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Moth flies (Diptera, Psychodidae) inhabiting Prague city and adjacent localities with descriptions of five new species

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Diptera, Psychodidae, taxonomy, faunistics, Prague agglomeration, new species, redescriptions.

Abstract: Five new species of Psychodine moth flies are described from Central Bohemia in the presented paper: *Jungiella (Psychogella) inundationum sp.n., Philosepedon kowarzi* sp.n., *P. nickerli* sp.n., *P. pragensis* sp. n. and *Berdeniella vimmeri* sp. n. Three rare species, new to Czech Republic, are redescribed here: *Taramormia pulcherrima* (Wag.), *Telmatoscopus britteni* Tonn. and *Berdeniella manicata* (Tonn.). Diagnoses of all of these species are given and detailed information about type-material as well as type-localities are included and all important morphological characters are figured. Moreover a review of 52 more or less common species inhabiting Prague agglomeration is shown and characteristics of their habitats are given. All preserved historical specimens of moth flies of the Vimmer collection deposited in the National Museum in Prague were revised. Known literary data are quoted.

Municipal sewages and other liquid wastes of Prague agglomeration are suitable places for life cycles of many species of moth flies. Adults are very common on leaves of plants of the banks of natural brooks as well as paved ones, ditches, gutters, blind arms of the river Vltava (shipyard), water reservoirs of stagnant water, spring areas, wet meadows, swamps, bogs, pools below rocky walls, mouths of canals to the river, wet biotopes below railway-lines shaded by bridges, rills of fields, bluffs and hillsides, tributaries and outflows of ponds, sewers, fountains, wells etc. The adults are seen as well on the walls of dark rooms, flats and closets, latrines, overgrown wet places with rubbish, in town agglomeration, in the localities often polluted by dustbins, rubbish heaps, gardens with rotten organic material, manure, excrements,farms with pigs, rubbished rills. Some species are very common by the sides of the sewage treatment tanks with accumulated waste and decomposed materials. The decaying vegetation and scum of green algae are the main features of the sewage drains. Adults lay eggs in clusters in drains, liquid wastes and sewage deposits. Many species are collected as well by light at night. The species whose adults feed on human excrement, garbage and kitchen refuse may be important in transmission of human diseases. Broken

scales of the wings, setae, hairs, bristles and sensory filaments of moth flies can cause bronchial asthmatic cough and allergy to moth flies (unpublished information) probably in the sense of Kino et al. (1987). The role of moth flies in this matter needs to be verified in future, as well as their use as bioindicators of polluted waters.

Only Vimmer (1913) quoted in his Catalogus Dipterorum several species of moth flies from Prague; however, almost all these literary data concerning family Psychodidae must be rejected because of his mostly wrong determinations. A part of his material is probably lost, but there are 5 species (5 specimens) included in the Vimmer collection of Diptera from the end of 19th and the beginning of 20th century, deposited in the Department of Entomology of the National Museum in Prague. Review of preserved and revised species: *Trichomyia urbica* Curt., ♀, Černošice, 6. VI., Vimmer (determined as „*Pericoma canescens* Mg.") – Inv. No. of the slide 3098; *Tinearia alternata* (Say), ♂, Vrané, VI., Vimmer (determined as „*Psychoda albipennis* Zt.") – Inv. No. 3099; *Logima albipennis* (Zett.), ♀, Letná, V., Vimmer (determined as „*Psychoda phalenoid.* L.") – Inv. No. 3100; *Satchelliella nubila* (Meig.), ♂, Krč, 5.V.1894, Collectio Klapálek (determined as „*Pericoma canescens* Mg.") – Inv. No. 3097; *Satchelliella palustris* (Meig.), ♂, Chuchle, V. 1904, Col. Vimmer (determined as „*Pericoma palustr.* Mg.") – Inv. No. 3096. Several papers with some rather sparse data about moth flies from Prague city have been published by Ježek in the past (1972; 1977; 1982; 1983 a, b; 1985 a, b; 1987 a, b, c; 1988; 1990 a, b).

The author's research of Prague city started in 1978 and results are limited by year 1989. This paper quotes the representative material of moth flies mounted on slides only (Canada Balsam) for the faunistic data bank of the National Museum in Prague (1015 slides). Literary data are based partially on an alcohol material as well. This paper is one of a series of papers as further results of research on moth flies in Czech and Slovak Republics, based on the study of all accessible old type material. The problematic generic position of the included species was resolved by Ježek (1977; 1983 a–d; 1984 a, b; 1985 a; 1988; 1990 a, c). The present paper is an attempt to cover a gap in our knowledge on species of moth flies in town agglomerations.

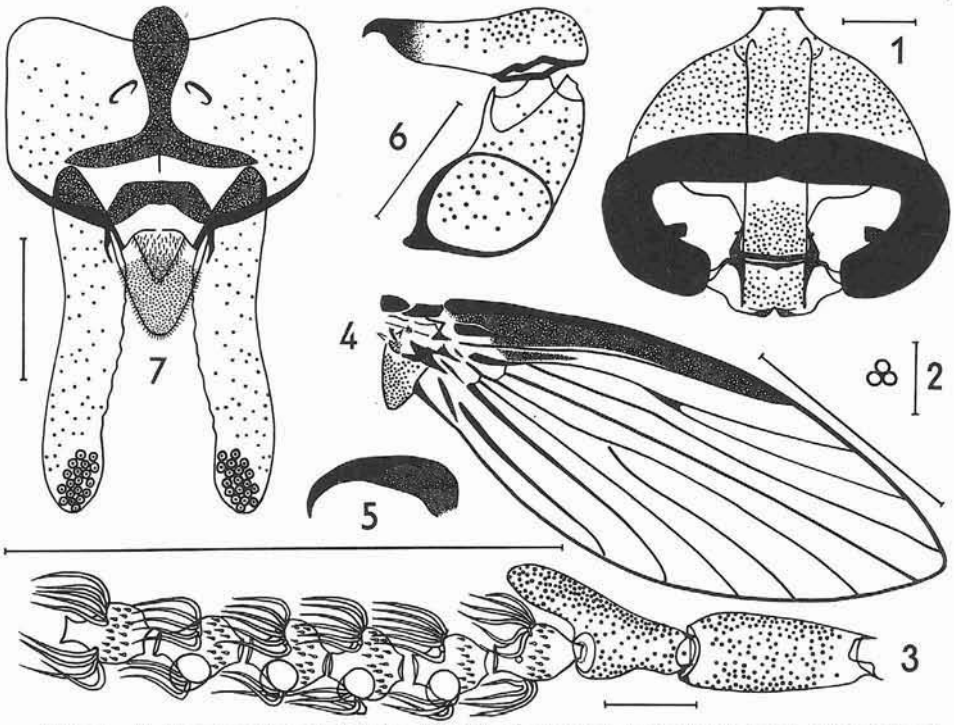
Taramormia pulcherrima (Wag.)

(Figs. 1 – 14)

Mormia pulcherrima Wagner, 1979 : 237, 238, 239.

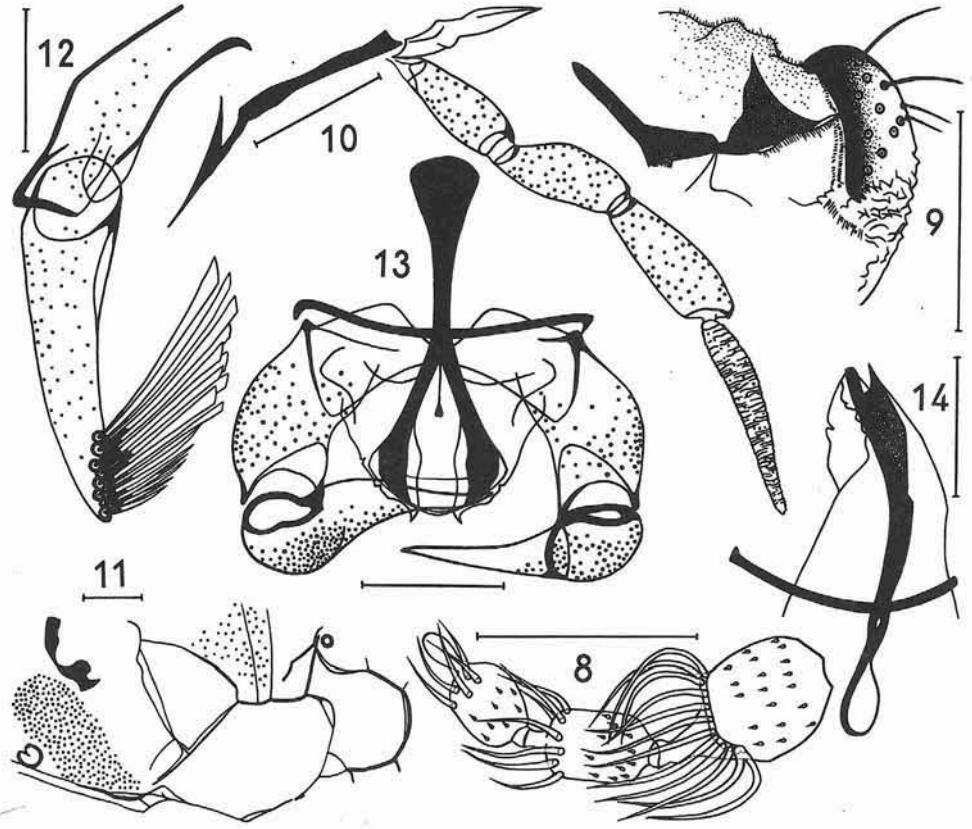
Taramormia pulcherrima; Ježek, 1984a : 158; c : 224.

Differential diagnosis. Closely related to *Taramormia tatrica* Ježek, 1984. This latter species has the neck of 15th antennal segment very short, basal apodeme widened not only proximally, paired protuberances of male copulatory organ conspicuously large and bent, oriented laterally, number of retinaculi greater than 20. The redescribed species below has the neck of 15th antennal segment conspicuous, basal apodeme widened only proximally, paired protuberances of male copulatory ogan relatively small, straight, oriented caudally, number of retinaculi less than 20.



Figs. 1 – 7: *Taramormia pulcherrima* (Wag.), ♂. 1: head; 2: facets; 3: basal antennal segments; 4: wing; 5: claw of P_1; 6: coxopodite and harpagon laterally; 7: epandrium and cerci dorsally. Scales 0.1 mm, in Fig. 4 – 1 mm.

Male. Eyes contiguous, touching for more than two diameters of one facet. Index of distance of tangential points of eye's ends to facet diameter: 8.8. Antennae 16-segmented. Scape almost cylindrical, a little widened distad, rather long, its length 5.4 times greater than width at base. Pedicel asymmetrical, with long and strong protuberance laterad. Flagellar segments pitcher-shaped, middle segments of flagellum are more asymmetrical than basal and apical ones. Distal necks of flagellar segments are more and more prolonged to distal part of flagellum in contrast to apical two segments with short necks. Ratios of maximum width of scape to width of pedicel and first and second flagellar segments 2.1:4.3:1.5:1.8, ratios of length of antennal segments 1 – 4 5.4:3.3:2.4:2.0. The last two flagellar segments minute (Fig. 8) in contrast to the segment 14. Apical antennal segment with a thumb-like protuberance, almost egg-shaped. Sensory filaments conspicuous, comb-shaped, simple, segment 15 with 7 needle-shaped subapical sensory filaments, segment 16 with only five. Circular organs of four flagellar segments developed (4 – 7). The first flagellar segment with very small sensory circle. Ratios of lengths of segments of maxillary palps 3.4:3.5:4.2:5.5. Last segment of maxillary palpus annulate, connected basally with apical end of the foregoing segment. Terminal lobe of labium on Fig. 9. Ratio of ma-



Figs. 8 – 14: *Taramormia pulcherrima* (Wag.), ♂. 8: apical antennal segments; 9: terminal lobe of labium; 10: maxilla and palpus maxillaris; 11: thoracal sclerites laterally; 12: epandrium and cercus laterally; 13: copulatory organ, coxopodites and harpagones dorsally; 14: copulatory organ laterally. Scales 0.1 mm.

ximal length of cibarium to length of epipharynx 2.2:1. Wings narrowely lancet-shaped, 2.7 mm long (variability 2.4 – 2.7 mm), cubital area not conspicuously developed, wing membrane bare. Wings clouded only behind basal costal margin (only between Sc and fore margin of wings) as well as in a small area between R_1 and R_{2+3}. Wings without small strengthened parts of veins in central area; Sc, base of R_{2+3}, radial fork, R_5, basal part of M_{1+2},basal part of both M_4 and Cu strengthened. Basal costal nodes distinct, Sc uninterrupted. Angle of base of R_2 and R_3 acute, the angle of distal part of R_{2+3} and R_3 a little larger than the angle of R_{2+3} and R_2. Angle of base of M_1 and M_2 acute as well, the angle of distal part of M_{1+2} and M_1 conspicuously larger than the angle of M_{1+2} and M_2. Cu without a connection on M_4, M_3 with a connection on M_4 at

base by m. R_5 extends distally to reach wing margin conspicuously behind the apex of the wing. Veins r-r, r-m and m-m developed. Medial wing angle 140°. Indices of wing AB:AC:AD = 8.7:9.0:8.3; BC:CD:BD = 1.7:3.1:4.6 (A = end of R_5, B = radial fork, C = medial fork, D = end of Cu). Index of base of M_{1+2}, A to maximal width of wing: 2.3. Ratio of maximal length of halteres to its maximal width: 4.2:1. Ratios of lengths of femora, tibiae and first tarsal segments: P_1= 15.5:17.0:6.9; P_2= 17.8:22.0:10.4; P_3= 18.3:24.0:9.8. Paired tarsal claws of P_1 pointed and bent distad – Fig. 5. Basal apodeme of male genitalia conspicuously and abruptly widened proximally from dorsal view, rounded, straight from dorsal aspect, without bifurcation, arched from lateral view. Distal part of basal apodeme forked in two caudal arms. Copulatory organ outside a little wrinkled. Paired protuberances of male copulatory organ as figured (Fig. 13). Coxopodites of a medium size, a little arched from dorsal view, without conspicuous protuberances. Harpagones with long thin pointed tips, longer than coxopodites from dorsal view. Epandrium with many setae, basal paired apertures oval-shaped, conspicuously bordered in lateral parts. Sclerotized remainders of 10th tergite and sternite inside of epandrium conspicuously developed, of characteristic T-shape. Cercus more than 1.5 times longer than epandrium (measured without hypoproct and epiproct) from dorsal view. Hypandrium narrow, without swollen parts and without hairs. Epiproct small, haired, equilaterally triangular with rounded top, hairs of epiproct more widely spaced in contrast to hypoproct. Hypoproct large, tongue-shaped, apex of hypoproct reaching up to one half of length of cercus, with many minute hairs. Cerci rather long, inconspicuously S-shaped from ventral view, only a little divergent, without disunited top, subapically with 19 retinacula of different lengths, irregularly arranged, cluster of insertions of retinacula prolonged.

Female: unknown.

Material: 6 ♂♂. Divoká Šárka, 9.VI.1983 – 1 ♂; Kosoř, 6.VI.1978 – 1; Sedlec-Sv. Ján pod Skalou, 9.VII.1979 – 4; all Ježek lgt. (Cat. No. P5 – 33496-33501), Inv. No. 2730-2735).

Comments on material: Deposited in the Department of Entomology of the National Museum (Nat. Hist.), Praha. Figured male specimen labelled Kosoř (6.VI.1978).

Occurrence: VI–VII, in accord to Wagner's type material.

Bionomy: Unknown. Author of the present paper collected adults on banks of brooks and a river with weirs and tips in forest areas with *Acer, Aesculus, Alnus, Crataegus, Fraxinus, Picea* and *Sambucus* around, the undergrowth mostly with *Urtica.*

Distribution: Austria, Germany. New to Czech Republic.

Data about type-material and type-locality: Holotype and two paratypes are deposited in the private collection of Doz.Dr. R. Wagner (Schlitz). Holotype (♂) is labelled „Schlitz (Hessen), Hallenmühle der limnologischen Flussstation 12.6.1979, leg. P. Schwank". Paratypes are labelled as follows. „♂, Schreierbach/Lunz am See (Niederösterreich), Emergenzfalle 2.7.1976, ♂ ebendort 19.6.1978".

Telmatoscopus britteni Tonn.
(Figs. 15 – 28)

Telmatoscopus britteni Tonnoir, 1940: 29, 43–45, 63.

Telmatoscopus britteni; Freeman, 1950: 88; Jung, 1956: 197; Sarà, 1957: 3; 1958: 1,2,6; Szabó, 1960a: 427; Vaillant, 1964: 64; Tanasijčuk, 1969: 127, 128; Szabó, 1983: 36; Ježek, 1984a: 164; 1988: 77; Withers, 1989: 16,31,34,68,82.

Telmatoscopus (Telmatoscopus) britteni; Kloet et Hincks, 1945: 333; Vaillant, 1960: 165,166,168; 1961b: 135; Duckhouse, 1966: 176; Sarà, et Salamanna, 1967: 43,65,68.

Telmatoscopus (Panimerus) britteni; Withers, 1986: 230.

