

European species of the subgenus *Amiota* s. str.
(Diptera, Drosophilidae)

JAN MÁČA

District Museum, Soběslav

Taxonomy, lectotypes, morphology, key, *Amiota filipes* sp. n., Czechoslovakia

Abstract. European species of the nominate subgenus *Amiota* Loew are revised with particular attention to the structure of the male terminalia which have previously been little studied. *Amiota* (s. str.) *filipes* sp. n. is described from Czechoslovakia. Lectotypes are designated for *Amiota subtusradiata* Duda, 1934 and *Phortica rufescens* Oldenberg, 1914, and some species previously considered to be "varieties" or synonyms are established as good species.

The species of *Amiota* s. str. are poorly represented in collections of Drosophilidae since the usual collecting methods give only poor results in this group. Inadequate series for comparison, together with considerable uniformity in external morphology, are the main causes of uncertainty in the characteristics of European species; some of them were treated as "varieties" of *Amiota alboguttata* WAHLBERG, e.g. by DUDA (1934). FONSECA (1965) used additional taxonomic criteria (secondary sexual characters of male hindlegs) and distinguished four European species, including *A. basdeni* FONSECA, instead of DUDA's concept of polytypic *A. alboguttata*.

Studies of Japanese and Oriental species by OKADA (1960, 1968, 1971) have shown that the male terminalia are of primary taxonomic significance in this group. Therefore the present paper gives special attention to the male and, so far as possible, to the female terminalia. Some of the somatic characters are also newly applied. A result of this study has been to prove beyond doubt that the "varieties" of DUDA (1934) are good species. It is hoped that the present paper will help to make clear the taxonomic position of certain Nearctic forms which remain undescribed because of their possible confusion with the insufficiently defined European species (see WHEELER, 1952 : 167).

Of about 17 000 specimens of Drosophilidae from Czechoslovakia, which were mostly collected in beer traps suspended in tree canopies (MÁČA, 1973), less than fifty were specimens of *Amiota* s. str. These represented several species, which is of considerable interest since no species of this subgenus was previously known from this country except for a brief mention of *A. alboguttata* in the key by LAŠTOVKA & MÁČA (1977). I am grateful for the loan of additional material, whose sources are listed in the Acknowledgements.

Morphological terms are used in the same sense as in OKADA (1956), if not stated otherwise. Some of the wing indices used follow OKADA (1971): Ac-index (length ratio of 3rd to 4th section of costa), as well as Cx-index (length ratio of 4th costal section to posterior crossvein). M-index (length ratio of the apical section of M 2 to the last but one section of M 1) is adopted after BOCK (1976). Instead of the word "index" symbol "I" is used: e.g. Ac-I, Cx-I etc. When considering colour characters, some degree of colour change must be anticipated in specimens preserved in alcohol.

Subgenus *Amiota* (s. str.) LOEW, 1862

Amiota LOEW, 1862, Berl. ent. Z., 6 : 229 (as genus).

Type-species: *Amiota leucostoma* LOEW, 1862, Berl. ent. Z., 6 : 230 (subsequent designation by COQUILLET, 1910: Proc. U.S. natn. Mus., 37 : 505).

Of the six subgenera of the genus *Amiota* which are usually recognized, viz. *Amiota* s. str., *Phortica* SCHINER, 1862, *Erima* KERTÉSZ, 1899, *Apsiphortica* OKADA, 1971, *Paraphortica* DUDA, 1934 and *Sinophthalmus* COQUILLET, 1904, only the subgenus *Amiota* s. str. seems to have nearly worldwide distribution (succeeded by likewise widely distributed subgenus *Phortica*). In the Palaearctic the subgenus *Amiota* s. str. comprises more than thirty species, including those newly described by TAKADA, BEPPU & TODA (1979). The following characteristics of the subgenus are based mostly on the study of European species, and also on some Japanese species: specimens of *Amiota foveata* OKADA, *A. subfoveata* OKADA, *A. dispina* OKADA and *A. clavata* OKADA were kindly donated by Prof. emer. T. Okada, and of *A. stylopyga* WAKAHAMA & OKADA by Dr. K. Beppu.

Diagnosis. Arista plumose, without distinct end fork. Both 2nd orbital and the postvertical bristles are about as long as 2/3 of the 3rd orbital bristle. Frontal hairs may be divided into three categories, some of them may, however, sometimes be absent: a transverse row (frontal lower hairs) above lunula, a longitudinal row in front of the orbital macrochaetae (fronto-orbital hairs; they usually continue among orbitals but only those in front of orbital macrochaetae are counted), and the interfrontal hairs in similar position to those of *Drosophila* subg. *Scaptodrosophila* — about middle of front. One strong vibrissa and an equally long bristle in the buccal angle are developed. Prelabrum dark and somewhat projecting below. Face (fronto-clypeus) in the lower part, humeri and pteropleurae each with large white spot. These spots are never entirely absent in the European species examined, but they may become indistinct in specimens preserved in alcohol. They are not mentioned in the redescriptions of species which follow in this paper; when e.g. colour of humerus in mentioned, the areas around the white spot are meant.

Mesonotum practically unicolorous, pollinose to shining. Bristles of the thoracic dorsum (only one side of body considered): 1 humeral, 2 notopleurals (one of them in posthumeral position), 1 weak presutural, 2 supraalars (proximal one weak), 1 postalar, 2 dorsocentrals, 1 praescutellar, usually also one weak bristle laterad from the posterior dorsocentrals, 2 scutellars. Acrostichal hairs in about 6—7 irregular rows each side. 2—3 sternopleurals, excepting some hairs. Prosternum with a longitudinal suture medially. Wings clear, the bristles of costal break indistinctly differentiated. 2nd (longest) costal section with two rows of bristles; those of the dorsal row cuneiform in shape and continuing along 0.4 to 0.8 of the length of 3rd costal section (i.e. C_3 range = 0.4—0.8; the values of the C_3 range seem to be roughly proportional to the body size); the lower row composed of rather fine bristles or hairs and continuing along the whole C vein. Besides these two rows, some sparse short hairs may be developed above the dorsal row and/or below the lower row. The last-mentioned ventral sparse hairs develop as a row of thorn-like warts on the 3rd costal section (see OKADA, 1960, Fig. 1 B). First costal section with a bristle proximad to the humeral

Many thanks
for *A. excavata!*
J. M.

vein, tegula (in the sense of *BASDEN*, 1961) with 1-2 bristles and several hairs. Crossveins of wing rather distant from each other; the section of media between crossveins more than 1.5 times longer than the posterior crossvein. Forelegs with femora bearing long bristles in two irregular rows. Preapical bristles on tibiae of all legs, but rather inconspicuous; apical bristles on middle tibiae. Middle tarsus (whole length) with posteroventral row of cuneiform bristles, some species with similar row also on the anteroventral side; hind tarsus with cuneiform bristles on the anteroventral side. Ventral side of middle and hind tarsi with a pair of stronger cuneiform bristles at the end of each segment except on the last one. Colour variability of legs (perhaps of genetic origin) is known in *A. alboguttata*, *A. filipes* and, in a lesser degree, in *A. albilabris*. Males of some species have outstanding bristles on hindlegs, the number and disposition of them being species specific.

Abdominal tergites mostly without conspicuous pattern. Last pregenital sternite of males drawn into a pocket-like cavity, its bristles being reduced or absent. Periphallalic organs with periandrium (after conception of *GRIFFITHS*, 1972) not or only narrowly connected in dorsal midline; sometimes the connection is indicated by a suture, as is common in many other *Steganinae*. Anal lamellae, as well as the claspers, separated from the periandrium. Decasternum inconspicuous, weakly sclerotized, or absent.

