; Peter Dwyer on "The Shadows of Schreibersii ; towards a historical zoogeography of Miniopterus."; Karl Koopman on the taxonomy of Indo-Australian Pipistrellus ; and John Nelson on vocal communication in Pteropus poliocephalus.

MISCELLANEA

Batflies: Prof. T.C. Maa, P.O. Box 5, Neihu, Taipei, Taiwan 114 is continuing his work on batflies (see the abstracts of his recent major paper in later pages) and is very interested to see any further Australian material.

Accidental deaths in Miniopterus: Andrew Spate writes: After a prolonged windy spell several Miniopterus schreibersii have been found entangled in barbed wire fences, two by myself and one reported by a local grazier. The first was found at about 5.30 p.m. on a blustery overcast day and had only been dead a few hours as living (and apparently happy!) Nycteribiids were running about in the fur. Veterinary opinion at the time also estimated death as being only a few hours earlier. The other two were found in a decomposing condition and had apparently been dead for some time. This sort of misadventure may explain the holes that are common in the wings of these bats. The effect of introducing blackberries into the Australian environment upon bats may prove an interesting study topic for someone!

A NOTE ON EPTESICUS PUMILUS IN THE FLINDERS RANGES, SOUTH AUSTRALIA

- T.H. Maddock

As is well known, Eptesicus pumilus occurs throughout Australia and has been recorded from an abundance of roosts, including buildings, caves and mines, and trees, in various regions. It does, in some regions, show preference to more specific types of roost. In Tasmania, for instance, Green (1965) found E. pumilus predominantly inhabiting buildings. In other regions, however, it has been recorded from a number of more diverse roosts. I have found E. pumilus in canvas blinds and in trees in south-eastern South Australia.

Aitken (1969) was first to recognise E. pumilus as being cave-dwelling in the Flinders Ranges, South Australia, when he recorded it from a cave near Depot Springs, from the adits of the disused uranium mines at Mount Painter and from the old copper mines at Blinman. Dr. C.T. James, of the Field Naturalist's Society of South Australia (pers. comm.) has also found a wintering colony of E. pumilus roosting in rock shelters in Brachina Gorge near Wilpena Pound.

I have followed Hamilton-Smith (1966) here in regarding mines and other man-made tunnels as ecologically equivalent to caves.

While bushwalking in the Gammon Ranges (Northern Flinders Ranges) in January, 1972, Mr. A. McLeod and three companions found a colony of bats in a disused mine adit, of which they took photographs and other records. I recognized the bats in Mr. McLeod's photographs as E. pumilus and also observed a number of them to be infants, not more than two or three weeks old. Mr. McLeod has made these records available to me.

The mine adit is near Weetootla Springs in the Gammon Ranges. Approximately 70 E. pumilus, predominantly females, were roosting in the adits. A definite size and pelage difference was noticeable between the adults and the infants. The young had a uniform dark grey dorsal pelage ranging to a lighter grey fawn on the ventral surface. The adults were rust coloured to darker rust-grey on the back. The young were loath to disperse when disturbed, while the adults flew about in an apparently disorganized state and were unable to avoid collision with the people in the adit.

In a second adit, a short distance from the first, four more E. pumilus were found. All four were adults and were in a torpid condition. The humidity and temperature were noticeably lower within this adit and guano accumulations significantly less.

From the above information it appears that the first adit almost certainly supported a maternal colony of E. pumilus and that parturition corresponds approximately with Green (1965). Also, pelage variants appear to be influenced by age as observed by Green. There is, however, no evidence of post-partum copulation and it may be supposed that, if indeed this were the case, more males would be present in the colony as indicated by the structure of the colonies in Green (1965).

It is hoped that further observations may be made of this colony in the future. I am grateful to Mr. A. McLeod for making available data and photographs of this colony.

References

- AITKEN, P.F. (1969). - The Mammals of the Flinders Ranges, in Corbett, D.W.P. (ed.) The Natural History of the Flinders Ranges (Adelaide: Libraries Board of South Australia) pp. 255-356.
- GREEN, R.H. (1965). - Observations on the little brown bat, Eptesicus pumilus Gray, in Tasmania. Rec. Q. Vict. Mus. Launceston (n.s.) 20: 1-16.
- HAMILTON-SMITH, E. (1966). - The geographical distribution of Australian cave-dwelling Chiroptera. Inter. J. Speleol. 2: 91-104.

