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Janusz SAWONIEWICZ

Revision of European species of the genus *Bathythrix* FOERSTER
(Hymenoptera, Ichneumonidae)

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JANUSZ SAWONIEWICZ

**Revision of European species of the genus *Bathythrix* FOERSTER
(Hymenoptera, Ichneumonidae)**

[With 67 text-figures]

INTRODUCTION

The genus *Bathythrix* consists of tens of species occurring almost all over the world, particularly in the Northern Hemisphere. In Europe 21 species were recorded. This genus was first characterized and its seven synonyms were listed by TOWNES, MOMOI and TOWNES (1965: 126) and TOWNES (1970: 89).

It may be admitted that the first revision of this genus was prepared by THOMSON (1884: 963–966) but it involves only a part of the species earlier described in different genera. Similarly, SCHMIEDEKNECHT (1905: 727), MORLEY (1907: 101) and MEYER (1933: 190) considered only a part of species names and incorrectly used synonyms. In later fragmentary contributions by ROMAN (1914), PFANKUCH (1906, 1921, 1923, 1925), KERRICH (1942), TOWNES (1944), OEHLKE (1966), AUBERT (1964, 1968, 1972), HORSTMANN (1974), and SAWONIEWICZ (1978) the problem of synonyms and assignment of known species to the genus *Bathythrix* has gradually been clarified on the basis of type specimens.

Thus, the present contribution is the first comprehensive revision of European species. It is based on type specimens and on the materials of about 2400 specimens from different regions of Europe. The analysis of these large materials made it possible to recognize the morphological variability and to precise the distribution of particular species.

Many collections of *Ichneumonidae* in Europe were examined. They are denoted by the following symbols as used in this contribution:

- BC — BAUER Collection, Großschwarzenlohe, FRG.
 BM — British Museum (Natural History), London, England.
 CM — Castel Museum, Norwich, England.
 GC — GŁOWACKI Collection, Brwinów near Warszawa, Poland.
 HC — HINZ Collection, Einbeck, FRG.
 HCZI — HORSTMANN Collection, Zoologisches Intitut der Universität Würzburg, FRG.
 IAZ — Institut für Angewandte Zoologie, München, FRG.
 IPSF — Institut für Pflanzenschutzforschung, Eberswalde-Finow, GDR.
 IZPAN — Instytut Zoologii, PAN, Warszawa, Poland.
 JC — JUSSILA Collection, Mullintie, Finland.
 LEEO — Laboratoire d'évolution des êtres organisés, Paris, France.
 MN — Museum für Naturkunde der Humboldt-Universität, Berlin, GDR.
 MZH — Museum Zoologicum, Helsinki, Finland.
 NMS — Natur-Museum und Forschungs-Intitut, Senckenberg, Frankfurt/M., FRG.
 PD — Plantenziektenkundige Dienst, Wageningen, Netherlands.
 SC — STROBL Collection, Admont, Austria.
 SMH — Staatliche Museen Heidecksburg, Rudolstadt, GDR.
 TC — TOWNES Collection, Ann Arbor, Michigan, USA.
 TMA — Természettudományi Múzeum Állattára, Budapest, Hungary.
 UR — University of Reading, England.
 UU — University of Uppsala, Sweden.
 UW — Uniwersytet Wrocławski, Muzeum Przyrodnicze, Poland.
 ZIL — Zoological Institute, Lunds Universitet, Sweden.
 ZSBS — Zoologische Sammlung des Bayerischen Staates, München, FRG.

The morphological terminology applied here generally follows that used by TOWNES (1969), and microsculpture patterns are named after EADY (1968). Also some additional notations are introduced:

- OOL — the distance from the outer edge of lateral ocellus to the compound eyes,
 HO — the greatest width of lateral ocellus,
 index — the ratio of the greatest length to the greatest width (exceptionally, the index of face = the ratio of smallest height to smallest breadth),
 first plica — the membranous part of the first abdominal sternite.

Length of the first abdominal segment was measured on its dorsal face, along the midline. Front aspect of the head plotted in the plane of the face.