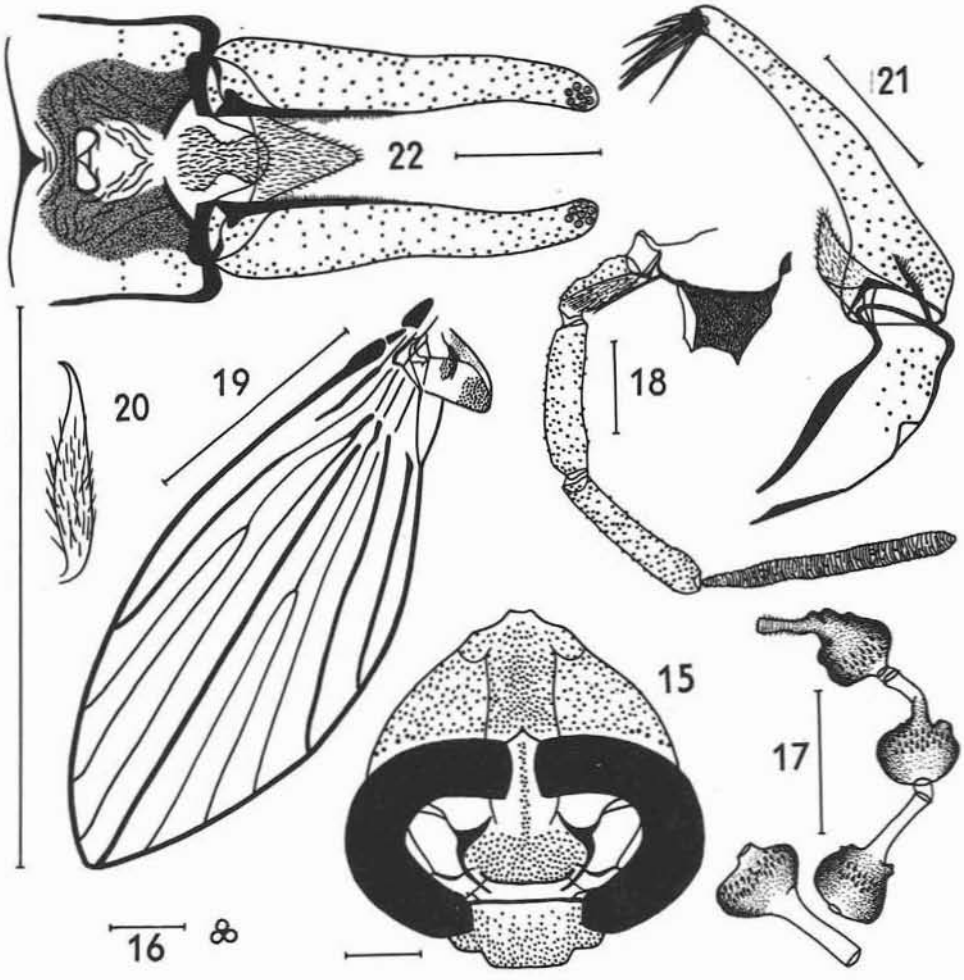
Panimerus britteni; Salamanna, 1975: 90; Krek, 1977: 171,173; 1978: 323, 329,330,332-335; Caspers et Wagner, 1980: 78,80,93,94; Vaillant, 1982: 297.

Panimerus (Panimerus) britteni; Salamanna et Castellano, 1989: 211.

Jungiella britteni; Krek, 1971: 173; 1972: 250.

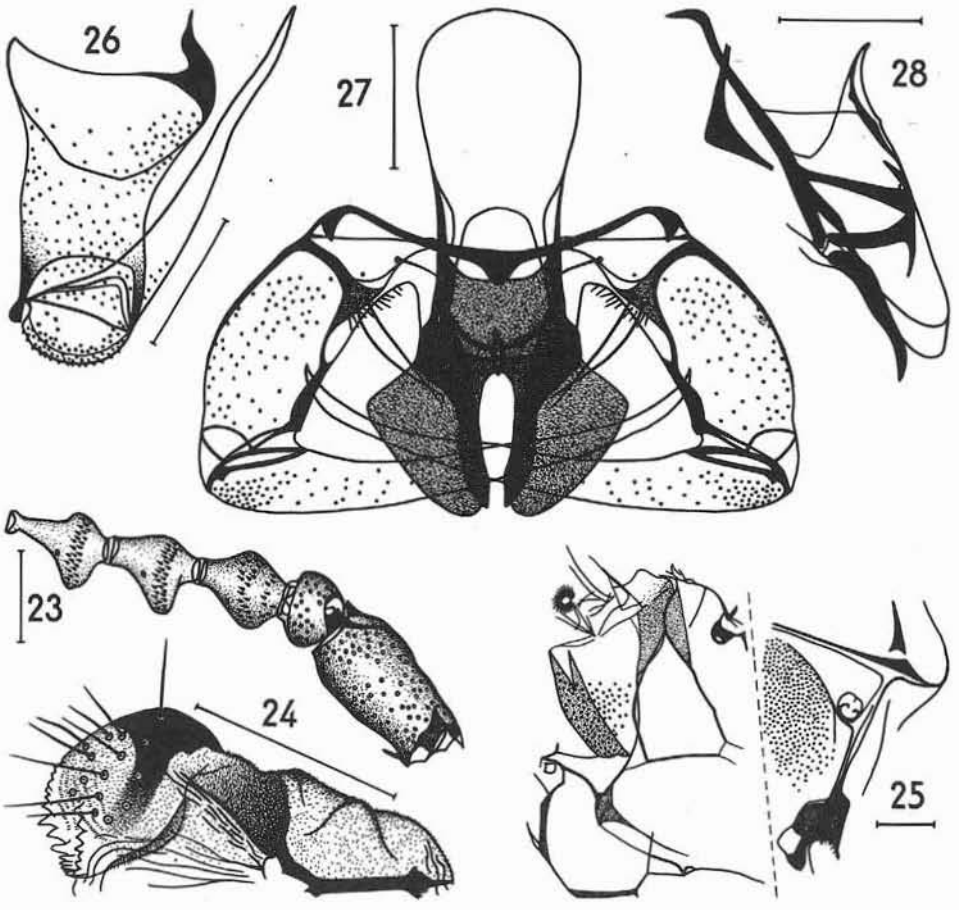
Differential diagnosis: Closely related to *Telmatoscopus labeculosus* (Eaton, 1893) which has protuberances of the male copulatory organ conspicuously arched and oriented in a lateral position to bilobed subgenital plate in contrast to the below redescribed species which has protuberances only a little irregularly bent and oriented in converging dorsal position to the mentioned plate.

Male. Eyes separated, frons with irregularly arranged dorsoventral set of setae. The minimum distance between eyes equals a little less than two facet diameters, closely below frontal suture a little more than two facet diameters. Index of distance of tangential points of eye's ends to minimum width of frons: 7.2, to facet diameter 12.3. Antennae 16-segmented. Scape almost cylindrical, a little widened distad, its length 2.8 times greater than width at base. Pedicel almost globular, symmetrical, with width a little larger than length. Flagellar segments pitcher-shaped, the first flagellar segment almost symmetrical as well as apical flagellar segments, segments 4-12 conspicuously asymmetrical, distal segments with rather long necks. Ratios of maximum width of scape to width of pedicel and first and second flagellar segments 2.4:2.0:2.0:2.1, ratio of length of antennal segments 1–4 5.0:1.7:2.4:2.4. The last 3 antennal segments fully developed, with small protuberances or warts in the middle. Apical atennal segment with a very long finger-like protuberance. Paired very small circular areas, however sensory filaments were not noted. Ratios of lengths of segments of maxillary palps 2.3:4.2:4.5:6.8. Last segment of maxillary palpus annulate, connected basally with apical end of the foregoing segment. Terminal lobe of labium on Fig. 24. Ratio of maximal length of cibarium to length of epipharynx 2:1. Wings lancet-shaped, 2.8 mm long, cubital area reduced, wing membrane bare. Wings almost clear and without small strengthened parts of veins in central area. Strengthened veins: Sc, R_1 distad, base of R_4, R_5, base of M_{1+2}, M_4 and Cu. Basal costal nodes distinct, well visible, Sc uninterrupted. Angle of base of R_2 and R_3 acute, the angle of distal part of R_{2+3} and R_3 larger than the angle of R_{2+3} and R_2. Angle of base of M_1 and M_2 acute as well, the angle of distal part of M_{1+2} and M_1 larger than the ang-



Figs. 15 – 22: *Telmatoscopus britteni* Tonn., ♂. 15: head; 16: facets; 17: apical antennal segments; 18: maxilla and palpus maxillaris; 19: wing; 20: claw of P_1; 21: epandrium and cercus laterally; 22: epandrium and cerci dorsally. Scales 0.1 mm, in Fig. 19 – 1 mm.

le of M_{1+2} and M_2. M_3 and Cu without a connection on M_4. R_5 extends distally to reach wing margin a little behind the apex of the wing. Veins r-r, r-m and m-m not visible. Medial wing angle 174°. Indices of wing AB:AC:AD = 9.8:9.1:8.4; BC:CD:BD = 2.1:3.2:5.4. Index of base of M_{1+2}, A to maximal width of wing: 2.1. Ratio of maximal length of halteres to its maximal width: 2.7:1. Ratios of lengths of femora, tibiae and first tarsal segments: P_1 = 16.1:19.0:10.1; P_2 = 18.0:23.1:11.2; P_3 = 18.6:26.8:11.6.



Figs. 23 – 28: *Telmatoscopus britteni* Tonn., ♂. 23: basal antennal segments; 24: terminal lobe of labium; 25: thoracal sclerites laterally; 26: coxopodite and harpagon laterally; 27: copulatory organ, coxopodites and harpagones dorsally; 28: copulatory organ laterally. Scales 0.1 mm.

Paired tarsal claws of P_1 almost straight from lateral view, pointed and bent apically – Fig. 20. Basal apodeme of male genitalia widened proximally from dorsal view, spoon-shaped, rounded, straight from dorsal aspect, bent apically from lateral view. Distal part of basal apodeme forked in two caudal arms, the tops of which are jointed with stake (dagger)-shaped protuberances, the male subgenital plate conspicuously bilobed with very deep medial cleft, length of the lobes inconspicuously overlaps length of the mentioned protuberances. Coxopodites long, only a little arched from dorsal view, without protuberances. Harpagones very long, with long, thin, pointed, somewhat arched tips, length of harpagones twice as large as length of coxopodites

from dorsal view. Epandrium haired in distal half as figured, partially divided in the middle. Basal paired apertures visible, connected proximally, conspicuously bordered in lateral parts. Sclerotized remainders of 10th tergite and sternite inside of epandrium distinct, conspicuously developed, of characteristic shape, U-shaped. Index of length of cercus to length of epandrium from dorsal view approximately 1.9. Hypandrium narrow, conspicuously widened only in the middle by a triangular broader part with rounded top. Epiproct rather large, conspicuously and strongly haired, of characteristic shape, tongue-like. Hypoproct large, triangular, with rounded top, apex of hypoproct reaching up to lesser than one half of length of cercus, distinctly haired, the length of hypoproct approximately equal to its maximum width at base. Hypoproct inconspicuously longer than epiproct. Cerci long, almost straight, parallel, only in distal half inconspicuously S-shaped from ventral view, a little arched from lateral view, narrowed apically,with single top, subapically with 8 retinacula.

Female. Unknown to me, briefly described by Tonnoir (1940), subgenital plate figured also by Sarà (1958).

Material: 1♂, Luka pod Medníkem – Zlatý potok, 30.V.1989; Ježek, Mašínová et Trojánková lgt.; Cat. No. P5 – 33502, Inv. No. 3095.

Comments on material: Single male was dissected and used for 14 figures, all parts of this specimen were mounted in Canada Balsam on a slide. Deposited in the Department of Entomology of the National Museum (Nat. Hist.), Praha.

Occurence: V.

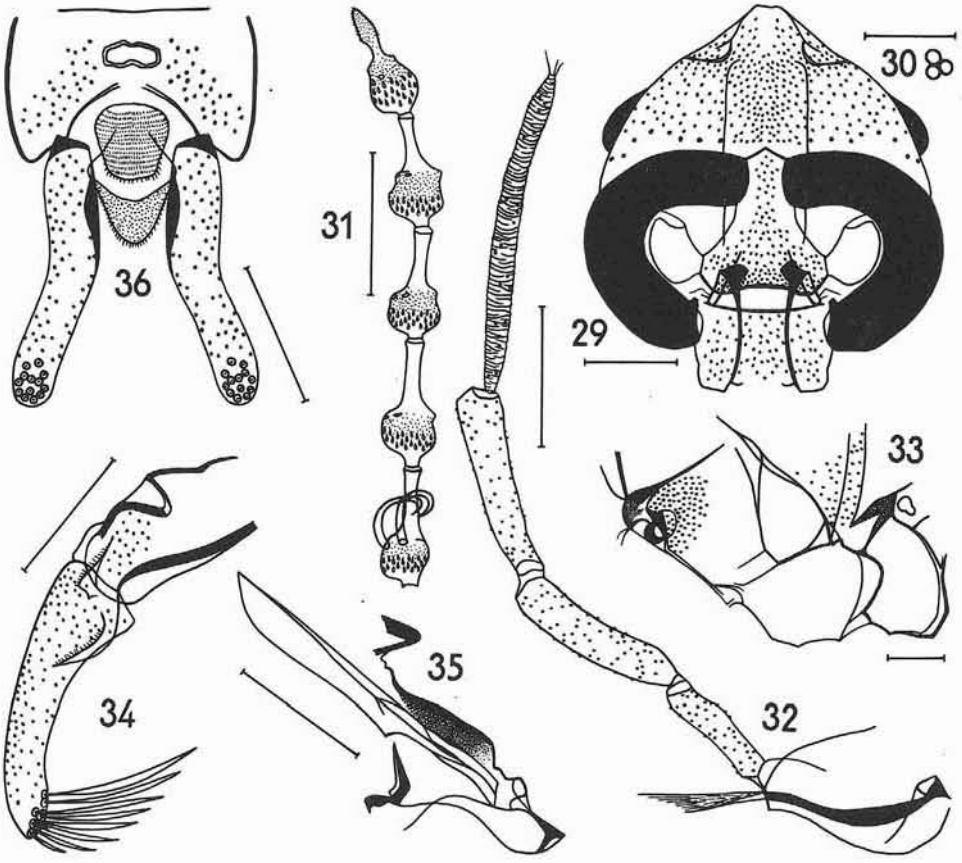
Bionomy: Sensu Withers (1989) larvae were reared from leaf mould and trickles on rock faces. Salamanna et Castellano (1989) collected females near wet rocks and water-falls where the walls were covered with thick moss-cushions. Habitats were registred in Calabria by Salamanna (1975) at an altitude of 1200 – 1600 m a.s.l., Sarà collected this species at 900 m (Sarà et Salamanna, 1967). Only one specimen (male) was collected by author of this paper in a forest with swamps about a brook with *Carpinus, Corylus* and *Salix* around, undergrowth with *Urtica* and *Convallaria.*

Distribution: France, Great Britain, Hungary, Italy, Switzerland, former Yugoslavia. New to Czech Republic.

Data about type-material and type-locality: Tonnoir (1940) quoted only short data „Holotype, ♂, allotype and 1 ♀, paratype, Madeley, Staffs., 16.VI.39 (Britten).".

Jungiella (Psychogella) inundationum sp. n.
(Figs. 29 – 42)

Differential diagnosis: Species closely related to *Jungiella (Psychogella) bohemica* Ježek, 1979, which has M_3 conspicuously strengthened only in limited two parts of the mentioned vein of wing, jointed apical parts of male genitalia are fixed laterally, with nearly parallel marginal sclerotized stripes on both sides of male copulatory organ, cerci with 8–10 retinaculi, in contrast to the below described species which is

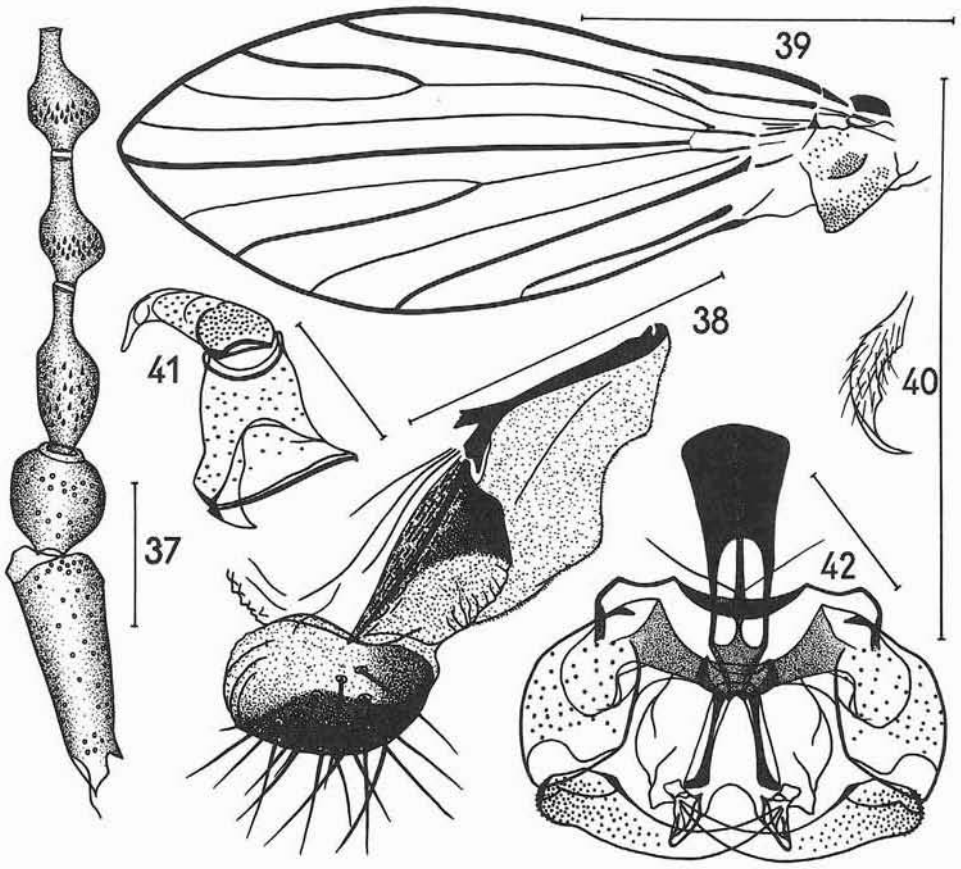


Figs. 29 – 36: *Jungiella (Psychogella) inundationum* sp.n., ♂. 29: head; 30: facets; 31: apical antennal segments; 32: maxilla and palpus maxillaris; 33: thoracal sclerites laterally; 34: epandrium and cercus laterally; 35: copulatory organ laterally; 36: epandrium and cerci dorsally. Scales 0.1 mm.

without strengthened parts of M_3, jointed apical parts of male genitalia are fixed caudally, without parallel marginal sclerotized stripes on both sides of male copulatory organ, cerci with 13 retinaculi.