CURRENT LITERATURE

Proceedings of the First International Bat Research Conference

Published in Lynx, n.s., 10 : 3-125, 4 plates. (1969)

The following papers are included:

- BRAAKSMA, S. - Summer-resorts of bats in lofts and towers of churches in the Netherlands.
- DAAN, S. - Frequency of displacements as a measure of activity of hibernating bats.
- DUSBÁBEK, F. - To the phylogeny and zoogeography of bats (Chiroptera) based on a study of their parasitic mites (Acarina).

- GAISLER, J. and HANAK, V. - Summary of the results of bat-banding in Czechoslovakia 1948-1967.
- HANÁK, V. - Okologické Bemerkungen zur Verbreitung der Langohren (Gattung Plecotus Geoffroy 1818) in der Tschechoslowakei.
- KRZANOWSKI, A. - The protection of bats.
- LAUFENS, G. - Untersuchungen zur Aktivitätsperiodik von Myotis nattereri Kuhl 1818
- MUTERE, F.A. - Flight activity of the tropical Microchiroptera, Tadarida (Chaerophon) pumilia Cretzschmar and Tadarida (Mops) condylura A. Smith.
- NEUWEILER, G. - Zum Sozialverhalten von Flughunden (Pteropus g. giganteus).
- KLEIMAN, D.G. and RACEY, P.A. - Observations of noctule bats (Nyctalus noctula) breeding in captivity.
- RANDÍK, A. - Ochrana netopierov na Slovensku. (Protection of bats in Slovakia)
- ROER, H. and EGSBACK, W. - Über die balz der Wasserfledermaus (Myotis daubentoni) im winterquartier.
- STEBBINGS, R.E. - observerinfluence on bat behaviour.
- DORGELLO, J. and PUNT, A. - Abundance and "internal migration" of hibernating bats in an artificial limestone cave ("Sibbergroeve").

Proceedings of the Second International Bat Research Conference

Published in Bijdragen tot de Dierkunde, 40 (1) :
2-102. (1970)

The following papers are included :

- PUNT, A. - Round table discussion on bat-conservation
- HANÁK, V. and GAISLER, J. - Comments on the protection of bats in Czechoslovakia and some suggestions on the research on bat populations.
- AELLEN, V. - Le baculum de Tadarida teniotis.
- BRAAKSMA, S. - The distribution of bats in The Netherlands.
- DAAN, S. - Photographic recording of natural activity in hibernating bats.
- DULIĆ, B. and TVRTKOVIĆ, N. - The distribution of bats on the Adriatic islands
- EISENTRAUT, M. - Ein kurzer Ueberblick über die Geschichte der Fledermausforschung.

- FINDLEY, J.S. - Phenetic relationships in the genus Myotis
- FIRBAS, W. - The innervation of the bat cochlea
- GAISLER, J. - Remarks on the thermopreferendum of palearctic bats in their natural habitats.
- GREENHALL, A.M. - The use of a precipitin test to determine host preferences of the vampire bats. Desmodus rotundus and Diaemus youngi.
- HANÁK, V. - Notes on the distribution and systematic of Myotis mystacinus Kuhl, 1819.
- HELDMAIER, G. - Variations of body temperatures and metabolism during entrance into cold lethargy in the bat Myotis myotis.
- KUIPERS, B. and DAAN, S. - "Internal migration" of hibernating bats: response to seasonal variation in cave microclimate.
- MUTERE, F.A. - The breeding biology of equatorial vertebrates: reproduction in the insectivorous bat. Hipposideros caffer, living at 0°27'N
- NEUWEILER, G. - Neurophysiological investigations in the colliculus inferior of Rhinolophus ferrumequinum.
- NORBERG, O.M. - Hovering flight of Plecotus auritus Linnaeus.
- PYE, A.L. - The aural anatomy of bats.
- ROER, H. - Zur Wasserversorgung der Microchiropteren Eptesicus zuluensis vansoni (Vespertilionidae) und Sauromys petrophilus erongensis (Molossidae) in der Namibwüste.
- SCHMIDT, U., GREENHALL, A.M. and LOPEZ-FERMENT, W. - Vampire bat control in Mexico.
- SCHNITZLER, H.U. - Comparison of the echolocation behaviour in Rhinolophus ferrumequinum and Chilonycteris rubiginosa.
- SIGMUND, L. and ZAJICOVA, A. - Quantitative Zusammensetzung des Gehirns der Mitteleuropäischen Fledermäuse (Rhinolophidae und Vespertilionidae)
- SIMMONS, J.A. - Distance perception by echolocation: the nature of echo signal-processing in the bat
- STEBBINGS, R.E. - A comparative study of Plecotus auritus and P. austriacus (Chiroptera. Vespertilionidae) inhabiting one roost.
- STEPHAN, H. and PIRLOT, P. - Volumetric comparisons of the brain structures in bats (an attempt at a phylogenetic interpretation)

