

**RESULTS OF THE CZECHOSLOVAK-IRANIAN ENTOMOLOGICAL
EXPEDITIONS TO IRAN 1977**

**Peripsychoda iranica sp. n. (Diptera, Psychodidae) with comments to
the genus and redescriptions of included species**

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This paper deals with 3 so far known palaearctic species (adults) of the genus *Peripsychoda* Enderlein, 1935: *P. iranica* sp. n., *P. auriculata* (Curt.) and *P. fusca* (Macq.) — in addition to *P. aurasica* (Vail.) described on the basis of larva from North Africa. Some species which were described from the Australian and Indo-Malayan regions are similar to the genus *Peripsychoda* End., however they must be transferred in future from the genus *Telmatoscopus* Eaton, 1904 sensu Quate, 1962 a, b, c, d to a new genus so far undescribed. The mentioned species differ from palaearctic species of the genus *Peripsychoda* End. by characters on antennae and thorax. Genus *Peripsychoda* Enderlein, 1935 is now placed in the tribe Paramormiini Enderlein, 1936 because of morphological characters (Ježek, 1984) whilst Enderlein (1936) included this genus in the tribe Mormiini Enderlein, 1936 (subtribe Mormiina). Inter-generic relationships were published by Ježek (1983).

Genus *Peripsychoda* Enderlein

- Peripsychoda* Enderlein, 1935: 248; 1936: 99; Sarà, 1952: 8; 1959: 10; Krek, 1971: 184; Vaillant, 1971: 33; 1972: 94; Wagner, 1973: 520; Salamanna, 1975a: 201; b: 70; c: 78; Wagner, 1979: 44; Hackman, 1980: 21.
- Peripsychoda* sensu Vaillant, 1972: 94, partim.
- Peripsychoda* auct. (subgenus of the genus *Telmatoscopus* auct.), partim; Jung, 1956: 186; Sarà, 1958: 3; Szabó, 1960: 211; Vaillant, 1958: 153; 1960: 106; 1961: 135; Nielsen, 1961: 141; Duckhouse, 1962: 431; Vaillant, 1963a: 86; b: 229; Nielsen, 1964: 154; 1965: 150; Szabó, 1965a: 81; b: 621; Sarà et Salamanna, 1967: 46; Halgoš, 1973: 74.
- Psychoda* auct. (nec Latreille, 1796), partim; Macquart, 1826: 167; Meigen, 1830: 272; Macquart, 1834: 164; Curtis, 1839: 745; Zetterstedt, 1850: 3706; Neuhaus, 1886: 18.
- Pericoma* auct. (nec *Pericoma* sensu Vaillant, 1971), partim; Schiner, 1864a: 17; b: 633; V. d. Wulp, 1877: 318; Eaton, 1893: 32; 1894: 31; 1897: 124; Strobl, 1898: 203; Thalhammer, 1899: 16; Kertész, 1902: 294; Becker, Bezzi, Bischof, Kertész et Stein, 1903: 161; Jacobs, 1903: 357; Tonnoir, 1919: 14; Feuerborn, 1922: 19; Barendrecht, 1934: 79; Tonnoir, 1940: 27; Kloet et Hincks, 1945: 332; Satchell, 1949: 421; Freeman, 1950: 81.
- Pericoma* Walker, 1856: 260 (nec *Pericoma* sensu Vaillant, 1971), partim.

Telmatoscopus auct. (nec Eaton, 1904), partim; Jung, 1956: 186; Sarà, 1958: 3; Szabó, 1960: 211; Vaillant, 1958: 153; 1960: 106; 1961: 135; Nielsen, 1961: 141; Duckhouse, 1962: 431; Vaillant, 1963a: 86; b: 229; Giljarov, 1964: 657; Nielsen, 1964: 154; Botosaneanu et Vaillant, 1965: 79; Nielsen, 1965: 150; Szabó, 1965a: 81; b: 621; Vaillant, 1966: 226; Bellier, 1967: 58; Sarà et Salamanna, 1967: 46; Tanasijčuk, 1969: 126; Rozkošný, 1971: 139; Vaillant, 1972: 97; Halgoš, 1973: 74; Wagner, 1973: 518.

Tipula auct. (nec Linné, 1758), partim; Schrank, 1803: 82.

Type-species: *Psychoda fusca* Macquart, 1826 (by orig. des.)

Differential diagnosis: The genus *Peripsychoda* Enderlein, 1935 has the last antennal segment skittle shaped, sensory filaments of flagellar segments finger-like basally, fan-shaped distad, patagia and tegulae developed in contrast to genera *Telmatoscopus* Eaton, 1904, *Panimerus* Eaton, 1913, *Psycmera* Ježek, 1984, *Parajungiella* Vaillant, 1972, *Jungiel-la* Vaillant, 1972, *Paramormia* Enderlein, 1935, *Trichopsychoda* Tonnoir, 1922, *Philosepedon* Eaton, 1904, *Feuerborniella* Vaillant, 1971 and *Thre-ticus* Eaton, 1904 which have the last antennal segment not as above, sensory filaments of antennae of another shape, patagia and tegulae not developed. The genus *Peripsychoda* Enderlein, 1935 has index of the base of M_{1+2} , A to maximum width of wing 1.5—1.7, a connection of M_3 , M_4 and Cu in one point, however the last antennal segment isn't globular, wings clouded, the end of R_5 conspicuously below apex of wing, the base of R_1 and R_{2+3} narrowly spaced, cubital area large, number of retinaculi 35—44, the sclerotized remainders of 10th segment inside of epandrium in two forms. On the other hand above mentioned genera have index of the base of M_{1+2} , A to maximum width of wing 1.8—2.3, a connection of M_3 , M_4 and Cu absent, wings almost without pigmentation (if wings clouded then the male copulatory organ with two long harpoon-shaped protuberances, very sclerotized), the end of R_5 a little below or at apex of wing, the base of R_1 and R_{2+3} aren't narrowly spaced (if the mentioned bases are narrowly spaced, harpagones have characteristic cut end), cubital area small, number of retinaculi 1—24, the sclerotized remainder of 10th segment inside of epandrium developed, simple.

Bionomy: Ssensu Vaillant (1972) larvae live in mud or rotten vegetation on banks of water runs and in decomposed leaves. Habitats: gutters, brooks in fields, arms of rivers, ponds and their outflows, water reservoirs, swamps, dust-heaps and inundated forests.