Male. Eyes separated, the lower part of frons with irregularly arranged dorsoventral set of setae. Minimum distance between eyes equal to two diameters of facet, closely below frontal suture is equivalent hardly to its threefold. Index of distance of tangential points of eye's ends to minimum width of frons: 5.0, to facet diameter: 10.0. Antennae 16-segmented. Scape almost cone-shaped (truncated cone), widened distad, long, its length almost 5 times greater than width at base. Pedicel almost globular, inconspicuously asymmetrical, without protuberances laterad and subapically. Flagellar segments pitcher-shaped, asymmetrical, in spite of apical antennal seg-

ments. Distal segments with rather long necks. Ratios of maximum width of scape to width of pedicel and first and second flagellar segments 2.6:2.5:1.7:1.7, ratios of length of antennal segments 1-4 6.9:3.0:4.4:3.4. The last 4 flagellar segments fully developed, not reduced. Apical antennal segment with a long finger-like protuberance terminally, this protuberance a little widened in the middle and very narrow apically with rounded top. Sensory filaments simple, long, bent, paired. Ratios of lengths of segments of maxillary palps 3.3:4.7:5.2:8.5. Last segment of maxillary palpus annulate, connected basally with apical end of the foregoing segment. Terminal lobe of labium on Fig. 38. Ratio of maximal length of cibarium to length of epipharynx: 2:1. Corniculi very small, semiglobular. Wings lancet-shaped, 2.2 mm long, cubital area reduced, wing membrane bare. Wings clear. Strengthened veins or parts of veins: Sc, distal part of R_1, R_2, R_5, M_2, M_4 and Cu, inconspicuously basal part of R_4 and basal part of M_{1+2}. Basal costal nodes distinct, well visible, Sc not interrupted. Angle of base of R_2 and R_3 acute, the angle of distal part of R_{2+3} and R_3 larger than the angle of R_{2+3} and R_2. Angle of base of M_1 and M_2 acute as well, the angle of distal part of M_{1+2} and M_1 inconspicuously larger than the angle of M_{1+2} and M_2. M_3 and Cu without a connection on M_4. R_5 extends distally to reach wing margin a little behind the apex of the wing. Veins r-r and r-m inconspicuous; m-m not visible. Medial wing angle 170°. Indices of wing AB:AC:AD = 8.2:9.5:11.2; BC:CD:BD = 3.0:3.3:6.3. Index of base of M_{1+2}, A to maximal width of wing: 2.1. Ratio of maximal length of halteres to its maximal width: 2.3:1. Ratios of lengths of femora, tibiae and first tarsal segments: P_1 = 12.7:15.1:7.2; P_2= 14.1:20.0:9.0; P_3 = 13.9:21.7:8.8. Paired tarsal claws of P_1 on Fig. 40. Basal apodeme of male genitalia chisel-shaped, widened proximally from dorsal view, rounded in lateral corners, straight from dorsal and lateral aspects, compressed from lateral view, with a characteristic medial vertical rib. Distal part of basal apodeme forked in two parallel caudal arms. Central area of distal part of basal apodeme is limited proximally by distal ends of rib and arms, distally by developed furca. Margins of central area converging distad. Copulatory organ (Fig. 42) with smooth surface outside, internal lamellae diverging. Paired wedge-shaped caudal sclerites included in caudal margin of copulatory organ, with characteristic lateral pointed folds. Coxopodites rather short, without protuberances. Harpagones with long, thin, pointed tips, length of harpagones a little larger than length of coxopodites from dorsal view. Epandrium haired (Fig. 36), with a large notch caudally. Only central aperture developed, narrowed in the middle. Sclerotized remainders of 10th tergite and sternite inside of epandrium missing. Index of length of cercus to length of epandrium from lateral view approximately 1.6. Hypandrium narrow, a little widened in the middle. Epiproct smaller than hypoproct, haired, of characteristic shape, equilaterally triangular with rounded basal tops and cut caudal top, the width of epiproct equals to its length. Epiproct narrowed distad, hairs of epiproct arranged in horizontal rows and more widely spaced. Hypoproct very broad in the middle, rounded on its top, apex of hypoproct reaching up to less than one half of length of cercus, hypoproct distinctly haired. Hypoproct 1.5 times longer than epiproct. Cerci rather long, in basal half



Figs. 37 – 42: *Jungiella (Psychogella) inundationum* sp. n., ♂. 37: basal antennal segments; 38: terminal lobe of labium; 39: wing; 40: claw of P_1; 41: coxopodite and harpagon laterally; 42: copulatory organ, coxopodites and harpagones dorsally. Scales 0.1 mm, in Fig. 39 – 1 mm.

straight and after diverging from ventral view, with single top, subapically with 13 retinacula, irregularly arranged.

Female. Unknown.

Material: Holotype – ♂, Křeslice, 10.VII.1979, Ježek lgt., Cat. No. P5 – 33503, Inv. No. 3091.

Derivatio nominis: inundationes - inundation area.

Comments on material: Single male, designated as holotype, was dissected and used for all figures, all parts of this specimen were mounted in Canada Balsam on a slide. Deposited in the Department of Entomology of the National Museum (Nat. Hist.), Praha.

Occurence: VII.

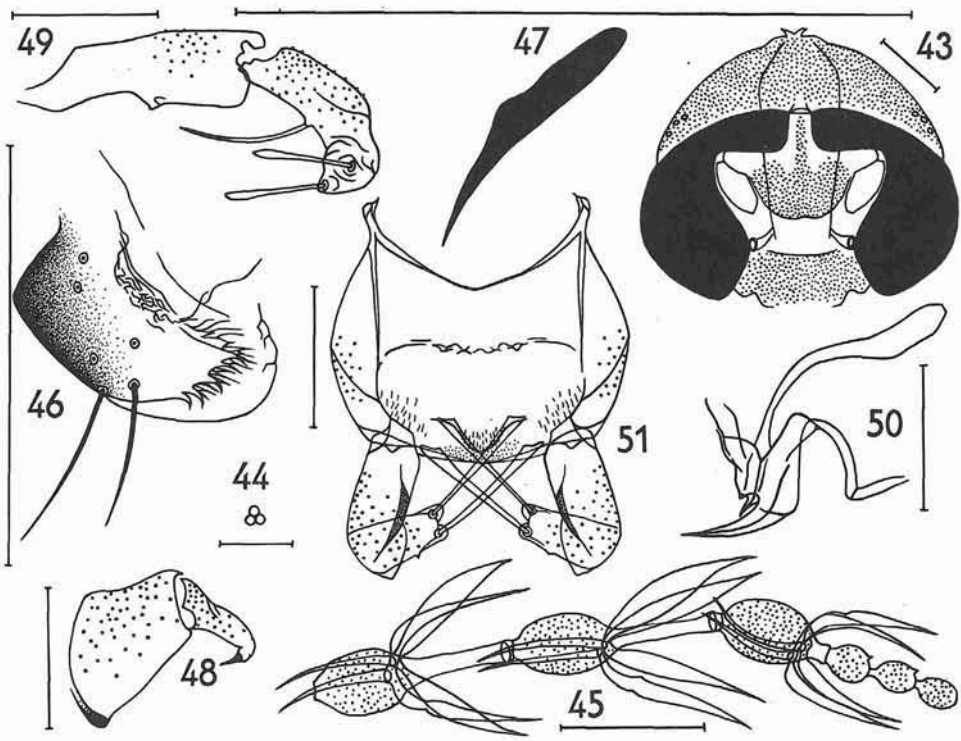
Bionomy: Unknown. The only specimen was collected on a bank of a brook shaded by *Alnus, Quercus* and *Urtica.*

Distribution: Only Czech Republic so far.

Comparative material: Type-material of *J. (P.) bohemica* Ježek, 1979, deposited in the National Museum in Prague (Cat. No. P5 – 32705–32715).

Philosepedon kowarzi sp. n.
(Figs. 43 – 56)

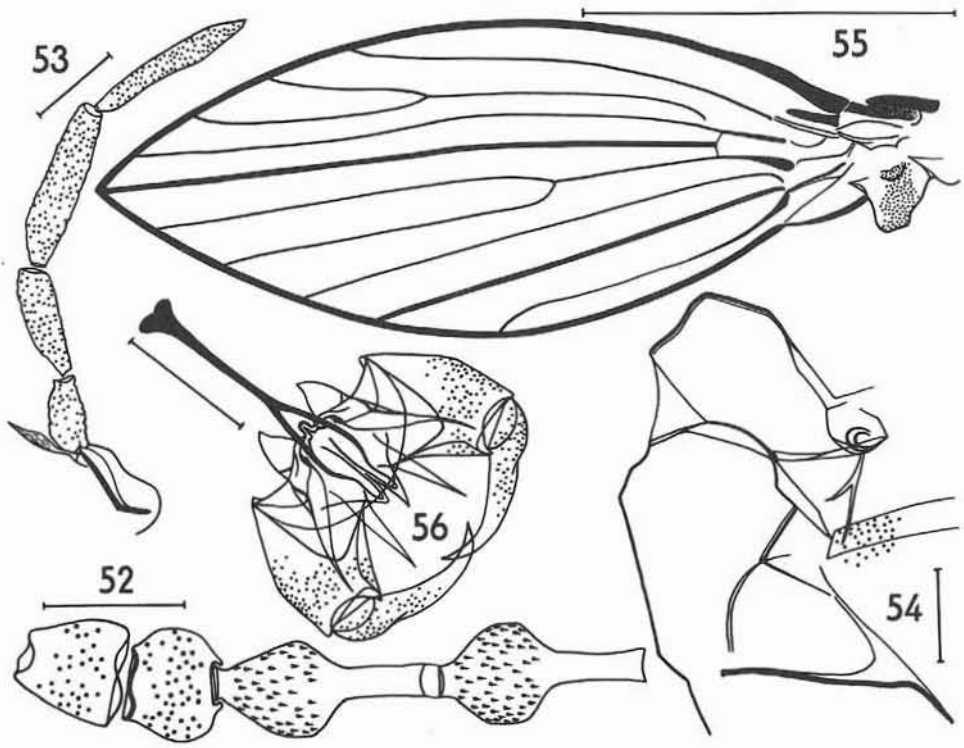
Differential diagnosis: Closely related to *Philosepedon austriacus* Vaillant, 1974 which has external additional protuberances of male genitalia arched and paired sclerotized forms of male copulatory organ not covered by pointed sheaths, in contrast



Figs. 43 – 51: *Philosepedon kowarzi* sp. n., ♂. 43: head; 44: facets; 45: apical antennal segments; 46: terminal lobe of labium; 47: claw of P_1; 48: coxopodite and harpagon laterally; 49: epandrium and cercus laterally; 50: copulatory organ laterally; 51: epandrium and cerci dorsally. Scales 0.1 mm.

to the below described species with straight external additional protuberances of male genitalia and pointed sheaths of paired sclerotized forms of copulatory organ.

Male. Eyes separated,frons with dorsoventral stripe of setae. The distance between eyes corresponds to two diameters of facets, maximum distance in the basal part of frons equals a little more than twice diameter. Frontal suture a little complicated, characteristic (Fig. 43). Index of distance of tangential points of eye's ends to minimum width of frons: 6.7, to facet diameter: 13.3. Antennae 16–segmented. Scape like a truncate cone, a little widened distad, short, its length more than twice greater than width at base. Pedicel almost globular, symmetrical. Flagellar segments amphora–shaped, mostly symmetrical, distal segments with rather long necks. Ratios of maximum width of scape to width of pedicel and first and second flagellar segments 2.7:3.0:2.5:2.7, ratios of length of antennal segments 1–4 2.9:2.6:5.6:5.5. The last 3 antennal segments minute in contrast to the segment 13. 13th segment egg–shaped, with very short neck distad. Segments 14, 15 and 16 almost globular, with very short neck basally. Subapical spines on segments 14 and 15 developed, very short. Sensory filaments paired, with 3 branches, which are narrowely lancet–shaped and very long. Ratios of lengths of segments of maxillary palps: 2.0:3.0:4.5:4.6. Last segment of maxillary palpus not annulate, connected basally with apical end of the foregoing segment. Terminal lobe of labium on Fig. 46. Ratio of maximal length of cibarium to length of epipharynx: 2.4:1. Wings widely lancet–shaped, 2.3 mm long, wing membrane bare. Wings clear, without small strengthened parts of veins in central area; base of R_4, R_5, basal part of M_{1+2}, M_4 and base of Cu strengthened. Basal costal nodes well visible, Sc not interrupted. Angle of base of R_2 and R_3 acute, the angle of distal part of R_{2+3} and R_2 only inconspicuously larger than the angle of R_{2+3} and R_3. Angle of base of M_1 and M_2 acute as well, the angle of distal part of M_{1+2} and M_1 much more larger than the angle of M_{1+2} and M_2. M_3 and Cu with an inconspicuous connection on M_4. R_5 extends distally to reach wing margin in apex of wing. Veins r–r and r–m visible, m–m not visible. Medial wing angle 104°. Indices of wing AB:AC:AD = 9.1:12.0:11.2; BC:CD:BD = 4.0:4.4:6.6. Index of base of M_{1+2}, A to maximal width of wing: 2.4. Ratio of maximal length of halteres to its maximal width: 2.9:1. Ratios of lengths of femora, tibiae and first tarsal segments: P_1 = 14.3:15.0:7.1; P_2 = 15.2:19.4:7.8; P_3 = 15.1:25.1:8.6. Paired tarsal claws of P_1 long, almost straight and pointed – Fig. 47. Basal apodeme of male genitalia straight and thin, conspicuously widened and disunited proximally from dorsal view, lobulae rounded. Basal apodeme S–shaped from lateral view, proximally conspicuously widened over a large area. Distal part of basal apodeme forked in two caudal lamellae, first diverging, then converging. Paired sclerotized forms of male copulatory organ are covered by pointed sheaths, the right sheath is longer. Paired external additional protuberances fully developed, long, thin, pointed, straight from dorsal view, backwards bent from lateral view. The external protuberances reach the apex of distal end of coxopodites. Coxopodites of medium length, a little arched from dorsal view. Harpagones long, with pointed tips, bent, a little longer than coxopodites from dorsal view. Epandrium



Figs. 52 – 56: *Philosepedon kowarzi* sp.n., ♂. 52: basal antennal segments; 53: maxilla and palpus maxillaris; 54: thoracal sclerites laterally; 55: wing; 56: copulatory organ, coxopodites and harpagones dorsally. Scales 0.1 mm, in Fig. 55 – 1 mm.

almost bare (Fig. 51). Basal paired apertures and sclerotized remainders of 10th tergite and sternite inside of epandrium not visible. Length of cercus equals approximately to length of epandrium from lateral view. Hypandrium narrow. Epiproct and hypoproct as figured, both parts haired. Cerci rather long, C–shaped from lateral view, with disunited top, subapically with two retinacula.

Female unknown.

Material: Holotype – ♂, Dubeč, 13.V.1982, Ježek lgt., Cat. No. P5 – 33504, Inv. No. 3092.

Derivatio nominis: The new species is dedicated to F. Kowarz, famous dipterologist; a part of his large collection of Diptera is deposited in the National Museum in Prague.

Comments on material: Single male (holotype) was dissected and used for all figurers, all parts of this specimen were placed in Canada Balsam on a slide. Deposited in the Department of Entomology of the National Museum (Nat. Hist.), Praha.

Occurence: V.

Bionomy: Unknown. The only male was collected on a margin of a pond shaded by *Populus* and *Salix*, with *Urtica* in undergrowth.

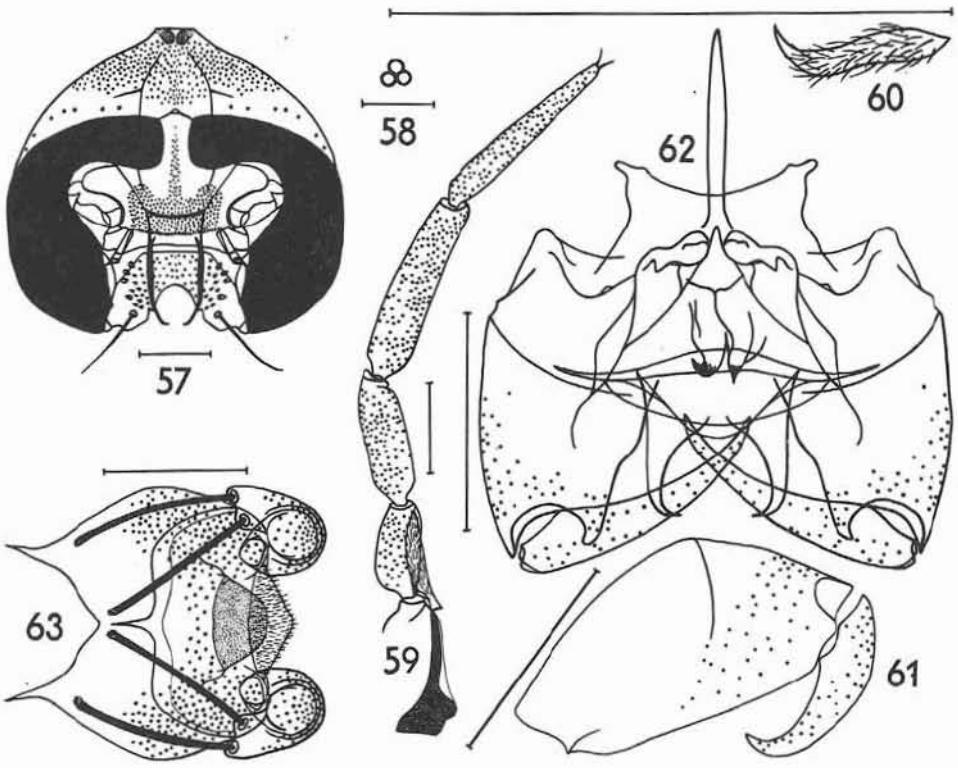
Distribution: Czech Republic, only locality so far known.

