AN ANNOTATED BIBLIOGRAPHY OF BATFLIES
(Diptera: Streblidae; Nycteribiidae)

By T. C. Maa

Abstract. This bibliography lists, up to the end of 1970, about 800 references relating to the batflies or Streblidae and Nycteribiidae. Annotations are given regarding the contents, dates of publication and other information of the references listed. A subject index is appended.

The following bibliography is the result of an attempt to catalogue and partly digest all the literature (published up to the end of 1970) relating to the systematics and other aspects of the 2 small dipterous families of batflies, i.e., Streblidae and Nycteribiidae. The bibliography includes a list of about 800 references, with annotations, and a subject index. Soon after the start of the compilation of literature in 1960, it was found that many odd but often important records were scattered in books and other publications on travels, expeditions, speleology, mammalogy, parasitology, etc. A number of such publications are not available even in the largest entomological libraries and might well have been inadvertently overlooked. While some 50 additional references are provisionally omitted because of the lack of sufficient information, new contributions on the subject are almost continuously coming out from various sources. This bibliography does not, therefore, pretend to be complete and exhaustive. The time and effort devoted toward the compilation would be worthwhile should this bibliography be of interest to its readers and the annotations and subject index be of benefit. The manuscript has been revised several times and it is hoped that not too many errors, omissions and other discrepancies have developed during the course of preparation. Notes on a few points of this bibliography are given below.

Selection of References. In the selection of the references to be listed, strong emphasis has been placed on scientific originality, no matter how brief and preliminary it might be. Textbooks and the like are not included unless they contain information of originality (such as in G. M. Allen 1939, Oldroyd 1964) or much historical interest. Abstracts, translations, independently paged separata, fascimile editions, second and subsequent printings, book reviews and so on are generally either omitted in the list, or only mentioned in the annotations. The bibliographies of batflies published by earlier authors have been checked and compared. Some of the entries there listed are here deleted because they either are purely secondary in nature or have no direct bearings on the batflies, or the information about their pagination, contents etc., is

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1. Partial results of a grant to Bishop Museum from the U. S. National Institutes of Health (Al 01723).
2. B. P. Bishop Museum, P. O. Box 6037, Honolulu, Hawaii 96818, U.S.A.
insufficient. For instance, Wenzel, Tipton & Kiewlicz's (1966) bibliography of the New World Streblidae lists 123 entries, while Theodor's (1967b) bibliography of the Nycteribiidae of the entire world lists 21 entries. Of these, 9 and 3 entries, respectively, are not incorporated into this bibliography.

**Authorship of Taxa.** During the course of the compilation, it was discovered that the authorship of certain taxa has sometimes been wrongly cited, largely as a result of pen-slips. The following 2 instances are probably the most interesting and deserve more detailed comments. Firstly, Latreille (1829a, b, 1836) and Drapiez (1845) accredited the authorship of the genus *Strebla* to Dalman (1823) who almost simultaneously published a paper under the same title “Analecta entomologica” (but with a different subtitle, contents and by a different publisher) as did Wiedemann (1824). It was the latter author who actually published the name *Strebla* (cf. annotations under Latreille 1836). Secondly, Macquart (1835) and Westwood (1840) cited the original reference of *Lipoptena phyllostomatis* [now known as *Aspidoptera phyllostomatis* (Perty)] as “Nitzsch: Voyage du Prince Maximilien de Bavière” which Speiser (1900b: 32) and Maa (1965b: 385) failed to trace among the publications by either Nitzsch or Maximilian (Prinz zu Wied-Neuwied). — Neuwied is a city on the Rhine, 10 km NNW of Koblenz, once a part of Bavaria, and is not far from the present-day Bavarian border. — It is true that in his “Reise nach Brasilien in den Jahren 1815 bis 1817” (1820-21, Frankfurt a. M.) and “Beiträge zur Naturgeschichte von Brasilien” (1826-33, Weimar), Prince Maximilian did describe a number of bats and mention the findings of the insect remains in the bat stomachs and of the ants damaging bat and other specimens. It is also true that in the summary of his collection of Brazilian insects (in “Reise...”, 2: 299), some ants, butterflies (and spiders) but no batflies were included. There could not so far be found even the slightest evidence that Nitzsch had ever studied that insect collection. From the full title of Perty’s (1830-34) work as cited in this bibliography (q. v.), it seems sufficiently clear that Macquart and Westwood confused the 1815-17 voyage (“Reise”) of Prince Maximilian of Wied-Neuwied with the 1817-20 voyage sent by the order and under the auspices of King Maximilian Joseph I of Bavaria and with J. A. Maximilian Perty, author of *L. phyllostomatis*. In those days, Nitzsch was highly reputed in Germany as the foremost authority of ectoparasites while Perty was nearly a beginner. The former author’s well publicized paper “Thierinsekten” (published in 2 different journals of good reputation) probably heavily overshadowed the latter author’s privately printed “Delectus.” Only by such coincidence and under such circumstances, could the wrong citation by Macquart and Westwood have happened.

**Authors’ Names.** For practical reasons, full names are not written out for the authors listed in this bibliography even when they are easily traceable. For instance, the full name of Macquart is Pierre Justin Marie Macquart. In all his papers that I have consulted, it was simply given as J. Macquart and sometimes even more simply as M. [monsieur] Macquart. In this and similar cases, the spelling-out of the initial “J.” (which is the one most often used by Macquart), but not “P.” and “M.” as well, seems not only fairly sufficient but also may avoid certain unnecessary confusion. The compound surnames of some authors are at times rather perplexing. Thus, E. Balcells R.[ocamora] has been listed incorrectly by certain earlier workers as E. R. Falcells; A. Hoffmann Mendizabal, as A. H. Mendizabal; A. de Mirarda Ribeiro, as A. d. M.
Ribeiro; and so on. To save space, the Subject Index of this bibliography lists only the surnames for authors unless some confusion (such as E. L. Kessel vs. Q. C. Kessel) may occur; and in cases of compound surname, either only the first word of such surnames is used, or the second word is abbreviated, such as Miranda Rib., Schuurmans Stkh. For the same reason, the name(s) of the junior author(s) of a joint paper is represented in the Subject Index by the abbreviation "et al." except in cases like Theodor & Moscona vs. Theodor & Peterson.

Dates of Publication. In this bibliography, there are fortunately only a few references (such as Perty 1833) of which the dates of publication need some annotation. Very few references which include new taxa of batflies came out in the same years, and it appears unnecessary to give annotations regarding the more exact publication dates (i.e., months and days) for such references. The a, b, c ... for the same year's papers of an author (such as Ferris 1925a, 1925b) are, however, not necessarily arranged in the order of their publication dates. Incidentally, Westwood's revision of the genus Nycteribia and Falcoz's descriptions of the New Caledonian Pupipara are dated respectively from 1834 and 1921 rather than, as cited by most subsequent workers, from 1835 and 1923.

Original Titles of References. In the section "Titles and Annotations", the titles of various references listed are as originally given except for the change of the capital to small letters for certain words, the omission of suprageneric names originally given in parentheses (such as Diptera Pupipara, Diptera: Nycteribiidae) and the replacement of the subtitles, in part or as a whole, indicated by ellipses... It should be added that the titles of certain references (such as Loveridge 1923, Starrett & Torre 1931) are quite vague and seemingly have nothing to do with the batflies. Such references might also have been inadvertently overlooked by me, and without annotations, their contents concerning the batflies can hardly be evaluated. On the other hand, the titles of a few references (such as Kishida 1928, Meijere 1899b) are so clear and exact that there is no need for an annotation.

Relative Importance and Rareness of References. The references listed in this bibliography vary greatly in relative rareness and scientific value. In fact, many of them have sunken deeply and quietly into the sea of library files without causing the slightest ripple. The annotations are so designed that they are more detailed for the rarer and less important references. The users of this bibliography thus may not need to search for and directly consult such references.

Symbols, Abbreviations. Abbreviations for serial publications are modified from the World List of Scientific Periodicals (London, 1963-). Symbols and other abbreviations (besides the commonly used ones such as nom. nud., sp., spp., sp.,) in the annotations are as below.

cat. = catalogue, checklist, with or without citing references.
des. = descriptive notes, short description(s).
fig(s.) = figure(s) in text (figure[s] in plate are given in parenthesis. thus pl. 2 (3) for plate 2, figure 3).
fr. = from.
g. = genus (genera).
incl. = including.
misc. = miscellaneous.
n. = new (for new taxa or new names).
Nyct. = Nycteribiidae, nycteribiid(s).
Acknowledgments. Without the cooperation and help in various ways from many people, this bibliography could by no means have attained its present shape and size. The space available here does not permit me to acknowledge my indebtedness to all of them individually. I am especially grateful to the librarians of the following institutions for free access to the book-files under their care: British Museum Department of Entomology, Museo di Storia Naturale di Genova, Rijksmuseum van Natuurlijke Historie in Leiden, Museum of Comparative Zoology at Harvard, B. P. Bishop Museum, and Hawaiian Sugar Planters' Association Experiment Station. The kind help from K. Hörka (Praha), B. V. Peterson (Ottawa), G. B. Thompson (Cambridge, England), O. Theodor (Jerusalem) and many others in supplying additional references or useful information is also deeply appreciated.

I. LIST OF TITLES, WITH ANNOTATIONS

**Absolon, Ph. C. Karl**


**Acloque, Alexandre**

1897. Faune de France. Contenant la description des espèces indigènes .... **2**: i-viii, 1-516, 1235 figs. Paris (Baillière). — *Nycteribia* (to g. only) listed under *Brachyceres*: *Hippoboscidi*: *Nycteribii*, p.490, fig. 219; *Strebla* & other 8 g. (in key), under *Hippoboscidi*: *Hippoboscii*, p. 489.

**Adensamer, Theodor**


**Aders, Walter M.**


**Aellen, Villy**


**Agassiz, J. Louis R. & H. Loew**


**Aldrich, John M.**


**Allen, F. J.**

*1885. [Nycteribia from bat]. J. Microsc. Nat. Hist. (J. Postal Microsc. Soc.) 4: 262. — "The Nycteribia shows its relation to the Diptera by the rudiments of wings, which may be seen like a pair of curved combs on the meso-thorax, near the base of the pro-legs. I believe the Nycteribia is eyeless, and that its tiny head consists almost entirely of mouth organs."*

**Allen, Glover M.**


**Anciaux de Faveaux, M. Felix**

1950. Explorons nos cavernes. Presentation des divers problèmes scientifiques qui se
posent en spéléologie, avec un appendice consacré au domaine souterrain de la Belgique. 315 pp., 7 figs., 1 pl. Bordeaux (Dinant). — 2 Nycteribia, 1 Penicillidia sp. listed for Belgium, p. 169.


Andretta, M. A. V. d’ (see Guimarães & d’Andretta)

Angulo, L. N. (see Najera Angulo, L.)

Annandale, Nelson


Anthony, Harold E.


Arias Encobet, José


Arnold, Keith (see Tonn & Arnold)

Arzamasov, I. T. & A. N. Kurskov


Aschner, Manfred

1931. Die Bakterienflora der Pupiparen (Diptera). Z. Morph. Oekol. Tiere 20: 368-442, 5 figs., 5 pls. — Rickettsia (probably R. melophagi Nöller) found in egg-cell or as
intracellular in all flies studied; mycetomes, either solitary or in small groups, found in abdomens of ♀ Nycteribia; bacterial flora of Nycteribia biarticulata, blasii, blainvillei & Nycteribosca kollarii, pp. 402-412.


Ash, John S.


Audcent, H.


Audouin, Jean V., E. Blanchard, L. Doyère & H. Milne-Edwards


Audouin, J. V. & H. Milne-Edwards


Augustson, G. F.


Augustson, G. F. & S. F. Wood


Awati, P. R.


Ayrosa Galvão, A. L. (see Pessôa & Ayrosa Galvão)

Baggini, A.

1961. Sulla distribuzione della Fauna cavernicola italiana nella categorie biospele-

Bal, D. V. (see Hiregaudar & Bal)

**Bal, D. V. & F. Ahmad**


Balazuc, J. (see van Herdt & Sluiter)

**Balazuc, N., E. Dresco, H. Henrot & J. Nègre**


**Balcells Rocamora, E.**


1956a. Datos para el estudio de la fauna Pupipara de los quirópteros en España (w. English summary). *Speleon, Oviedo* **6**: 287-312, 9 figs. — Streb. (1 sp.), Nyct. (8 spp. in 3 g.) found in 21 Spanish caves; Laboulbeniales found on *Nycteribia vexata, Penicillidia conspicua & Basilia nana*; pupal stage of *B. nana* taking 22 days; no flies on very solitary bat *Rhinolophus hipposideros; Penicillidia* always found on gregarious bats.


