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NOMINAL GENERA AND SPECIES OF LANTERNFISHES (FAMILY MYCTOPHIDAE)¹

By John R. Paxton²

ABSTRACT: The 365 species of recent fishes of the family Myctophidae are listed under 35 generic and sub-generic categories; some 225 species are considered valid. The author, date, page, type locality, number and location of types and museum registration number for primary types are listed for each species. An alphabetical list of species indicates the genus in which the species is currently placed and the genus and year of original description. Of the lanternfishes described as fossils, 89 Cenozoic species are listed.

INTRODUCTION

Lanternfishes (family Myctophidae) occur in the upper 1000 metres of all oceans of the world. With some 225 currently recognized species, myctophids are the largest family of mesopelagic fishes. The first species were described in 1810 and there is now a total of 365 nominal species of Recent lanternfishes. The number of new species descriptions is not decreasing (34 since 1969) and, with at least 10 other new species waiting description by various workers, the number of recognized species will probably reach 250.

Family revisions have been published by Cuvier and Valenciennes (1849), Goode and Bean (1896), Brauer (1904), Parr (1928) and Fraser-Brunner (1949). However, Fraser-Brunner did not effectively deal with the numerous species of *Diaphus* described by Fowler (1934), and since 1949, 67 new myctophid species have been described. Parr (1929, 1934) discussed the myctophid types in the United States National Museum and the Museum of Comparative Zoology, Harvard University respectively, while Nafpaktitis (1973) redescribed the myctophid types of Tåning (1918, 1928, 1932).

The present paper attempts to bring together all of the published names of the recent genera and species in the family Myctophidae.

MATERIALS AND METHODS

Type specimens of myctophids are located in the following institutions:

- AHF — Allan Hancock Foundation, Los Angeles (specimens now at LACM)
- AMG — Albany Museum, Grahamstown (specimens now at RUSI)
- AMNH — American Museum of Natural History, New York
- AMS* — Australian Museum, Sydney
- ANSP* — Academy of Natural Sciences, Philadelphia
- BCFH — U.S. Bureau of Commercial Fisheries, Honolulu
- BMNH* — British Museum (Natural History), London
- BOC — Bingham Oceanographic Collections, Yale University, New Haven

BPBM*	— Bernice P. Bishop Museum, Honolulu
CAS*	— California Academy of Sciences, San Francisco
CMP	— Carnegie Museum, Pittsburgh (specimens now at FMNH)
DMBL	— Dana Collections, Dana Marine Biological Laboratory, Charlottenlund (specimens now at ZMUC)
FMNH	— Field Museum of Natural History, Chicago
IMC	— Indian Museum, Calcutta (now ZSI)
IOANM	— Institute of Oceanology, Academy of Sciences, Moscow
IOES	— Indian Ocean Expedition Collections, Hamburg (specimens now at ZMH)
ISH*	— Institut für Seefischerei, Hamburg
ISNB*	— Institut Royal des Sciences Naturelles, Brussels
LACM*	— Natural History Museum of Los Angeles County, Los Angeles
LV	— Laboratoria de Vigo, Spain
MCZ*	— Museum of Comparative Zoology, Harvard University, Cambridge
MMF	— Museum Municipal Funchal, Madeira
MNHN*	— Museum National d'Histoire Naturelle, Paris
MOM*	— Musée océanographique de Monaco, Monaco
MPS	— Museum of the Philosophical Society, University of Cambridge, London (specimens now at BMNH)
NIO*	— National Institution of Oceanography, Surrey (specimens now at BMNH)
NMC	— National Museum of Canada, Ottawa
NMFS	— National Marine Fisheries Service, Washington D.C. (specimens now at USNM)

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NMG	— Naturhistoriska Museet, Göteborg
NMW*	— Naturhistorisches Museum, Vienna
NRMS	— Naturhistoriska Riksmuseet, Stockholm
NYZS	— New York Zoological Society, New York (specimens now at CAS)
ORI	— Ocean Research Institute, University of Tokyo, Tokyo
OSUDO	— Oregon State University Department of Oceanography, Corvallis
PM	— Philippines Museum, Manila
QM*	— Queensland Museum, Brisbane
RMNH*	— Rijksmuseum van Natuurlijke Historie, Leiden
ROM	— Royal Ontario Museum, Toronto
RUSI	— Rhodes University J.L.B. Smith Institute, Grahamstown
SAM	— South African Museum, Capetown
SIO*	— Scripps Institution of Oceanography, La Jolla
SMF*	— Senckenberg Museum, Frankfurt
SU	— Stanford University Natural History Museum (specimens now at CAS)
SMNS*	— Staatliches Museum für Naturkunde in Stuttgart, Ludwigsburg
SOSC	— Smithsonian Oceanographic Sorting Center, Washington D.C. (specimens now at USNM)
UMB	— Überseemuseum, Bremen
UMML	— University of Miami Marine Laboratory, Miami
USFC	— U.S. Fish Commission (specimens now at USNM)
USNM*	— United States National Museum of Natural History, Washington D.C.
VMM	— Vanderbilt Marine Museum, Long Island
ZIANL	— Zoological Institute, Academy of Sciences, Leningrad
ZMA*	— Zoologisch Museum der Universiteit van Amsterdam, Amsterdam
ZMB*	— Zoological Museum, Berlin
ZMH*	— Zoologisches Institut und Museum, Universität Hamburg, Hamburg
ZMO	— Zoological Museum, University of Oslo, Oslo
ZMUC*	— Zoological Museum, University of Copenhagen, Copenhagen
ZSI*	— Zoological Survey of India, Calcutta
ZUMT	— Department of Zoology, University Museum, University of Tokyo, Tokyo.

The abbreviations are used in the body of the species list. Registration numbers were checked and most type specimens examined in those institutions asterisked. Most other placements were confirmed by correspondence with the relevant curators, while a few are taken as stated in the original description.

The species are listed under the currently recognized genera. Because agreement has not been reached on generic relationships within the family (see Moser and Ahlstrom 1970, 1972, 1974; Paxton 1972), the genera are arranged alphabetically. When subgenera are recognized, the nominal subgenus is listed first. Within each genus or subgenus, the currently recognized species are arranged chronologically by year of description; junior synonyms are indented and listed chronologically under their respective senior synonyms. Included for each species is the original combination and spelling, author, date, page number of the original description, type locality, kind and number of types, and institutional location (with registration numbers for primary types

only) as given in the original description. Additional data on the types or locality as given by subsequent authors are placed in parentheses; further information not followed by an author's name is the result of the present study.

The alphabetical index of all recent species names includes the genus in which the species is currently placed, the genus in which it was originally described and the year of description. To find more easily junior synonyms in the main list, particularly in the genus *Diaphus* with 112 nominal species, the year of description of the senior synonym is placed in parentheses after all junior synonyms in the alphabetical list.

More than 90 species of fossils have been described in the family Myctophidae; most are based on Cenozoic otoliths. The vast majority of these fossil species were originally described in, or have subsequently been assigned to, recent myctophid genera. Because of the problems of potential homonymy, an alphabetical list of fossil myctophid species is addended. Each species is followed by the genus in which it is currently placed, the original genus if different, the author and year of original description, and a reference to the current generic allocation, if applicable. This list was compiled mostly from Weiler (1968) and the Zoological Record. J. Fitch kindly provided a number of recent reprints. The list is probably incomplete and should be used with some caution.

A number of species based on otoliths have been described as *Otolithus (Myctophidarum)* sp., indicating only placement in the family Myctophidae. In such cases, only the subgeneric name has been included in the list. The taxonomy of the fossil species is not stable and a number of species have changed generic allocation more than once (see Nolf 1977 and Weiler 1971). The fossil species are not included in the list of recent species and the references for the fossil species are in a separate section. A number of Cretaceous fossils have been attributed to the family Myctophidae; the genera are listed in Romer (1966). Goody (1969) and Rosen (1973) have shown that most of these genera do not belong with the myctophoids. Some species of *Sardinoides* and *Acrognathus* are most similar to the Neoscopelidae (Rosen 1973). None of the Cretaceous species is included in the list of fossil Myctophidae.

DISCUSSION

The most contentious aspect of this compilation is the listing of valid species with junior synonyms. Revisionary work is required for many genera and for some, particularly the genus *Diaphus*, the listing of valid species is admittedly premature. It is stressed that this is not a family revision and the vast majority of types were examined only to confirm the listed registration numbers. Decisions about junior synonyms have been taken mostly from the literature, using the most recent revision of the genus in question. Much advice has been given by other workers on myctophids, particularly B.G. Nafpaktitis on *Diaphus*, although none will agree with all of the decisions made herein. Where the status of a species is questioned, the name is preceded by a '?'.

A few differences at the generic level are evident between this compilation and Paxton (1972). Subgenera have been recognized (i.e. *Metelectrona* and *Parvilux*) primarily on the larval evidence of Moser and Ahlstrom (1974).

In my opinion the designation of lectotypes should be a conservative process. Many myctophid species are represented by a series of syntypes. If the syntypic series is currently considered

conspecific, I think it more reasonable not to choose a lectotype. If in the future the syntypes are found to represent more than one species, a more valuable lectotype designation can be made at that time, in an attempt to match the known name with the more appropriate species. While some syntypic series were found to represent more than one species (*Myctophum naufragus*, *Diaphus malayanus*, *D. splendidus*, *Triphoturus micropterus*), the designation of lectotypes has been deferred until more comprehensive descriptions and discussion could be included. In those cases the currently recognized name, usually based on the figured specimen, has been utilized in choosing senior synonyms.

A number of lectotype designations have been made in the past. Goode and Bean (1896) described 13 species and in only a few cases designated a holotype. Jordan and Evermann (1896) listed 'type' catalogue numbers for all these species and, where correct, these have been accepted herein as lectotype designations.

For those considering placement of future type specimens, USNM with primary types representing 88 species and secondary types of an additional 30 species has the largest myctophid type holdings, followed by ZMUC (65), BMNH (42) and CAS (54). The rest of the first 10 institutions, MCZ, ZIANL, ZMB, SIO, LACM and BOC, all have between 10 and 30 species represented whereas none of the other institutions have types of more than eight species. Tåning (41), Fowler (38) and Gilbert (34) have described the largest number of myctophids.

A few species require separate comment.

Scopelus pyrsobolus Alcock (1890; = *Bolinichthys pyrsobolus*) has caused some previous problems. Nafpaktitis and Nafpaktitis (1969) pointed out that on the basis of Alcock's original description the species is unidentifiable. As a result Nafpaktitis and Nafpaktitis (1969) and Johnson (1975) did not utilize the name in their respective treatments of the two species groups of the genus, while Bolin (1959) used the name for the wrong species. In a paper apparently overlooked by later workers, Misra (1949) redescribed and figured Alcock's holotype. Examination of the 76 mm SL holotype has revealed some differences from Misra's redescription. A VLO is present on the right side, slightly closer to the lateral line than the ventral base. The VO₂ is elevated to the level of the SAO₁ and PO₄. Three luminous organs are present at the base of the anal fin. No photophores are visible behind the eye. Gill rakers number 5+1+11–12. While the absence of secondary photophores and a luminous organ at the pelvic base cannot be certain due to the condition of the holotype, the position of the VLO far below the lateral line places it in the species group treated by Johnson (1975). The highly elevated VO₂ indicates that *B. pyrsobolus* is a senior synonym of *Serpa blacki* Fowler (1934).

The holotype of *Bolinichthys stilbius* (Gilbert 1908) is in poor condition, lacking almost all photophores and luminous patches. However from the figure of Gilbert (1908), the species appears to be the same as *B. photothorax* (Parr 1928). I prefer to wait a revision of the Pacific specimens of this species group before placing Parr's widely utilized name in synonymy.

The holotype of *Scopelus* (= *Myctophum*) *indicus* Day (1878) was found to be totally disintegrated in the bottle. Day's original description is inadequate to place the species, which must remain a nomen dubium. In a valuable contribution Whitehead and Talwar (1977) have listed the possible type specimens of Day's species in the numerous institutions that now hold his specimens. Three specimens in London (BMNH 1889.2.1.2232–4) from the

Andaman Islands are listed as possible syntypes of *Scopelus indicus*. However, the original description is clearly based on a single specimen from Vizagapatam. Day's figure is of a *Myctophum* unidentifiable to species; the three BMNH specimens represent two species of *Centrobranchus* and are not types of *Scopelus indicus*.

Scopelus tenuicauda Steindachner (1867a), *S. cuvieri* Castelnau (1873), *S. langerhansi* Johnson (1890) and *S. novaeseelandiae* Steindachner (1901) are all nomina dubia, for no types could be found and the original descriptions are inadequate.

Serpa turneri Fowler (1934) was placed in the subgenus (now genus) *Triphoturus* by Fraser-Brunner (1949). However, the holotype has only four VO, which places the species in the genus *Lampanyctus*. It is identical to, and a senior synonym of, *Lampanyctus basili* Wisner (1974).

The type locality of *Myctophum* (= *Symbolophorus*) *boops* Richardson (1845) is in error (Whitley 1953). Until the south Pacific species in this difficult complex are adequately defined, no synonymy is possible.

Three specimens of *Lampadena speculigera* (USNM 43796, 43797 and 39479) were apparently available to Goode and Bean (1896) at the time of original description. Only 43796 is mentioned in the original description, as a 50 mm specimen from 39°48'N, 70°38'W, which is an 'Albatross' locality. The specimen is now 45 mm TL. However, the counts of dorsal 15 and gill rakers 6+1+12 do not match those of the original description, nor is this specimen labelled type in the catalogue. Jordan and Evermann (1896) list 43797 as the type of the species, and it is so labelled in the catalogue. The counts of this specimen come close to those of the original description (see Bolin 1959). However, the specimen is about 130 mm TL and was collected by the schooner "Alice J. Wonson" in the Gulf Stream. Specimen 39479, now almost disintegrated but certainly closer to 130 mm TL than 50 mm TL, has the same locality data as 43796, is also labelled type in the catalogue and has a label stating "drawn" in the bottle. However, in the list of figures (Goode and Bean 1896), specimen 43797 is given with the apparently erroneous ship "Fish Hawk." The figure has no scale, is approximately 130 mm TL, and is presumably natural size. As at least two of the three specimens were apparently utilized in the original description and figure, the type listing of USNM 43797 by Jordan and Evermann (1896) is accepted as a lectotype designation, and the other two specimens are considered paralectotypes.

Fowler (1934) described 33 species of myctophids, mostly in the genus *Diaphus*. The holotypes were deposited in USNM, and in a number of cases it was stated that paratypes were deposited at ANSP. Apparently none of these were ever deposited at ANSP and all that could be found are at USNM.

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cock (NIO), P. Kähsbauer (NMW), R. McKay (QM), M. Boeseman (RMNH), R. Rosenblatt and R. Wisner (SIO), W. Klausewitz (SMF), G. von Wahlert (SNMS), R. Gibbs and S. Karnella (USNM), H. Nijssen (ZMA), C. Karrer (ZMB), H. Wilkens (ZMH), J. Nielsen and E. Bertelsen (ZMUC), and P. Talwar (ZSI).

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BENTHOSEMA Goode and Bean 1896

BENTHOSEMA Goode and Bean 1896:75 (type species *Scopelus mulleri* Gill 1861 (Gmelin 1788) by original designation; = *Scopelus glacialis* Reinhardt 1837).

Scopelus glacialis Reinhardt 1837:44, Greenland. (Holotype ZMUC 62, Krefft and Bekker 1973).

Scopelus mulleri Gill 1861:53 (NOMEN NUDUM).

Scopelus parvimanus Günther 1864:406, south Pacific; Holotype BMNH. (New Zealand; Holotype BMNH 1863.8.10.4; type locality probably in error).

Scopelus scoticus Günther 1889:31, Faeroe Channel, England; many Syntypes BMNH. (6 Syntypes BMNH 1889.7.22.67, 1889.7.22.8.12, Krefft and Bekker 1973; 8 Syntypes BMNH 1889.7.22.6-12).

Myctophum glaciale var. *thori* Tåning 1918:33, Mediterranean. (40°48'N, 27°59'E, Sea of Marmora; Syntype ZMUC P2329225, Nielsen 1974).

Myctophum glaciale knipovitschi Soldatov 1939:152, 164, 72°44'N, 22°47'E, Barents Sea; Holotype. (No type material, Krefft and Bekker 1973).

Scopelus (Myctophum) pterotus Alcock 1891:217, 18°30'N, 86°46'E, off Madras coast, Bay of Bengal; about 60 Syntypes. (4 Syntypes MNHN, Estève 1947; 24 Syntypes ZSI F.12737-9, Menon and Yazdani 1968; Syntypes: ZSI (58) F.12737-9, MNHN (4) 90.348-51, BMNH (7) 1890.II.28.31-36, 1947.12.17.1).

Myctophum gilberti Evermann and Seale 1907:55, Bulan, Philippines; Holotype USNM 55900, 3 paratypes: PMM (1), SU (1), USBCF (1). (Paratypes: PMM lost, SU now CAS, USBCF now USNM).

Myctophum fibulatum Gilbert and Cramer 1897:411, Kaiwi Channel, Hawaii; Holotype USNM 47711.

Myctophum hollandi Jordan and Jordan 1922:11, Honolulu Market, Hawaii; Holotype CMP 3897. (Holotype FMNH 55191).

Myctophum renschi Ahl 1929:195, breakwater at Sabang (Sumatra); Holotype. (Holotype ZMB 20724).

Benthosema pinchoti Fowler 1932:4, Nukuhiva, Marquesas Islands; Holotype USNM 91823.

Myctophum suborbitale Gilbert 1913:82, 35°02'N, 138°38'E, Suruga Bay, Japan; Holotype USNM, paratypes. (Holotype USNM 74473, Parr 1929; 2 paratypes SU, Böhlke 1953; paratypes: USNM (4), CAS (2)).

Myctophum simile Tåning 1928:56, north Atlantic. (31°47'N, 41°41'W; Lectotype ZMUC P2329235, Nafpaktitis 1973).

Myctophum initiator Parr 1928:60 (replacement name for *Myctophum suborbitale* Gilbert 1913; not preoccupied by *Diaphlus suborbitalis* Weber 1913).

Myctophum fibulatum proximum Parr 1929:8, Tongue of the Ocean, Bahamas; Holotype BOC 2184, 1 paratype USNM. (21 paratypes BOC, Parr 1928; 22 paratypes BOC, Krefft and Bekker 1973).

Myctophum pterotum panamense Tåning 1932:129, Gulf of Panama. (7°30'N, 79°19'W; Lectotype ZMUC P2329233, Nafpaktitis 1973).

BOLINICHTHYS Paxton 1972

BOLINICHTHYS Paxton 1972:46 (type species *Myctophum longipes* Brauer 1906 by original designation).

Scopelus pyrsobolus Alcock 1891:218, 15°38'N, 82°30'E, off Madras coast, Bay of Bengal; Holotype. (Holotype ZSI F.12839, Menon and Yazdani 1968).

Serpula blacki Fowler 1934:284, Iligan Bay, Mindanao, Philippines; Holotype USNM 92312, 2 paratypes: USNM (1), ANSP (1). (2 paratypes USNM).

Myctophum (Lampanyctus) longipes Brauer 1906:236, 10 localities in tropical Indian and north Atlantic Oceans; 14 Syntypes. (4 Syntypes ZMB 17612-3, Krefft and Bekker 1973).

?*Lampanyctus joubini* Angel and Verrier 1931:127, 1°16'S, 138°55'E, north of New Guinea; Holotype. (Holotype not found at MOM or MNHN, 1975).

?*Macrostoma grayi* Fowler 1938:190, 40 miles south of Christmas Island, Pacific Ocean; Holotype ANSP 68366.

Lampanyctus fraserbrunneri Bolin 1946:150, 5°56'N, 76°22'E, off Cape Cormorin, India; Holotype IMC, 1 paratype SU. (Holotype ZSI, lost, Menon and Rao 1971; Holotype ZSI F7336/2, found; 1 paratype CAS).

Lampanyctus supralateralis Parr 1928:94, 23°42'N, 76°43'W, Bahamas; Holotype BOC 2229, 3 paratypes BOC. (1 paratype MCZ).

Lampanyctus photothorax Parr 1928:95, 23°55'N, 77°09'W, Bahamas; Holotype BOC 2263, 53 paratypes BOC. (2 paratypes BMNH).

?*Lampanyctus stilbius* Gilbert 1908:235, near Nukuhiva Island, Marquesas; Holotype. (Holotype USNM 757768, Parr 1929; Holotype USNM 75768).

Lepidophanes indicus Nafpaktitis and Nafpaktitis 1969:61,

22°34'S, 64°55'E, Indian Ocean; Holotype MCZ 46314, 17 paratypes; MCZ (16), LACM (1).

Bolinichthys distofax Johnson 1975:54, Hawaii; Holotype CAS 15998, 89 paratypes; CAS (74), SIO (15). (Paratypes: BMNH (2), CAS (66), FMNH (2), LACM (2), SIO (15), USNM (2)).

Bolinichthys nikolayi Bekker 1978:260, 19°39'S, 175°10'W, southwest Pacific; Holotype ZIANL 43780, 1 paratype IOANM.

CENTROBRANCHUS Fowler 1904

CENTROBRANCHUS Fowler 1904:754 (type species *Centrobranchus choerocephalus* Fowler 1904 by original designation).

Scopelus nigrocellatus Günther 1873:91, south Atlantic; Holotype. (Holotype BMNH 1873.8.1.40, Krefft and Bekker 1973).

Myctophum coccoi f. *regularis* Brauer 1904:390, no type locality given. (Specimens in NMH (=ZMH) Brauer 1906).