Comparative material: Several males of *Philosepedon austriacus* Vaill. deposited in the Department of Entomology of the National Museum (Nat. Hist.), Praha.

Philosepedon nickerli sp. n.
(Figs. 57 – 70)

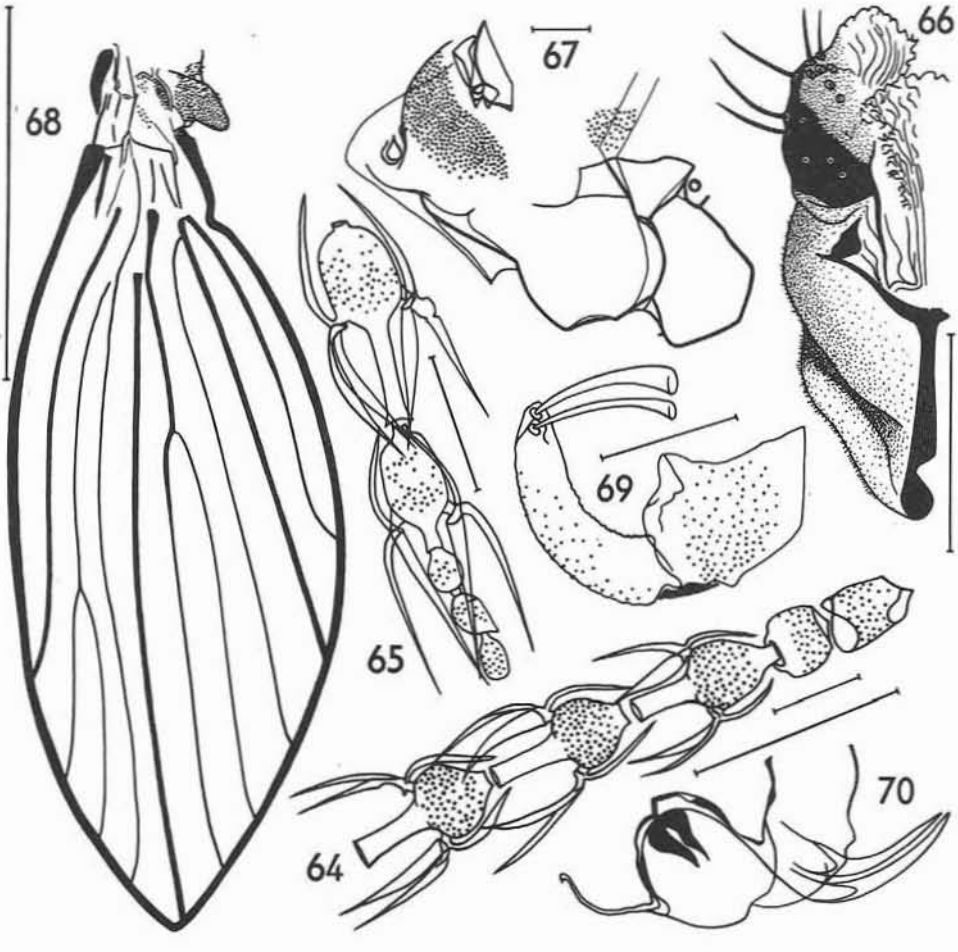
Differential diagnosis: Closely related to *Philosepedon ibericus* Vaillant, 1974 which has hypandrium strengthened in two parts, external additional protuberances of male genitalia almost straight (only inconspicuously bent) with rather wide base and paired sclerotized forms of male copulatory organ not conspicuously pointed, in contrast to *Philosepedon nickerli* sp.n. This latter species has hypandrium widened only in the middle, external additional protuberances of male genitalia C–shaped with very wide base and paired sclerotized forms of male copulatory organ conspicuously pointed.

Male. Eyes separated, frons with setae in a stripe, dorsoventrally a little widened, setae irregularly arranged. Minimum distance between eyes equals a little less than twice diameter of facet, closely below frontal suture is equivalent to its two fold. Index of distance of tangential points of eye's ends to minimum width of frons: 7.5, to facet diameter: 11.3. Antennae 16–segmented. Scape almost cylindrical, somewhat widened distad, short. The length and width of pedicel have the same size, pedicel almost globular. Basal flagellar segments amphora–shaped, flagellar segments mostly symmetrical, distal segments with rather long necks. Ratios of maximum width of scape to width of pedicel and first and second flagellar segments 1.6:1.8:1.8:1.9, ratio of length of antennal segments 1–4 2.5:1.8:4.1:3.9. The last 3 flagellar segments very small, approximately of the same size, in contrast to segment 13. 13th segment of the same shape as preceding segments, however distal neck is very short, 14th segment almost globular, 15th segment with a conspicuous distal subapical pointed protuberance. 16th segment egg–shaped with short neck basally. Sensory filaments paired, long, with 3 branches. Ratios of lengths of segments of maxillary palps 2.6:3.8:5.2:5.3. Last segment of maxillary palpus not annulate, connected basally with apical end of the foregoing segment. Terminal lobe of labium as Fig. 66. Ratio of maximal length of cibarium to length of epipharynx: 1.7:1. Wings widely lancet–shaped, 2.4 mm long, wing membrane bare. Wings clear, without short strengthened parts of veins in central area; Sc, R_1, R_5, M_{1+2} and basal part of M_1, M_4 and Cu basally strengthened. Basal costal nodes distinct, well visible, Sc not interrupted. Angle of base of R_2 and R_3 acute, the angle of distal part of R_{2+3} and R_3 a little larger than the angle of R_{2+3} and R_2. Angle of base of M_1 and M_2 at first obtuse, after acute, the angle of distal part of M_{1+2} and M_1 larger than the angle of M_{1+2} and M_2. M_3 with a connection on M_4, Cu connected with M_4 inconspicuously at base. R_5 extends distally to reach wing margin in apex



Figs. 57 – 63: *Philosepedon nickerli* sp.n., ♂. 57: head; 58: facets; 59: maxilla and palpus maxillaris; 60: claw of P_1; 61: coxopodite and harpagon laterally; 62: copulatory ogan, coxopodites and harpagones dorsally; 63: epandrium and cerci dorsally. Scales 0.1 mm.

of wing. Veins r–r, r–m and m–m not visible. Medial wing angle 87°. Indices of wing AB:AC:AD = 9.2:12.9:11.0; BC:CD:BD = 4.8:5.3:6.9. Index of base of M_{1+2},A to maximal width of wing: 2.7. Ratio of maximal length of halteres to its maximal width: 2.7:1. Ratios of lengths of femora, tibiae and first tarsal segments: P_1 = 15.8:18.1:8.5; P_2 = 17:22.5:9.6; P_3 = 16.2:28.3:9.9. Paired tarsal claws of P_1 inconspicuously S–shaped as Fig. 60. Basal apodeme of male genitalia straight in dorsal view. Paired sclerotized forms of male copulatory organ developed (Fig. 62), left form hooked, right one straight, both approximately of the same length. Paired external additional protuberances fully developed, rather long, pointed, bent backwards in dorsal view, sabre–shaped in lateral view. Coxopodites of middle size, thick at base, length of coxopodites twice as long as length of harpagones in lateral view. Harpagones with long thin pointed tips in dorsal view. Epandrium covered by many setae (Fig. 63), aperture not visible. Sclerotized remainders of 10th tergite and sternite inside of epandrium also not visible. Index of length of cercus to length of epandrium from lateral view



Figs. 64 – 70. *Philosepedon nickerli* sp. n., ♂. 64: basal antennal segments; 65: apical antennal segments; 66: terminal lobe of labium; 67: thoracal sclerites laterally; 68: wing; 69: epandrium and cercus laterally; 70: copulatory organ laterally. Scales 0.1 mm, in Fig. 68 – 1 mm.

approximately 1.2. Hypandrium narrow, a little widened in the middle. Epiproct small, tongue–shaped, short, rounded at the top, covered by many minute hairs. Hypoproct large, of a characteristic shape as figured, with triangular top, distinctly haired. Cerci rather short, C–shaped in lateral view, a little divergent from dorsal view, with disunited top, subapically with two well developed conspicuous retinacula.

Female unknown.

Material: Holotype – ♂, Uhřiněves, 10.VII.1979, Ježek lgt., Cat.No.P5 – 33505, Inv.No. 3093.

Derivatio nominis: The new species is dedicated to the late Dr. O. Nickerl, famous entomologist and in the past a Maecenas of the Department of Entomology of the National Museum in Prague.

Comments on material: Single holotype male used for figures, mounted in Canada Balsam on a slide. Deposited in the Department of Entomology of the National Museum (Nat. Hist.), Praha.

Occurence: VII.

Bionomy: Unknown. The only male was collected on a bank of a brook by sweeping on *Phragmites* and *Urtica*, the place was shaded by *Alnus* and *Salix*.

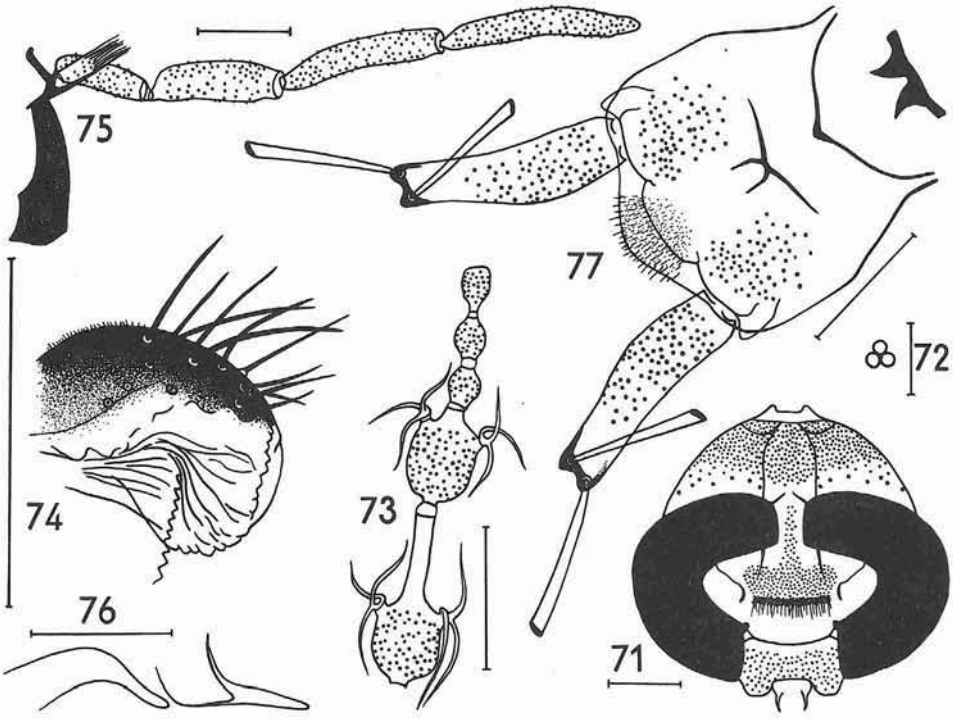
Distribution: Czech Republic.

Comparative material: Only original description and figures of *Philosepedon ibericus* Vaillant, 1974.

Philosepedon pragensis sp.n.
(Figs. 71 – 84)

Differential diagnosis: Closely related to *Philosepedon carpaticus* Vaillant, 1974 because of long and straight external additional protuberances of male genitalia. *P. carpaticus* Vaill. has hypandrium conspicuously strengthened in the middle and the right internal sclerotized form of male copulatory organ is developed as well as left one. *Philosepedon pragensis* sp.n. has hypandrium very narrow, without strengthened part and the right internal sclerotized form is missing, only left form developed from dorsal view.

Male. Eyes separated, frons with irregularly arranged dorsoventral set of setae. Minimum distance between eyes equals a little less than twice diameter, closely below interrupted frontal suture is equivalent to its twofold. Ratios of distance of tangential points of eye's ends to minimum width of frons: 6:1, to facet diameter: 9:1. Antennae 16–segmented. Scape almost cylindrical, short, its length conspicuously greater than width at base. Pedicel symmetrical, length and width of pedicel equivalent. Flagellar segments pitcher–shaped, symmetrical, distal segments with rather long necks in contrast to 4 apical segments. Ratios of maximum width of scape to width of pedicel and first and second flagellar segments 1.5:1.7:1.6:1.6, ratio of length of antennal segments 1–4 2.1:1.7:3.5:3.5. The last 3 flagellar segments minute in contrast to segment 13. 13th segment almost egg–shaped, with very short apical narrowed part, segments 14–16 cask–shaped, without apical narrowed parts. Apical antennal segment with a short neck basally. Sensory filaments paired, with 3 rather long branches. Ratios of lengths of segments of maxillary palps 2.5:3.5:4.5:5.3. Last segment of maxillary palpus not annulate, connected basally with apical end of the foregoing segment. Terminal lobe of labium as Fig. 74. Ratio of maximal length of cibarium to length of epipharynx: 2.3:1. Wings lancet–shaped, 2.5 mm long, wing membrane bare. Wings clear, without strengthened parts of veins in central area; R_1, base of R_{2+3}, R_5, M_4 and Cu strengthened. Basal costal nodes distinct, well visible, Sc not



Figs. 71 – 77: *Philosepedon pragensis* sp.n., ♂. 71: head; 72: facets; 73: apical antennal segments; 74: terminal lobe of labium; 75: maxilla and palpus maxillaris; 76: external protuberances of male copulatory organ laterally; 77: epandrium and cerci dorsally. Scales 0.1 mm.

interrupted. Angle of base of R_2 and R_3 acute, the angle of distal part of R_{2+3} and R_3 larger than the angle of R_{2+3} and R_2. Angle of base of M_1 and M_2 acute as well, the angle of distal part of M_{1+2} and M_1 larger than the angle of M_{1+2} and M_2. M_3 and Cu with connections on M_4. R_5 extends distally to reach wing margin in apex of wing. Veins r–r, r–m and m–m visible. Medial wing angle 93°. Indices of wing AB:AC:AD = 6.4:8.6:7.4; BC:CD:BD = 3.0:3.7:4.9. Index of base of M_{1+2},A to maximal width of wing: 2.3. Ratios of lengths of femora, tibiae and first tarsal segments: P_1 = 17.1:19.0:9.4; P_2 = 18.7:25.2:10.4; P_3 = 19.0:32.5:11.5. Paired tarsal claws of P_1 thick basally, cut by a deep incision in the middle, pointed and a little bent distad as Fig. 81, from lateral view. Basal apodeme of male genitalia conspicuously widened proximally from dorsal view, straight in dorsal aspect, with a rounded proximal top. Distal part of basal apodeme forked in two caudal short bent sclerotized pointed arms. Copulatory organ as figured (Fig. 84). Only left internal form developed, short, pointed, right one missing. Paired external additional protuberances fully developed, long, thin, pointed, conspicuously bent in lateral view, sabre–shaped, parallel in dorsal view. The length of the

external protuberances equal to the length of coxopodites. Coxopodites thick basally, narrowed apically. Harpagones with short conspicuously cut pointed tips, length of harpagones is the same as length of coxopodites in dorsal view. Epandrium with two setose areas (Fig. 77). Sclerotized remainders of 10th tergite and sternite inside of epandrium reduced. Length of cercus a little larger than length of epandrium in lateral view. Hypandrium narrow, without swollen parts. Epiproct small, inconspicuous, shortly haired. Hypoproct a little longer than epiproct, rounded, distinctly haired. Cerci long, C–shaped in lateral view, with disunited top, subapically with two retinacula.

Female unknown.

Material: Holotype – ♂, Radotín, 19.V.1982, Ježek lgt., Cat. No.P5 – 33506, Inv. No. 3094.

Derivatio nominis: The name is derived from Prague – capital of Czech Republic.

Comments on material: Single specimen (male holotype) used for this description. It was dissected and mounted on a slide in Canada Balsam. Deposited in the Department of Entomology of the National Museum (Nat.Hist.), Praha.

Occurence: V.

Bionomy: Unknown. One male collected on a bank of a brook by sweeping on *Urtica,* shaded by *Salix, Sorbus, Corylus* and *Acer.*

Distribution: Czech Republic, only locality known.

Comparative material: Only original description and figures of *Philosepedon carpaticus* Vaillant, 1974.

Berdeniella manicata (Tonn.)
(Figs. 85 – 98)

Pericoma manicata Tonnoir, 1920: 181.