Distribution: Only Palaearctic region — 4 species: *Peripsychoda fusca* (Macquart, 1826) — Europe, *P. aurasica* (Vaillant, 1959) — North Africa (larva only), *P. auriculata* (Curtis, 1839) — Europe, *P. iranica* sp. n. — North Iran.

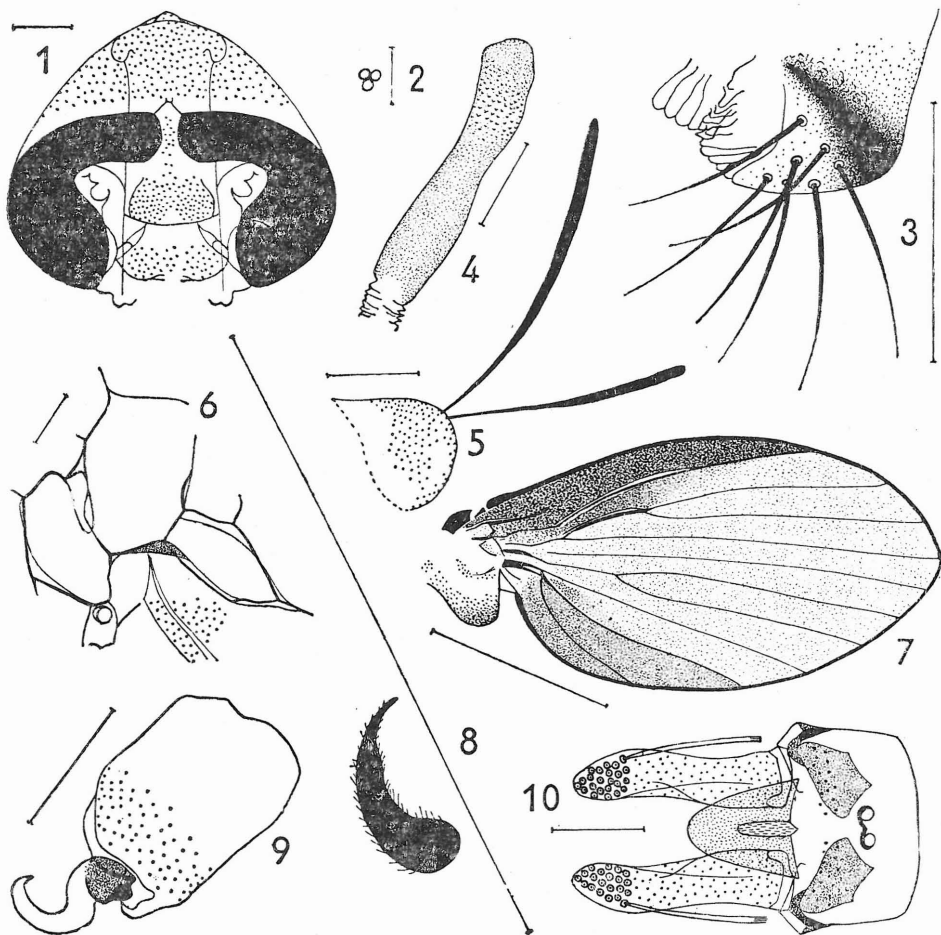
Discussion: Jung (1956) used the name *Peripsychoda* Enderlein, 1935 in a sense of the subgenus of the genus *Telmatoscopus* Eaton, 1904; he established new name *T. propensus* Jung, 1956 for *T. fuscus* Tonnoir, 1934. Jung recognized both species „*auriculatus* and *fuscus*“ in contrast to Tonnoir (1940), who recognized only one species with dimorphic males. This problem was discussed by Duckhouse (1962) in detail. Jung (1956) was followed in the status of this name *Peripsychoda* Enderlein,

1935 by Duckhouse (1962) and Wagner (1973). Rapp (1946), Duckhouse (1966) and Vaillant (1972) recognized generic status of the mentioned name. Vaillant (1972) wrongly quoted as type species of the genus *Peripsychoda* Enderlein, 1935 *P. auriculata* (Curtis, 1839).

***Peripsychoda iranica* sp. n.**

[Figs. 1—17]

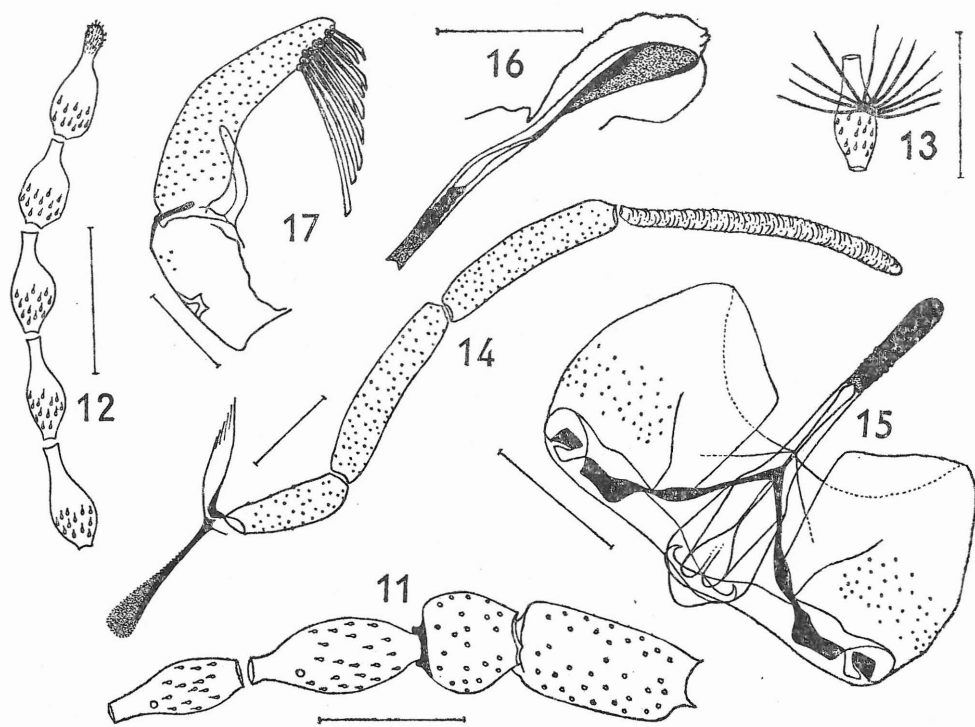
Diagnosis. Large species wing-length 2.5—2.7 mm.; wings broad, however, cubital area rather reduced, wings conspicuously clouded bet-



Figs. 1—10: *Peripsychoda iranica* sp. n. ♂; 1: head; 2: facets; 3: terminal lobe of labium; 4: patagium; 5: tegula; 6: thoracic sclerites laterally; 7: wing; 8: claw of P_1 laterally; 9: coxopodit and harpagon laterally; 10: epandrium and cerci dorsally. Scales 0.1 mm., in fig. 7 1 mm.

ween costal wing margin and R_{2+3} and in cubital area. Medial wing angle approximately 149° . Patagia long, thick, tegulae semiglobular. Claw of P_1 haired. Apical margin of the male copulatory organ of a heart outline. Cerci with 24—30 retinaculi in a rounded aggregation.

