CATALOGUE OF RECENT AND FOSSIL NEMESTRINIDÆ OF AMERICA NORTH OF MEXICO

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The present compilation arranges all published references of North American Nemestrinidae, known to the author, so as to present a reliable key to the literature and a clear historical view of the subject. All citations have been checked with the originals. The actual date of publication follows the author’s name while any other date mentioned in connection with the work is inserted in parentheses after the abbreviated title and volume number. The type localities and present location of the types are noted with the original descriptions of either sex. Other references mention localities based on new material, as well as important biological data. I have used the opportunity to publish additional localities for some of the forms.

The abbreviations have been chosen so that even the beginner and non-specialist will be able to trace them in the literature. In my experience Catalogues are more useful to the uninitiated than to the strict specialist. The following abbreviations are used for the depositories of types: A.M.N.H. for American Museum of Natural History, New York; Brit. Mus. for British Museum (Natural History), London; Kansas Un. for Department of Zoology and Entomology, University of Kansas, Lawrence, Kansas; M.C.Z. for Museum of Comparative Zoology, Cambridge, Massachusetts; Melander Coll. for private collection of A. L. Melander, now at Riverside, California; Painter Coll. for private collection of R. H. Painter, now at Manhattan, Kansas; Peabody Mus. for Peabody Museum of Yale University, New Haven, Connecticut; U. Colo. Mus. for Museum of the University of Colorado, Boulder, Colorado; and U.S.N.M. for United States National Museum, Washington, D. C.
The Catalogue covers the Dominion of Canada and the United States, no species being known from Alaska. This area includes the major part of the Nearctic Region, which, as is well known, extends some distance into Mexico, its southern boundary being irregular and often disputed. Two of the species here listed are known also from farther south, extending to Guatemala in one case and to Panama in the other. Moreover, most probably some of the other forms will also be taken eventually south of the Mexican border. On the other hand, three additional species, *Neorhynchocephalus mexicanus* Bequaert, *Hirmoneura* (*Neohirmoneura*) *psilotes* Osten Sacken, and *Hirmoneura* (*Hyrmophlaeba*) *brevirostris* Macquart, are known from Mexico and Central America. One or more of these might possibly yet be discovered in the southwestern United States. With this reservation, it is doubtful whether many additions will be made in the future to the Recent Catalogue. In any case, such additions will not alter appreciably the general character of the fauna.

Even if we include the Mexican and Central American forms, the Nearctic nemestrinid fauna is very scant, consisting of only nine species and one subspecies. These are now placed in three subfamilies and three genera, an unusually high proportion of supra-specific groups. All the species are precinctive; while one of the three genera only (*Neorhynchocephalus*) is strictly American, occurring as far south as Argentina. The other two genera (*Hirmoneura* and *Trichopsidea*) are nearly cosmopolitan; but the Nearctic species belong to peculiarly American subgenera (*Neohirmoneura*, *Hyrmophlaeba*, and *Parasymmictus*).

Throughout the world the majority of Recent Nemestrinidae occur in five widely separated areas: the Nearctic Region; the warm temperate areas of Chile and Argentina; the Mediterranean subregion and Central Asia; Africa south of the Zambesi; and Australasia. In point of number of species, the Nearctic Region is the poorest of these five areas. The Recent North American members of the family appear to be remnants of what may
have been a flourishing fauna at some earlier geological period. This is strongly suggested by the relatively rich fossil fauna. One set of Miocene strata in one locality has now yielded five species, belonging to at least three genera, one of the latter no longer found in the New World. The fact that only one fossil species is known outside North America makes this even more remarkable. Bequaert and Carpenter (1936) have commented upon the astonishing similarity between the Miocene and Recent Nemestrinidae. The evolution of the family seems to have been at a standstill since mid-Tertiary times, which also points to the great antiquity of the group.

RECENT SPECIES

Family Nemestrinidae

Fallenina Rondani, 1856, Dipt. Italicae Prod., I, p. 33 and 161.

Subfamily Hirmoneurinae

Hirmoneurinae Bequaert, 1930, Psyche, XXXVII, p. 295.

Hirmoneura Meigen

Ins., II, p. 132 (monotypic for Hirmoneura obscura Wiedemann, 1820).


*clausa* Osten Sacken. See Trichopsidea.

Subgenus *Neohirmoneura* Bequaert


Distr.: Tex.


Distr.: Ariz.

Subgenus *Hyrmophlæba* Rondani


*Hirmoneura* (*Hyrmophlæba*) *texana* Bequaert, 1934, Jl. New York Ent. Soc., XLII, p. 178 (allotype
Helotes, Bexar Co., Texas.—M.C.Z. Also Texas: Nueces R., Uvalde Co.; Sabinal R., Uvalde Co. Arizona: Post Creek Canyon, Pinaleño Mts., Fort Grant, 6,000 ft., Graham Co.