Phallic organs: Shifting of the genital porus basad seems to be a character common to the whole genus *Amiota*. In the subgenus *Amiota*, s. str., it is placed at the extreme base on aedeagus; the aedeagal lamellae therefore acquire the function of "additional parameres". Aedeagal apodeme dorsoventrally flattened. The connection between apodeme and proper aedeagus is very flexible, so that the distal parts of aedeagus lie near to the distal part of its apodeme in the resting position. The structures of proper aedeagus are difficult to homologize with those of other groups of *Drosophilidae*. The deeply bifurcated medial formation of *A. rufescens* seems to be homologous to the "medial rod" of many species of the subgenus *Phortica*. This structure is paired in *A. albilabris* and of curious construction in other species; it may be asymmetrical, as in *A. filipes* and Japanese *A. flagellata* *OKADA*. Distal parts of aedeagus seem to be without membranous structures. The simple aedeagal structures of *A. rufescens* and *A. albilabris* seem to be primitive like other characters of those species (large body size as in most other *Steganinae*; distinctly cuneiform bristles of middle metatarsus anteriorly, in common with at least *Phortica*, *Stegana* and *Leucophenga*). Anterior parameres sometimes contiguous to aedeagus (*A. basdeni*). Posterior parameres mostly separated from aedeagus but always connected to or near lateral ends of hypandrium, fused, with a medial projection which is bent caudad, this projection being apparently homologous to the spoon-shaped lobe which is developed in *Phortica* spp. In *Amiota* (s. str.) *subtusradiata*, a pilose formation, perhaps representing the proper aedeagus or its distal part, is contiguous to the medial projection of posterior parameres. Hypandrium is a narrow arch, its medial part sometimes bent inward or the lateral parts thickened. Ejaculatory apodeme usually with impaired points on its dilated part.

Female terminalia with 6th tergite shortened, 7th tergite divided medially, of the following tergite only a pair of laterally located sclerites remains. Anal conus as in *Phortica* (see *MÁCA*, 1977). Egg-guides not separated from

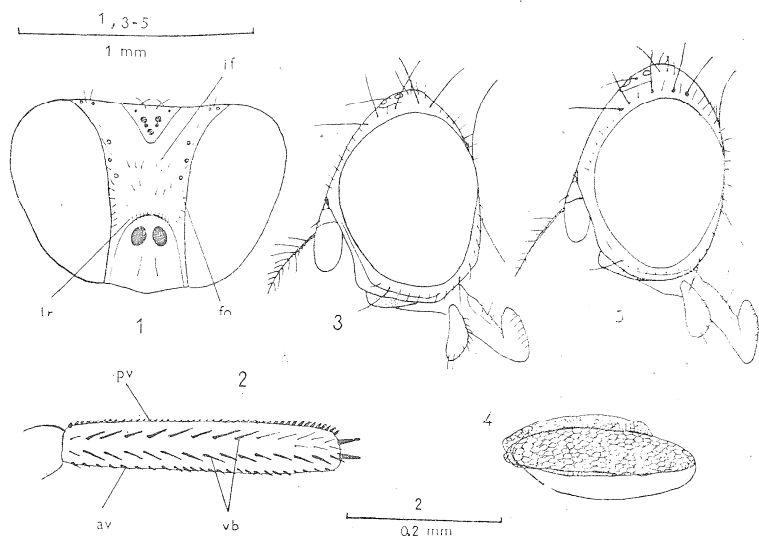
one another, without cuneiform bristlets (forming a lamelle similar in appearance to other sternites), or modified into a transverse band with a row of cuneiform bristlets. Pregenital lamellae mostly large and of complicated structure, but rather fine and easy to deform; in some species whole distal part of uterus is formed by such complex of sclerotizations (vaginal complex). Perineal sclerites differentiated from the distal part of vaginal complex or absent. Spermathecae cylindrical to roughly pear-shaped, sometimes with transverse wrinkles.

The inhabiting of tree canopies is typical for the members of this subgenus (BASDEN, 1953; TODA, 1977). STORÅ (1957) and others observed specimens of some species on tree sap. Two specimens of *A. filipes* sp. n. were obtained in January, 1979 from logs of oak and beech which were collected in August, 1978 and stored in a cellar for mass-rearing of Coleoptera. It seems probable that the development of *Amiota* s. str. species is fixed to fermenting tree sap or similar matter, but the larvae and puparia of this subgenus are as yet undescribed. BUXTON (1961) mentioned that *A. alboguttata* had been repeatedly bred from the Pyrenomycete fungus *Daldinia concentrica*. The egg of *A. basdeni* is shown in Fig. 4.

Males of a number of species have been recorded flying about heads and eyes of people (e.g. WHEELER, 1952, Nearctic species). It seems that such habits are more common in the warmer and drier regions; of the specimens collected by myself, only one male of *A. alboguttata* behaved in this way.

Key to European species of *Amiota* s. str.

- 1 Middle metatarsus with anteroventral row of cuneiform bristles or denticles in addition to posteroventral row (Fig. 2). On average larger species (wing length 2.8 to 3.4 mm) 2
- Middle metatarsus with only posteroventral row of cuneiform bristles. On average smaller species (wing length 2.1 to 2.9 mm) 3
- 2 (1) Frons with at least 10 interfrontal bristlets and at least 10 lower frontal bristlets. Mesonotum rufous, legs not darkened. ♂: Hind femora not expanded, tibiae with only usual suberect bristlets; periphallie and phallic organs as in Figs. 6-9 *Amiota rufescens* (OLDENBERG)
- Frons with about six interfrontal bristlets and not more than six of very small lower frontal bristlets. Mesonotum black, legs darkened but tarsi and trochanters pale. ♂: Hind femora expanded basally, hind tibiae with many short, ± erect bristlets; periphallie and phallic organs as in Figs. 10-13 *Amiota albilabris* (ROTH in ZERR.)
- 3 (1) Frons with a group of about six interfrontal bristlets, each about 0.05 mm long. C₃ range 0.75. Arista with long ventral rays in apical third. ♂: With erect bristles on the distal part of hind femur and on subbasal part of hind tibia; periphallie and phallic organs as in Figs. 14-17 *Amiota subusradiata* DUDA
- Frons bare or with single weak hairs (only in *A. flavopruinosa* they are up to 0.05 mm long). C₃ range less than 0.7. If erect bristles developed on male hind tibia, similar bristles present along whole hind femur and arista with only short ventral rays 4
- 4 (3) Cheeks with horizontal keel almost angularly bent above in parafacial part (Fig. 3). Ventral rays of arista long on apical half. Legs, palpi and first two antennal joints pale. C₃ range 0.6-0.7. ♂: Anterior parameres contiguous to aedeagus - Figs. 18-19. ♀: Postabdomen not telescopic. Egg-guide with transversal row of cuneiform bristles as in Figs. 22-23 *Amiota basdeni* FONSECA
- Cheeks with ± evenly convex keel. If arista with long ventral rays (only on its apical third), then legs, palpi and first two antennal segments darkened in most parts. ♂: Anterior parameres separated from aedeagus. ♀: Postabdomen telescopic. Egg-guide without cuneiform bristles 5
- 5 (4) Arista with dorsal rays about as long as ventral rays. ♂: Hind femora and tibiae without outstanding erect bristles; hypandrium not curved dorsad; aedeagal structures asym-



Figs. 1-2. *Amiota rufescens*: 1 - Head, frontal aspect (appendages and major bristles omitted). 2 - Metatarsus of the left mid leg, ventral aspect (bristles not inserting on the ventral side omitted). Figs. 3-4. *Amiota basdeni*: 3 - Head, lateral aspect. 4 - Egg. Fig. 5. *Amiota alboquittata*, head, lateral aspect. - av - anteroventral cuneiform bristles, fo - frontoorbital hairs, if - interfrontal hairs, lr - lower frontal hairs, pv - posteroventral cuneiform bristles, vb - ventral bristles.