Scopelus (Rhinoscopelus) andreae Lütken 1892a:209, Jacobshavn Greenland; Holotype. (Holotype ZMUC 94, lost, Nielsen 1974; not found ZMUC 1975).

Centrobranchus gracilicaudus Gilbert 1905:595, west of Niihau Island, Hawaii; Holotype USNM 51518, 10 paratypes. (6 paratypes SU, Böhlke 1953; paratypes: CAS (6), USNM (1)).

Centrobranchus choerocephalus Fowler 1904:754, near Hawaiian Islands; Holotype ANSP 7972, 3 paratypes. (1 paratype SU, Böhlke 1953; possible paratypes: ANSP (5), CAS (1)).

?*Centrobranchus brevirostris* Bekker 1964:52, 33°19'N, 151°08'E; Holotype ZIANL 34344, 9 paratypes.

CERATOSCOPELUS Günther 1864

SCOPELUS (CERATOSCOPELUS) Günther 1864:405 (as subgenus; type species *Scopelus maderensis* Lowe 1839 by monotypy).

Scopelus maderensis Lowe 1839:87, Madeira; Holotype. (Holotype BMNH, Günther 1864; Holotype BMNH 1865.1.19.2, status uncertain, Krefft and Bekker 1973; I can find no reason to question the type status of this specimen, which was purchased from Lowe in Madeira).

Scopelus aoanthurus Facciola 1882a:166, Straits of Messina. (Emmended to *Scopelus acanthurus*, Facciola 1882b; no type material available, Krefft and Bekker 1973).

Scopelus doderleini Facciola 1882b:193, Sea of Messina; new name for *Scopelus acanthurus* Facciola 1882a.

Myctophum townsendi Eigenmann and Eigenmann 1889:125, Cortez Banks off southern California; several Syntypes. (Types USNM 41921, Parr 1929; Syntypes: BMNH (2) 1891.5.19.172-3, CAS (1) SU 20173, MCZ (1) 35970, USNM (3) 41921).

Scopelus (Nyctophus) warmingii Lütken 1892b:259, 32°06'N, 39°28'W, Holotype. (Holotype ZMUC 39, Krefft and Bekker 1973).

Lampanyctus polyphotis Beebe 1932:67, 5 miles south of Nonsuch Island, Bermuda; Holotype NYZS 10151. (Holotype now USNM 171200, Mead 1958).

DIAPHUS Eigenmann and Eigenmann 1890

DIAPHUS Eigenmann and Eigenmann 1890:3 (type species *Diaphus theta* Eigenmann and Eigenmann 1890 by original designation).

AETHOPRORA Goode and Bean 1896:86 (type species *Myctophum metopoclampum* Cocco 1829 by subsequent designation of Jordan 1920).

COLLETTIA Goode and Bean 1896:88 (type species *Nyctophus rafinesquii* Cocco 1838 by original designation).

PANTOPHOS Jordan and Hubbs 1925:156 (type species *Diaphus glandulifer* Gilbert 1913 by original designation; = *Diaphus suborbitalis* Weber 1913).

LAMPROSSA Jordan and Hubbs 1925:156 (type species *Diaphus anteorbitalis* Gilbert 1913 by original designation; = *Diaphus adenomus* Gilbert 1905).

COLLETTIA (CAVELAMPUS) Whitley 1933:62 (as subgenus; type species *Aethoprora perspicillata* Ogilby 1898 by original designation).

Myctophum metopoclampum Cocco 1829:144, Messina. (No type material available, Krefft and Bekker 1973).

Nyctophus rafinesquii Cocco 1838:20, Messina. (No type material available, Krefft and Bekker 1973).

Diaphus intermedius Borodin 1930:89, 33°N, 64°W, north Atlantic; 2 Syntypes. (Holotype MCZ 32289, 1 paratype MCZ, Borodin 1931; paratype not found at MCZ 1975).

Scopelus dumerili Bleeker 1856:66, Manado, Makassar, Celebes; 3 Syntypes. (2 Syntypes RMNH 6931, Krefft and Bekker 1973).

Myctophum nocturnum Poey 1861:426, Cuba. (Holotype MCZ 6871, Gilbert 1906).

?*Scopelus schmitzi* Johnson 1890:456, Madeira; 2 Syntypes. (1 Syntype BMNH 1890.5.31.4, Krefft and Bekker 1973).

Lampanyctus lacerta Goode and Bean 1896:81, 28°38'N, 85°52'W (north Atlantic); 3 Syntypes USNM 43778. (Holotype USNM 43778, Parr 1929; 3 Syntypes USNM 43778).

Scopelus (Lampanyctus) coeruleus Klunzinger 1871:592, Red Sea; Holotype. (Kosseir, Red Sea; Holotype SNMS 1775, topotype from Klunzinger at ZMB).

?*Scopelus engraulis* Günther 1887:197, Philippines; Holotype. (Holotype BMNH 1887.12.7.217).

Diaphus theta Eigenmann and Eigenmann 1890:4, off Point Loma, California; 11 Syntypes. (2 Syntypes USNM 41914, Parr 1929; 1 Syntype MCZ 27392, Parr 1934; Lectotype USNM 41914, Nafpaktitis 1978; paralectotypes: BMNH (2), MCZ (1), USNM (5)).

Myctophum protocolus Gilbert 1891:52, off Oregon-Washington; 3 Syntypes. (Type USNM 41922, Jordan and Evermann 1896; Type USNM 44290, Parr 1929; Lectotype USNM 44290, 1 paralectotype SU, Böhlke 1953; Jordan and Evermann's indication cannot be a valid lectotype

designation, as USNM 41922 is not part of the original type series; Parr's indication is merely in a list of material examined).

Aethoprora lucida Goode and Bean 1896:87, 19°45'N, 75°04'W; Holotype USNM 44084.

Diaphus monodi Fowler 1934:306, Tanon Strait off Negros, Philippines; Holotype USNM 92315.

Diaphus reidi Fowler 1934:309, near Marinduque Island, Philippines; Holotype USNM 93154.

Diaphus altifrons Kulikova 1961:11, 10°06'S, 187°(sic)23'W; Holotype ZIANL 36107, 5 paratypes.

Aethoprora effulgens Goode and Bean 1896:87, Brown's Bank and 19°45'N, 75°W, north Atlantic; 2 Syntypes, 1 USNM 43770. (Lectotype USNM 43770, Jordan and Evermann 1896; Brown's Bank).

Myctophum (Diaphus) aeolochrus Barnard 1927:1021, 60 miles WSW Table Bay, South Africa; Holotype SAM. (Holotype BMNH 1935.7.6.3).

Diaphus macrophus Parr 1928:136, 24°11'N, 75°35'W, Bahamas; Holotype BOC 2172.

Diaphus antelucens Kulikova 1961:13, 12°55'N, 154°04'E; Holotype ZIANL 36105, 1 paratype.

Diaphus chrysorhynchus Gilbert and Cramer 1897:409, 21°16'N, 157°44'W, Kaiwi Channel, Hawaii; Holotype USNM 47710, 11 paratypes. (6 Syntypes USNM 47710, Parr 1929; 2 paratypes SU, Böhlke 1953; Syntypes: USNM 47710 (6, none labelled holotype), CAS SU 4927 (1), SU 5068 (1)).

Diaphus sagamiensis Gilbert 1913:96, Sagami Bay, Japan; Holotype CMP 4608, 6 paratypes. (2 paratypes SU, Böhlke 1953; Holotype FMNH 55831, paratypes: CAS (2), FMNH (3), USNM (1)).

?*Diaphus astridae* Giltay 1929:29, off New Guinea; Holotype ISNB 2548.

Aethoprora perspicillata Ogilby 1898:36, Lord Howe Island; Holotype. (Holotype QM I.794).

Myctophum (Nyctophus) elucens Brauer 1904:401, Indian Ocean. (0°27'S, 42°47'E, northeast Africa; Holotype, Brauer 1906; Holotype ZMB 17602).

?*Diaphus gigas* Gilbert 1913:93, Sagami Bay, Japan; Holotype CMP 4601, 2 paratypes. (1 paratype SU, Böhlke 1953; Holotype FMNH 55825, paratypes: FMNH (1), CAS (1)).

Diaphus watasei Jordan and Starks 1904:580, off Atami, Sagami Bay, Japan; Holotype USNM 51443, 4 paratypes SU. (SU paratypes now CAS).

Myctophum (Nyctophus) splendidum Brauer 1904:399, Atlantic and Indian Oceans. (11 localities in Atlantic and Indian Oceans; 13 Syntypes, Brauer 1906; Syntypes: ZMH H5676(1), Wilkens 1977; SMF 2081 (1), ZMB (3) 17600, 17601, 20773).

Diaphus steadi Fowler 1934:310, Macassar Strait; Holotype USNM 93164.

Diaphus scapulofulgens Fowler 1934:316, Buton Strait, Philippines; Holotype USNM 93155.

Diaphus vitiazi Kulikova 1961:36, 6°15'S, 153°44'E; Holotype ZIANL 36104, 10 paratypes.

?*Myctophum (Nyctophus) microps* Brauer 1904:400, Indian Ocean. (4°05'S, 70°01'E, Holotype, Brauer 1906; Holotype ZMB 17596).

Myctophum (Nyctophus) luetkeni Brauer 1904:400, Indian Ocean. (4 localities in Indian Ocean; 4 Syntypes, Brauer 1906; 3 Syntypes ZMB 17603, 17604, 22376).

Diaphus luetkeni pacificus Kulikova 1961:24, 31°02'N, 146°05'E; Holotype ZIANL 36109, 19 paratypes. (Preoccupied by *Diaphus pacificus* Parr 1931).

Myctophum (Nyctophus) fulgens Brauer 1904:402, 4 localities in Indian Ocean. (4 Syntypes, Brauer 1906; Lectotype ZMB 17605, 4°06'S, 70°02'E, 1 paralectotype ZMB, Nafpaktitis 1978).

Diaphus nanus Gilbert 1908:224, near Nukuhiva, Marquesas; Holotype, 4 paratypes. (Holotype USNM 75765, Parr 1929; 3 paratypes SU, Böhlke 1953; paratypes: USNM (2), CAS (3)).

Diaphus adenomus Gilbert 1905:592, between Oahu and Molokai, Hawaii; Holotype USNM 51588, at least 2 paratypes. (1 paratype SU, Böhlke 1953; paratypes: CAS (1), USNM (1)).

Diaphus anteorbitalis Gilbert 1913:92, 33°25'N, 135°39'E, Japan; Holotype USNM, 3 paratypes. (Holotype USNM 74471, Parr 1929; 1 paratype SU, Böhlke 1953; paratypes: CAS (1), USNM (2)).

Diaphus garmani Gilbert 1906:258, Cuba; Holotype MCZ 6873, 3 paratypes MCZ. (Holotype MCZ 29070, Parr 1934).

?*Diaphus ashmeadi* Fowler 1934:311, China Sea (13°30'N, 121°01'E, Nafpaktitis 1968); Holotype USNM 93161.

Myctophum (Diaphus) vanhoeffeni Brauer 1906:222, no type locality given; 2 Syntypes. (Lectotype ZMB and 1 paralectotype ZMB, Nafpaktitis 1968; Lectotype ZMB 19367, tropical Atlantic Ocean).

Diaphus lewisi Nafpaktitis 1966:410, 13°31'N, 18°03'W, north Atlantic; Holotype DMBL, 106 paratypes: DMBL (2), MCZ (84), USNM (20). (Holotype ZMUC P2329207, 2 paratypes ZMUC, Nielsen 1974).

?*Diaphus agassizii* Gilbert 1908:226, near Nukuhiva Island, Marquesas; Holotype, 1 paratype. (Holotype USNM 75764, Parr 1929; 1 paratype SU, Böhlke 1953; 5 specimens in SU paratype bottle, now at CAS).

Diaphus signatus Gilbert 1908:228, near Nukuhiva Island, Marquesas; Holotype, 1 paratype. (Holotype USNM 75767, Parr 1929; 2 paratypes SU, Böhlke 1953; 1 paratype CAS; CAS SU 20193 is 22 mm TL and cannot be a paratype).

Diaphus malayanus Weber 1913:89, Halmahera and Banda Seas; 9 Syntypes. (Syntypes: RMNH 9941 (1), ZMA 109.186-7, 109.193 (8)).

Diaphus meyeri Fowler 1934:314, off west Luzon, Philippines; Holotype USNM 93152.

Diaphus suborbitalis Weber 1913:90, Bali, Banda and Arufura Seas; 4 Syntypes. (Lectotype ZMA 109.968, 1 paralectotype RMNH, Wisner 1974; 1 paralectotype ZMA).

Diaphus glandulifer Gilbert 1913:90, Suruga Gulf, Japan; Holotype USNM, paratypes. (Holotype USNM 74472, Parr

1929; 3 paratypes SU, Böhlke 1953; paratypes: CAS (6), FMNH (3), USNM (17)).

Diaphus streetsi Fowler 1934:291, China Sea, Sombrero Island off Luzon, Philippines (13°45'N, 120°46'E, Nafpaktitis 1968); Holotype USNM 93162.

?*Diaphus tanakae* Gilbert 1913:88, 31°10'N, 131°58'E, Japan; Holotype USNM, 3 paratypes. (Holotype USNM 74470, Parr 1929; 1 paratype SU, Böhlke 1953; paratypes: CAS (1), USNM (2)).

Diaphus latus Gilbert 1913:95, Sagami Bay, Japan; Holotype CMP 4604, paratypes. (3 paratypes SU, Böhlke 1953; Holotype FMNH 56208, paratypes: CAS (3), FMNH (6)).

Myctophum (Diaphus) holti Tåning 1918:88, Mediterranean Sea. (36°53'N, 03°09'E; Lectotype ZMUC P2329204, 1 parlectotype ZMUC, Nafpaktitis 1973).

Diaphus brachycephalus Tåning 1928:59, north Atlantic. (19°22'N, 24°06'W; Lectotype ZMUC P2329197, Nafpaktitis 1973).

Diaphus termophilus Tåning 1928:59, north Atlantic. (14°38'N, 61°16'W; Lectotype ZMUC P2329218, Nafpaktitis 1973).

Diaphus hypolucens Parr 1928:130, 23°58'N, 77°26'W; Holotype BOC 2197.

Diaphus mollis Tåning 1928:60, north Atlantic. (19°22'N, 24°06'W; Lectotype ZMUC 2329211, Nafpaktitis 1973).

Diaphus fragilis Tåning 1928:61, north Atlantic. (12°11'N, 35°49'W; Lectotype ZMUC P2329202, Nafpaktitis 1973).

Diaphus problematicus Parr 1928:143, 24°29'N, 77°29'E, Bahamas; Holotype BOC 2195, 1 paratype BOC.

Diaphus weberi Tåning 1932:138, 7°23'N, 121°22'E, Zulu Sea. (7°22'N, 121°16'E; Holotype ZMUC P2329219, Nafpaktitis 1973).

Diaphus taanangi Norman 1930:332, 0°36'S, 8°28'E, central Atlantic; Holotype. (Holotype BMNH 1930.1.12.835).

Diaphus pacificus Parr 1931:34, 16°14'N, 99°36'W, off Mexico; Holotype BOC 2690.

Diaphus anderseni Tåning 1932:134, 20°00'S, 174°29'E, southwest of Fiji. (Holotype ZMUC P2329194, Nafpaktitis 1973).

Diaphus parri Tåning 1932:135, 27°21'S, 175°11'E, southeast of New Caledonia. (Holotype ZMUC P2331765, Nafpaktitis 1973).

Diaphus longleyi Fowler 1934:296, between Leyte and Cebu, Philippines; Holotype USNM 92320.

Diaphus kendalli Fowler 1934:297, between Leyte and Mindanao, Philippines; Holotype USNM 93157.

Diaphus rassi Kulikova 1961:28, 6°15'S, 153°44'E, off New Britain; Holotype ZIANL 36108, 11 paratypes.

Diaphus richardsoni Tåning 1932:136, 2°00'N, 138°22'E, north of New Guinea. (Holotype ZMUC P2329214, Nafpaktitis 1973).

Diaphus harveyi Fowler 1934:294, Manila Bay, Luzon, Philippines; Holotype USNM 92317, 6 paratypes. (No paratypes found USNM or ANSP, 1975).

Diaphus diademetus Tåning 1932:137, 24°33'S, 38°26'E, Indian Ocean. (Lectotype ZMUC P2329199, 1 paralectotype, ZMUC, Nafpaktitis 1973).

Diaphus regani Tåning 1932:139, 20°53'S, 164°03'E, off New Caledonia. (Holotype ZMUC P2329213, Nafpaktitis 1973).

Diaphus danae Tåning 1932:140, 36°23'S, 176°26'E, north of New Zealand. (Holotype ZMUC P2329198, Nafpaktitis 1973).

Diaphus schmidti Tåning 1932:139, 7°46'S, 167°10'W, north of Samoa. (Holotype ZMUC P2329215, Nafpaktitis 1973).

Diaphus crameri Fowler 1934:314, Gulf of Tomini, Celebes; Holotype USNM 93156.

Diaphus jessensi Tåning 1932:141, 3°18'N, 129°02'E, north of New Guinea. (Holotype ZMUC P2329205, Nafpaktitis 1973).

Diaphus kylei Tåning 1932:133, 7°22'N, 121°16'E, Zulu Sea. (Holotype ZMUC P2329206, Nafpaktitis 1973).

Diaphus gadgeri Fowler 1934:302, off north Mindanao, Philippines; Holotype USNM 92322, 4 paratypes. (11 Albatross specimens labeled *Diaphus gadgeri* n. sp. in USNM, which presumably include the four paratypes).

Diaphus carlsoni Fowler 1934:312, off east Mindoro, Philippines; Holotype USNM 93151.

Diaphus ostenfeldi Tåning 1932:142, 35°36'S, 171°52'E, west of New Zealand. (Holotype ZMUC P2329212, Nafpaktitis 1973).

Diaphus drachmanni Tåning 1932:144, 4°44'N, 88°05'E, Indian Ocean. (Holotype ZMUC P2329201, Nafpaktitis 1973).

Diaphus phillipsi Fowler 1934:287, between Panay and Negros, Philippines; Holotype USNM 93149.

Diaphus rolfbolini Wisner 1971:47, 10°00'N, 116°52'W, Holotype SIO 68-536, 27 paratypes: SIO (4), USNM (23).

Diaphus thiollierei Fowler 1934:289, off west Bohol, Philippines; Holotype USNM 93158.

Diaphus jouani Fowler 1934:301, Macassar Strait (0°29'S, 118°51'E, Nafpaktitis 1968); Holotype USNM 93153.

Diaphus handi Fowler 1934:290, between Cebu and Siquijor, Philippines; Holotype USNM 93163.

Diaphus aliciae Fowler 1934:295, between Bohol and Leyte, Philippines; Holotype USNM 92316, 2 paratypes: ANSP (1), USNM (1). (Probable paratypes USNM (2)).

Diaphus layi Fowler 1934:292, north of Mindanao, Philippines; Holotype USNM 93145.

Diaphus dahlgreni Fowler 1934:299, off Darvel Bay, Borneo; Holotype USNM 93165.

Diaphus faustinoi Fowler 1934:300, Tanon Strait, off Negros, Philippines; Holotype USNM 92321.

Diaphus ehrhorni Fowler 1934:304, between Burias and Luzon, Philippines; Holotype USNM 92319, 49 paratypes. (No paratypes found at ANSP or USNM, 1975).

Diaphus whitleyi Fowler 1934:305, Verde Island Passage and Batangas Bay, Philippines; Holotype USNM 92318, 2 paratypes. (49 Albatross specimens in 3 lots in USNM; presumably the 2 paratypes are included, but none is labeled n. sp. nor come from the same station as the holotype).

?*Diaphus atkinsoni* Fowler 1934:321, Verde Island Passage and Batangas Bay, Philippines; Holotype USNM 93159.

Diaphus lucifrons Fowler 1934:307, east of Luzon, Philippines; Holotype USNM 93147.

Diaphus burtoni Fowler 1934:315, China Sea off south Luzon, Philippines; Holotype USNM 93146.

Diaphus bryani Fowler 1934:319, China Sea off south Luzon, Philippines; Holotype USNM 93150.

Diaphus umbroculus Fowler 1934:317, Verde Island Passage and Batangas Bay, Philippines; Holotype USNM 93148.

Diaphus dehaveni Fowler 1934:320, between Samar and Masbate, Philippines; Holotype USNM 93160.

?*Diaphus gracilis* Kulikova 1961:21, 7°19'S, 155°26'E; Holotype ZIANL 36106.

Diaphus bertelsenii Nafpaktitis 1966:405, 0°15'S, 18°35'W, Atlantic; Holotype MCZ 43121, 3 paratypes: DMBL (2; now at ZMUC), MCZ (1).

Diaphus minax Nafpaktitis 1968:57, 26°34'N, 79°04'W, north Atlantic; Holotype MCZ 44952, 2 paratypes: DMBL (1; now at ZMUC), UMML (1).

Diaphus subtilis Nafpaktitis 1968:92, 13°47'N, 61°26'W, north Atlantic; Holotype DMBL, 3 paratypes: DMBL (1), MCZ (2). (Holotype ZMUC P2329216, 1 paratype ZMUC, Nielsen 1974).

Diaphus trachops Wisner 1974:5, near Oahu Hawaii; Holotype SIO 71-172, 15 paratypes: BPBM (2), CAS (2), LACM (1), SIO (4), USNM (6).

Diaphus similis Wisner 1974:7, central Pacific; Holotype SIO 71-177, 15 paratypes: CAS (2), SIO (9), USNM (4).

Diaphus roei Nafpaktitis 1974:4, 17°20'N, 62°52'W, north Atlantic; Holotype USNM 210553, 7 paratypes: LACM (3), MCZ (2), USNM (2).