Male. Minimum distance between eyes equals almost two diameters of one facet, frons below frontal suture a little broader than two diameters of one facet. Frons with a row of irregularly arranged hairs. Index of distance of tangential points of the eye's ends to minimum width of frons 8.0, to facet diameter 13.3. Antennae 16-segmented. Scapus short, cylindrical, its length almost four times longer than width at base, pedicel almost globular, index of length of first antennal segment to second 1.8, flagellar segments pitcher-shaped, ratio of maximum width of pedicel to width of first and second flagellar segment 2.7:1.9:1.4. Index of length of first flagellar segment to length of second segment 1.3. First flagellar segment larger than following segments, the apical segment with a finger-like haired protuberance. Sensory filaments with about 11 branches arranged in a fan. Last segment of maxillary palpus annulate, this segment connected basally with apex of the preceeding one. Ratios of lengths of segments of maxillary palpus 3.4:5.1:5.2:7.5. Ratio of maximum length of cibarium to length of epipharynx 2.4:1. Corniculi wanting. Patagia of characteristic shape, tegulae semiglobular. Wings widely lancet-shaped, cubital area rather reduced, wing membrane bare; wings almost without strengthened parts of veins in central area, only R_{2+3} is strengthened distad. Wings brownish, clouded, conspicuously clouded between costal wing-margin and R_{2+3} . Basal costal nodes distinct. Sc uninterrupted. R_1 bent to Sc, basal field not developed, base of R_1 and R_{2+3} rather largely spaced, R_{2+3} arched to fore margin of wing, angle of base of R_2 and distal part of R_{2+3} larger than the angle of the same of R_3 and R_{2+3} , R_2 bent to fore margin of wing, R_3 inconspicuously S-shaped, R_4 with end before the apex of wing, arched to radial fork, R_5 arched in the same way. M_{1+2} straight, angle of base of M_1 and distal part of M_{1+2} the same as angle of the same of M_2 and M_{1+2} . M_1 , M_2 and M_3 straight. Basal part of M_4 arched to Cu and Cu bent to hind margin. M_4 and Cu connected at base. Veins r-r, r-m and m-m not visible. Medial wing angle 149° . Indexes of wing: $AB:AC:AD = 8.0:8.6:8.8$, $BC:CD:BD = 1.9:3.0:4.6$. Index of base of M_{1+2} , A to maximum width of wing 1.7. Index of length of haltere to its maximum width 3:1. Ratios of lengths of femora, tibiae and first tarsal segment: $P_1 = 17.8:17.3:6.9$; $P_2 = 19.1:23.8:8.8$; $P_3 = 19.4:25.2:8.9$. Paired tarsal claws bent, haired. Basal apodeme of male genitalia straight from dorsal view and proximally rounded, a little arched from lateral view as figured. Paired rounded protuberances developed, sheath dorsally Y-shaped. Coxopodites outside without conspicuous protuberances, index of maximum length of coxopodites to length of harpagones from dorsal view 0.8. Epandrium with two small circular apertures connected distad by a sclerotized broken rib. Paired sclerotized remainders of 10th tergum and sternum inside of epandrium trapezium-shaped, rounded on tops. Index



Figs. 11—17: *Peripsychoda iranica* sp. n. ♂; 11: basal antennal segments; 12: apical antennal segments; 13: 6th antennal segment with sensory filaments; 14: maxilla and palpus maxillaris; 15: copulatory organ, coxopodites and harpagones dorsally; 16: copulatory organ laterally; 17: epandrium and cercus laterally. Scales 0.1 mm.

of length of cercus to length of epandrium from lateral view 1.7. Hypandrium not developed. Epiproct long, a little narrowed distad, haired. Hypoproct tongue-shaped with minute hairs. Index of length of epiproct to width of hypoproct at base 1.6. Cerci S-shaped from ventral view, subapically with approximately 24—30 frayed retinaculi.

Material: 3 ♂. Holotypus (Inv. No. 695; Cat. No. 32981) and 2 paratypes (Inv. No. 696, 697; Cat. No. 32982, 32983) with the same data: N. Iran, Mazandaran, Golestan forest — Maharli, 20 km. N. W. of Dasht, Loc. No. 376 (37 22 N, 55 51 E), 530 m., 19.—21. 6. 1977, Ježek lgt. (Fig. 45).

Comments on the material: It was collected during IIIrd Czechoslovak-Iranian entomological expedition of the National Museum (Nat. Hist.), Praha and Plant Pest and Diseases Research Institute, Tehran in Iran. Figured male Inv. No. 695, only thoracic sclerites Inv. No. 696. All material was mounted on microscope slides with Canada Balsam

and deposited in the Department of Entomology of the National Museum [Nat. Hist.], Praha.

Female and bionomy unknown.

***Peripsychoda auriculata* (Curtis)**

(Figs. 18—36)

Psychoda auriculata Curtis, 1839: 745.

Pericoma auriculata; Eaton, 1897: 124; Kertész, 1902: 294; Becker, Bezzi, Bischof, Kertész et Stein, 1903: 161; Tonnoir, 1919: 14; Feuerborn, 1922: 19; Barendrecht, 1934: 79; Kloet et Hincks, 1945: 332.

Telmatoscopus (Peripsychoda) auriculatus; Jung, 1956: 186; Sarà, 1958: 3; Vaillant, 1958: 153; Szabó, 1960: 211; Vaillant, 1960: 106; Nielsen, 1961: 141; Vaillant, 1961: 135; Duckhouse, 1962: 431; Vaillant, 1963a: 86; b: 229; Nielsen, 1964: 154; 1965: 150; Szabó, 1965a: 81; b: 621; Sarà et Salamanna, 1967: 46; Halgoš, 1973: 74.