- metrical - Figs. 24-25. ♀: 6th sternite at most slightly wider than long. *Amiota filipes* sp. n.
- Arista with longest ventral rays at most half as long as longest dorsal rays. ♂: Hind femora and tibiae with erect bristles; hypandrium curved dorsad in medial part; aedeagal structures symmetrical. ♀: 6th sternite at least twice wider than long. 6
- 6 (5) Longest dorsal rays of arista about 0.1 mm. C_3 range less than 0.45. Frons and mesonotum brown (general specimens) to black, subshining, without pollinosity; mature specimens with dark brown bristles. ♂: Hind tibia with 5-7 erect bristles; peripheral and phallic organs as in Figs. 30-32. ♀: Bristles of cerci moderately long (longest of them about 0.15 mm), slightly undulated. *Amiota alboquittata* (WAHLBERG)
- Longest dorsal rays of arista 0.12 to 0.15 mm. C_3 range 0.5-0.6. Frons and mesonotum light tan to brown, matt, with grey pollinosity; bristles rufous but strong antennal bristle and rays of arista black. ♂: Hind tibia with about 18 erect bristles; peripheral and phallic organs as in Figs. 35-37. ♀: Cerci with long (up to 0.2 mm), conspicuously wavy bristles. *Amiota flavopruinosa* DUDA

Remarks: The species are arranged according to their presumed phylogenetic relationships. Allowance should be made both in the key and in the redescriptions for the limited knowledge of the variability of some species and the likelihood that some characters vary. *A. lacteoguttata* (PORTSCHINSKY, 1892) is not mentioned in the above key and its status is discussed in the Appendix (see below).

Amiota rufescens (OLDENBERG, 1914)

(Figs. 1-2, 6-9)

Phortica rufescens OLDENBERG, 1914, Arch. f. Naturh., 80, A: 21.
Amiota leucostoma: DUDA, 1934.

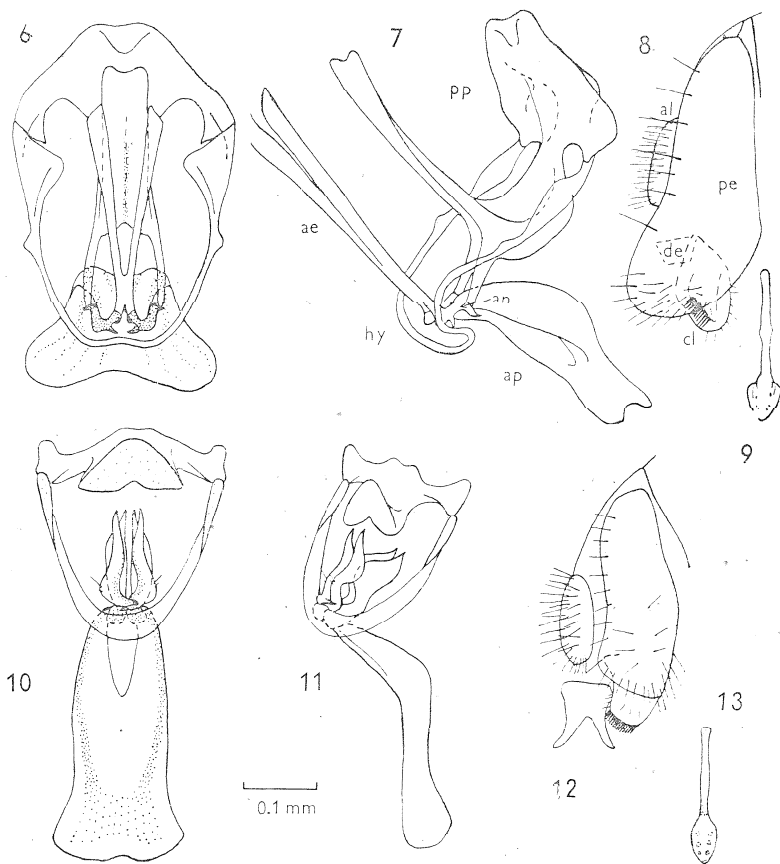
Some confusion has existed about the identity of *Amiota leucostoma* LOEW, 1862. Mr. G. C. STEYSKAL of the U.S. National Museum, Washington has now kindly provided a sketch of the male genitalia of the type specimen of this species (type locality Pennsylvania). In this specimen the lamellae of the proper aedeagus are somewhat clavate, each having two pointed, adpressed, apically directed spikes laterally, which are very obvious in the ventral aspect; also the anterior parameres differ in shape from those of *A. rufescens*. Mr. STEYSKAL informed me that the aedeagal lamellae of *A. leucostoma* may somewhat vary in shape, it was confirmed in the specimen (Great Falls, Virginia, without date, Aldrich lgt., Coll. Naturh. Mus. Wien) recently seen by me, which has these lamellae of the shape more similar to that figured by MALLOCH & McATTEE (1924). Another conspicuous character of *A. leucostoma* seems to be bright yellowish colour of almost whole 2nd abdominal tergite, appearing in the specimen from Great Falls. Therefore I consider *A. leucostoma* and *A. rufescens* to be two distinct species.

Only male sex of *A. rufescens* seems to be known as yet.

Face with flat, straight carina. White spot above mouthedge occupying half of height of face but laterally not reaching eye margin. Frons as long as wide, orange, brownish posteriorly, slightly pollinose. About 12 distinct interfrontal bristlets (hairs), about 12 proclinate lower frontal hairs and 8-9 fronto-orbital hairs (these each side). Palpi elongate-oval, with upper surface concave (deformed by drying off?), with about 15 bristles. Antennae yellowish brown; arista with six dorsal rays, which are rather elongated (up to 0.2 mm) but last two rays much decrescent; ventral rays on distal two thirds, up to 0.13 mm long. Peristomal bristles in two rows; vibrissa located in front of the lower row which is formed by only about three bristles. Width of cheek 0.09 mm.

Mesonotum yellowish brown, rather shining, faintly pollinose; scutellum sometimes with pale line medially. Pleura of the tannish colour, mesopleura somewhat more darkened. Praescutellars slightly longer than anterior dorsocentrals (0.5 mm: 0.4 mm), posterior dorsocentrals twice longer than anterior ones. Scutellar index about 1.1, posterior scutellars crossed. Sternopleural index 0.7-0.85; both strong bristles upright; several caudally directed hairs in the posterior half. Prosternum yellowish, pollinose. Wing length 3.1 mm, width 1.4 mm. Wing indices: C-i 2.1, 4V-i 2.5, 4C-i 1.35, 5x-i 1.3, Ac-i 3.7, Cx-i 0.75, M-i 0.7. C₃ range 0.8. Warts on C₃ numerous, trichoid. Legs yellow. Hind tibiae without erect bristles on inner side. Mid tibia with apical bristles paired (0.1 and 0.05 mm). Middle metatarsus with about 25 anteroventral (not very well differentiated) and 45 posteroventral cuneiform bristlets. Hind metatarsus with about 30 cuneiform bristlets anteroventrally. Length ratio of metatarsus to other tarsal segments - 0.85, 0.95, 1.1 (from fore to hind tarsi, respectively).

Abdomen rather dark brown, 2nd to 4th tergites apically yellowish banded, the light band of 3rd tergite sometimes protruding medially in continuation up to middle of 2nd tergite. Periandrium narrowly connected



Figs. 6-9. *Amiota rufescens*; Lectotype: 6 - Phallic organs, ventral aspect. 7 - Phallic organs, lateral aspect. 8 -Periphallial organs. 9 - Ejaculatory apodeme. - ae - aedeagus, al - anal lamellae, an - anterior parameres, ap - apodeme of aedeagus, ci - clasper, de - decasternum, hy - hypandrium, pe - perianthrium, pp - posterior paramere. Figs. 10-13. *Amiota abilabris*; Oseček: Sequence of figures as in Figs. 6-9.

above, posterior margin with about 10 bristles mainly in dorsal part, each posterolateral edge with about 15 slight bristles. Clasper oval, with a row of 10-12 primary teeth and 3 extra bristles on the outer surface; inner surface with bristles anteriorly. Ejaculatory apodeme with stalk somewhat expanded and at the dilated end with three pairs of indistinct pits. Aedeagus \pm pale, bi-

furcated, its lamellae without apically directed spikes laterally. Anterior parameres short, each with one blunt and two acute projections; connection to aedeagus rigid. Posterior paramere vaulted dorsad, with long and protruding medial projection and with \pm membranous connection to the basal parts of aedeagus each side (membranous parts not entered in Figs. 6—7). Hypandrium bent dorsad in medial part, its arms apically (on lateral ends) dilated.

Distribution: Roumania, Switzerland, Great Britain, according to STACKELBERG (1970, sub *A. leucostoma*) in the NW of the European part of USSR.