Diaphus hudsoni Zurbrigg and Scott 1976:1538, 44°14'S, 42°43'W, south Atlantic; Holotype ROM 27569, 5 paratypes: NMC (2), ROM (3).

Diaphus nielseni Nafpaktitis 1978:17, 06°37'N, 122°24'E, southeast Asian seas; Holotype ZMUC P2334949, 5 paratypes: LACM (1), MNHN (1), ZMUC (3).

Diaphus antonbruuni Nafpaktitis 1978:25, 07°56'S, 65°14'E, Indian Ocean; Holotype LACM 31389-16, 6 paratypes: LACM (2), USNM (2), ZMUC (2).

Diaphus diademophilus Nafpaktitis 1978:34, 04°01'S, 65°00'E, Indian Ocean; Holotype LACM 31365-6, 8 paratypes: LACM (2), ZMUC (6).

Diaphus knappi Nafpaktitis 1978:45, 23°36'S, 43°31'E, southwest coast of Madagascar; Holotype MNHN 1977-306, 4 paratypes LACM.

Diaphus meadi Nafpaktitis 1978:63, 27°10'S, 8°59'E, south Atlantic; Holotype ZMUC P2334935, 16 paratypes: LACM (6), USNM (2), ZMUC (8).

Diaphus megalops Nafpaktitis 1978:65, 02°00'S, 64°54'E, Indian Ocean; Holotype LACM 31362-3, 9 paratypes: LACM (2), USNM (2), ZMUC (5).

Diaphus arabicus Nafpaktitis 1978:77, 17°46'N, 65°02'E,

Arabian Sea; Holotype LACM 31334-6, 15 paratypes: LACM (9), USNM (4), ZMUC (2).

Diaphus lobatus Nafpaktitis 1978:79, 06°52'N, 79°30'E, Indian Ocean; Holotype ZMUC P2334930, 8 paratypes: LACM (2), USNM (2), ZMUC (4).

Diaphus kuroshio Kawaguchi and Nafpaktitis 1978:89, 31°24'N, 136°52'E, off Japan; Holotype ZUMT 54126, 28 paratypes: ORI (24), ZUMT (4).

DIOGENICHTHYS Bolin 1939

DIOGENICHTHYS Bolin 1939:119 (type species *Myctophum laternatum* Garman 1899 by original designation).

Myctophum laternatum Garman 1899:267, 3 localities in northeast Pacific. (7 Syntypes MCZ 28492, Parr 1934; 11 Syntypes MCZ: 28492 (7), 35186 (2), 35188 (1), 41788 (1)).

Myctophum laternatum atlanticum Tåning 1928:56, north Atlantic, 20°00'N, 21°55'W; Lectotype ZMUC P2329229, 1 paralectotype ZMUC, Nafpaktitis 1973).

Diogenichthys scofieldi Bolin 1939:122, 31°33'N, 119°57'W, Cortez Banks, California; Holotype SU 33657, 6 paratypes: MCZ (1), SU (4), USNM (1). (MCZ paratype not found 1975, Holotype and SU paratypes at CAS).

Diogenichthys panurgus Bolin 1946:140, 5°56'N, 76°22'E, off Cape Cormorin, India; Holotype IMC, 7 paratypes: IMC (3), SU (4). (Holotype and IMC (= ZSI) paratypes lost, Menon and Rao 1971; Holotype ZSI F 7334/2, found; paratypes: CAS (4), ZSI (3)).

ELECTRONA (ELECTRONA) Goode and Bean 1896

ELECTRONA Goode and Bean 1896:91 (type species *Scopelus risso* Cocco 1829 by original designation).

ELECTRONA (ELAMPA) Fraser-Brunner 1949:1048 (as subgenus; type species *Scopelus subasper* Günther 1864 by original designation).

ELAMPADENA Whitley 1953:135 (type species *Scopelus subasper* Günther 1864 by original designation; replacement name for *Elampa* Fraser-Brunner 1949; not preoccupied by *Elampus* Spinola 1806, Hymenoptera).

Scopelus risso Cocco 1829:144, Messina. (No type material, Krefft and Bekker 1973).

Electrona risso salubris Whitley 1933:62, between Gabo Island and Cape Everard, Victoria, Australia; Holotype AMS E.5701.

Scopelus (Dasyscopelus) subasper Günther 1864:411, 43°30'S, 123°E, Pacific Ocean; Holotype BMNH. (Holotype BMNH 1845.8.5.45).

?*Scopelus stellatus* Bennet 1840:288, 43°S, Pacific Ocean off South America; Syntypes. (No types found, 1975).

Myctophum megalops Peters 1865:393, Cape Horn; 2 Syntypes. (2 Syntypes ZMB 199).

Scopelus antarcticus Günther 1878:184, Antarctic Ocean; Holotype BMNH. (Holotype BMNH 1887.12.7.215).

Scopelus colletti Lütken 1892b: 249, 28°16'S, 97°30'W and 600 miles west of Cape Horn; 2 Syntypes. (Lectotype ZMO J710, 1 paralectotype ZMUC, Pethon 1969).

Myctophum carlsbergi Tåning 1932:126, 44°40'S, 173°39'E, east of New Zealand. (Holotype ZMUC P2329224, Nafpaktitis 1973).

Electrona paucirastra Bolin in Andriashev 1962:280, 39°30'S, 71°16'E (southern Indian Ocean); 9 Syntypes, 5 Syntypes ZIANL 36765.

ELECTRONA (METELECTRONA) Wisner 1963

METELECTRONA Wisner 1963b:24 (type species *Metelectrona ahlstromi* Wisner 1963 by original designation; = *Electrona ventralis* Bekker 1963).

Electrona ventralis Bekker 1963:26, 42°40'S, 39°07'W, south Atlantic; Holotype ZIANL 36804, 1 paratype.

Metelectrona ahlstromi Wisner 1963b:25, 46°53'S, 179°48'W, southeast of New Zealand; Holotype SIO 61-45A-25.

GONICHTHYS Gistel 1850

ALYSIA Lowe 1839:87 (type species *Alysia loricata* Lowe 1839 by monotypy; = *Scopelus coco* Cocco 1829; preoccupied by *Alysia* Latreille 1804, Hymenoptera).

GONICHTHYS Gistel 1850:71 (type species *Alysia loricata* Lowe 1839 by original designation; = *Scopelus coco* Cocco 1829; replacement name for *Alysia* Lowe 1839).

SCOPELUS (RHINOSCOPELUS) Lütken 1892a:209 (as subgenus; type species *Scopelus coco* by subsequent designation of Lütken 1892b: 232; only species listed with original description, *Scopelus (Rhinoscopelus) andreae* Lutken?, invalid as type because listed as species inquirenda).

Scopelus coco Cocco 1829:143, Messina. (No type material, Krefft and Bekker 1973).

Alysia loricata Lowe 1839:87, Madeira; Holotype. (Holotype MPS, Günther 1864; no type material, Krefft and Bekker 1973; Holotype BMNH 1948.8.9.1).

Myctophum hians Richardson 1845:41, no type locality given. (2 Syntypes BMNH, Günther 1864; BMNH 1847.12.31.1-2, Krefft and Bekker 1973; 2 Syntypes BMNH 1947.12.31.1-2).

Scopelus jagorii Peters 1859:411, 3 localities in Atlantic Ocean. (8 Syntypes ZMHU (= ZMB) 3811, Krefft and Bekker 1973).

Scopelus gracilis Lütken 1892b:255, 5 localities in Atlantic and Indian Oceans; Syntypes. (Holotype ZMO J719, 7 paratypes ZMUC, Krefft and Bekker 1973).

Myctophum tenuiculum Garman 1899:262, 6°21'N, 80°41'W (eastern Pacific). (4 Syntypes MCZ 58499, Parr 1934; 4 Syntypes MCZ 28499).

Gonichthys barnesi Whitley 1943:174, Lord Howe Island; Holotype AMS IA.953, 40 paratypes AMS. (4 paratypes exchanged SU, 1958, now at CAS).

?*Myctophum coruscans* Richardson 1845:40, between St. Helena and Ascension Islands, and Tasman Sea. (Types lost, Günther 1864).

?*Gonichthys venetus* Bekker 1964:39, 27°40'S, 171°56'E; Holotype ZIANL 37347, 10 paratypes. (Holotype ZIANL 37343).

GYMNOSCOPELUS (GYMNOSCOPELUS) Günther 1873

GYMNOSCOPELUS Günther 1873:91 (type species *Gymnoscopelus aphyia* Günther 1873 by monotypy).

Gymnoscopelus aphyia Günther 1873:91, 55°S, 85°W, near the Straits of Magellan; Holotype. (Holotype BMNH, Andriashev 1962; Holotype BMNH 1873.8.1.42).

Lampanyctus nicholsi Gilbert 1911:17, 47°S, 60°W, north of Falkland Islands; Holotype AMNH, 3 paratypes. (1 paratype SU, Böhlke 1953; Holotype AMNH 1919, paratypes: AMNH (2), CAS (1)).

Myctophum (Lampanyctus) braueri Lonnberg 1905:764, 48°54'S, 51°40'W; Holotype. (Holotype NRMS 9022658105).

Gymnoscopelus opisthopterus Fraser-Brunner 1949:1102, 64°23'S, 106°33'E (Pacific Antarctic); Holotype BMNH Discovery Collections. (Holotype BMNH 1948.5.14.612).

Gymnoscopelus bolini Andriashev 1962:272, 53°01'S, 109°30'W (south Pacific); Holotype, 1 paratype. (Holotype ZIANL 36383, 1 paratype ZIANL).

GYMNOSCOPELUS (NASOLYCHNUS) Smith 1933

MYCTOPHUM (NASOLYCHNUS) Smith 1933:126 (as subgenus; type species *Myctophum (Nasolychnus) florenti* Smith 1933 by monotypy; = *Lampanyctus piabilis* Whitley 1931).

Lampanyctus fraseri Fraser-Brunner 1931:224, 3°18'S, 5°17'E; Holotype BMNH. (Holotype BMNH 1931.2.27.6).

Lampanyctus piabilis Whitley 1931:103, Macquarie Island; Holotype AMS IA.504, 1 paratype AMS.

Myctophum (Nasolychnus) florenti Smith 1933:126, near Port Alfred, South Africa; Holotype AMG. (Holotype RUSI 55).

HINTONIA Fraser-Brunner 1949

HINTONIA Fraser-Brunner 1949:1098 (type species *Hintonia candens* Fraser-Brunner 1949 by original designation).

Hintonia candens Fraser-Brunner 1949:1104, 41°50'-54'S, 0°02'-03'E, south Atlantic; Holotype BMNH Discovery Collections. (Holotype BMNH 1948.5.14.693).

HYGOPHUM Bolin 1939

MYCTOPHUM (HYGOPHUM) Bolin 1939:113 (as subgenus; type species *Scopelus hygomi* Lütken 1892 by original designation; original indication by Tåning 1932:133, invalid due to lack of type species designation).

Scopelus benoisti Cocco 1838:12, Sea of Messina. (Emmended

to *benoiti* by Bonaparte 1840; no type material, Krefft and Bekker 1973).

Scopelus (Myctophum) macrochir Günther 1864:408, no type locality given; 3 Syntypes. (Lectotype BMNH 1947.12.16.1, 2 paralectotypes BMNH, Bolin 1959; Lectotype not found 1975).

Scopelus hygomii Lütken 1892b:256, 4 localities in Atlantic and Indian Oceans; 4 Syntypes. (38°N, 22°20'W; Lectotype ZMUC 41, 3 paralectotypes ZMUC, Bolin 1959).

Myctophum remiger Goode and Bean 1896:74, 40°34'N, 60°09'W; 8 Syntypes USNM 43792. (9 Syntypes in bottle).

Scopelus reinhardtii Lütken 1892b:256, 2 localities in north Atlantic; 2 Syntypes. (34°22'N, 18°10'W; Lectotype Gilbert 1908; Lectotype ZMUC 24, Bolin 1959; paralectotype ZMUC Nielsen 1974).

Myctophum braueri Gilbert 1905:598, south of Oahu, Hawaii; Holotype USNM 51527, 16 paratypes. (7 paratypes SU Böhlke 1953; paratypes: CAS (7), USNM (8); preoccupied by *Myctophum (Lampanyctus) braueri* Lonnberg 1905).

Myctophum atratum Garman 1899:268, 25°26'N, 109°48'W (northeast Pacific); Holotype. (Holotype MCZ 28491, Parr 1934).

Myctophum (Hygophum) hansenii Tåning 1932:132, 42°32'S, 174°50'E, east of New Zealand. (Holotype ZMUC P2329226, Nafpaktitis 1973).

Serpa peccatus Whitley and Phillips 1939:228, North Cape, New Zealand; Holotype BMNH = *Lampanyctus macropodus* (non Brauer) Regan 1916. (Spirits Bay, New Zealand; Holotype BMNH 1910.3.20.89).

Hygophum taanungi Bekker 1965:76, 22°47'N, 63°40'W; Holotype ZIANL 37538, 2 paratypes.

Hygophum proximum Bekker 1965:81, 0°58'S, 82°53'E; Holotype ZIANL 37537, 10 paratypes.

Hygophum bruuni Wisner 1971:41, 32°48'S, 72°02'W; Holotype SIO 65-667, 203 paratypes: CAS (3), LACM (53), SIO (143), USNM (4).

IDIOLYCHNUS Nafpaktitis and Paxton 1978

IDIOLYCHNUS Nafpaktitis and Paxton 1978:495 (type species *Diaphus urolampus* Gilbert and Cramer 1897 by original designation).

Diaphus urolampus Gilbert and Cramer 1897:408, Kaiwi Channel, Hawaii; Holotype USNM 47709, 6 paratypes. (2 paratypes USNM, Parr 1929; 3 paratypes SU, Böhlke 1953; USNM 47709 with 3 specimens, none designated holotype; 1 additional USNM type, SU types now CAS).

LAMPADENA (LAMPADENA) Goode and Bean in Gill 1893

LAMPADENA Goode and Bean in Gill 1893:113 (type species *Lamпадена speculigera* Goode and Bean 1896 by subsequent monotypy, Goode and Bean 1896:85; only species listed with

original description, *Scopelus parvimanus?* Günther, invalid as type because listed as species inquirenda).

LAMPADENA (LYCHNOPHORA) Fraser-Brunner 1949:1080 (as subgenus; type species *Lamпадена nitida* Tåning 1928 by original designation; = *Myctophum luminosum* Garman 1899).

Lamпадена speculigera Goode and Bean 1896:85, 39°48'N, 70°36'W, north Atlantic; Holotype USNM 43796. (Lectotype USNM 43797, Jordan and Evermann 1896; 2 paralectotypes USNM).

Lamпадена braueri Zugmayer 1914:2, no type localities given. (northeast Atlantic, southeast of Halifax; 3 Syntypes MOM 3414, 3447, Belloc 1949).

Myctophum luminosum Garman 1899:263, 0°57'S, 89°03'W (eastern Pacific); Holotype. (Holotype MCZ 28498; Parr 1934).

Lamпадена luminosa nitida Tåning 1928:62, north Atlantic. (17°43'N, 64°56'W; Lectotype ZMUC P2330214, 1 paralectotype ZMUC, Nafpaktitis 1973).

Lamпадена chavesi Collett 1905:728, Azores; Holotype. (Holotype ZMO J693, Pethon 1969).

Lamпадена anomala Parr 1928:150, 32°24'N, 64°29'W, near Bermuda; Holotype BOC 2272.

Lamпадена dea Fraser-Brunner 1949:1101, 48°27'S, 22°10'-06'W; Holotype BMNH Discovery Collections, 1 paratype BMNH. (Holotype BMNH 1948.5.14.344).

Lamпадена urophaos Paxton 1963:29, 33°32'N, 118°25'W, southern California; Holotype AHF 2589, 6 paratypes: AHF (2), SIO (4). (Holotype LACM 6843-6, AHF paratypes now LACM).

?*Lamпадена urophaos atlantica* Maul 1969:2, Madeira; Holotype MMF 2464, 18 paratypes: LV (1), MMF (17).

Lamпадена notialis Nafpaktitis and Paxton 1968:13, 42°00'-08'S, 160°11'-05'E (south Pacific); Holotype LACM 11321-1, 2 paratypes: LACM (1), MCZ (1).

Lamпадена pontifex Krefft 1970:227, 14°31'N, 17°39'W, Holotype ISH 662/64a, 5 paratypes ISH. (Types now at ZMH).

LAMPADENA (DORSADENA) Coleman and Nafpaktitis 1972

DORSADENA Coleman and Nafpaktitis 1972:1 (type species *Dorsадена yaquinae* Coleman and Nafpaktitis 1972 by original designation).

Dorsадена yaquinae Coleman and Nafpaktitis 1972:2, 44°54'N, 138°32'W, off Oregon; Holotype LACM 30841-1, 4 paratypes: MCZ (1), OSUDO (2), USNM (1).

LAMPANYCTODES Fraser-Brunner 1949

LAMPANYCTODES Fraser-Brunner 1949:1080 (type species *Scopelus hectoris* Günther 1876 by original designation).

Scopelus hectoris Günther 1876:399, Cook Strait, New Zealand; Holotype BMNH. (Holotype BMNH 1876.2.12.18).

Scopelus argenteus Gilchrist 1904:15, 3 localities off South

Africa; Syntypes. (8 Syntypes: BMNH 1927.12.6.4–6 (3), 1947.12.27.1–2 (2), SAM 12671–2 (3), SAM 12671 labelled holotype).

LAMPANYCTUS (LAMPANYCTUS) Bonaparte 1840

LAMPANYCTUS Bonaparte 1840:139 (type species *Nyctophus bonapartii* Cocco 1838 by monotypy; = *Gasteropelecanus crocodilus* Risso 1810).

NANNOBRACHIUM Günther 1887:199 (type species *Nanobrachium nigrum* Günther 1887 by monotypy).

PROMACHEON Weber 1913:84 (type species *Promacheon sibogae* Weber 1913 by monotypy).

NYCTIMASTER Jordan 1921:645 (type species *Lampanyctus jordani* Gilbert 1913 by original designation).

SERPA Whitley 1933:64 (type species *Gasteropelecanus crocodilus* Risso 1810 by original designation).

PARALAMPANYCTUS Kotthaus 1972a:13 (type species *Nanobrachium nigrum* Günther 1887 by original designation).

Gasteropelecanus crocodilus Risso 1810:357, Sea of Amplova, Mediterranean. (No type material available, Krefft and Bekker 1973).

Nyctophus bonapartii Cocco 1838:29, Sea of Messina, Mediterranean. (No type material available, Krefft and Bekker 1973).

Lampanyctus gemmifer Goode and Bean 1896:80, 39°40'N, 71°35'W (north Atlantic); Holotype USNM 35604.

Lampanyctus peculiaris Borodin 1929:111, 47°40'N, 37°20'W, north Atlantic; Holotype MCZ 31628.

Lampanyctus iselini Parr 1934:60, 41°30'N, 45°57'W, north Atlantic; Holotype MCZ 33223, 1 paratype MCZ.

Nanobrachium nigrum Günther 1887:199, south of Philippine Islands; Holotype. (Holotype BMNH 1887.12.7.219, Nafpaktitis 1973).

Scopelus pusillus Johnson 1890:457, Madeira; Holotype. (Holotype BMNH 1890.5.31.8, Krefft and Bekker 1973).

Myctophum regale Gilbert 1892:544, northeast Pacific; Holotype, 3 paratypes. (Holotype USNM 44289, Jordan and Evermann 1896; 1 paratype SU, Böhlke 1953; paratype now at CAS).

Lampanyctus micropunctatus Chapman 1939:527, 53°40'N, 134°15'W, northeast Pacific; Holotype USNM 108142, 19 paratypes. (1 paratype SU, Böhlke 1953; paratypes: CAS (11), USNM (7)).

Lampanyctus alatus Goode and Bean 1896:79, 28°43'N, 87°14'W (Gulf of Mexico); 3 Syntypes USNM 43769. (2 Syntypes USNM 43769, Parr 1929; Lectotype USNM 43769, 1 paralectotype USNM, Bolin 1959).

Lampanyctus punctatissimus Gilbert 1913:103, Suruga Bay, Japan; Holotype USNM, paratypes. (Holotype USNM 74469, Parr 1929; 1 paratype SU, Böhlke 1953; 2 paratypes USNM, Krefft and Bekker 1973; 5 paratypes USNM, SU paratype now at CAS).

Lampanyctus pseudoalatus Tåning 1918:108, 2 localities in

northeast Atlantic. (20°00'N, 21°55'W; Lectotype ZMUC P2330202, Nafpaktitis 1973; 3 paralectotypes ZMUC, Nielsen 1974).

Nanobrachium macdonaldi Goode and Bean 1896:94, 39°48'N, 70°36'W, north Atlantic; Holotype USNM 39478. (Type USNM 35545, Jordan and Evermann 1896; Holotype USNM 39478, 2 paratypes USNM).

Myctophum (Lampanyctus) macropterum Brauer 1904:404, Indian Ocean. (10 localities in Indian Ocean; 22 Syntypes, Brauer 1906; Syntypes: ZMH H 5677(1), Wilkens 1977; SMF 2078 (1), ZMB 17624–6, 22377 (4)).

Lampanyctus macropterus taningi Angel and Verrier 1931:124, 1°16'S, 138°55'E, north of New Guinea; Holotype. (Holotype not found at MOM or MNHM, 1975; preoccupied by *Lampanyctus taanangi* Parr 1929).

Serpa freta Whitley 1936:162, replacement name for *Lampanyctus macropterus taningi* Angel and Verrier 1931.