[Author's name wrongly given as E. R. Balcells]. — 10 spp. known fr. Iberia, of which 7 widespread in Europe, 2 (Nycteribosca kollari, Nycteribia pedicularia) circum-Mediterranean, 1 (Basilia bathybotyra) originally fr. Orient.


1968b. Revision faunistica de nicteríbidos y estreblidos de quirópteros españolas y su especificidad. Revista Iber. Parasitol. 28: 19-31 (w. English summary). — Spanish, C. European & Middle Eastern records (fr. 1923 & onward) of 4 Streb. & 16 Nyct. spp., & relative frequency of batflies as a whole on 26 spp. of European & Middle Eastern bats summarized in tables; faunistics of these batflies analyzed; host specificity, cohabitation & Laboulbeniales-infection briefly discussed; 1 Streb. & 10 Nyct. spp. occurring in Spain.

Banks, Nathan


Barbour, Thomas

1910. A note regarding the life history of Ascodipteran. Psyche 17: 165. — Summary of F. Muir’s observation in Amboina (see Muir 1911).

Barr, Thomas C., Jr. & J. R. Reddell


Barrera, Alfredo


Bau, Arminius

1929. Die Pupipara der Dipteren-Sammlung Victor v. Röder. Zool. Anz. 85: 9-15. — Nyct. (9 spp. in 3 g.), Streb. (5 spp. in 3 g.), pp. 11-12; rec. for Germany, Switzerland, Greece, Tonga Is., Cuba, Brazil; Streblia mexicana, status discussed.


**Bearup, A. J. & J. J. Lawrence**

1947. A search for the vector of *Plasmodium pteropi* Breinl. *Proc. Linn. Soc. N. S. Wales* **71**: 197-200. — *Pteropus gouldi*, *conspicillatus* & *scapulatus* in Australia having gametocytes in their blood and all parasitized by *Cyclopodia albertisi*, of which the midgut and salivary gland of 49 flies were dissected but w. no evidence of infection.

**Beaucournu, J. C.**


**Beaucournu, J. C. & L. Matile**


**Beaulah, J.**

*1885. Nycteribia* from bat. *J. Microsc. Nat. Sci. (J. Postal Microsc. Soc.)* **4**: 261. — “This parasite is very uncommon. I had a large quantity of bats brought to me from one hole in a tree .... but on only one specimen were there any Nycteribiae, and on that, eight only were found.” *(Names of bats and locality not mentioned, probably fr. nr. Brigg, Lincolnshire)*.

**Becker, Theodor**


**Bedford, G. A. Harold**


**Bels, P. J.**


**Bels P. J. & L. Bels**


Beneden, P. J. van (see van Beneden, P. J.)

Beneway, D. F. (see Byers et al.)

**Benoit, P. L. G.**


**Bequaert, Joseph C. (see also Rodhain & Bequaert)**


1953b. The Hippoboscidae or louse-flies of mammals and birds. Part I. Structure, physiology and natural history. *Ent. Amer.* (n.s.) 32: 1-209, 21 figs.; 33: 211-442. — Head structure, reproductive system, chromosome behavior, host specificity of Nyct.-Streb. vs Hippoboscidae compared, pp. 15, 26, 29, 56, 81, 86, 88, 98, 139, 174, 282, 332; *Cyclopodia plenocenta = C. ferrarii; Strebla avium*, probably a *Trichobius*; very extensive bibliography (largely for Hippoboscidae).


Beron, Petar (see Guéorguiev & Beron)

Bettini, S. (see Saccà & Bettini)

**Bezzi**, Mario


1897. Les insectes épizoiques. Leur moeurs, leur caractères, leur classification, manière de les recueillir et de les conserver. *Misc. Ent.* 5: 5-7, 17-19, 118-120. [Cont’d from 1: 86-87 etc. 1893; 4: 48-52, 59-60 etc. 1896]. — Nyct., list of 7 g., p. 6; Streb., list of 4 g., p. 17, with *Euctenodes* listed under Hippoboscidae, p. 17. [No hosts-parasites index. See preceding article]


Bezzi, M. & T. de Stefani-Perez


Bianchi, C., L. di Caporiacco, M. G. Massera & A. Valle


Bigot, Jacques M. F.


1885. Diptères nouveaux au peu connus. 27e partie. XXXV. Famille des Anomalocerati (mihi) αὐσμολατος—χρασ (Coriacae, Pupipara, Nycteribidae, auctor). Ann. Soc. Ent. Fr. (6), 5: 225-246. — Diptera divided into Omalocerati & Anomalocerati, latter subdivided into tribes Zoobiae, Melitobiae & Nycteribiae; Zoobiae divided into curies Streblidi & Zoobidi; Streblidi incl. 4 g. (key, p. 232); Zoobidi incl. Euctenodes, Polycetenes, Curnus, & 10 hippoboscid g.; 3 g. (key, p. 235) recognized for Nycteribiae; Megistopoda, Cyclopodia, Nycteribia; N. mexicana (Mexico), oceanica (New Caledonia), fulvida (Cape of Good Hope) n. spp.


Billberg, Gustav J.


Bitsch, Jacques


Blanchard, C. Émile (see also Audouin, Blanchard et al.)


Blank, F. (see Byers et al.)

Bodenheimer, Fritz S.


Bogdanov, O. P.


Boldori, Leonida


Bond, Richard M. & G. A. Seaman

Bradshaw, Gordon V. R. & A. Ross  

Braga, José M.  

Brauer, Friedrich M.  

Brèthes, Juan  


Broek, E., van den (see Schuurmans Stekhoven & van den Broek)

Brues, Charles T.  

Brunetti, Enrico A.  

Bullock, John A.  

Burmeister, Hermann C. C.  

Byers, George W., F. Blank, W. J. Hanson, D. F. Beneway & R. W. Fredrichson  
Camicas, J. L.
Caporiacco, L. di (see Bianchi et al.)

Carlisle, R. W. & S. Skillen

Castellernau, I. Sala (see Sala Castellernau, I.)

Caudell, Andrew N.

Chalupský, Josef (see also Hůrka & Chalupský)

Chapman, D. I. & P. M. Hammond

Charbonnier, Henry J.

Chatton, Edouard P. L.

Choudhuri, D. K. & S. K. Mitra

Cockerell, Theodore D. A.
Cole, Frank R.  
Collado, J. Gil (see Gil Collado, J.)

Collart, Albert  

Colless, Donald H.  


Collett, Robert  

Collins, Benjamin J.  
1931. The confused nomenclature of Nycteribia Latreille, 1796 and Spinturnix Heyden, 1826. U. S. Treasury Dept. Nat. Inst. Hlth Bull. 155: 743-765, 11 figs. (plus pp. 769-780, index for both this article & Stiles & Nolan 1931). — Historical review, w. critique on earlier authors’ interpretations of Linnean (1758) description of Pediculus vespertilionis; on basis of Linnean citation of Frisch’s (1728) paper and disregarding other evidence, P. vespertilionis accepted as a mite, not an insect.

Colyer, Charles N. & C. O. Hammond  

Conci, Cesare  

Conci, C. & T. Franceschi  
Cooper, Kenneth W.


Coquillett, Daniel W.

1899. New genera and species of Nycteribidae and Hippoboscidae. Canad. Ent. 31: 333-336. — Pterellipsis (n. g.) aranea (Jamaica, Montserrat, Puerto Rico), Trichobius major (Florida, Arizona), Aspidoptera (n. g.) busckii (Puerto Rico) n. spp.


Corradetti, Augusto


Corradetti, A. & G. Lupascu


Costa Lima, Angelo M. da


Coward, T. A.

Crampton, Guy C.


Curran, Charles H.


1934b. The families and genera of North American Diptera. 512 pp., 235 figs., 2 pls. New York (The Author). — Nyc., key to 2 g., p. 476; Streb., key to 12 g., pp. 477-479; *Eldunia breviceps* n. g. & sp.

1935. New species of Nycteribiidae and Streblidae. *Amer. Mus. Novit.* 765: 1-15, 12 figs. — *Basidia*, key to 5 Amer. spp., p. 4; *B. dunnii, myotis* n. spp.; Streb., key to 15 Amer. g., pp. 5-6; *Speiseria dunnii*, n. sp.; *Trichobius*, key to 13 spp., *uniformis, mixtus, blandus* n. spp.; all n. spp. fr. Panama; remarks on known spp.


Curris, John


Cuthbertson, Alexander


Czerny, Leander & G. Strobl


Czwalina, Gustav

Dalla Torre, Karl W. von


Dalquest, Walter W.


Dasgupta, Biswapati (see Mukerji & Dasgupta)

Decu [≡Decou] -Burghele, Anca


1962b. Contribution à la connaissance des Nycteribiidés appartenant à la faune de la République populaire Roumaine. (In Romanian, w. Russian & French summaries). *Studii si Cercetari de Biol.* 14: 225-239, 4 figs. — 9 spp. in 3 g., rec., key, 7 of these spp. new to Romania.


Del Ponte, Eduardo


Desmarest, Eugène


Dew, Barbara


Didier, Robert & P. Rode


Diesing, Karl M.


**Dinale, Giovanni**


**Dinale, G. & G. M. Ghidini**


**Disconzi, D. Francesco**


**Dogiel, V. A.**


**Domrow, Robert**


**Doyère, Louis** *(see Audouin, Blanchard et al.)*
**Drapiez, Pierre A. J.**


Dresco, Eduard (see N. Balazuc et al.)

**Dubovcenko, T. A.**


**Dudich, Endre**


**Dufour, J. M. Léon**


**Dunn, Frederick L.**

1965. Gua Anak Takun: Ecological observations. *Malayan Nature J.* 19: 75-87, 4 pls., 1 map. — *Hipposideros armiger* & *H. diadema* bats found highly infected by *Hepatocystis* and parasitized by Streb. indet. which was considered the most likely vector of this haemosporidan; a single oocyst-like structure, probably of a haemosporidian, was detected in wall of midgut in 1 of the 15 Streb. flies (ex *H. armiger*) dissected; Nyct. ex *H. armiger* also dissected but none found harboring *Hepatocystis* stages.

**Dunn, Lawrence H.**

Dybas, Henry S. & R. L. Wenzel

Eads, Richard B. & G. C. Menzies

Eads, R. B., J. S. Wiseman & G. C. Menzies

Edwards, Frederick W. (see also under Smart, J.)

Egsbaek, W. & H. Roer

Ehik, Gyula (see under Dudich 1924)

Eisenstraut, M.

Encobet, J. A. (see Arias Encobet, J.)

Enderlein, Günther
Esaki, Teiso


Essig, Edward O.


Evans, Francis C. (see Holdenried et al.)

Evans, William


Fabricius, Johann C.


Falcoz, Louis


1927. Streblidae et Nycteribiidae. Ins. Samoa 6 (Dipt.): 1-9, 7 figs. — Nycteribosca buxtoni, Cyclopodia inclita n. spp.


Fallén, Carl F.


Faveaux, M. F. A. de (see Anciaux de Faveaux, M. F.)

Ferris, Gordon F.


1923. Observations on the larvae of some Diptera Pupipara with description of a new species of Hippoboscidae. Parasitology 15: 54-58, 4 figs. — Aspidoptera megastigma (Paraguay), Nycteribia pedicularia (Switzerland), larvae.


1924b. Some Diptera Pupipara from the Philippine Islands. Philipp. J. Sci. 25: 391-401, 7 figs. — Nycteribosca amboinensis, Nycteribia allotopa, parvula, Penicillidia jenynsi, redes. [This is the 2nd of the author’s 6 reports on Philippine Diptera Pupipara. The 5th and 6th reports contain no batflies.]


1924d. The New World Nycteribiidae. Ent. News 35: 191-199, 1 fig., 1 pl. — 2 Nycteribia, 7 Basilia spp. listed; Basilia, generic characters; B. forcipata n. sp.


**Fiedler, O. G. H.**


**Fiori, Andrea**


**Fletcher, T. Bainbrigge**


**Fordham, W. J.**


Fowler, Christina J. (see Wenzel, Tipton & Fowler)

Fox, Irving (see Tamsitt & Fox)

**Fox, Richard M. & R. M. Stabler** (see also Stabler & Fox)


Franceschi, T. (see Conci & Franceschi)

**Franciscolo, Mario E.**


**Frauenfeld, Georg R. von**


Fredrichson, R. W. (see Byers et al.)

**Freeman, H. E.**

*1885. Nycteribia from bat. J. Microsc. Nat. Sci. (J. Postal Microsc. Soc.)* 4: 262. — “Those from India have much larger legs in proportion to the body, and are said to be very quick in their movements.”