Material studied (7 ♂♂)

Lectotype ♂ (hereby designated): Roumania: Mehadia, 5. 7. 1912, Oldenberg lgt. The specimen bears Oldenberg's determination label and a label with four illegible words, the first of them being perhaps "Menschagen". Coll. Inst. f. Pflanzenforschung, Abt. Taxon. Ins., Berlin. Paralectotypes: Roumania: Mehadia, 27. 6. 1912 — 1 ♂, 1. 7. 1912 — 1 ♂, 4. 7. 1912 — 2 ♂♂, 5. 7. 1912 — 1 ♂, same Coll. as Lectotype. Other material studied: Switzerland: Graubünden: Landquart, 9.—12. 8. 1974 — 1 ♂, lgt. and Coll. G. Bächli.

Remarks: The specimen from Switzerland has somewhat wider hypandrial arch (in lateral aspect) and a shorter medial projection of the posterior parameres than the Lectotype.

Amiota stylopyga WAKAHAMA & OKADA, 1958 (from Japan) is very close to *A. rufescens*. The following differences are noted (after 1 ♂, 1 ♀, Hokkaido: Sakurano, 16. 7. 1977, Beppu lgt.): *A. stylopyga* has more gradually decreased dorsal rays of the arista, greater Ac-index, more numerous bristles of the posterior margin of periandrium, darker aedeagus, more slender anterior parameres and more strongly longitudinally vaulted apodeme. The colour of prelabrum varies to some extent; it is generally paler in European specimens but this does not seem to be a good taxonomic character. Further material is desirable for consideration of the variability of all above mentioned characters.

✓ *Amiota albilabris* (ROTH in ZETTERSTEDT, 1860)

(Figs. 10—13)

Drosophila albilabris ROTH in ZETTERSTEDT, 1860, Dipt. Scand., 14 : 6425.

• *Phortica alboguttata* var. *obscuripes* STROBL, 1910, Mitt. naturw. Ver. Steierm., 46 (1909) : 210.

DUDA (1934) sunk *A. albilabris* as a "variety" of *A. alboguttata*, but later authors (OKADA, 1960; BASDEN, 1961) considered it correctly as a distinct species. The subspecies *A. albilabris obscuripes* (STROBL) from Austria, which had been transferred from *A. alboguttata* and redefined by BASDEN (1961), has not been examined by mine. Although *A. albilabris* seems to show considerable variability, subdivision of this species is not attempted here because too few specimens are known for consideration of subspecific differences.

The redescription of *A. albilabris* by OKADA, 1960 (as *A. ? albilabris*, since no European specimen was compared by him) is adequate; the secondary sexual characters of the male were ascertained by FONSECA, 1965 (see also PAPP, 1973: Fig. 76 C). Some additional characters are given below.

Frons with about 6 interfrontal bristles, about 6 lower frontal bristles and each side 8—9 frontoorbital bristles. Orbitae with a narrow rufous strip

along eye margin. The basalmost lower ray of arista is on the basal half of arista.

Mesonotum black, shining, scutellum rather pollinose, humerus brownish rufous, pleura brownish. Fore corners of scutellum impressed. Posterior scutellars convergent (OKADA, 1960, considered them divergent perhaps because of their displacement during preparation). Tegula with two bristles. Wing length 2.8 mm (locality Oseček) to 3.4 mm (loc. Würenlingen). Wing indices of both European males studied were measured. C-i 2.3-2.4, 4V-i 2.3-2.4, 4C-i 1.2, 5x-i 0.9-1.3, Ac-i 3.4-3.6, Cx-i 0.6-0.8, M-i 0.5 to 0.6. C₃ range 0.75-0.80. Prosternum dark, with whitish pollinosity. Legs ± darkened, except pale trochanters and tarsi; knees also pale but to a very small extent. Middle metatarsus with about 30 anteroventral and 50 posteroventral cuneiform to dentiform bristles.

Abdomen paler than mesonotum, at least basally. ♂: Clasper with 12-16 teeth and with several bristles on outer surface; posterior dilation of clasper somewhat slighter in European specimens. Posterior parameres with moderately developed medial projection, very faintly sclerotized. Paramedial parts of hypandrium membranous; medial sclerotized formation (OKADA, 1960: Fig. 1 F) appearing identical with the last pregenital sternite. ♀ (new female): Similar to male except of terminalia. Anal cone narrow, elongate, as in *A. alboguttata*. Genital structures not studied.

Distribution: Europe: Sweden, Finland, England, Austria, Switzerland, Yugoslavia, Roumania, Czechoslovakia (new record for Czechoslovakia). Japan.

Material studied (3 ♂♂, 1 ♀)

Czechoslovakia: Bohemia centr.: Oseček nr. Velký Osek, 12.-16. 7. 1971 - 1 ♂, Rozkošný lgt., Coll. Máca. Switzerland: Aargau: Würenlingen, 6.-11. 6. 1973 - 1 ♂, lgt. et Coll. Bächli. Japan: Hokkaido: Jōzankai, 2. 7. 1958 - 1 ♂, lgt. et Coll. Okada. Roumania: Mehadia, 6. 7. 1912, 1 ♀, Duda lgt., Coll. Hung. Nat. Museum. Remark: The female specimen bears Duda's label "*Amiota alboguttata* var. *subtusradiata*", thus belongs to the type series of *A. subtusradiata*.

✓ *Amiota subtusradiata* DUDA, 1934

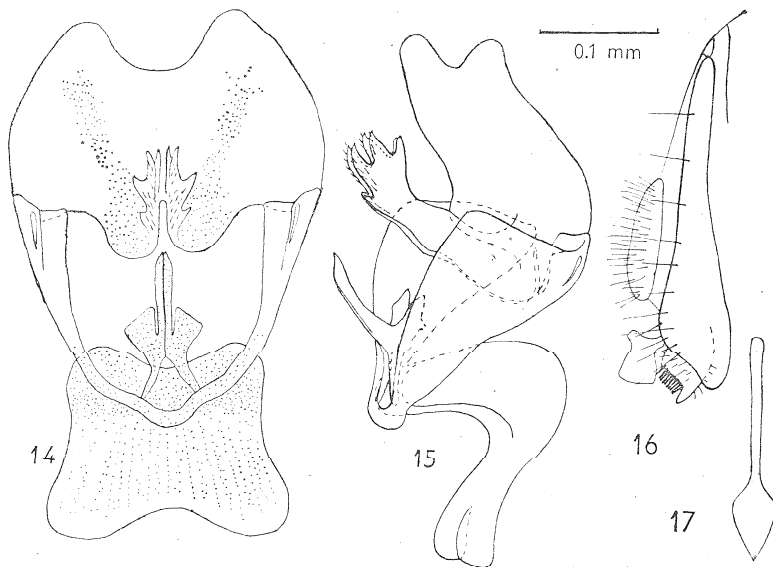
(Figs. 14-17)

Amiota alboguttata var. *subtusradiata* DUDA, 1934: 32.

The original description of this species is rather incomplete. Therefore some additional characters of this species are given below, with emphasis on the morphology of the male terminalia and chaetotaxy of the male hindlegs, these characters not having been studied previously.

Facial carina straight, in the shape of a low roof. Frons with about six interfrontal bristles, and each side eight fronto-orbital bristles. Palpi brownish, of usual oval shape. Antennae yellowish brown; arista with long ventral rays on distal third, the longest of them more than half as long as the longest dorsal rays.

Mesonotum subshining, dark. Acrostichals reddish brown, other bristles darker. Wing length 2.9 mm. Wing indices: C-i 2.2, 4V-i 2.2, 4C-i 1.2, 5x-i 1.0, Ac-i 4.3; Cx-i and M-i not counted. C₃ range 0.75. Hind femora of male with a row of about seven long erect hairs apically on the posteroventral side. Male hind tibia ventrally with about seven long erect bristles in a row



Figs. 14—17. *Amiota subtusradiata*; Lectotype: Sequence of figures as in Figs. 6—9.