Telmatoscopus auriculatus; Giljarov, 1964: 657; Botosaneanu et Vaillant, 1965: 79; Vaillant, 1966: 226; Bellier, 1967: 58; Tanasijčuk, 1969: 126; Rozkošný, 1971: 139.

Peripsychoda auriculata; Sarà, 1952: 8; Krek, 1971: 184; Vaillant, 1971: 33; 1972: 94; Wagner, 1973: 520; Salamanna, 1975a: 201; b: 70; c: 78; Wagner, 1979: 44.

Peripsychoda zangherii Sarà, 1952: 5; Sarà, 1959: 10; Vaillant, 1972: 97. **Syn. n.**

Telmatoscopus zangherii; Vaillant, 1972: 97.

?*Peripsychoda nigritarsis* Enderlein, 1936: 99 [female].

Pericoma canescens auct. (nec Meigen, 1804); Walker, 1856: 258.

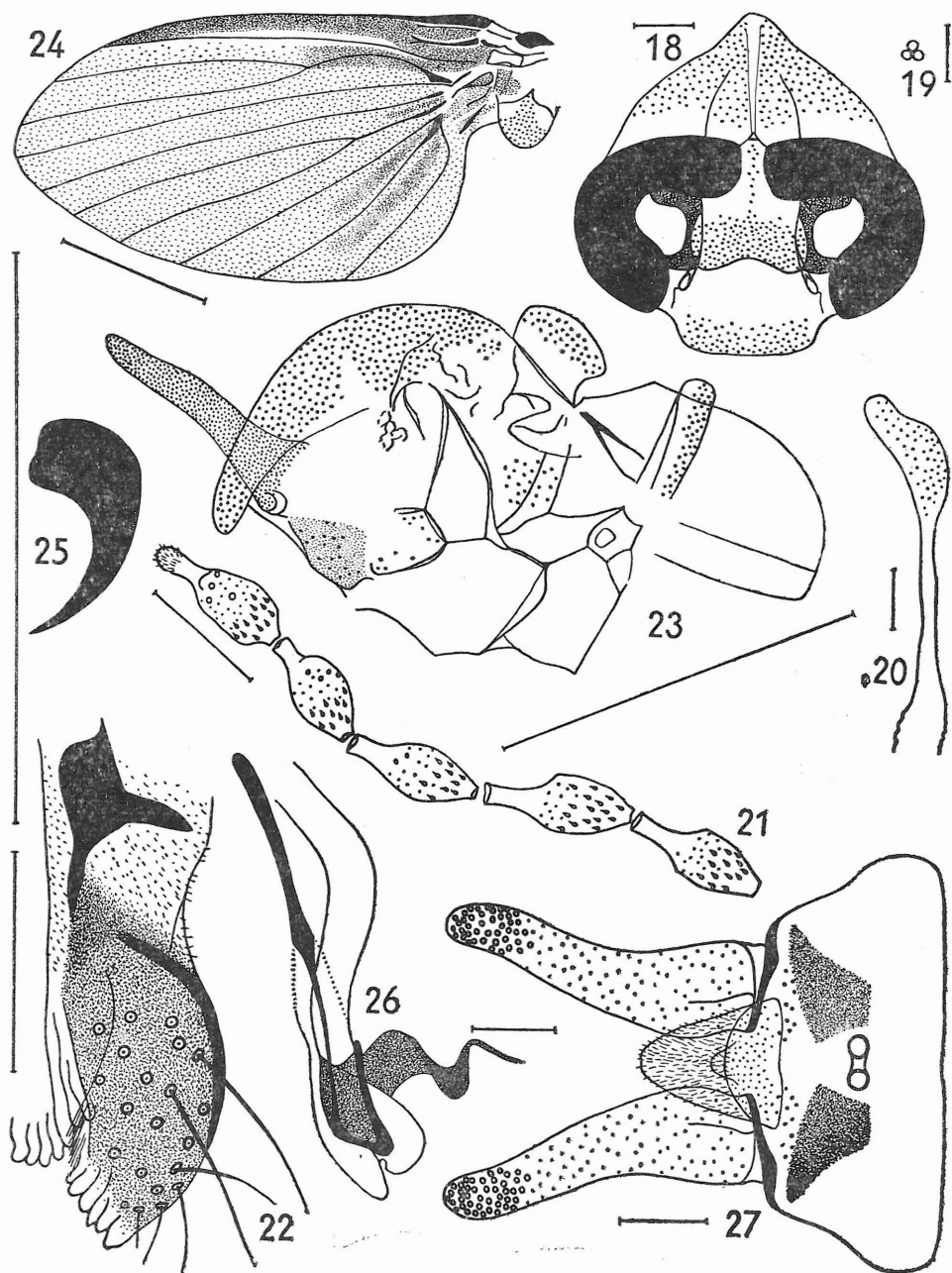
Pericoma fusca auct. (nec Macquart, 1826); Walker, 1856: 260; V. d. Wulp, 1877: 318; Feuerborn, 1922: 39; Tonnoir, 1940: 27; Satchell, 1949: 421; Freeman, 1950: 81.

Pericoma palustris auct. (nec Meigen, 1804); Schiner, 1864a: 17; b: 633.

Diagnosis. Large species, wings pigmented, the wing-length 3.5—4.0 mm. Conspicuous sexual dimorphism: wings of males with conspicuously developed cubital part in contrast to females, females without patagia and tegulae. Medial wing angle of males approximately 142°. Patagia long, widened apically, tegulae long. Claw of P_1 without hairs. Cerci with 44 retinaculi in a rounded aggregation. The last segment of maxillary palps of males much shorter than that of females. The male copulatory organ with circular end from dorsal view, the complicated forms of female genital chamber are also characteristic.