**Frey, Richard**


**Friedmann, I.**


**Frisch, Johann L.**


**Froggatt, Walter W.**


**Galli-Valerio, Bruno**


Galvão, A. L. Ayrosa (see Pessoa & Ayrosa Galvão)

Garcia, Miguel


Garnham, P. C. C.


Genoways, H. H. (see Jones & Genoways)

George, R. S.


Gerstaecker, C. E. Adolph


*1864. (see under Kolenati 1863).

Gervais, F. L. Paul


Gervais, F. L. P. & J. van Beneden


Ghidini, Gian M. (see also Dinale & Ghidini)

Giglioli, Henry (= Enrico)

Gilbert, Owen J. W.

Gil Collado, Juan

Gistel, Johannes N. F. X.

Glennie, E. A. (see Hazelton & Glennie)

Gmelin, Johann F.

Goldblum, N. (see Mer & Goldblum)

Goodwin, George G. & A. M. Greenhall

Gowdey, Carlton C.

Greca, M. La
Green, E. Ernest
1911. On Megaderma lyra, its habits and parasites. Spolia Zeylan. 7: 216. — “Swarming with a minute dipterous parasite .... fully developed wings and is capable of flight.”
Greenhall, Arthur M. (see Goodwin & Greenhall)

Grimshaw, Percy M.

Grulich, I. & D. Povolny

Grünberg, Karl

Guéorguiev, Vassil & P. Beron

Guérin-Méneville, Felix E.
Guiglia, Delfa


Guimarães, Lindolpho R. *(see also Pessoa & Guimarães)*


Guimarães, L. R. & M. A. V. d’Andretta

Gurtl, Ernst F.


Hackman, Walter


Hagan, Harold R.


Halloran, P. O’Connor


Hamann, Otto


Hamilton-Smith, Elery


Hammond, Cyril O. (see Colyer & Hammond)

Hammond, P. M. (see Chapman & Hammond)

Handlirsch, Anton


Hansen, Charles G.


Hanson, Wilfred J. (see Byers et al.)

Hardenberg, J. D. Franz (see also Schuurmans Stekhoven & Hardenberg)


Hardy, J. R.


Hase, Albrecht


Hazelton, M.


Hazelton, M. & E. A. Glennie


Heerdt, P. F. van (see van Heerdt et al.)

Hennig, Willi


1965. Vorarbeiten zu einem phylogenetischen System der Muscidae. *Stuttgart. Beitr. Naturk.* **141**: 1-100, 53 figs. — Pupipara fairly distinct from Glossinidae; Nyc. -Streb., p. 87, comparison of adult & larval mouthparts, larval respiratory system & adult ♂ genitalia; whether or not they are monophyletic is so far not “sicht benatworten”.

Henrot, Henri *(see Balazuc et al.)*

**Hermann, Jean F.**


**Hesketh, G. E.**


Hiernaux-Ihoest *(see van Riel & Hiernaux Ihoest)*

Hincks, Walter D. *(see Kloet & Hincks)*

**Hiregauar, L. S. & D. V. Bal**


1956. Some ectoparasites of bats from India. *Agra Univ. J. Res. (Sci.)* 5: 1-134, 161 figs. — Nyc., pp. 6-67, key to 9 g., redes. & rec. of 11 spp. (in 6 g.); Streb., pp. 67-81, key to 2 g., redes. & rec. of 5 spp. (in 2 g.); *Penicillidia bombayensis* (!). *Basilia scotti, Nycteribosca taji, Raymondia joblingi* n. spp.; *Eucampsipedia hyrtli orientalis* n. sp.

**Hoffmann** [*= Hoffmann Mendizabal, = Hoffmann-Sandoval], Anita


**Holdenried, R., F. C. Evans & D. S. Longanecker**


Hoogstraal, Harry *(see Sanborn & Hoogstraal)*

**Hooper, J. H. D.**

Hooper, J. H. D. & W. M. Hooper


Hooper, W. M., J. H. D. Hooper & T. R. Shaw


Howell, D. E. (see Zeve & Howell)

Howlett, F. M. (see Maxwell-Lefroy & Howlett)

Hsu, Yin-Chi


Hubbard, D. H.


Hubbard, Henry G.


Hughes, Howard


Humphries, D. A.


Hunter, S. J.


Hůrka, Karel

*1957. Prispevek k systematice, faunistice, bionomii a ekologii netopyrich blech v CSR. Cs. Parasit. 4: 145-166.


Asian (Turkmenia, Uzbekistan, Kirghiz, E. Kazakhstan) & 1 N. Chinese sp. rec.; Bas. (Bas.) rybini n. sp.; Nycteribia quasioscellata, N. lindbergi, Stylidia szechuana, Bas. mongolensis, Penicillidia d. dufouri, P. d. tainani, P. monoceros, des.; zoogeographical analysis of 20 Nyct. spp. occurring in C. Asia.

1970a. Basilia (Basilia) cubana sp. n., a new bat fly from Cuba. Acta Ent. Bohemoslov. 67: 335-338, 1 fig. — B. cubana n. sp. ex Eptesicus fuscus (27% & 60% parasitized in 2 colonies); B. ferruginea rec.

Hůrka, K. & J. Chalupský


Hůrka, K. & D. Povolný


Hurlbut, Herbert S.


International Commission on Zoological Nomenclature


Jacobson, Edward


Jameson, D. Kittrell


Jeanne, René G.


Jellison, William L. (see Kohls & Jellison)

**Jobling, Boris**

1928. The structure of the head and mouthparts in the Nycteribiidae. *Parasitology* **20**: 254-272, 4 figs., 3 pls. — Immovable & movable parts, muscles of head studied, compared w. those of Hippoboscidae.


1934a. A revision of the subfamilies of the Streblidae and the genera of the subfamily Streblinae including a redescription of *Metelasmus pseudopterus* Coquillett and a description of two new species from Africa. *Parasitology* **28**: 355-380, 5 figs. — Streb., general morphology, key to Nycteriboscinae, Ascodipterinae, Trichobiinae, Streblinae; Streblinae, key to 5 g.; *M. pseudopterus* (Panama), redes.; *Nycteribosca bequaerti* (Tanzania), *Raymondia intermedia* (Congo) n. spp.


1936a. A revision of the subfamilies of the Streblidae and the genera of the subfamily Streblinae including a redescription of *Metelasmus pseudopterus* Coquillett and a description of two new species from Africa. *Parasitology* **28**: 355-380, 5 figs. — Streb., general morphology, key to Nycteriboscinae, Ascodipterinae, Trichobiinae, Streblinae; Streblinae, key to 5 g.; *M. pseudopterus* (Panama), redes.; *Nycteribosca bequaerti* (Tanzania), *Raymondia intermedia* (Congo) n. spp.


1939c. On some American genera of the Streblidae and their species, with the description of a new species of *Trichobius*. *Parasitology* **31**: 486-497, 4 figs. — *Synthesiostræbla amorphochili* (= *Speiseria ambigua*), *Paratrichobius longicrus* (Mexico, Paraguay), *P. dunni*, redes.; *Trichobius sphaeronotus* (Mexico) n. sp.; *Metelasmus pseudopterus* (= *Lemosia setosa*).


1949b. A revision of the species of the genus *Aspidoptera* Coquillett, with some notes on the larva and puparium of *A. clovisi*, and a new synonym. *Proc. Ent. Soc. Lond. (B)*, **18**: 135-144, 4 figs. — *Aspidoptera*, 4 spp., key, redes.; *A. clovisi*, larva; *Speiseria ambigua* (= *Paratrichobius anduzei*).

1949c. Host-Parasite relationship between the American Streblidae and the bats, with a new key to the American genera and a record of the Streblidae from Trinidad, British West Indies. *Parasitology* **39**: 315-329, 3 figs. — Host rec. summarized-analysed; key to 16 g.; 14 spp. (in 9 g.), Trinidad, rec.


1952. Description of two new species of *Ascodipteron* from Africa and one species of *Nycteribosca* from Madagascar. *Parasitology* **42**: 126-135, 4 figs. — *Ascodipteron rhinopomatos* (Egypt, Palestine), *Jonesi* (Sierra Leone), *Nycteribosca wenzeli* (Madagascar) n. spp.; *Petrellipsis proxima* (Brazil) compared w. *aranea*.


1 Raymondia sp., French Guinea, rec.; Raymondia brachyphysa, Ascodipteron megalostigmatus n. spp.


Johnson, Charles W.


Jones, J. Knox, Jr. & H. H. Genoways


Jörg, Miguel E. (see Mazza & Jörg)

Joseph, Gustav


Karaman, Zora S.


Karsch, Ferdinand A. F.


Kelsall, J. E.


Kertész, Kálmán


Kessel, Edward L.


Kessel, Quinta C.

1924. Notes on the Streblinae, a subfamily of the Streblidae. Parasitology 16: 405-414, 8 figs. [Introductory notes, by H. Scott, pp. 405-406]. — Streb., characters; Euctenodes tonatiae (n. sp.), mirabilis, Strebla vespertilionis, des.; misc. rec. for Bolivia, Brazil, Colombia, Ecuador, Panama, Peru.

1925. A synopsis of the Streblidae of the world. J. N. Y. Ent. Soc. 33: 11-33, 4 pls. — Keys to 2 subfam., to 16 g., & to 4 Aspidoptera, 2 Euctenodes, 7 Nycteribosca, 2 Paradyschiria, 3 Raymondia, 2 Strebla, 8 Trichobius (+ 2 var.) spp.; Paradyschiria lineata, Speiseria (n. g.) ambigu, Trichobius truncatus (+ n. var. A) n. spp.; T. major n. var. quadrisetosa.

Kiewlicz, Alicja (see Wenzel, Tipton & Kiewlicz)

Kirschenblatt, J. D.


Kishida, Kikuchi


Klemmer, K. & H. Krampitz

Kloet, George S. & W. D. Hincks

Klugkist, Carl E.

Koch, Carl

Kohls, Glenn M.

Kohls, G. M. & W. L. Jellison

Kolenati, Friedrich A.


1857b. Epizoa der Nycteribiern. *Wien. Ent. Monatschr.* 1: 66-69, 1 pl. — *Arthrorhynchus* (n. g.) believed to be of Acanthocephala; *A. westrumbii* n. sp. ex *Megistopoda westwoodii*, *A. diesingii* n. sp. ex *Acrocholidia montaguei*. 
1871. Maa: Bibliography of batflies


Kozlowski, Slawomir


Krampitz, H. (see Klemmer & Krampitz)

Krausse, Anton H.


Krutzsch, Philip H.


Kurskov, A. N. (see Arzamasov & Kurskov)

Lamarche, Jean B. P. A. de Monet de


Lanza, Benedetto


**Lanza, B. & G. Marcucci**


**Larrousse, Fernand L.**


**Latreille, Pierre A.**

1796. Précis des caractères génériques des insectes, disposés dans un ordre naturel. xiv+210+5 pp. Brive (F. Bordeaux) — *Nycteribia* n. g., placed in class Acéphales.


1805. Histoire naturelle, générale et particulière des Crustacés et des Insectes. 14: 1-432, 9 pls. [This is the last vol. of the “Crustacés et Insectes” series, see Latreille 1802, above]. — Coriaceés: *Nycteribia pedicularia*, p. 403.


1829b. Les crustacés, les arachnides et les insectes, tome II. In G. C. L. D. Cuvier: Le règne animal .... (ed. 2), 5: 1-556, 5 pls. [ Entire work in 5 vols., published 1829-30. Paris (Déterville), of these only the vols. 4-5 (i. e., tomes I-II of the “Crustacés, Arachnides et Insectes” series) were by Latreille and deal w. Crustacea, Arachnida and Insecta. Ed. 1 of the work, in 3 vols., published 1816-17, Paris (Déterville), w. vol. 3 by Latreille but containing no batflies. Ed. 3, in 3 vols., published 1836, Bruxelles (L. Hausman), w. vols. 2 (p. 307 et seq.) & 3 by Latreille, q. v. Ed. 4 (“disciples edition”) in 20 vols., w. 5 vols. on insectes, by Audouin et al., q. v.] — Strebla Dalm. ( ! ), p. 544; Nycteribia, p. 545; des., no spp. mentioned.


**Lavoipierre, Michel**


Lawrence, J. J. (see Bearup & Lawrence)

**Leach, William E.**


**Leclercq, Marcel & J. Théodoridès**


Lefroy, H. Maxwell (see Maxwell-Lefroy & Howlett)

**Leong, Ming Ching & A. G. Marshall**

Malayan Nature J. 21: 171-180, 5 figs. — General behavior (adult), development & metamorphosis similar in many details to other Nyct. previously reported.

Leruth, Robert

Leuckart, C. G. F. Rudolph


Lever, Robert J. A. W.

