New Data and Nomenclatural Notes on the Tephritidae (Diptera) of Far East Russia. II

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New Data and Nomenclatural Notes on the Tephritidae (Diptera) of Far East Russia. II. Korneyev V. A. — Species of the tribe Trypetini are taxonomically treated for the forthcoming "Keys to Insects of Far East Russia". Trypetia anitra Korneyev, sp. n. and Morinowotome itoi Korneyev, sp. n. are described. The following synonyms are established: Calosphenisca Hendel, 1914 = Fusculidia Ito, 1984, syn. n.; Acidiella Hendel, 1914 = Flavidula Ito, 1984, syn. n.; Hemileophila sibirica (Portschinsky, 1892) = H. alini Hering, 1940, syn. n. = H. undosa Ito, 1951, syn. n.; Anastrepheides matsumurai Shiraki, 1933 = A. annulifer Hering, 1940, syn. n.; Philophylla marumoi (Miyake, 1919), = Euleia basiyalina Hering, 1951, syn. n.; Trypetia quaesita Ito, 1984 = T. quadrangulifer Richter et Kandybina, 1985, syn. n.; T. immaculata (Macquart, 1835) = T. digesta Ito, 1984, syn. n.; Stemonocera corruca (Hering) = Vidalia koreana Kwon, 1985, syn. n.; Acidiella bipunctata (Portschinsky), comb. n. (= Spilographa bipunctata) = Shiracidia dilutata Ito, 1984, syn. n. The new combinations proposed are: Magnimyioia quadrinota (Hardy), comb. n. (= Myoleia quadrinota), Acidiella zephyria (Ito), comb. n. (= Flavidula zephyria). The genus Hyleurus Ito is resurrected from synonymy. Chetostoma dilutum (Zia), Itosigo bellus Ito, Magnimyioia media Ito, Trypetia submicanis Zia, Hyleurus kalopanacis Ito, Yamanowotome accepta Ito, Y. pilosa Ito, "Dryadodacryma" albicoastale Ito, Pseudhemilea longistigma (Shiraki), Angelogelasinus naganoinesi (Shiraki), Morinowotome egregia (Ito), A. anangelicata takeuchi (Ito), Acidiella pachypon (Ito), A. zephyria (Ito), A. issiki (Shiraki) are newly recorded from Far East Russia. Females of Yamanowotome pilosa Ito, A. obscuripennis Chen are described for the first time. The lectotypes of Spilographa bipunctata Portschinsky and Spilographa armifrons Portschinsky are designated.

Новые данные и замечания по номенклатуре Tephritidae (Diptera) Дальнего Востока России. II. Кorneев В. А. — Характеристика видов трибы Trypetini, включаемых в готовящийся "Распределитель насекомых Дальнего Востока России". Описаны Trypetia anitra Korneyev, sp. n. и Morinowotome itoi Korneyev, sp. n. Установлены следующие синонимы: Calosphenisca Hendel, 1914 = Fusculidia Ito, 1984, syn. n.; Acidiella Hendel, 1914 = Flavidula Ito, 1984, syn. n.; Hemileophila sibirica (Portschinsky, 1892) = H. alini Hering, 1940, syn. n. = H. undosa Ito, 1951, syn. n.; Anastrepheides matsumurai Shiraki, 1933 = A. annulifer Hering, 1940, syn. n.; Philophylla marumoi (Miyake, 1919), = Euleia basiyalina Hering, 1951, syn. n.; Trypetia quaesita Ito, 1984 = T. quadrangulifer Richter et Kandybina, 1985, syn. n.; T. immaculata (Macquart, 1835) = T. digesta Ito, 1984, syn. n.; Stemonocera corruca (Hering) = Vidalia koreana Kwon, 1985, syn. n.; Acidiella bipunctata (Portschinsky), comb. n. (= Spilographa bipunctata) = Shiracidia dilutata Ito, 1984, syn. n. Предложены новые комбинации: Magnimyioia quadrinota (Hardy), comb. n. (= Myoleia quadrinota), Acidiella zephyria (Ito), comb. n. (= Flavidula zephyria). Род Hyleurus Ito восстановлен из синонимий. Впервые для Дальнего Востока России указываются Chetostoma dilutum (Zia), Itosigo bellus Ito, Magnimyioia media Ito, Trypetia submicanis Zia, Hyleurus kalopanacis Ito, Yamanowotome accepta Ito, Y. pilosa Ito, "Dryadodacryma" albicoastale Ito, Pseudhemilea longistigma (Shiraki), Angelogelasinus naganoinesi (Shiraki), Morinowotome egregia (Ito), A. anangelicata takeuchi (Ito), Acidiella pachypon (Ito), A. zephyria (Ito), A. issiki (Shiraki). Описываются ранее неизвестные самки Yamanowotome pilosa Ito, Acidiella obscuripennis Chen. Обозначаются лектотипы Spilographa bipunctata Portschinsky и Spilographa armifrons Portschinsky.

When preparing the tephritid chapter for the "Keys to Insects of Far East Russia" (Korneyev, Ovchinnikova, in prep.) several new synonyms and names that need to be resurrected from synonymy, and other previously unpublished nomenclatural changes were noted; new undescribed taxa were recognized, and some already known species and their host plants were recorded in Far East Russia for the first time.
An aim of this paper is to point out such improvements and additions to the Russian Far East fauna and to supply them with proper explanations and comments. The present communication covers the subfamily Trypetinae sensu stricto (i.e., only the tribes Trypetini and Carpophyini included). The nomenclature mostly follows Han (1992) in his unpublished thesis and recently introduced by Thompson et al. (1998), with several corrections and improvements that are discussed herein.

The type and other species are deposited in the following institutions:
Natural History Museum, London (NHML), Naturhistorisches Museum Wien (NHMW), Schmalhausen Institute of Zoology, Kiev (SIZK), University of Osaka Prefecture (UOP), Zoological Institute of Russian Academy of Sciences, St. Petersburg (ZISP), Zoological Museum of Moscow University (ZMUM).

The following abbreviations are used in the text below:
Anur. — Amurskaya oblast’;
Prim. — Primorskiy (before 1965 Usuriyskiy) Kray;
S. Khab. — South of Khabarovsky Kray;
S. Kur. — southern Kurile Islands;
S. Sakhal. — southern Sakhalin;
Kamenushka — Usuriyskiy State Reserve, village Kamenushka 40 km SE of Usuriysk;
Kedrovaya Pad’ — Natural Reserve “Kedrovaya Pad’ ” W of Primorskye.
FER = frons : eye width ratio (dorsal view);
FR = frontal ratio (= length : width);
HR = head ratio (= length : height : width).

Subfamily Trypetinae
Tribe Trypetini

Anomoia—Chetostoma group of genera

Myoleja Rondani

Type species. Tephritis lucida Fallén, by original designation.

This genus was known to include 2 Palearctic species: M. lucida (forest zone of Europe, Altai), the Far East M. sinensis (Zia). M. megaloba Hardy, 1987 described from Papua New Guinea apparently belongs to this genus, too. Recently, Norrbom (in: Thompson et al., 1998) transferred here Shumera boninis, Ito, accepting changes proposed by Han (1992) in his unpublished dissertation, and Euleia contemnens Hering. Pseudosphenicus desperatus Hering, that were included herein by Hardy (1987) and not transferred elsewhere by Han (loc. cit.).

Another taxon that apparently belongs to Myoleja, is Spilographa caucasica Bieg., a species of somewhat doubtful identity whose types have not been located; the only species from Caucasus that fits its description is a species closely related to M. lucida, but certainly different from the latter.

Females of Myoleja differ from the species assigned to other genera of the Chetostoma—Anomoia group by the aculeus largely and sparsely serrate apicodorsally only.

Although some species of Myoleja and Anastrphoides Hendel share similar wing pattern and body coloration, they strongly differ by the structure of male and especially female genitalia (see below).

Myoleja sinensis (Zia)

Zia, 1937 (Anastrphoides); Chen, 1948; Kandybina, 1966 (Euleia); 1977; Foote, 1984 (Myoleja).

Material. Prim. Kamenushka, 11.08.1987, Q (head lost) (Antropov) (ZMUM); [Partizansk, 14.09.1968, ex Lonicera, 4 Q, 4 Q (Kandybina) (SIZK)].

This species was originally described as Anastrphoides for it has similar wing pattern. The close relationship of this species and M. lucida was first proven by Kandybina (1966; 1977) from larval characters, and then by Han (1992; 1996) and by Korneyev (1995) from the structure of the terminus.

Anomoia solemnis (V. Richter)


The coloration of the abdominal terga is extremely variable, from completely yellowish-brown to largely black spotted. The only difference from A. vulgaris Shiraki is the broadly black mediotergite.

Chetostoma Rondani

Type species. Chetostoma curvinerme Rondani, by original designation.