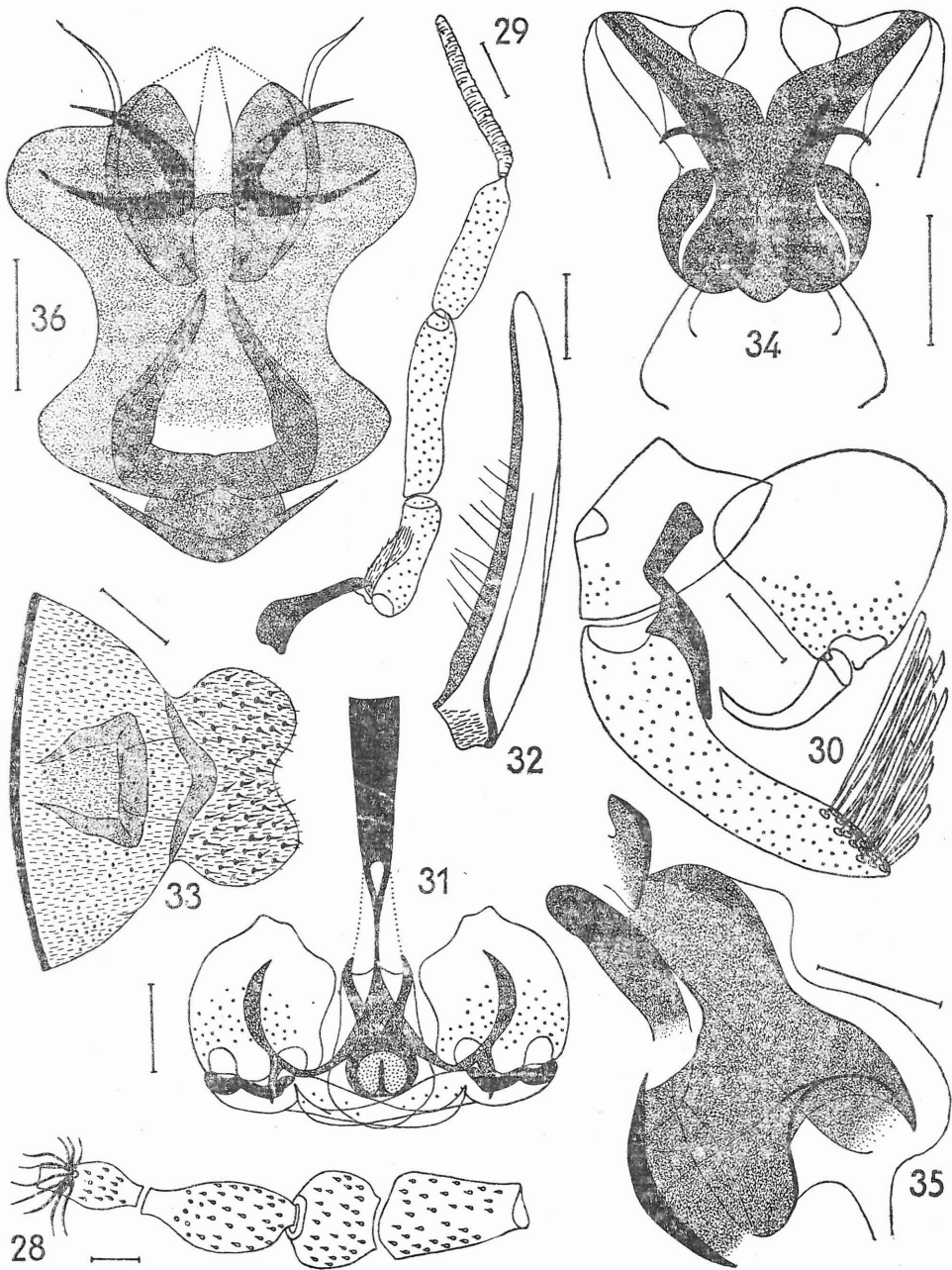
Male. Minimum distance between eyes equals two diameters of one facet, frons below frontal suture a little broader. Frons with a row of irregularly arranged hairs. Index of distance of tagential points of the eye's ends to minimum width of frons 6.5, to facet diameter 13.0. Antennae 16-segmented. Scapus short, cylindrical, its length three times larger than width at base, pedicel almost globular, index of length of first antennal segment to second 1.6, flagellar segments pitcher-shaped, ratio of maximum width of pedicel to width of first and second flagellar segment 2.7:1.9:1.4. Index of length of first flagellar segment to length of second segment 1.4. First flagellar segment a little larger than follo-

Figs. 18—27: *Peripsychoda auriculata* (Curt.) ♂; 18: head; 19: facets; 20: patagium; 21: apical antennal segments; 22: terminal lobe of labium; 23: thorax laterally; 24: wing; 25: claw of P_1 laterally; 26: copulatory organ laterally; 27: epandrium and cerci dorsally. Scales 0.1 mm., in figs. 23 and 24 1 mm.



wing segments, the apical segment with a finger-like protuberance which is haired. Sensory filaments with 10 branches arranged in a fan. Last segment of maxillary palpus annulate, variability of length of mentioned segment very large, this segment connected basally with apex of the preceeding one. Ratios of length of segments of maxillary palpus 3.5 : 5.2 : 4.2 : 4.9. Ratio of maximum length of cibarium to length of epipharynx 1.4 : 1. Corniculi lacking. Patagia of characteristic shape, length of tegulae with very large variability. Wings widely lancet-shaped, cubital area conspicuously developed, wing membrane bare; wings without strengthened parts of veins in central area. Wings clouded, conspicuously clouded behind costal margin. Basal costal nodes distinct. Sc uninterrupted. R_1 bent to Sc, basal field not developed, base of R_1 and R_{2+3} narrowly spaced, strengthened origin of R_{2+3} as a level of origin of R_4 , conspicuously arched to fore margin of wing, angle of base of R_2 and distal part of R_{2+3} rather large as well as the angle of the same of R_3 and R_{2+3} , R_2 a little bent to fore margin of wing, R_3 inconspicuously S-shaped, R_4 with end at the apex of wing, a little arched to radial fork, R_5 straight in its basal part, a little bent distad to fore margin of wing. M_{1+2} almost straight, angle of base of M_1 and distal part of M_{1+2} rather large, as well as the angle of the same of M_2 and M_{1+2} . M_1 a little bent to fore margin of wing, M_2 only inconspicuously S-shaped, M_3 only a little bent to hind margin of wing, while M_4 conspicuously arched in this way, M_4 strengthened. Cu basally conspicuously curved, M_3 and Cu connected on M_4 . Veins r-r, r-m and m-m not visible. Medial wing angle about 142° . Indexes of wing: $AB:AC:AD = 7.8:8.6:8.5$, $BC:CD:BD = 2.4:3.8:5.8$. Index of base of M_{1+2} , A to maximum width of wing 1.5. Index of length of haltere to its maximum width 2.8 : 1. Ratios of lengths of femora, tibiae and first tarsal segment: $P_1 = 24.0:25.3:11.5$; $P_2 = 26.5:31.2:13.0$; $P_3 = 27.5:35.5:13.0$. Paired tarsal claws rather bent. Basal apodeme of male genitalia straight from dorsal view, cut proximally, a little bent laterally. Basal apodeme narrowed distad with a drop-shaped hollow. Copulatory organ with circular end, C-shaped from dorsal view. Scalpel-shaped paired protuberances lacking, sheath developed. Coxopodites outside without conspicuous protuberance, harpagones more than 1.5 times longer in comparison with coxopodites from dorsal view. Epandrium of characteristic shape. Aperture elliptical, narrowed medially. Sclerotized remainders of 10th tergum and sternum inside of epandrium in shapes of paired trapezium forms rounded at edges. Index of length of cercus to length of epandrium from lateral view 2.0. Hypandrium not developed. Epiproct very short, distinctly hairy, hypoproct of triangular shape with rounded tops. Hypoproct also