***Bathythrix* FOERSTER, 1868 sensu TOWNES 1970**

- Ischnurgops* FOERSTER, 1868: 175. Type-species: *Cryptus claviger* TASCHENBERG. Designated by VIERECK 1914.
Steganops FOERSTER, 1868: 175. Type-species: *Cryptus claviger* TASCHENBERG. Designated by VIERECK 1914.
Bathythrix FOERSTER, 1868: 176. Type-species: *Bathythrix meteori* HOWARD. Designated by VIERECK 1914.
Panargyrops FOERSTER, 1868: 182. Type-species: *Bathythrix claviger* TASCHENBERG. Designated by VIERECK 1914.
Gausocentrus FOERSTER, 1868: 198. Type-species: *Gausocentrus gyrini* ASHMEAD. Included by ASHMEAD 1894.
Stenoschema FOERSTER, 1868: 220. Nomen nudum.

Leptocryptus THOMSON, 1873: 521 and 963. Type-species: *Cryptus claviger* TASCHENBERG.
Designated by VIERECK 1914.

Agenora CAMERON, 1909: 722. Type-species: *Agenora hirticeps* CAMERON (= *Cryptus claviger* TASCHENBERG).

To supplement the description by TOWNES (1970: 90) it may be added: Smooth, polished body with long silver hairs, particularly on the head and thorax; cheek narrow and the first sternite granulate; oral carina from strongly raised behind the base of mandible to completely reduced; clypeal fovea very large to small; inner margins of eyes in some species, particularly in ♂, very strongly convergent ventrad; epomia present; flagellum filiform, flagellum of ♂ with or without tyloids; sternaulus reaching hind edge of mesopleurum; postpectal carina complete to strongly interrupted in front of each middle coxa; notaulus distinct, extending at least to basal half of mesoscutum; hind part of mesoscutum with sharp margin and almost vertically descending prescutellar transverse groove, or without sharp margin and gently descending prescutellar transverse groove; basal vein, usually at least along a certain section, parallel to discocubitus.

Primary parasites or hyperparasites. They parasitize cocoons of *Braconidae* and *Ichneumonidae*, of *Symphyta* (*Strongylogaster*, *Diprion*), puparia of *Syrphidae* and egg cocoons of spiders and some *Coleoptera*.

Species with uncertain taxonomic position

Bathythrix sputator AUBERT, 1964: 153, ♂, type lost.

The original description is not sufficient to identify the species. Brown colour of hind knees suggests that it is closely related to *B. fragilis* or *B. alter*.

Species erroneously included into the genus *Bathythrix*

Phygadeuon tenuipes GRAVENHORST, 1829a: 720.

Belongs to the genus *Gnotus* FOERST. (PERKINS 1962: 425). MORLEY (1907: 102) erroneously synonymized it with *Hemiteles ruficaudatus* BRIDGM.

Hemiteles tenerrimus GRAVENHORST, 1829a: 831.

MORLEY (1907: 107) erroneously assigned this species to the genus *Leptocryptus*. Belongs to the genus *Eudelus* FOERST. (HORSTMANN 1979: 161)

Leptocryptus clavipes THOMSON, 1888: 1243.

Belongs to the genus *Leptocryptoides* HORSTMANN, 1976: 27.

Hemiteles cryptiformis KISS, 1924: 71.

ROMAN (1939: 103) assigned this species to the genus *Leptocryptus*, it is, however, a junior synonym of *Gnotus tenuipes* (GRAV.) (HORSTMANN 1974: 340).

Leptocryptus magnocephalus KISS, 1924: 69.

Belongs to the genus *Phygadeuon* GRAV. (ROMAN 1939: 104, HORSTMANN, 1974: 341).

Leptocryptus marginatus KISS, 1930: 116.

Belongs to the group of genera *Uchidella-Gnotus-Stibeutes* (HORSTMANN 1974: 341).

Leptocryptus ramellosus KISS, 1924: 70.

Junior synonym of *Xiphuleus floricolator* (GRAV.) (HORSTMANN 1974: 344).

Panargyrops nigripes BAUER R., 1958: 183.

Junior synonym of *Gnotus tenuipes* (GRAV.) (SAWONIEWICZ 1978: 129).

Mesoleptus sordidus GRAVENHORST, 1829a: 36.

Mesoleptus macrodactylus HOLMGREN 1854: 68.

DALLA TORRE (1901: 370) erroneously assigned the both endmost species to the genus *Gausocentrus* FOERST. Belongs to other subfamily — *Scolobatinae*.