The Palearctic species of this genus were recently keyed by Korneyev (1990), Females of Chetostoma differ from the other genera of this group by the aculeus with small and dense serration both apicodorsally and apicodorsally. Since that time Han (1992) has shown that Euchetostoma mirabilis Chen is congeneric with Chetostoma curvinerme, and this synonymy is accepted and formally published by Thompson et al. (1998). For this reason, Ch. mirabilis (Chen) and Ch. japonicum (Ito), originally described in Euchetostoma were added to the list of Far Eastern Chetostoma. Sinuleria esakii Ito, 1960, known only from the holotype α from Kyushu, shares with Chetostoma species the short, subquadrangular subcostal cell and rather long parasternal setae, so it is keyed in the latter genus (Korneyev, Ovchinnikova, in prep.); its original combination is being used until its genitalia are dissected and the male is discovered.

Chetostoma dilutum (Zia)


Chetostoma continuans (Zia)

Material. Prim.: Khassan distr.: Tsukanovo, 15.08.1986, Q (Churkin) (ZMUM).

Chetostoma melliculum (V. Richter)

Material. Prim.: Khab. Kamenushka, 19.08.1984, Q, 4.09.1987, Q (Shatalkin); Kedrovaya Pad’, 26.08.1964, Q (Usachev) (ZMUM).

Subtribe Trypetina

Hemileophila Hering

Type species. Hemileophila alni Hering, by original designation.

This genus fits near Platyparea Lw., especially in the head shape and in the presence of 3-7 frontal setae, but it differs by the katepisternal seta well-developed and by the glands of phallus with two sculptured areas on inner surface of
preputium; female terminalia not examined. Despite its similar wing pattern, the following species is not closely related to *Hemileia* L., as was suggested by Han (1992) and accepted subsequently by Thompson et al. (1998), who synonymized *Hemileia* and *Hemileiophila*. I am considering the latter to be a valid genus. It shares the head shape, short arista, dark body coloration, shining mesonotal with 2 silvery tomentose vittae and shining convex scutellum with *Platyptera* and seems to be closely related to the latter genus.

**Hemileiophila sibirica** (Potschs.)

Potschsinski, 1892; Hendel, 1927; Zia, Chen, 1938; Chen, 1948 (Hypenidium); Richter, 1969; Foote, 1984 (Hemileiophila); Thompson et al., 1998 (Hemileia). — *alini* Hering, 1940 a; Foote, 1984 (Hemileia); Thompson et al., 1998 (Hemileia), syn. n. — undosa Ito, 1951; 1984; Foote, 1984 (Hemileiophila); Thompson et al., 1998 (Hemileia), syn. n.


**Remarks.** I was not able to find any significant differences among the specimens assigned to the three mentioned species, except for the variation in size of the light spotlet adjoining R1 apex and occasionally appearing setae on R4+5 in some specimens from Primorye. For this reason *H. alini* and *H. undosa* are considered as synonyms of *H. sibirica*.

**Calosphenisca Hendel**


**Remarks.** The concept of the genus *Fusciludia* was expanded by Han (1992), and then accepted by Hancock and Drew (1994), Permikam and Hancock (1995), and Thompson et al. (1998). The species they included herein are rather different, and the genus has become somewhat heterogeneous, that necessitates further confirmation of its monophyly and a full revaluation.

According to Han (1992), the species of *Fusciludia* can be readily distinguished by the mesonotal shining brown to black, contrasting with whitish or ivory scutellum and anepisternum. Some species of *Euleia* Walker having shining black mesonotal scutum and ivory scutellum, can be recognized by the anepisternum mostly dark brown, and the species of *Urophora* R.-D. — by the cell cup closed by bowed CuA2 without extensions along A1.

When studying a syntype of *C. volucris* it was found to fit near the other species assigned to *Fusciludia*, especially *E. uncinatata* (Hardy). Because *C. volucris* was never rediscovered nor redescribed since its description, the presumed synonymy of *Calosphenisca* and *Fusciludia* was merely omitted.

**Calosphenisca volucris** Hendel

Hendel, 1914; 1915; Chen, 1948; Hardy, 1977; Thompson et al., 1998 (Calosphenisca).

**Material.** Possible syntype *C. volucris* Q: "Kankau (Koshun) Formosa H. Sauter V 1912 / Fusciludia volucris det. Hendel (NHMW) (examined, but not dissected).

**Remarks.** This species fits near *Calosphenisca uncinata* (Hardy), comb. n. (= *Myolea uncinata* Hardy, 1987, Fusciludia uncinata (Hardy Permikam et Hancock, 1995) from Papua New Guinea and Australia, differing by the white coloration of the postpronotal lobes only.

**Itoisgo Ito**

**Type species.** *Itoisgo bellus* Ito, by original designation.

**Remarks.** The type species comprises small reddish-yellow flies with single pair of orbital setae, somewhat reduced wing pattern, and parallel-sided, bluntly tapered, serrate female aculeus (figs 1–2) that resembles the aculeus of *Nearctic stem-borers of the genus Strauzia* R.-D. The neck of spermatheca is very slightly expanded (fig. 3).

**Itoisgo bellus Ito**

**Material.** Prim.: Kamunchka, 16, 22, 29.07.1984, 5 Q, 5 Q (Shatalkin) (ZMUM; SIZK) (new for Russia).

**Anastrephoides Hendel**

Type species. *Anastrephoides gerczki* Hendel, by monotypy and original designation.

This genus comprises three nominal species: *A. gerczki* Hendel described from Astrakhan, and *A. matsumurai* Shiraki and *A. annulifer* Hering from the Palearctic Far East. These three names, in my opinion, may comprise just one species (see discussion below). *Trypetta tubifer* Walker, assigned to this genus by Chen (1948) as a Chinese species, has been shown to be a species of *Anastrepha* Schiner with erroneous type data (teste Hardy, 1959).

**Anastrephoides matsumurai** Shiraki


**Material.** *A. annulifer* China: Holotype Q, labeled: "type" (printed on a red-boarded circle), "type" (printed on red paper square), "Gaolingszi 2.8.1939" (printed on white paper), "Anastrephoides annulifer <<sc>> Type det. M. Hering 1939" (handwritten on yellow paper) (NHML); paratype Q: with the same data (location not known, probably ZMHB or DEI) (not examined). Non-type material: China: "Maereshan, 7.07.1940 Manchukuo W. Alin", Q (NHML); Russia: Prim.: Khasan distr.: Rayanovka, 7, 8, 10.07.1993, Q (Shatalkin), Spassk, 21.06, 1.07.1961, Q, Q (Zhelokhovser) (ZMUM); S. Sakhal.: Kholmisk, 24.06.1930, Q (Violotovish) (ZMUM); Novoalexandrovsk, Bureya river valley, 28.06.1976 (Nesterov) (SIZK).

**Remarks.** This species was completely described and figured by Shiraki (though no sex of the holotype was indicated) and then by Ito, so no redescription is needed; only the structures of terminalia should be added. Male terminalia have not been dissected, and in situ are similar to those of the subtribe Trypetinae species; surstyli are long and slender, clearly different of the very short and broad shape in superficially similar species of *Myolea*; the aedeagus has the praependon sculptured inside. Female tergosternum 7 with a tubular, very long apical third, that bears only 2–6 short setulae, and no desclerotized areas at its tip; the eversible membrane bearing numerous tooth-like scales both dorsally and ventrally; the aculeus flattened dorso-ventrally, very long, later- apically serrate.

The holotype of *A. annulifer* fits very well the descriptions of *A. matsumurai* made by Shiraki and Ito in all the features but the dark apical patch on scutellum. Such patches are rather common in the specimens examined and seem to be merely a postmortal or alive discoloration of the scutellar cuticle. Moreover, Ito (loc. cit.) noted Mandschuria in the distribution range of *A. matsumurai*.
The S- and V-shaped bands are joined through cell r2+3 in the paratype of _A. annulifer_ (see the original figure in: Herding, 1940 b) and two males from S. Sakhalin, so this appears to be not more than intraspecific wing pattern variation. For this reason _A. matsumurai_ and _A. annulifer_ are considered to be synonyms.

The taxonomic status of _A. gerckeii_ is unclear. It was known from the single female from “Astrachan” (coll. Gercke, Hamburger Museum), that cannot be located in Wien and therefore is presumed to be destroyed in Hamburg during World War II (B. Merz, pers. comm.). So far, the other known fruit fly specimens from Gercke’s collection mentioned by Herding (1940 c) were originated from “Amur”, and since the time of description not a single _A. gerckeii_ specimen has been rediscovered from the Caspian area. The description of _A. gerckeii_ is brief, but it appears to fit very closely _A. matsumurai_, except the latter is somewhat bigger (φ 7.5 mm and 10.0 mm, respectively). The _A. gerckeii_ holotype might be a mislabeled specimen actually originated from Far East Russia, and that this name is the possible senior synonym of _A. matsumurai_.

**Magnimyioïda Shiraki**

Structures of male terminalia are typical for the Trypetini. _Magnimyioïda quadrinota_ (Hardy), comb. n. (= _Myolejia quadrinota_ Hardy, 1987) from Papua New Guinea has the face high and the wing pattern mostly dark, and obviously belongs to this genus.

**Magnimyioïda media Ito**


The aculeus of _M. media_ female is not flattened dorso-ventrally, and has the apex tridentate, rather than serrate (figs 4–5).