Lampanyctus macropterus novaeguineae Fowler 1958:7, replacement name for *Lampanyctus macropterus taningi* Angel and Verrier 1931.

Lampanyctus basili Kotthaus 1972b:31, 180 miles ENE of Seychelles, Indian Ocean (3°S, 58°E); Holotype IOES 154A', 6 paratypes IOES. (Holotype ZMH 5110, 6 paratypes ZMH).

Myctophum (Lampanyctus) tenuiforme Brauer 1906:243, 4°34'S, 53°42'E, Indian Ocean between Zanzibar and Seychelles; Holotype. (Holotype ZMB 17620).

Lampanyctus omostigma Gilbert 1908:232, 10°58'N, 137°35'W; Holotype, 1 paratype. (Holotype USNM 75769, Parr 1929; 1 paratype SU, Böhlke 1953; SU paratype now at CAS).

?*Promacheon sibogae* Weber 1913:85, 4°14'S, 128°52'W, Banda Sea; 2 larval Syntypes. (2 Syntypes ZMA 112.630–31).

Lampanyctus jordani Gilbert 1913:104, Nemuro Hokkaido, Japan; Holotype CMP 4617, 2 paratypes. (1 paratype SU, Böhlke 1953; Holotype FMNH 55837, paratypes: CAS (1), USNM (1)).

Lampanyctus ritteri Gilbert 1915:318, Monterey Bay, California; Holotype USNM 75807, paratypes. (2 paratypes SU, Böhlke 1953; SU paratypes now at CAS).

?*Nyctimaster reinhardti* Jordan 1921:645, southwest of Hawaii; Holotype USNM 84095, 2 paratypes. (2 Syntypes USNM 84095, Parr 1929; 1 paratype BPBM, larger specimen only).

Lampanyctus nobilis Tåning 1928:66, north Atlantic. (17°41'N, 60°58'W; Lectotype ZMUC P2330211, Nafpaktitis 1973).

Lampanyctus intricarius Tåning 1928:67, north Atlantic. (38°10'N, 9°20'W; Lectotype ZMUC P2330208, Nafpaktitis 1973).

Serpa conspicua Whitley 1936:160, Kaikoura, New Zealand; Holotype AMS IA.6500.

Lampanyctus festivus Tåning 1928:67, north Atlantic. (35°44'N, 29°33'W; Lectotype ZMUC P2330215, Nafpaktitis 1973).

Lampanyctus septilucus Beebe 1932:68, 7 miles southwest of Nonsuch Island, Bermuda; Holotype NYZS 14292A, 2 paratypes NYZS. (Holotype now USNM 171199, Mead 1958; 2 paratypes CAS, Krefft and Bekker 1973).

?*Serpa bensoni* Fowler 1934:286, Suruga Gulf, Japan; Holotype USNM 92311.

Lampanyctus ater Tåning 1928:68, north Atlantic. (30°17'N, 20°44'W; Lectotype ZMUC P2330209, Nafpaktitis 1973).

Lampanyctus lineatus Tåning 1928:68, north Atlantic. (17°54'N, 64°54'W; Lectotype ZMUC P2330212, Nafpaktitis 1973).

Lampanyctus cuprarius Tåning 1928:68, north Atlantic. (24°30'N, 80°00'W; Lectotype ZMUC P2330213, Nafpaktitis 1973).

Lampanyctus photonotus Parr 1928:102, 22°43'N, 74°23'W, Bahamas; Holotype BOC 2261.

Lampanyctus taanungi Parr 1929:27, Exuma Sound, Bahamas; Holotype BOC 2301, 1 paratype USNM. (8 paratypes BOC, Krefft and Bekker 1973).

Lampanyctus omostigma parvicauda Parr 1931:26, 16°14'N, 99°36'W; Holotype BOC 2682, 27 paratypes BOC.

Lampanyctus idostigma Parr 1931:32, 16°14'N, 99°36'W, Holotype BOC 2686, 26 paratypes BOC. (2 paratypes CAS).

Lampanyctus alatus australis Tåning 1932:145, off New Zealand, Australia and South Africa. (41°47'S, 176°55'E, off New Zealand; Lectotype ZMUC P2330216, Nafpaktitis 1973).

Serpa turneri Fowler 1934:285, Leyte-Mindanao, Philippines; Holotype USNM 92313, 1 paratype. (Holotype and paratype in 1 bottle, USNM 92313, both 57 mm TL).

Lampanyctus basili Wisner 1974:11, 6°32'N, 114°16'E (off Malaysia); Holotype SIO 69-20, 265 paratypes: BPBM (15), CAS (16), LACM (7), SIO (220), USNM (7). (Paratypes: BPBM (15), CAS (16), LACM (7), SIO (232), USNM (6); preoccupied by *Lampanyctus basili* Kotthaus 1972).

Lampanyctus steinbecki Bolin 1939:140, off Santa Catalina Island, California; Holotype SU 33658. (Holotype now at CAS).

Lampanyctus achirus Andriashev 1962:256, 64°36'S, 108°52'W; Holotype ZIANL 36111, 11 paratypes. (Paratypes: CAS (1), ZIANL (11)).

Lampanyctus hubbsi Wisner 1963a:16, 2°31'S, 137°04'W, central Pacific; Holotype SIO 60-234-25A, 36 paratypes SIO.

Lampanyctus iselinoides Bussing 1965:205, 31°58'S, 73°11'W, Peru-Chile Trench; Holotype LACM 10068, 163 paratypes LACM.

Lampanyctus lepidolychnus Bekker 1967:112, 42°17'S, 39°00'W; Holotype ZIANL 37858, 5 paratypes.

Lampanyctus fernae Wisner 1971:50, 41°01'N, 155°13'W; Holotype SIO 51-373, 45 paratypes: BCFH (1), CAS (1), OSUDO (1), SIO (29), USNM (13). (Paratypes: BCFH (2), CAS (4), OSUDO (5), SIO (21), USNM (13)).

Lampanyctus simulator Wisner 1971:51, 41°01'N, 155°00'W, Holotype SIO 69-17, 12 paratypes: OSUDO (1), SIO (9),

USNM (3). (Paratypes: CAS (1), OSUDO (1), SIO (6), USNM (2)).

Lampanyctus isaacsii Wisner 1974:14, 1°10'N, 11°36'W, off west Africa; Holotype SIO 63-560, 9 paratypes: SIO (3), USNM (5), ZMUC (1). (USNM and ZMUC paratypes not found 1975, only 2 SIO paratypes in bottle).

Lampanyctus acanthurus Wisner 1974:17, 27°25'N, 155°32'W, north Pacific; Holotype SIO 71-305, 20 paratypes: BPBM (1), CAS (3), LACM (2), SIO (12), USNM (2).

LAMPANYCTUS (PARVILUX) Hubbs and Wisner 1964

PARVILUX Hubbs and Wisner 1964:488 (type species *Parvilux ingens* Hubbs and Wisner 1964 by original designation).

Parvilux ingens Hubbs and Wisner 1964:451, 29°09'N, 118°27'W, off Guadalupe Island, Mexico; Holotype SIO 57-207-25A, 76 paratypes: AHF (3), BMNH (4), CAS (2), MCZ (3), MMF (3), RMNH (6), SIO (29), SU (1), USNM (25). (Paratypes: BMNH (1), CAS (3), LACM (3), MCZ (1), RMNH (1), SIO (63), USNM (3)).

Parvilux boschmai Hubbs and Wisner 1964:458, 2°09'N, 84°53'W; Holotype SIO 52-384-25B.

LAMPICHTHYS Fraser-Brunner 1949

LAMPICHTHYS Fraser-Brunner 1949:1095 (type species *Myctophum (Lampanyctus) procerum* Brauer 1904 by original designation).

Myctophum (Lampanyctus) procerum Brauer 1904:402, close to Agulhas Bank. (35°32'S, 18°20'E, south Atlantic; Holotype, Brauer 1906). (Holotype? ZMB 22382, second specimen not mentioned by Brauer ZMB 17609 labelled as type).

Lampichthys rectangularis Fraser-Brunner 1949:103, 44°42'S, 53°32'W; Holotype BMNH Discovery Collections. (Holotype BMNH 1948.5.14.690).

LEPIDOPHANES Fraser-Brunner 1949

LAMPANYCTUS (LEPIDOPHANES) Fraser-Brunner 1949:1090 (as subgenus; type species *Lampanyctus guentheri* Goode and Bean 1896 by original designation).

Lampanyctus guentheri Goode and Bean 1896:79, north Atlantic (Newfoundland Banks); Holotype USNM 43777.

Lampanyctus melanothorax Parr 1928:98, 21°30'N, 71°11'W, Bahamas; Holotype BOC 2260, 54 paratypes BOC. (1 paratype MCZ).

Myctophum (Lampanyctus) gaussi Brauer 1906:235, no type locality given; 4 Syntypes. (Lectotype ZMB 20725, 5 paratypes ZMB, Bolin 1959).

?*Lampanyctus gaussi mediterranea* Borodin 1928:12, Sardinia, Mediterranean; Holotype VMM 131.

Lampanyctus subpectoralis Parr 1928:101, 24°29'N, 77°29'W, Bahamas; Holotype BOC 2249.

LOBIANCHIA Gatti 1903

LOBIANCHIA Gatti 1903:28 (type species *Nyctophus gemellarii* Cocco 1838 by monotypy).

PSEUDODIAPHUS Tåning 1918:71 (no type species indicated; *Diaphus gemellarii* and *Diaphus dofleini* listed under new genus; *Myctophum (Lampanyctus) dofleini* Zugmayer 1911 here designated as type species).

DIAPHUS (HYPERPHOTOS) Fraser-Brunner 1949:1066 (as subgenus; type species *Nyctophus gemellarii* Cocco 1838 by original designation).

Nyctophus gemellarii Cocco 1838:26, Sea of Messina. (No type material, Krefft and Bekker 1973).

?*Scopelus uracocampus* Facciola 1884:51, Messina. (No type material, Krefft and Bekker 1973).

Diaphus nipponensis Gilbert 1913:86, 30°34'N, 129°22'E, Japan; Holotype USNM. (Holotype USNM 74467, Parr 1929).

Myctophum (Lampanyctus) dofleini Zugmayer 1911:3, no localities given; 7 Syntypes. (West of Seine Bank, off Cape Palos and off Cape de Gate; 8 Syntypes MOM 2022, 2699, 2902, 2910, Belloc 1949; only 7 Syntypes found 1975).

LOWEINA Fowler 1925

RHINOSCOPELUS (LOWEINA) Fowler 1925:2 (as subgenus; type species *Scopelus (Rhinoscopelus) rarus* Lütken 1892 by original designation).

Scopelus (Rhinoscopelus) rarus Lütken 1892b:246, 4 localities in north and south Atlantic; Syntypes. (20°00'N, 49°W; Lectotype ZMUC 223, 1 paralectotype ZMUC, Nielsen 1974; Wisner 1976).

Myctophum rarum f. *integer* Brauer 1904:391, no type locality given. (3 localities in Atlantic; 4 Syntypes, Brauer 1906; 1 presumed Syntype ZMB 17585, Krefft and Bekker 1973; 1 Syntype ZMB 17585).

Loweina laurae Wisner 1971:45, 21°32'N, 123°00'W; Holotype SIO 57-99, 47 paratypes: CAS (3), SIO (35), USNM (9).

Myctophum interruptum Tåning 1928:56, north Atlantic. (37°40'S, 120°00'E; Lectotype ZMUC 18, 2 paralectotypes ZMUC, Nafpaktitis 1973; Wisner 1976).

Loweina terminata Bekker 1964:18, 35°00'N, 172°56'E; Holotype ZIANL 37342, 10 paratypes.

MYCTOPHUM Rafinesque 1810

MYCTOPHUM Rafinesque 1810:56 (type species *Myctophum punctatum* Rafinesque 1810 by monotypy).

SCOPELUS Cuvier 1817:169 (type species *Gasteropelecus humboldti* Risso 1810 by subsequent designation of Goode and Bean 1896; = *Myctophum punctatum* Rafinesque 1810).

SCOPELUS (DASYSCOPELUS) Günther 1864:405 (as subgenus; type species *Scopelus asper* Richardson 1845 by subsequent designation of Goode and Bean 1896).

STYLOPHTHALMOIDES Mazzarelli 1912:4 (type species *Stylophthalma lobiancoi* Mazzarelli 1909 by subsequent designation of Tåning 1932a; = *Myctophum punctatum* Rafinesque 1810).

CTENOSCOPELUS Fraser-Brunner 1949:1059 (type species *Scopelus phengodes* Lütken 1892 by original designation).

Myctophum punctatum Rafinesque 1810:56, Sicily, Mediterranean Sea. (No type material, Krefft and Bekker 1973).

Gasteropelecus humboldti Risso 1810:358, Sea of Amplova, Mediterranean. (Types MNHN, Cuvier and Valenciennes 1849; 3 Syntypes MNHN, Esteve 1947; 3 Syntypes MNHN 1470, Krefft and Bekker 1973).

Scopehus caninianus Cuvier and Valenciennes 1849:455, Italy; Holotype MNHN. (No type material, Krefft and Bekker 1973; Holotype MNHN 88.150, not found 1975).

Scopelus heideri Steindachner 1881:401, Messina; 2 Syntypes. (Holotype NMW 58592, Krefft and Bekker 1973; only one Syntype found 1975 with label indication that 2 specimens existed at one time).

Stylophthalma lobiancoi Mazzarelli 1909:187, Messina; larval types. (No type material, Krefft and Bekker 1973).

Myctophum asperum Richardson 1845:41, no type locality given. (2 Syntypes BMNH, Günther 1864; type locality unknown; Lectotype BMNH 1855.9.19.1959-30, 1 paralectotype BMNH, Wisner 1970; Lectotype BMNH 1855.9.19.1529).

Dasycephalus naufragus Waite 1904:154, Lagoon Beach, Lord Howe Island; 25 Syntypes AMS. (5 Syntypes SU, Böhlke 1953; Syntypes: AMS (20) 1.5537-56, 1B.4178, BMNH (1) 1926.6.30.80, CAS (5) SU 20171).

Scopelus brachynathos Bleeker 1856:65, Manado, Makassar, Indonesia; 2 Syntypes. (2 Syntypes RMNH, Nafpaktitis 1973; RMNH 6932).

Dasycephalus pristilepis Gilbert and Cramer 1897:412, 21°16'N, 157°44'W, Kaiwi Channel, Hawaii; Holotype USNM 47737, 1 paratype. (1 paratype SU, Böhlke 1953; SU paratype now CAS).

Scopelus spinosus Steindachner 1867b:711, China; Holotype. (Holotype NMW 58690).

?*Scopelus cuvieri* Castelnau 1873:106, Knob Island, north of Australia, Torres Strait?; Holotype. (Holotype MNHN, Waite 1904; Holotype MNHN A.4219, not found 1975).

?*Scopelus (Myctophum) indicus* Day 1878:507, Vizagapatam, India; Holotype. (Holotype ZSI 1337, totally disintegrated).

Scopelus affinis Lütken 1892b:252, 38 localities in Atlantic and Indian Oceans and South China Sea. (8°44'N, 21°W; Lectotype ZMUC 16, 67 paralectotypes ZMUC, Bolin 1959; 77 paralectotypes ZMUC, Nielsen 1974).

?*Myctophum opalinum* Goode and Bean 1896:72, no type locality given, number of types not indicated. (Gulf Stream, western Atlantic; Lectotype USNM 43808, Jordan and Evermann 1896; 69 presumed paralectotypes USNM, 1 possible paralectotype MCZ).

?*Rhinoscopelus oceanicus* Jordan and Evermann 1903:168, 10°57'N, 137°35'W, southeast of Hawaii, Holotype USNM 50622, 1 paratype USFC. (USFC paratype now USNM).

Scopelus phengodes Lütken 1892b:253, 25°50'S, 102°50'E (south Pacific); Holotype and paratypes. (Holotype ZMUC 14, 20 paratypes ZMUC, Krefft and Bekker 1973).

Myctophum nitidulum Garman 1899:266, 27°50'N, 145°45'W (north Pacific); Holotype. (Holotype MCZ 28493, Parr 1929).

Myctophium margaritatum Gilbert 1905:596, south of Molokai, Hawaii; Holotype USNM 51536, 62 paratypes. (11+ paratypes SU, Böhlke 1953; paratypes: CAS (26), USNM (29)).

Myctophum aurolaternatum Garman 1899:264, 6°21'N, 80°41'W (eastern Pacific). (25 Syntypes MCZ 28494-5, Parr 1929; Syntypes: MCZ 28494 (3), MCZ 35191 (1), USNM 120276 (4)).

Myctophum aurolaternatum gracilior Fowler 1944:355, 250 miles southwest of Acapulco, Mexico; Holotype ANSP 70262, paratypes ANSP. (16 paratypes ANSP).

?*Scopelus* (*Myctophum*) *novaeseelandiae* Steindachner 1901:513, New Zealand; Holotype. (Holotype UMB 4667, lost, von Wahlgren 1955).

Dasy scopelus orientalis Gilbert 1913:70, Misaki, Sagami Bay, Japan; Holotype CMP 6313 or USNM, 125 paratypes. (1 paratype CMP, Henn 1928; 21 paratypes SU, Böhlke 1953; Holotype FMNH 55834, paratypes: CAS (23), FMNH (63), USNM (23)).

Myctophum pristilepis obtusirostre Tåning 1928:54, north Atlantic. (17°54'N, 64°54'W; Lectotype ZMUC P2329232, Nafpaktitis 1973).

?*Myctophum imperceptum* Bekker and Borodulina 1971:422, 9°30'S, 156°30'E, southwest Pacific; Holotype ZIANL 39910, 4 paratypes.

Myctophum selenops Tåning 1928:54, north Atlantic. (23°13'N, 82°21'W; Lectotype ZMUC P2329234, Nafpaktitis 1973).

Myctophum selenoides Wisner 1971:43, west of Keyhole Point, Hawaii; Holotype SIO 60-251, 6 paratypes: BPBM (1), SIO (2), USNM (3).

?*Myctophum lychnobium* Bolin 1946:137, 5°56'N, 76°22'E, off Cape Cormorin, India; Holotype IMC. (Holotype ZSI, lost, Menon and Rao 1971; Holotype ZSI F 7405/2, found).

Myctophum fissunovi Bekker and Borodulina 1971:420, 6°58'S, 39°37'E, Indian Ocean; Holotype ZIANL 39909, 1 paratype.

Myctophum lunatum Bekker and Borodulina 1978:110, 7°26'S, 124°13'E, Indo-Malayan Archipelago; Holotype ZIANL 43261, 14 paratypes IOANM.

NOTOLYCHNUS Fraser-Brunner 1949

VESTULA Bolin 1946:144 (type species *Myctophum valdiviae* Brauer 1904 by original designation; preoccupied by *Vestula* Staal 1865, Hemiptera).

NOTOLYCHNUS Fraser-Brunner 1949:1077 (type species *Myctophum valdiviae* Brauer 1904 by original designation; replacement name for *Vestula* Bolin 1946).

Myctophum valdiviae Brauer 1904:398, Atlantic and Indian Oceans; 66 Syntypes. (23 localities in Atlantic and Indian

Oceans, Brauer 1906; 12 presumed Syntypes ZMB 17586-9, Krefft and Bekker 1973; Syntypes: SMF (6) 2074-5, 11942; SMNS (1) 4477; ZMB (17) 17586-9, 20007).

NOTOSCOPELUS (NOTOSCOPELUS) Günther 1864

SCOPELUS (*NOTOSCOPELUS*) Günther 1864:405 (as subgenus; type species *Lampanyctus resplendens* Richardson 1845 by subsequent designation of Goode and Bean 1896).

CATABLEMELLA Eigenmann and Eigenmann 1890:24 (type species *Notoscopelus brachyphir* Eigenmann and Eigenmann 1889 by original designation; = *Lampanyctus resplendens* Richardson 1845).

Scopelus elongatus Costa 1844:2, off Naples. (No types exist, Moreau 1891; types obviously lost, Krefft and Bekker 1973).

Scopelus pseudocrocodilus Moreau 1891:84, Nice, Mediterranean Sea. (Types MNHN, Esteve 1947; 2 Syntypes MNHN 98-1115, Krefft and Bekker 1973).

Lampanyctus resplendens Richardson 1845:42, no type locality given; 6 Syntypes. (3 Syntypes BMNH, Günther 1864; 3 Syntypes BMNH 1843.3.16, Krefft and Bekker 1973).

Notoscopellus brachyphir Eigenmann and Eigenmann 1889:126, Cortez Banks off California; 3 Syntypes. (Emended to *Notoscopelus brachyphir*, Eigenmann and Eigenmann 1890; Type USNM 76336, Parr 1929; Lectotype USNM 76336, 1 paralectotype BMNH, Bolin 1959).

Notoscopelus ejectus Waite 1904:150, Lord Howe Island; Holotype AMS. (Holotype AMS 1.5564, Krefft and Bekker 1973).

Serpa hoffmanni Fowler 1934:282, 36°45'N, 74°29'W; Holotype USNM 43790, 1 paratype. (No paratype found ANSP or USNM 1975).

Scopelus kroeyerii Malm 1861:617, Skagerrak, Sweden; Holotype. (Holotype NMG Pi.su. 219, Krefft and Bekker 1973).

Notoscopelus quercinus Goode and Bean 1896:83, north Atlantic; Holotype USNM 43789.

Notoscopelus margariferus Goode and Bean 1896:84, off Banquero, north Atlantic, 2 Syntypes USNM 43774-5. (Newfoundland Banks; Lectotype USNM 43775, Jordan and Evermann 1896).