Nomen dubium

Hemiteles gyrini PARFITT, 1881: 79 (FITTON 1976: 345).

MORLEY (1907: 162) probably correctly synonymized it with *Hemiteles argenatus* GRAV.

Nomen nudum

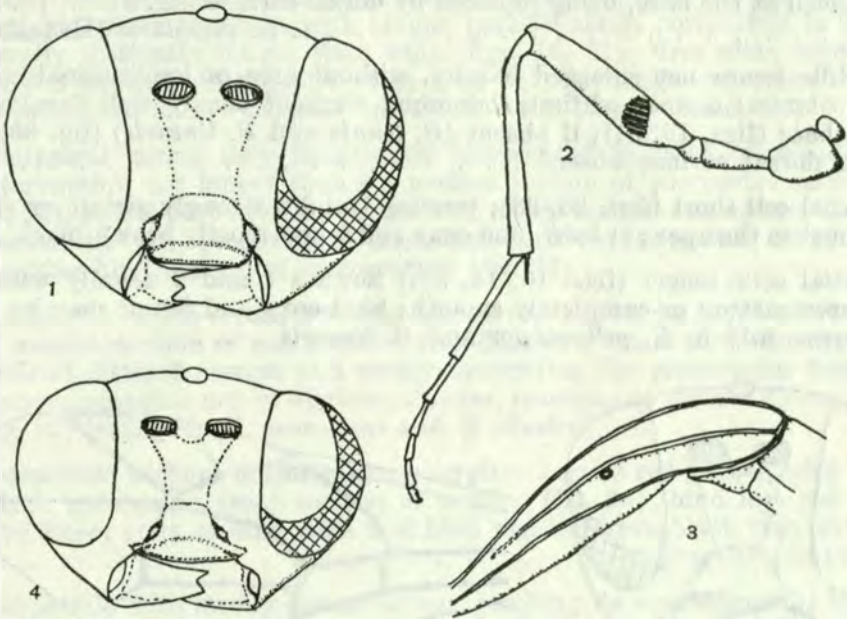
Leptocryptus harpунus ULBRICHT, 1913: 6, undescribed.

It probably was *Barycnemis* (= *Leptopygus*) *harpurus* (SCHRANK).

Key to the European species of *Bathythrix* FOERST.

1. Face in ♀ very strongly narrowed ventrad, eye almost reaching basal part of mandible (figs. 37, 38); nervellus oppositus, not intercepted (fig. 39) 13. *B. margaretae* sp. nov., ♀.
- Face in ♀ not strongly narrowed ventrad (figs 1, 46), if in ♂ very strongly narrowed (figs. 41, 47, 54), then nervellus distinctly intercepted (fig. 50) 2.
2. Clypeal fovea exceptionally large, extending from the margin of clypeus and basal part of mandible to lower eye margin, with long, dense hairs inside (figs. 29, 31, 33, 35); nervellus in typical form oppositus, not intercepted, and without discoidella (cf. fig. 39) 3.
- Clypeal fovea small, with moderate hairs (figs. 1, 8); nervellus intercepted, with more or less distinct discoidella (figs. 10, 50, 65) 6.
3. Genal carina complete (figs. 34, 36); ovipositor straight 4.
- Genal carina completely reduced at the base of mandible (figs. 32, 34); ovipositor downcurved 5.
4. Tergite 1 usually entire, tergite 2 only at the base granulate and finely longitudinally aciculate, the other tergites smooth; clypeus very weakly convex; clypeal fovea not reaching 0.5 basal width mandible (figs. 35, 36); ocellus small — HO : OOL = 1 : 1.7–2.0 12. *B. aereus* (GRAV.), ♀♂.