**Genera allied to Trypeta and Acidiella**

This group may be delimited by the following combination of characters: glans of aedeagus always large, spread laterally, the glans with two areas of distinct sculpture (e. g. as it was figured by White, 1988 and Han, Wang et Kim, 1993); female aculeus usually flattened dorso-ventrally, wide, with serrate edges posteriorly of ventral lobes and the extreme tip non-serrate.

For most Oriental species which were referred to this group, the generic name _Myolejia_ was misapplied by Hardy (1973, 1974, 1977, 1987). It has become clear that _Myolejia_ Rond. should be restricted to few species of different shape of aculeus and aedeagus. The species misplaced in _Myolejia_ mostly belong to _Philophyilla_ or related genera. I follow the generic arrangement proposed by Han (1992) in his unpublished thesis and formally published later (Han, Wang et Kim, 1993; 1994 a; 1994 b; Perkam, Hancock, 1995; Hancock, Drew, 1993; Thompson et al., 1998) with some additional improvements.

**Philophyilla Rondani**

_Philophyilla_ Rondani, 1870 (type species: _Musca caesio_ Harris, [1776], by original designation).

_Hendelina_ Hardy, 1951 (type species: _Sphæriscus angulosus_ Hendel, 1913, by original designation).

**Philophyilla marumoi** (Miyake)

_marumoi_ Miyake, 1919 (Acidua); _Hendel, 1927 (Myolejia);_ Ito, 1984; Thompson et al. (_Philophyilla_).

—_inflata_ Shiraki, 1933 (Pseudopheniscus). —_basiphylina_ Herding, 1951 (Eulea), syn.
Material. Type: Holotype *Euleia bashyalina*: Q: NE China: "Type", "Erzendenjanzys, Mandschurei, 4.VII.1943, Aliin S.//*Euleia bashyalina* m. det M. Hering Q Type* (NHML) (examined). Non-type: Prim.: Bikan river 22 km higher of Svetlovodnaya river mouth, 14.08.1980, Q (Zlobin) (ZISP); Spassk, 9.07.1961, Q (Zhelokhovtsy) (ZMUM); Khasan distr.: Zanadvorovka, 16–19.07.1983, Q, Q (Berest); S. Sakh.: Novoalexandrovsk, 21.07.1986, Q; Tshchekh Mt., 200 m, Bureya river valley, 21.07.1986, Q, Q (Nesterov); S. Kur.: Kunashir, vicinity of Yuzhno-Kurilsk, Serdbrianoe lake, meadow, 8.08.1988, Q (Kotenko) (SIZK).

Remarks. This species fits near European *Ph. caesio* Harris, differing by pleurae and femora mostly brown (not wholly yellow); the base of presutural supraalar seta always in the black field (usually in yellow field in *Ph. caesio*). Further comparison with European specimens is necessary to clarify their status and differences. There is a conspicuous variability in the wing pattern of *Ph. marumoii* noted by Ito (1984) who redescribed this species. Examination of the *Euleia bashyalina* holotype shows that it fits well Ito's diagnosis of *Ph. marumoii*. These two species are therefore considered to be synonyms.

Female terminalia as on the figs 6–8.

Trypeta Meigen


More than 16 species are recorded currently in Palearctic. Some are of questionable status.

Trypeta artemisiae F.


Material. Prim.: Kamenchuka, 9.08.1987, Q (Shatalkin) (ZMUM); S. Sakh.: Novoalexandrovsk, forest, 19.07.1986 (Nesterov) (SIZK).

Zia (in: Zia et Chen, 1938) described T. *flavida* as having ocellar setae strong, and yellow crossbands of the proximal wing half, with the pterostigma and anal spots blackish. This character combination commonly occurs both in European and Asian specimens, and I see no way to distinguish *T. flavida* from its description only.

Trypeta trifasciata Shiraki

Shiraki, 1933; Foote, 1984; Richter, Kandybina, 1985; Thompson et al., 1998. — *artemisicola*: Ito 1984, non Hendel, 1923.

Material. Kamchatka: 18 km NE of Koryzrevsk, 21.07.1985, Q (Zlobin); Prim.: Kedrovaya Pad, 30.08.1986, Q (Kotenko); S. Sakh.: Novoalexandrovsk, forest, 19.07.1986, Q (Nesterov) (SIZK).

This species has the wing pattern similar to that of *T. artemisiae*, differing in the discal and preapical crossbands usually brown-yellow, unbroken, and the ocellar setae conspicuously shorter. *T. artemisicola* was synonymized to *T. zoë* by Hendel himself.

Figs 6–8. *Philophylla marumoii*: 6 — aculeus and eversible membrane, ventral view; 7 — same, apex, enlarged; 8 — same, spermatheca.
Trypeta binotata Zia


**Material.** Prim.: Khasan distr., Ryzanovka 10.06.1989, Q (Shatalkin) (ZMUM).

This is a species rather distinctive among those having the broad apical spot, for it has reduced discal and subbasal crossbands with very contrasting dark brown stigmata and anal spots (usually another one on the R₂₃ fork) and the preapical crossband only narrowly broken in both females and males. According to Zia (in: Zia, Chen, 1938), the mesonotum anteriorly with black to dark red vitta, sometimes reaching dc level. The specimen before me has 2 broad black submedial stripes at the very anterior margin of mesonotum. Wing pattern of *T. beatifica* looks to fit well the concept of *T. binotata* proposed by Richter and Kandybina (1985), but status of these species, like the most of the Far East *Trypeta* species, needs further clarification under a proper taxonomic revision.

**Trypeta submicanis Zia**


**Material.** Amur: Zeya, 17.06.1979, Q (Shatalkin); Prim.: Kamenshusha, 30.05.1989, Q (Shatalkin) (ZMUM); S. Sakh.: Urozhaynov, 6.07.1989, Q (Nesterov) (SIZK) (new for Russia).

The Far East species similar to *T. zo* in having the apical crossband broad, and the male epandrium and female tergosternum 7 black, fits well the description and the figure of *T. submicanis*. The latter species, described from females, fits near European *T. zo* and can hardly be distinguished from its females. But the three males examined fit the description of *T. submicanis* very well, showing no sexual dimorphism in the wing pattern at all. For this reason I prefer to consider the Eastern specimens to belong to a separate species (or, possibly, a subspecies) that herein is associated with the name *T. submicanis*. Further confirmation of its status is necessary.

**Trypeta quaesita Ito**


**Remarks.** Both holotypes are very similar in the broad cheeks and postgenae, two dark brown stripes at anterior margin of mesonotum, and the wing pattern, differing by the mediotergite yellowish brown in *T. quad rangulifera* and brownish black in *T. quaesita*. The type localities of the two nominal species are only 150 km apart, and, they are, despite this difference of coloration, certainly conspecific.

**Trypeta immaculata** (Macquart)


**Material.** Prim.: Bikin river 22 km higher of Svetlovdnaya river mouth, 14.08.1980, 2 Q (Zlobin) (ZISP); S. Sakh.: Novoalexandrovsk, 7–31.07.1986, 2 Q, Tshekhov Mt., 3.08.1971, 4 Q, 8 Q (Nesterov); S. Kur.: Kunashir, Yuzhno-Kurilsk, vicinity, 5.06.1988, Q (Kotenko) (SIZK).

**Remarks.** Ito noted two characters to distinguish *T. digesta* from *T. immaculata*: 1) r-m proximally of R₁₃, and 2) dark bands on r-m and dm-cu separated at the hind wing margin. These characters vary, and several specimens in the series from Sakhalin fit very well the description of *T. digesta*. Therefore, the two species are considered as synonyms. They differ from all other *Trypeta* species by the frontal setae somewhat reclinate, not procline, sharing this character, as well as the short ocellar setae and larval mining in *Taraxacum* sp. leaves, as well as in other Cichorioidea.

**Trypeta anitra** Kornev, sp. n.

**Material.** Holotype Q; Prim.: Kedrovyaya Padi, 20.08.1984 (Shatalkin) (ZMUM).

**Diagnosis.** A large yellow species with eyes very high, with broad and long wing that has an unusual, predominantly yellow pattern and the mediotergite with two lateral black spots, yellow medially.

**Description.** Female. Head (fig. 9) and its appendages yellow, HR = 1: 1.25 : 1.55. Frons yellow, finely yellowish brown setulose at the middle and with whitish yellow cells laterally, FR = 1.6, FER = 0.9. Ocellar triangle black, oc equal to postocular or. Parafacial 0.3–0.5 as wide as flagellomere 1. Pedicel and scape with yellowish setulae; flagellomere 1 rounded at apex, 2.5 times longer than wide, arista shortly pubescent, yellow in basal 1/4. Eye 11 times higher than cheek. Setae dark brown, except genal and postgenal setae slightly brownish yellow. Occiput moderately swollen, covered with yellow setulae.

Thorax yellow, with no tomentosity nor dark patches or strips on mesonotum, with 2 rather small black patches on sides of mediotergite and two black points behind of wing bases. All the setae black; dc slightly behind of asa level; 2 anepisternals, the lower is shorter; katepisternal well developed. All setae including proepisternal are yellow.