Lewis, Robert E. & D. L. Harrison

Lim, Boo Liat (see McClure, Lim & Winn)

Lima, A. M. da Costa (see Costa Lima, A. M. da)

Linnaeus, Carolus (= Linné, Carl von)
1758. Systema naturae, per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. (ed. 10, reformata), 1: i-ii, 1-824. Holmiae (L. Salvii). [Altogether 13 editions, some w. slightly different subtitles; ed. 1 in 13 folio pp., 1735, Lugduni Batavorum (T. Haak); ed. 11, merely a reproduction of ed. 10, 1760, Halae (J. J. Curt); ed. 13, by J. F. Gmelin, q. v.] — Pediculus vespertilionis n. sp., w. des. & discussion but also citing Frisch (1728) in synonymy.


1767. Systema naturae .... (ed. 12), 1 (2): 533-1327 (Appendix in 36 unnumbered
1971  Maa: Bibliography of batflies  165


Lioy, Paolo


Löhrl, Hans


Loew, Hermann (see Agassiz & Loew)

Longanecker, D. S. (see Holdenried et al.)

Loveridge, Arthur


Lupascu, George (= Gheorghe) (see Corradetti & Lupascu)

Maa, Tsing C. (see also Peterson & Maa)


1966. Partial revision of the *Cyclopodiinae*. *Pacif. Ins.* 8: 648-685, 69 figs. — *Cyclopodia pembertoni* group, rev., key to 4 spp.; *C. inflatipes* group, rec.; *Leptocyclopodia*, rev., keys to 5 spp-subssp. of *Oncopothia* n. subg. & 10 spp. of *Leptocyclopodia* s.s.; *C. ligula*, *aspinosa*, *dorsinuda*, *L. (O.) planiseta*, *zelotypa*, *L. (L.) pilospectus*, *cheirogaster*, *schizopyga*, *brevicula* n. spp.; *L. (O.) macrura* *ambonae* n. spp.; *L. (L.) simulans*, des. of ?; misc. rec. for Malaya, Borneo, Java, Philippines, Komodo, Celebes,


**McClure, H. Elliott**


**McClure, H. E., B. L. Lim & S. E. Winn**


**Machado-Allison, Carlos E.**


1966. Notas sobre Streblidae de Venezuela. I. Las especies del genero *Pterellipsis*


Mackie, Frederick P.


MacLeay, William S.


Macquart, P. Justin M.


Marcucci, G. (see Lanza & Marcucci)

Markova, L. I.


Marshall, Adrian G. (see also Leong & Marshall)

1970. The life cycle of Basilia hispida Theodor 1967 in Malaysia. Parasitology 61:
1-18, 5 figs., 2 pls. — Life cycle from emergence of ♀ adult to emergence of her first offspring typically 39 (5+9+25) days, not affected by seasons; sex ratio ca 1 : 1; adult mortality largely due to predation by host; ♀ longevity (5-6 weeks) longer than ♂ longevity; no major difference in life cycle from 5 other Nyct. previously known; puparium & larval developmental stages (illustrated) comparable to those of 1 Nycteribia & 2 Penicillidia spp.

Marumo, Nobumasa


Massera M. G. (see Bianchi et al.)

Massonnat, Émile


Matheson, Robert


Matthews, L. H.

*[1952. British mammals. xii+410 pp., illus. London (Collins). — Nyct., general remarks, p. 92, fig. 44.]*

Matsumura, Shonen


Maxwell-Lefroy, Harold & F. M. Howlett


Mazza, Salvador & M. E. Jörg


Meigen, Johann W.

1830 *Systematische Beschreibung der bekannten europäischen zweißügigen Insek-

Meijere, Johannes C. H. de (see also van der Wulp & Meijere)

Mendizabal, A. H. (see Hoffmann, A.)

Menozzi, Carlos

Menzies, George C. (see Eads & Menzies; Eads, Wiseman & Menzies)

Mer, G. G. & N. Goldblum
1947. A haemosporidian of bat. Nature, London 159: 444, 1 fig. — Polychromophilus found in Penicillidio dufourii; among 299 Israeli bats (of 10 spp.) examined, 48 bats (Myotis myotis, M. nattereri, Miniopterus schreibersi) were found to harbor pigmented malarial parasites; these bats were heavily infested by unnamed Nyct. spp., in one of which, sporozoites were found in salivary gland.

Milne-Edwards, Henri (see Audouin, Blanchard, Doyère & Milne-Edwards; Audouin & Milne-Edwards)

Miranda Ribeiro, Alipio de

Mitra, S. K. (see Choudhuri & Mitra)

Miyake, Tsunemasa

Montagu, George
1815. Description of several new and rare animals, principally marine, discovered
on the South Coast of Devonshire. Trans. Linn. Soc. Lond. 11: 1-26, 5 pls. — Nycteribia vespertilionis Latr. (=Celeripes vespertilionis Mont.), des., p. 11.

Monticelli, Fr. Saverio


Morlan, Harvey B.


Morris, Francis O.


Morstatt, H.


Moscona, A. (see Theodor & Moscona)

Motschulsky, Victor von


Müggenburg, F. Hans


Muir, Frederick


Mukerjji, Durgadas & B. Dasgupta

Musgrave, Anthony


Nájera Angulo, Luis

*1945. Sobre el Tripanosoma de los lirones (Tripanosoma blanchardi) y de los murciélagos (Schizotripanum vespertilionis) hallados en España y su interés biológico. Libro homenaje al Prof. C. R. López-Neyra. Granada. — 4 Nycteribia, 2 Penicillidia spp. listed as hosts of Sch. vespertilionis.

Nègre, Jacques (see Balazuc et al.)

Neuhaus, Gustav H.


Newman, Edward


Newstead, Robert


Nitzsch, Christian L.


Nolan, Marbelle O. (see Stiles & Nolan)

**Nordberg, Sven**


Norris, Kenneth S. (see Reeder & Norris)

**Nowicki, Maximilian S.**


**Nussbaum, Rosemarie**


**Oldham, Charles**


**Oldroyd, Harold**


1964. The natural history of flies. xiv + 324 pp., 40 figs., 32 pls. London (Weidenfeld & Nicolson). — Chapt. 18, pp. 229-240, on flies parasitic on birds & mammals; fig. 37 showing profile of an unnamed Nyct., pl. 27 showing *Ascodipteron* cyst in situ.

**Olfers, Ignaz F. M. von**


**Olivier, Antoine G.**

Olivier, Ernest

O’Mahony, Eugene

Orr, Robert T.

Osten Sacken, Charles R.


Oudemans, Anthonie C.
1926. Kritisch historisch overzicht der acarologie. IId gedeelte, 850 v. C. tot 1758. Tijds. Ent. 69 (suppl.): i-viii, 1-500, 68 figs. — Pediculus vespertilionis Linn. 1758, as interpreted from description (Linne’s citation of Frisch’s 1728 said to be erroneous), = Nycteribia vespertilionis Klnt., pp. 36-39.


Packard, Alpheus S.

Palmen, Johan A.
Paramonov, S. Jacques

Parmalee, Paul W.

Patton, Walter S.

Pavan, Mario

Pearce, E. K.
1921. Typical flies, a photographic atlas of Diptera. Series II. xiv+38 pp., 125 figs. London etc. (Cambridge Univ. Press). — *Nycteribia (Listropodia) pedicularia, (†var. blasii), N. (Stylidia) biarticulata*, pp. 33-34, figs. 119-122.

Pearse, Arthur S.

Pendlebury, H. M.

Percheron, Achille R.

Perty, J. A. Maximilian
1833. Delectus animalium articulatorum quae in itinere per Brasiliam annis
MDCCCVII-MDCCXX Jussu et auspiciis Maximiliani Josephi I. Bavariae regis Augustissimi peracto collegerunt Dr. J. B. de Sphix et Dr. C. F. Ph. de Martius. Fasc. 3: (Insecta brasiliensia): 125-224, pls. 25-40. [Entire “Delectus ...”, in 3 fascicles, iii+44+224 pp., 40 col. pls. Monachii (The Author) 1830-1834]. — Lipoptera phyllostomatis n. sp., p. 190. [Authorship of this species was wrongly accredited to Nitzsch by Macquart (1835) and Westwood (1840) who gave the original reference as Nitzsch: “Voyage du Prince Maximilien de Bavière”. The fasc. 3 is generally accepted to have been published in 1833 but the date given on the title page of the work is 1834].

Pessoa, Samuel B. & A. L. Ayrosa Galvão


Pessoa, S. B. & L. R. Guimarães


1941. Nota sobre Streblideos de morcegos de Mato-Grosso, Brasil. Arq. Inst. Biol., S. Paulo 11: 421-426, 6 figs. [Date of publication given on cover of the “artigo” containing this paper, i.e., artigo 45, as 1940; but on back-cover, as 1941]. — 1 Aspidoptera, 1 Euctenodes, 1 Nycterophilia, 1 Strebla, 2 Trichobius spp., rec.; Nycterophilia, subfamilial status discussed.

Petagna, Vincenz


Peterson, B. V. (see also Theodor & Peterson)


Peterson, B. V. & T. C. Maa


Peyritsch, J.

Phillips, W. W. A.
1924. Ectoparasites of Ceylon bats. Spolia Zeylan. 13: 65-70. — Scarcity of Nyct on Rhinolophus attributed to well spaced roosting sites of latter; 1 Ascodipteron, 1 Nycteribosca & 1 Strebi, all unnamed, plus 1 Raymondia, 3 Cyclopodia, 1 Tripselia, 2 Penicillidia, 3 Nycteribia spp. ex 10 bat spp., lists.

Pieper, Harald

Plateau, Felix

Pliginsky, V. G.

Plomley, N. J. B. (see Thompson & Plomley)
Povolny, Dalibor (see Grulich & Povolny; Hurka & Povolny)

Rainbow, William J.

Ratcliffe, F. N.

Reddell, James R. (see also Barr & Reddell)


Reed, Edwyn C.

Reeder, William G. & K. S. Norris
1954. Distribution, type locality and habits of the fish-eating bat Pizonyx vivesi. J. Mammal. 35: 81-87, 2 figs. — Basilia pizonychus, numerous on specimens from Puerto San Bartolome.

Reichenbach, Anton B. (see Thon & Réichenbach)

Reichenow, Eduard

Ribeiro, A. de Miranda (see Miranda Ribeiro, A. de)

Ricci, Marcello

Riedel, M. P.

Riel, J. van (see van Riel, J. & Hiernaux-Ihoes)

Risso, J. A.

Rode, Paul (see Didier & Rode)

Röder, Victor von

Rodhain, Jérôme & J. Bequaert

Roer, H. (see Egsbaek & Roer)

Rohdendorf, B. B.

**Rondani, Camillo**


**Root, Francis M.**


**Ross, Anthony** (see also Bradshaw & Ross)


**Rossi, Friedrich W.**


**Roth, Vincent D.**


**Rothschild, Miriam**

**Rothschild, N. Charles**

1916. Convergent development among certain ectoparasites. *Proc. Ent. Soc. Lond.* 1916: cxli-clvi, 30 figs. — Nyct. -Streb. taken as part of examples; conclusion: “The medium in which a species exists exercises a most powerful influence on its evolution. The similarities, often slight in themselves, which sympatric insects exhibit, are due in the first instance to similarities in the surrounding primary conditions of life.”

**Rozeboom, Lloyd E.**

1934. A new nycteribiid from Florida. *J. Parasit.* 20: 315-316, 1 fig. — *Basilia boardmani* n. sp

**Rudow, Ferdinand**


**Ruffo, Sandro**


**Ryberg, Olof**


**Ryckman, Raymond E.**


**Ryckman, R. E. & A. E. Ryckman**

1963. Loma Linda University’s 1962 Expedition to Baja California: Medical ento-

**Saccà, Giuseppe & S. Bettini**


**Sadoğlu, Perihan**

1956. Ocular reduction of the bat fly *Nycteribosca africana* and its comparison with those in some nycteribiids. *Rev. Fac. Sci. Univ. Istanbul* (B), **20** (1-2): 103-138, 17 figs. — Eyes in *Nycteribosca* similar to compound eyes in other insects, having crystalline body & 2 types of cells; eyes in *Penicillidia dufouri*, *P. conspicua*, *Eucampsipoda hyrtlii*, more similar to ocelli in other insects, having only 1 type of cells, w. optical lobe connecting to brain on dorsum & in front.

**Sala Castellernau, Ignacio**

1956. Bionomia de los Dipteros apteros y ectoparasitos de Quiropteros. *Broteria, Cienc. Nat.* **25**: 183-188, 1 fig. — 2 *Penicillidia*, 4 *Nycteribia* spp. listed for Portugal, p. 185; *Aspidoptera*, *Nycteribosca* & *Cyclopodia*, 1 sp. each, briefly mentioned. This paper is essentially a compilation.