Distr.: Tex., Ariz. Also Panama (Tapia, collected by G. Fairchild).

3a. _H. (H.) texana_ var. _arizonensis_ Bequaert.


Additional Record.—Arizona: Tucson, many ♀ ♂, September 3 (F. M. Carpenter).

Distr.: Ariz.

Subfamily _Nemestrininae_


_Nemestrininae_ Bequaert, 1930, _Psyche_, XXXVII, p. 286.

_Neorrhynchocephalus_ Lichtwardt


1. _N. sackenii_ (Williston).


Additional Records.—Oregon: Bush’s Pasture, Salem (G. F. Smith); [also Sparta, Baker Co., according to T. H. G. Aitken, in litt.]—California: Santa Cruz.


2. N. volaticus (Williston).


*Rhynchocephalus flavus* Curran, 1931, Canad. Entom., LXIII, pp. 69 and 70 (holotype ♂: Harper Co., Kansas; allotype ?: Sumner Co., Kan-
Nemestrinidae

sas.—Both Kansas Un. Also paratypes Kansas: Bourbon Co.; Cherokee Co.; Waubumsee Co.).

Additional Records.—Florida: Indian River (Whitfield); Monticello (G. Fairchild).—Missouri: Willard, Greene Co. (A. E. Brower).

Distr.: Ariz., Kans., Okla., Mo., Tex., Miss., Fla. Also Mexico (Baja California, Sinaloa, Guerrero, Colima, Morelos, Veracruz, Oaxaca, Yucatan) and Guatemala.

Rhynchocephalus Fischer, 1806

clausus Brauer (not Osten Sacken). See Neorhynchocephalus sackenii.
flavus Curran. See Neorhynchocephalus volaticus.
maculatus Curran. See Neorhynchocephalus volaticus.
sackenii Osten Sacken. See Neorhynchocephalus.
subnitens Cockerell. See Neorhynchocephalus sackenii.
volicus Williston. See Neorhynchocephalus.

Subfamily Trichopsideinae


Trichopsidea Westwood


Subgenus Parasymmictus Bigot


1. T. (Parasymmictus) clausa (Osten Sacken).


*Trichopsidea (Parasymmyctus) clausa* Bequaert, 1934, Jl. New York Ent. Soc., XLII, pp. 181 and 182 (Kansas: Medora, Reno Co.).


FOSSIL SPECIES

Subfamily HIRMONEURINÆ

Hirmoneura Meigen

occultator Cockerell. See Neorhynchocephalus.
melanderi Cockerell. See Neorhynchocephalus (?).
vulcanicus Cockerell. See Neorhynchocephalus.

Subgenus Hirmoneurites Cockerell


1. H. (Hirmoneurites) willistoni (Cockerell).


Hirmoneura (Hirmoneurites) willistoni Bequaert, 1932, Zoolog. Anzeiger, C, p. 15. Bequaert and Carpenter, 1936, Jl. of Paleontology, X, p. 399, figs. 2 (on p. 400) and 7 (2) (on p. 405) (holotype ?).

Distr.: Miocene of Colo.

Subfamily NEMESTRINÆ

Neorhynchocephalus Lichtwardt

1. N. occultator (Cockerell).


Neorhynchocephalus occultator Bequaert and Carpenter, 1936, Jl. of Paleontology, X, pp. 399 and 402, figs. 4 (on p. 400) and 7 (1) (on p. 405) (obverse of type ?).

Distr.: Miocene of Colo.
2. *N. vulcanicus* (Cockerell).


*Neo~chocephalus vulcanicus* Bequaert and Carpenter, 1936, Jl. of Paleontology, X, pp. 399 and 401, figs. 3 (on p. 400) and 7 (4) (on p. 405) (obverse and reverse of type ?).

Distr.: Miocene of Colo.

**Generic Position Doubtful**

3. *N. (? ) melanderi* (Cockerell).


*Neo~chocephalus (?) melanderi* Bequaert and Carpenter, 1936, Jl. of Paleontology, X, pp. 399 and 403, figs. 5 (on p. 400) and 7 (3) (on p. 405) (obverse and reverse of type, of doubtful sex. Also 2 add. specimens, one ♂, Florissant, at M.C.Z.).

Distr.: Miocene of Colo.

**Prosaceca Schiner**


Subgenus *Palembolus* Scudder


*Palombolus* Handlirsch, 1907, Die Fossilen Insekten, pt. 7, p. 1009 (misspelling of *Palembolus*).

1. *P. (Palembolus) florigera* (Scudder).


*Prosaeca (Palembolus) florigera* Bequaert and Carpenter, 1936, Jl. of Paleontology, X, pp. 399 and 406, figs. 6 (on p. 400) and 7 (5) (on p. 405) (obverse and reverse of type ♂).

Distr.: Miocene of Colo.