Figs. 28—36: *Peripsychoda auriculata* (Curt.) ♂♀; 28: basal antennal segments; 29: maxilla and palpus maxillaris; 30: hypopygium laterally; 31: copulatory organ, coxopodites and harpagones dorsally; 32: female cercus laterally; 33: female subgenital plate; 34: female genital chamber anteriorly; 35: the same laterally; 36: the same ventrad. Scales 0.1 mm.



hairy but hairs are much finer. Length of hypoproct a little larger than its width at base. Cerci S-shaped from ventral view, subapically with approximately 44 retinaculi.

Female. Patagia and tegulae not developed, cubital part of wing reduced, 4th segment of maxillary palpus much longer than in males. Subgenital plate with widened base, with paired rounded lobes distally, hairy. Complicated sclerotized forms in the area of genital chamber without netting structures. Cercus almost straight, index of length of cercus to its maximum width 6.0.

Material: 500 ♂♂ and 500 ♀♀. ČSSR. Bohemia: Charvatce (Mladá Boleslav distr.), Chudíř, Čejkovice (České Budějovice distr.), Čelákovice, České Budějovice, Družec, Jabkenice, Konopiště (Benešov distr.), Kostomlaty nad Labem, Kounice (Kutná Hora distr.), Kynšperk nad Ohří, Lhotka (České Budějovice distr.), Malé Kyšice, Měrunice, Mladá Vožice (D.), Nymburk, Pěčice, Planá nad Lužnicí, Praha-Kunratice, Račice (Litoměřice distr.), Roudná (Tábor distr.), Sepekov, Srby (Kladno distr.), Úvaly (Praha-východ distr.). Moravia: Babice nad Svitavou, Brodek u Prostějova, Břeclav, Dětmárovice, Dolní Libochová, Horákov, Líšeň, Moravičany (M.), Nová Ves (Žďár n. S. distr.), Nové Sady (Olomouc distr.) (M.), Ochoz u Brna, Osová, Ostrava, Plumlov (M.), Pohořelice (Břeclav distr.), Račice (Vyškov distr.), Stonava, Střížov-Přímělkov, Třebíč, Závada (Karlín distr.), Znojmo.

Comments on the material: The name of the district town is only given where according to the alphabetic list of settlements of ČSSR one or more homonym of the locality exist. All collected by author, only D.-Dlabola lgt., M.-Martinovský, deposited in the Department of Entomology of the National Museum (Nat. Hist.), Praha. Figured male specimen is labelled Račice (Litoměřice distr.), 25. 6. 1975, figured female specimen Znojmo, 5. 8. 1974. Material was partially mounted on microscope slides, partially preserved in alcohol.

Occurrence in ČSSR: VI—IX.

Bionomy: Larva was figured and described by Feuerborn (1923) and Satchell (1949) under the name *Pericoma fusca* Macquart, 1826. A key-diagnosis not differentiated from „*fusca*“ published Vaillant (1960) and Giljarov (1964). Pupa was described by Satchell (1949) also under name „*fusca*“. Ssensu Vaillant (1971, 1972) larvae lives in the banks of brooks, springs, streams, reservoirs of stagnant water, under decayed and moist rotten leaves and in humose alluvium of flows. Vaillant (1972) collected this species in France to altitude 1000 m. above sea level. Adults were collected by author of the present paper on banks of drainages, field brooks, arms of rivers, ponds and their outflows, water reservoirs, swamps, dust-heaps near moist places, in areas of bogs in lowland forests with growth of *Alnus*, *Salix*, *Populus*, *Fraxinus*, *Quercus*, *Carpinus*, *Acer*, *Sambucus*, *Picea*, *Pinus* and *Robinia*, undergrowth with *Urtica*, *Phragmites*, *Scirpus*, *Calamagrostis*, *Typha*, *Lysimachia*, *Mentha*, *Stachys* and *Rubus*. Organs for sexual attraction studied Feuerborn (1922) and sexual dimorphism characterized Duckhouse (1962).

Distribution: England, Belgium, BRD, Czechoslovakia, Denmark, France, Hungary, Italy, Netherlands, Romania, Sweden, Switzerland and Yugoslavia.

Data about type-material and type-locality: There are 2 male specimens perhaps of syntypic serie *P. auriculata* (Curt.) in Dublin museum. One specimen labelled „Type, Haliday, 20. 2. 82, Side, Eaton, British“ was loaned to me by the generosity of Dr. O'Connor who permitted dissection of parts of body and mounting of microscope slide. Lectotype was not established because of the fact that one of several curators of the museum designated subsequently by „Type“ the specimen which was collected by Eaton later than the quoted date of the published paper of Curtis. This specimen does not correspond to Curtis's conception of species. Moreover the mentioned designation was not based on a revisional study. The date 20. 2. 1882 isn't the date of Haliday's collecting, but date of designation of „Type“. Original description of Curtis is very short and generalized. The specimen was not determined by Haliday. *P. auriculata* (Curt.) in this paper is based on the mentioned specimen which accords with the view of this species in the quoted literature. A second specimen was kindly loaned by Dr. O'Connor but, because of above mentioned facts, it was not dissected.

Discussion: The extensive synonymy of this species suggests that views on the systematic position of the species has been developed gradually. Jung (1956) established „hypotypoids“ of males and females on the basis of material from West Germany. However, „hypotypoids“ are not recognized by nomenclatorial code. Males of this species were redescribed and figured by Vaillant (1972), female was described by Jung (1956) and redescribed by Nielsen (1961). Author of the present paper measured the apical part of maxillary palpus of 1000 specimens (males as well as females) of this species of ČSSR and synonymized on the base of variability of *P. zangherii* Sará, 1952, described on the base of very long apical segment of maxillary palpus with *P. auriculata* (Curtis, 1839). Type-material of *P. zangherii* Sará, 1952 collected in district Forlì near village Ladino by Zangheri is probably lost.