**Samouelle, George**


**Sanborn, Colin C. & H. Hoogstraal**


**Sanfilippo, Nino**


**Sasakawa, Mitsuhiro**


Schiner, J. (= Ignaz) Rudolf


Schingarew, A. J.


Schlein, Y.

1970. A comparative study of the thoracic skeleton and musculature of the Pupipara and the Glossinidae. Parasitology 60: 327-373, 69 figs. — Thorax of Pupipara compared w. that of Musca & Glossina to identify thoracic sclerites of Nyct.; status of Streb. & Nyct. discussed, w. suggestions that they do not belong to higher Calypterata and are not closely related to Hippoboscidae.

Schmitz, Hermann


Schrank, Franz von P.

Schreckenstein, Friedrich R. von

*1802. Verzeichniss der Halbkäfer, .... und Fliegen, welche um den Ursprung der Donau und des Neckars, dann um den untern Theil des Bodensees vorkommen. 70 pp. Tübingen (Cotta). — *Acarus vespertilionis* [= *Nycteribia*, teste Oudemans 1929], p. 44.

Schulz, Hans


Schuurmans Stekhoven, Jacob H., Jr.


1931. Eine seltene ungentigend beschriebene *Basilia*-Art aus Venezuela. *Z. Parasitenk.* **3**: 205-219, 6 figs. — *B. bellardii* (= *silvae*) from Venezuela, redes., designated as type of g.; *B. ferrisi* n. name.


Schuurmans Stekhoven, J. H., Jr. & D. J. F. Hardenberg


Schuurmans Stekhoven, J. H., Jr. & E. van den Broek


Scopoli, Johann A.


Scott, Hugh


(type), redes.; *N. fryeri* nom. nud.; misc. rec. for Ceylon, India, Burma, Peninsular Thailand, Sumatra, Batchian, Amboina, Australia.


1937. New records of Nycteribiidae from bats of the Solomon Islands. *In* G. B.


**Sealander, John A. & H. Young**


Seaman, G. A. (see Bond & Seaman)

**Šebek, Zdeněk**


**Séguy, Eugène**


Senior-White, Ronald


Sharp, David


Shaw, T. R. (see Hooper, Hooper & Shaw)

Sherborn, Charles D.


Shelford, Robert W. C.

1916. A naturalist in Borneo. xxvii+331 pp., 32 pls. London (T.T. Unwin) (Ed. by E. B. Poulton). — “The external parasites of bats are .... those strange apterous flies, the Nycteribiidae and the Streblidae. The pupae [encysted ? ? of *Ascodipteron*] of some fly, not belonging to either of these families, have been found embedded in the wing membranes of a species of *Hipposideros*”, p. 19.

Siebold, Carl T. E. von


Silva Taboada, Gilberto


Skillen, S. (see Carlisle & Skillen)

Skuratowicz, W.


Sluiter, J. W. (see van Heerdt et al.)

Smart, John


Smith, Hobart M.


Smith-Rowe, T.

*1888. Parasites of flying fox. J. Microsc. Nat. Sci (J. Postal Microsc. Soc.) 7 (=n. s., 1): 260, pl. 18, fig. 10. — Very brief notes on “the insect” (no name, no locality given) ex flying fox; rough outline of head of host.

Soós, Árpád


Southgate, B. J. (see Woodroffe & Southgate)

Speiser, Paul G. E.


1901. Ueber die Nycteribiiden, Fledermausparasiten aus der Gruppe der pupiparen
Dipteren. Arch. Naturg. 67 (1): 11-78, 1 pl. — Monographic rev. incl. historical account, morphology, larva, parasites, keys, catalog; 5 g., 45 spp. (3 doubtful); Nycteribia divided into 3 subg. Acrocholidia, Stylistida, Listropodia; Archinycteribia (n. g.) actena, Penicillidia euxesta, pachymela, N. (A.) dispar, scissa, stichotricha, N. (L.) parvula, allotopa n. spp.; Pen. conspicua n. name.


Spencer, George J.


Stabler, Robert M. & R. M. Fox (see also Fox & Stabler)


Stackelberg, Alexander A.


Starrett, Andrew & L. de la Torre


Staveley, E. F.


Stebbings, R. E.


Stefanelli, Alberto


Penicillidia dufouri, conspicua, Celeripes biarticulata, Listropodia schmidli, pedicularia, blasii, Nycteribia vexata in Italy briefly analysed; certain details of ♂ ♀ terminalia figured.


Stefani-Perez, Teodosio de (see Bezzi et al.)

Stephens, J. H. Schuurmans (see Schuurmans Stekhoven, J. H., Jr.)

**Stephens, James F.**

1829a. The nomenclature of British insects, being a compendious list of such species as contained in the systematic catalogues of British insects. 68 columns. London (Baldwin). [Ed. 2, 136 columns, published 1831]. — Nycteribia hermanni, latreillei, column 63.


**Stiles, C. Wardell & M. O. Nolan**


**Stock, A. D.**


**Strinati, P.**


Strobl, Gabriel (see Czerny & Strobl)

**Stuardo Ortiz, Carlos**

1946. Catalogo de los Dipteros de Chile. 253 pp. Santiago de Chile (Ministr. d. Agric.) — Basilia silvae, p. 188.

**Swinhoe, Robert**

of a bat ["Dysopus rueppelli"] some years ago at Amoy .... The living animal carried two species of parasites, one winged and other wingless. These have been described and figured by Mr. H. Giglioli ....", p. 618.

Taboada, G. Silva (see Silva Taboada, G.)

**Tamsitt, J. R. & I. Fox**


**Tamsitt, J. R. & D. Valdivieso**


**Tatarinov, K. A.**


**Tennent, J. Emerson**


1861. Sketches of the natural history of Ceylon with narratives and anecdotes illustrative of .... insects .... xxiii + 500 pp., figs. (unnumbered). London (Longman & Roberts). — Insects pp. 403-479; *Nycteribia* sp. ex *Scotophilus*, p. 21, figured.

**Thalhammer, E. Janos (= Johannes)**


**Thaxter, Roland**


Theodor, Oskar


1953. On the structure of the genitalia in the Nycteribiidae. Trans. 9th Int. Congr. Ent. (Amsterdam) 2: 27-33, 6 figs. — 3 types of ♂ ♀ genitalia recognized; Nycteribia biloba, Basilia nana nom. nuda; Acrocholdia integra n. name.


1971

Maa: Bibliography of batflies

rec., general distribution, host specificiity; Nycteribia allotopoides, parvuoides, Stylidia mindanaensis, brachyacantha, Penicillidia oligacantha n. spp.; P. oceanica acuminata n. spp.; races of Nycteribia allotopa & N. parvula fr. India, Ceylon & Taiwan compared.


1968a. New species and new records of Nycteribiidae from the Ethiopian, Oriental and Pacific regions. Parasitology 58: 247-276, 62 figs. — Basilia sierraelectronae, victoriananzae, saccata, Penicillidia allisoni, principis, sumatrensis, Stylidia tounggoenesis n. spp.; P. deciapiens ?, St. phthisica, euxesta, Leptocyclopodia schizopyga, planiseta, redes.; St. burmensis n. name for euxesta Theod.; L. melanoleuca n. name proposed conditionally; Listropodia, Stylidia, Triopselia status discussed; misc. rec. for Mozambique, Congo, S. Tomé, Principe I., Sierra Leone, Ghana, Uganda, Tanzania, Madagascar, Burma, Malay, Sumatra, Borneo, Philippines, Ceram, Bismarck Arch.

1968b. A revision of the Streblicae of the Ethiopian Region. Trans. Ent. Soc. Lond. 120: 313-373, 225 figs. — Keys to various taxa; 2 subfam., 4 g., 36 spp. - subsp. (incl. 2 unnamed) recognized; Raymondia, entire g. divided into 2 subg., 6 species-groups; Brachytarsina alluaudi minor, B. longiarista longipes n. subssp.; R. (R.) allisoni, tauffliebi, Ascodipteron brachythecum n. spp.; supplementary des. of several Raymondia (incl. 4 Oriental ones) & Ascodipteron spp. (incl. illustrations of larval spiracles); discussions on host relationship.
Theodor, O. & M. Costa


Theodor, O. & A. Moscona


Theodor, O. & B. V. Peterson


Théodoridès, Jean (see also Leclercq & Théodoridès)


Thompson, Gordon B.


1937a. A list of the Diptera (Nycteribiidae and Streblidae) recorded from bats of the Pacific islands. Ent. Mon. Mag. 73: 202-208. — Scope of this list confined to Bismarck Arch., New Hebrides, Solomon Is., New Caledonia, Loyalty Is., Samoa, Fiji; compiled from 6 papers by Falcoz etc.; 1 Archinycteribia, 2 Penicillidia, 2 Nycteribia, 6 Cyclopodia, 7 Nycteribosca spp. included; host index; also including brief notes, by H. Scott, on 3 Solomon Is. Nyct.

1937b. The parasites of British birds and mammals. XVII. A bibliography of the previous records of Nycteribiidae together with additional records and notes. Ent. Mon. Mag. 73: 274-278. — Earlier literature (20 entries) summarized; Nycteribia latreillei (also Ireland), biarticulata, rec.


**Thompson**, G. B. & N. J. B. Plomley


**Thon**, Theodor & A. B. Reichenbach


**Tillyard**, Robin J.

1926. The insects of Australia and New Zealand. xi+560 pp., figs. (many), 44 pls. — 1 Streb., 5 . Nyct. spp. (all without giving names) included in a census of Australian fauna, p. 378; *Cyclopodia pteropus*, fig. W 72.

Tipton, Vernon J. (see Wenzel & Tipton; Wenzel, Tipton et al.)

**Tokunaga**, Masaaki


**Tonn**, Robert J. & K. Arnold


Torre, Luis de la (see Starrett & de la Torre)

**Townsend**, C. H. Tyler

1891. A remarkable new hippoboscid from Mexico. *Ent. News* 2: 105-106. — *Trichobius* (as n. g.) *dugesii* n. sp.; *Strebla* to be included in Hippoboscidae.


Trimen, Roland


Ubelaker, John E.


Urich, Frederic W.


Valdivieso, D. (see Tamsitt & Valdivieso)

Valle, Antonio (see Bianchi et al.)

van Beneden, P. J. (see also Gervais & van Beneden)


van den Broek, E. (see Schuurmans Stekhoven & van den Broek)

van der Wulp, Frederick M.


van der **Wulp, F. M. & J. C. H. de Meijere**


Vaney, C. (see under Falcoz 1926)

van **Eyndhoven, G. L.**


van **Heerdt, P. F. & J. W. Sluiter**


van **Riel, J. & Hiernaux-Ihoest**


Vañura, J.


van **Volkenberg, H. L.**


Vermeil, Claude


Verolini, Felice


Verrall, George H.


Volkenberg, H. L. van (see van Volkenberg, H. L.)
Walker, Francis


Walsh, G. B.


Waterhouse, Charles O.

1879. On the affinity of the genus Polyctenes Giglioli with the description of new species. Trans. Ent. Soc. Lond. 1879: 309-312, 2 pls. — Euctenodes (n. g.) mirabilis n. sp., Colombia; g. placed provisionally in Polyctenidae.

Waterston, James


Wegelin, H.


Weidner, Herbert

Weiss, Albert

Wenzel, Rupert L. (see also Dybas & Wenzel)


Wenzel, R. L. & V. J. Tipton
1966. Some relationships between mammal hosts and their ectoparasites. In R. L. Wenzel & V. J. Tipton (ed.): Ectoparasites of Panama: 677-723, 4 figs. — Host specificity, competitive displacement, epidemiological relationship, altitudinal distribution, faunal relationship, zoogeographical implications of bats and other Panamanian ectoparasites examined; a case of coexistence and possible competitive displacement among Streb. on Phyllostomus hastatus discussed; relative faunal endemism of Panama compared with that of northern S. America.