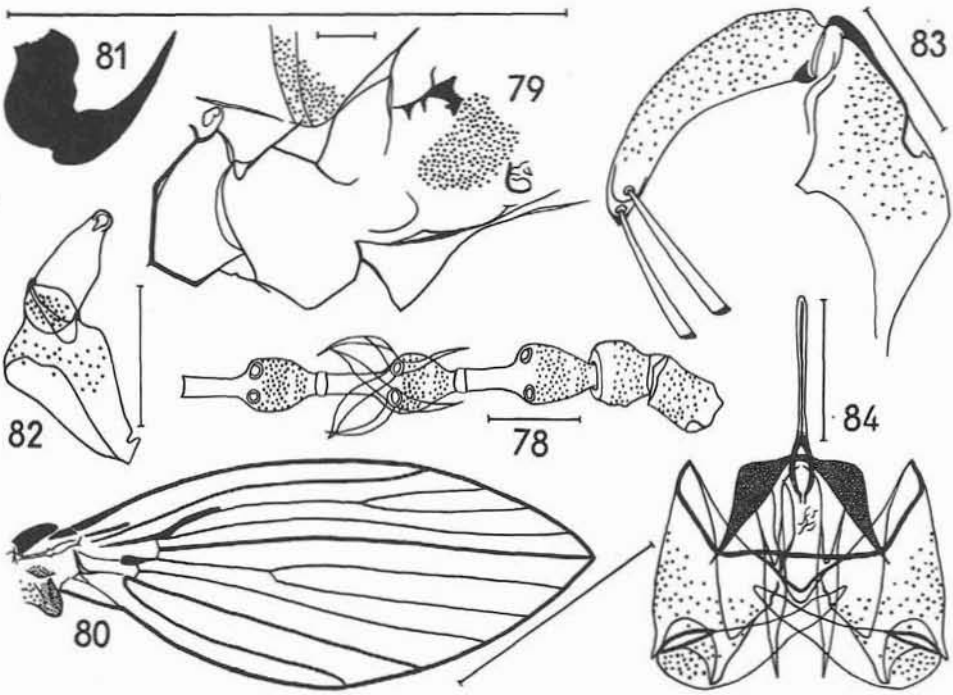
Pericoma manicata; Enderlein, 1936: 85; Jung, 1954: 27; 1956: 148, 194; Vaillant, 1957: 72, 91, 92, 104; Sarà, 1957: 6, 7; Szabó, 1960b: 210; Vaillant, 1961a: 115; 1963b: 110, 118; Szabó, 1965a: 88; b: 627; Tanasijčuk, 1969: 119, 121; Szabó, 1973: 169; 1983: 55, 56.

Berdeniella manicata; Wagner, 1973: 518, 520, 522; Vaillant, 1976: 185, 190; Krek, 1979: 1806, 1808, 1809; Salamanna et Sarà, 1980: 27, 36; Wagner, 1979b: 47, 60, 62, 74; Caspers et Wagner, 1980: 81; Wagner, 1980: 119; Krek, 1982: 152, 153, 160; Wagner, 1983: 164, 167; Krek, 1985: 151, 179; Bellstedt, 1986: 21 – 24; Bellstedt et Wagner, 1986: 60; Wagner et Joost, 1988: 30.

Pericoma huescana Vaillant, 1958: 99, 100, 102, 103.

Pericoma huescana; Vaillant, 1961c: 117, 120, 123, 124; 1963a: 90, 92; Krek, 1967: 317; Vaillant, 1968: 295; Krek, 1969: 63; Vaillant, 1973: 140, 142.

Differential diagnosis: Closely related to *Berdeniella magniseta* (Sarà, 1953) which has coxopodites somewhat thicker in dorsal view and harpagones shorter with hemiglobular base in contrast to the below redescribed species: coxopodites and harpa-



Figs. 78 – 84: *Philosepedon pragensis* sp.n., ♂. 78: basal antennal segments; 79: thoracal sclerites laterally; 80: wing; 81: claw of P_3; 82: coxopoodite and harpagon laterally; 83: epandrium and cercus laterally; 84: copulatory organ, coxopodites and harpagones dorsally. Scales 0.1 mm, in Fig. 80 - 1 mm.

gones somewhat slender, harpagones longer and quite different structures of male copulatory organ.

Male. Eyes separated, frons with irregularly arranged dorsoventral set of setae. The minimum distance between eyes corresponds to more than three facet diameters. Index of distance of tangential points of eye's ends to minimum width of frons: 4, to facet diameter: 12. Antennae 16–segmented. Scape almost cylindrical, somewhat widened distad, short, its length 2.4 times greater than width at base. Pedicel not globular, its length a little larger than its width, somewhat asymmetrical. Flagellar segments cask–shaped. Ratios of maximum width of scape to width of pedicel and first and second flagellar segments 2.4:2.3:1.3:1.1, ratio of length of antennal segments 1–4 3.7:2.8:2.5:1.6. The last 3 flagellar segments small, short. Apical antennal segment with a big finger–like cut terminal protuberance placed excentrically, covered by minute hairs. Sensory filaments needle–shaped, rather long, paired, badly visible. Ratios of lengths of segments of maxillary palps 2.6:3.4:4.1:6.1. Last segment of

maxillary palpus annulate, connected basally with a part closely below top of the preceding segment. Terminal lobe of labium on Fig. 89. Ratio of maximal length of cibarium to length of epipharynx: 2.5:1. Wings clear, widely lancet–shaped, 2.7–3.2 mm long, cubital area not enlarged, wing membrane bare. Wings without small strengthened parts of veins in central area; Sc, R_1, R_{2+3}, R_2, M_4 and Cu, basal parts of R_4, R_5 and M_{1+2} strengthened. Basal costal nodes distinct, well visible, Sc not interrupted. Angle of base of R_2 and R_3 acute, the angle of distal part of R_{2+3} and R_3 larger than the angle of R_{2+3} and R_2. Angle of base of M_1 and M_2 acute as well, the angle of distal part of M_{1+2} and M_1 larger than the angle of M_{1+2} and M_2. M_3 and Cu without a connection on M_4. R_5 extends distally to reach wing margin behind the apex of the wing. Veins r–r and r–m developed, m–m not visible. Medial wing angle 177°. Indices of wing AB:AC:AD = 7.9:7.6:7.8; BC:CD:BD = 1.8:2.9:4.7. Indices of base of M_{1+2},A to maximal width of wing: 2.0. Ratio of maximal length of halteres to its maximal width: 2.3:1. Ratios of lengths of femora, tibiae and first tarsal segments: P_1 = 21.9:22.0:11.8; P_2 = 22.8:26.5:13.5; P_3 = 25.0:31.0:14.0. Paired tarsal claws of P_1 inconspicuously swollen basally, pointed and bent distad as Fig. 96. Basal apodeme of male genitalia a little narrowed proximally in dorsal view, arched. Distal part of basal apodeme forked in two caudal arms. Furca missing. Copulatory organ in dorsal and lateral view as figured (Figs. 91 and 92). Coxopodites rather long, almost straight in dorsal view. Harpagones with short thin pointed tips and with a long wide basal part. Harpagones a little shorter than coxopodites in dorsal view. The larger part of epandrium bare (Figs. 90 and 98), with a wide notch caudally. Basal paired apertures visible, conspicuously bordered in lateral parts. Sclerotized remainders of 10th tergite and sternite inside of epandrium distinct, conspicuously developed, club–shaped. Index of length of cercus to length of epandrium in lateral view approximately 2.0. Hypandrium narrow. Epiproct rather small, widely rounded, haired. Hairs of epiproct minute, only on the top conspicuous. Hypoproct very broad at base, large, triangle–shaped. Apex of hypoproct reaching up more than to one quarter of length of cercus, distinctly haired. Cerci long, almost straight from dorsal view, parallel, inconspicuously C–shaped in lateral view, narrowed apically, with single top, subapically with one conspicuous big retinaculum and one short spine.

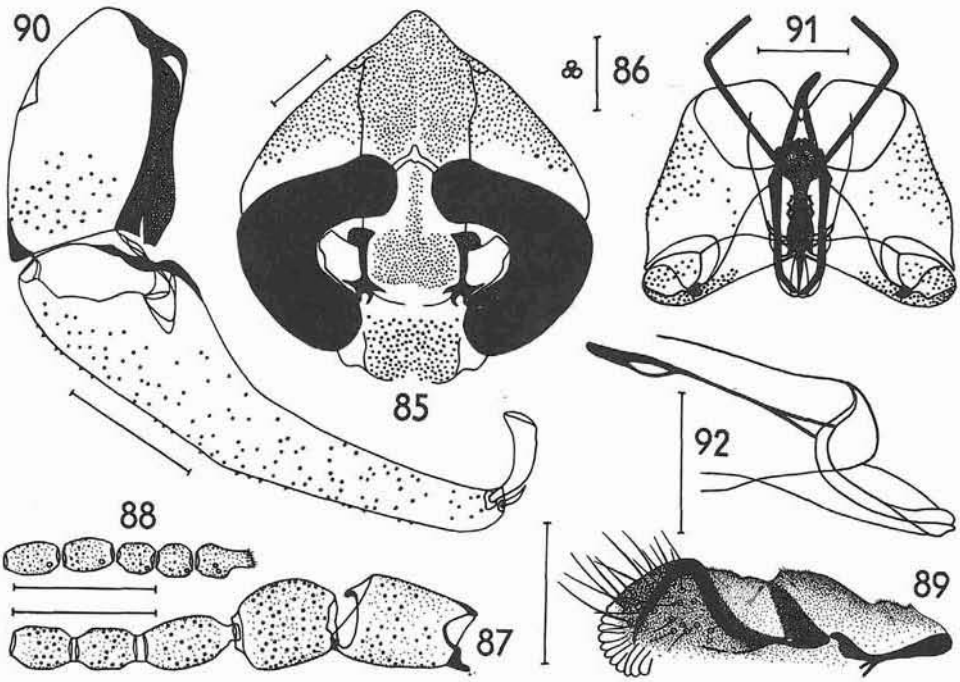
Female. Unknown to me, however briefly described by Tonnoir (1920).

Material: 16 ♂ ♂. Choteč, 19.V.1982 – 5 ♂ ♂; Slivenec, 19.V. 1982 – 4 ♂ ♂; Uhříněves – Pitkovický potok, 13.V.1982 – 1 ♂ ; Zadní Kopanina, 19.V.1982 – 5 ♂ ♂; Závist, 15.V.1982 – 1 ♂; all Ježek lgt.; Cat.No.P5 – 33507–33522, Inv.No. 3057–3072.

Comments on material: Slides, deposited in the Department of Entomology of the National Museum (Nat. Hist.), Praha. Figured male Inv.No. 3072 labelled Uhříněves – Pitkovický potok (13.V.1982).

Occurence: V.

Bionomy: Larvae were described by Vaillant (1961c) and adults were collected at 1200 m altitude (Salamanna et Sarà, 1980). Ecology and biomass of adults were studied by Wagner (1973, 1979b). The present author collected adults on banks of bro-



Figs. 85 – 92: *Berdeniella manicata* (Tonn.), ♂. 85: head; 86: facets; 87: basal antennal segments; 88: apical antennal segments; 89: terminal lobe of labium; 90: epandrium and cercus laterally; 91: copulatory organ, coxopodites and harpagones dorsally; 92: copulatory organ laterally. Scales 0.1 mm.

oks and swamp areas in forests with growth of *Aesculus, Alnus, Picea, Salix, Sambucus, Ulmus,* undergrowth with *Asarum, Caltha, Ficaria, Filipendula, Ranunculus* and *Urtica.*

Distribution: Austria, Belgium, Bulgaria, France, Germany, Hungary, Italy, Slovak Republic, Spain and former Yugoslavia. New to Czech Republic.

Data about type–material and type–locality brief, „ 3 ♂, 6 ♀,. Virton (Jur) en septembre.".

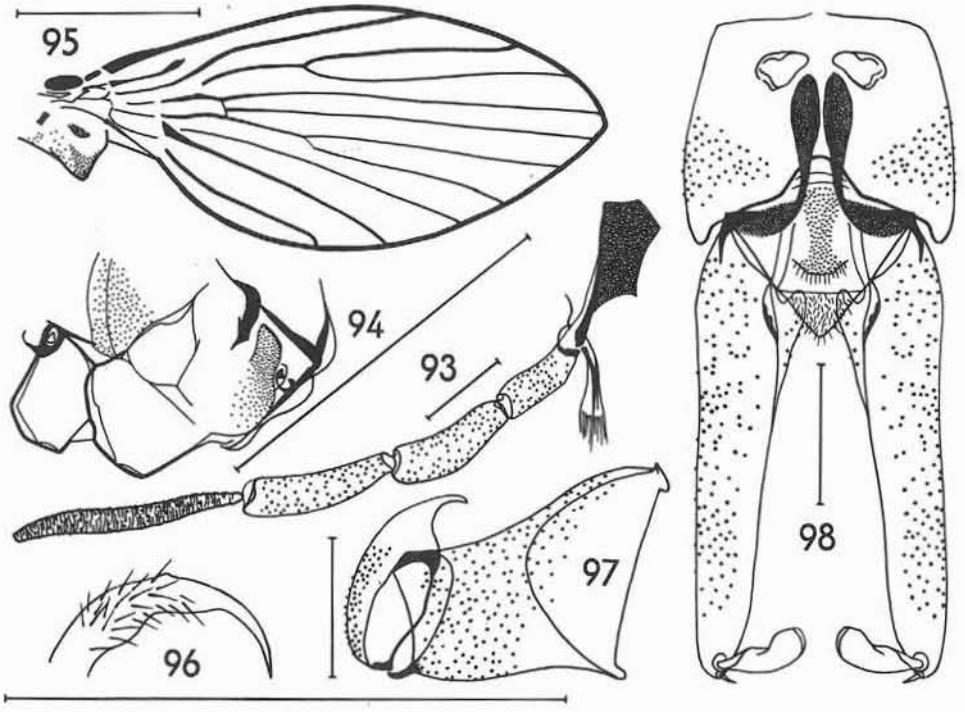
Comparative material: By the generosity of Dr. P. Grootaert (Bruxelles) I have had the possibility to examine holotype (♂) of *Pericoma manicata* Tonn. labelled: „A. Virton, 3 Sept. 1920, A. Tonnoir, Collect. et déterm. A. Tonnoir, cf Bull. Ann. Soc. Ent. Belg., 60, 1920, p. 181". It was dry specimen with genitalia pined on a microslide.

Discussion: It was very difficult for me to arrange genitalia of this species in the same position as in the micro–slide with holotype's genitalia. It was classified at first sight as a new species, however, after this comparison as quite identical.

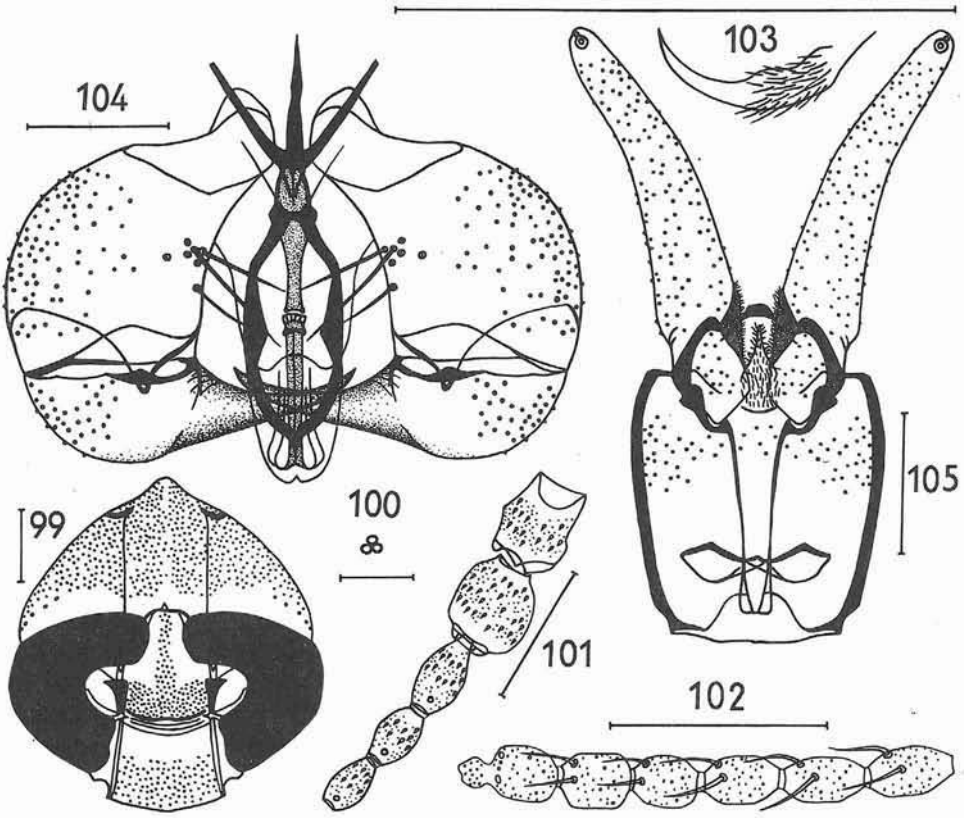
Berdeniella vimmeri sp.n.
(Figs. 99 – 112)

Differential diagnosis: Closely related to *Berdeniella stavniensis* (Krek, 1969) by the structure of male genitalia. This species has cercopods with one big retinaculum and two small bristles, wings with M_3 and Cu connected on M_4 in contrast to the below described species with one retinaculum and only one bristle, M_3 and Cu not connected on M_4.

Male. Eyes separated, frons with irregularly arranged dorsoventral set of setae. The minimum distance between eyes corresponds to three diameters of facets, closely below frontal suture is equivalent almost to its fourfold. Ratios of distance of tangential points of eye's ends to minimum width of frons: 3.5:1, to facet diameter: 10.0:1. Antennae 16-segmented. Scape very short (Fig. 101), almost cylindrical, a little widened distad, its length twice that of the width at base. Pedicel almost globular,



Figs. 93 – 98: *Berdeniella manicata* (Tonn.), ♂. 93: maxilla and palpus maxillaris; 94: thoracal sclerites laterally; 95: wing; 96: claw of P_1; 97: coxopodite and harpagon laterally; 98: epandrium and cerci dorsally. Scales 0.1 mm, in Figs. 94 and 95 – 1 mm.