Notoscopelus castaneus Goode and Bean 1896:84, 39°57'N, 70°37'W (north Atlantic); Holotype USNM 31706.

Scopelus caudispinosus Johnson 1863:42, Madeira; Holotype BMNH. (Holotype BMNH 1862.2.5.3, Krefft and Bekker 1973).

Macrostoma quercinum japonicum Tanaka 1908:5, off Misaki, Japan; Holotype. (Holotype FMNH 80459, Fujii and Ueno 1976).

NOTOSCOPELUS (PAREIOPHUS) Nafpaktitis 1975

NOTOSCOPELUS (*PAREIOPHUS*) Nafpaktitis 1975:83 (as subgenus; type species *Notoscopelus bolini* Nafpaktitis 1975 by original designation).

Notoscopelus (Pareiophus) bolini Nafpaktitis 1975:83, 38°39'N, 04°12'E, Mediterranean; Holotype USNM 212056, 5 paratypes: LACM (2), MCZ (2), USNM (1).

PROTOMYCTOPHUM (PROTOMYCTOPHUM)
Fraser-Brunner 1949

ELECTRONA (PROTOMYCTOPHUM) Fraser-Brunner 1949:1045 (as subgenus; type species *Myctophum tenisoni* Norman 1930 by original designation).

Myctophum anderssoni Lonnberg 1905:763, 48°54'S, 51°40'W; 3 Syntypes. (3 Syntypes NRMS 9022653761).

Myctophum tenisoni Norman 1930:321, 46°25'S, 15°13'E, south Atlantic; Holotype, 8 paratypes BMNH. (Holotype BMNH 1930.1.12.604; of the remaining 13 specimens over 34 mm listed by Norman, the 8 paratypes are not indicated; all specimens are present in BMNH).

Myctophum normani Tåning 1932:127, 41°47'S, 176°55'E, east of New Zealand. (Holotype ZMUC P2329231, Nafpaktitis 1973).

Electrona (Protomyctophum) bolini Fraser-Brunner 1949:1099, 45°18'S, 18°58'S, south Atlantic; Holotype, 4 paratypes BMNH Discovery Collections. (Holotype BMNH 1948.5.14.1).

Protomyctophum andriashevi Bekker 1963:19, 42°16'S, 39°00'W, south Atlantic; Holotype ZIANL 36803, 5 paratypes.

PROTOMYCTOPHUM (HIEROPS) Fraser-Brunner 1949

ELECTRONA (HIEROPS) Fraser-Brunner 1949:1046 (as subgenus; type species *Scopelus arcticus* Lütken 1892 by original designation).

Scopelus arcticus Lütken 1892a:207, off southern Greenland; 5 Syntypes. (Sukkertoppen, Greenland; Lectotype ZMUC 81, Bolin 1959; 4 paralectotypes ZMUC, Nielsen 1974).

Myctophum parallelum Lonnberg 1905:764, 48°27'S, 44°36'W; Holotype. (Holotype NRMS 9022613760).

Myctophum arcticum subparallelum Tåning 1932:128, east of Cook Strait, New Zealand. (41°47'S, 176°55'E; Lectotype ZMUC P2329223, Nafpaktitis 1973).

Electrona crockeri Bolin 1939:98, 33°11'N, 118°21'W, off southern California; Holotype SU 33656. (Holotype now CAS).

Electrona thompsoni Chapman 1944:54 (replacement name for *Myctophum oculatum* Chapman 1939).

Myctophum oculatum Chapman 1939:524, 54°15'N, 158°23'W, northeast Pacific; Holotype USNM 108146, 37 paratypes. (Preoccupied by *Myctophum oculatum* Garman 1899; 1 paratype SU, Böhlke 1953; paratypes: CAS (32), USNM (2)).

Protomyctophum (Hierops) chilensis Wisner 1971:39, 33°07'S, 73°09'W, off Chile; Holotype SIO 65-665, 23 paratypes: CAS (1), LACM (7), SIO (14), USNM (1).

Protomyctophum (Hierops) beckeri Wisner 1971:39, 17°09'N,

153°57'W; Holotype SIO 60-249, 4 paratypes: BPBM (1), SIO (2), USNM (1).

SCOPELOPSIS Brauer 1906

SCOPELOPSIS Brauer 1906:146 (type species *Scopelopsis multipunctatus* Brauer 1906 by monotypy).

Scopelopsis multipunctatus Brauer 1906:146, 33°23'S, 16°19'E, south Atlantic; Holotype. (Holotype ZMB 17560).

Lampanyctus longipinnis Regan 1916:140, 33°12'S, 171°05'E, northeast of Three Kings Island, New Zealand; larval Holotype BMNH. (Holotype BMNH 1916.3.20.90).

Scopelopsis caudalis Whitley 1932:333, Lord Howe Island; Holotype AMS IA.2427.

STENOBRACHIUS Eigenmann and Eigenmann 1890

MYCTOPHUM (STENOBRACHIUS) Eigenmann and Eigenmann 1890:5 (as subgenus; type species *Myctophum leucopsarum* Eigenmann and Eigenmann 1890 by original designation).

Myctophum (Stenobrachius) leucopsarum Eigenmann and Eigenmann 1890:5, off Point Loma, California; 23 Syntypes. (Lectotype USNM 41916, Jordan and Evermann 1896; 2 types MCZ, Parr 1934; paralectotypes: BMNH (3), CAS (1), MCZ (2)).

Lampanyctus beringensis Schmidt 1933:131, off Cape Severny, Bering Island; Holotype ZIANL 23745.

Myctophum nannochir Gilbert 1890:51, Pacific coast of United States; Syntypes. (Lectotype SU 1459, Gilbert 1895; 8 types USNM, Parr 1929; 9 paralectotypes SU, Böhlke 1953; paralectotypes: CAS (9), MCZ (1), USNM (7)).

Lampanyctus nannochir laticauda Kulikova 1954:196, Okhotsk Sea and Kurile Islands; 67 Syntypes. (Syntypes not at ZIANL).

SYMOLOPHORUS Bolin and Wisner in Bolin 1959

SYMOLOPHORUS Bolin and Wisner in Bolin 1959:11 (type species *Myctophum californiense* Eigenmann and Eigenmann 1889 by original designation).

?*Myctophum boops* Richardson 1845:39, Tasman Sea; Syntypes. (Holotype BMNH, Günther 1864; type locality in error, Whitley 1953; Syntype BMNH 1948.1.12.1).

Scopelus veranyi Moreau 1888:108, Nice, Mediterranean Sea; Syntypes. (No type material, Krefft and Bekker 1973; no types recorded in MNHN).

Stylophthalmus mediterraneus Mazzarelli 1909:187, Messina; larval Syntypes.

Myctophum californiense Eigenmann and Eigenmann 1889:124, Cortez Banks off California; several Syntypes. (Type USNM 41920, Parr 1929; Syntypes: BMNH (1) 1891.5.17.4, CAS (1) SU 20172, USNM (1) 41920).

Myctophum evermanni Gilbert 1905:597, south of Oahu, Hawaii; Holotype USNM 51521, 34 paratypes. (19 paratypes SU,

Böhlke 1953; paratypes: CAS (19), USNM (6)).

Myctophum rufinum Tåning 1928:54, north Atlantic. (15°50'N, 26°32'W; Lectotype ZMUC P2330210, Nafpaktitis 1973).

?*Myctophum humboldti barnardi* Tåning 1932:128, off South Africa. (Lectotype ZMUC P2329227, Nafpaktitis 1973).

?*Scopelus hookeri* Whitley 1953:134, Tasman Sea (Lord Howe Island); Holotype AMS IA.1406.

TAANINGICHTHYS Bolin 1959

TAANINGICHTHYS Bolin 1959:25 (type species *Lampadена bathyphila* Tåning 1928 by original designation).

Lampadена bathyphila Tåning 1928:63, north Atlantic. (25°11'N, 20°57'W; Lectotype Bolin 1959; Lectotype ZMUC P2329220, Nafpaktitis 1973).

Lampadena minima Tåning 1928:63, north Atlantic. (15°50'N, 26°32'W; Lectotype ZMUC P2329221, Nafpaktitis 1973).

Taaningichthys paurolychnus Davy 1972:71, 31°N, 119°W, northeast Pacific; Holotype SIO 70-19, 12 paratypes: MMF (1), NIO (1), NMFS (1), SIO (2), SOSC (1), IOANM (1), ZMUC (4). (Paratypes: BMNH (1), LACM (3), MMF (8), USNM (2), ZIANL (1), ZMUC (1)).

TARLETONBEANIA Eigenmann and Eigenmann 1890

TARLETONBEANIA Eigenmann and Eigenmann 1890:6 (type species *Tarletonbeania tenua* Eigenmann and Eigenmann 1890 by original designation; = *Myctophum crenulare* Jordan and Gilbert 1880).

Myctophum crenulare Jordan and Gilbert 1880:274, Santa Barbara Channel, California; Holotype. (Holotype USNM 27402, Jordan and Evermann 1896).

Myctophum procellarium Bean in Jordan and Gilbert 1881:457 (NOMEN NUDUM).

Tarletonbeania tenua Eigenmann and Eigenmann 1890:7, probably near Coronado Islands, California; Holotype USNM 41882.

?*Tarletonbeania taylori* Mead 1953:105, 39°21'N, 142°56'E, off Ohakozake, Japan; Holotype USNM 164970, 5 paratypes: USNM (2). (3 paratypes CAS).

TRIPHOTURUS Fraser-Brunner 1949

LAMPANYCTUS (TRIPHOTURUS) Fraser-Brunner 1949:1083 (as subgenus; type species *Myctophum (Lampanyctus) micropoterum* Brauer 1906 by original designation).

Myctophum mexicanum Gilbert 1890:51, Gulf of California and west coast of Baja California, Mexico; 6 Syntypes. (Type USNM 44289, Jordan and Evermann 1896; (invalid as a lectotype designation, as 44289 is not part of the syntypic series); type USNM 76343, Parr 1929; Lectotype USNM 76343, 3 paralectotypes SU, Böhlke 1953).

?*Myctophum oculeum* Garman 1899:260, 12 localities in eastern Pacific. (8 Syntypes MCZ 28500, Parr 1934; 19

Syntypes: MCZ 28500 (7), 34945 (1), 34946 (4), 35162 (1), 35182 (1), 35185 (1), 35187 (1), 35189 (2), USNM 120422 (1)).

Myctophum (Lampanyctus) nigrescens Brauer 1904:403, Indian Ocean. (2 localities east of Seychelles; 2 Syntypes, Brauer 1906; 2 Syntypes ZMB 17617, 22379).

?*Lampanyctus microchir* Gilbert 1913:101, Suruga Bay, Japan; Holotype USNM. (Holotype USNM 74468, Parr 1929).

?*Myctophum (Lampanyctus) micropterum* Brauer 1906:239, 11 localities in tropical Atlantic and Indian Oceans; 9 Syntypes. (3 Syntypes ZMB 17614-16).

Myctophidae unplaceable to genus

?*Scopelus tenuicauda* Steindachner 1867a:590, China Sea. (Type not found NMW 1975).

?*Scopelus langerhansi* Johnson 1890:454, Madeira; Holotype ZMB. (Holotype not found ZMB 1975).

ALPHABETICAL LIST OF RECENT MYCTOPHID SPECIES

Species, present genus, original genus, year of description (senior synonym year).

- acanthurus, *Ceratoscopelus*, *Scopelus*, 1882, (1864)
- acanthurus, *Lampanyctus*, *Lampanyctus*, 1974
- achirus, *Lampanyctus*, *Lampanyctus*, 1962
- adenomus, *Diaphus*, *Diaphus*, 1905
- aeolochrus, *Diaphus*, *Myctophum*, 1927, (1896)
- affinis, *Myctophum*, *Scopelus*, 1892
- agassizi, *Diaphus*, *Diaphus*, 1908
- ahlstromi, *Electrona*, *Metelectrona*, 1963, (1963)
- alatus, *Lampanyctus*, *Lampanyctus*, 1896
- aliciae, *Diaphus*, *Diaphus*, 1934
- altifrons, *Diaphus*, *Diaphus*, 1961
- anderseni, *Diaphus*, *Diaphus*, 1932
- anderssoni, *Protomyctophum*, *Myctophum*, 1905
- andreae, *Centrobranchus*, *Scopelus*, 1892
- andriashevi, *Protomyctophum*, *Protomyctophum*, 1963
- anomala, *Lampadена*, *Lampadena*, 1928
- antarcticus, *Electrona*, *Scopelus*, 1878
- antelucens, *Diaphus*, *Diaphus*, 1961
- anteorbitalis, *Diaphus*, *Diaphus*, 1913, (1905)
- antonbruuni, *Diaphus*, *Diaphus*, 1978
- aphya, *Gymnoscopelus*, *Gymnoscopelus*, 1873
- arabicus, *Diaphus*, *Diaphus*, 1978
- arcticus, *Protomyctophum*, *Scopelus*, 1892
- argenteus, *Lampanyctodes*, *Scopelus*, 1904, (1876)
- ashmeadi, *Diaphus*, *Diaphus*, 1934, (1906)
- asperum, *Myctophum*, *Myctophum*, 1845
- astridae, *Diaphus*, *Diaphus*, 1929, (1897)
- ater, *Lampanyctus*, *Lampanyctus*, 1928
- atkinsoni, *Diaphus*, *Diaphus*, 1934, (1934)
- atlanticum, *Diogenichthys*, *Myctophum*, 1928
- atlantica, *Lampadena*, *Lampadena*, 1969, (1963)

- atratum*, *Hygophum*, *Myctophum*, 1899
aurolateratum, *Myctophum*, *Myctophum*, 1899
australis, *Lampanyctus*, *Lampanyctus*, 1932
barnardi, *Symbolophorus*, *Myctophum*, 1932
barnesi, *Gonichthys*, *Gonichthys*, 1943
basili, *Lampanyctus*, *Lampanyctus*, 1972, (1904)
basili, *Lampanyctus*, *Lampanyctus*, 1974, (1934)
bathyphila, *Taaningichthys*, *Lampadena*, 1928
beckeri, *Protomyctoplum*, *Protomyctoplum*, 1971
benoiti, *Hygophum*, *Scopelus*, 1838
bensoni, *Lampanyctus*, *Serpa*, 1934, (1928)
beringensis, *Stenobrachius*, *Lampanyctus*, 1933, (1890)
bertelseni, *Diaphus*, *Diaphus*, 1966
blacki, *Bolinichthys*, *Serpa*, 1934, (1891)
bolini, *Protomycophum*, *Electrona*, 1949
bolini, *Gymnoscopelus*, *Gymnoscopelus*, 1962
bolini, *Notoscopelus*, *Notoscopelus*, 1975
bonapartii, *Lampanyctus*, *Nyctophus*, 1838, (1810)
boops, *Symbolophorus*, *Myctoplum*, 1845
boschmai, *Lampanyctus*, *Parvilux*, 1964
brachycephalus, *Diaphus*, *Diaphus*, 1928
brachychir, *Notoscopelus*, *Notoscopelus*, 1889, (1845)
brachygynathos, *Myctophum*, *Scopelus*, 1856
braueri, *Gymnoscopelus*, *Myctophum*, 1905
braueri, *Hygophum*, *Myctophum*, 1905, (1892)
braueri, *Lampadena*, *Lampadena*, 1914, (1896)
brevirostris, *Centrobranchus*, *Centrobranchus*, 1964
bruuni, *Hygophum*, *Hygophum*, 1971
bryani, *Diaphus*, *Diaphus*, 1934, (1934)
burtoni, *Diaphus*, *Diaphus*, 1934
californiense, *Symbolophorus*, *Myctophum*, 1889
candens, *Hintonia*, *Hintonia*, 1949
caninianus, *Myctophum*, *Scopelus*, 1849, (1810)
carlsbergi, *Electrona*, *Myctophum*, 1932
carlsoni, *Diaphus*, *Diaphus*, 1934, (1932)
castaneus, *Notoscopelus*, *Notoscopelus*, 1896, (1861)
caudalis, *Scopelopsis*, *Scopelopsis*, 1932, (1906)
caudispinosus, *Notoscopelus*, *Scopelus*, 1863
chavesi, *Lampadena*, *Lampadena*, 1905
chilensis, *Protomycophum*, *Protomycophum*, 1971
choerocephalus, *Centrobranchus*, *Centrobranchus*, 1904
chrysorhynchus, *Diaphus*, *Diaphus*, 1897
cocco, *Gonichthys*, *Scopelus*, 1829
coeruleus, *Diaphus*, *Scopelus*, 1871
colletti, *Electrona*, *Scopelus*, 1892, (1878)
conspicua, *Lampanyctus*, *Serpa*, 1936, (1928)
coruscans, *Gonichthys*, *Myctophum*, 1845, (1943)
crameri, *Diaphus*, *Diaphus*, 1934, (1932)
crenulare, *Tarletonbeania*, *Myctophum*, 1880
crockeri, *Protomycophum*, *Electrona*, 1939
crocodilus, *Lampanyctus*, *Gasteropeleucus*, 1810
cuprarius, *Lampanyctus*, *Lampanyctus*, 1928
cuvieri, *Myctophum*, *Scopelus*, 1873, (1867)
dahlgreni, *Diaphus*, *Diaphus*, 1934
danae, *Diaphus*, *Diaphus*, 1932
dea, *Lampadena*, *Lampadena*, 1949
dehaveni, *Diaphus*, *Diaphus*, 1934
diademetus, *Diaphus*, *Diaphus*, 1932
diademophilus, *Diaphus*, *Diaphus*, 1978
distofax, *Bolinichthys*, *Bolinichthys*, 1975
doderleini, *Ceratoscopelus*, *Scopelus*, 1882, (1864)
dofleini, *Lobianchia*, *Myctophum*, 1911
dracmanni, *Diaphus*, *Diaphus*, 1932
dumerili, *Diaphus*, *Scopelus*, 1856
effulgens, *Diaphus*, *Aethoprora*, 1896
ehrhorni, *Diaphus*, *Diaphus*, 1934
ejectus, *Notoscopelus*, *Notoscopelus*, 1904, (1845)
elongatus, *Notoscopelus*, *Scopelus*, 1844
elucens, *Diaphus*, *Myctophum*, 1904, (1898)
engraulis, *Diaphus*, *Scopelus*, 1887, (1871)
evermanni, *Symbolophorus*, *Myctophum*, 1905
faustinoi, *Diaphus*, *Diaphus*, 1934
fernae, *Lampanyctus*, *Lampanyctus*, 1971
festivus, *Lampanyctus*, *Lampanyctus*, 1928
fibulatum, *Benthosema*, *Myctophum*, 1897
fissunovi, *Myctophum*, *Myctophum*, 1971
florenti, *Gymnoscopelus*, *Myctophum*, 1933, (1931)
fragilis, *Diaphus*, *Diaphus*, 1928
fraserbrunneri, *Bolinichthys*, *Lampanyctus*, 1946, (1906)
fraseri, *Gymnoscopelus*, *Lampanyctus*, 1931
freta, *Lampanyctus*, *Serpa*, 1936, (1904)
fulgens, *Diaphus*, *Myctophum*, 1904
garmani, *Diaphus*, *Diaphus*, 1906
gaussi, *Lepidophanes*, *Myctophum*, 1906
gemellarii, *Lobianchia*, *Nyctophus*, 1838
gemmifer, *Lampanyctus*, *Lampanyctus*, 1896, (1810)
gigas, *Diaphus*, *Diaphus*, 1913, (1896)
gilberti, *Benthosema*, *Myctophum*, 1907, (1891)
glacialis, *Benthosema*, *Scopelus*, 1837
glandulifer, *Diaphus*, *Diaphus*, 1913, (1913)
gracilicaudus, *Centrobranchus*, *Centrobranchus*, 1905, (1892)
gracilior, *Myctophum*, *Myctophum*, 1944, (1899)
gracilis, *Gonichthys*, *Scopelus*, 1892, (1829)
gracilis, *Diaphus*, *Diaphus*, 1961
grayi, *Bolinichthys*, *Macrostoma*, 1938, (1906)
gudgeri, *Diaphus*, *Diaphus*, 1934, (1932)
guentheri, *Lepidophanes*, *Lampanyctus*, 1896
handi, *Diaphus*, *Diaphus*, 1934
hanseni, *Hygophum*, *Myctophum*, 1932
harveyi, *Diaphus*, *Diaphus*, 1934, (1932)
hectoris, *Lampanyctodes*, *Scopelus*, 1876
heideri, *Myctophum*, *Scopelus*, 1881, (1810)
lians, *Gonichthys*, *Myctoplum*, 1845, (1829)
hoffmanni, *Notoscopelus*, *Serpa*, 1934, (1845)
hollandi, *Benthosema*, *Myctophum*, 1922, (1897)
holti, *Diaphus*, *Myctophum*, 1918
hookeri, *Symbolophorus*, *Scopelus*, 1953, (1932)
hubbsi, *Lampanyctus*, *Lampanyctus*, 1963
hudsoni, *Diaphus*, *Diaphus*, 1976
humboldti, *Myctophum*, *Gasteropeleucus*, 1810, (1810)
hygomii, *Hygophum*, *Scopelus*, 1892
hypolucens, *Diaphus*, *Diaphus*, 1928, (1928)
idostigma, *Lampanyctus*, *Lampanyctus*, 1931
imitator, *Benthosema*, *Myctophum*, 1928, (1913)
imperceptum, *Myctophum*, *Myctophum*, 1971, (1928)
indicus, *Myctophum*, *Scopelus*, 1878
indicus, *Bolinichthys*, *Lepidophanes*, 1969
ingens, *Lampanyctus*, *Parvilux*, 1964
integer, *Loweina*, *Myctophum*, 1904, (1892)
intermedius, *Diaphus*, *Diaphus*, 1930, (1838)
interruptum, *Loweina*, *Myctophum*, 1928
intricarius, *Lampanyctus*, *Lampanyctus*, 1928

