

CATALOG OF ENTOMOLOGICAL TYPES IN THE BISHOP MUSEUM.

Diptera: Asilidae, Leptogastridae¹

By Neal L. Evenhuis²

Abstract. Holotypes of 34 species of Asilidae and 10 species of Leptogastridae deposited in the Bishop Museum Entomological Type Collection are listed. An account of the holdings of each family in the general collection of the Bishop Museum is also presented.

This catalog lists holotypes of 44 species in the families Asilidae and Leptogastridae and gives an account of the general collection holdings of each family in the Bishop Museum collection. The format used in this catalog is explained in Radovsky et al. (1976).

The Asilidae in the Bishop Museum collection are represented by 34 species in 8 genera and 2 subgenera. All but 1 of these holotypes (from Western Samoa) are from the Philippines and are described in Oldroyd (1972). Oldroyd, in this work on the Asilidae from the Philippines, failed to state the sex of the holotype for new species described in his paper. In a few cases, the sex is implied in an introductory paragraph to that species (e.g., *Ommatius allopoecius*) or the type is unique and the sex stated (e.g., *Promachus (Promachus) hypocaustus*). For the remainder of the species, the sex of the holotype is stated herein. Many of Oldroyd's holotypes have a label with a large black number pinned below the specimen in addition to locality data. This number follows the name of the collector in the collection data section for each species.

The Asilidae in the general collection of the Bishop Museum number approximately 8500 pinned adult specimens; there are 7 adults in alcohol from New Guinea and other Pacific islands. Most specimens are from New Guinea (2000), Philippines (1750) and China (1050). The remainder are from the following localities: Ambon I (94), Australia (497), Cambodia (24), Fiji (93), Hong Kong (22), India (226), Japan (89), Laos (375), Micronesia (61), Nepal (25), New Caledonia (164), New Hebrides (190), Ryukyus (130), Samoa (145), Solomons (450), Taiwan (65), Thailand (103), Tonga (5), Vietnam (400), North and South America (400), and miscellaneous localities (30). Most of the specimens from the Philippines and North and South America are identified to species; New Guinea material has been sorted to tribe, and the remainder are unidentified.

The family Leptogastridae was erected by Martin (1968a) for those genera included in the subfamily Leptogasterinae of the Asilidae. Though Oldroyd (1975) retains the

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tribe Leptogasterini in Asilidae, this catalog follows Martin (1968a, b) in treating Leptogastridae as a family distinct from Asilidae. The family Leptogastridae is represented by holotypes of 10 species in 4 genera and 1 subgenus. Four of these holotypes are from the Philippines, 3 from India, 2 from Thailand and 1 from Papua New Guinea. The remarks above for Oldroyd's Asilidae holotypes apply also to his holotypes of leptogastrid species and need not be repeated here.

The holdings of Leptogastridae in the general collection of the Bishop Museum are small. There are approximately 200 specimens consisting of pinned adults from the following localities: Australia (21), New Caledonia (14), New Hebrides (8), Papua New Guinea (47), Philippines (25), Solomons (9), Vietnam (13), North and South America (39), and miscellaneous localities (19). Specimens from the Philippines and North and South America have been identified to species. The remainder are unsorted.