Wing (fig. 10) 2.5 times longer than wide, with yellow pattern and brownish strips on r-m and wing apex. Vein R₄₅ setulose at most of its length above and with 2–4 setulae below of proximally of r-m. The vein r-m is situated slightly distally of dm cell middle. Apical section of M 1.8 times longer than subapical and twice as long as dm-cu. Squamae yellowish, with margin slightly darkened and cilia white.

Legs as typical for genus; yellow with brownish yellow setae and yellowish setae.

Abdomen yellow, with yellowish setae and brown setae. Tergosternum 7 dark yellow, flattened dorso-ventrally, 1.7 times wider its length, 1.5 times longer than tergum 6, and 2.4 times shorter than cell c₂. Terminalia as on fig. 11–13.

Body length 7.2 mm. Wing length 7.0 mm.

**Remarks.** This species is similar to *T. zo* Ito from Japan in the mostly yellow, widely spread wing pattern (atypical for *Trypeta*, but commonly occurring in the closely related *Semonotoma Kond*), and narrow frons and cheeks. It differs from that species by the eyes wider, not incised in profile at hind margin, by the scutum wholly yellow, by the mediotergite mostly yellow, and by the setulae on the mesonotal scutum yellow, not black. The wing of *T. oze* differs from that of *T. anitra* by the dark brown spots at R₄₅ fork and on apices of sc and cp cells, it is 2.8 times longer than wide; the dm-cu anterior margin more apically produced, the apical section of M twice as long as the subapical, and 2.8 times longer than dm-cu.

Both *T. oze* and *T. anitra* sp. n. have isolated position in *Trypeta* and their generic placement is tentative. To determine their position more precisely the terminology of both sexes should be examined.
**Etymology.** The specific epithet is the name of Anitra, the daughter of bedouin’s king (H. Ibsen, “Peer Gynt”), and is a noun in apposition.

**Cornutrypeta Han et Wang**


The concept of this genus is clearly monophyletic, however the concept of *Trypeta* after exclusion of the *Cornutrypeta* species is paraphyletic. A group of species related to *T. zoe* (with the large apical spot on the wing and short ocellar setae) certainly must include *Cornutrypeta*. Moreover, the presence of 4 fr 7 fr 2 or is common for the aberrant female specimens of *T. zoe*, making them hardly different from the females of *Cornutrypeta spinifrons* Schroeder.

**Cornutrypeta superciliata** (Frey)


Thus far, the holotype of *Vidalia jibadaua* is the only record of this species in Far East Palaeartic.

**Cornutrypeta spinifrons** (Schroeder)


**Material.** Prim.: Khasan distr.: Ryazanovka, 8-10.06.1989, 2 ♂ (Shatalkin) (ZMUM).

**Stemonocera Rondani, 1870**

Type species: *Musca cornuta* Scopoli, 1772 (by original designation). — *Vidalia* auct., pro parte.

**Stemonocera cornuta** (Scopoli)

**Material.** Amur.: Zeya Natural Reserve, 2, 22.07.1978, 2 ♂ (Belov, Ozerov) (ZMUM); S. Khab.: Jewish Autonomous Region, Maly Khingan Mt. rdg., Dichen river, 17.06, 8.07.1981, 2 ♂ (Shatalkin) (ZMUM).

**Stemonocera corrucata** (Hering)


**Material.** Amur.: Zeya Natural Reserve, 15.08.1982, ♂ (Shatalkin) (ZMUM); S. Khab.: Jewish Autonomous Region, Maly Khingan Mt. rdg., Dichen river, 21.08.1981, ♂ (Ozerov) (ZMUM); Prim.: Kamenshchika, 18, 23.08.1987, 3 ♂ (Shatalkin) (ZMUM); Kedrovaya Pad’, 30.08.1980, ♂ (Zlobin) (ZISP), idem, 25.08.1964, ♂ (Usachev), Khasan distr.: Tsukanovo, 16.07.1989, ♂ (Churkin) (ZMUM).

**Remarks.** Han (unpublished data) has studied the type specimens of all the three species and suggested *S. lucens* to be a junior synonym of *S. corrucata*.

**Stemonocera mica Richter et Kandybina**


Remarks. All the examined specimens are very similar to those of *S. corruga* except for the frontal process of males much shorter, and for the number of frontal setae is 3 rather than 4. They all are originated from the Kuriles, Sakhalin and Japan whereas *S. corruga* is known from the mainland only. I have not found any characters to separate females of these species. Further study also is necessary to decide if *S. mica* is merely a subspecies or local form of *S. corruga* with the short frontal process. Han (1992, and pers. comm.) suggested that *Vidalia koreana* Kwon is a synonym of *S. mica*, that has male frontal processes somewhat longer, but also with 3 frontal setae, like in typical island specimens. Ito (in: Ito, Tamaki, 1993) synonymized *V. montivaga* with *V. mica*.

**Acidia Robineau-Desvoidy**


This genus includes two very similar Palaeartic species, one from Europe and another from Far East, differing in minor details of wing pattern. The name *Acidia* is the valid senior synonym; its senior homonym used within Tunica only as *lapiss calami* is to be rejected.

**Acidia japonica** Shiraki

Shiraki, 1933; Richter, 1963; Foote, 1984; Thompson et al., 1998 (*Acidia*); Ito, 1984 (*Prionimera*).

Material. Prim.: Terney, 3-4.08.1937, 1 Q (Grum (ZUM)); S. Sakh.: Novoalexandrovsk, forest margins, near a river, 14.17.07, 24.07.1986, 2 Ω, 2 Q (Nesterov); S. Kur.: Kunashir, 24 km N from Yuzhno-Kurilsk, 7.08.1988, 2 Ω (Kotenko) (SIZK).

**Acidiostigma** Hendel


Han and Wang (1997) show that the concept of *Acidiostigma* should be revised to incorporate all the species assigned to *Parabypenidium* and *Shiracida* which share extremely broad abdominal sterna and long wing with very long or extremely long pterostigma (except in *A. s-nigrum*, where it is rather short). They have synonymized the three names and transferred several species into *Acidiostigma* that currently enumerates 16 species in Oriental Region and eastern Palaeartic.

**Acidiostigma s-nigrum** (Matsumura)


Material. S. Sakh.: Novoalexandrovsk, forest, near the river, 14-17.07.1986, Ω, Q (Nesterov); S. Kur.: vicinity of Yuzhno-Kurilsk, 5.08.1988, 2 Ω (Kotenko) (SIZK).

Aculus as on the fig. 14. This species was currently redescribed by Han and Wang (1997).

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**Hemilea Loew**

Type species: *Trypetra dimidiate* O. Costa, 1844 (by monotypy).

Remarks. There is no agreement concerning the concept and synonymy of this genus. Hardy (1987) and Han (1992) spread it to include the species assigned to *Hemilephila* Hering, *Pseudhemileya* Chen, *Drosanthus* Hering, *Hemileoides* Rohdendorf, *Hyleurinus* Ito, *Yamanowotome* Ito, and *Dryadodacryma* Ito. Later, this concept was accepted by Thompson et al. (1998), who formally synonymized these genus names with *Hemilea*.

Some synonymy has not been accepted herein for certain reasons. *Hemilea dimidiate* Costa and *H. infuscata* Hering are two very closely related vicariant species related to *Trypetra*, because of having shape of surstylate, minute prensisetae and feeding on composite plants like species of *Stemonocera* Rondani, *Cornutypetra* Han & Wang and *Trypetra* Mg. (Han, 1992). Although other species share the so-called "dimidiate" wing pattern with *Hemilea* were assigned by Han to that genus, they are very different from *H. dimidiate* and *H. infuscata* and hardly share enough characters to make them congeners. The other species considered below as *Hemilea* may belong elsewhere, but apparently not to this genus.

*Hemilephila* is apparently more closely related to *Oreunus* Ito (see discussion above).

The species assigned to *Pseudhemileya* Chen, *P. nudiaria* Chen and *P. longistigma* Shiraki, both differ from other species assigned to *Hemilea* by the absence of the genal seta, the character that may indicate their close relationships. *P. longistigma* has surstylate shape very different from those in *H. dimidiate* and *H. infuscata* and apparently is not congeneric with them.

On the other hand, the species known from the literature as *"Hemilea bipars"*, sensu Hardy, 1973 & Hardy, 1987 (sic Hardy, 1974) from Laos has very similar shape of the two spermathecae (shorter in *H. longistigma*, longer in *H. bipars") and of aculeus; this species is probably congeneric with *P. longistigma*, but nothing is said about its genal seta. The lectotype of *Sophipara bipars* Walker is a male (Hardy, 1959), so identity of both *"H. bipars"* sensu Hardy, 1973 and *"H. bipars"* sensu Hardy, 1974 (different in the structure of aculeus and spermathecae) is doubtful.

A complex of the species with the ivory white scutellum, including *Hemilea aralae* Malloch, *H. flavoscutellata* Malloch, *H. arata* Hardy, *H. lineomaculata* Hardy from Papua and adjacent islands plus *H. quadriramiculata* Hancock and Drew from Southeast Asia share this peculiar character also with *Nemeurus leucocelis* Ito from Far East Palaeartic. Their close relationship can be hypothesized also from the long wings (synapomorphy?) with 2 costal spots in r1 (in *N. leucocelis, H. arata* and *H. lineomaculata*), aculeus with minute serration (in *N. leucocelis, H. arata* and *H. lineomaculata*), and the ocellar setae weak. Besides this, *N. leucocelis* sharply reclimate frontal setae with *H. pulchella, H. infuscata* and *Hyleurinus kalopracis*, but this character may appear also due to convergence. At the same time, not a single Papuan species is said or figured by Hardy as having frontal setae reclinate.