- isaaci*, *Lampanyctus*, *Lampanyctus*, 1974
iselini, *Lampanyctus*, *Lampanyctus*, 1934, (1810)
iselinooides, *Lampanyctus*, *Lampanyctus*, 1965
jagorii, *Gonichthys*, *Scopelus*, 1845, (1829)
japonicum, *Notoscopelus*, *Macrostoma*, 1908
jensenii, *Diaphus*, *Diaphus*, 1932
jordani, *Lampanyctus*, *Lampanyctus*, 1913
jouani, *Diaphus*, *Diaphus*, 1934, (1934)
joubini, *Bolinichthys*, *Lampanyctus*, 1931, (1906)
kendalli, *Diaphus*, *Diaphus*, 1934, (1932)
knappi, *Diaphus*, *Diaphus*, 1978
knipovitschi, *Benthosema*, *Myctophum*, 1939, (1837)
kroeyerii, *Notoscopelus*, *Scopelus*, 1861
kuroshio, *Diaphus*, *Diaphus*, 1978
kylei, *Diaphus*, *Diaphus*, 1932, (1932)
lacerta, *Diaphus*, *Lampanyctus*, 1896, (1856)
langerhansi, ?, *Scopehus*, 1890
laternatum, *Diogenichthys*, *Myctophum*, 1899
laticauda, *Stenobrachius*, *Lampanyctus*, 1954, (1890)
latus, *Diaphus*, *Diaphus*, 1913
laurae, *Loweina*, *Loweina*, 1971, (1892)
layi, *Diaphus*, *Diaphus*, 1934, (1934)
lepidolychnus, *Lampanyctus*, *Lampanyctus*, 1967
leucopsarum, *Stenobrachius*, *Myctophum*, 1890
lewisi, *Diaphus*, *Diaphus*, 1966, (1906)
lineatus, *Lampanyctus*, *Lampanyctus*, 1928
lobatus, *Diaphus*, *Diaphus*, 1978
lobiancoi, *Myctophum*, *Stylophthalmus*, 1909, (1910)
longipes, *Bolinichthys*, *Myctophum*, 1906
longipinnis, *Scopelopsis*, *Lampanyctus*, 1916, (1906)
longleyi, *Diaphus*, *Diaphus*, 1934, (1932)
loricata, *Gonichthys*, *Alysia*, 1839, (1829)
lucida, *Diaphus*, *Aethoprora*, 1896
lucifrons, *Diaphus*, *Diaphus*, 1934
luetkeni, *Diaphus*, *Myctophum*, 1904
luminosum, *Lampadena*, *Myctophum*, 1899
lunatum, *Myctophum*, *Myctophum*, 1978
lychnobium, *Myctophum*, *Myctophum*, 1946
macdonaldi, *Lampanyctus*, *Nannobrachium*, 1896
macrochir, *Hygophum*, *Scopelus*, 1864
macrophus, *Diaphus*, *Diaphus*, 1928, (1896)
macropterum, *Lampanyctus*, *Myctophum*, 1904
maderensis, *Ceratoscopelus*, *Scopelus*, 1839
malayanus, *Diaphus*, *Diaphus*, 1913
margaritatum, *Myctophum*, *Myctophum*, 1905, (1899)
margaritiferus, *Notoscopelus*, *Notoscopelus*, 1896, (1861)
meadi, *Diaphus*, *Diaphus*, 1978
mediterranea, *Lepidophanes*, *Lampanyctus*, 1928, (1906)
mediterraneus, *Symbolophorus*, *Stylophthalmus*, 1909, (1888)
megalops, *Diaphus*, *Diaphus*, 1978
megalops, *Electrona*, *Myctophum*, 1865, (1864)
melanothorax, *Lepidophanes*, *Lampanyctus*, 1928, (1896)
metopoclampum, *Diaphus*, *Myctophum*, 1829
mexicanum, *Triphoturus*, *Myctophum*, 1890
meyeri, *Diaphus*, *Diaphus*, 1934, (1913)
microchir, *Triphoturus*, *Myctophum*, 1913, (1904)
microps, *Diaphus*, *Myctophum*, 1904
micropterum, *Triphoturus*, *Myctophum*, 1906
micropunctatus, *Lampanyctus*, *Lampanyctus*, 1939, (1892)
minax, *Diaphus*, *Diaphus*, 1968
minima, *Taaningichthys*, *Lampadena*, 1928
mollis, *Diaphus*, *Diaphus*, 1928
monodi, *Diaphus*, *Diaphus*, 1934, (1896)
mulleri, *Benthosema*, *Scopelus*, 1861, (1837)
multipunctatus, *Scopelopsis*, *Scopelopsis*, 1906
nannochir, *Stenobrachius*, *Myctophum*, 1890
nanus, *Diaphus*, *Diaphus*, 1908, (1904)
naupragus, *Myctophum*, *Dasyscopelus*, 1904, (1845)
nicholsi, *Gymnoscopelus*, *Lampanyctus*, 1911, (1873)
nielseni, *Diaphus*, *Diaphus*, 1978
nigrescens, *Triphoturus*, *Myctophum*, 1904
nigrocellatus, *Centrobranchus*, *Scopelus*, 1873
nigrum, *Lampanyctus*, *Nannobrachium*, 1887
nikolai, *Bolinichthys*, *Bolinichthys*, 1978
nipponensis, *Lobianchia*, *Diaphus*, 1913, (1838)
nitida, *Lampadena*, *Lampadena*, 1928, (1899)
nitidulum, *Myctophum*, *Myctoplum*, 1899
nobilis, *Lampanyctus*, *Lampanyctus*, 1928
nocurnum, *Diaphus*, *Myctophum*, 1861, (1856)
normani, *Protomyctophum*, *Myctophum*, 1932
notialis, *Lampadena*, *Lampadena*, 1968
novaeguineae, *Lampanyctus*, *Lampanyctus*, 1958, (1904)
novaeseelandiae, *Myctophum*, *Scopelus*, 1901
obtusirostre, *Myctophum*, *Myctophum*, 1928
oceanicus, *Myctophum*, *Rhinoscopelus*, 1903, (1892)
oculeum, *Triphoturus*, *Myctophum*, 1899
oculeum, *Protomyctophum*, *Myctophum*, 1939, (1944)
omostigma, *Lampanyctus*, *Lampanyctus*, 1908
opalinum, *Myctophum*, *Myctophum*, 1896, (1892)
opistopterus, *Gymnoscopelus*, *Gymnoscopelus*, 1949
orientalis, *Myctophum*, *Dasyscopelus*, 1913
ostenfeldi, *Diaphus*, *Diaphus*, 1932
pacificus, *Diaphus*, *Diaphus*, 1961, (1904)
pacificus, *Diaphus*, *Diaphus*, 1931
panamense, *Benthosema*, *Myctophum*, 1932
panurgus, *Diogenichthys*, *Diogenichthys*, 1946
parallelum, *Protomyctophum*, *Myctophum*, 1905
parri, *Diaphus*, *Diaphus*, 1932
parvicauda, *Lampanyctus*, *Lampanyctus*, 1931
parvimanus, *Benthosema*, *Scopelus*, 1864, (1837)
paucirastra, *Electrona*, *Electrona*, 1962
paurololynthus, *Taaningichthys*, *Taaningichthys*, 1972
peccatus, *Hygophum*, *Serpa*, 1939, (1932)
peculiaris, *Lampanyctus*, *Lampanyctus*, 1929, (1810)
perspicillata, *Diaphus*, *Aethoprora*, 1898
phengodes, *Myctophum*, *Scopelus*, 1892
philippi, *Diaphus*, *Diaphus*, 1934
photonotus, *Lampanyctus*, *Lampanyctus*, 1928
photothorax, *Bolinichthys*, *Lampanyctus*, 1928
piabilis, *Gymnoscopelus*, *Lampanyctus*, 1931
pinchoti, *Benthosema*, *Benthosema*, 1932, (1897)
polyphotis, *Ceratoscopelus*, *Lampanyctus*, 1932, (1892)
pontifex, *Lampadena*, *Lampadena*, 1970
pristilepis, *Myctophum*, *Dasyscopelus*, 1897, (1856)
problematicus, *Diaphus*, *Diaphus*, 1928
procellarum, *Tarletonbeania*, *Myctophum*, 1881, (1880)
procerum, *Lampichthys*, *Myctophum*, 1904
protoculus, *Diaphus*, *Myctophum*, 1891, (1890)
proximum, *Benthosema*, *Myctophum*, 1929, (1913)
proximum, *Hygophum*, *Hygophum*, 1965
pseudoalatus, *Lampanyctus*, *Lampanyctus*, 1918, (1896)
pseudocrocillus, *Notoscopelus*, *Scopelus*, 1891, (1844)

- pterotus*, *Benthosema*, *Scopelus*, 1891
punctatissimus, *Lampanyctus*, *Lampanyctus*, 1913, (1896)
punctatum, *Myctophum*, *Myctophum*, 1810
pusillus, *Lampanyctus*, *Scopelus*, 1890
pyrsobolus, *Bolinichthys*, *Scopelus*, 1891
querinus, *Notoscopehus*, *Notoscopelus*, 1896, (1861)
rafinesquii, *Diaphus*, *Nyctophus*, 1839
rarus, *Loweina*, *Scopelus*, 1892
rassi, *Diaphus*, *Diaphus*, 1961, (1932)
readi, *Diaphus*, *Diaphus*, 1934, (1896)
rectangularis, *Lampichthys*, *Lampichthys*, 1949, (1904)
regale, *Lampanyctus*, *Myctophum*, 1892
regani, *Diaphus*, *Diaphus*, 1932
regularis, *Centrobranchus*, *Myctophum*, 1904, (1873)
reinhardtii, *Hygophum*, *Scopelus*, 1892
reinhardtii, *Lampanyctus*, *Nyctimaster*, 1921
remiger, *Hygophum*, *Myctophum*, 1896, (1892)
renschi, *Benthosema*, *Myctophum*, 1929, (1897)
resplendens, *Notoscopelus*, *Lampanyctus*, 1845
richardsoni, *Diaphus*, *Diaphus*, 1932
risso, *Electrona*, *Scopelus*, 1829
ritteri, *Lampanyctus*, *Myctophum*, 1915
roei, *Diaphus*, *Diaphus*, 1974
rolfbolini, *Diaphus*, *Diaphus*, 1971, (1934)
rufinum, *Symbolophorus*, *Myctophum*, 1928
sagamiensis, *Diaphus*, *Diaphus*, 1913, (1897)
salubris, *Electrona*, *Electrona*, 1933, (1829)
scapulofulgens, *Diaphus*, *Diaphus*, 1934, (1904)
schmidti, *Diaphus*, *Diaphus*, 1932
schmiizi, *Diaphus*, *Scopelus*, 1890, (1856)
scofieldi, *Diogenichthys*, *Diogenichthys*, 1939, (1928)
scoticus, *Benthosema*, *Scopelus*, 1889, (1837)
seleoides, *Myctophum*, *Myctophum*, 1971, (1928)
selenops, *Myctophum*, *Myctophum*, 1928
septilucus, *Lampanyctus*, *Lampanyctus*, 1932, (1928)
sibogae, *Lampanyctus*, *Promacheon*, 1913
signatus, *Diaphus*, *Diaphus*, 1908
simile, *Benthosema*, *Myctophum*, 1928, (1913)
similis, *Diaphus*, *Diaphus*, 1974
simulator, *Lampanyctus*, *Lampanyctus*, 1971
speculigera, *Lampadena*, *Lampadena*, 1896
spinosis, *Myctophum*, *Scopelus*, 1867
splendidum, *Diaphus*, *Myctophum*, 1904
steadi, *Diaphus*, *Diaphus*, 1934, (1904)
steinbecki, *Lampanyctus*, *Lampanyctus*, 1939
stellatus, *Electrona*, *Scopelus*, 1840, (1864)
stilbius, *Bolinichthys*, *Lampanyctus*, 1908 (1928)
streetsi, *Diaphus*, *Diaphus*, 1934, (1913)
subasper, *Electrona*, *Scopelus*, 1864
suborbitale, *Benthosema*, *Myctophum*, 1913
suborbitalis, *Diaphus*, *Diaphus*, 1913
subparallelum, *Protomyctophum*, *Myctophum*, 1932
subpectoralis, *Lepidophanes*, *Lampanyctus*, 1928, (1906)
subtilis, *Diaphus*, *Diaphus*, 1968
supralateralis, *Bolinichthys*, *Lampanyctus*, 1928
taanungi, *Lampanyctus*, *Lampanyctus*, 1929, (1928)
taanungi, *Diaphus*, *Diaphus*, 1930
taanungi, *Hygophum*, *Hygophum*, 1965
tanungi, *Lampanyctus*, *Lampanyctus*, 1931, (1928)
tanakae, *Diaphus*, *Diaphus*, 1913
taylori, *Tarletonbeania*, *Tarletonbeania*, 1953
tenisoni, *Protomyctophum*, *Myctophum*, 1930
tenua, *Tarletonbeania*, *Tarletonbeania*, 1890, (1880)
tenuicauda, ?, *Scopelus*, 1867
tenuiculum, *Gonichthys*, *Myctophum*, 1899
tenuiforme, *Lampanyctus*, *Myctophum*, 1906
termophilus, *Diaphus*, *Diaphus*, 1928
terminata, *Loweina*, *Loweina*, 1964
theta, *Diaphus*, *Diaphus*, 1890
thiollerei, *Diaphus*, *Diaphus*, 1934
thompsoni, *Protomyctophum*, *Electrona*, 1944
thori, *Benthosema*, *Myctophum*, 1918, (1837)
townsendi, *Ceratoscopelus*, *Myctophum*, 1889
trachops, *Diaphus*, *Diaphus*, 1974
turneri, *Lampanyctus*, *Serpa*, 1934
umbroculus, *Diaphus*, *Diaphus*, 1934
uracocampus, *Lobianchia*, *Scopelus*, 1884, (1838)
urokampus, *Idiolychnus*, *Diaphus*, 1897
urophaos, *Lampadena*, *Lampadena*, 1963
valdiviae, *Notolychnus*, *Myctophum*, 1904
vanhoeffeni, *Diaphus*, *Myctophum*, 1906
venetus, *Gonichthys*, *Gonichthys*, 1964
ventralis, *Electrona*, *Electrona*, 1963
veranyi, *Symbolophorus*, *Scopelus*, 1888
vitiazi, *Diaphus*, *Diaphus*, 1961
warmingii, *Ceratoscopelus*, *Scopehus*, 1892
watasei, *Diaphus*, *Diaphus*, 1904
weberi, *Diaphus*, *Diaphus*, 1932, (1928)
whitleyi, *Diaphus*, *Diaphus*, 1934
yaquiniae, *Lampadena*, *Dorsadena*, 1972

ALPHABETICAL LIST OF FOSSIL MYCTOPHID SPECIES

- acutirostrum*, *Myctophidarum* Holec 1975
acus, *Myctophum*, *Nyctophidarum* Weiler 1959 (Weiler 1968)
aemilianus, *Myctophidarum* Anfossi and Mosna 1972
agatense, *Hygophum* Robba 1970
an, *Myctophum*, *Scopelus* Sulc 1932 (Weiler 1968)
angulatus, *Diaphus* Ohe and Araki 1973
austriacus, *Myctophum*, *Berycidarum* Koken 1891 (Weiler 1968)
appenicinus, *Lampanyctus* Anfossi and Mosna 1971
bartonicus, *Myctophum*, *Scopelus* Shepherd 1916 (Weiler 1968)
biarrizensis, *Myctophum*, *Scopelus* Priem 1912 (Weiler 1968)
biatlanticus, *Symbolophorus?*, *Nyctophum* Weiler 1959 (Fitch 1969)
bolini, *Diaphus*, *Lampanyctus* David 1943 (Fitch 1969)
borneensis, *Scopelidarum* Posthumus 1929
carpathicus, *Myctophidarum* Brzobohaty 1965
cassidiformis, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
circularis, *Myctophum*, *Scopehus* Frost 1924 (Weiler 1968)
columnae, *Myctophum*, *Aspius* Sauvage 1873 (Weiler 1968)
concentricus, *Myctophum*, *Scopehus* Frost 1933 (Weiler 1968)
dainellii, *Nyctophus* d'Erasco 1930
debilis, *Diaphus*, *Berycidarum* Koken 1891 (Nolf 1977)
dorsalis, *Myctophum*, *Leuciscus* Sauvage 1870 (Weiler 1968)
ecnomi, *Lampanyctus?*, *Aspius* Sauvage 1870 (Weiler 1971)
edwardsi, *Lampanyctus?*, *Rhodeus* Sauvage 1870 (Weiler 1971)
ellipticus, *Myctophum*, *Scopelus* Sulc 1932 (Weiler 1968)
ellipticus, *Myctophum*, *Scopehus* Frost 1933 (Weiler 1968)

excavatus, *Myctophum*, *Scopelus* Sulc 1932 (Smigelska 1966)
excisus, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
frosti, *Myctophum*, *Scopelus* Vorstmann 1927 (Weiler 1968)
germanicum, *Hygoplum?* Heinrich 1969
gracile, *Eomyctophum* Daniltshenko 1962
gracilis, *Myctophum* Schubert 1912
hataii, *Diaphus* Ohe and Araki 1973
incertus, *Myctophum*, *Berycidarum* Priem 1911 (Weiler 1968)
incisus, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
insoletum, *Myctophum*, *Berycidarum* Prochazka 1893
 (Smigelska 1966)
intermedius, *Hygoplum*, *Hygophus* Weiler 1959 (Fitch 1969)
italicus, *Diaphus* Anfossi and Mosna 1971
kokeni, *Diaphus?*, *Berycidarum* Prochazka 1893 (Nolf 1977)
konganaruensis, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
koraensis, *Protomycophum-Electrona?*, *Eomyctophum*
 Daniltshenko 1947 (Fitch pers. comm.)
kitboensis, *Lampanyctus* Ohe and Araki 1973
laminatus, *Myctophum?*, *Scopelus* Frost 1933 (Weiler 1968)
larteti, *Diaphus*, *Leuciscus* Sauvage 1870 (Weiler 1968)
latirostratus, *Myctophum*, *Scopelus* Weiler 1950 (Smigelska
 1966)
licatae, *Lampanyctus?*, *Leuciscus* Sauvage 1870 (Weiler 1971)
limicola, *Eomyctophum* Daniltshenko 1960
longirostris, *Myctophidarum* Brzobohaty 1964
makutaensis, *Myctophidarum* Aoka 1971
mammans, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
marwicki, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
mediterraneus, *Myctophum*, *Berycidarum* Koken 1891
 (Smigelska 1966)
menetiticus, *Diaphus* Kalabis 1948
menneri, *Protomycophum-Electrona?*, *Eomyctophum*
 Daniltshenko 1947 (Fitch, pers. comm.)
microsoma, *Lampanyctus?*, *Clupea* Sauvage 1870 (Weiler 1971)
mimiensis, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
moravicus, *Myctophum*, *Berycidarum* Prochazka 1893
 (Smigelska 1966)
muraii, *Diaphus* Sato 1962
murbani, *Myctophum*, *Scopelus* Weinfurter 1952 (Smigelska
 1966)
nanae, *Lampadena* Sato 1962
nicolisi, *Scopeloides* Bassani 1889
obliquus, *Myctophum*, *Scopelus* Weiler 1943 (Weiler 1968)
orbicularis, *Myctophum*, *Apogoninarum* Priem 1906 (Weiler
 1968)
oroseinum, *Myctophum* Dieni 1968
ovatus, *Scopelus* Stinton 1957
pabloensis, *Myctophum*, *Ceratoscopelus?* Weiler 1959 (Fitch
 1969)
papuense, *Myctophum*, *Scopelus* Schubert 1910 (Weiler 1968)
petrolifer, *Lepidophanes*, *Lampanyctus* David 1943 (Fitch 1969)
polygonium, *Myctophum* Aoki 1971
polysarcus, *Diaphus?*, *Leuciscus* Kramberger 1879 (Kalabis
 1948)
praeraefinesquii, *Diaphus* Weiler 1971
probenoiti, *Hygophum*, *Myctophum* Arambourg 1927 (Weiler
 1968)
prolaternatum, *Myctophum* Arambourg 1921
pulcher, *Myctophum*, *Berycidarum* Prochazka 1893 (Weiler
 1968)
regulare, *Myctophum* Smigelska 1966

regularis, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
rossiae, *Myctophum* Robba 1970
rotundum, *Hygophum* Ohe and Araki 1973
sauvagei, *Diaphus* Arambourg 1925
serratus, *Lampanyctus* Stinton 1957
shizukunihiensis, *Diaphus* Sato 1962
spinatum, *Myctophum* Aoki 1971
splendidus, *Myctophum*, *Berycidarum* Prochazka 1893
 (Smigelska 1966)
sulcatus, *Myctophum*, *Berycidarum* Bassoli 1960 (Weiler 1968)
tenuis, *Myctophum*, *Berycidarum* Schubert 1905 (Weiler 1968)
tuberculatus, *Myctophum*, *Berycidarum* Bassoli 1906 (Weiler
 1968)
utamoensis, *Myctophum*, *Scopelus* Frost 1933 (Weiler 1968)
vastus, *Myctophum* Aoki 1971
vexillifer, *Lampanyctus?*, *Aspius* Sauvage 1870 (Weiler 1971)
weileri, *Ceratoscopelus?* Brzobohaty 1965

LITERATURE CITED FOR RECENT MYCTOPHIDAE

- AHL, E. 1929. Zur Kenntnis der Leuchtfische der Gattung *Myctophum*. Zool. Anz., 81 (7/10):194–197.
- ALCOCK, A.W. 1891. Natural history notes from H.M. Indian marine survey steamer 'Investigator.' No. 16. On the bathybiological fishes collected in the Bay of Bengal during the season 1889–90. Ann. Mag. Nat. Hist., (6) 6(33):197–222.
- ANDRIASHEV, A.P. 1962. Bathypelagic fishes of the Antarctic. 1. Family Myctophidae. Akad. Nauk S.S.R., Issled. Fauny Morei, 1 (9):216–294. [In Russian; Bur. Comm. Fish. Ichthyol. Lab. Transl. 29].
- ANGEL, M.F. AND M.L. VERRIER. 1931. Étude de quelques poissons des grandes profondeurs; Étude Systématique. Ann. Inst. Océanogr. (Monaco), N.S. 10(5):119–128.
- BARNARD, K.H. 1927. A monograph of the marine fishes of South Africa. Part 2. Ann. So. African Mus., 21 (2):419–1065.
- BEEBE, W. 1932. Nineteen new species and four post-larval deep-sea fish. Zoologica (New York), 13(4):47–107.
- BEKKER, V.E. 1963. New data on the luminous anchovy genera *Electrona* and *Protomycophum* (Pisces, Myctophidae) of the southern hemisphere. Vopr. Ikht., 3, 1(26):15–28. (In Russian).
- _____. 1964. Slendertailed myctophids (genera *Loweina*, *Tarletonbeania*, *Gonichthys* and *Centrobranchus*) of the Pacific and Indian Oceans, systematics and distribution. Trudy Inst. Okean., 73:11–75. (In Russian).
- _____. 1965. Lanternfishes of the genus *Hygophum* (Myctophidae, Pisces), systematics and distribution. Ibid., 80:62–103 (In Russian; Bur. Comm. Fish. Ichthyol. Lab. Transl. 45).
- _____. 1967. The lanternfishes (Myctophidae) from the 'Petr Lebedev' Atlantic Expeditions 1961–1964. Ibid., 84:84–124. (In Russian).
- _____. 1978. New species of the genus *Bolinichthys* (Myctophidae, Osteichthyes) from the south Pacific Ocean. Ibid., 111:259–264. (In Russian).
- _____. AND O.D. BORODULINA. 1971. New species of lanternfishes of the genus *Myctophum* (Myctophidae, Pisces). J.