SPECIES-GROUP ENTRIES

Family ASILIDAE

- allopocius** Oldroyd, *Ommatius* HOLOTYPE ♂ 9689
 1972 *Pac. Insects* 14(2): 319
 PHILIPPINES: Mindanao I: Bukidnon Prov.: Mt View Colleges: 15 km NW of Valencia 671 m 22-23.IV.1968 M.D. Delfinado #63
 Type number incorrectly stated as 8689 in original description.
- balabacensis** Oldroyd, *Aphistina* HOLOTYPE ♀ 9672
 1972 *Pac. Insects* 14(2): 233
 PHILIPPINES: [Palawan Prov.]: Balabac I: 10 km S of Balabac 24.IV.1962 H. Holtmann
 Malaise trap
- carapacina** Oldroyd, *Xenomyza* HOLOTYPE ♂ 9677
 1972 *Pac. Insects* 14(2): 257 Fig. 48
 PHILIPPINES: Luzon I: Ifugao [Prov.]: Mayoyao 9.VII.1966 H.M. Torre Villas #98
 Date stated as 19-21.VII.1966 in original description.
- centurionis** Oldroyd, *Xenomyza* HOLOTYPE ♂ 9678
 1972 *Pac. Insects* 14(2): 257-59 Fig. 46
 PHILIPPINES: [Palawan Prov.]: Culion I: 6 km W of Culion 10.VI.1962 H. Holtmann #100
 [Low vegetation]
- chrysopilus** Oldroyd, *Ommatius* HOLOTYPE ♂ 9690
 1972 *Pac. Insects* 14(2): 321-23 Fig. 123
 PHILIPPINES: Luzon I: Albay Prov.: Libon: Caguscus 200 m 15.V.1965 H.M. Torre Villas #70
 Locality misspelled as Caguscus, and type number incorrectly stated as 8690 in original description.
- conopoides** Oldroyd, *Choerades* HOLOTYPE ♀ 9673
 1972 *Pac. Insects* 14(2): 235-37
 PHILIPPINES: Luzon I: Mountain Prov.: Abatan: Buguias: 60 km S of Bontoc 1800-2000 m 4-7.V.1964 H.M. Torre Villas
 Locality misspelled as "Manatan Prov." and "Bugias" in original description.
- crypticus** Oldroyd, *Ommatius* HOLOTYPE ♂ 9691
 1972 *Pac. Insects* 14(2): 323 Fig. 109
 PHILIPPINES: Mindanao I: Misamis Oriental Prov.: Minalwang 1050 m 24.III-4.IV.1961 H. Torre Villas #68
 Locality misspelled as Minalway, and type number incorrectly stated as 8691 in original description.

1980	Evenhuis: Bishop Museum type catalog, Asilidae, Leptogastridae	207
daknistus Oldroyd, Ommatius	HOLOTYPE ♂	9692
1972 <i>Pac. Insects</i> 14(2): 323–25 Fig. 118		pin
PHILIPPINES: Luzon I: Ifugao Prov.: Jacmal Bunhian: 24 km E of Mayoyao		
800–1000 m 9–12.IV.1967 H.M. Torrevillas #52		
Abdomen glued to upper label; date stated as 7–8.IV.1967 and type number incorrectly stated as 8692 in original description.		
divaricata Oldroyd, Heligmoneura	HOLOTYPE ♂	9679
1972 <i>Pac. Insects</i> 14(2): 277–80 Fig. 64, 71		pin
PHILIPPINES: Luzon I: Camarines Sur Prov.: Mt Isarog: Pili 600 m 5.IV.1965 H.M. Torrevillas #156		
Type number incorrectly stated as 8679 in original description.		
divinosus Oldroyd, Machimus	HOLOTYPE ♂	9684
1972 <i>Pac. Insects</i> 14(2): 287–89 Fig. 76–77		pin
PHILIPPINES: Luzon I: Mountain Prov.: Abatan: 60 km S of Bontoc: Buguias 1800–2000 m 29.IV.1964 H.M. Torrevillas #16		
Light trap		
Locality misspelled as “Bugias,” date stated as 4.V.1964, and type number incorrectly stated as 8684 in original description.		
docimus Oldroyd, Ommatius	HOLOTYPE ♂	9693
1972 <i>Pac. Insects</i> 14(2): 325–26 Fig. 111		pin
PHILIPPINES: Luzon I: Camarines Sur Prov.: Mt Isarog 500–600 m 13.IV.1963 H.M. Torrevillas #65		
dolon Oldroyd, Ommatius	HOLOTYPE ♂	9694
1972 <i>Pac. Insects</i> 14(2): 326		pin
PHILIPPINES: [Palawan Prov.]: Palawan I: Mt Beaufort: Irawan Riv 17.IV.1968 D.E. Hardy #71		
Abdomen glued to paper point with the specimen; type number incorrectly stated as 8694 in original description.		
elaphra Oldroyd, Heligmoneura	HOLOTYPE ♂	9680
1972 <i>Pac. Insects</i> 14(2): 280 Fig. 70		pin
PHILIPPINES: Luzon I: Laguna Prov.: Mt Makiling: Laguna [305 m] 30.III.1968 M.D. Delfinado #112		
Mud spring		
Type number incorrectly stated as 8680 in original description.		
epicalus Oldroyd, Ommatius	HOLOTYPE ♂	9695
1972 <i>Pac. Insects</i> 14(2): 326–28 Fig. 106–07		pin
PHILIPPINES: [Palawan Prov.]: Culion I: 6 km W of Culion 10.VI.1962 H. Holtmann #67		
Malaise trap		
Type number incorrectly stated as 8695 in original description.		
epipomus Oldroyd, Ommatius	HOLOTYPE ♂	9696
1972 <i>Pac. Insects</i> 14(2): 328–29 Fig. 108		pin
PHILIPPINES: Luzon I: Albay Prov.: Mt Mayon: 16 km NW of Lagaspi 1100–1800 m 5.V.1962 H.M. Torrevillas #55		
Altitude incorrectly stated as 100–1800 m and type number incorrectly stated as 8696 in original description.		
episkeris Oldroyd, Ommatius	HOLOTYPE ♂	9697
1972 <i>Pac. Insects</i> 14(2): 330 Fig. 110		pin
PHILIPPINES: Luzon I: Camarines Sur Prov.: Mt Isarog 800 m 27–30.IV.1963 H.M. Torrevillas #57		
Date stated as 27–30.IV.1863 in original description.		
eplocus Oldroyd, Ommatius	HOLOTYPE ♂	9698
1972 <i>Pac. Insects</i> 14(2): 330–31		pin
PHILIPPINES: Luzon I: Camarines Sur Prov.: Mt Isarog: 20 km E of Naga 1000–1500 m 23.IV.1963 H.M. Torrevillas #59		
Type number incorrectly stated as 8698 in original description.		