Wenzel, R. L., V. J. Tipton & C. J. Fowler

Wenzel, R. L., V. J. Tipton & A. Kiewlicz
1966. The streblid batflies of Panama. In R. L. Wenzel & V. J. Tipton (ed.): Ectoparasites of Panama: 405-675, figs. 38-146. — Virtually a monographic rev. of New World forms; 23 g. (7 n.) 87 spp. (50 n.) in 3 subfam. treated (plus 1 Strebla, 6 Paratrichobius spp. unnamed) leaving only 7 known New World spp. untreated; of these, 20 g. 66 spp. from Panama (12,000 specimens from over 50 spp. of bats); morphology pp. 415-425; biological notes pp. 425-427; technique pp. 410-415; host relationships pp. 636-661; comprehensive bibliography for New World Streb.; 55% of the spp. each confined to a single host species, only 15% occurring on bats of more than 1 g. (usually of same fam.) or on bats of closely related g. of same subfam.; monotypic hosts very rarely harboring different Streb. in different parts of their geographic ranges; also very rarely Streb. of same g. occurring together on same host; Anastrebla (n. g.) modestini, mattadeni, nycteridis, ANatrichobius (n. g.) scorzai, Aspidoptera delatorrei, Mastoptera (n. g.) guimaraesii, Megistopoda theodori, Noctiostrebla (n. g.) aitkeni, maai, traubi, Nycterophilus fairchildi, parnelli, natali, Paradyschiria lowei, sanchezii, salvini, Pseudostrebla greenweli, Strebla altmani, alturezi, carolliae, christinae, conocous (!), diaemi, diphyllae, galindoii, hertigi, hoogstraali, kohlsi, machadoi, Trichobius bequaerti, brennani, diphyllae, dugesioides, dunnii, dybasi, furmani, galei, joblingii, johnsonae, keenani, lioinmycteris, lonicymphyllae, macrophylli, mendesi, urodermae, vampyropis, yunkeri n. spp.; Exastinion, Trichobioides n. g.; Nycterophilinae n. subfam. [authorship of above n. taxa accredited to Wenzel alone]; Neotrichobius
stenopterus Wzl. & Aitken n.g., n.sp.; *Pseudotrebla, Stizotrebla* & *Eldunnia* transferred to Trichobiinae; *Strebla = Euctenodes; Hippobosca vespertilionis* Fabr., neotype designated.

**West**, Tuffen


**Westwood**, John O.


**Weyenbergh**, G. Hendrik


**Whitaker**, J. O., Jr.


**White**, Adam

Widmark, Erik


Wiedemann, Christian R. W.


1824. Analecta entomologica ex Museo regio Havniensi maxime congesta. 60 pp., 1 pl. Kiliae (Reg. Typogr. Schol.) — Strebla n. g. for vespertilionis Fabr. [Authorship of Strebla wrongly accredited by Latreille & others to J. W. Dalman (1823. Analecta entomologica, iv + 104 pp., Holmiaes) whose work is entirely different.]


Williston, Samuel W.


1908. Manual of North American Diptera. 405 pp., 163 figs. New Haven (Hathaway). [Ed. 3 of Williston 1888]. — Streb., pp. 384-385, key to 4 g., Megistopoda = Pterellipsis; Nyct., p. 386, Nycteribia said to be the only well defined g., while Penicillidia, doubtfully distinctive.

Wingate, W. J.


Winn, Sarah E. (see McClure, Lim & Winn)

Wiseman, J. S. (see Eads, Wiseman & Menzies)

Wolcott, George N.


Wolf, Benno


Wood, John G.


Wood, Sherwin F. (see Augustson & Wood)

Woodroffe, G. E. & B. J. Southgate


Wu, Chenfu F.


Wulp, F. M. van der (see van der Wulp, F. M.)

Yerbury, J. W.


Young, Howard (see Sealander & Young)

Zetterstedt, Johann W.


Zeve, Victor H.


Zeve, V. H. & D. E. Howell

1962. The comparative external morphology of Trichobius corynorhini, T. major


**Zimsen, Ella**


**Zovtyj, I. F. et al.**


**Zumpt, Fritz K. E.**


**Zwart, D.**


**II. SUBJECT INDEX**

For those subheadings prefixed by double asterisk (**) the entries listed under the subheading “Revisions” should also be consulted. Certain entries (such as Dudich 1924, Rudow 1871) listed under the subheading “Faunistics, Individual Countries” might have wrongly been placed because the political boundary-lines of the involved countries have been changed often, or the exact type localities of the involved species were not given in their original descriptions. Diacritic marks of the authors’ names are omitted in this index.

**General Account.** F. J. Allen 1885; G. M. Allen 1939; Audouin, Blanchard et al. 1849; Audouin & Milne-Edw. 1828; Bequaert 1953b, 1954; Bezzi 1893, 1897, 1907; Blanchard 1840, 1845; Curran 1945; Desmarest 1867, 1869; Dogiel 1964; Drapiez 1841; Dufour 1831; Eisenstraut 1944; Frauenfeld 1855; Guerin 1827, 1835, 1844; Halloran 1955; Jeannel 1943; Joling 1954a; Q. C. Kessel 1924; Lamarck 1835; Latreille 1803, 1805, 1818a, b, 1829a, b, 1836; Lohrl 1953; MacLeay 1821; Macquart 1843; Matthews 1952; Oldroyd 1964; A. G. Olivier 1812; Percheron 1838, 1846; Riedel 1895; Ryberg
1947; Schuurmans Stkh.1939, 1957; Scott 1914b, 1922, 1924, 1936b; Seguy 1936, 1950; Sharp 1901; Smith-Rowe 1888; Speiser 1899a, 1907d; Staveley 1871; Tonn et al. 1838; Weidner 1958; West 1887, 1888; Westood 1840a.

**Historical Remarks.** Aellen 1955; Bequaert 1954; Collins 1931; Leuckart 1858; Nitzsch 1855; Scott 1924; Speiser 1900b, 1901; Westwood 1834, 1835.

**Technique.** Bezza 1893, 1897; Ross 1961; Scott 1914a, 1936a, 1940; Theodor 1967b; Wenzel, Tipton & Kiewlicz 1966.

Collections. Bau 1929 (Röder colln., cat.); Byers et al. 1962 (Univ. Kansas types); Chalupsky 1956 (Storkan colln., cat.); Falcoz 1924 (Paris Mus. colln., cat.); Guiglia 1957 (Genova Mus. types); Hunter 1914 (Univ. Kansas types); Hurka 1964b (Berlin Mus. colln., cat.); Jolbing 1928, 1929 (head, mouthparts), 1930 (Raymondia, 1934a (Nycteribosca), 1936a (Streb.), 1938 (Trichobius), 1939b (Ascodipteron), 1951, 195a (terminalia, Streb.); Massonnat 1909 (head); Mazza et al. 1939 (Trichoobia); Muggenburg 1892 (mouthparts, Nycteribia); Mukerjee et al. 1954 (Cyclopodia); Nussbaum 1960 (thoracic skeleton, Basilia); Pessoa & Guimaraes 1937 (antennae, Streb.); Sadoglu 1956 (ocular reduction); Schlein 1970 (thoracic skeleton); Schuurmans Stkh. 1952a (Ascodipteron); Speiser 1899b (wing reduction), 1900b (Streb.), 1901 (Nyct.); Stefanelli 1942f (terminalia, Nycteribosca); Theodor 1955 (terminalia, Nyct.), 1954b (Streb.), 1954a, 1967b (Nyct.); Theodor & Moscona 1954 (Nyct.); Townsend 1913 (crossveins, Streb.); Zeve et al. 1962, 1963a, b (comparative study, 3 Trichobius spp.).

**External Morphology, Adults.** Adensamer 1896 (Ascodipteron); Bequaert 1953b (head); Bezzi 1900, 1906 (wing reduction); Cole 1927 (terminalia); Corradetti et al. 1941 (terminalia, Nyct.); Crampton 1942 (head, thorax); Gerstaecker 1862 (halteres, Nyct.); Guimaraes et al. 1956 (Basilia); Hackman 1964 (wing reduction); Hennig 1941b (antennae, thoracic sternal area), 1958 (comparative morphology), 1965 (mouthparts, genitalia); Jobling 1928, 1929 (head, mouthparts), 1930 (Raymondia), 1934a (Nycteribosca), 1936a (Streb.), 1938 (Trichobius), 1939b (Ascodipteron), 1951, 195a (terminalia, Streb.); Massonnat 1909 (head); Mazza et al. 1939 (Trichoobia); Nussbaum 1960 (thoracic skeleton, Basilia); Pessoa & Guimaraes 1937 (antennae, Streb.); Sadoglu 1956 (ocular reduction); Schlein 1970 (thoracic skeleton); Schuurmans Stkh. 1952a (Ascodipteron); Speiser 1899b (wing reduction), 1900b (Streb.), 1901 (Nyct.); Stefanelli 1942f (terminalia, Nycteribosca); Theodor 1955 (terminalia, Nyct.), 1954b (Streb.), 1954a, 1967b (Nyct.); Theodor & Moscona 1954 (Nyct.); Townsend 1913 (crossveins, Streb.); Zeve et al. 1962, 1963a, b (comparative study, 3 Trichobius spp.).

**Internal Morphology, Adults.** Adensamer 1896 (Ascodipteron); Bequaert 1953b (reproductive system); Hardenberg 1927, 1929 (comparative study); Massonnat 1909 (nervous system); Mukerjee et al. (alimentary duct, reproductive system, Cyclopodia); Nussbaum 1960 (thoracic musculature, nervous system, Basilia); Rodhain et al. 1915 (reproductive system, Cyclopodia); Sadoglu 1956 (ocular reduction); Schlein 1970 (thoracic musculature); Verolini 1957 (reproductive system, Nycteribia).

**Histology.** Theodor 1968b (ocular ganglion, Brachytarsina); Verolini 1957 (reproductive system, Nycteribia).

**Cytology.** Bequaert 1953b; Cooper 1942.

**Immature Stages.** Banks 1911 (Ascodipteron); Decu-Burghele 1963 (4 Nycteribia, 1 Phthiridium sp., w. key); Ferris 1923 (Nycteribia), 1930a (Basilia); Guimaraes 1944b (1 Aspidoptera, 1 Paradyshoria, 2 Trichobius spp.); Guimaraes et al. 1956 (5 Basilia sp.); Hase 1931a (Basilia); Hennig 1952 (comprehensive review), 1965 (mouthparts, respiratory system); Hurka 1963 (1 Phthiridium, 4 Nycteribia sp., w. key); Jobling 1949b (Ascodipteron); Maa 1965a (Ascodipteron); Marshall 1970 (1 Basilia, 1 Nycteribia, 2 Penicillidia spp.); Muir 1912 (1 Cyclopodia, 1 Ereuctenia, 1 Nycteribosca, 2 Nycteribia, 2 Ascodipteron spp.); Osten Sacken 1881a (Nyct. indet., Ceylon); Rodhain et al. 1915 (Cyclopodia); Ryberg 1939 (1 Basilia, 2 Nycteribia, 1947 (2 Nycteribia, 1 Penicillidia, 1 “Eucampsipoda”; plus colln. of drawings of previously described larvae & puparia); Scott 1908 (Penicillidia), 1934 (Nycteribia), 1936 (Basilia); Speiser 1900e (Nycteribosca), 1901 (1 Nycteribia, 1 Penicillidia sp.); Theodor 1954b (Ascodipteron), 1966b (5 Ascodipteron spp.); Theodor & Moscona 1954 (Ascodipteron); Westwood 1835, 1840a (Cyclopodia).

**Host Relationships.** Aellen 1963 (influence, host hibernation); Annandale 1903 (host size vs parasite size); Balcells 1956a (host preference, Eur. Nyct.,), 1967 (influence, ecological groups of hosts);

**Bionomics.** Balcells 1956a (puparial period, Basilia, Spain); Barbour 1910 (Ascodipteron, Amboina); Bezi 1893, 1897 (general remarks); Eads et al. 1957 (man-attacking Streb.); Hardenberg 1927, 1929 (sex ratio, larval nutrition); Hagen 1951 (larval development); Hase 1931a (Basilia, Venezuela), 1931b (cohabitation w. fleas, Basilia); Jobling 1939b (life history, Ascodipteron); Kirschblatt 1936 (Nyct. in bird's nest); Leong et al. 1968 (Eucampsipoda, Malaya); Leuckart 1858 (larval development); McClure et al. 1967 (man-attacking & light attraction, Streb.); Marshall 1970 (Basilia, Malaya); Muir 1911, 1912 (Ascodipteron, Amboina & Australia); Nordberg 1936 (Nyct. in bird's nest); Oudemans 1939 (viviparism, Nyct.); Rodhain et al. 1915 (Cyclopodia, Congo); Ross 1959 (population dynamics, N. Amer. Trichobius); Ryberg 1939, 1947 (Basilia & Nycteribia, Sweden); Schulz 1938 (Nycteribia, Germany); Scott 1917 (general remarks, Nyct.); Speiser 1900d (same, Streb.); Tennent 1859 (movement mechanism, Basilia); Thompson 1937c (census, Ceylonese forms); Urich 1922 (Cyclopodia, S. Tomé).

Symbiotic Bacteria; Rickettsia. Aschner 1931 (Rickettsia in Nycteribia, bacteria in Nycteribia etc.), 1946 (bacteria in Eucampsipoda).

Parasitic Fungi. Balcells 1956a, 1968b; Brauer 1871; Diesing 1859; Kolenati 1856a, 1857b; Leuckart 1861; Peyritsch 1871; Ryberg 1947; Scott 1914a, c, 1925, 1936a; Speiser 1900c, 1901; Thaxter 1896, 1901, 1908 (rev.).