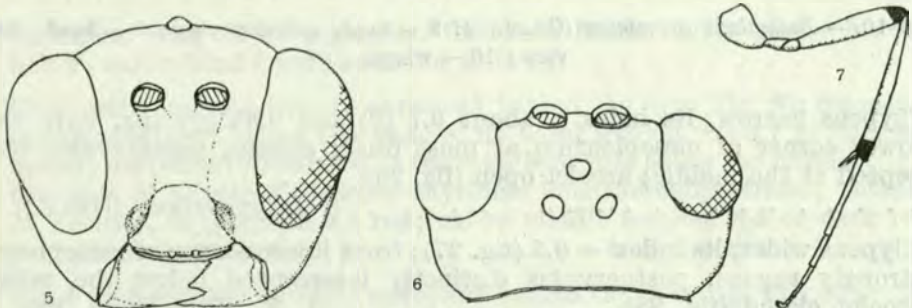
— Tergites 1-3 longitudinally, finely striate or finely rugose (sometimes only basal half of tergites 2-3 with microsculpture); clypeus strongly convex; clypeal fovea reaching 0.5 basal width mandible (figs. 33, 34); ocellus larger — HO : OOL = 1 : 1.3-1.6 . . . 11. *B. thomsoni* (KERRICH), ♀♂.



Figs. 1-4. 1-3 — *Bathythrix maculatus* (HELLÉN) ♀: 1 — head, anterior view; 2 — middle leg, from the inside; 3 — abdominal segment 1, lateral view. 4 — *Bathythrix rugulosus* (THOMS.) ♀, head, anterior view.

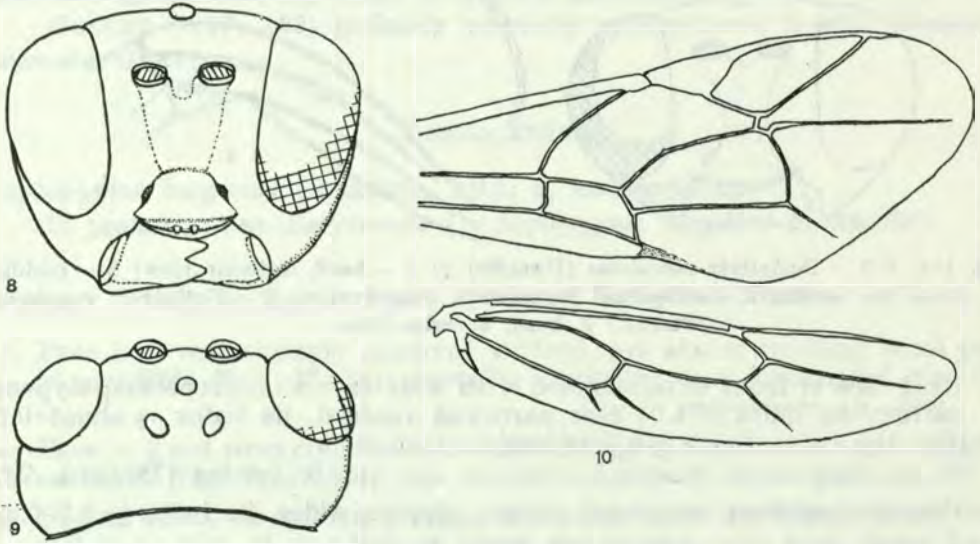
5. Hind face of front coxa enclosed with wide carina on prepectus; clypeus narrow, its index = 1.0; face narrowed ventrad, its index = about 0.7 (fig. 31); ovipositor 0.6-0.7 as long as hind tibia 10. *B. lamina* (THOMS.), ♀♂.

— Prepectus without transverse carina; clypeus wider, its index = 0.7-0.8;



Figs. 5-7. — *Bathythrix alter* (KERRICH) ♀: 5 — head, anterior view; 6 — head, dorsal view; 7 — hind leg, lateral view.

- face enlarged ventrad, wide, its index = 0.4–0.5 (fig. 29); ovipositor 1.0–1.4 as long as hind tibia. 9. *B. strigosus* (THOMS.), ♀♂.
6. Middle femur enlarged basally, on inner side with area of longitudinal carinae (fig. 2); dorsolateral carinae of first abdominal segment completely reduced at the base, being replaced by dorsal carinae (fig. 3). 1. *B. maculatus* (HELLÉN), ♀♂.
- Middle femur not enlarged basally, without area of longitudinal carinae; dorsolateral carinae of first abdominal segment usually well developed at the base (figs. 15, 51); if absent (*B. tenuis* and *B. linearis*) (fig. 66), then also dorsal carinae absent 7.
7. Radial cell short (figs. 26, 28); tergites 1 and 2 strongly striate or strigose almost to the apex; at least hind coxa and femur mostly brown-black 8.
- Radial cell longer (figs. 10, 14, 65); tergites 1 and 2 usually with finer microstructure or completely smooth; hind coxa and femur may be black-brown only in *B. pellucidator* and *B. linearis* 9.