- hobelias** Oldroyd, **Choerades** HOLOTYPE ♂ 9674
 1972 *Pac. Insects* 14(2): 239-40
 PHILIPPINES: Luzon I: Camarines Sur Prov.: Mt Isarog: Pili 800 m 27.IV.1965 H.M.
 Torrevillas
 Light trap
 pin
- hocus** Oldroyd, **Ommatius** HOLOTYPE ♂ 9699
 1972 *Pac. Insects* 14(2): 332
 PHILIPPINES: Mindanao I: Bukidnon Prov.: Mt View Colleges: 15 km NW of Valencia 671
 m 22-23.IV.1968 M.D. Delfinado #160
 Type number incorrectly stated as 8699 in original description.
 pin
- hypnus** Oldroyd, **Ommatius** HOLOTYPE ♂ 9700
 1972 *Pac. Insects* 14(2): 332-33 Fig. 125
 PHILIPPINES: Mindanao I: Misamis Oriental Prov.: Minubanan 1050-1200 m 5-
 9.IV.1961 H.M. Torrevillas #62
 Locality misspelled as Minabanan, and type number incorrectly stated as 8700 in original
 description.
 pin
- hypocaustus** Oldroyd, **Promachus (Promachus)** HOLOTYPE ♂ 9686
 1972 *Pac. Insects* 14(2): 297-99 Fig. 85
 PHILIPPINES: Leyte I: [Leyte Prov.]: Palo 21.VII.1957 W.U.F. #161
 Type number incorrectly stated as 8686 in original description.
 pin
- irigensis** Oldroyd, **Andrenosoma** HOLOTYPE ♀ 9676
 1972 *Pac. Insects* 14(2): 253-54 Fig. 31
 PHILIPPINES: Luzon I: Camarines Sur Prov.: Mt Iriga 500-600 m 18.IV.1962 H.M.
 Torrevillas
 pin
- manipulus** Oldroyd, **Ommatius** HOLOTYPE ♂ 9701
 1972 *Pac. Insects* 14(2): 333-34 Fig. 113
 PHILIPPINES: Mindanao I: Zamboanga Del Norte Prov.: 11 km E of Sindangan
 20.VII.1958 H.E. Milliron #64
 Type number incorrectly stated as 8701 in original description.
 pin
- nussus** Oldroyd, **Promachus (Trypanoides)** HOLOTYPE ♂ 9687
 1972 *Pac. Insects* 14(2): 302-03 Fig. 84
 PHILIPPINES: [Palawan Prov.]: Busuanga I: 4 km N of San Nicolas 23.V.1962 M.
 Thompson #187
 Locality data incorrectly stated as 4 km S of San Nicolas, and type number incorrectly stated
 as 8697 in original description.
 pin
- peristalsis** Oldroyd, **Choerades** HOLOTYPE ♂ 9675
 1972 *Pac. Insects* 14(2): 241-42 Fig. 40
 PHILIPPINES: Luzon I: Camarines Sur Prov.: Isarog 500-600 m 15.IV.1963 H.M.
 Torrevillas #84
 Altitude and date stated as 750-800 m and 26.V.1963, respectively, in original description.
 pin
- peristus** Oldroyd, **Ommatius** HOLOTYPE ♂ 9702
 1972 *Pac. Insects* 14(2): 334 Fig. 124
 PHILIPPINES: Luzon I: Ifugao [Prov.]: Mayoyao 1000-1500 m 4.VII.1966 H.M.
 Torrevillas #69
 Altitude and date stated as 100-1500 m and 4.VIII.1966, and type number incorrectly
 stated as 8702 in original description.
 pin
- pygmaea** Oldroyd, **Heligmoneura** HOLOTYPE ♂ 9681
 1972 *Pac. Insects* 14(2): 280-82 Fig. 72
 PHILIPPINES: Luzon I: Albay Prov.: Libon: Caguscos 200 m 7.V.1965 H.M. Torre-
 villas #154
 Locality misspelled as Caguscos, and type number incorrectly stated as 8681 in original
 description.
 pin
- scinus** Oldroyd, **Ommatius** HOLOTYPE ♂ 9703
 1972 *Pac. Insects* 14(2): 334-35 Fig. 122
 pin

