97. Definition of Coenomyiidae (Diptera). II

Genera of the Family

By Akira NAGATOMI

Entomological Laboratory, Faculty of Agriculture, Kagoshima University

(Comm. by Sajiro MAKINO, M. J. A., June 3, 1975)

The diagnoses of Coenomyiidae were given by Nagatomi (1975a). The genera of Coenomyiidae are presented in this paper.

Key to genera of Coenomyiidae.

1. Antennal segment 3 annulated, porrect, and subulate; 4th posterior cell widely open and anal cell narrowly open or closed at wing margin; in ♀ front broader toward antenna 2
- Antennal segment 3 conical and with a long arista; 4th posterior cell (when vein M_3 is present) and anal cell closed before wing margin (sometimes the latter closed at wing margin); in ♀ front parallel sided; body slender, scutellum unarmed, and hind femur distinctly longer than mesonotum and scutellum combined *Dialysis*
- 2(1). In antenna, segment 1 about as long as wide and segments 1+2 less than $1/2$ as long as flagellum; head nearly as wide as or somewhat narrower than thorax (as well as in *Dialysis*); body slender or nearly so but sometimes (e. g. in *Arthropeas magna* Johnson) fairly robust 3
- In antenna, segment 1 distinctly longer than wide and segments 1+2 over $1/2$ as long as flagellum; head distinctly narrower than thorax; body robust 4
- 3(2). Scutellum with a pair of spine-like processes; hind femur distinctly longer than mesonotum and scutellum combined; body slender *Odontosabula*
- Scutellum unarmed; hind femur not longer than mesonotum and scutellum combined (as well as in *Coenomyia* and *Anacanthaspis*); body somewhat slender to fairly robust *Arthropeas*
- 4(2). Scutellum unarmed, much wider than long, and its hind margin distinctly concave at middle and consisting of two more or less rounded portions; vein M_4 arising from discal cell at or near m-cu crossvein (as well as in *Dialysis*, *Odontosabula*, and *Arthropeas*) or sometimes arising

- from m-cu crossvein; eye bare or practically so (as well as in *Dialysis*, *Odontosabula*, and *Arthropeas*); abdomen widest at segment 3 or 4 *Anacanthaspis*
- Scutellum trapezoidal or semicircular and with a pair of spine-like processes (which become small and inconspicuous in *C. bituberculata* Enderlein); vein M_4 arising from discal cell much beyond m-cu crossvein and distance between bases of M_2 and M_3 roughly as long as that between bases of M_3 and M_4 ; eye distinctly pilose; abdomen widest at segment 2 or 3 *Coenomyia*

Genus *Anacanthaspis* Röder, 1889 (Type-species: *Anacanthaspis bifasciata* Röder)—This genus contains only 1 species, *bifasciata* Röder 1889 known from Siberia and Manchuria. One subspecies, *bifasciata japonica* Shiraki 1932, is reported from Japan. For diagnoses see Nagatomi and Saigusa (1970) and the key to genera in this paper. Distribution: Siberia, Manchuria, Japan.

I have examined the specimens (♂, ♀) of *bifasciata japonica*. The anterior thoracic spiracle (as well as posterior thoracic one) is large and is roughly as long as the posterior width of humeral callus.

Genus *Arthropeas* Loew, 1850 (Type-species: *Arthropeas sibirica* Loew)—This genus contains 4 species: *americana* Loew 1861 from N. America, *magna* Johnson 1913 from N. America, *sachalinensis* Matsumura 1916 from Sakhalin, and *sibirica* Loew 1850 from Siberia, Manchuria (after Ouchi, 1943), and Korea (after Ouchi, 1943). Two subspecies or varieties, *sibirica fenestralis* Malloch 1932 from Tibet and *sibirica semifusca* Malloch 1932 from Tibet, are reported. For diagnoses see the key to genera in this paper. Distribution: Tibet, Korea, Manchuria, Siberia, Sakhalin, N. America.

I have examined 1♂, 3♀ of *americana* and 1♂, 3♀ of *magna* and add the following notes: cheeks rather well developed below eyes, mid-lower face not so large as in *Coenomyia* and *Anacanthaspis*, lower facets smaller than upper ones especially in *americana* but difference inconspicuous, convexity of metapleura gentle, scutellum roughly triangular or semicircular and over 1/2 or not much less than 1/2 as long as basal width, and abdomen widest at segment 1 or 2.

In *americana*, sides of face bare, in antennal flagellum last segment over 1/2 as long as rest, anterior thoracic spiracle (as well as posterior thoracic one) much shorter than posterior width of humeral callus, mid-posterior margin of mesonotum without knob-like processes, small subscutellum present, postscutellum (including subscutellum) longer than in *magna*, convexity of metapleura more weak than in *magna*, mid-ventral part of hind coxa with a well developed

knob-like process, vein between 1st submarginal and 1st posterior cells much shorter than vein R_4 , distance between apices of R_4 and R_5 somewhat longer than but never over twice that between apices of R_5 and M_1 , and abdomen somewhat slender.

Whereas in *magna*, sides of face haired, in antennal flagellum last segment less than $1/2$ as long as rest, anterior thoracic spiracle (as well as posterior thoracic spiracle) about as long as posterior width of humeral callus, mid-posterior margin of mesonotum with a pair of small knob-like processes, subscutellum absent, postscutellum short as in *Coenomyia* and *Anacanthaspis*, convexity of metapleura more strong than in *americana*, hind coxa without mid-ventral process, vein between 1st submarginal and 1st posterior cells roughly as long as vein R_4 , distance between apices of R_4 and R_5 over twice as long as that between apices of R_5 and M_1 , and abdomen fairly robust.