Parasitic Haemoflagellates. Anciaux 1965 (batflies as possible vectors, Congo); Chattan 1909 (Crithidia n. sp. ex Cyclopodia, India); Corradetti 1936 (Crithidia n. sp. ex Nycteribia, Italy); Najere 1945 (hosts, Spain); Reichenow 1940 (Crithidia n. sp. ex Penicillidia, Tanzania).

Parasitic Haemosporidia. Anciaux 1965 (batflies as possible vectors, Congo); Bearup et al. 1947 (negative findings in Cyclopodia, Australia); F. L. Dunn 1965 (Streb. as most likely vectors, oocyst-like structure detected in midgut, Malaya); Gernham 1966 (Nyct. as possible vectors of Nycteribia medusiformis); Mackie 1914 (negative findings in Cyclopodia, India); Mer et al. 1947 (Penicillidia infected by Polychromophilus, Israel); Schingarew 1906 (negative findings in Nyct. ex Myotis & Miniopterus, Russia).

Phoretic Laelapid Mites. Domrow 1961, 1963 (Neolaelaps ex Cyclopodia, Bismarck Arch., Australia); Ratcliffe 1931 (“mites” ex Cyclopodia, Australia); Scott 1908a (Leiognathus mite ex Cyclopodia, Ceylon).

Parasitic Chalcid Wasps. Waterston 1922 (Eupelmus n. sp. ex Cyclopodia puparia, S. Tomé).


**Phylogeny; Suprageneric Classification.** Acloque 1897; Auduoin & Milne-Edw. 1828; Bequaert 1953b, 1954; Bigot 1852, 1885; Billberg 1820; Blanchard 1840, 1845; Brues 1904; Burmeister 1837; Crampton 1942; Desmarest 1869; Disconzi 1865; Frauenfeld 1855; Giglioli 1864; Gistel 1848; Guimaraes et al. 1956 (*Basilia*); Hurka 1964a (Eur. Nyct.), 1965 (W. Afr. Strebr.), Maa 1965b (*name list, g. & spp*.; Osten Sacken 1878 (N. Amer.), 1881b (Malay Arch.); Schuurmans Stkh. 1951a (*Guimaraesia*); Scott 1936a (*Basilia*); Speiser 1900b (different Regions); Stiles et al. 1931 (world); Thompson 1935a (*C. Pacific*); v. d. Wulp 1896 (S. Asian); Wenzel 1965a (N. Amer. Strebr.), 1965b (N. Amer. Nyct.), 1967b (N. Amer. Strebr.); Wolf 1938 (caverniculous forms); Zumpt 1966 (Ethiopian).

**Generic Keys.** Bedford 1927, 1932 (Ethiopian); Bequaert 1940, 1942 (Amer. Strebr.); Costa Lima 1921 (Amer. Strebr.); Del Ponte 1944 (Amer. *Basilia*); Grunberg 1907 (former German colonies); Guimaraes et al. 1956 (*Basilia*); Hurka 1964a (Eur. Nyct.), 1965 (W. Afr. Strebr.), Maa 1965b (*name list, g. & spp*.; Osten Sacken 1878 (N. Amer.), 1881b (Malay Arch.); Schuurmans Stkh. 1951a (*Guimaraesia*); Scott 1936a (*Basilia*); Speiser 1900b (different Regions); Stiles et al. 1931 (world); Williston 1885, 1896, 1908 (N.Amer.); Zumpt 1966 (Ethiopian).


**Zoogeography.** Balcells 1967, 1968a, b; Bodenheimer 1937; Guimaraes 1946; Guimaraes et al. 1956; Hurka 1962, 1964a, 1969; Hurka & Povolny 1968; Jobling 1951; Maa 1967b; Scott 1917, 1925, 1932a; Speiser 1908c; Theodor 1952; Theodor & Moscona 1954.

**Faunisties, Individual Countries.** Countries arranged more or less in the order from the Palaeartic to the Ethiopian, Oriental, Australian, Nearctic and Neotropical Regions and from the west to east and north to south.

NORWAY: Collett 1911.

SWEDEN: Fabricius 1775, 1781, 1794, 1803; Fallen 1818; Gmelin 1790; Linnaeus 1758, 1761, 1767; Ryberg 1929 (rev.), 1939, 1947; Widmark 1907; Zetterstedt 1848, 1860.
DENMARK: Ryberg 1929.

FINLAND: (incl. Asian portion): Arzamasov et al. 1962 (Belorussia); Bogdanov 1953 (Uzbek); Dogiel 1964 (Leningrad); Dubovcenko 1968 (Azerbaijan); Hurka 1962 (Uzbek, W. Caucasus), 1964b (Russia), 1969 (Turkmenia, Uzbek, Kirghiz, E. Kazakhstan); Kirschenblatt 1936 (Russia); Markova 1938 (Leningrad); Pliginsky 1927 (Crimea); Ryberg 1929 (Ural); Schingarew 1906 (Russia); Siebold 1837 (E. Prussia); Stackelberg 1928 (Turkmenia); Tatarinov 1956 (Ukraine); Wiedemann 1818 (no locality, perhaps Russia).

BRITISH ISLES: Ash 1955; Audcent 1934, 1950; Beaulah 1885; Brunetti 1888; Carlisle et al. 1960 (Ireland); Chapman et al. 1912; Charbonnier 1912, 1920; Colyer et al. 1951; Coward 1907; Curtis 1829, 1831; W. Evans 1904; Fordham 1945; George 1954, 1957, 1958; Gilbert 1949, 1951; Grimshaw 1901, 1906; Hardy 1914; Hazelton 1959, 1960, 1965; Hazelton et al. 1947; Hesketh 1951, 1954; Hooper 1964; Hooper et al. 1950, 1956; Humphries 1959; Kelsall 1887; Kloet et al. 1945; Leach 1816, 1817; Matthews 1932; Montagu 1808, 1815; Morris 1865; Newman 1834; Oldham 1896, 1912; O'Mahony 1939; Pearce 1921; Smart 1939; Staveley 1871; Stebbings 1966; Walker 1853; Walsh 1928; Westwood 1834, 1835, 1840b; White 1853; Wingate 1906; Wood 1872; Woodroffe et al. 1951; Yerbury 1919.

NETHERLANDS: Bels 1940, 1941; Bels & Bels 1939; Schmitz 1909; Schuurmans Stkh. 1955 (rev); Schuurmans Stkh. & Broek 1969 (rev.); v. d. Wulp et al. 1898.

BELGIUM: Aellen 1955; Aniciaux 1950; Collart 1933; Leruth 1939; Plateau 1873; v. Beneden 1872.

GERMANY: Bau 1929; Czwalina 1893; Eisenstraut 1937; Enderlein 1936; Frisch 1728; Gurtl 1857; Hurka 1964b; Karaman 1939b, 1947; Klugkist 1909; Koch 1865; Neuhaus 1886; Nitzsch 1803; Schrank 1803; Schreckenstein 1802; Schulz 1938; Speiser 1900a; Wegelin 1933; Weidner 1834, 1835.

POLAND: Czwalina 1893; Hurka 1964b; Kozlowski 1956; Skuratowicz 1962; Speiser 1900a, c.

FRANCE: Acloque 1897; Aellen 1949, 1955; Balazuc et al. 1951; Beaucournu 1961, 1962a, b; Beaucournu et al. 1963; Bezzi 1903; Bitsch 1957 (key); Didier et al. 1953; Dufour 1831; Falcoz 1923b, 1924, 1926 (rev.), 1931; Hermann 1804; Jeannel 1926; Larrousse 1828, 1829; Leclercq 1803; Schrank 1803; Schreckenstein 1802; Schulz 1938; Speiser 1900a; Wegelin 1933; Westwood 1834, 1835.


CZECHOSLOVAKIA: Absolon 1899; Chalupsky 1878; Diesing 1859; Dudich 1924, 1925; Gurlerich et al. 1955 (rev.), 1956; Hurka 1957, 1958a, 1959a, b, 1964b; Hurka & Chalupsky 1956; Kolenati 1856b; Maa 1962.


FRANCE: Acloque 1897; Aellen 1949, 1955; Balazuc et al. 1951; Beaucournu 1961, 1962a, b; Beaucournu et al. 1963; Bezzi 1903; Bitsch 1957 (key); Didier et al. 1953; Dufour 1831; Falcoz 1923b, 1924, 1926 (rev.), 1931; Hermann 1804; Jeannel 1926; Larrousse 1828, 1829; Leclercq 1803; Schrank 1803; Schreckenstein 1802; Schulz 1938; Speiser 1900a; Wegelin 1933; Westwood 1834, 1835.

AUSTRIA: Falcoz 1923b; Karaman 1939a; Peyritsch 1871; Rossi 1848; Schiner 1864b; Speiser 1900c.


ROMANIA: Decu-Burghele 1962a, b; Diesing 1839; Dudich 1925; Peyritsch 1871; Speiser 1900c; Thalhammer 1918.

ITALY: Aellen 1955; Baggini 1961; Bezzi 1891, 1892; Bezzi et al. 1897; Bianchi et al. 1949; Boldori 1927, 1963; Conci 1952; Conci et al. 1953; Corradetti 1934, 1936; Dinale 1958, 1962; Dinale et al. 1963, 1966; Disconzi 1865; Ferris 1930; Fiori 1880; Franciscolo 1950, 1951, 1955; Ghidini 1934; Greca 1946; Hurka 1964b; Klamer et al. 1954; Krause 1911; Lanza 1947, 1948, 1950, 1952, 1959 (cat.); Lanza et al. 1953; Lioy 1895; Menozzi 1939; Pavon 1937, 1941; Petagna 1792; Ricci 1953, 1954; Risso 1826; Rondani 1879; Russo 1838, 1837; Sacca et al. 1949; Sanfilippo 1930; Stefanelli 1942a-f, 1949; Westwood 1834, 1835.
BULGARIA: Gueorguiev et al. 1962; Hurka 1958b, 1962; Karaman 1939a
GREECE: Aellen 1955; Bau 1929; Chalupsky 1956; Hurka 1964b; Pieper 1965.
PORTUGAL: Arias 1912b; Braga 1941; Decu-Burghhele 1952a; Sala Castel. 1956.
MOROCCO: Aellen 1952, 1955; Falcoz 1924; Seguy 1930.
ALGERIA: Aellen 1955; Falcoz 1923b, 1925; Seguy 1933.
TUNISIA: Karaman 1939a; Verneil 1960; Weiss 1911.
EGYPT: Aschner 1946; Becker 1903; Frauenfeld 1856a, b, 1857a, b; Hurka 1964b; Jobling 1952, 1954a; Karaman 1939a; Maa 1965a; Macquart 1851; Scott 1925; Speiser 1900c; Thaxter 1901, 1908; Theodor 1956.
CYPRUS: Bequaert 1953a; Theodor 1956.
LEBANON: Aellen 1955; Lewis et al. 1962.
SYRIA: Hurka 1964b.
IRAN: Maa 1968c.
CHINA PROPER: Ferris 1930b; Giglioli 1864; Hsu 1935, 1936; Hurka 1969; Jobling 1951; Maa 1962, 1969a; Macquart 1843; Schuurmans Stkh. 1931b; Scott 1925, 1936a; Swinhoe 1870; Walker 1849; Westwood 1834, 1835; Wu 1940 (cat.)
MONGOLIA: Theodor 1966a; Zovtyj et al. 1962.
KOREA: Maa 1968c.
JAPAN: Esaki 1938, 1950; Kishida 1928. 1932a, b; Maa 1967b (rev.); Marumo 1927; Matsumura 1931; Miyake 1919; Sasakawa 1960, 1965; Scott 1936a; Tokunaga 1932.
RYUKYU IS.: Jobling 1951; Maa 1967b.
SENEGAL: Camicas 1968; Falcoz 1924; Gervais 1843; Seguy 1930.
GAMBIA: Theodor 1956.
LIBERIA: Bequaert 1953a; Theodor 1956.
IVORY COAST: Bigot 1891; Jobling 1956; Maa 1962; Speiser 1902a; Theodor 1956.
GHANA: Theodor 1956, 1968a
DAHOMEY: Falcoz 1924; Scott 1922; Theodor 1956.
NIGERIA: Jobling 1954a; Maa 1968c; Oldroyd 1953; Theodor 1956.
CAMEROONS: Jobling 1954b; Karaman 1947; Maa 1962; Scott 1922; Theodor 1956.
GULF OF GUINEA: Enderlein 1901 (Rolas); Hurka 1964b (Rolas); Karsch 1884 (Rolas); Theodor 1968a (Principe I, S. Tomé); Urich 1922 (S. Tomé); Waterston 1922 (S. Tomé).
Bibliography of batflies

1971

Maa: Bibliography of batflies


SUDAN: Becker 1922; Jobling 1954a; Theodor 1956.