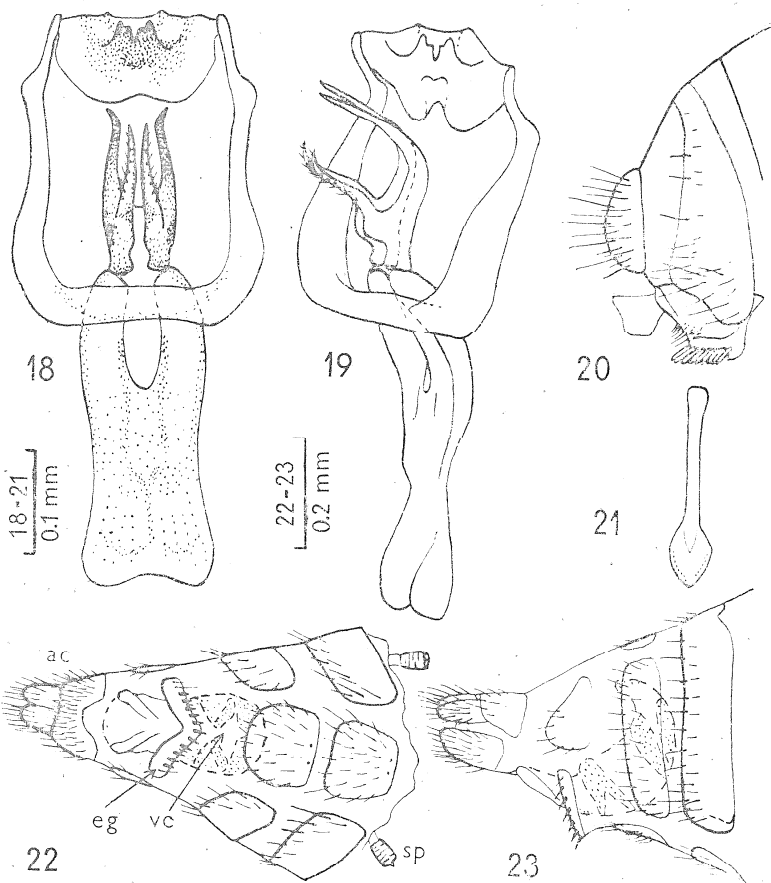
from its basal fourth to beyond its middle, longest of them being as long as the width of tibia; hind metatarsus as long as other tarsal joints altogether, with several elongated bristles ventrally at base.

Last sternite heart-shaped. Periandrium narrow, bipartite, its halves contiguous at one point. Posterior margin of periandrium with 6 bristles (each side), toe with about 6 shorter bristles. Clasper with a finger-like process cranial of the row of 10 primary teeth; several hairs present on both inner and outer surfaces of clasper. Decasternum lamellar, connected to claspers by short arms. Ejaculatory apodeme without visible pits (magnification 100 \times). Aedeagal apodeme strongly vaulted dorsad. A pair of structures connected to it and medially apposed one another represents probably anterior parameres. The proper aedeagus (?) separated from its apodeme but basally coalescent with posterior paramere, with four pointed hairy processes each side. Posterior paramere large, flat. Hypandrium not bent dorsad medially, with lateral arms much dilated.

Distribution: Finland, *Poland, *USSR (known from the Leningrad region and Far East). The statements with an asterisk are cited from DUDA (1934) and need to be confirmed as DUDA did not distinguish the similar species *A. basdeni* and *A. filipes*.

Material studied (1 ♂)

Finland: Tvärminne, without date, R. Frey lgt., Coll. Zool. Museum of the University Helsinki. This specimen, bearing a label with number 802, Duda's determination label and a red



Figs. 18-23. *Amiota basdeni*; Woolwich Wood: Sequence of Figs. 18-21 as in Figs. 6-9. Fig. 22 - Female postabdomen, ventral aspect. Fig. 23 - Female postabdomen, lateral aspect. - ac - anal cone, eg - egg-guides, sp - spermatheca, vc - vaginal complex.

label with inscriptions "Holotypus" (printed) and "unpublished" (in handwriting), is hereby designated as Lectotype of *A. subtusradiata*.

Remarks: *A. neochunqi* TAKADA, BEPPU & TODA, 1979 (from Japan) seems to be related to *A. subtusradiata*, but is without doubt a distinct species. - WHEELER (1965) was probably not correct in introducing *A. subtusradiata* in the list of Nearctic species since Steyskal's unpublished draw-

ing of "*A. subtusradiata*" from the USA shows some different characters; this Nearctic species is however also close to *A. subtusradiata*.

✓ *Amiota basdeni* FONSECA, 1965
(Figs. 3-4, 18-23)

Amiota basdeni FONSECA, 1965, Trans. Soc. Br. Ent., 16 : 242.

The main external characters of this species were adequately defined by FONSECA (1965) but the male and female terminalia were not fully studied.

♂: Facial carina straight, low; lower margin of face concave to angular in middle. Eyes comparatively large. Frons with only several lower frontal bristlets, brown, with greyish pollinosity; orbitae not paler. First two antennal segments and palpi yellow; arista with strong ventral rays along its apical two thirds. Cheeks with a slight keel which is almost angularly bent in parafacial part and almost horizontal below eye (in some specimens this character is not very distinct but these have whole peristomal region rather shrivelled) Buccal angle prominent.

Mesonotum greyish black, rather dull. Humeri, and sides of scutellum basally, yellowish in most specimens. Presutural bristle rather long — about 0.2 mm, also the middle sternopleural bristle unusually distinct. Wing length 2.5 to 2.7 mm. Wing indices: C-i 2.0, 4V-i 1.9-2.3, 4C-i 1.3-1.5, 5x-i 1.1-1.3, Ae-i 3.5, Cx-i 0.9, M-i 0.5-0.6. C₃ range 0.6-0.7. Legs yellow. Hind tibia without erect bristles. Cuneiform bristlets developed on postero-ventral side of middle metatarsus and on anteroventral side of hind metatarsus.

First abdominal tergite rather pale; second tergite pale basally; apical margins of tergites often with narrow pale strips. Periandrium narrowly connected above, posterior margin with about five bristles each side, toe with at least ten bristles. Clasper with a slight longitudinal ridge on exterior side and nine primary teeth. Ejaculatory apodeme with many tiny pits. Aedeagus apparently fused with anterior parameres. Posterior paramere with distinct traces of paired construction and sclerotized short projections paramedially. Hypandrium almost straight at middle, with lateral arms expanded paramedially.

♀: Similar to male except in characters of the terminalia. Spermathecae pear-shaped. Egg-guides with 10-12 cuneiform bristles in a transverse row. Vaginal complex large, elongate, connected with V-formed pair of perineal sclerites. Anal cnus of a conical shape, at base much broader than the hind metatarsus.

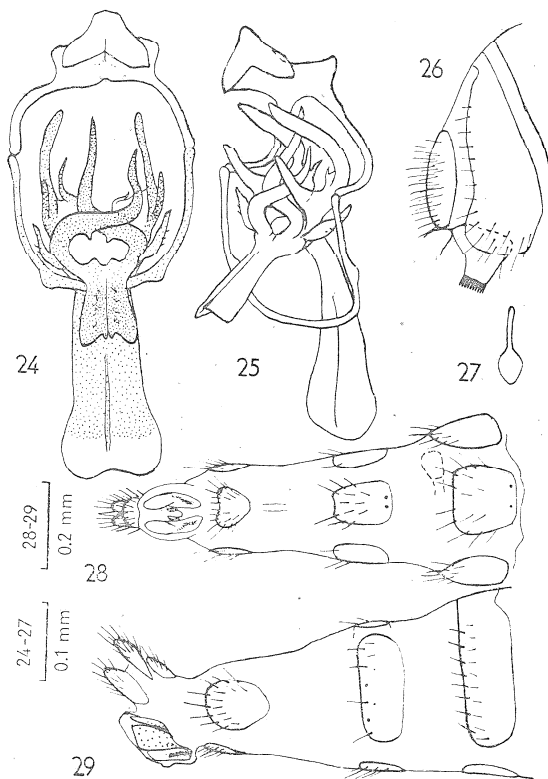
Distribution: England, Switzerland, Czechoslovakia, Hungary (new records for the last three countries).