The species assigned to *Dryadodacryma* are very different, and this genus, as it was proposed by Ito, apparently is not monophyletic. "Dryadodacryma" *albicostata* Ito is very similar to "Hemilea" *bipars* sensu Hardy, 1974, nec Hardy, 1973 & Hardy, 1987 in the structure of aculeus and spermathecae than to any other taxa.

*Hemileoides continus* (Ito) (= *Dryadodacryma continus*) is very close to *H. theodori* Rohd., and was transferred to *Hemileoides* by Korneyev (1995).
The type species of Dryadodacryma, D. fenestratum Ito, is known from the holotype male only, and the concept of this genus is unclear because the most important female postabdomen characters remain unknown.

Males of Yamanowotome pilosa Ito are superficially similar to some Hemilea s. l. species, but have the aculeus serrate at the very tip only somewhat similarly to that of Euleia Walker.

Nemorilidia (recently attributed by Han (1992) to Magnimyriola), superficially resembling species assigned to Dryadodacryma, also have the shape of aculeus rather similar to Euleia than to Hemilea, Dryadodacryma or Magnimyriola.

For this reason I consider the genera mentioned above as being separate from Hemilea.

**Hemilea infuscata** Hering


Material: Prim.: Kamenshchka, 27.08.1989, Q (Churkin); Spassk, 25.07.1961, Q (Zhelokhovtsiev) (ZMUM); Tigrav, 23.05, Sedanka river, 21.06.1963, 2 Q (Falkovich) (ZISP); Sedanka, 21.06.1986, Q (Kotenko) (SZK).

This species could be easily recognized among superficially similar Far East species by its shining black abdomen in combination with the frontal setae slightly reclinate, surstyli with posterior lobe very short, subapical prensiseta very small, and aculeus with minute and uniform serration postlaterally. Like in most of Trypeta-group species, its larvae are leaf-miners of Asteraceae (Lactuca laciniata, Taraxacum sp., *T. platycladum* (Hering, 1937 b); Sasakawa, 1955; Kwon, 1985).

From the description of *H. nabe* (Kwon, 1985), it looks to be identical to *H. infuscata* Hering, especially considering the slightly reclinate frontal setae, narrowly brown vittate mesonotum and black abdominal terga 3-6. The degree of the cell cu, infuscation (formed by blackish microtrichia) varies in the series and depends largely on the angle of view.

The identity of *H. infuscata* sensu Kwon, 1985 needs further confirmation; the brownish yellow color of the abdomen might appear due to discoloration, otherwise it might belong elsewhere.

**Hyleurinus Ito**

Type species: Hyleurinus kalopanacis Ito, 1984 (by monotypy and original designation).

I synonymized this genus with Hemilea Lw. basing only on strong resemblance of their female terminalia (Korneyev, 1995), but neither the shape of spermathecae, nor of aculeus can be considered as synapomorphies. *H. kalopanacis* and *Hemilea* spp. have also the reclinate frontal setae and short ocellar setae, but the weight of these characters needs further reconsideration. For this, here I suspend use of this synonymy until the proper revision of this group, covering all available types and larger series of specimens, is done.

There is some similarity of Carpophthoracida Shiraki and Hyleurinus Ito in the wing pattern (the 3rd section of m is crossed by a hyaline wedge extending from the cu1 cell). Otherwise they are much dislike, as Carpophthoracida differs by the frontal setae inclinate, the single pair of orbitalis, the longer ocellar setae, and by the whitish scutellum, the latest also known to occur in Nemearinus and in the araliae-quadrangularis group of species assigned to Hemilea.

**Hyleurinus kalopanacis** Ito


**Yamanowotome Ito**

Type species: Yamanowotome pilosa Ito, 1984 (by original designation).

Females of Yamanowotome have aculeus serrate at the very apex, somewhat similar to those of Euleia. Beside the two species below, the genus includes Y. acrotoxa (Hering, 1938) (= Euleia acrotoxa Hering) from Burma, that has wing pattern and venation very similar to those of Y. accepta Ito, but the shape of serrate area at the aculeus tip somewhat different than in the compared species or Euleia heraclea L. (Han, 1992; Thompson et al., 1998).

**Yamanowotome accepta** Ito

Ito, 1984 (Yamanowotome); Thompson et al., 1998 (Hemilea).

Material: Prim.: Kamenshchka, 16.07.1984, Q (Shatalkin); S. Kur.: Kunashir, Stolbchatyi cape, 29.06.1985, Q (Churkin) (ZMUM) (new for Russia).

**Yamanowotome pilosa** Ito

Ito, 1984 (Yamanowotome); Thompson et al., 1998 (Hemilea).

Material: S. Kur.: Kunashir: Tretjakovo, 10.07.1985, Q; vicinity of Mendelyevo volcano, 17.07.1985, Q (Churkin) (ZMUM); 5-7 km N from the Lagonwee lake, 9.08.1988, 2 Q (Kotenko) (SZK) (new for Russia).

Description. Female (new). Similar to male in body coloration yellow with two patches of black on the metanotum. In contrast to male, the female has the wing pattern predominantly yellow with a long hyaline spot in the cell br, similar to Y. accepta, but having the hyaline mark in the distal third of dm cell open posteriorally, like in the male of Y. pilosa. Female terminalia like in Y. accepta: tergosternum conical, apically tapered, so its apical opening is more postero-dorsal rather than posterior, with 6 apicoventral and 2 apicodorsal setae, 2 ventral and 2 dorsal taeniae (both in 1/3 of reversible membrane length), and the posterior 2/3 of the membrane evenly covered with rather small and uniformly blunt diamond-shaped scales. Aculeus narrowly pointed apically, serrate only at its very tip, with smooth postero-lateral edge (figs 15–16). Only 2 strongly sclerotized spermathecae without bulbous expansion of the neck (fig. 17).

**Hemileoides Rohrendorffi**

Type species: Hemileoides theodori Rohrendorff (by original designation and monotypy).

The genus includes also Hemileoides continuus (Ito) from Japan, previously assigned to Dryadodacryma Ito, that differs from H. theodori by the presence of the second hyaline spot in the cell R4+5, apically of dm-cu. Both species differ from the species assigned to Dryadodacryma by 4 to 5 reclinate frontal setae, rather than 3 pro- or inclinate fr. All the specimens known thus far are females. Another species that shares similar wing venation, pattern and weak ocellar setae, is Acidiella clarimbata Chen from eastern China (Chekiang), known to me only from its original description.
Hemileoides theodori Rohendorf

Rohendorf, 1955.


Remarks. This second of known specimens has 4, not 2 fr, as was stated by Rohendorf. 1 strong + 1 weak or very weak anepisternal setae. R₄+₅ setulose to r-m. Mesonotum subshining yellow, with one medial and two dorsocentral brownish vitals; dc posteriori of asa. Abdominal terga shining black, except for the 1+2nd and 3rd brownish yellow laterally, black setulose. Sterna all yellow. Tergosternum 7 truncated conical, brownish black dorsally, yellowish brown ventrally, black setulose, 1.5 times longer than tergum 6; aculeus with minute apico-lateral serration (figs 18, 19); 3 short oval, sparsely papillose spermathecae with bulbous expansion of the neck (fig. 20).

"Dryadodacryma" albicostale Ito

Ito, 1984 (Dryadodacryma); Thompson et al., 1998 (Hemilea).

Material. Prim.: Kamenushka, 4.08.1987, Q (Shatalkin) (ZMUM) (new for Russia).

Remarks. This species certainly is not congeneric with the two species mentioned above; it differs by the 2 strong anepisternal setae; the mediotergite ochreous yellow, abdominal terga yellow to brownish yellow at posterior end, black setulose; the tergosternum 7 brownish-yellow, shining, dorsally convex, apicodorsally with 6 thick and short setae, apicoventrally with 4 longer setae; the eversible membrane with 2 dorsal and 2 ventral taeniae as long as 2/3 of the membrane; dorsal scales are long angular, arranged into 2 submedial stripes; ventral ones are much larger at the middle of the ventral side (figs 21, 22); aculeus heavily sclerotized, with rather large and rounded apico-lateral serration (fig. 23); 3 short oval spermathecae with somewhat expanded, but not bulbous, neck (fig. 24).

Generic position of "D." albicostale is unresolved, for the females of the Dryadodacryma type species, D. fenestratum, are not known, "D." albicostale female terminalia looks similarly to "Hemilea bipars" sensu Hardy, 1974.

Pseudhemilea Chen

Type species: Acidiella (Pseudhemilea) nudiarista Chen (by original designation and monotypy).

The concept of this genus probably depends on the choice of the lectotype that is to be designated from among the syntypes of its type species, that apparently might be heterogeneous. At least the following species fits well the original diagnosis of Pseudhemilea for the arista is very short pubescent, genal seta is absent and dorsocentral setae situated posterior of asa level.