WATSON, A. - Electronic aids to the identification of bats in flight and to their study under natural conditions.

SLAUGHTER, Bob H. and WALTON, Dan W., About bats - a Chiropteran biology symposium (Dallas : Southern Methodist University Press, 1970. U.S. price \$7.95) 339 pp.

As the name indicates, this book presents a collection of papers on the biology of bats. Unfortunately, the papers are uneven in quality, style and apparent purpose and there is little evidence of competent editing. At the same time, the book does contain some extremely useful papers and an extensive bibliography of some value in itself. Perhaps the major problem is the lack of any clearly defined aim or purpose in the collection - the preface refers to the "think tank" approach to interdisciplinary problems, but this promise is not borne out. Many papers are condensed summaries of published research and few introduce new material or raise major questions for further study. Beyond these brief general comments, this reviewer finds the only satisfactory way to deal with the book is to discuss each paper separately, again because of the lack of integration in the total publication.

Systematics is discussed competently but all too briefly by Knox Jones and Genoways, who provide useful examples to illustrate some of the practical issues facing the taxonomist. However, the following chapter on classification by Koppman and Knox Jones is disappointing and provides only a summary such as could be found (more adequately) in such a text as Recent Mammals of the World (Anderson and Jones). Koopman, in reviewing zoogeography, has reproduced the useful maps from this text, added a clear summary of the present patterns of distribution and discussed their general implications.

One of the more interesting and useful papers is that by Slaughter who deals with the apparent evolutionary trends in bat dentition. This paper does synthesise, more adequately than any other recent work, the available knowledge of dental patterns in bats and so provides a valuable source of reference. Feeding habits are then discussed, again far too briefly to be useful, by Bryan Glass. The Waltons discuss the post-cranial osteology (it is not clear why the cranium is omitted) in considerable detail, but devote too little space to discussing the relationships between anatomy and biological function. This latter aspect is certainly discussed from one perspective by Vaughan in outlining adaptations for flight in a brief, clearly presented paper largely based (inevitably) on his own earlier research, but other aspects, e.g. roosting, are not covered.

Gould summarises, again briefly, the present knowledge of echo-location and communication in bats, presenting this clearly and with some conceptualization. By contrast, in summarising data about diurnal roosting, Dalquest and Walton have lumped together an immense amount of published references, many of which are now known to be incorrect or incomplete in their information, and presented these genus by genus without any useful attempt at conceptualising.

Henshaw has attempted the task of summarising the subject of thermoregulation, and in this has provided another useful paper. Perhaps more real controversy has centred about this aspect than any other and one can only regret that Henshaw has not given more attention to analysing the various hypotheses advanced in the present literature. Another extremely poor paper follows, this being Carter's discussion of reproduction. Carter completely ignores the many European studies on this and deals all too briefly with other material. He is, of course, not alone in appearing to be unfamiliar with the European literature, but this is particularly noticeable in his subject area.

Ubelaker devotes the greater part of his paper on parasites to the helminths with only superficial discussion of any other groups. Another somewhat unbalanced paper is that by Gillette and Kimbrough on mortality. None of the evidence on mortality rates and vital statistics is cited, and the paper deals primarily with predation and accidents with a brief discussion of disease. Sulkin and Allen, in discussing the possible role of bats in human disease, deal only with rabies and the arboviruses - again somewhat of an imbalance.

The role of karyotypes in phylogenetic studies is usefully, even though briefly, dealt with by Baker. Gould concludes with the volume's shortest paper - a single page on conservation !!