Material studied (15 ♂♂, 7 ♀♀)

England: Woolwich Wood, Woolage Green, 3. 8. 1957 — 1 ♂, 1 ♀, lgt. et Coll. Fonseca (det. by Fonseca). Switzerland: Vaud: Aigle, 5. 8. 1970 — 2 ♂♂, Bächli lgt. Bern: Biel, 27. — 31. 7. 1973 — 2 ♂♂, Bächli lgt. Délemont, 2. — 6. 8. 1974 — 1 ♀, Bächli lgt. Zürich district: Zürich, 25. 6. 1970 — 1 ♂, 23. 7. 1970 — 3 ♂♂, Bächli lgt. Solothurn: Mariastein, 21. — 25. 7. 1973 — 1 ♂, Bächli lgt. Uri: Seelisherg, 4. — 7. 8. 1973 — 3 ♂♂, 2 ♀♀, Bächli lgt. Aargau: Aarau, 6. 1965 — 1 ♂, 1 ♀, V. Schmid lgt. All Coll. Bächli. Czechoslovakia: Bohemia mer.: Sevětín, 9. 8. 1973 — 1 ♀, Mácálgt. Moravia mer.: Lednice, 23. 8. 1972 — 1 ♀, Vanžara lgt. (by sweeping over *Glechoma hederacea* L., which does not seem to be typical habitat for this species, indeed), Coll. Mácá,

Hungary: Zempléni-hegység: Ördög, 24. 6. 1960 — 1 ♂, Zsirkó lgt., Coll. Hungarian National Museum.

Remarks: Specimens from Délemont and Ševětín have rather atypically narrowed or shrivelled cheeks. One female specimen from Seelisberg has two bristles on the 2nd segment of the antennae. It seems best to consider these deviations a manifestation of intraspecific variability.



Figs. 24—29. *Amiota filipes*: Holotype ♂, Paratype ♀: Sequence of Figs. 24—27 as in Figs. 6—9; Figs. 28—29 as in Figs. 22—23.

✓ *Amiota filipes* sp. n.
(Figs. 24—29)

This species has the following remarkable combination of characters: Antennae, palpi and legs at least partly darkened; arista with long rays on

the ventral side. Middle metatarsus without anteroventral row of cuneiform bristles. Male genitalia asymmetric.

♂: Frons brown to black, lower part sometimes brownish rufous; ocellar triangle black, orbitae paler, rufous. Length of orbital bristles: 0.21, 0.16, 0.21 mm. Without interfrontal bristles. Face tan, darker in the lower part, lower margin slightly concave, carina low, straight. Palpi yellowish brown, somewhat flattened, with about six subequal bristles (besides several microchaetae) at outer margin. Antennae greyish brown; arista with yellow stem and dark rays; four upper rays and 2-3 lower ones, each up to 0.12 mm long. Cheeks yellow, evenly convex, about 0.05 mm wide.

Mesonotum dark brown to black, shining, mesonotal suture pale brown, tip of scutellum sometimes brown. Pleura blackish, shiny. Prosternum tan. Prescutellars more than half as long as posterior dorsocentrals and longer than anterior dorsocentrals. Scutellar index about 1.0. Two sternopleurals (sternopleural index 0.85) and two short bristles between them. Wings clear, veins yellowish. Wing length about 2.2 mm, width 1.0 mm. Wing indices: C-i 2.1, 4V-i 2.3, 4C-i 1.4, 5x-i 1.4, Cx-i 1.0, Ac-i 3.0, M-i 0.7. C₃ range 0.65. Costal warts inconspicuous or missing (magnification 60×). Halteres white. Legs yellow, at least coxae and fore femora brownish. Fore coxae with a strong erect bristle anterad. Middle metatarsus with a posteroventral row of about 33 cuneiform bristles; hind metatarsus anteroventrally with about 17 cuneiform bristles. Hind tibiae with only usual suberect bristles; inner side of tibiae sometimes apically darkened. Hind tarsi (especially first three segments) with irregular, almost transverse rows of strong bristles; these bristles are black in the holotype, brown, somewhat shorter and more adpressed in other specimens.

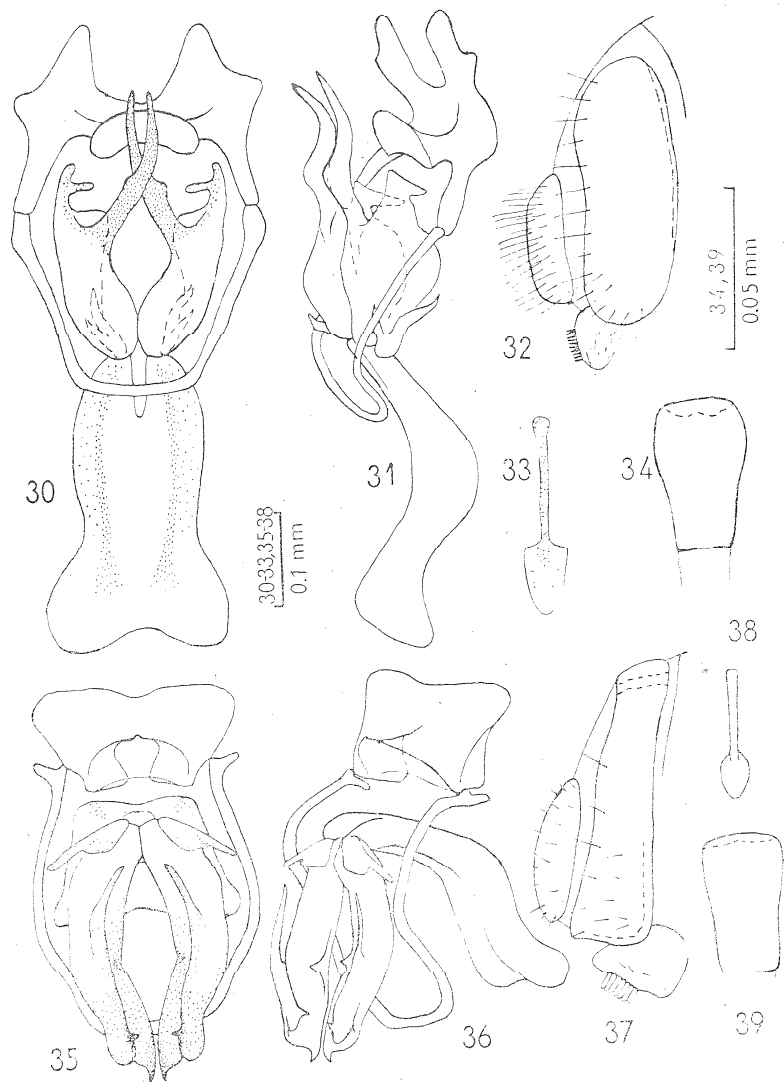
Abdomen dark brown, sides of tergites somewhat paler. Pre genital sternite roughly heart-shaped. Testes bright orange. Periandrium narrowly confluent above, posterior margin with about ten bristles each side, toe with about ten shorter bristles. Clasper oval, with 12 primary teeth. Aedeagal apodeme with a strong ventral ridge medially. Aedeagus composed of three pairs of rods: outer rods U-shaped, with a pair of strong, twisted and crossed rods between them; a pair of U-shaped rods, the right-hand one very small, situated distad of the crossed rods. A pair of lamellar, apically hooked prominences cranially directed and basally connected to the crossed rods. Anterior parameres short, lamellar. Posterior paramere poorly sclerotized, basally with long lateral arms, the medial prominence apically flat and bilobed.

♀: Similar to male with following exceptions: Middle tibiae slightly flattened (deformed?). Wing length 2.5 mm, width 1.2 mm, 4V-i 2.7, 4C-i 1.6. Terminalia: Spermathecae pear-shaped. Egg-guides without cuneiform bristles. 6th sternite not, or little, wider than long. Vaginal complex oval, not conspicuously elongated. Anal conus narrow, elongate. Whole postabdomen telescopic, with extensive membranous parts.

Distribution: Czechoslovakia.