Pseudhemilea longistigma (Shiraki)

Shiraki, 1933; Foote, 1984; Thompson et al., 1998 (Hemilea); Chen, 1948 (Acidiella (Pseudhemilea)); Ito, 1984; Kwon, 1985 (Pseudhemilea).


Remarks. Shiraki has described this species after 4 ♂ from Hokkaido, without selection of the holotype. From his original description, this species could be recognized as having at least 2 rather broad (rarely 3) blackish dorsocentral vitals in combination with the subcostal cell nearly as long as the cell c₂ (≡ c₂), yellow mediotergite and yellow abdomen; Shiraki clearly noticed that H. longistigma (♂) does have the genal seta and figured this character. The specimens
examined by Ito (1984) and the female before me (♀) seem to be conspecific with Shiraki's specimens, though certainly have no genital setae. It may indicate, that this character is apparently sex dependent. It must be kept in mind, that the expression of mesonotum vitellae is probably variable, and that the genus requires careful revision.

Female terminalia as on the figs 25-26. The third spermatheca is reduced, and its remnant is a non-sclerotized dead-end tube.

**Nemeurinus Ito**


The type species of both genera certainly are synonyms (Korneyev, 1995). This synonymy was discovered independently also by Han (1992; 1997).

**Nemeurinus leucocelis** Ito


**Angelogelasinus Ito**

Type species: *Acidiella naganoensis* Shiraki, 1933 (by original designation and monotypy).

This genus shows certain superficial similarity to some *Acidiella* (see below) differing in the anterior lobe of surstyli slightly bowed, but never strongly produced inward (fig. 28), and the mediotergite with brown or black spots.

**Angelogelasinus naganoensis** (Shiraki)

Shiraki, 1933; Foote, 1984 (*Acidiella*); Ito, 1984; Thompson et al., 1998 (*Angelogelasinus*).


**Description.** Female. Head (fig. 25) wholly yellow. HR = 1.0.1:32:1.48. Frons yellow, with rather long, bowed backward brown setulae. Orbital plates of frons at anterior part with brownish setulae and 3 very long fr, crossing above the middle of frons. Ocellar triangle black; oc well-defined, reaching bases of anterior or by their tips. Antennae yellow. Scape and pedicel bears yellowish-brown setulae; pedicel with a strong long brown seta; 1st flagellomere 2.1–2.4 times longer than wide; arista distinctly shortly plumose, yellow at basal 1/3 and black in the rest. Face grayish-yellow. Facialis yellow, 0.3 times as wide as 1st flagellomere. Facial ridge bears rather strong blackish setulae. Cheek 1/8 as high as eye. Genal seta strong, black. Postgenal seta yellowish-brown. Labellum yellow, short, with fine yellow setulae; palpi yellow, not extending beyond the peritarsal ridge, covered with black setae. Occiput very slightly swollen at the lower part, with yellowish setae; vte and vte strong, long, pv moderately long, postoral setae rather strong, ca. as long as pv. All the setae black.

Figs 27–31. *Angelobasisinus naganoensis*: 27 — head; 28 — wing; 29 — male genitalia, right lateral view; 30 — epandrium and surstyli, posterior view (proctiger removed); 31 — glans of phallus (a — insets show enlarged details).
Thorax yellow, with brownish setulae and black setae. Mesonotum with sparse grisish tomentum of microtrichia and 4 indistinct reddish longitudinal strips. Postpronotal lobes and narrow strip at the upper edge of anepisternum light yellow. Katepisterna without dark patches. Scutellum light yellow. Mediotergite shining black laterally, with a yellow medial strip. All the setae black; dc in line with asa; 3 yellow propleural setae; 2 anestp, the lower is ca 2/3 as long as upper.

Wing hyaline with brown and yellow pattern of partially fused crossbands (fig. 28); the basal hyaline spot in r4+5 cell extends into cell dm and often joins with distal hyaline incision in r1 and r3+5 cells; the subapical hyaline spots in r4+5 and m cells are also joined. Squamae creamy white, alar squama slightly narrower than the thoracic one, with blackish cilia.

Legs yellow, with black setae and setae.

Abdomen yellowish-brown, with blackish setulae and setae; terga 4-5 with a pair of rather pale brownish spots; tergosternum 7 yellow to yellowish brown, with sparse black setulae, shorter than terga 5-6 altogether. Aculeus as on figs 32-33; rather narrow and elongate, with the anterior teeth forming 2 rows, but not coming onto ventral surface (as in Morinowotome Ito) 0.6-0.7 mm long. Three spermathecae as on fig. 34.

Male is similar to female in all the details, except for the terminalia, and differing by the wing pattern mostly yellow (brownish only in the stigma, at the wing apex, on the dm-cu vein and at the cu1 cell apex). Male genitalia as on figs 29-31.

Body length: female: 7.0–7.5; male: 6.0.

Wing length: 6.0–6.5.

Remarks. This redescription is based upon the series from Sakhalin and Kuriles that fits near the descriptions of A. naganoensis by Shiraki (1933) and Ito (1984), except for somewhat larger size and wing pattern being brownish-yellow with the hyaline spots larger and more confluent, and brown flecks on abdominal terga less conspicuous as well as the 7th tergosternum yellowish brown rather than brown. As these characters show conspicuous variability in the examined series, I consider the specimens from both Kuriles and Japan as extremal color forms of the same species.

**Angelogelasinus amuricola** (Hendel)


Non-type: Prim.: Kamenshka, 15.07.1984, 28.07.1985, 2 Q; Kedrovaya Pad, 22.08.1980, 2 Q (Shatalkin) (ZMUM); Khasan district: Zanadvorovka, forest, 21-25.07.1985, Q (Berest) (SIZK).

Remarks. This species was rather completely described by Hendel, but only based on a female.

Wing patterns of the specimens seen during this study were found to vary from that drawn by Hendel to the wing pattern drawn by Ito (1984) for A. implicatus. The examined series shows rather wide range of wing pattern variability, but the costal cell never has the medial dark spot, and the outer margin of the cell in always dark brown to dark gray (only the specimen figured by Ito as A. implicatus has the large hyaline spot in it touching the outer margin).

Figs 32-34. Angelogelasinus naganoensis: 32 — aculeus; 33 — same, apex, enlarged; 34 — spermatheca.

Mediotergite with two lateral spots brown to yellow, same variation is observed in coloration of the tergosternum 7. Male and female are similar in most essential features, including the wing pattern (fig. 35). Genitalia as on figs 36-40.
As no Japanese specimens were available during this study, and the series before me is not so big to represent the whole range of variability, I retain the synonymy of the current species and *A. implicatus* only presumed.

Syntonymy of *A. amuricola* with *A. obscursipennis* (Korneyev, 1989) was based upon the misidentification of females of the latter species (see below).

**Morinowotome Ito**

Type species: *Pseudacidia egregia* Ito, 1953 (by original designation).

The three species included here by Han (1992), namely *M. flavonigra* (Hendel, 1927) (= *Myiolea flavonigra*) from Szechwan, *M. minowai* (= *Acidia (Pseudacidia) minowai*) from Taiwan, and *M. egregia* are very similar and may be merely synonyms, at least I cannot find any essential characters to separate them from descriptions only. Because they have both posterior and anterior lobes of outer surstyl iod, they do not belong to *Acidiella* Hendel (see below). The only character that is the synapomorphy of the two species below and apparently of *Morinowotome* in whole, is the presence of 5–25 blunt denticles on sides of the ventral surface of aculeus at the level of ventral lobes (figs 41–44).

**Morinowotome egregia (Ito)**


**Material.** Paratypes: ♂; ♀: Japan: Kamikot 17.VII.1951 A. Mutaura, "Paratype *Pseudacidia egregia* Ito" (on greenish paper) (UOP) (the female dissected). Non-type specimens: Russia: Prim.: Bikin river 22 km higher of Svetlovodnaya river mouth, 14–19.08.1980, 3 ♀ (Zlobin) (ZISP); S. Sakhal.: Novoalexandrovsk, forest, 5, 14, 17.07.1986, 4 ♂, 3 ♀; Bureya river valley, 31.07.1986, 4 ♀ (Nesterov); idem, 26.07.1988, 4 ♀ (Kotenko) (SIK) (new for Russia).

For description of this species see Ito (1984). Aculeus with minute and rather numerous serration laterally and 25–30 denticles on the middle of the ventral surface on each side (fig. 41–42).

**Morinowotome itoi Korneyev, sp. n.**

**Material.** Holotype ♀: Prim.: Khasan disr.: Shatalkin, 11.06.1989 (Shatalkin) (ZMUM).

**Description.** Female. Head (fig. 46) wholly yellow. HR = 1.0 : 1.36 : 1.56. Frons yellow, with reclinate, rather long brown setulae. FR = 1.3. FER = 1.4. Orbital plates of frons at anterior part with blackish setulae and 3–4 long fr, crossing above the middle of frons. Lunula deeply incised. Ocellar triangle black; oc well-defined, 2.5 times as long as ocellar triangle. Antennae yellow.