The chiropterologist may well find it useful to buy this relatively cheap book (above price is for paperback; hard cover is \$12.50) for the sake of papers such as those by Jones and Genoways, Slaughter, Vaughan, Gould, or Henshaw, together with the bibliography. Although each individual may have some differences of opinion as to which are the least useful papers, I am certain any experienced worker will agree that the book could have been greatly improved by the omission of at least several papers. For this reason, one cannot commend this book as an introductory text for a novice. This is indeed a misfortune, as no single book currently fills this need - with a much more adequately defined purpose and much better editing, this is a niche which the present book may have been able to fill.

(E. Hamilton-Smith)

WIMSATT, William A., The Biology of Bats (New York : Academic Press, 1970)

Vol. I - 406 pp. - Aust. price approx. \$27.50

Vol. II - 477 pp. - Aust. price approx. \$28.50

By contrast to the above, the aim of this book is clear - to provide a balanced and authoritative account of all major facets of Chiropteran biology (exclusive of systematics) and to meet the reference requirements of zoologists, teachers, and others concerned with the general biology of the Chiroptera. I have extracted this statement from several sentences in the preface, and an examination of the volumes can only leave one convinced the editor has succeeded admirably in accomplishing his goals.

Generally, the chapters are extremely thorough in their treatment, are adequately and clearly illustrated, and provided with useful bibliographies. A list of these chapters will doubtless be useful at this stage :

- Vol I Bat origins and evolution (Glenn L. Jepsen)
 Karyotypic trends in bats (Robert J. Baker)
 The Skeletal system (Terry A. Vaughan)
 The muscular system (Terry A. Vaughan)
 Flight patterns and aerodynamics (Terry A. Vaughan)
 Development : prenatal and postnatal (Robert T. Orr)
 Migrations and homing of bats (Donald R. Griffin)
 Hibernation : ecology and physiological ecology (Wayne H. Davis)
 Thermoregulation and metabolism in bats (Charles P. Lyman)
 Urinary system (Robert M. Rosenbaum)
- Vol II Integument and derivatives (W.B. Quay)
 The central nervous system (O.W. Henson, jr.)
 Peripheral nervous system (W.B. Quay)
 The ear and audition (O.W. Henson, jr.)
 Vision, olfaction, taste (Roderick A. Suthers)
 Pineal organ (W.B. Quay)
 Bats in relation to the health, welfare, and economy of man (Denny G. Constantine)

The quality of these two volumes is extremely high, and further volumes which are apparently planned will certainly be awaited with interest by anyone familiar with the first. Although the absolute price of these volumes is high, I doubt if anyone could seriously claim that the price did not, relative to other books, represent really good value for money.

Inevitably, one will find small points upon which authors may be criticised. I personally regret that Griffin's discussion of migration centres upon "longest recoveries" rather than upon comprehensive statistical analyses of banding recovery data and the general movement patterns elucidated by such methods. There is quite adequate evidence, in at least some species, that his assumption "the longest and most rapid flights are presumably the closest approximations to the actual migratory performance" is quite erroneous. Similarly, I regret that by confining himself to hibernation (perhaps at the editor's behest), Wayne Davis has not adequately related this to other parts of the annual cycle and their relationship to the physiological ecology of a species.

Glenn Jepsen leaves me quite ambivalent - I find myself sorry that his discussion is almost entirely confined to the remarkable Icaronycteris index and to the general issues about the bat evolution, with only passing references to other fossil evidence. On the other hand, he provides magnificent stereophotographs and other illustrations, some of which are previously unpublished; his writing style is a delight to read; and his conceptualisation of the evolutionary process in bats together with his provocative questioning together make this chapter a truly worthy first one. In my opinion, it should be compulsory reading for all bat workers, whatever their own specialist field.