Figs. 99 – 105: *Berdeniella vimmeri* sp.n., ♂. 99: head; 100: facets; 101: basal antennal segments; 102: apical antennal segments; 103: claw of P_1; 104: copulatory organ, coxopodites and harpagones dorsally; 105: epandrium and cerci dorsally. Scales 0.1 mm.

ball-shaped, a little asymmetrical. Flagellar segments cask-shaped, almost symmetrical. Ratios of maximum width of scape to width of pedicel and first and second flagellar segments 2.0:2.2:1.2:1.1, ratio of length of antennal segments 1-4 2.6:2.6:2.3:1.7. The last flagellar segments not reduced. Apical antennal segment egg–shaped, with a big globular protuberance terminally. Sensory filaments rather long, paired, needle-shaped. Ratios of lengths of segments of maxillary palps 2.2:2.4:2.7:4.6. Last segment of maxillary palpus annulate, connected basally with a part closely below top of the preceding segment. Terminal lobe of labium Fig. 106. Ratio of maximal length of cibarium to length of epipharynx: 1.5:1. Wings clear, widely lancet-shaped with rounded apex, holotype's wing 2.8 mm long (paratypes 2.4–2.9 mm), cubital area not conspicuously enlarged, wing membrane bare. Wings without conspicuous small strengthened parts of veins in central area; Sc, distal part

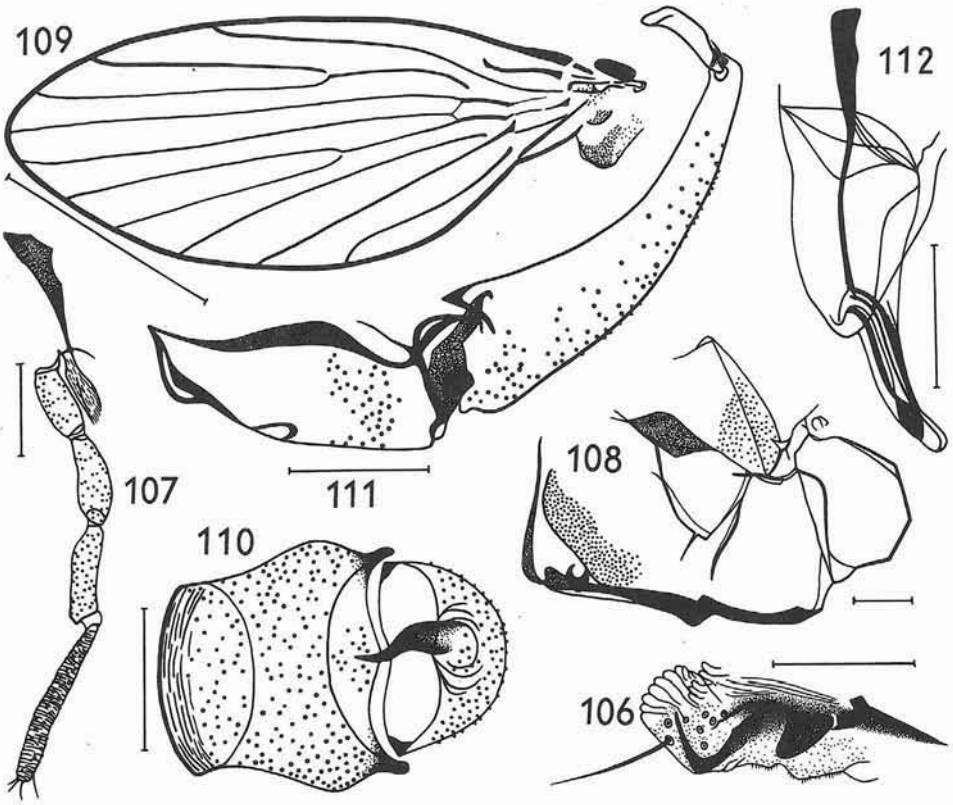
of R_1, R_{2+3}, R_2, base of R_4, base of M_{1+2}, M_4 and Cu basally strengthened. Basal costal nodes distinct, well visible, Sc not interrupted. Angle of base of R_2 and R_3 at first obtuse, after acute, the angle of distal part of R_{2+3} and R_3 inconspicuously larger than the angle of R_{2+3} and R_2. Angle of base of M_1 and M_2 at first obtuse, after acute as well, the angle of distal part of M_{1+2} and M_1 larger than the angle of M_{1+2} and M_2. M_3 and Cu without a connection on M_4. R_5 extends distally to reach wing margin conspicuously behind the apex of the wing. Veins r-r and m-m visible, m-m not visible. Medial wing angle 172°. Indices of wing AB:AC:AD = 8.5:8.6:9.1; BC:CD:BD = 2.0:3.0:5.0. Index of base of M_{1+2},A to maximal width of wing 2.2. Ratio of maximal length of halteres to its maximal width 2.4:1. Ratios of lengths of femora, tibiae and first tarsal segments (holotype): P_1 = 16.0:17.5:8.3; P_2 = 17.2:20.5:9.8; P_3 = 18.8:24.0:10.9. Paired tarsal claws of P_1 thicker basally, pointed and bent distad as Fig. 103. Basal part haired, with an incision ventrad. Basal apodeme of male genitalia conspicuously widened proximally in lateral view, pointed and characteristically narrowed in dorsal aspect, straight. Distal part of basal apodeme with very complicated structures. Copulatory organ as figured (Fig. 104). Coxopodites short, thick, a little arched from dorsal view, with a tuft of large setae inside. Harpagones with a hemispherical base and rather short pointed tips, conspicuously sclerotized. Harpagones a little shorter than coxopodites in dorsal view. Epandrium almost bare (Fig. 105). Basal paired apertures visible, partially fused, conspicuously bordered in distal pointed margins. Sclerotized remainders of 10th tergite and sternite inside of epandrium very reduced. Index of length of cercus to length of epandrium from lateral view approximately 1.4. Hypandrium narrow, a little widened in the middle. Epiproct small, conspicuously and strongly haired, rather short, tongue-like, with long pointed top. Hypoproct large, oblong-shaped, its caudal side prolonged in a rounded tongue-shaped protuberance, almost bare. Cerci long, C-shaped from lateral view, diverging in dorsal view, narrowed apically, with united top, subapically with one cudgel-shaped big retinaculum and only one small additional spine.

Female unknown.

Material: 14 ♂♂. Holotype – ♂, Březanská rokle, 15.V.1982, Ježek lgt.; Cat.No.P5 – 33523, Inv.No. 3090. Paratypes – 13 ♂♂: Závist, 15.V.1982 – 7 ♂♂; Březanská rokle, 15.V.1982 – 6 ♂♂; all collected by author; Cat.No.P5 – 33524–33536, Inv.No. 3073–3079, 3084–3089.

Derivatio nominis: The new species is dedicated to the late A. Vimmer, famous Czech amateur dipterologist, who described several valid new genera and species of some families of Diptera, now recognized. He established a basis of Czech dipterology at the beginning of this century by his large collection of Diptera deposited in the National Museum in Prague.

Comments on material: Holotype used for all figures. It was dissected and mounted on a slide in Canada Balsam. All paratype material is slide mounted as well and deposited in the Department of Entomology of the National Museum (Nat.Hist.), Praha.



Figs. 106 – 112: *Berdeniella vimmeri* sp.n., ♂. 106: terminal lobe of labium; 107: maxilla and palpus maxillaris; 108: thoracal sclerites laterally; 109: wing; 110: coxopodite and harpagon laterally; 111: epandrium and cercus laterally; 112: copulatory organ laterally. Scales 0.1 mm, in Fig. 109 – 1 mm.

Occurence: V.

Bionomy: Unknown. Males were collected on the banks of a brook in very deep rocky valley by sweeping on *Ficaria* and *Urtica*, shaded by *Alnus, Carpinus, Crataegus* and *Picea*.

Distribution: Czech Republic, only the mentioned area of Prague.

Comparative material: Only the original description and figures of *Berdeniella stavniensis* (Krek, 1969).

Provided that we add to these 8 described and redescribed species 52 more or less common species inhabiting Prague agglomeration, we can proceed to an objective picture about the fauna of moth flies of Prague city and adjacent localities. All so far known localities of all species are quoted, including all known literary data, with very short characteristics of habitats.

All following material was collected mostly by author, however his name is quoted in the faunal list only in the case where the species was collected also by another collector on the same locality (if at the same time, the names are separated by comma, at a different time by semicolon). The symbols used: D.–Dlabola lgt., J.–Ježek, K.–Kovář, M.–Mašínová, S.–Sochrová, St.–Studničková, T.–Trojánková, V.–Vimmer.

The review of localities presents also codes (quoted in parentheses) for the grid-mapping in the sense of Zelený (1972): Benice (5953), Bohnice (5852), Brnky (5852), Březanská rokle (6052), Břve (5951), Chuchle (5952), Černošice (6051), Čimice (5852), Čísovice (6151), Divoká Šárka (5951), Dobročovice (5954), Dolní Chabry (5852), Dolní Liboc (5951), Dolní Počernice (5953), Drahaňská rokle (5852), Dubeč (5953), Ďáblice (5852), Hloubětín (5853), Hlubočepy (5952), Holešovice (5852), Hostivice (5951), Hrnčíře (6053), Choteč (6051), Jenerálka (5852), Klánovice (5953), Klukovice (5952), Koloděje (5953), Kosoř (6052), Krč (5952), Křeslice (5953), Kunratice (5952), Letná (5952), Levý Hradec (5852), Libeň (5852), Libeň – Rokytka (5852), Libuš (5952), Lochkov (6052), Luka pod Medníkem (6152), Luka pod Medníkem – Zlatý potok (6152), Milíčov (5953), Mírovice (5853), Modřany (6052), Petrovice (5953), Písnice (6052), Prokopské údolí (5952), Průhonice (6053), Přemyšlení (5852), Roztoky (5852), Ruzyně (5951), Sedlec – Sv. Ján pod Skalou (6050), Slivenec (5952), Sobín (5951), Solopysky (6051), Spořilov (5952), Stodůlky (5951), Suchdol (5852), Šeberov (5953), Tiché údolí (5852), Troja (5852), Třeboradice (5853), Tuchoměřice (5851), Úholičky (5852), Uhříněves (5953), Uhříněves – Pitkovický potok (5953), Uhříněves – Fantův Mlýn (5953), Unětice (5852), Úvaly (5954), Vinohrady (5952), Vinoř (5853), Vokovice (5952), Vokovice – Džbán (5952), Vrané nad Vltavou (6052), Vysočany (5853), Zadní Kopanina (5951), Zahořanský potok (6052), Závist (6052), Zličín (5951), Žalov (5852).

The growth of dominant trees on the visited localities is represented here by symbols A–V, the plant undergrowth by numbers 1–33: *Acer* (A), *Aesculus* (B), *Alnus* (C), *Betula* (D), *Carpinus* (E), *Corylus* (F), *Crataegus* (G), *Fraxinus* (H), *Juglans* (I), *Larix* (J), *Malva* (K), *Picea* (L), *Pinus* (M), *Popolus* (N), *Prunus* (O), *Quercus* (P), *Robinia* (Q), *Salix* (R), *Sambucus* (S), *Sorbus* (T), *Tilia* (U), *Ulmus* (V); *Alisma* (1), *Asarum* (2), *Caltha* (3), *Carex* (4), *Convallaria* (5), *Equisetum* (6), *Ficaria* (7), *Filipendula* (8), *Geranium* (9), *Geum* (10), *Grossularia* (11), *Heracleum* (12), *Impatiens* (13), *Juncus* (14), *Lappa* (15), *Lemna* (16), *Mentha* (17), *Musci* (18), *Myosotis* (19), *Nasturtia* (20), *Petasites* (21), *Phragmites* (22), *Plantago* (23), *Poaceae* (24), *Ranunculus* (25), *Ribes* (26), *Rosa* (27), *Rubus* (28), *Rumex* (29), *Scirpus* (30), *Trollius* (31), *Typha* (32), *Urtica* (33).

Review of species:

Trichomyia urbica Curtis, 1839

Slide: ♀; VI; Černošice (V.); other data missing.

Oomormia andrenipes (Strobl, 1910)

Slides: 2 ♂ ♂; V; Modřany, Zahořanský potok (J.,M.,T.); banks of brooks; A,D,F,L,N,Q–T; 33.

Psychomormia incerta (Eaton, 1893)

Slide: ♂; V; Zadní Kopanina; brooks and bogs in a forest; C,R; 3,8.

Peripsychoda auriculata (Curtis, 1839)

Literature: Ježek, 1987a – p.198 (Kunratice, Úvaly).

Slides: 29 ♂ ♂; V–VIII; new localities: Brnky, Břve, Čísovice, Divoká Šárka, Dolní Počernice, Hloubětín, Jenerálka, Klukovice, Křeslice, Luka pod Medníkem (J.,M.,T.), Milíčov (M.;J.), Sobín, Vinoř, Vokovice; banks of ponds, outflows of water reservoirs, gutters, brooks, rills of bluffs, swamps in forests, wet places with rubbish, pools below rocky walls; A-D, F-I, L, N-S; 3-4, 6,8,13-14,22,24-25,28,33.

Telmatoscopus carthusianus (Vaillant, 1972)

Literature: Ježek, 1982 – p.57 (Kosoř); Ježek, 1988 – p.86 (Černošice, Dolní Liboc, Kosoř, Modřany, Tiché údolí, Žalov).

Slides: 17 ♂ ♂; V–VI; new localities: Čimice, Divoká Šárka, Vokovice, Zahořanský potok (J.,M.,T.); banks of brooks in villages as well as out of a village, rills of hillsides shaded by a forest; A-B,D,F,H,J,L-N,P-T; 3,9,12,16,33.

Telmatoscopus gressicus (Vaillant, 1972)

Literature: Ježek, 1988 – p.89 (Dolní Liboc, Kosoř, Modřany).

Slides: 44 ♂ ♂; V–VII; new localities: Břve, Čimice, Divoká Šárka, Dolní Chabry, Hloubětín, Levý Hradec, Troja, Vokovice, Zahořanský potok (J.,M.,T.), Žalov; banks of ponds, brooks and rivers, mouth of brooks to rivers, rills of bluffs and springs below railway-lines, swamps in forests, wet biotopes shaded by bridges; A-D, G-J, L-T; 3-4,12,14-16,19,24-25,27-28,33.

Panimerus denticulatus Krek, 1971

Literature: Ježek, 1987c – p.231 (Kunratice).

Slides: 8 ♂ ♂; VI–VII; new localities: Brnky, Čísovice, Dolní Chabry, Drahaňská rokle, Jenerálka, Milíčov, Vokovice, Žalov; brooks in forests and on meadows, outflows of ponds, swamps with rubbish, rills of hillsides; B-D,F-H,L-P,R-S; 8,12-13,15,21,24,33.

Panimerus kreki Vaillant, 1972

Slide: ♂; VI; Divoká Šárka; a brook;B-C,G,S.

Panimerus notabilis (Eaton, 1893)

Literature: Ježek, 1982 – p.58 (Zličín).

Slides: 92 ♂ ♂; V-IX; new localities: Divoká Šárka, Dolní Chabry, Dolní Liboc, Dolní Počernice, Hloubětín, Hostivice, Jenerálka, Libeň-Rokytka, Luka pod Medníkem (J.,M.,T.), Milíčov (M.), Ruzyně, Sobín, Stodůlky, Suchdol, Šeberov (D.), Tiché údolí, Žalov; banks of brooks, ponds, ditches, outflows of ponds, rills on fields,

swamps, wet places with rubbish in town agglomeration, wet meadows; B-D,G-I,L-N,Q-S; 1,3-4,12-14,17,22,25,32-33.

Panimerus verneysicus Vaillant, 1972

Literature: Ježek, 1987c – p.242 (Kunratice).

Panimerus sp. (gynandromorph)

Slide: 1 ex; VIII; Dolní Počernice; swamps on the periphery of a pond; R; 22,33.

Psycmera integella (Jung, 1956)

Literature: Ježek, 1985b – p.6 (Kunratice).

Slides: 3 ♂ ♂; V–VI; new localities: Břve, Luka pod Medníkem – Zlatý potok (J.,M.,T.), Tiché údolí; swamps, banks of ponds and brooks; C-F,H,N,R; 4-5,33.

Parajungiella consors (Eaton, 1893)

Slides: 4 ♂ ♂, V–VI; Dolní Liboc, Stodůlky, Suchdol, Žalov; banks of brooks and wet meadows; D,L-M,Q-R; 3-4,12,33.

Parajungiella longicornis (Tonnoir, 1919)

Literature: Ježek, 1985b – p.15 (Krč, Kunratice).

Slides: 131 ♂ ♂; V–VIII; new localities: Benice, Břve, Divoká Šárka, Dolní Liboc, Dolní Počernice, Drahaňská rokle, Hloubětín, Jenerálka, Křeslice, Libuš, Luka pod Medníkem (J.,M.,T.), Luka pod Medníkem – Zlatý potok (J.,M.,T.), Milíčov (M.), Písnice, Roztoky, Stodůlky, Suchdol, Tiché údolí, Vinoř, Vokovice, Zahořanský potok (J.,M.,T.); banks of brooks, ponds and swamps in forests or out of a forest, wet meadows, owergrown wet places with rubbish; A-I,L-N,Q-T; 3-6,9,12-14,16,21-22,25,28,33.

Jungiella (J.) hygrophila Ježek, 1987

Slides: 27 ♂♂; V–VI; Čimice, Divoká Šárka, Dolní Chabry, Dolní Liboc, Jenerálka, Klukovice, Luka pod Medníkem (J.,M.,T.), Luka pod Medníkem – Zlatý potok (J.,M.,T.), Tiché údolí, Vinoř, Vokovice, Zahořanský potok (J.,M.,T.); banks of brooks, outflows of ponds, rills of bluffs, swamps in forests, pools below rocky walls, wet places with rubbish; A-F,H,J,L-N,P-T; 3,5-6,12-13,25,33.

Jungiella (J.) soleata (Walker, 1856)

Literature: Ježek, 1982 – p.58 (Choteč, Černošice, Kosoř, Radotín, Zadní Kopanina).

Slides: 132 ♂ ♂; V–VI; new localities: Čimice, Divoká Šárka, Dolní Chabry, Dolní Liboc, Drahaňská rokle, Hloubětín, Jenerálka, Klukovice, Kunratice, Luka pod Medníkem (J.,M.,T.), Luka pod Medníkem – Zlatý potok (J.,M.,T.), Stodůlky, Suchdol, Tiché údolí, Úholičky, Vinoř, Vokovice, Vysočany, Zahořanský potok (J.,M.,T.), Žalov; banks of brooks, gutters,swamps, water reservoirs, tributaries of ponds in forests or out of a forest, on the localities often polluted by dustbins; A-J,L-N,P-T,V; 3-6,12-14,19,21-22,24-25,28,33.