Scape and pedicel bear yellowish-brown setulae; pedicel with a strong light brown seta; 1st flagellomere 2.3 times longer than wide; arista distinctly shortly pubescent, yellow at basal 1/3 and black in the rest, its rays 1–1.5 times longer than its base width. Face grayish-yellow. Facial yellow, 0.4 times as wide as flagellomere 1 and linear in profile. Facial ridges bear rather strong blackish setulae. Eye vertical elongate, slightly tapered downward. Cheek 1/7 as high as eye. Genal seta strong, black. Postgenal seta yellowish-brown. Labellum yellow, short, with fine yellow setulae; palp yellow, not extending beyond the peristomal edge, covered with black setulae. Occiput very slightly swollen at the lower part, with yellowish setulae; vti and vte strong, long, pv moderately long, postorbital setulae rather strong, ca. as long as pv. All the setae black.


**Figs 35–40. Angelogelasinus amuricola:** 35 — male wing; 36 — male genitalia, left lateral view; 37 — epandrium and surstyli, posterior view (proctiger removed); 38 — glans of phallus (a — insets show enlarged details); 39 — aculeus; 40 — same, apex, enlarged.
Scutellum light yellow. Mediotergite shining black laterally, with a yellow medial strip. All setae black; dc in line with asa; 3 brown proepisternal setae; 2 anepisternals, the lower is ca. 0.5 as long as upper.

Wing hyaline with a brown and yellow pattern of partially joined crossbands and three dark gray patches: on humeral vein, on R_{1.5} fork, and on transverse portion of vein Cu_{2} between the cells cup and cu_{a} (fig. 47). Squamae creamy white, alar squama slightly narrower than thoracic one, with blackish cilia.

Legs yellow, with black setae and setulae.

Abdomen yellowish-brown, with blackish setulae and setae; terga 4–5 with a pair of brownish spots; tergosternum 7 yellow, with sparse black setulae, shorter than terga 5–6 together. Aculeus as on fig. 43–44; largely serrate, 0.75 mm long. Three ovate spermathecae with bulbous neck as on fig. 45.

Body length: 5.5.

Wing length: 4.8.

Male unknown.

Remarks. This species is similar to *M. egre-gia* in the wing pattern and the aculeus with the 5–6 denticles on the ventral side, differing by the head higher, the fronto-facial angle rounded and the aculeus having ca. 20–25 larger denticles on each side of its posterolateral edge rather than 40–50 small ones. The head and eye shape and the wing pattern are also very similar to those of *Alsangelisca takeuchii* (Ito), but the latter species can be easily distinguished by always 2, not 3 or 4 frontal setae, as well as the aculeus lacking any serration (see below).

Etymology. Named after Professor Emeritus Dr. Syujiro Ito (University of Osaka Prefecture), in recognition of his contributions to the study of Palaeartic fruit flies.

**Alsangelisca Ito**

Type species: *Philophylla takeuchii* Ito, 1951 (by original designation and monotypy).

An aberrant monotypic genus certainly belonging to the group of genera allied to *Trypetta*, and apparently related to the previous genus, but differing by the presence of 2 frontal setae only, the large granulate median sclerite of the phallus (Han, 1992), and the aculeus completely lacking any serration (figs 48–49). Three ovate spermathecae with bulbous neck as on fig. 50.

**Alsangelisca takeuchii (Ito)**


Remarks. Han (1992) mentioned Sakhalin in the list of distribution, but said nothing about this information source.
Acidiella Hendel


Diagnosis. Head without appendages, fr : or = 3 : 2, ocellar setae longer, than posterior orbital setae, postgena slightly to strongly swollen, thorax rufous, pleurae never darkened, mediogaster always shining yellow to yellow brown; surstyli lacking posterior lobe, but with large anterior lobe strongly produced inward (synapomorphy).

Remarks. The current concept of the genus was refined by Han (1992) in his unpublished thesis, and the synonymy he proposed, are formally published by Thompson et al. (1998). This concept is accepted herein and, moreover, includes the genus Flaviludia, been out of Han’s consideration, and later redefined by Korneyev (1995). All the species previously placed to Flaviludia, share same wing pattern and yellow mediogaster, and two of them have surstyli with the anterior lobe strongly expanded inward; the type species of Flaviludia, is known from females only.

Acidiella longipennis Hendel

Hendel, 1914; 1915; Herling, 1938; Hardy, 1977; Ito, 1984; Korneyev, 1995; Thompson et al., 1998 (Acidiella); Chen, 1948 (Acidiella (Acidiella)); Hendel, 1927; Shiraki, 1933 (Myioa (Acidiella)); Hardy, 1987 (Myioa).

Material. China: Taiwan [Tainan, 04.1910], 7 ♀ (head of one specimen is missed) and ♀ labeled: “Formosa 1 Sauter R.,” “Coll. Oldenberg”, “Acidiella longipennis Hend. det. H K Munro 1932” (DEI) (examined and dissected).

Descriptions by Shiraki, Ito and Hardy are quite complete, and only the following characters should be added: scutellum short, convex, pleurae are stained-brownish dotted; in some specimens also abdominal tergum 3 with a pair of brown spots; wing pattern in this series rather constant; second costal cell length (c) is 1.15–1.30 mm (average 1.20); the 4th (apical) section of M is 2.8–3.5 (average 3.03) times as long as the subapical one; wing 2.5–2.7 longer than wide.

Wing length 5.6–6.1 (average 5.9).

Male and female terminalia were figured by Korneyev (1995).

Length of aculeus 0.53 mm.

Acidiella obscuripennis Chen


Redescription. Male. Head (fig. 51) light yellow; eye 5 times higher than cheek; face shorter than frons. Thorax and legs completely yellow, except two dots posteri or of wing bases; mediogaster shining yellow; propleural setae and all the setae black. Wing dark brown, light brown only at postero-basal corner (fig. 52). Abdomen shining yellow except for 5th tergum and terminalia black; abdominal setae black. Epandrium dark brown; surstyli with large anterior lobe directed inward, and no posterior lobe (fig. 56, 57).

Female similar to male, differing by spotted wing pattern (fig. 53) and by completely yellow abdomen and terminalia (fig. 59–61).

Body length of male 4.5–5.0 mm, of female 4.7–5.4 mm.

Remarks. Korneyev (1995) suggested to place this species into Angelogelasinus Ito, because of superficial similarity of the female wing pattern to the species of the latter genus. However, the wholly yellow mediogaster and shape of its male genitalia shows that it certainly belongs to Acidiella.

Acidiella pachypogon (Ito)

Ito, 1984 (*Pagonangelus*) (O); Thompson et al., 1998 — assimilis Kwon, 1985 (*Pagonangelus*) (Q).


Remarks. Head and wing pattern as on figs 62–63. Terminalia not dissected; aculeus exposed, with minute lateral serration, similar to that of *Trypeta* and other genera of this group.

Acidiella angustifascia (Hering)


Material. S. Khab.: Khabarovsk, vicinity, ex fruits of *Eleutherococcus senticosus* (Araliaceae), 13.09.1959, 2 Q, 2 Q (Sheldesheva) (SIZK; ZISP); Prim.: Sikhote-Alin, Vangou, 16, 17–20.08.1911, Q, Q (Pereleshina) (ZMUM).

Remarks. This species, as well as the three following, have the mediotergite ochreous yellow, occellar setae not longer than anterior orbitals, and the wing pattern similarly striate, like in *A. zephyria* (Ito), that is the type species of *Flavilidia* Ito. For this reason these species were transferred to the latter genus (Korneyev, 1996), but current study shows that *A. angustifascia* has the surstylus anterior lobe typical for *Acidiella* (figs 64–65), as well as *A. echinopanacis* Kandybina (see: Kandybina, 1966). Although males of *A. zephyria* are still unknown, this complex of species is transferred herein to *Acidiella*.

*A. angustifascia* differs from closely related species by the pale wing pattern of ochreous and light brown crossbands, relatively large and broad wings (W/L >4.5 mm), and by the tergosternum 7 and male genitalia yellowish. The very apex of the aculeus is conspicuously shorter, than the distance between the apices of the last lateral teeth (figs 67–68).
**Acidiella angustifascia**

**Material.** Prim.: Kamenshikha, 16.07.1984, ♀ (Shatalkin) (ZMUM).

**Remarks.** This specimen has the mediotergite yellow and the tergosternum 7 black; though the latter is unicolor, it just may be full of a putrid content of abdomen; the terminalia are not dissected, but aculeus exposed, and its apex is as in the other examined specimens of *A. angustifascia*.

**Acidiella zephyria** (Ito), comb. n.

Ito, 1984; Korneyev, 1995; Thompson et al., 1998 (*Flaviludia*).

**Material.** Prim.: Kamenshikha, 27.08.1987, ♀ (Shatalkin) (ZMUM) (new for Russia).

**Remarks.** This species is known from the holotype female from Japan, and the second female specimen from Russian Far East. They both share moderately long (WL=4.5-4.8) and not apically narrowed wing with the dark brown, rather contrast pattern (see Ito, 1984), and the tergosternum 7 yellowish. The very apex of aculeus was broken off during dissection (fig. 70–71), but on the picture re-composed of two pieces it looks certainly longer, than that in *A. angustifascia* (fig. 68–69).