- PHILIPPINES: Luzon I: Ifugao [Prov.]: Mayoyao 1000–1500 m 6.VII.1966 H.M. Torrevillas #53
Altitude stated as 1100–1500 m, and type number incorrectly stated as 8703 in original description.
- seminuda** Oldroyd, **Heligmoneura** HOLOTYPE ♂ 9682
1972 *Pac. Insects* 14(2): 283 Fig. 68
pin
PHILIPPINES: Mindanao I: Bukidnon Prov.: Malaybalay [For. Station]: Malaybalay 23.IV.1968 M.D. Delfinado #151
Type number incorrectly stated as 8682 in original description.
- sula** Oldroyd, **Heligmoneura** HOLOTYPE ♂ 9683
1972 *Pac. Insects* 14(2): 335–86 Fig. 67
pin
PHILIPPINES: [Palawan Prov.]: Palawan I: Agric. Exp Station: 11.2 km N of Puerto Princessa 15–17.IV.1968 D.E. Hardy #165
Locality and date stated as 11.2 km S of Puerto Princessa and 15–17.IV.1868, respectively, and type number incorrectly stated as 8683 in original description.
- suntius** Oldroyd, **Ommatius** HOLOTYPE ♂ 9704
1972 *Pac. Insects* 14(2): 335–36 Fig. 114
pin
PHILIPPINES: Mindanao I: Misamis Oriental Prov.: Mt Empagatao 1050–1200 m 19–30.IV.1961 H.M. Torrevillas #66
[Rain forest]
Type number incorrectly stated as 8704 in original description.
- superfluus** Oldroyd, **Promachus (Promachus)** HOLOTYPE ♂ 9688
1972 *Pac. Insects* 14(2): 304–05 Fig. 82
pin
PHILIPPINES: Mindanao I: Bukidnon Prov.: Dalwansan 610 m 23.IV.1968 D.E. Hardy #180
Type number incorrectly stated as 8688 in original description.
- truncatus** Oldroyd, **Machimus** HOLOTYPE ♂ 9685
1972 *Pac. Insects* 14(2): 289–90 Fig. 79
pin
PHILIPPINES: Luzon I: Ifugao Prov.: 24 km E of Mayoyao: Jacmal Bunhian 800–1000 m 19–21.1967 H.M. Torrevillas #93
Type number incorrectly stated as 8685 in original description.
- varitibiatus** Ricardo, **Ommatius** SYNTYPE ♂ 518
1929 *Insects of Samoa* Part 6(3): 120–22 Fig. 5–6
pin
WESTERN SAMOA: Savaii I: Safune 610–1219 m 3.V.1924 E.H. Bryan, Jr.
Rain forest
Syntype ♂ carries a label marked “Holotype no. 518”; syntype ♀ not found in the collection.

Family LEPTOGASTRIDAE

- australis** Martin, **Ammophilomima** HOLOTYPE ♂ 10090
1973 *Pac. Insects* 15(3–4): 448 Fig. 3
pin
INDIA: [Madras]: Kodaikanal: Pulney Hills V.1953 P.S. Nathan
- guineae** Martin, **Lobus (Nanilobus)** HOLOTYPE ♂ 9922
1972 *J. Kans. Entomol. Soc.* 45: 16–17 Fig. 7
pin
PNG: NEW GUINEA (NE): Wau 1250 m 30.VIII.1965 J. & M. Sedlacek
Malaise trap
Left hind leg and left wing glued to point.
- indiae** Martin, **Ammophilomima** HOLOTYPE ♂ 10091
1973 *Pac. Insects* 15(3–4): 453 Fig. 5
pin
INDIA: [Madras]: Anamalai Hills: Cinchona 1060 m V.1967 P.S. Nathan
ALLOTYPE ♀ 10091a, on pin.
- palawanensis** Oldroyd, **Leptogaster** 5 SYNTYPES 9671
1972 *Pac. Insects* 14(2): 224 Fig. 5
pin
PHILIPPINES: [Palawan Prov.]: Palawan I: 3 km NE of Tanabag H. Holtmann
Malaise trap

Dates on specimens range from 8.V.1962 to 17.V.1962; syntype series consists of 1♂, 1♀ and 3 specimens too damaged to determine sex.