Jungiella (J.) valachica (Vaillant, 1963)

Literature: Ježek, 1982 – p.58 (Kosoř); 1987b – p.220 (Dolní Chabry).

Slides: 21 ♂ ♂; V–VI; new localities: Čimice, Divoká Šárka, Klukovice, Luka pod Medníkem – Zlatý potok (J.,M.,T.), Stodůlky, Vinoř, Vokovice; banks of outflows of

ponds, brooks, mouths of brooks to the river, wet meadows, swamps in forests, rills of bluffs, pools below rocky walls, wet places with rubbish; A-F,H,J,L-M,P-S; 3-6,19,25,33.

Jungiella (P). acuminata (Szabó, 1960)

Literature: Ježek, 1983a – p.238 (Kunratice).

Slides: 19 ♂ ♂; VI–VII; new localities: Divoká Šárka, Drahaňská rokle, Milíčov, Vokovice, Žalov; banks of brooks and ponds, rills of hillsides, swamps in forests; A-D,G-H,L,O-P,R-S; 12-13,15,21,29,33.

Jungiella (P.) laminata (Szabó, 1960)

Slide: ♂; VI; Divoká Šárka; banks of a brook; A,C,H; 3,33.

Jungiella (P.) procera Krek, 1971

Literature: Ježek, 1982 – p.58 (Černošice, Kosoř, Solopysky).

Slides: 18 ♂ ♂; V–VI; new localities: Čimice, Divoká Šárka, Dolní Chabry, Drahaňská rokle, Klukovice, Stodůlky, Vokovice, Žalov; banks of brooks and rills of bluffs, wet meadows, mouth of brooks to the river, outflows of ponds, pools below rocky walls, rubbish heaps; A-D,G-H,J,L-M,P-S; 3-4,19,21,25,33.

Jungiella (P.) ripicola (Bellier, 1967)

Slide: ♂; VII; Křeslice; banks of a brook; C,P; 33.

Paramormia (P.) polyascoidea (Krek, 1971)

Literature: Ježek, 1990a – p.134 (Divoká Šárka, Dolní Počernice, Křeslice, Kunratice, Šeberov, Uhříněves, Vinoř).

Slides: 13 ♂ ♂; V–VII; new localities: Luka pod Medníkem (J.,M.,T.), Troja, Zahořanský potok (J.,M.,T.); banks of ponds, gutters, the river and brooks, swamps in forests as well as out of a forest; A-C,F-G,L,N,Q-T; 3,6,13,22,24,27,33.

Paramormia (D.) ustulata (Walker, 1856)

Literature: Ježek, 1990a – p.139 (Břve, Dolní Chabry, Dubeč, Kunratice, Ruzyně).

Slides: 8 ♂ ♂; V–IX; new locality: Zahořanský potok (J.,M.,T.); banks of brooks, ponds in forests or out of a forest, gutters on fields (Zea), swamps, sewers in villages; A,C-D,F,L,N,R-T; 16-17,33.

Trichopsychoda hirtella (Tonnoir, 1919)

Literature: Ježek, 1985a – p.70 (Kunratice).

Slide: ♂; VI; new locality: Břve, banks of a pond; C-D,H,R; 4.

Philosepedon humeralis (Meigen, 1818)

Literature:Ježek, 1985a – p.74 (Kunratice).

Slides: 6 ♂ ♂, 1 ♀; IV–IX; new localities: Benice, Divoká Šárka, Mírovice, Prokopské údolí, Třeboradice, Uhříněves – Pitkovický potok; banks of brooks as well as gutters on fields; B-C,G,N,R-S; 9,11,33.

Feuerborniella obscura (Tonnoir, 1919)

Slides: 4 ♂ ♂, 1 ♀; V–VI; Jenerálka, Luka pod Medníkem – Zlatý potok (J.,M.,T.), Tiché údolí; banks of brooks and swamps; E-F,N,R-S; 5,33.

Threticus lucifugus (Walker, 1856)

Slide: ♂; V; Zahořanský potok (J.,M.,T.); banks of a brook; A,F,L,T; 33.

Psychodocha cinerea (Banks, 1894)

Literature: Ježek, 1990b – p.36 (Drahaňská rokle, Kunratice, Spořilov).

Slides: 3 ♂ ♂, 12 ♀ ♀; I–VIII; without new localities; banks of a river and a brook, gardens, flats and closets; D,S; 21.

Psychodocha gemina (Eaton, 1904)

Literature: Ježek, 1982 – p.59 (Černošice, Kosoř); 1990b – pp.41,43 (Bohnice, Choteč, Divoká Šárka, Dolní Liboc, Drahaňská rokle, Jenerálka, Levý Hradec, Kunratice, Úholičky, Úvaly, Zadní Kopanina, Závist, Žalov).

Slides: 3 ♂ ♂, 20 ♀ ♀; V–VII; new localities: Čimice, Luka pod Medníkem – Zlatý potok (J.,M.,T.); swamps and brooks in forests or out of a forest, springs below railway-lines; A,C-H,J,L-S,V; 3-5,7-8,12,21,25,29,33.

Psycha grisescens (Tonnoir, 1922)

Literature: Ježek, 1990b – p.46 (Kunratice).

Slide: ♀; V; new locality: Holešovice-Libeň; banks of a blind arm of the river Vltava (shipyard); B-C,O,S; 28,33.

Psychomora trinodulosa (Tonnoir, 1922)

Literature: Ježek, 1982 – p.59 (Solopysky).

Psychodula minuta (Banks, 1894)

Literature: Ježek, 1982 – p.59 (Solopysky); 1990b – p.58 (Kunratice, Šeberov).

Slide: only ♀ from Šeberov; IV; manure.

Psychoda phalaenoides (Linné, 1758)

Literature: Ježek, 1990b – p.65 (Závist).

Slides: 2 ♂ ♂; V–VI; Břežanská rokle, Čimice; banks of brooks; A,D-E,G-H,J,L,P; 7,31,33.

Psychoda uniformata Haseman, 1907

Literature: Ježek, 1990b – p.69 (Kunratice).

Tinearia alternata (Say, 1824)

Literature: Ježek, 1972 – p.29 (Libuš, Vinoř); 1977 – p.237 (the same).

Slides: 23 ♂ ♂, 22 ♀ ♀; V–IX; new localities: Bohnice, Dolní Chabry, Ďáblice, Hostivice, Jenerálka, Koloděje, Kunratice (M.), Luka pod Medníkem (J.,M.,T.), Milíčov (M.), Spořilov (St.), Vinohrady (D.), Vrané nad Vltavou (V.), Žalov; banks of ponds, ditches, brooks and rills with rotten organic material, swamps, gardens, excrements, flats, collected as well by light at night; A-C,G,N,Q-S; 33.

Tinearia lativentris (Berdén, 1952)

Slide: ♀; VII; Milíčov (M.); other data missing.

Logima albipennis (Zetterstedt, 1850)

Literature: Ježek, 1983b – p.218 (Kunratice).

Slides: 32 ♀ ♀; III–IX; new localities: Bohnice, Dobročovice, Dolní Chabry, Dolní Liboc, Hlubočepy, Jenerálka, Klánovice, Klukovice, Křeslice, Letná (V.), Lochkov, Luka pod Medníkem (J.,M.,T.), Písnice, Přemyšlení, Spořilov (St.), Úholičky, Žalov; ditches in forests or out of a forest, brooks, outflows of ponds, swamps, reservoirs of stagnant water, wet rubbish-heaps, rotten organic material, excrements, outflows of

farms with pigs, flats; A-D,G-H,L-S,U; 4,12-13,17-18,25,29-30,32-33.

Logima erminea (Eaton, 1893)

Slides: 2 ♂ ♂; VII; Milíčov, Žalov; swamps in forests, banks of ponds and brooks; C-D,H,L,O-S; 13,29,33.

Logima satchelli (Quate, 1955)

Literature: Ježek, 1990b – p.73 (Bohnice, Dobročovice, Klukovice, Křeslice, Prokoposké údolí, Průhonice, Žalov).

Slides: 5 ♂ ♂, 9 ♀ ♀; III-VII; new localities: Dolní Chabry, Holešovice-Libeň, Luka pod Medníkem (J.,M.,T.), Troja; spring areas, gutters,brooks, rivers, blind arms of the river (e.g. shipyard), outflows of ponds, swamps, pools below rocky walls, wet margins of a forest, rubbish-heaps, excrements, rotten organic material, farms with pigs; A-E,H,N-S; 4,7,13,15,23-25,27-29,32-33.

Logima zetterstedti Ježek, 1983

Literature: Ježek, 1983b – p.227 (Kunratice).

Slides: 5 ♂ ♂, 6 ♀ ♀; IV–IX; new localities: Bohnice, Dolní Chabry, Hrnčíře (St.), Klukovice, Křeslice, Milíčov (M.), Přemyšlení, Šeberov (St.), Vokovice; banks of brooks, rills and ponds, swamps in forests or out of a forest, small pools below rocky walls, manure, excrements and rotten organic rests; A-C,G-H,P-S; 30,33. Comments: Teratol.ex. Inv.No. 48 from Hrnčíře (St.).

Clytocerus ocellaris (Meigen, 1804)

Slide: ♂; VII; Brnky; rubbished rill; G,O-P,R-S; 33.

Ulomyia annulata (Tonnoir, 1919)

Slides: 12 ♂ ♂; V-X; Břve, Čísovice, Divoká Šárka (D.), Dolní Počernice, Dubeč, Jenerálka, Petrovice, Prokopské údolí, Přemyšlení, Vokovice, Žalov; banks of brooks, ponds in forests as well as out of a forest, outflows of ponds and water reservoirs, swamps, rills and wet meadows; C-D,F,H,N-P,R-S; 3-4,8-10,22,24,26-27,29-30,33.

Ulomyia fuliginosa (Meigen, 1804)

Slides: 37 ♂ ♂; IV–IX; Brnky, Břežanská rokle, Choteč, Čimice, Čísovice, Divoká Šárka (J.;D.), Dolní Chabry, Dubeč, Hloubětín, Jenerálka, Klukovice, Kosoř, Kunratice, Levý Hradec, Libeň, Libuš, Lochkov, Luka pod Medníkem (J.,M.,T.), Luka pod Medníkem – Zlatý potok (J.,M.,T.), Modřany, Nebušice (S.), Prokopské údolí, Přemyšlení, Slivenec, Tiché údolí, Tuchoměřice, Úholičky, Vinoř, Vokovice (J.; S.), Zadní Kopanina, Zahořanský potok (J.,M.,T.), Závist, Žalov; banks of brooks, outflows of ponds, blind arms of the river, swamps in forests or out of a forest, rills on margins of forests, wet meadows, fountains, pools below rocky walls, springs below railway-lines; A-T,V; 2-8,13-14,16-17,20,22,24-25,27-30,33.

Bazarella subneglecta (Tonnoir, 1922)

Slides: 12 ♂ ♂; IV–VII; Břežanská rokle, Dolní Chabry, Drahaňská rokle, Milíčov, Petrovice, Prokopské údolí, Tiché údolí, Uhříněves – Pitkovický potok, Unětice, Vokovice, Závist; banks of brooks, outflows of ponds, swamps in forests as well as out of a forest and margins of forests; A,C-E,G,J,L-N,P,R-S; 7,9-10,12-13,22,26,33.

Satchelliella canescens (Meigen, 1804)

Slides: 9 ♂ ♂; IV–IX; Brnky, Dubeč, Levý Hradec, Luka pod Medníkem (J.,M.,T.), Prokopské údolí, Přemyšlení, Tuchoměřice, Žalov; banks of brooks near the river, outflows of ponds, swamps, springs on margins of forests and below railway-lines, rills and wells; C,G-H,L,O-P,R-S; 3,7,13,26,29-30,33.

Satchelliella gracilis gracilis (Eaton, 1893)

Slides: 4 ♂ ♂; V; Jenerálka, Vokovice, Zadní Kopanina, Závist; banks of brooks and swamps in a forest; A,C-D,L,K; 3,7-8,33.

Satchelliella mutua (Eaton, 1893)

Slide: ♂; VII; Čísovice; rill on meadow; F,N,P,R; 8,24.

Satchelliella nubila (Meigen, 1818)

Slides: 54 ♂ ♂; IV–IX; Bohnice, Březanská rokle, Břve, Čimice, Čísovice, Divoká Šárka (D.; J.), Dolní Chabry, Dolní Počernice, Dubeč, Choteč, Jenerálka, Klukovice, Kosoř, Krč (V.?), Křeslice, Kunratice, Libeň, Libuš, Luka pod Medníkem (J.,M.,T.), Luka pod Medníkem – Zlatý potok (J.,M.,T.), Milíčov (M.), Modřany, Petrovice, Prokopské údolí, Průhonice (J.;J.,M.), Přemyšlení, Roztoky, Slivenec, Tiché údolí, Tuchoměřice (K.), Uhřiněves (M.), Uhřiněves – Pitkovický potok, Vinoř, Vokovice (J.;S.), Zadní Kopanina, Zahořanský potok (J.,M.,T.), Závist, Žalov; banks of brooks, outflows of ponds, ponds and swamps in forests as well as out of a forest, ditches, rills, wet meadows, pools below rocky walls, wet places in a modern part of the town agglomeration with rubbish; A-H,J,L-N,P-T,V; 1-10,13,16,22,24-27,29-30,32-33. Comments: Teratol.ex. Inv. No. 2897 Dolní Chabry.

Satchelliella palustris (Meigen, 1804)

Slides: 11 ♂ ♂; V; Chuchle (V.), Divoká Šárka (D.), Jenerálka, Kosoř, Luka pod Medníkem – Zlatý potok (J.,M.,T.), Nebušice (S.), Vokovice, Závist; banks of brooks and ditches, wet meadows, swamps in forests or out of a forest; A,C-F,K-N,R-S; 3-5,7,20,22,33.

Satchelliella pilularia (Tonnoir, 1940)

Slides: 2 ♂ ♂; V; Modřany, Nebušice; banks of brooks with deep places; N,S; 16,33.

Satchelliella trivialis (Eaton, 1893)

Slides: 69 ♂ ♂; IV–IX; Brnky, Březanská rokle, Břve, Choteč, Čimice, Čísovice, Divoká Šárka (D.;J.), Dolní Chabry, Dolní Počernice, Dubeč, Džbán, Hostivice, Jenerálka, Klukovice, Křeslice, Kunratice, Libeň, Libuš, Lochkov, Luka pod Medníkem (J.,M.,T.), Luka pod Medníkem – Zlatý potok (J.,M.,T.), Milíčov (J.;M.), Modřany, Petrovice, Prokopské údolí, Průhonice (J.,M.), Přemyšlení, Roztoky, Slivenec, Sobín, Suchdol, Šeberov (D.), Tiché údolí, Tuchoměřice (J.; K.), Uhřiněves – Fantův Mlýn, Uhřiněves – Pitkovický potok, Unětice (J.;M.), Vokovice (J.;S.), Vysočany, Zadní Kopanina, Zahořanský potok (J.,M.,T.), Závist, Žalov; banks of ponds in forests or out of a forest, brooks, gutters, blind arms of the river, rills, outflows of ponds, spring areas in or out of forests, wet meadows, swamps on margins of a forest, pools below rocky walls, wet places with rubbish in parts of the town agglomeration; A-H,J,L-N,P-T,V; 1-10,13,15-17,21-28,32,33.

Pericoma (Pachypericoma) blandula Eaton, 1893

Slides: 17 ♂ ♂; V–VIII; Choteč, Čimice, Divoká Šárka, Dolní Liboc, Dolní Počernice, Dubeč, Kosoř, Křeslice, Modřany, Prokopské údolí, Úholičky, Uhříněves (M.), Uhříněves – Fantův Mlýn, Uhříněves – Pitkovický potok, Zadní Kopanina; banks of ponds and brooks, swamps in forests and out of a forest; A-D,H,J,L-N,P-S,V; 3-4,8,12,22,25-26,33.

Pericoma (Pachypericoma) fallax Eaton, 1893

Slides: 10 ♂ ♂; V–VII; Divoká Šárka, Dolní Liboc, Hlubočepy, Klukovice, Křeslice, Roztoky, Slivenec, Úholičky, Zadní Kopanina, Zahořanský potok (J.,M.,T.); banks of natural brooks as well as paved ones, swamps in forests, pools below rocky walls; A-D,F,H,L-M,P-T; 2-3,8,12,25,33.

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References

Banks N., 1894: Some Psychodidae from Long Island, N. Y. *Canad. Ent.*, **26**: 329–333.

Bellier M. T., 1967: Les Diptères Psychodidae des eaux a cours lent et des étangs. *Trav. Lab. Hydrobiol. Piscic. Univ.* Grenoble, **57–58** (1965–1966): 57–63.

Bellstedt R., 1986: Die Psychodiden-Emergenz 1983 des Bergbaches Vesser im Thüringer Wald (Diptera, Psychodidae). Gothaer Emergenz – Untersuchungen im Biosphärenreservat Vessertal, Nr.5. *Abh. Ber. Mus. Nat.* Gotha, **13**: 21–25.

Bellstedt R. et Wagner R., 1986: Weitere Psychodiden – Nachweise in Thüringen (Diptera). *Abh. Ber. Mus. Nat.* Gotha, **13**: 60–63.

Berdén S., 1952: Taxonomical notes on Psychodidae (Dipt.Nem.) I. Psychoda lativentris n.sp., a species hitherto confused with alternata Say. *Opusc. ent.*, Lund, **17**: 110–112.

Caspers N. et Wagner R., 1980: Emergenz – Untersuchungen an einem Mittelgebirgsbach bei Bonn. II. Psychodiden-Emergenz 1976/1977. *Arch. Hydrobiol.*, Stuttgart, **88**(1): 73–95.