Material studied (3 ♂♂, 2 ♀♀)

Holotype ♂: Bohemia mer.: Hluboká n. Vlt., raised in Jan., 1979 (at temperature 5-15 °C) from rotting logs collected in August, 1978, V. Karas lgt., Coll. Museum Soběslav. Paratypes: Same data as Holotype - 1 ♂ (partly crushed when collected). Sevětín (near Hluboká n. Vlt.), 12. 6. 1973 - 1 ♂, 22. 8. 1973 - 2 ♀♀, lgt. and Coll. Máca.



Figs. 30-34. *Anaieta alboquittata*; Borkovico: Sequence of Figs. 30-33 as in Figs. 6-9. Fig. 34. Spermatheca. Figs. 35-39. *Anaieta flavopruinosa*: ♂ - Týn nad Vltavou, ♀ - Holotype; Sequence of Figs. 35-38 as in Figs. 6-9. Fig. 39. Spermatheca.

✓ *Amiota albogettata* (WAHLBERG, 1838)

(Figs. 5, 30-34)

Drosophila albogettata WAHLBERG, 1838, K. Svenska Vet. Akad. Handl., 1838 : 22.
Leucopenga leucostoma BECKER, 1908, Ann. Mus. Nat. Hung., 6 : 320.

The redescription of this species by DUDA (1934) is rather thorough; male terminalia were figured by OKADA (1960), under designation "*Amiota albogettata*, European form" and some characters were also given by FONSECA (1965). Therefore only complementary information on the structures not or inadequately studied previously are given here.

♂: Face with antennal cavity not sharply ridged. Frons black, sometimes brownish anteriorly, without interfrontal bristlets but with hardly visible, soft, ± adpressed rufous fibres (magnification 100×).

Mesothoracic pleura often paler than the mesonotum. Thoracic spiracles large, whitish. Prosternum brown. Praescutellars slightly shorter than anterior dorsocentrals, posterior dorsocentrals more than twice longer than praescutellars. Sternopleural index about 0.8. Wing length about 2.0 mm. Wing indices: C-i 2.2-2.5, 4V-i 2.9-3.2, 4C-i 1.5-1.6, 5x-i 1.2-1.5, Ac-i 3.0-3.4, Cx-i 0.8-0.9, Mi 0.7-0.8, C₃ range 0.4-0.5. Legs yellow, or coxae, femora and tibiae except knees darker. Male hind tibiae with 5-7 erected bristlets on the inner side, these often inconspicuous; hind femur of male with a row of ± erect bristlets evenly distributed along whole length of inner side. Cuneiform bristlets posteroventrally on middle metatarsus (about 18) and anteroventrally on hind metatarsus (about 30).

Periandrium bipartite. Clasper with 12 teeth. Aedeagus bipartite; each lobe substantially saucer-shaped, with three marginal prominences, the basalmost of them being strongest and foot-shaped. Anterior paramere bilobed. Posterior parameres connected virtually only in region of medial projection. Hypandrium bent dorsad in medial part. Ejaculatory apodeme with stalk twice bent in lateral aspect.

♀: Female terminalia: Spermathecae pear-shaped, 1.5-2× longer than wide. Egg-guides without cuneiform bristles. Vaginal complex oval of similar shape as in *A. filipes*. Anal conus elongate, narrow, especially the cerci; bristles of cerci straight to slightly undulated, up to 0.15 mm long. 6th sternite at least twice wider than long. Postabdomen telescopic, with extensive membranous parts.

Distribution: Europe; almost unrecorded in the southern part but possibly overlooked. Old records from the eastern part of Palaearctic sub-region and from the Oriental region have not been confirmed by recent authors (see OKADA, 1971, 1977).

Material studied (19 ♂♂, 21 ♀♀)

Czechoslovakia: Bohemia mer.: Val, 23. 5. 1973 - 1 ♂, 2 ♀♀, 12. 7. 1973 - 1 ♂, 15. 8. 1973 - 2 ♀♀, 6. 9. 1973 - 1 ♂, 25. 9. 1973 - 3 ♂♂, 6 ♀♀. Borkovice, 24. 5. 1973 - 1 ♂, 24. 8. 1973 - 1 ♀, 9. 10. 1973 - 1 ♂, 24. 5. 1974 - 1 ♂. Veselí n. Luž.-Žižov, 27. 5. 1975 - 1 ♀. Poněšice, 13. 9. 1973 - 1 ♂, 3 ♀♀, 4. 10. 1973 - 1 ♀, 10. 9. 1974 - 6 ♂♂, 2 ♀♀. Párkarec, 26. 8. 1975 - 1 ♀, 15. 9. 1975 - 1 ♂. All Mácá lgt., Coll. Museum Soběslav et Coll. Mácá. Moravia mer.: Lednice, 18. 9. 1972 - 1 ♂. Vaňhara lgt., Coll. Mácá. Switzerland: Zürich district: Nänikon (Käsberg), 1. 8. 1958 - 1 ♂, 1 ♀. Burla lgt., Coll. Bächli, Bern: Delémont, 2.-6. 8. 1974 - 1 ♂, lgt. et Coll. Bächli. Schaffhausen district: Schaffhausen, 30. 5.-6. 6. 1973 - 1 ♀. J. Walter lgt., Coll. Bächli.

Remark: *Amiota delta* TAKADA, BEPPU & TODA is rather close to *A. alboguttata*, the former species is however distinguished by the flattened shape of male hind tarsi etc.

✓ *Amiota flavopruinosa* DUDA, 1934
(Figs. 35-39)

Amiota flavopruinosa DUDA, 1934 : 33.

This species was described on the basis of one female specimen; the male is described here for the first time.

♂: Face yellow, ± parallel-sided, with sharp oblique ridge along each antennal cavity; white spot occupying lower third of face. Frons including orbitae greyish (paler in lower part), with microscopic rufous hairs as in *A. alboguttata*, rather heavily pollinose. Occiput tan to brown. Palpi yellow. Antennae yellowish, 3rd segment slightly darker; arista with 3-5 of upper rays exceeding 0.1 mm in length, longest of lower rays reaching about 0.05 mm, the remaining hairs very fine. Cheeks yellow, vibrissa three times longer than other peristomals except the bristle in buccal angle.

Mesonotum matt, pale or dark tan, with yellowish grey pollinosity. Mesonotal bristles rufous, arranged as in *A. alboguttata*. Pleurae greyish brown, marmorate, with spiracular areas not conspicuously whitish. Scutellum and prosternum pale brown. Sternopleural index 0.8. Wings clear, with yellowish to brownish shade. Wing length 2.2 mm. Wing indices: C-i 2.3, 4V-i 2.6, 4C-i 1.3, 5x-i 2.4, Ac-i 4.0, Cx-i 0.9, M-i 0.6-0.7. C₃ range 0.5-0.6. Halteres white. Legs yellow. Middle metatarsus with 33 cuneiform bristles posteroventrally, hind metatarsus with about 18 cuneiform bristles anteroventrally. Hind femur with a row of about 12 erect bristles along whole length of inner side. Hind tibia with a conspicuous row of about 18 erect bristles bent backwards at apices.

Abdomen yellowish brown, apical three tergites darker. Perianthium connected above but sclerotization very fine there; posterior margin with six bristles each side, six additional smaller bristles scattered along each lateral margin. Clasper with apical margin straight, with a row of seven teeth at middle; outer surface with three bristles. Ejaculatory apodeme spoonshaped. Aedeagus consisting of a pair of convex elongate structures, each with four pointed prominences of characteristic shape. Anterior parameres shifted to dorsal side of aedeagus, each with outer margin projecting into a rod-like prominence. Posterior paramere with slight medial prominence. Hypandrium strongly bent dorsad about half of its length.

♀: As described by DUDA (1934). Mesonotum matt, pale brown or somewhat darkened, wings clear to slightly brownish. Terminalia as in *A. alboguttata* with following exceptions: Spermathecae slightly pear-shaped, 1.5 to 2 times longer than wide. Vaginal complex small, inconspicuous. Cerci with wavy bristles; the longest of them about 0.2 mm long. (The holotype now lacks the cerci but their characteristic bristling is mentioned in the description).

Distribution: Fed. Rep. Germany — Saar (DUDA, 1934), West Berlin (OLDENBERG, 1914, under "*Phortica lacteoguttata* PORTSCH."): Czechoslovakia (new record), Jugoslavia (new record, see also remark below).