(E. Hamilton-Smith)

PAPERS OF AUSTRALIAN INTEREST

- 0048 ERRATA - the reference to McKean's paper should have been W. Aust. Nat., 11: 138-140, not vol. 14 as shown.
- 0103 CLIFF, W.J. and NICOLL, P.A. 1970 Structure and function of lymphatic vessels of the bat's wing. Q.J. Exp. Physiol., 55: 112-121
 A study of lymphatic vessels in the wing of Miniopterus schreibersii in which the function of the two types of these vessels as observed in vivo was compared with the ultrastructure as revealed by electron microscopy.
- 0104 DWYER, P.D. 1970 Size variation in the New Zealand Short-tailed Bat. Trans. Roy. Soc. N.Z. (Biol. Sci.), 12: 239-243.
 Size ranges for selected skull characters and limb bones of Mystacina tuberculata are given for different latitudes. The measurements conflict with an earlier separation of M. tuberculata into northern and southern subspecies and reflect size variation greater than that recognised elsewhere, at a specific level, in bats. Questions of taxonomic status posed by the present report cannot be resolved until more material is forthcoming.
- 0105 DWYER, P.D. 1971 Are bats socially conservative? Fauna, 1: 31-35.
 Previous authors have tended to assume that aggregation of bats is a response to physiological factors and to ignore or deny the possible existence of social organization. This paper details the complex social organization of Australian Myotis adversus which includes male territoriality, defence of homesites, harem formation coincident with mating, extension of the mother-offspring bond beyond the nursing period and the development of group foraging. Brief summaries are given of different patterns in other species. (see also 0019, 0020)
- 0106 DWYER, P.D. 1971 Temperature regulation and cave-dwelling in bats : an evolutionary perspective. Mammalia, 35: 424-455.
 A comprehensive review of available evidence on the evolution of thermoregulation and cave-dwelling in bats. The author suggests that bats may be divided into three groups - (1) species that enter torpor readily at low ambient temperatures and appear unable to sustain high body temperatures if inactive for a prolonged period, (2) species able to voluntarily enter torpor and able to maintain high body temperature when inactive at low ambient temperatures and (3) species that do not voluntarily enter torpor. It is suggested that thermoregulation evolved from the group 1 pattern to the group 3 pattern; that group 2 and 3 bats were pre-adapted for cave-dwelling in middle and high latitudes, but that cave-dwelling in itself did not play a significant role in the evolution of thermoregulation.

- 0107 EMANUEL, M.L., MACKERRAS, I.M. and SMITH, D.J.W. 1964 The epidemiology of leptospirosis in North Queensland 1. General survey of animal hosts. J. Hyg., 62: 451-484.
- 0108 FRANKENBERG, J. 1971 Nature Conservation in Victoria (Melbourne : National Parks Association) 145 pp.
Lists 15 species of bats as occurring in Victoria and categorises these according to their apparent abundance and vulnerability.
- 0109 GREEN, R.H. and McGARVIE, A.M. 1971 The Birds of King Island. Recs. Q. Vict. Mus., 40: 1-42.
Includes records of Pteropus poliocephalus and Nyctophilus geoffroyi.
- 0110 GREEN, R.H. and MUNDAY, B.L. 1971 Parasites of Tasmanian native and feral fauna; Part. I Arthropoda. Rec. Q. Vict. Mus., 41: 1-16.
Includes records of mites, ticks, fleas and batflies from Tasmanian bats.
- 0111 HAMILTON-SMITH, E. 1972 The bat population of the Naracoorte Caves area. Proc. 8th Natl. Conf. Aust. Speleological Federation, Hobart : 66-75.
The results of banding and observational studies on the annual cycle of Miniopterus schreibersii in the Naracoorte area are summarised; an outline is given of the associated organisms living in the Bat Cave, Naracoorte; and differences between the Naracoorte population and others in South-eastern Australia are outlined. It is demonstrated that this species in South-eastern Australia provides an example of a "stepped cline" in biological variation, and suggested that the populations concerned represent three separate immigrations to the continent.
- 0112 MAA, T.C. 1971 Studies in batflies (Diptera : Streblidae, Nycteribiidae) Part I. Pacific Insects Monograph, 28: 1-247.
This volume contains 3 separate papers:
1. Revision of the Australian Batflies (Diptera : Streblidae and Nycteribiidae) pp. 1-118. A comprehensive review of Australian species, covering 33 species and based upon the study of 5,000 specimens (previous studies had examined only 280 specimens of 20 species). Of these species, 24 are at present endemic to Australia, 9 also occur in New Guinea or further westward, and one also is recorded from New Caledonia. The fauna is essentially an extension of that known from the Oriental region and is of considerable antiquity. The author provides a taxonomic revision of all known species, a discussion of the zoogeography of this fauna and its host-parasite relationships, a gazetteer of collecting sites with a list of species recorded from each locality and a complete host-parasite list. The bibliography is comprehensive, annotated and chronologically arranged.