***Peripsychoda fusca* (Macquart)**

(Figs. 37—42)

Psychoda fusca Macquart, 1826: 167; 1834: 164.

Pericoma fusca; Schiner, 1864a: 17; Kertész, 1902: 295; Eaton, 1893: 32; 1894: 31; 1897: 122; Becker, Bezzi, Bischof, Kertész et Stein, 1903: 162; Jacobs, 1903: 357; Tonnoir, 1919: 16; Feuerborn, 1922: 39; Kloet et Hincks, 1945: 332.

Telmatoscopus (Peripsychoda) fuscus; Jung, 1956: 185; Szabó, 1960: 211; Vaillant, 1960: 106; 1961: 137; Nielsen, 1961: 141; Duckhouse, 1962: 431; Vaillant, 1963a: 86; Nielsen, 1964: 155; Sará et Salamanna, 1967: 46.

Telmatoscopus fuscus; Giljarov, 1964: 657; Tanasijčuk, 1969: 126; Vaillant, 1966: 228.

Peripsychoda fusca; Enderlein, 1935: 248; Sará, 1952: 8; Krek, 1971: 186; Vaillant, 1972: 96; Salamanna, 1975c: 90; Wagner, 1979: 44; Hackman, 1980: 21.

Psychoda calceata Meigen, 1830: 272; Zetterstedt, 1850: 3706; Neuhaus, 1886: 18.

Pericoma calceata; Walker, 1856: 260; Schiner, 1864a: 17; b: 634; V. d. Wulp, 1877: 318; Thalhammer, 1899: 16.

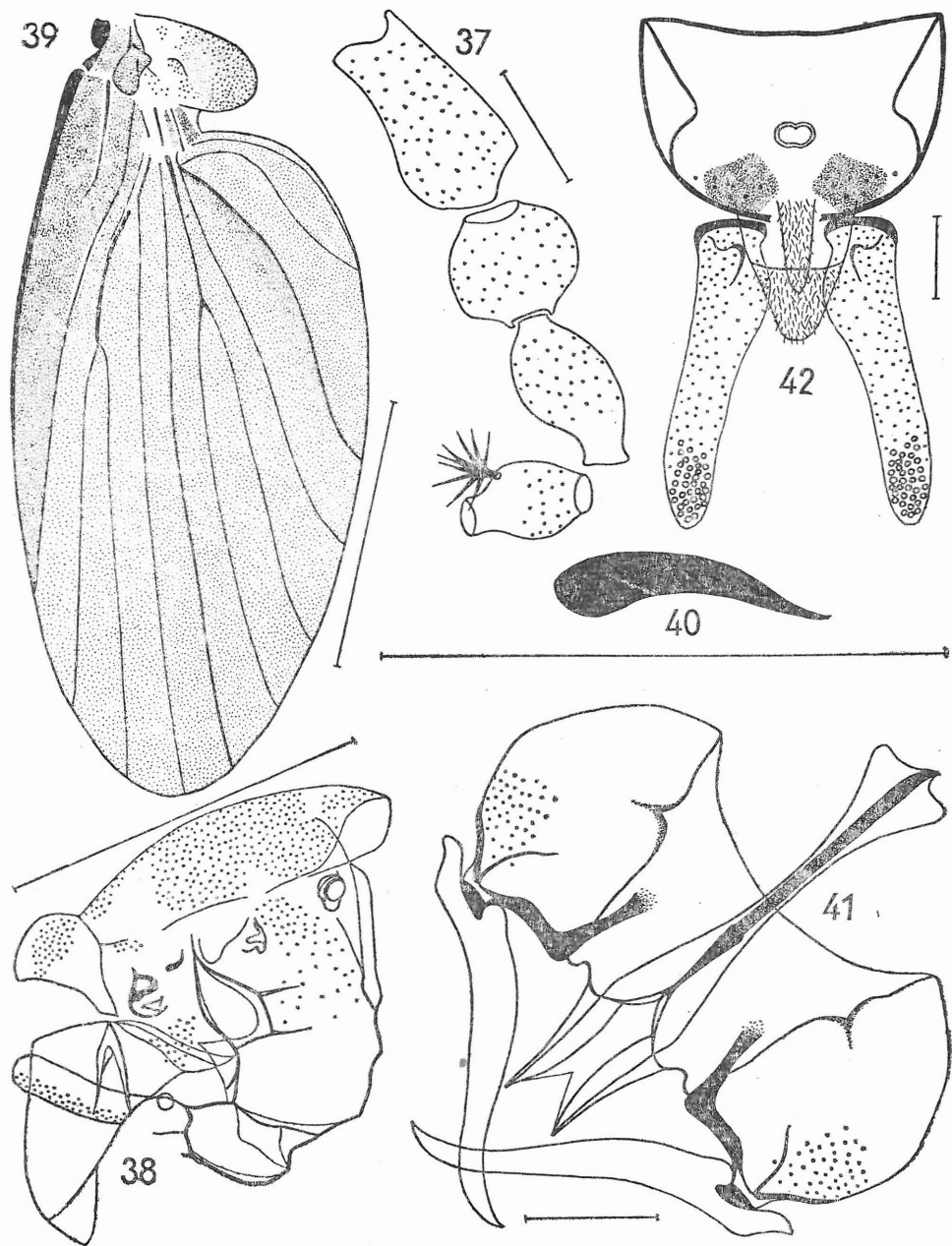




Fig. 43: Golestan forest in North Iran.

Fig. 46: Zone of consistent forest in Mazandaran province.





Fig. 44: Eastern border of Wildlife Park with a transition between steppe and forest in Golestan.



Fig. 45: An interior of the type-locality of *Peripsychoda iranica* sp. n. [Diptera, Psychodidae] of Golestan forest (Loc. No. 376).

Pericoma tristis auct. (nec Meigen, 1830); Schiner, 1864a: 17; b: 634; Strobl, 1898: 203.

Tipula phalaenoides auct. (nec Linné, 1758); Schrank, 1803: 82.

Pericoma auriculata auct. (nec Curtis, 1839); Tonnoir, 1940: 27; Freeman, 1950: 82.

Diagnosis. Large species, wing-length 3.2 mm. Wings of male rather broad, brownish, conspicuously clouded in the area of radial fork, C and base of wing, conspicuous brownish colour traces M_4 in area between M_3 and M_4 . Medial wing-angle 170° . Patagia long, thick, tegulae hardly visible. Claw of P_1 without hairs. Copulatory male organ of characteristic shape with paired knife-like divergent protuberances. Cerci with conspicuous protuberances oriented to medial line of epandrium, approximately with 35 retinaculi subapically fixed in an irregular longitudinal tuft.