- Ichthyol., 11(3):329–336. (English translation from Vopr. Ichth., 11(3):418–426).
- . 1978. ‘*Myctophum asperum*’ species-group with description of a new species, and *Myctophum selenops* Tåning (Myctophidae, Osteichthys), taxonomy and distribution. Trudy Inst. Okean., 111:108–128. (In Russian).
- BELLOC, G. 1949. Catalogue des types de poissons du Musée Océanographique de Monaco. Bull. Inst. Océanogr. (Monaco), 958:1–23.
- BENNET, F.D. 1840. Narrative of a whaling voyage round the globe from the year 1833 to 1836. Vol. 2. London: R. Bentley, 395 pp.
- BLEEKER, P. 1856. Beschrijvingen van nieuwe of weinig bekende vischsoorten van Manado en Makassar. Act. Soc. Sci. Indo-Neerl., 1(5):1–80.
- BÖHLKE, J. 1953. A catalogue of the type specimens of recent fishes in the Natural History Museum of Stanford University. Stan. Ichth. Bull., 5:1–168.
- BOLIN, R.L. 1939. A review of the myctophid fishes of the Pacific coast of the United States and of Lower California. Stan. Ichth. Bull., 1(4):89–156.
- . 1946. Lanternfishes from ‘Investigator’ station 670, Indian Ocean. *Ibid.*, 3(2):137–152.
- . 1959. Iniomni. Myctophidae from the ‘Michael Sars’ North Atlantic Deep Sea Expedition 1910. Rept. Sci. Res. ‘Michael Sars’ Deep-Sea Exped. 1910, 4, 2(7):1–45.
- BONAPARTE, C.L.P. 1840. Iconografia della fauna Italica per le quattro classi degli animali vertebrati. Vol. 3, Pesci. Roma: Salviucci.
- BORODIN, N.A. 1928. Scientific results of the yacht ‘Ara’ expedition during the years 1926 to 1928, while in command of William K. Vanderbilt, Fishes. Bull. Vanderbilt. Oceanog. Mus., 1(1):1–37.
- . 1929. Some new deep-sea fishes. Proc. New. Engl. Zool. Club, 10:109–111.
- . 1930. Some more new deep-sea fishes. *Ibid.*, 11:87–92.
- . 1931. Atlantic deep-sea fishes. Bull. Mus. Comp. Zool. (Harvard Univ.), 72(3):55–89.
- BRAUER, A. 1904. Die Gattung *Myctophum*. Zool. Anz., 28(10):377–404.
- . 1906. Die Tiefsee-Fische. I. Systematischer Teil. Wiss. Erg. Dt. Tiefsee-Exped. ‘Valdivia’ 1898–1899, 15(1):1–266.
- BUSSING, W.A. 1965. Studies of the midwater fishes of the Peru-Chile Trench. Amer. Geophys. Union, Antarct. Res. Ser., 5:185–227.
- CASTELNAU, F. 1873. Contribution to the ichthyology of Australia, No. VI, Notes on fishes from Knob Island. Proc. Zool. Acclim. Soc. Vict., 2:98–109.
- CHAPMAN, W.M. 1939. Eleven new species and three new genera of oceanic fishes collected by the International Fisheries Commission from the northeastern Pacific. Proc. U.S. Natn. Mus., 86(3062):501–542.
- . 1944. A new name for *Myctophum oculatum* Chapman. Copeia, 1944(1):54–55.
- COCO, A. 1829. Su di alcuni pesci de Mari de Messina. Giorn. Sci. Lett. Art Sicilia (Palermo), (7) 26(77):138–147.
- . 1838. Su di alcuni Salmonidi del Mare di Messina, lettera al Ch. D. Carle Luciano Bonaparte. Nuovi Ann. Sci. Nat. Bologna, 1(2):161–194.
- COLEMAN, L.R. AND B.G. NAFPAKTITIS. 1972. *Dorsadena yaquinae*, a new genus and species of myctophid fish from the eastern north Pacific Ocean. Los Angeles Co. Nat. Hist. Mus. Contrib. Sci., 225:1–11.
- COLLETT, R. 1905. On some fishes from the sea off the Azores. Zool. Anz., 28(21/22):723–730.
- COSTA, O.G. 1844. Fauna del regno di Napoli, ossia enumerazione di tutti gli animali. Part 1, Animali Vertebrati, 3, Pesci, Fasc. 46:1–4.
- CUVIER, G.L.C.F.D. 1817. Le règne animal distribué d’après son organisation. Vol. 2. Les reptiles, les poissons, les mollusques et les annelides. Paris. 532 pp.
- . AND M.A. VALENCIENNES. 1849. Histoire Naturelle des Poissons. Vol. 22. Strasbourg. 395 pp.
- DAVY, B. 1972. A review of the lanternfish genus *Taaningichthys* (family Myctophidae) with the description of a new species. (U.S.) Fish. Bull., 70(1):67–78.
- DAY, F. 1878. The fishes of India, Vol. 1. London: Bernard Quaritch. 778 pp.
- EIGENMANN, C.H. AND R.S. EIGENMANN. 1889. Notes from the San Diego Biological Laboratory. The fishes of Cortez Banks. West. Amer. Scient., 6(48):123–132.
- . 1890. Additions to the fauna of San Diego. Proc. Calif. Acad. Sci., (2)3:1–24.
- ESTEVE, R. 1947. Révision des types de myctophidés (scopélidés) du Muséum. Bull. Mus. Hist. Nat. Paris, (2) 19(1):67–69.
- EVERMANN, B.W. AND A. SEALE. 1907. Fishes of the Philippines. Bull. U.S. Bur. Fish., Wash., 26:49–110.
- FACCIOLA, L. 1882a. Pesci nuovi o poco noti dello Stretto di Messina. Il Naturalista Siciliano, 1(7):166–168.
- . 1882b. Descrizione di una nuova specie de *Scopelus* del Mar di Messina. *Ibid.*, 1(9):193–198.
- . 1884. Note sui pesci dello Stretto di Messina. *Ibid.*, 3:51–54.
- FOWLER, H.W. 1904. Description of a new lanternfish. Proc. Acad. Nat. Sci. Phila., 55:754–755.
- . 1932. The fishes obtained by the Pinchot South Seas Expedition of 1929, with description of one new genus and three new species. Proc. U.S. Natn. Mus., 80(2906):1–16.
- . 1934. Descriptions of new fishes obtained in 1907 to 1910, chiefly in the Philippine Islands and adjacent seas. Proc. Acad. Nat. Sci. Phila., 85:233–367.
- . 1938. The fishes of the George Vanderbilt South Pacific Expedition, 1937. Monogr. Acad. Nat. Sci. Phila., 2:1–349.
- . 1944. The fishes. Results of the Fifth George Vanderbilt Expedition (1941). *Ibid.*, 6:57–583.
- . 1958. Some new taxonomic names of fishlike vertebrates. Not. Nat. Acad. Nat. Sci. Phila., 310:1–16.
- FRASER-BRUNNER, A. 1931. Some interesting West African fishes, with descriptions of a new genus and two new species. Ann Mag. Nat. Hist., (10) 8(45):217–225.
- . 1949. A classification of the fishes of the family

- Myctophidae. Proc. Zool. Soc. London, 118(4):1019–1106.
- FUJII, E. AND T. UYENO. 1976. On three species of the myctophid genus *Notoscopelus* found in western north Pacific. Jap. J. Ichth., 22(4):227–233.
- GARMAN, S. 1899. Reports on an exploration of the west coasts of Mexico, Central and South America, and off the Galapagos Islands, in charge of Alexander Agassiz, by the U.S. Fish Commission steamer 'Albatross' during 1891, Lieut.-Commander Z.L. Tanner, U.S.N., commanding. XXVI. The fishes. Mem. Mus. Comp. Zool. (Harvard), 24:1–431.
- GATTI, M. 1903. Ricerche sugli organi luminosi dei pesci. Ann. Agric. Roma, 1902(233?):7–126.
- GILBERT, C.H. 1890. Preliminary report on the fishes collected by the steamer 'Albatross' on the Pacific coast of North America during the year 1889. Proc. U.S. Natn. Mus., 13(797):49–126.
- _____. 1892. Scientific results of explorations by the U.S. Fish Commission steamer 'Albatross.' No. XXII. Descriptions of thirty-four new species of fishes collected in 1888 and 1889, principally among the Santa Barbara Islands and in the Gulf of California. *Ibid.*, 14(880):539–566.
- _____. 1895. The ichthyological collections of the steamer 'Albatross' during the years 1890 and 1891. Rept. U.S. Comm. Fish., 1893:393–476.
- _____. 1905. The aquatic resources of the Hawaiian Islands. II. The deep-sea fishes. Bull. U.S. Fish Comm., 1903, 23(2):575–713. (5 Aug. 1905).
- _____. 1906. Certain scopelids in the collection of the Museum of Comparative Zoology. Bull. Mus. Comp. Zool. (Harvard), 46(14):253–263.
- _____. 1908. Reports on the scientific results of the expedition to the tropical Pacific, in charge of Alexander Agassiz, by the U.S. Fish Commission steamer 'Albatross,' from August, 1899 to March, 1900, Commander Jefferson F. Moser, U.S.N., commanding. X. The lantern fishes. Mem. Mus. Comp. Zool. (Harvard), 26(6):217–238.
- _____. 1911. Notes on lantern fishes from southern seas, collected by J.T. Nichols in 1906. Bull. Amer. Mus. Nat. Hist., 30(2):13–19.
- _____. 1913. The lantern fishes of Japan. Mem. Carnegie Mus., 6(2):67–107.
- _____. 1915. Fishes collected by the U.S. Fisheries Steamer 'Albatross' in 1904. Proc. U.S. Natn. Mus., 48(2075):305–380.
- _____. AND F. CRAMER. 1897. Report on the fishes dredged in deep water near the Hawaiian Islands, with descriptions and figures of twenty-three new species. Proc. U.S. Natn. Mus., 19(1114):403–435.
- GILCHRIST, J.D.F. 1904. Descriptions of new South African fishes. Mar. Invest. So. Africa, 3:1–16.
- GILL, T.N. 1861. Catalogue of the fishes of the eastern coast of North America from Greenland to Georgia. Proc. Acad. Nat. Sci. Phila., Appendix, 1861:1–63.
- _____. 1893. A comparison of antipodal faunas. Mem. Natn. Acad. Sci., Wash., 6(5):91–142.
- GILTAY, L. 1929. Notes préliminaires sur les poissons recueillis aux Indes Néerlandaises par S.A.R. le Prince Leopold de Belgique. Ann. Soc. Roy. Zool. Belg., 60:29–32.
- GISTEL, J. 1850. *Gonichthys*, ein Fisch aus der Bai von Madera. Isis (Muenchen), 1850, 5:71.
- GMELIN, 1788. Pisces In Linneaus' *Systema Naturae*. Ed. 13. 1(3):1126–1516.
- GOODE, G.B. AND T.H. BEAN. 1896. Oceanic ichthyology, a treatise on the deep-sea and pelagic fishes of the world, based chiefly upon the collections made by the steamers 'Blake,' 'Albatross,' and 'Fish Hawk' in the northeastern Atlantic, with an atlas containing 417 figures. U.S. Natn. Mus. Spec. Bull., 2:1–553.
- GÜNTHER, A.C.L.G. 1864. Catalogue of the fishes of the British Museum, Volume fifth. London. 455 pp.
- _____. 1873. Zweiter ichthyologischer Beitrag nach Exemplaren aus dem Museum Godeffroy. J. Mus. Godeffroy (Hamburg), 1(4):89–92.
- _____. 1876. Remarks on fishes, with descriptions of new species in the British Museum, chiefly from southern seas. Ann. Mag. Nat. Hist., (4) 17(43):389–402.
- _____. 1878. Preliminary notes of deep-sea fishes collected during the voyage of H.M.S. 'Challenger.' *Ibid.*, (5) 2:179–187.
- _____. 1887. Report on the deep-sea fishes collected by H.M.S. 'Challenger' during the years 1873–76. Challenger Repts., 22(57):1–268.
- _____. 1889. Report on the pelagic fishes collected by H.M.S. 'Challenger' during the years 1873–76. *Ibid.*, 31(78):1–47.
- HUBBS, C.L. AND R.L. WISNER. 1964. *Parvilux*, a new genus of myctophid fishes from the northeastern Pacific, with two new species. Zool. Mededelingen, 39:445–463.
- JOHNSON, J.Y. 1863. Descriptions of five new species of fishes obtained at Madeira. Proc. Zool. Soc. London, 1863:36–46.
- _____. 1890. On some new species of fish from Madeira. *Ibid.*, 1890 (3):452–459.
- JOHNSON, R.K. 1975. A new myctophid fish, *Bolinichthys distofax*, from the western and central north Pacific Ocean, with notes on other species of *Bolinichthys*. Copeia, 1975(1):53–60.
- JORDAN, D.S. 1917–1920. The genera of fishes . . . in four parts. Stanford Univ., Univ. Ser. 576 pp.
- _____. 1921. Description of deep-sea fishes from the coast of Hawaii, killed by a lava flow from Mauna Loa. Proc. U.S. Natn. Mus., 59(2392):643–656.
- _____. AND B.W. EVERMANN. 1896. The fishes of north and middle America, part I. Bull. U.S. Natn. Mus., 47:1–1240.
- _____. 1903. Descriptions of new genera and species of fishes from the Hawaiian Islands. Bull. U.S. Fish. Comm., 1902, 22:163–208.
- JORDAN, D.S. AND C.H. GILBERT. 1880. Description of two new species of scopeloid fishes, *Sudis ringens* and *Myctophum crenulare*, from Santa Barbara Channel, California. Proc. U.S. Natn. Mus., 3(146):273–276.
- _____. 1881. List of the fishes of the Pacific Coast of the United States, with a table showing the distribution of the species. *Ibid.*, 3(173):452–458.
- JORDAN, D.S. AND C.H. HUBBS. 1925. Record of fishes obtained

- by David Starr Jordan in Japan, 1922. Mem. Carnegie Mus., 10(2):93–346.
- AND E.K. JORDAN. 1922. A list of the fishes of Hawaii, with notes and descriptions of new species. Mem. Carnegie Mus., 10(1):1–92.
- AND E.C. STARKS. 1904. List of fishes dredged by the steamer 'Albatross' off the coast of Japan in the summer of 1900, with descriptions of new species and a review of the Japanese Macrouridae. Bull. U.S. Fish Comm., 1902, 22:577–628.
- KAWAGUCHI, K. AND B.G. NAFFAKTITIS. 1978. A new lanternfish, *Diaphus kuroshio* (family Myctophidae) from the Kuroshio waters off Japan. Jap. J. Ichth., 25(2):89–91.
- KLUNZINGER, C.B. 1871. Synopsis der Fische des Rothen Meeres. II. Verh. Zool.—Bot. Gesell., Wien, 21:441–699.
- KOTTHAUS, A. 1972a. Die meso- und bathypelagischen Fische der 'Meteor'. Rossbreiten-Expedition 1970 (2 und 3 Fahrabschnitt). 'Meteor' Forsch. Ergebni., D 11:1–28.
- . 1972b. Fische des Indischen Ozeans, . . . A. Systematischer Teil, IX, Innomi (Nachtrag: Fam. Myctophidae). *Ibid.*, D 12:12–35.
- KREFFT, G. 1970. Zur Systematik und Verbreitung der Gattung *Lampadena* Goode and Bean, 1896 (Osteichthyes, Myctophoidei, Myctophidae) im Atlantischen Ozean, mit Beschreibung einer neuen Art. Ber. Dt. Wiss. Komm. Meeresforsch., 21:(1/4):271–289.
- AND V.E. BEKKER. 1973. Myctophidae. In Check-list of the fishes of the north-eastern Atlantic and of the Mediterranean. J.C. Hureau and Th. Monod (Eds.). Paris: UNESCO. Pp. 171–198.
- KULIKOVA, E.B. 1954. A lanternfish of the Okhotsk Sea, *Lampanyctus nannochir laticauda* Kulikova subsp. nova (Pisces, Scopelidae). Trudy Inst. Okeanol., 11:196–204. (In Russian; Bur. Comm. Fish Ichthyol. Lab. Transl., 42).
- . 1961. Data on the lanternfishes of the genus *Diaphus* (family Scopelidae) from the western part of the Pacific Ocean. *Ibid.*, 43:5–39. (In Russian; Bur. Comm. Fish Ichthyol. Lab. Transl., 61).
- LATREILLE, P.A. 1804. Tableau méthodique des Insectes . . . In Dictionnaire d'Histoire naturelle de Deterville. Vol. 24; Paris.
- LÖNNBERG, E. 1905. Pelagische von der schwedischen Südpolarexpedition 1901–1903 erbeutete Fische. Zool. Anz., 28(23):762–766. (25 April 1905).
- LOWE, R.T. 1839. A supplement to a synopsis of the fishes of Madeira. Proc. Zool. Soc. London, 7:76–92.
- LÜTKEN, C.F. 1892a. Korte Bidrag til nordisk Ichthyographi. VIII. Nogle nordiske Laxesild (Scopeliner). Vidensk. Meddel. Dansk. Naturh. Foren., 1891, 43:203–233.
- . 1892b. Spolia Atlantica. Scopelini Museu Zoologici Hauensis. Bedrag til Kundskab om det aabne Havs Laxesild eller scopeliner. K. Danske Vidensk. Selsk. Shrift., (6), 7:221–297.
- MALM, A.W. 1861. Raekke af Fiske, Krebsdjur og Bløddjur, som ere nye for den Skandinaviske Fauna. Forh. Skand. Naturf. Møte, 8(1860):616–624.
- MAUL, G.E. 1969. A new subspecies of *Lampadena urophao* Paxton 1963 from the Atlantic Ocean. Bocagiana, Mus. Mun. Funchal, 22:1–8.
- MAZZARELLI, G. 1909. Gli animali abissali e le correnti sotto marine dello Stretto di Messina. Rivista Mensile Pesca Idrobiologia (Pavia), (11) 4(9–12):177–218.
- . 1912. Studi sui pesci batipelagici dello Stretto di Messina, I, Larve stioltalmoidi ('periscopiche' di Holt e Byrne) di Scopelidi e loro metamorfosi iniziale. *Ibid.*, (14) 7(1–3):1–26.
- MEAD, G.W. 1953. *Tarletonbeania taylori*, a new lanternfish from the western north Pacific. Zoologica (N.Y.), 38(2):105–108.
- . 1958. A catalogue of the type specimens of fishes formerly in the collections of the Department of Tropical Research, New York Zoological Society. *Ibid.*, 43(4):131–134.
- MENON, A.G.K. AND K.V.R. RAO. 1971. Further notes on the fish types in the R.I.M.S. Investigator Collections. Copeia, 1971(2):343–344.
- AND G.M. YAZDANI. 1968. Catalogue of type specimens in the Zoological Survey of India, Part 2, Fishes. Rec. Zool. Surv. India, 61(1/2):91–190.
- MISRA, K.S. 1949. Notes on Alcock's type-specimen of the deep sea fish, *Scopelus pyrsobolus*, from the Bay of Bengal. J. Zool. Soc. India, 6:37–38.
- MOREAU, E. 1888. Le scopèle de Verany, *Scopelus veranyi*. Bull. Soc. Philomath. Paris, Ser. 7, 12(3):108–111.
- . 1891. Supplement à Histoire Naturelle des Poissons de la France. Paris, 144 pp.
- MOSER, H.G. AND E.H. AHLSTROM. 1970. Development of lanternfishes (family Myctophidae) in the California Current. Part 1. Species with narrow-eyed larvae. Bull. Los Angeles Co. Mus. Nat. Hist., Sci., 7:1–145.
- . 1972. Development of the lanternfish, *Scopelopsis multipunctatus* Brauer 1906, with a discussion of its phylogenetic position in the family Myctophidae and its role in a proposed mechanism for the evolution of photophore patterns in lanternfishes. (U.S.) Fish. Bull., 70(3):541–564.
- . 1974. Role of larval stages in systematic investigations of marine teleosts: the Myctophidae, a case study. *Ibid.*, 72(2):391–413.
- NAFPAKTITIS, B.G. 1966. Two new fishes of the myctophid genus *Diaphus* from the Atlantic Ocean. Bull. Mus. Comp. Zool. (Harvard), 133(9):401–424.
- . 1968 Taxonomy and distribution of lanternfishes, genera *Lobianchia* and *Diaphus*, in the north Atlantic. Dana Rept., 73:1–131.
- . 1973. A review of the lanternfishes (family Myctophidae) described by Å. Vedel Tåning. *Ibid.*, 83:1–46.
- . 1974. A new record and a new species of lanternfish, genus *Diaphus* (family Myctophidae), from the north Atlantic Ocean. Los Angeles Co. Mus. Contrib. Sci., 254:1–6.
- . 1975. Review of the lanternfish genus *Notoscopelus* (family Myctophidae) in the north Atlantic and Mediterranean. Bull. Mar. Sci., 25(1):75–87.
- . 1978. Systematics and distribution of lanternfishes of the genera *Lobianchia* and *Diaphus* (Myctophidae) in the Indian Ocean. Bull. Los Angeles Co. Mus. Nat. Hist., Sci., 30:1–92.
- AND M. Nafpaktitis. 1969. Lanternfishes (family Myctophidae) from the Indian Ocean. Bull. Los Angeles Co. Mus. Nat. Hist., Sci., 30:1–92.