2. An annotated bibliography of batflies (Diptera : Streblidae : Nycteribiidae) pp. 119 - 211. A world bibliography, containing 800 references to the end of 1970 but with a few items dated 1971. The references are arranged under authors, but indexed according to subject and country treated.

3. Review of the Streblidae (Diptera) parasitic on Megachiropteran bats, pp. 213 - 243. Of the 16 streblid species previously recorded as parasites of the Megachiroptera, only 6 are considered here to be correctly so associated. These are reviewed and the following taxa are dealt with : Megastrebla n. gen., M.(M.) parvior parvior (Maa) n. comb., M.(M.) parvior papuae Maa n. subsp., M.(M.) gigantea gigantea (Speiser) n. comb., M.(M.) gigantea kaluawawae Maa n. subsp., M.(M.) gigantea solomonis Maa n. subsp., Aouroura n. subgen., M.(A.) bequaerti (Jobling) n. comb., M.(A.) wenzeli (Jobling) n. comb., M.(A.) limbooliati Maa n.sp., M.(A.) nigriceps (Jobling) n.comb., Brachytarsina (B.) rouxi (Falcoz), Psilacris n. subgen. (a new subgenus of Brachytarsina, but not including any species from Megachiroptera). A host-parasite list is provided, together with a summary of other species which represent accidental records on Megachiroptera.

In view of the importance of the first of these three papers, a list of the taxa dealt with is provided here:

STREBLIDAE

Brachytarsina verecunda Maa n.sp.
mackeani Maa n.sp.
amboinensis uniformis Maa n.subsp.
Raymondia sp.
Ascodipteron archboldi Maa n.sp.
australiense Muir

NYCTERIBIIDAE

Cyclopodia albertisii Rondani
australis Theodor
sycophanta sycophanta Maa n.sp. and
 subsp. (New Guinea)
sycophanta euronoti Maa n. subsp.
Archinycteribia actena Speiser
Basilia techna Maa n.sp.
longispinosa (Musgrave)
multispinosa (Musgrave)
hamsmithi Maa n.sp.
aitkeni Maa n.sp.
barbarae Maa n.sp.
falcozi (Musgrave)
halei (Musgrave)
nodulata Maa n.sp.
brevicauda (Musgrave)
musgravei Theodor
troughtoni (Musgrave)
burrelli (Musgrave)
transversa Maa n.sp.

Penicillidia (Penicillidia) oceanica (Bigot)
setosala Maa n.sp. (extends
to New Guinea)
tectisentis Maa n.sp.
sp.
(Eremoctenia) vandeuseni (Maa)
Phthiridium torresi (Theodor)
curvatum (Theodor)
Nycteribia allotopa meridiana Maa n.subsp.
parilis vicaria Maa n.subsp.
alternata Maa (=N. spinosa Theodor n.syn.)

In addition, previous erroneous records of Trichobius parasiticus Gerv., Strebila vespertilionis Fabr., Leptocyclopodia macrura Speis. and Nycteribia bakeri Scott are deleted from the Australian faunal list. A specimen of Basilia forcipata Ferris, labelled as being collected in Australia is recorded but considered to be wrongly labelled.

- 0113 MADDOCK, T.H. 1971 Bat Cave Naracoorte : A study area and natural cave laboratory. Cave Explor. Group (S.A.) Newsl. (roneo), May-July 1971 : 11-13.
Brief summary of data on the Miniopterus schreibersii inhabiting this cave.
- 0114 MADDOCK, T.H. 1971 Some mammal remains from caves in the Naracoorte area. S. Aust. Nat., 46: 24-27.
Includes records of Miniopterus schreibersii in bone deposits within Cave Park Cave.
- 0115 MADDOCK, T.H. 1972 A report on bat research activities for the year 1971-72 Cave Explor. Group (S.A.) Ann. Rept. 1971-72: 7-12.
Some results of banding Miniopterus schreibersii in the Naracoorte area are reported, including the recovery of one individual originally banded nine years previously. Lactating females were captured during the first week of November and the species is recorded for the first time from Cave G14 in Victoria. Mine-dwelling colonies of Eptesicus pumilus are reported from the Flinders Ranges and further reports of Nyctophilus geoffroyi and Chalinolobus morio from Nullarbor caves are noted.
- 0116 NOVICK, A. and DALE, B.A. 1971 Foraging behaviour in fishing bats and their insectivorous relatives. J. Mammal., 52: 817-818.
A discussion of the evolution of fishing in bats, suggesting that foraging for insects from water surfaces and catching these with the feet is a likely precursor behaviour. Includes reference to Dwyer's observations on Myotis adversus (see 0019, 0105)