This species fits closely to *A. angustifascia*, differing in the shape of the aculeus apex and the wing pattern.

**Acidiella echinopanacis** Kandybina

Kandybina, 1966; 1977; Foote, 1984 (*Acidiella*); Korneyev, 1995; Thompson et al., 1998 (*Flaviludia*).

**Material.** Prim.: Kievka, 12.09.1980, ♂ (Shatalkin) (ZMUM).

**Remarks.** Male genitalia of this species figured by Kandybina (1966: fig. 23), clearly shows this species to belong to *Acidiella*. Larvae in fruits of *Echinopanax elatum* Nakai (Araliaceae) (Kandybina, 1966). This species differs from the closely related species (*A. angustifascia* and *A. zephyria*) by the smaller size (WL<4.5), the wing apically conspicuously elongate and the tergosternum 7 shining black. Female terminalia are not examined.

**Acidiella issikii** (Shiraki)

Shiraki, 1933; Foote, 1984; Ito, 1984; (Pseudacidia); Thompson et al., 1998 (*Acidiella*). — *circumvaga* Ito, 1984 (*Pseudacidia*), presumed synonym.

**Material.** Prim.: Khasan district: kedrovaya Pad, 21.08.1964, 23.08.1980, 2 ♀ (Usachev; Shatalkin); Khasan distr.: Ryazanovka, 9–10.06.1989, 2 ♀ (Shatalkin) (ZMUM) (new for Russia).
Remarks. This species was described from Korea, and is based on the holotype female. Ito (1984) described *Pseudacidia circumvaga* from a couple of specimens from Kyūshū that fits very near *Ps. issikii*, except for the hyaline spot in the cell br situated at the middle of the cell, but not in its apical quarter. The specimens from the Far East Russia examined during this study fit close descriptions of the both species, showing intergrading variability in the wing pattern, including the position of the spot in the br cell. All the examined females have similarly serrated aculeus (figs 75–76), and the specimens listed above are certainly conspecific. But synonymization of the two names is still pending until more material is available.

Generic placement of this species is somewhat questionable. First, it has the anterior lobe of surstystlus moderately extended medially (but conspicuously less, than in *A. longipennis*). Furthermore, it has the mediostigite largely black, and the posterior lobe of surstystlus less reduced, than in all the species mentioned above (fig. 72–73).

Therefore, *Ps. issikii* is placed here only tentatively, and as it is the type species of *Pseudacidia* Shiraki, we accept Han’s opinion and consider the two generic names as synonyms tentatively, too. The subsequent revision the species assigned to *Acidiella* (Han, Wang, in preparation) must solve this problem in a proper way.

*Acidiella sp. near sepulcralis* Herig

Material. Prim.: Bikin river 22 km higher of Svetlovodnaya river mouth, 14.08.1980, Ø (Zlobin) (ZISP).

Remarks. This species fits near *Acidiella sepulcralis* Herig, 1938 from northern Burma by the wing pattern (fig. 55) broadly ochreous and the mediostigite yellow, differing by the frons wider (FR=0.9; FER=1.9) and genae higher (1/3 of eye height) (fig. 54). Study of additional material is needed for more precise determination of this species.

*Acidiella bipunctata* (Portschnisky), comb. n.


Redescription. Female. Head (fig. 77) brownish-yellow; HR = 1: 1.2: 1.4. Frons wide, subquadrate, nearly twice as wide as eye (upper view); FR = 0.8–1.1; FER = 1.7–2.1. Frons and face in profile meet at right or slightly acute angles; eyes small, genae 0.4 as high as eye; occiput swollen, ca. 0.5 of eye length. Chaetotaxy of head complete, 3 (–5) fr. 2 or. Ocellar setae moderately developed, as long as, or slightly shorter than anterior orbitals.

Thorax, including mesoventrum, pleurae and mediostigite brownish-yellow, two black dots behind the wing bases. Thoracic chaetotaxy complete; 4–6 black proepisternal setae; dc behind asa level; 4 scut, 2 subequal anepist; 1 keps; 1 anepm.
Wing without modifications; vein R₄₊₅ setulose to r-m above, the latter is beyond R₁ end, and distal of dm cell middle. Wing pattern (fig. 78) brownish yellow, conspicuously variable: the hyaline crossband between r-m and dm-cu either whole or broken into 2–4 hyaline spots; the hyaline spot in the T₄₊₅ cell isolated or, commonly, broadly joined to the hyaline area in m.

Abdomen brownish-yellow. Tergosternum 7 dark brown to black, rather short, completely scleritized apically. Aculeus very slightly compressed dorsoventrally, not serrate, covered with sparse blunt spines on outer surface of aculeus, as well as on the inner surface of ovipositor (figs 79–80); 3 spermathcae with non-expanded necks, as on fig. 81.

Body length of female 7.0–8.5 mm. Wing length 6.7–7.5 mm.

Male unknown, but it is believed that the males described by Ito (1984) as *Pseudidia yasumatsi* Ito and *P. disjuncta* Ito are actually the males of this species. They are similar to female in the head shape, wing pattern and body coloration. Fore femur with a row of spur-like setae ventrally. *P. spinifera* Herling from Myanmar share this character, as well as the similar wing pattern and comparatively large size, and might belong here. Male genitalia not dissected.

**Remarks.** This species can be recognized among Far East Russian Trypetini by the combination of high gena, swollen postgena, shining yellow mediotergite, dark brown to black tergosternum 7. As far as the range of chaetotaxy and wing pattern variation is not examined on larger series, it is possible, that there is a complex of closely related species that fits this diagnosis in Eastern Asia.

The shape of aculeus distinguishes this species from other species of *Acidiella*, therefore its generic placement is based mostly on having the mediotergite shining yellow and the wing pattern similar to that of *A. issikii* and, like in the latter species, is tentative. There are short ventral spinulae on forefemur of *Acidostigma s-nigrum* males (2 rows!), but their relationship to *A. bipunctata* are not understood.

**Vidalia R.-D.**


This genus was recently revised by Han, Wang and Kim (1993; 1994 a; 1994 b) under the name *Pseudina*. Hancock and Drew (1995) discussed the identity of *Vidalia impressifrons* R.-D., the type species of the genus.

**Vidalia armifrons** (Portschinsky)


**Material.** Type: *S. armifrons*: Lectotype O (on a micropin pinned into a piece of cork closer to a general pin) and paralectotype O (on a micropin pinned farther from the pin, wings are partly broken off), with labels handwritten in ink on white paper: "Spilographa armifrons", "Siberia (Raddewka)" (= S. Khab. Jewish Autonomous Region, Radde), small white paper square, latter handwritten label on red paper "Spilographa armifrons* Portsch.*", treated here, with the handwritten labels on red paper "Lectotypus O / Spilographa armifrons Portsch." / des. V. Kornev, 6.02.1986", and "Paralectotypus ...", respectively (ZISP) and figured by Kornev (1995; fig. 5). *S. alini*: Holotype: Q: CHINA: Type (printed on a red-boarded paper circle), Type (printed on red paper square) "Charbin, Mandshuens. Gaolunzy, 25.05.1940 (W. Alin)" and Q with the same data labeled as "Paratype" (printed on..."
Body length of male 5.0–5.6; of female 5.8–6.0 mm.
Wing length 5.5–5.8 mm.
Remarks. As far as there are no other similar species in north-eastern China and Russian Far East, the type specimens of both S. armifrons and S. alini, are merely the two sexes of the same species, already known from large series of both males and females. The synonymy of these two species was supposed, but not introduced by Han, Wang and Kim (1994 a) for the formal reasons, as the type specimens of S. armifrons were not available for Richter. Genitalia of both sexes were figured in the latter work.

**Vidalia rohdendorfi** were not Richter.


Material. **Type: S. rohdendorfi**. Holotype: **Russia**: Prim.; c. Imanino, 15.VII.1941 (E. K. Ted Fid). [Station... Emelyanov] (ZISP) [examined]; V. furialis: Holotype: **Japan**: “Sinoso, Sigakogen”, 8. VIII. 1981 (H. Hara) [UO] (examined); 3 ♀ (Korein); Prim.: Kamenshuka, 5.08.1984, 25.08.1987, Kiyeka, 7.09.1980, 7 ♂; 3 ♀ (Shatalkin) (ZUM); (SIZK) (dissected).

Remarks. Genitalia of both sexes were figured by Kornev (1995). Preliminary phylogenetic analysis shows, that this species belongs to a sister-group either to all the other genera of the Vidalia group (Chenaciadilera Shiraki, Hoplandromya Bezzi and Vidalia R.-D.) or at least to the two latest, Dr. Xingjian Wang (in preparation) is supposed to establish a new genus for this species. V. furialis was described from two teneral specimens, otherwise fitting close S. rohdendorfi, and for this synonymized by Kornev (1995). Ito and Tanaki (1995) synonymized V. rohdendorfi with V. brevialis, but this must be accepted with some precaution, both the head bristle and the wing pattern, though similar, have some minor differences (see Ito, 1985), not observed within the series before me. It may be either individual variability, or the characters of taxonomic significance, and I place V. brevialis into the list of synonymy with a query mark.

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