Genus *Coenomyia* Latreille, 1796 (Type-species: *Musca ferruginea* Scopoli)—This genus contains 3 species: *basalis* Matsumura 1915 (= *apicalis* Matsumura 1915, *comans* Enderlein 1927, and *japonica* Séguéy 1955) from Japan, *bituberculata* Enderlein 1921 from Tibet, Nepal, and Sikkim and *ferruginea* Scopoli 1763 from Europe and N. America. For diagnoses see Oldroyd (1966), Nagatomi and Saigusa (1970), and the key to genera in this paper. Distribution: Europe, Tibet, Nepal, Sikkim, Japan, N. America.

I have examined the specimens (σ , φ) of *basalis*. In *basalis* anterior thoracic spiracle (as well as posterior thoracic one) small and much shorter than posterior width of humeral callus.

Genus *Dialysis* Walker, 1850 (Type-species: *Dialysis dissimilis* Walker, which is a synonym of *elongata* Say)—*Triptotricha* Loew 1872 is a synonym of this genus (after Leonard, 1930). *Dialysis* contains 12 species, of which 1 is known from Formosa and S. China (after Frey, 1954), 2 from Japan, and 9 from N. America. For diagnoses see the key to genera in this paper and the additional notes given below. For illustrations of σ genitalia see Hardy (1948). Distribution: Formosa, S. China, Japan, N. America.

The annulated portion of antennal segment 3 may easily change into an unsegmented, slender arista, the unarmed scutellum is in common with *Arthropeas*, and the slender abdomen is also seen in *Odontosabula*. All of these characters, as well as the mesonotum not so strongly arched, the 4th posterior- and anal cell closed before wing margin, and the mid-ventral part of basistyle without a membranous area, seem to matter little to the family segregation.

In *disparilis* Bergroth 1889 and *kesseli* Hardy 1948, fore basitarsus with 2 terminal spurs (after Leonard, 1930 and Hardy, 1948), and in *elongata* Say 1823 vein M_3 incomplete or entirely lacking and

anal cell closed at wing margin (after Leonard, 1930).

I have examined the specimens (♂, ♀) of *iwatai* Nagatomi 1953 and add the following notes: lower occiput somewhat developed behind eye, sides of face narrow as in *Coenomyia* and *Anacanthaspis*, in antenna each segment roughly as long as wide and segment 3 smaller in size than segment 2, anterior thoracic spiracle (as well as posterior thoracic one) much shorter than posterior width of humeral callus, convexity of metapleura weak, scutellum triangular or semicircular and roughly 1/2 as long as basal width, postscutellum well developed, mid-ventral part of hind coxa with a small knob-like process (which may be inconspicuous), abdomen about as wide as thorax and segments 1-6 in ♂ and segments 1-4 in ♀ nearly parallel sided.

Genus *Odontosabula* Matsumura, 1905 (Type-species: *Odontosabula gloriosa* Matsumura)—*Stratieleptis* Pleske, 1925 is a synonym of this genus (after Nagatomi and Saigusa, 1970). *Odontosabula* contains 3 species: *czerskii* Pleske 1925 from E. Siberia and Korea, *gloriosa* Matsumura 1905 (= *pleskei* Séguéy 1926) from Japan (Kyushu), and *licenti* Séguéy 1952 from Manchuria. But *licenti* is probably a synonym of *czerskii*. For diagnoses see Nagatomi and Saigusa (1970) and the key to genera in this paper. Distribution: Manchuria, Korea, E. Siberia, Japan.

I have examined the specimens (♂, ♀) of *czerskii* and *gloriosa*. The thoracic spiracles fairly large and its anterior one over 1/2 as long as posterior width of humeral callus.

I have noticed that there are 2 species in Japan. One is *gloriosa* (= *pleskei*) from Kyushu (Kagoshima Pref.) and the other is an undescribed form from Honshu (Nagano-, Gifu-, Fukui Pref.) which will be named in the near future.

References

- Frey, R. (1954): Studien über ostasiatische Dipteren. III. Rhachiceridae, Rhagionidae, Hilarimorphidae. Notulae Ent., **34**, 1-25.
- Hardy, D. E. (1948): New and little known Diptera from the California Academy of Sciences collection (Rhagionidae and Dorilaidae). Amer. Midland Nat., **41**, 143-167.
- Leonard, M. D. (1930): A revision of the Dipterous family Rhagionidae (Leptidae) in the United States and Canada. Amer. Ent. Soc. Mem., **7**, 1-181.
- Nagatomi, A. (1975a): Definition of Coenomyiidae (Diptera). I. Diagnoses of the family. Proc. Japan Acad., **51**, 452-456.
- Nagatomi, A., and Saigusa, T. (1970): The Coenomyiidae of Japan (Diptera). Mem. Fac. Agr. Kagoshima Univ., **7**, 257-292.
- Oldroyd, H. (1966): Notes on *Coenomyia* Latreille (Diptera: Coenomyiidae). Beitr. Ent., **16**, 953-963.

- Ouchi, Y. (1943): *Contributiones ad Congnitionem Insectorum Asiae Orientalis*
13. Notes on some Dipterous insects from Japan and Manchoukuo. Shanghai
Sizenkagaku Kenkyusyo Ihô, **13**, 483-492 (in Japanese with English summary).