Male.*) Antennae 16-segmented, hairy. Scapus cylindrical, widened distad, scape three times longer than its width at base. Index of length of first antennal segment to second 1.7. Pedicellus almost globular. Ratio of maximum width of pedicellus to width of the first and second flagellar segment 3.7 : 2.6 : 2.2. Flagellar segments pitcher-shaped, index of length of first flagellar segment to length of second segment 1.2. Sensory filaments of antennae fan-shaped with 9 thin and straight arms in one fan. Wings broadly lancet-shaped, brownish mostly in area among radial fork, C and base of wing, conspicuous brownish colour traces M_4 in area limited M_3 and M_4 . Wing-membrane bare, numerous local strengthening of veins in central area of wing lacking. Basal costal nodes distinct. Sc rather long, uninterrupted, bent to C distad. R_1 straight basally, bent to C distad; basal field not developed, R_{2+3} strengthened and bent to fore wing-margin. Base of R_1 and R_{2+3} narrowly spaced. R_2 and R_3 straight; angle of basal part of R_2 and distal part of R_{2+3} larger than angle of R_3 and R_{2+3} . R_4 bent basally to fore margin of wing, a little bent distad in the same way, end of R_4 at apex of wing. R_5 strengthened, bent to radial fork in middle part, end of R_5 below of apex of wing. M_{1+2} straight, M_1 bent to fore margin of wing, M_2 inconspicuously S-shaped, angles of distal part of M_{1+2} and basal part of M_1 and distal part of M_{1+2} and basal part of M_2 as figured. M_3 inconspicuously S-shaped; M_4 conspicuously strengthened and bent to hind wing-margin as well as weakened Cu. M_3 and Cu connected on M_4 . Veins r-r, r-m and m-m not visible. Medial wing-angle 170° . Indexes of wing: AB : AC : AD = 12.1 : 12.7 : 13.9, BC : CD : BD = 3.1 : 4.3 : 7.3. Index of base of M_{1+2} , A to maximum width of wing 1.7. Basal part of hind wing-margin with rather large lobe. Ratios of lengths of femora, tibiae and first tarsal segments:

*) Redescription and figures of diagnostic characters are incomplete because of only single microscope preparation of this species.

Figs. 37—42: *Peripsychoda fusca* (Macq.) ♂; 37: basal antennal segments; 38: thorax laterally; 39: wing; 40: claw of P_1 laterally; 41: copulatory organ, coxopodites and harpagones dorsally; 42: epandrium and cerci dorsally. Scales 0.1 mm., in figs. 38 and 39 1 mm.

$P_1 = 20.1:21.8:8.7$; $P_2 = 23.1:29.0:11.2$; $P_3 = 24.2:34.0:12.0$. Paired tarsal claws only a little bent. Basal apodeme of male genitalia straight, conspicuously and abruptly widened. Copulatory organ of characteristic shape with paired divergent knife-like protuberances, smooth outside. Coxopodites outside without conspicuous protuberances, harpagones a little longer than coxopodites from dorsal view, inconspicuously S-shaped, pointed apically. Epandrium with elliptical aperture, antero-posteriorly narrowed, paired sclerotized remainders of 10th tergum and sternum inside of epandrium conspicuous. Epiproct long, narrowed distad, rounded apically, spined, hypoproct larger, hairy. Cerci with conspicuous protuberance basally which is directed to medial line of epandrium, approximately with 35 retinaculi subapically, irregularly arranged, cluster of insertions of retinaculi very prolonged in line of cercus.

Material: 1 ♂. ČSSR. Moravia: Mokrý hora — Brno.

Comments on the material: Single male specimen mounted in microscope preparation is deposited in the Moravian Museum Brno. Preparation is labelled 10. 6. 1914, lgt.?, Vaillant det.

Occurrence in ČSSR: VI.

Bionomy: Life cycle one year. Larva was described and figured by Feuerborn (1923) as „*fusca*“, however it is „*auriculata*“ sensu Jung (1956). Vaillant (1960) and Giljarov (1964) published a key-diagnosis of larva, not distinguished from „*auriculata*“. Feuerborn (1922) studied organs for sexual attraction of this species. Duckhouse (1962) referred to the dimorphism of this species. Larvae lives sensu Jung (1956) in moss wetted by water, near weirs and mill races, waterfalls, among moist leaves, near outflows of springs and brooks, on stones with moist moss in shallow rivers. Krek (1971) collected this species at 760 m. above sea level.

Distribution: Belgium, Corsica, Czechoslovakia, Denmark, England, Finland, France, Hungary, Italy, Netherlands, Romania, West Germany and Yugoslavia. Vaillant (1963a) published wrongly this species from Austria on the base of Schiner (1864b), who recorded the specimen from France.

Data about type-material and type-locality: Macquart's type-material was probably lost in France. Horn et Kahle (1935—1937) quoted: „Hauptmasse hat stark gelitten, ex parte an Mus. Hist. Nat., Lille“. Type-locality unknown so far.

Discussion: Vaillant (1972) figured and redescribed this species on the basis of specimens determined by Tonnoir from Belgium and France. Female was described and figured by Nielsen (1961). Jung (1956) established on the basis of material from West Germany male „hypotypoid“, however „hypotypoid“ is not recognized by nomenclatorial code.

Acknowledgements

It is a great pleasure to acknowledge the generous help of colleagues who have given me information and loaned me comparative material. In particular Dr. O'Connor, Museum of Ireland, Dublin, Dr. J. Stehlík, CSc. and Dr. P. Lauterer, Moravian Museum, Brno.

Summary

The genus *Peripsychoda* Enderlein, 1935 is qualified and the systematic position of this palaearctic taxon is discussed. Differential diagnosis as well as distribution of all included species are presented. *P. iranica* sp. n. is described and figured on the basis of males from North Iran. Males and females of *P. auriculata* (Curt.) and male of *P. fusca* (Macq.) are redescribed on the basis of material from Czechoslovakia, diagnoses and comments on bionomy are given, all literary data are summarized. New synonymy is proposed: *P. zangheri* Sarà, 1952 syn. n. = *P. auriculata* Curtis, 1839. Arguments counter-lectotype-designation in the case of *P. auriculata* (Curt.) are advanced.

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