ETHIOPIA (Abyssinia): Beuzzi 1915; Monticelli 1898; Theodor 1956.

SOMALIA: Beuzzi 1915; Jobling 1931; Reichenow 1940.

ARABIA: Hurka 1964b; Jobling 1957, 1958; Sanborn et al. 1953; Sharp 1901.


KENYA: Falcoz 1923b; Hurka 1964b; Jobling 1939b, 1940, 1954a; Theodor 1956.

TANZANIA: Aders 1917; Falcoz 1923b, 1924; Hurka 1964b; Jobling 1931, 1936a; Karaman 1939b; Loveridge 1923; Morstatt 1913; Speiser 1907c, 1924; Theodor 1936, 1968a.

ANGOLA: Jobling 1954a; Theodor 1956.

MALAWI: Jobling 1954a; Theodor 1956.

S. AFRICA (incl. SW Africa, Rhodesia, Bechuanaland): Cuthbertson 1937; Ferris 1930b; Fiedler 1954; Hurka 1964b; Jobling 1931, 1954a, 1959; Karaman 1939a; Lavoipierre 1946; Maa 1968c; Scott 1925; Speiser 1902a, 1908a; Theodor 1956; Trimen 1878; Walker 1849; Zumpt 1950.

MOZAMBIQUE: Maa 1968c; Theodor 1956.

MADAGASCAR (incl. Aldabra Is., Comoro Is.): Falcoz 1931; Hurka 1964b; Jobling 1952; Karaman 1947; Maa 1968c; Scott 1914b (Assumption I.); Speiser 1908b; Theodor 1956, 1968a.

MAURITIUS: Leach 1817; Latreille 1818; Theodor 1956; Westwood 1834, 1835.

MALDIVE ARCH.: Enderlein 1901.

S. AFRICA (incl. SW Africa, Rhodesia, Bechuanaland): Cuthbertson 1937; Ferris 1930b; Fiedler 1954; Hurka 1964b; Jobling 1931, 1954a, 1959; Karaman 1939a; Lavoipierre 1946; Maa 1968c; Scott 1925; Speiser 1902a, 1908a; Theodor 1956; Trimen 1878; Walker 1849; Zumpt 1950.

W. PAKISTAN: Bal et al. 1949; Chatton 1909, Choudhuri et al. 1965; Falcoz 1924; Freeman 1885; Hiregaudar et al. 1955, 1956 (rev.); Karaman 1947; Maa 1962, 1968a; Mackie 1914; Maxwell-Lefroy et al. 1909; Mukerji et al. 1954; Schiner 1868; Scott 1908b, 1914a, 1917, 1925; Speiser 1903; Theodor 1956, 1963; Walker 1849; Westwood 1834, 1835, 1839.

CEYLON: Fletcher 1906; Green 1911; Hurka 1964b; Maa 1962; Motschulsky 1863; Phillips 1924; Schiner 1868; Scott 1908a, 1914a, 1925, 1936a; Senior-White 1923; Tennent 1859, 1861; Theodor 1956, 1963; Thompson 1937c.

E. PAKISTAN, ASSAM: Awati 1922; Patton 1924; Scott 1925.

BURMA: Bequaert 1953a; Jobling 1951; Schuermanns Stkh. 1939; Scott 1914a, 1925; Speiser 1903; Theodor 1968a.

THAILAND: Maa 1962, 1968a; Scott 1914a; Speiser 1903; Theodor 1956.

CAMBODIA: Maa 1962.

VIETNAM: Maa 1962.

TAIWAN: Hennig 1941a (cat.); Karaman 1939a, b; Maa 1962; Schuermanns Stkh. 1928; Scott 1908, 1914a; Theodor 1963; Wu 1940 (cat.).

PHILIPPINES: G. M. Allen 1939; Ferris 1924a, b, 1925a, b; Hurka 1964b; Jobling 1951; Maa 1962, 1966, 1968a; Scott 1917; Theodor 1963, 1966b, 1968a; Walker 1849.

BORNEO: Banks 1911; Maa 1962, 1966, 1968a; Schuermanns Stkh. 1941a, 1942, 1958; Scott 1914b (Labuan); Shelford 1916; Theodor 1956, 1968a; Theodor & Peterson 1964.


SUMATRA, SIMALUR: Edwards 1919; Ferris 1925a; Jacobson 1912; Schuermanns Stkh. 1941a, 1942, 1958; Schuermanns Stkh. & Hardenberg 1939; Scott 1914a, 1917, 1936a; Theodor 1936, 1968a; v. d. Wulp 1892.
JAVA, BAli: Adensamer 1896; Bequaert 1953b (Cyclopodia plenoctena, status); Falcoz 1931; Hurka 1964b; Karaman 1939b; Maa 1962, 1966; Meijere 1899a, b, 1912; Rondani 1878; Schuurmans Stkh. 1932, 1942, 1951b, 1952a; Schuurmans Stkh. & Hardenberg 1939; Theodor 1936.

LOMBOK, FLORES, SUMBA, KOMODO, TIMOR: Bau 1930a; Hurka 1964b; Maa 1962, 1966.


MOLUCCA IS.: Barbour 1910; Bequaert 1942a, 1953b; Maa 1962, 1966; Muir 1911, 1912; Rondani 1878; Scott 1914a, 1925, 1932; Speiser 1907a; Theodor 1968a; Walker 1861b, 1868.

NEW GUINEA (incl. Bismarck Arch., Salawati, Timorlaut, Key Is., Fergusson J.): Enderlein 1901; Hurka 1964b; Jobling 1951; Maa 1962, 1966, 1968b; Muir 1912; Musgrave 1925, 1927 (Nycteribia, key); Paramonov 1931; Rainbow 1904; Ratcliffe 1967; Scott 1914a, 1932b; Speiser 1902a, b; Thompson et al. 1938; Theodor 1956, 1966b, 1968a; Thompson 1937a.

AUSTRALIA: Bearup et al. 1947; Collens 1970a; Dew 1963; Falcoz 1921, 1923a; Ferris 1924c; Froggatt 1907; Hughes 1960; Jobling 1936b, 1951; Maa 1962, 1966; Muir 1912; Musgrave 1925, 1927 (Nycteribia, key); Paramonov 1931; Rainbow 1904; Ratcliffe 1931; Rudow 1871, 1872; Scott 1914a, 1932b; Speiser 1902a, b; Thompson et al. 1938; Theodor 1956.

SOLOMON IS.: Jobling 1934b; Maa 1962, 1966, 1968a; Matheson 1945; Scott 1937; Thompson 1937a.

NEW HRERIDES: Falcoz 1924; Maa 1962, 1966b; Scott 1932a; Thompson 1937a.

NEW CALEDONIA, LOYALTY IS.: Bigot 1860, 1885; Falcoz 1921, 1923a, 1924; Hamilton-Smith 1965; Hurka 1964b; Jobling 1951; Maa 1962; Schuurmans Stkh. 1959; Speiser 1902a; Thompson 1937a.


SAMOA: Falcoz 1927; Ferris 1916; Lever 1944; Maa 1962, 1966; Thompson 1937a.

TONGA: Bau 1929.

CAROLINE IS.: Hurlbut 1949; Maa 1967a; Theodor 1967a.

CANADA: Peterson 1960, 1963; Spencer 1937, 1940.

UNITED STATES OF AMERICA: Augustson 1943; Augustson et al. 1953; Barr et al. 1967; Bond et al. 1958; Brashaw et al. 1961; Brues 1904; Byers et al. 1962; Cockerell 1910; Coquillet 1899, 1900; Dalquest 1947; Eads et al. 1948, 1957; Essig 1926; Ferris 1916, 1924d, 1928; Fox et al. 1953; Hansen 1964; Holdenried et al. 1951; D. H. Hubbard 1901; Hunter 1914; Jameson 1959; Jones et al. 1967; E. L. Kessel 1952; Kohls et al. 1948; Krutzsch 1955; Morlan 1952; Orr 1954; Parack 1886; Parmalee 1955; Peterson 1960, 1963; Reddell 1961, 1964, 1966; Ross 1959, 1960a, b, 1961; Roth 1951; Rozeboom 1934; Ryckman 1956; Sealander et al. 1955; Smith 1934; Stabler et al. 1952; Stock 1961; Theodor & Peterson 1964; Townsend 1893; Ubelaker 1966; Whitaker 1957; Zeve 1959, 1960; Zeve et al. 1962, 1963a, b.

MEXICO: Barrera 1958; Bequaert 1933; Byers et al. 1962; Guimaraes 1941; Hoffmann 1944, 1953 (rev.); Hunter 1914; Jobling 1939c; Maa 1968b; Macquart 1852; Pearse 1938; Reeder et al. 1954; Rondani 1878; Ross 1959; Ryckman 1956; Ryckman & Ryckman 1963; Scott 1936a, 1939; Speiser 1902a; Townsend 1891, 1892; v. d. Wulp 1903.

GUATEMALA: Dybas et al. 1947; Peterson 1960.

EL SALVADOR: Starrett et al. 1964.

NICARAGUA: Starrett et al. 1964.

COSTA RICA: Guimaraes 1940; Scott 1936a; Starrett et al. 1964, 1965.

W. INDIES: Anthony 1925 (Puerto Rico); Bau 1929 (Cuba); Bequaert 1953b (Strebla avium, status); Cockerell 1894 (Jamaica); Coquillet 1899 (Jamaica, P. Rico, Montserrat), 1900 (P. Rico); Edwards 1918 (Trinidad); Goodwin et al. 1961 (Trinidad, Tobago, cat.); Gowdey 1926.
Maa: Bibliography of batflies

1971

(Jamaica); Hurka 1970a (Cuba); Jobling 1939b (Dominica, Bahamas), 1949c (Trinidad); Johnson 1964 (Jamaica); Macquart 1853 (S. Domingo = Dominica); Matheson 1928 (Cuba); Newstead 1909 (Jamaica); Root 1922 (P. Rico); Schuurmans Stkh. 1928 (Cuba), 1941b (Leeward Is.); Seguy 1926 (Martinique I.); Silva 1965 (Cuba); Tamsitt & Fox 1970 (P. Rico); Tamsitt & Valdivieso 1970 (P. Rico); v. Volkenberg 1939 (P. Rico); Wolcott 1923, 1936, 1948 (P. Rico).

PANAMA: Bequaert 1940; Caudell 1924; Curran 1935; Guimaraes 1941, 1966 ( Basilica, key); Jobling 1936a, 1939c; Q. C. Kessel 1924; Wenzel & Tipton 1966; Wenzel, Tipton & Fowler 1966; Wenzel, Tipton & Kiewicz 1966 (rev., Streb.)

COLOMBIA: Bequaert 1940 (cat.); Q. C. Kessel 1924; Peterson et al. 1970b; Tamsitt & Fox 1970; Waterhouse 1879.

VENEZUELA: Bequaert 1942a, b (cat.), 1953b; Hase 1931a, b; Hurka 1964b; Karaman 1947; Machado 1963, 1966; Matheson 1945; Rudow 1871, 1872; Schuurmans Stkh. 1931.

GUIANA: Curran 1934a; Falcoz 1924; Gervais 1843, 1844; Peterson 1960; Tamsitt & Fox 1970.

ECUADOR: Q. C. Kessel 1924.

PERU: Jobling 1947; Q. C. Kessel 1924; Schuurmans Stkh. 1952b; Theodor & Peterson 1964; Townsend 1913.

BOLIVIA: Q. C. Kessel 1924.

BRAZIL: Bau 1929; Bequaert 1926, 1942a, 1953b; Costa Lima 1921; Fabricius 1805; Falcoz 1931; Gervais et al. 1859; Guimaraes 1938b, 1941, 1942, 1943, 1944a; Hurka 1964b; Jobling 1939a, 1952; Q. C. Kessel 1924; Maa 1968b; Machado 1967; Miranda Rib. 1905, 1907; Perry 1833; Pessoa & Ayrosa 1936a, b, 1937; Pessoa & Guimaraes 1937, 1941; Scott 1940; Wiedemann 1824.

PARAGUAY: Brethes 1908 (cat.); Coquillett 1907; Ferris 1923; Jobling 1939c; Schuurmans Stkh. 1928; Scott 1936a.


CHILE: Bequaert 1926; Brethes 1913; Reed 1904; Stuardo 1946.

ARGENTINA: Bau 1930b; Bequaert 1926; Brethes 1908 (cat.); Del Ponte 1944; Garcia 19 ; Mazza et al. 1939; Schuurmans Stkh. 1951b; Seguy 1926; Weyenbergh 1881.