- piliensis** Oldroyd, **Euscelidia** HOLOTYPE ♂ 9668
 1972 *Pac. Insects* **14**(2): 215 Fig. 9, 11, 16, 18
 PHILIPPINES: Luzon I: Camarines Sur Prov.: Mt. Isarog: Pili 600 m 15.IV.1965 H.M. Torrevillas #77
 Genitalia missing.
- rapacoides** Oldroyd, **Euscelidia** HOLOTYPE 9669
 1972 *Pac. Insects* **14**(2): 215-17 Fig. 17
 PHILIPPINES: Luzon I: Mountain Prov.: Abatan: Buguias: 60 km S of Bontoc 1800-2000 m 27.V.1964 H.M. Torrevillas #76
 Date stated as 27.V.1962 in original description; sex indeterminable; genitalia missing; abdomen glued to label.
- siamae** Martin, **Ammophilomima** HOLOTYPE ♀ 10092
 1973 *Pac. Insects* **15**(3-4): 456-57
 THAILAND (N): Chiang Mai Prov.: Ban Bon Doi Suthep 1000 m 21.III.1936 C. Tongyai Lot 319
 Abdomen and left hind leg glued to label.
- simila** Martin, **Ammophilomima** HOLOTYPE ♀ 10093
 1973 *Pac. Insects* **15**(3-4): 457
 INDIA: [Madras]: Anamalai Hills: Kadamparai 1060 m VI.1963 P.S. Nathan
 Locality misspelled as Anomalai Hills on label and in original description; date stated as 2.VI.1963 in original description.
- thailandae** Martin, **Ammophilomima** HOLOTYPE ♂ 10094
 1973 *Pac. Insects* **15**(3-4): 458-59 Fig. 2
 THAILAND (N): Kanchanaburi Prov.: Si Sawat 22.V.1962 P. Pholboon Lot 2824
 Abdomen and left wing glued to label.
- tomentosa** Oldroyd, **Leptogaster** HOLOTYPE ♂ 9670
 1972 *Pac. Insects* **14**(2): 222-23 Fig. 4
 PHILIPPINES: Mindanao I: Bukidnon Prov.: Dalwansan 550 m 23.IV.1968 M.D. Del-finado
 Altitude stated as 1800 m in original description.

GENUS-GROUP INVENTORY

Ammophilomima: australis, indiae, siamae, simila, thailandae
 Andrenosoma: irigensis
 Aphistina: balabacensis
 Choerades: conopoides, hobelias, peristalsis
 Euscelidia: piliensis, rapacoides
 Heligmoneura: divaricata, elaphra, pygmaea, seminuda, sula
 Leptogaster: palawanensis, tomentosa
 Lobus (Nanilobus): guineae
 Machimus: divinosus, truncatus
 Ommatius: allopoecius, chrysopilus, crypticus, daknistus, docimus, dolon, epicalus, epipomus, episkeris, euplocus, hocus, hypnus, manipulus, peristus, scinus, suntius, varitubatus
 Promachus (Promachus): hypocaustus, superfluous
 Promachus (Trypanoides): nussus
 Xenomyza: carapacina, centurionis

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PUBLICATION ANNOUNCEMENT

WAU ECOLOGY INSTITUTE HANDBOOK NO. 6 HANDBOOK OF NEW GUINEA RODENTS

By J. I. Menzies and Elizabeth Dennis

This is an identification guide which covers all of the 50 or so species of rodents of mainland New Guinea. There are also lists of species for the neighboring island groups such as the Moluccas, Bismarcks and Solomons. Biogeography, classification and biology are discussed. Various means are provided for identification: there is a key to genera on basis of mammary formulae; another key is based on external characters only; a third key is based on skull (teeth) characters; and a fourth key is based on external plus internal characters. Teeth, tails, skull, mammary and skin characters are illustrated. Then the various groups and species of rats and mice are discussed, with keys to species by genera or higher groups. All available ecological information is presented for each species. There is also a discussion of how to trap, collect, prepare or study rats; plus a glossary and an index.

68 pp, 8 figs., 8 color plates illustrating 24 species

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