Material studied (4 ♂♂, 3 ♀♀)

Holotype ♀: Fed. Rep. Germany: Saar: Sankt Wendel, 9. 6. 19.. (illegible), Duda lgt., Coll. Zool. Museum, Humboldt Univ., Berlin.

Other material studied: West Berlin: Berlin-Pichelsberg, 5. 7. 1900 — 1 ♂, 21. 7. 1906 — 1 ♀, 18. 6. 1907 — 1 ♂, Oldenberg lgt., Coll. Inst. Pflanzenf., Abt. Taxon. Ins., Berlin. Czechoslovakia: Bohemia mer.: Týn nad Vltavou, 8. 7. 1975 — 1 ♂, Máca lgt., Coll. Museum Soběslav. Switzerland: Uri: Seelisberg, 4.—7. 8. 1973 — 1 ♂, lgt. et Coll. Bächli. Zürich district: Nänikon, ? 27. 7. 1958 (with "??" on label) — 1 ♀, Burla lgt., Coll. Bächli. Jugoslavia: Kupari nr. Dubrovnik, 6.—19. 9. 1979, 1 ♂, lgt. et Coll. Bächli.

Remark: An unpublished figure of the hindleg and terminalia of a male collected at Macedonia, Lahanas Hills, July 1934, by Shannon and Hadjinnicolau, was kindly provided by Mr. G. C. Steyskal. The specimen is deposited in the U.S. National Museum, Washington.

APPENDIX

✓ *Drosophila lacteoquttata* PORTSCHINSKY, 1892, Trudy russk. ent. Obsch., 26 : 226.

This species was transferred by Oldenberg (1914) to the group related to "*Phortica*" *alboquttata* on the basis of the original description. It seems that the unique holotype female from Byelorussia, Mohilev, has not been examined since the original description. As I could not obtain positive information about the persistence of this specimen, our concept of the species still rests on the description. Although this is rather short, all the characters described correspond well to those of the pale specimens of *A. flavopruinosa* (the figure accompanying the description shows unusual arrangement of arista with 13 subequal dorsal rays and 12 ventral ones, but this seems likely to be a "lapsus calami"). This species may be treated as probable senior synonym of *A. flavopruinosa*, but this remains to be confirmed by examination of the type.

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Европейские виды подрода *Amiota* s. str. (Diptera, Drosophilidae)

Таксономия, лектотипы, морфология, определительная таблица; *Amiota filipes* sp. n., Чехословакия

Резюме. Дана ревизия европейских видов номинативного подрода *Amiota* Loew с особым вниманием к строению гениталий самцов, которые ранее были слабо изучены. Описан новый вид *Amiota* (s. str.) *filipes* sp. n. из Чехословакии. Обозначены лектотипы видов *Amiota subinsradiata* Duda, 1934 и *Phortica rufescens* Oldenberg, 1914 и обоснована самостоятельность некоторых видов, ранее считавшихся „варьетами“ или синонимами.

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Author's address: RNDr. J. Máča, Chmelnice 276, 391 81 Veselí nad Lužnicí I, Czechoslovakia.

FAUNISTIC RECORDS FROM CZECHOSLOVAKIA

Coleoptera

Tenebrionidae

Tribolium destructor UYTENBOGAART. Slovakia mer., Mužla (Štúrovo distr.), 24. ix. 1973, 1 spec., leg. Dusbábek, det. and coll. Picka. Circumstances of the record unknown. Synanthropic cosmopolitan species and important store pest. New species for Slovakia.

Byturidae

Satorystia meschniggi REITTER. Slovakia mer., Hégyfárok pr. Štúrovo, 11. vi. 1979, 1 spec., leg. Picka, det. Jelinek, coll. NMP. Hitherto known only from Hungary. New species for Czechoslovakia.

J. Picka, Praha 4, Sezimova 7, ČSSR

Staphylinidae

Cyphaea curtula ERICSON, 1839. Moravia bor., Jeseníky Mts., Kouty nad Desnou, vii. 1972, 1 ♂; dtdo, vii. 1978, 1 ♀. Leg., det. and coll. Pfeffer. Under bark of *Populus tremula*. Throughout Middle Europe. New species for Moravia.

A. Pfeffer, Raisova 2, 160 00 Praha 6, ČSSR

Diptera

Asteiidae

Asteia amoena MEIGEN, 1830. Numerous specimens from Moravian localities: H. Jeseník Mts.-Skříték, leg. Roháček, coll. SMO; H. Jeseník Mts.-Kotel, leg. Chvála, coll. PFP; Slezský Kočov, Zábřeh na Mor., Sternberk, Hrubá Voda-Jivová, Chomoutov-Pňovice, all leg. Lauterer, coll. Zuska; Lednice, leg. and coll. Vaňhara; Pálava, leg. Roháček, coll. SMO; all det. Roháček. Common Palaearctic species, recorded from Bohemia by MÁČA (1976). First records for Moravia.

Asteia concinna MEIGEN, 1830. Bohemia occ., Lužany, 18. vi. 54, 1 ♂; Ruda, 5. vii. 69, 10 ♂ 9 ♀; 17. viii. 69, 2 ♂; 23. vi. 71, 1 ♀, all leg. Doskočil, coll. PFP; Bohemia centr., Praha-Ruzyně, 1. viii. 62, 1 ♂ leg. Zusková; Hornoměřice nr. Praha, 3. viii. 53, 1 ♂, leg. Zuska, coll. Zuska; Moravia sept., Boskydy Mts., 20. vii. 60, 1 ♀, leg. Doskočil, coll. PFP; Brnošperk, 18. ix. 58, 1 ♀, leg. Konečná, coll. Zuska; Moravia mer., Zaječí-Přítlucká stráň, 2. vii. 62, 1 ♂; Horní Bojanovice, 14. vi. 63, 1 ♀, leg. Lauterer, coll. MMB; Slovakia or., Sívá Brada nr. Levoča, 6. vii. 73, 1 ♂ 1 ♀, leg. Roháček, coll. SMO, all det. Roháček. Widespread Palaearctic species; new for Czechoslovakia.

Asteia elegantula ZETTERSTEDT, 1847. Bohemia occ., Lužany, 30. vii. 54, 1 ♂, leg. Doskočil, coll. PFP; Moravia mer., Mikulov, 20. v. 59, 1 ♀, leg. Beránková; Hrušovany n. J., 22. v. 64, 3 ♀, leg. and coll. Zuska; Slovakia mer., Mužla, 4. vi. 58, 1 ♂ 2 ♀, leg. Škaloudová, coll. Zuska; all det. Roháček. Widely distributed but generally rare Palaearctic species; new for Czechoslovakia.

Leiomyza laevigata (MEIGEN, 1830). Moravia mer., Lednice, 14. vi. 71, 1 ♀; 16. ix. 71, 1 ♀, leg. and coll. Vaňhara, det. Roháček. A Holarctic species, recorded from Bohemia by VIMMER (1913), from Slovakia by BRANČEK (1910) and SOOS (1946). First record for Moravia.

Leiomyza daudai SABROUSET, 1956. Bohemia mer., Hlábětá-Stará obora, viii. 78, 3 ♂ 4 ♀ bred from Fagus and QUERCUS logs, adults emerged i. 79, leg. Karas, det. Roháček, coll. Muz. Soběslav and SMO. A little known species recorded from W. Europe, Finland, Poland, Hungary and Afghanistan. New species for Czechoslovakia.

Abbreviations: MMB — Moravské muzeum, Brno; PFP — Přírodovědecká fakulta KU, Katedra syst. zoologie, Praha; SMO — Slezské muzeum, Opava.

BRANČEK K., 1910: *Trans. tern. eg.*, 31-33 (1903-1910): 127-158. — MÁČA J., 1976: *Sbor. jihoces. Muz. Č. Budějovice, přír. vědy*, 14: 103-140. — SOOS A., 1946: *Fragm. faun. hung.*, 9: 2-10, 43-44. — VIMMER A., 1913: *Čas. čs. Spol. ent.*, 10: 38-80.

J. Roháček, Slezské muzeum, V. února 1935, 746 01 Opava, ČSSR