Curtis J., 1839: British Entomology. 16. London, pls. 722–769, plus 96 unnumbered pages /p.(2) with pl.745/.

Duckhouse D. A., 1966: Psychodidae (Diptera, Nematocera) of Southern Australia: subfamily Psychodinae. *Trans. R. ent. Soc.* Lond., **118**: 153–220.

Eaton A. E., 1893: A synopsis of British Psychodidae. *Ent. Mag.*, **29:** 5–8, 31–34, 120–130.

Eaton A. E., 1904: New genera of European Psychodidae. *Ent. Mag.*, **15:** 55–59.

Enderlein G., 1936: Klassifikation der Psychodiden (Dipt.). *Dtsch. ent. Z.*, Berlin, **4:** 81–112.

Freeman P., 1950: British Psychodidae. *Handb. Ident. Br. Ins.*, **9**(2): 77–96.

Haseman L., 1907: A Monograph of the North American Psychodidae, including ten new Species and an aquatic Psychodid from Florida. *Tr. Amer. ent. Soc.*, **33**: 299–333.

Ježek J., 1972: Psychodidae čistících stanic odpadních vod v Čechách. *Sbor. Jihočes. muz.* Č.Buděj., *Přír. vědy*, **12**(2): 29.

Ježek J., 1977: Reinstatement of the genus Tinearia Schellenberg (Diptera, Psychodidae). *Acta ent. bohemoslov.*,**74**: 232–241.

Ježek J., 1979: Jungiella bohemica sp.n. from Czechoslovakia (Diptera, Psychodidae). *Acta ent. bohemoslov.*, **76**: 341–344.

Ježek J., 1982: Some new faunistic records of Psychodidae (Diptera) of Bohemian Karst. *Dipt. bohemoslov.*, Brno, **3**: 57–60.

Ježek J., 1983a: A contribution to the knowledge of the subgenus Psychocha Ježek of the genus Jungiella Vaill. (Diptera, Psychodidae) in Czechoslovakia. *Acta ent. Mus. Nat. Pragae*, **41**: 235–254.

Ježek J., 1983b: Contribution to the taxonomy of genus Logima Eat. (Diptera, Psychodidae). *Acta ent. Mus. Nat. Pragae*, **41**: 213–234.

Ježek J., 1983c: Intergeneric relationships of selected tribes of the subfamily Psychodinae (Diptera, Psychodidae). *Acta ent. Mus. Nat. Pragae*, **41**: 255–259.

Ježek J., 1983d: Contribution to the knowledge of Mormiini End. (Diptera, Psychodidae) in Czechoslovakia. *Acta ent. Mus. Nat. Pragae*, **41**: 189–212.

Ježek J., 1984a: Nomenclatorical changes of some higher taxa of palaearctic Psychodinae (Diptera, Psychodidae). *Acta faun. ent. Mus. Nat. Pragae*, **17**: 155-171.

Ježek J., 1984b: Six new genera of the tribus Psychodini End. (Diptera, Psychodidae). *Acta faun. ent. Mus. Nat. Pragae*, **17**: 133–153.

Ježek J., 1984c: Taxonomic notes on Mormiini (Diptera, Psychodidae) from the High Tatra National Park. *Acta ent. bohemoslov.*, **81**: 223–231.

Ježek J., 1985a: Contribution to the knowledge of a new subtribe Trichopsychodina (Diptera, Psychodidae) from Czechoslovakia. *Acta Mus. Nat. Pragae B*, **40** (1984): 65–92.

Ježek J., 1985b: A taxonomic study of the genera Psycmera Ježek and Parajungiella Vaill. (Diptera, Psychodidae) of Czechoslovakia. *Acta Mus. Nat. Pragae B*, **40** (1984): 1–19.

Ježek J., 1987a: Results of the Czechoslovak-Iranian entomological expedition to Iran 1977. Peripsychoda iranica sp.n. (Diptera, Psychodidae) with comments to the genus and redescriptions of included species. *Acta ent. Mus. Nat. Pragae*, **42**: 189–206.

Ježek J., 1987b: Jungiella hygrophila sp.n. (Diptera, Psychodidae, Paramormiini) with redescriptions of Czechoslovak species of Jungiella s. str. *Acta ent. Mus. Nat. Pragae*, **42**: 207–223.

Ježek J., 1987c: Contribution to the knowledge of Panimerus Eat. (Diptera, Psychodidae) in Czechoslovakia. *Acta ent. Mus. Nat. Pragae*, **42**: 225–248.

Ježek J., 1988: Contribution to the taxonomy of the genus Telmatoscopus Eat. (Diptera, Psychodidae). *Acta Mus. Nat. Pragae B*, **44**: 75–104.

Ježek J., 1990a: Contribution to the taxonomy of some genera of Paramormiine moth flies (Diptera, Psychodidae) with description of a new genus Karakovounimerus. *Acta ent.*

Mus. Nat. Pragae, **43**: 129–157.

Ježek J., 1990b: Redescriptions of nine common palaearctic and holarctic species of Psychodini End. (Diptera: Psychodidae). *Acta ent. Mus. Nat. Pragae,* **43**: 33–83.

Ježek J., 1990c: Key to genera (♂ ♂) of the world Mormiini End. (Diptera, Psychodidae). *Čas. Nár. muz. v Praze*, ř. přír., **155**: 141–144.

Jung H. F., 1954: Einige neue mitteleuropäische Psychodiden (Diptera). *Zool. Anz.,* Leipzig, **152**: 16–31.

Jung H. F., 1956: Beiträge zur Biologie, Morphologie und Systematik der europäischen Psychodiden (Diptera). *Dtsch. ent. Z.,* Berlin (N.F.), **3**: 97–257.

Kino T., Chihara J., Fukuda K., Sasaki Y., Shogaki Y. et Oshima S., 1987: Allergy to insects in Japan. III. High frequency of lgE antibody responses to insects (moth, butterfly, caddis fly, and chironomid) in patients with bronchial asthma and immunochemical quantitation of the insect-related airborne particles smaller than 10 μm in diameter. *J. Allergy Clin. Immunol.,* **79**(6): 857–866.

Kloet G. S. et Hincks W. D., 1945: A check-list of British Insects. Stockport, 483 pp.

Krek S., 1967: Description de l'imago, de la nymphe et de la larve de Pericoma vaillanti n.sp. (Diptera Psychodidae). *Bull. Sci.,* Conseil Acad. RSF Yougoslavie, Section A – Zagreb, **12**(11–12): 317–318.

Krek S., 1969: Deux espèces nouvelles de Pericoma de Bosnie et Herzegovine (Dipt. Psychodidae). *Boll. Ass. Romana Ent.,* **24**: 62–66.

Krek S., 1971: Les Telmatoscopini de la Bosnie (Diptera, Psychodidae, Psychodinae). *Trav. Lab. Hydrob. Pisc. Univ.* Grenoble, **62**: 169–188.

Krek S., 1972: Nouvelle contribution à l'étude des Telmatoscopini de la Bosnie (Dipt., Psychodidae, Psychodinae). *Ann. Entomol. Soc. Fr.,* **8**(1): 239–251.

Krek S., 1977: Panimerus (Krekiella) ramae – nova vrsta Telmatoscopini Vaillant iz Bosne i Hercegovine. *Glas. Zem. Muz.* N.S. – Prirodne nauke, Sarajevo, **16**: 171–174.

Krek S., 1978: Rod Panimerus u Bosni i Hercegovini (Psychodidae, Psychodinae). Posebni Otisak *Glas. Zem. Muz.* N.S. – Prirodne nauke, Sarajevo, **17**: 323–335.

Krek S., 1979: Naselje Psychodidae (Diptera) Rijeke Krivaje. II. Kongr. Ekol. Jugosl., Zagreb, 1979: 1803–1811.

Krek S., 1982: Psychodidae (Diptera) Sjeverne Makedonije. *Glas. Zem. Muz.* N.S. – Prirodne nauke, Sarajevo, **21**: 147–161.

Krek S., 1985: Die Psychodidaen – Fauna der SR Serbien. *Proc. Faun. SR Serbia* (Serb. Acad. Sci. Arts, Belgrade), **3**: 149–182.

Linné C., 1758: Systema naturae, sive regna tria natirae systematice proposita per classes, ordines, genera et species. I. Ed. 10. Holmiae, 824 pp. (London, 1956).

Meigen J. W., 1804: Klassifikation und Beschreibung der europäischen zweiflügeligen Insekten (Diptera L.). I. Braunschweig, K. Reichard, 152 pp.

Meigen J. W., 1818: Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. I. Aachen, 333 pp.

Quate L. W., 1955: A revision of the Psychodidae (Diptera) in America north of Mexico. *Univ. Calif. Publ. Ent.,* Berkeley, **10**: 103–273.

Salamanna G., 1975: Psychodinae della Calabria con descrizione di due specie nuove (Diptera Nematocera Psychodidae). *Boll. Mus. Ist. Biol. Univ.* Genova, **43**: 75–94.

Salamanna G. et Castellano M. C., 1989: Psychodids from the Bisagno valley (Genoa, Liguria, Italy) (Diptera Psychodidae). *Boll. Soc. ent. ital.*, Genova, **120**(3): 209–215.

Salamanna G. et Sarà M., 1980: Psicodidi delle Dolomiti (Diptera Nematocera). *Mem. Soc. Ent. Ital.*, **58** (1979): 9–40.

Sarà M., 1953: Specie nuove di Psicodidi dall'Italia centrale e dalla Sicilia (Diptera). *Ann. Ist. Mus. Zool. Univ.* Napoli, 5 (8): 1–30.

Sarà M., 1957: Due nuove specie dei generi Pericoma e Telmatoscopus dalla Romagna. *Annu. Ist. Zool. Univ.* Napoli, **8**(12) (1956): 1–7.

Sarà M., 1958: Contributo alla conoscenza dei Psicodidi della Svizzera (Dipt.). *Annu. Ist. Zool. Univ.* Napoli, **9**(4) (1957): 1–9.

Sarà M. et Salamanna G., 1967: Nuovo contributo alla conoscenza dei psicodidi italiani (Diptera). *Memorie Soc. ent. ital.*, **46**: 27–72.

Say T., 1824: In Keating W. H., 1825: Narrative of an expedition to the source of the St. Peter's River, Lake of the Woods 1823 under the command of Major Long. Bd. 2. London, 110 pp.

Strobl G., 1910: Die Dipteren von Steiermark. V. II. Nachtrag. *Mitt. naturw. Ver.* Steierm., **46** (1909): 45–293.

Szabó J., 1960a: Neue, sowie aus dem Karpatenbecken bisher nicht nachgewiedene Psychodiden – Arten (Diptera, Nematocera). *Acta zool. Acad. Sci. Hung.*, Budapest, **6**: 419–428.

Szabó J., 1960b: Les Psychodides (Diptera, Nematocera) des Bassins-Carphathiques I. *Acta Univ. Debrec.*, Debrecen, **6**: 205–216.

Szabó J., 1965a: Beiträge zur Kenntnis der Psychodiden-Fauna (Diptera, Nematocera) im östlichen Teil der Tschechoslowakei. *Acta Univ. Debrec.*, Budapest, **3** (1964): 69–92.

Szabó J., 1965b: Beiträge zur Verbreitung der Psychodiden (Diptera, Nematocera), in der Slowakei. *Acta ent. Mus. Nat. Pragae*, **36**: 607–631.

Szabó J., 1973: Morfo-ökológiai vizsgálatok Psychodida (Diptera, Nematocea) Lárvákon. I. A Köztakaró (Integumentum) és Képletei. *Acta biol. Debrecina*, **10–11** (1972–1973): 163–189.

Szabó J., 1983: 10. család: Psychodidae – Lepkeszúnyogok in Szabó J. et Draskovits Á.: Lepkeszúnyogok – Redös Szúnyogok Psychodidae – Ptychopteridae (70 ábrával). Psychodidae: pp. 1–78. Magyarország Állatvilága (Fauna Hungariae, 156), XIV. Kötet, Diptera I., 4/c. Füzet. Akadémiai Kiadó – Budapest, 88 pp.

Tanasijčuk V. N., 1969: Psychodidae in Bej-Bienko G. Ja.: Opredělitěl nasekomych evropejskoj časti SSSR. V(1). Dvukrylye, blochy. Leningrad, 804 pp.

Tonnoir A. L., 1919: Contribution a l' étude des Psychodidae de Belgique. Note préliminaire. *Ann. Soc. ent. Belgique*, Bruxelles, **59**: 136–140.

Tonnoir A. L., 1920: Contribution à l' étude des Psychodidae de Belgique. Troisi'eme note. *Ann. Soc. ent. Belgique* Bruxelles, **60**: 180–187.

Tonnoir A. L., 1922: Synopsis des Esp'eces européenes du Genre Psychoda (Dipt'eres). *Ann. Soc. ent. Belgique* Bruxelles, **62**: 49–88.

Tonnoir A. L., 1940: A synopsis of the British Psychodidae (Dipt.), with descriptions of new species. *Trans. Soc. Brit. Ent.*, Southampton, **7**: 21–64.

Vaillant F., 1957: Les larves de quelques espèces de Telmatoscopus et de Pericoma de la zone paléarctique (Diptera Psychodidae). *Trav. Lab. Hydrob. Pisc. Univ.* Grenoble, **48–49** (1956–1957): 71–108.

Vaillant F., 1958: Quelques espèces de Pericoma du groupe unispinosa Tonnoir (Diptera). *Rev. franc. Ent.*, Paris, **25**: 99–110.

Vaillant F., 1960: Contribution à l' étude des Psychodidae de la France (Diptera). *Rev. franc. Ent.*, Paris, **27**: 163–172.

Vaillant F., 1961a: Complément à la révision des Psychodidae de France (Diptera). *Trav. Lab. Hydrob. Pisc. Univ.* Grenoble, **52–53** (1960–1961): 111–116.

Vaillant F., 1961b: Révision des Psychodidae Psychodinae de France (Diptera). *Ann. Soc. ent. France*, Paris, **130**: 131–157.

Vaillant F., 1961c: Larves nouvelles de Pericoma Walker (Diptera Psychodidae). *Trav. Lab. Hydrob. Pisc. Univ.* Grenoble, **52–53** (1960–1961): 117–129.

Vaillant F., 1963a: Einige Psychodiden (Dipteren) aus Österreich. *Verh. zool. - bot. Ges.*, Wien, **101–102** (1962–1963): 86–93.

Vaillant F., 1963b: Contribution à l' étude des Diptères Psychodidae d' Europe. *Trav. Lab. Hydrob. Pisc. Univ.* Grenoble, **54–55** (1962–1963): 109–121.

Vaillant F., 1964: Nouvelle contribution à l' étude des Psychodidae (Diptera) de la France. *Trav. Lab. Hydrob. Pisc. Univ.* Grenoble, **56**: 61–76.

Vaillant F., 1968: Diptères Psychodidae recueillis par M. A. Thomas dans les Pyrénées. *Annls Limnologie*, **3** (1967): 295–298.

Vaillant F., 1972: Psychodidae in Lindner E. (ed.): *Die Fliegen der palaearktischen Region*, Stuttgart, **291**: 49–78; **292**: 79–108.

Vaillant F., 1973: Quelques insectes diptères, a larves aquatiques, du parc de la Vanoise. *Trav. Sci. parc. Nat.* Vanoise, **3**: 133–165.

Vaillant F., 1974: Psychodidae in Lindner E. (ed.): *Die Fliegen der palaearktischen Region*, Stuttgart, **305**: 109–142.

Vaillant F., 1976: Psychodidae in Lindner E. (ed.): *Die Fliegen der palaearktischen Region*, Stuttgart, **313**: 183–206.

Vaillant F., 1982: Quelques considérations sur la classification des Psychodidae Psychodinae. *Bull. Soc. ent. Fr.*, **87**: 292–301.

Vimmer A., 1913: Seznam českého hmyzu dvoukřídlého (Catalogus Dipterorum). *Entom. příručky*, Praha, **8**: 1–99.

Wagner R., 1973:Psychodiden aus dem Breitenbach (Diptera, Psychodidae) 1970. *Arch. Hydrobiol.*, **72** (4): 517–524.

Wagner R., 1979a: Mormia pulcherrima n.sp., eine neue mitteleuropäische Psychodide (Diptera: Psychodidae). Schlitzer produktions-biologische Studien (38). *Ent. Zeitschr.*, Stuttgart, **89** (20): 237–239.

Wagner R., 1979b: Psychodidenstudien im Schlitzerland. Schlitzer Produktionsbiologische Studien (26). *Arch. Hydrobiol.*, Suppl. 57, **1**: 38–88.

Wagner R., 1980: Über einige Psychodiden (Diptera) aus dem Thüringer Wald. *Ent. Nachr.* Dresden, **24** (8): 118–123.

Wagner R., 1983: Zur Situation der Gattung Berdeniella Vaillant 1976 in Europa (Diptera, Psychodidae). *Mitt. Münch. Ent. Ges.*, **72** (1982): 159–186.

Wagner R. et Joost W., 1988: Psychodidae aus Bulgarien (Insecta, Diptera). *Faun. Abhandl. Staat. Mus. Tierk.* Dresden, **16** (3): 29–34.

Walker F., 1856: Insecta Britannica. Diptera. III. London, 352 pp.

Withers P., 1986: Recent records of moth flies in Norfolk including a species new to science and five species new to Britain. *Trans. Norfolk Norwich Nat. Soc.*, **27** (3): 227–231.

Withers P., 1989: Moth Flies – Diptera: Psychodidae. *Dipterists Digest,* Sheffield, **4**: 1–83.

Zelený J., 1972: Návrh členění Československa pro faunistický výzkum. *Zprávy čs. spol. entom. ČSAV,* Praha, **8**: 3–16.

Zetterstedt J. W., 1850: Diptera Scandinaviae disposita et descripta (Psychodidae). *Lundie,* **9**: 3367–3710.