- 0117 O'GOWER, A.K. 1960 Townsville culicines as possible vectors of dengue and allied viruses among local feral fauna. Aust. J. exp. Biol. Med. Sci., 38: 1-9.
- 0118 PRASAD, V. 1969 Bat-mites (Acarina: Spinturnicidae) mainly from South-east Asia and the Pacific region. Acarologia, 11: 657-677.
- Includes Spinturnix psi (Kolenati) (= S. verutus Del. and Baker n.syn.) from Hong Kong, Taiwan, Thailand and New Guinea ; S. kolenatii Oudemans from Taiwan ; S. paracuminatus Bak. and Delf. from New Guinea ; S. chiengmai Prasad n.sp. from Thailand ; Meristaspis calcaratus (Hirst) from the Philippines and Solomons ; M. jordani jordani (Radford) from New Guinea and Solomons ; M. dusbabeki Bak. and Delf. from New Guinea and Solomons (male descr. for first time) ; M. hardyi Prasad from New Guinea (male descr. for first time) ; M. lateralis (Kolenati) from Laos, New Guinea, Philippines and Thailand ; M. mindanaoensis Delf. and Bak. from New Guinea and Philippines ; M. jordani philippinensis Prasad from the Philippines ; Ancystropus rudnicki Bak. and Delf. from Laos, New Guinea and Philippines (Male described for the first time) ; A. zeleborii Kolenati (= A. palawanensis Delf. and Bak. n.syn.) from Laos, Philippines, Solomons, Thailand and Vietnam ; A. nakatae Prasad from the Philippines ; A. eonycteris Delf. and Bak. from the Philippines ; Paraperiglischrus strandtmanni Bak. and Delf. from Borneo, Laos and Taiwan ; P. hipposideros Bak. and Delf. from Thailand ; Oncoscelus kanheri (Hireg. and Bal) from the Philippines ; Eyndhovenia euryalis Bak. and Delf. from Korea.
- 0119 PRASAD, V. 1969 Two new species of Spinturnix mites from the Pacific region (Mesostigmata : Spinturnicidae) Proc. Ent. Soc. Wash., 71: 572-579.
- Describes Spinturnix wilsoni from Myotis adversus in New Guinea and S. queenslandicus from Chalinolobus gouldii venatoris in Queensland.
- 0120 PRINCE, J.H. 1970 The use of echo-location by bats. Aust. Nat. Hist., 16: 367-370.
- 0121 ROWAN, L.C. 1957 Recent work on dengue fever. Med. J. Aust., 2: 530-533.
- 0122 ROWAN, L.C. and O'CONNOR, J.L. 1957 Relationship between some coastal fauna and arthropod-borne fevers of North Queensland. Nature, 179 : 786-787.
- 0123 STANLEY, N.F., LEAK, P.J., GRIEVE, G.M. and PERRET, D. 1964.
- The ecology and epidemiology of reovirus. Aust. J. exp. Biol. Med. Sci., 42: 373-384.

- 0124 VAN DEUSEN, H.M. and KOOPMAN, K.F. 1971 Results of the Archbold Expeditions no. 95. The Genus Chalinolobus (Chiroptera : Vespertilionidae) Taxonomic Review of Chalinolobus picatus, C. nigrogriseus and C. rogersi. Amer. Mus. Novit., 2468 : 1-30
- C. nigrogriseus is clearly separated from C. picatus and both are considered as valid species ; C. rogersi is considered a subspecies of C. nigrogriseus. Specimens from the East coast of Australia, Cape York Peninsula and all known specimens from New Guinea are referable to C. n. nigrogriseus ; those from Sedan Dip, Camooweal, the Burketown area and all localities to the Westward are referable to C. n. rogersi.
- 0125 WHINRAY, J.S. 1971 Notes on West Sister Island, Furneaux Group, Tasmania. Vict. Nat., 89: 4-15.
- Records Nyctophilus geoffroyi.