- tophidae) collected during cruises 3 and 6 of the R/V 'Anton Brunn' in the Indian Ocean. Bull. Los Angeles Co. Mus. Nat. Hist., Sci., 5:1–79.
- AND J.R. PAXTON. 1968. Review of the lanternfish genus *Lampadena* with a description of a new species. Los Angeles Co. Mus. Nat. Hist. Contrib. Sci., 138:1–29.
- . 1978. *Idiolychnus*, a new genus of Myctophidae based on *Diaphus urolampus*. Copeia, 1978(3):492–497.
- NIELSEN, J.G. 1974. Fish types in the Zoological Museum of Copenhagen. Copenhagen: Zoological Museum. 115 pp.
- NORMAN, J.R. 1930. Oceanic fishes and flatfishes collected in 1925–1927. Disc. Rept., 2:261–370.
- OGILBY, J.D. 1898. New genera and species of fishes. Proc. Linn. Soc. N.S.W., 23(1):32–41.
- PARR, A.E. 1928. Deep-sea fishes of the order Iniomni from the waters around the Bahama and Bermuda Islands, with annotated keys to the Sudidae, Myctophidae, Scopelarchidae, Evermannellidae, Omosudidae, Cetomimidae and Rondelettiidae of the world. Bull. Bingham Oceanogr. Coll., 3(3):1–193.
- . 1929. Notes on the species of myctophine fishes represented by type specimens in the United States National Museum. Proc. U.S. Natn. Mus., 76(2807):1–47.
- . 1931. Deep-sea fishes from off the western coast of North and Central America. Bull. Bingham Oceanogr. Coll., 2(4):1–53.
- . 1934. Studies of Myctophinae in the Museum of Comparative Zoology. Bull. Mus. Comp. Zool. (Harvard), 77(2):41–65.
- PAXTON, J.R. 1963. A new lanternfish (family Myctophidae) of the genus *Lampadena* from the eastern Pacific Ocean. Copeia, 1963 (1):29–33.
- . 1972. Osteology and relationships of the lanternfishes (family Myctophidae). Bull. Los Angeles Co. Mus. Nat. Hist., Sci., 13:1–81.
- PETERS, W.C.H. 1860. Gesammsitzung der Akademie, 9 Juni. Monatsber. Akad. Wiss., Berlin, 1859:411–412.
- . 1865. Sitzung der physikalisch-mathematischen Klasse, 20 Juni. *Ibid.*, 1864:381–399.
- PETHON, P. 1969. List of type specimens of fishes, amphibians and reptiles in the Zoological Museum, University of Oslo. *Rhizocrinus*, 1(1):1–17.
- POEY, F. 1860. Poissons de Cuba, espèces nouvelles. *In Memorias sobre la historia natural de la isla de Cuba . . .* Havana. Vol. 2:115–356.
- RAFINESQUE, C.S. 1810. Indice d'ittiologia Siciliana. Messina: Giovanni del Nobol. 70 pp.
- REGAN, C.T. 1916. Larval and postlarval fishes. Brit. Antarct. ('Terra Nova') Exped., 1910, Nat. Hist. Rept. Zool., 1(4):125–156.
- REINHARDT, J.C.H. 1837. Ichtyologiske bidrag til den Grønlandske fauna. Copenhagen, 114 pp.
- RICHARDSON, J. 1844–1848. Ichthyology of the voyage of H.M.S. 'Erebus' and 'Terror,' under the command of Captain Sir James Clark Ross, R.N., F.R.S. Zool. Voy. 'Erebus' and 'Terror,' 2:1–139. (pp. 17–52 published March 1, 1845).
- RISSO, A. 1810. Ichthyologie de Nice, ou histoire naturelle des poissons du département des Alpes Maritimes. Paris. 388 pp.
- SCHMIDT, P.J. 1933. Description of a new myctophid fish from off Bering Island. Copeia, 1933(3):131–132.
- SMITH, J.L.B. 1933. An interesting new myctophid fish from South Africa. Trans. Roy. Soc. So. Africa, 21(2):125–127.
- SOLDATOV, V.K. 1939. Some new or rare species of fishes of our Northern Seas. *In Volume in honour of the scientific activity of N.M. Knipovich. Inst. Mar. Fish. Oceanogr. U.S.S.R.* pp.151–166. (In Russian with English summary).
- SPINOLA, M. 1806. *Insecta Liguriae . . . et iconibus illustravit.* Vol. 1; Genoa.
- STÅL, C. 1865. Hemiptera Africana. Vol. 3; Stockholm.
- STEINDACHNER, F. 1867a. Über einige neue und seltene Meeresfische aus China. Sitz. Akad. Wiss. Wien, 55:585–592.
- . 1867b. Ichthyologische Notizen V. Über ein neue *Scopelus* — und *Monacanthus* — Art aus China. *Ibid.*, 55:711–713.
- . 1881. Ichthyologische Beiträge XI. *Ibid.*, 83:393–408.
- . 1901. Fische aus dem Stillen Ocean, Ergebnisse einer Reise nach dem Pacific (Schauinsland 1896–97). Denks. Kais. Akad. Wiss. Wien. Math.-Naturw. Klasse, 70(1900):483–521.
- TÄNING, A.V. 1918. Mediterranean Scopelidae (*Saurus*, *Aulopus*, *Chlorophthalmus*, and *Myctophum*). Rept. Danish Oceanogr. Exped. 1908–10, 2, A(7):1–154.
- . 1928. Synopsis of the scopelids in the North Atlantic. Vidensk. Medd. dansk naturh. Foren., 86:49–69.
- . 1932. Notes on scopelids from the Dana Expeditions. *Ibid.*, 94:125–146.
- . 1932a. Iniomni: Myctophidae. *In Faune ichthyologique de l'Atlantique Nord*, M. Joubin (Ed.). Cons. Perm. Intern. Expl. Mer., 1(18).
- TANAKA, S. 1908. Notes on some rare fishes of Japan, with descriptions of two new genera and six new species. J. Coll. Sci. Tokyo, 23(13):1–24.
- VON WAHLERT, G. 1955. Die Typen und Typoide des Übersee-Museums Bremen, 2: Pisces. Veröff. Überseemus. Bremen, A, 2(5):323–326.
- WAITE, E.R. 1904. Additions to the fish-fauna of Lord Howe Island, No. 4. Rec. Austral. Mus., 5(3):135–186.
- WEBER, M. 1913. Die Fische der 'Siboga'-Expedition. 'Siboga' Exped. Rept., 57:1–710.
- WHITEHEAD, P.J.P. AND P.K. TALWAR. 1976. Francis Day and his collections of Indian fishes. Bull. Brit. Mus. Nat. Hist., Hist. Ser., 5(1):1–189.
- WHITLEY, G.P. 1931. Studies in ichthyology, No. 4. Rec. Austral. Mus., 18(3):96–133.
- . 1932. Studies in ichthyology, No. 6. *Ibid.*, 18(6):321–348.
- . 1933. Studies in ichthyology, No. 7. *Ibid.*, 19(1):60–112.
- . 1936. A new species of lanternfish from New Zealand with remarks on the genus *Serpa* (family Myctophidae). Austral. Zool., 8(3):160–163.
- . 1943. Ichthyological notes and illustrations (part 2). *Ibid.*, 10(2):167–187.

- _____. 1953. Studies in ichthyology, No. 16. Rec. Austral. Mus., 23(3):133–138.
- _____. AND W.J. PHILLIPS. 1939. Descriptive notes on some New Zealand fishes. Trans. Roy. Soc. New Zealand, 69(2):228–236.
- WILKENS, H. 1977. Die typen der Ichthyologischen Sammlung des Zoologischen Instituts und Zoologischen Museums der Universität Hamburg (ZMH), Teil III. Mitt. Hamburg. Zool. Mus. Inst., 74:155–163.
- WISNER, R.L. 1963a. *Lampanyctus hubbsi*, a new myctophid fish from the east-central tropical Pacific Ocean, with notes on the related, sympatric eastern Pacific species. Copeia, 1963(1):16–23.
- _____. 1963b. A new genus and species of myctophid fish from the south-central Pacific Ocean, with notes on related genera and the designation of a new tribe, Electronini. *Ibid.*, 1963(1):24–28.
- _____. 1970. A re-identification of the myctophid fishes originally determined by Lütken as *Scopelus spinosus*. *Ibid.*, 1970(2):362–366.
- _____. 1971. Descriptions of eight new species of myctophid fishes from the eastern Pacific Ocean. *Ibid.*, 1971(I):39–54.
- _____. 1974. Descriptions of five new species of myctophid fishes from the Pacific, Indian and Atlantic Oceans. Occ. Pap. Cal. Acad. Sci., 110:1–37.
- _____. 1976. The taxonomy and distribution of lanternfishes (family Myctophidae) of the eastern Pacific Ocean. (U.S.) Navy Ocean Res. Dev. Act. Rpt., 3:1–229.
- ZURBRIGG, R.E. AND W.B. SCOTT. 1976. *Diaphus hudsoni* (Pisces: Myctophidae), a new lanternfish from the south Atlantic Ocean. Can. J. Zool., 54:1538–1541.
- ZUGMAYER, E. 1911. Diagnoses des Poissons nouveaux provenant des campagnes du yacht 'Princesse Alice' (1901 à 1910). Bull. Inst. Océanogr. (Monaco), 193:1–14.
- _____. 1914. Diagnoses des quelques Poissons nouveaux provenant des campagnes du yacht 'Hirondelle II' (1911–1913). *Ibid.*, 288:1–4.
- BASSANI, F. 1889. Ricerche sui pesci fossili di Chiavon (Strati di Sotzka-Miocene inferiore). Atti Accad. Sci. Fis. Mat. Naples, (2)3(6):1–104.
- BASSOLI, G.G. 1906. Otoliti fossili terziari dell'Emilia. Riv. Ital. Paleont., 12(1):36–58.
- BRZOBOHATY, R. 1964. Predbezna zprava o vyzkumu rybich otolitu z tercienich sedimentu na území listu Zidlochovice. Zpravy o geol. Vyzkum., (1963), 1:236–238. (Not seen).
- _____. 1965. Fisch-Otolithen (Pisces, Teleostei) aus dem Karpatien von Nosislov (Mittelmiozän, Südmähren). Acta Muser Moraviae, Sci. Nat., 50:107–128.
- DANILTSHENKO, P.G. 1947. Fishes of the family Myctophidae from Caucasian Oligocene. Dokl. Acad. Sci. Moscow, 56(2):193–196. (In Russian; not seen).
- _____. 1960. Bony fishes of the Maikop deposits of the Caucasus. Trans. Paleont. Inst. Acad. Sci., U.S.S.R., 78:1–247. (Israel Prog. Sci. Transl., Jerusalem, 1967).
- _____. 1962. Fishes from the Dabakhan series of Georgia. Paleont. Zhurnal, 1962(1):111–126. (In Russian).
- DAVID, L. 1943. Miocene fishes of southern California. Geol. Soc. Amer. Spec. Pap., 43:1–193.
- DIENI, I. 1968. Gli otoliti del Pliocene inferiore di Orosei (Sardegna). Atti Mem. Accad. Patav., 80(2):243–284. (Not seen).
- ERASMO, G.D'. 1930. L'Ittiofauna fossili di Senigallia. Atti Accad. Sci. Fis. Napoli, (2)18(1):1–87.
- FITCH, J. 1969. Fossil lanternfish otoliths of California, with notes on fossil Myctophidae of North America. Los Angeles Co. Mus. Contrib. Sci., 173:1–20.
- FROST, E.A. 1924. Otoliths of fishes from the Tertiary formations of New Zealand. Trans. Proc. New Zeal. Inst., 55:605–614.
- _____. 1933. Otoliths from the Tertiary formations of New Zealand. *Ibid.*, 63:133–142.
- GOODY, P. 1969. The relationships of certain Upper Cretaceous teleosts with special reference to the myctophoids. Bull. Brit. Mus. Nat. Hist. (Geol.), Suppl. 7:1–255.
- HEINRICH, W.D. 1969. Fischotolithen aus dem Obermiozän von Hohen Woos. Geologie Biehete, 67:1–111. (Not seen).
- HALEC, P. 1975. Fisch-Otolithen aus dem Baden (Miozän) des Nördlichen teiles des weiner beckens und der Donau-Tiefebene. Geol. Carpathica, 26(2):253–256.
- KALABIS, V. 1948. Sur les poissons fossiles a organes lumineux du Paleogene (Schistes menelitiques) en Moravia. Cas Zem-sheko Mus. Brne, 32:131–174.
- KOKEN, E. 1891. Neue Untersuchungen an tertiären Fisch-Otolithen, II, Zeit Deutsch. Geol. Gesell., 43:77–170.
- KRAMBERGER, GORJANOVIC D. 1879. Beiträge zur Kenntniss der fossilen Fische der Karpathen. Paleontographica, 26:51–68.
- NOLF, D. 1977. Les otolithes des télostéens de l' Oligo-Miocène Belge. Ann. Soc. Roy. Zool. Belg., 106(1976):3–119.
- OHE, F. AND Y. Araki. 1973. Some Miocene fish otoliths from the Yakuji Formation, Tsu, Mie Prefecture. Sci. Rept. Tohoku Univ., Geol., Spec. Vol., 6:407–413.
- POSTHUMUS, O. 1929. Vischotoliën van N.O. Borneo. Dienst Mijnbouw Nederlandsch-Indie Wetenschappel. Mededeel., 9:87–108.

LITERATURE CITED FOR FOSSIL MYCTOPHIDAE

- ANFOSSI, G. AND S. MOSNA. 1971. Alcuni otoliti del Miocene medio-superiore Tortonese. Atti Ist. Geol. Univ. Pavia, 21: 138–147. (Not seen).
- _____. 1972. Otoliti del Pliocene inferiore di Lugagorano (Piacenza). *Ibid.*, 23:90–118.
- AOKI, N. 1971. Some Pleistocene fish-otoliths from the Boso and Miura Peninsulas (second report). Sci. Rept. Tokyo Kyoiku Daiyaku, C(Geogr., Geol., Miner.), 11(104):11–34.
- ARAMBOURG, C. 1921. Sur un Scopélidé fossile a organes lumineux: *Myctophum prolateratum* n. sp. du Sahélien oranais. Bul. Soc. Geol. Paris, Ser. 4, 20:233–239.
- _____. 1925. Révision des poissons fossiles de Licata (Sicile). Ann. Paleont., 14:39–96.
- _____. 1927. Les poissons fossiles d'Oran. Matériaux Carte Geol. d'Algérie, Paleont., 6:1–298. (Not seen).

- PRIEM, F. 1906. Sur les otolithes des poissons éocènes du Bassin Parisien. Bull. Soc. Geol. France, (4)6:265–280.
- _____. 1911. Études des poissons fossiles du Bassin Parisien (Supplément). Ann. Paleont., 6:1–44.
- _____. 1912. Sur des otolithes eocenes de France et d'Angleterre. Bull. Soc. Geol. France, (4)12:246–249.
- PROCHAZKA, V.J. 1893. Das Miozän van Seelowitz in Mähren und dessen Fauna. Rozpravy Ceske Akad. Cis. Frantiska Josefa, 2(2):65–88. (Not seen).
- ROBBA, E. 1970. Otolithi del Tortoniano-Tipo (Piemonta). Riv. Ital. Paleont., 76(1):89–172.
- ROMER, A.S. 1966. Vertebrate Paleontology, 3rd ed. Chicago: Univ. Chicago Press.
- ROSEN, D.E. 1973. Interrelationships of higher euteleostean fishes. In Interrelationships of Fishes. P.H. Greenwood, R.S. Miles, C. Patterson (eds). London: Academic Press (Zool. J. Linn. Soc., Vol. 53, Suppl. 1:397–513).
- SATO, J. 1962. Miocene fishes from the western area of Shizukuishi Basin, Iwate Prefecture, northeastern Japan. Earth Sci. Tokyo, 59:1–29. (Not seen).
- SAUVAGE, H.E. 1870. Synopsis des poissons tertiaires de Licata (Sicile). Ann. Sci. Nat. Zool. Paleont., Ser. 5, 14(7):1–26.
- _____. 1873. Mémoire sur la faune ichtyologique de la période tertiaire, et plus spécialement sur les poissons fossiles d'Oran (Algérie) et sur ceux découverts par M.R. Alby à Licata en Sicile. Ann. Sci. Geol., (Paris), 4(1):1–272.
- SCHUBERT, R.J. 1905. Die Fischotolithen des österreich-ungarischen Tertiärs. II. Macruriden und Beryciden. Jahrb. Geol. Reichsanst., 55:613–638.
- _____. 1910. Über Foraminiferen und einen Fischotolithen aus den fossilen Globigerinenschlamm von Neu-Guinea. Verh. k.k. Geol. Reichsanstalt, Jahrgang, 1910:318–328.
- _____. 1912. Die Fischotolithen der ungarischen Tertiärablagerungen. Mitt. Jahrb. k. Ungar. Geol., Reichsanst., 20:
- 118–139. (Not seen).
- SHEPHERD, C.E. 1916. Fossil otoliths. Knowledge, 39 (578): 177–184.
- SMIGIELSKA, T. 1966. Otoliths of fishes from the Tortonian of Southern Poland. Ann. Soc. Geol. Polonie, 36(3):205–275.
- STINTON, F.C. 1957. Teleostean otoliths from the Tertiary of New Zealand. Trans. Roy. Soc. New Zealand, 84:513–517.
- SULC, J. 1932. Les otolithes du Paléogène des environs de Biarritz. Rozpravy statniho Geol. Ustavu Ceskoslov. Republ., 7:1–94.
- _____. 1932A. Preliminary report on the otoliths from the Miocene of Kralice, at Namest, Moravia. Vest. Geol. Ustav. Ceskoslov., 8:168–174.
- VORSTMANN, A.G. 1927. Tertiaire Vischotolietan van Java. Dienst Mijnbouw Nederlandsch-Indie Wetenschappel. Mededeel., 5:1–16.
- WEILER, W. 1943. Die Otolithen aus dem Jungtertiär Süd-Rumäniens. I. Buglow und Sarmat. Senckenbergiana, 26:87–115.
- _____. 1950. Die Otolithen aus dem Jungtertiär Süd-Rumäniens. 2. Mittel-Miozän, Torton, Buglow und Sarmat. Ibid., 31:209–258.
- _____. 1959. Miozäne Fisch-Otolithen aus der Bohsung S. Pablo 2 im Becken von Veracruz in Mexiko. Neues Jahrb. Geol. Paleontol. Abh., 109:147–172. (not seen).
- _____. 1968. Otolithi Piscium (Neubearbeitung). In Fossilium Catalogues 1. Animalia. F. Westphal, Ed., 117:1–196.
- _____. 1971. Fisch-Otolithen aus dem Jungtertiär sud-Siziliens. Senckenbergiana, 52(1):5–37.
- WEINFURTER, 1952. Die Otolithen der Wetzelsdorfer Schichten und des Florianer Tegels (Miozän, Steiermark). Sitzber. Österr. Acad. Wiss., (1)161(7):455–498.

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NOTE ADDED IN PROOF

The following new species of fossil Myctophidae based on otoliths have recently been published: *Myctophum unicum*, *Diaphus crassus*, *Gymnocephalus fitchi*, *Hygophum agrigenensis*, *Hygophum? orcaianensis*, and *Electrona anfossimosa* by Schwarzhans, W., 1978, Otolithen aus dem Unter-Pliozän von Süd-Sizilien und aus der Toscana. Berliner geowiss. Abh., (A)8:1–52.