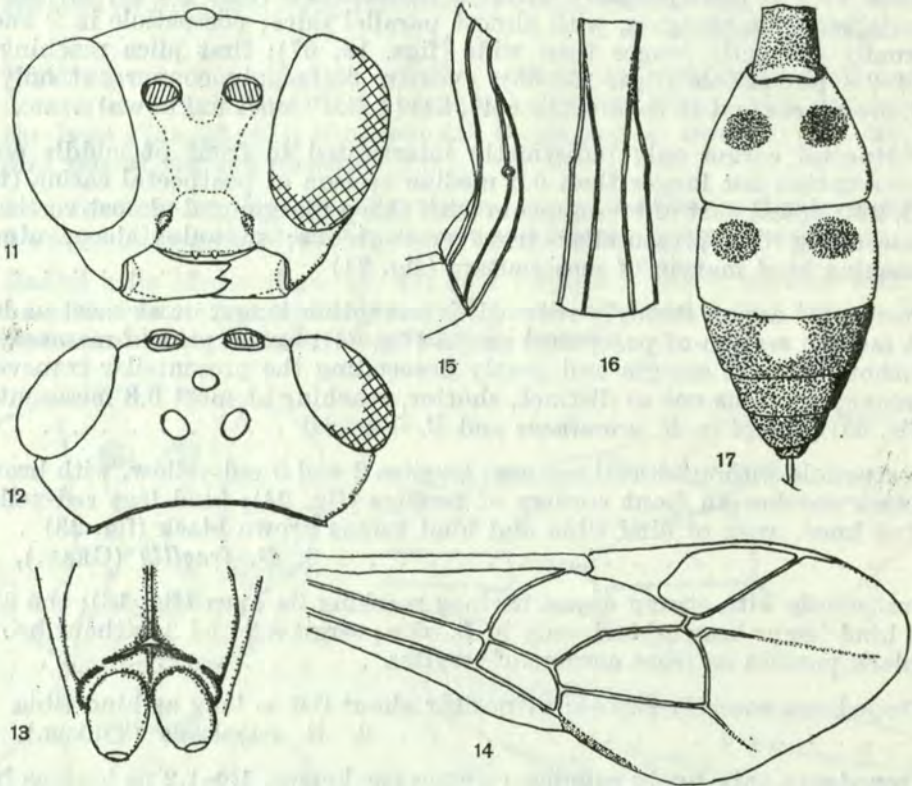


Figs. 8–10. — *Bathythrix argentatus* (GRAV.) ♀: 8 — head, anterior view; 9 — head, dorsal view; 10 — wings.

8. Clypeus narrow, its index = about 0.7 (♀) and 0.85 (♂) (fig. 25); front lower corner of mesopleurum at most finely striate; postnervulus intercepted at the middle; areolet open (fig. 26) 7. *B. spheginus* (GRAV.), ♀♂.
- Clypeus wider, its index = 0.5 (fig. 27); front lower corner of mesopleurum strongly rugose; postnervulus distinctly intercepted below the middle; areolet closed (fig. 28) 8. *B. pleuralis* sp. nov., ♂.
9. Basal vein not paralleling discocubitus (fig. 50); areola in typical form transversally oval (fig. 49); postpetiole in ♀ usually as long as wide, its

- index = 0.9–1.1 (fig. 51), in ♂ distinctly longer than wide, its index = 1.9–2.3; first plica in ♀ reaching almost to spiracles (fig. 51), in ♂ to 0.6 postpetiole; face in ♂ very strongly narrowed ventrad (fig. 47) 16. *B. pellucidator* (GRAV.), ♀♂.
- Basal vein at least partially parallels discocubitus (figs. 10, 14, 65); areola variable, often elongate, with almost parallel sides; postpetiole in ♀ and ♂ usually distinctly longer than wide (figs. 16, 67); first plica reaching to 0.4–0.8 postpetiole (figs. 15, 66); eyes in ♂ strongly convergent only in *B. prominens* and *B. collaris* (figs. 41, 54) (♂ *B. illustris* unknown) . . . 10.
10. Postpectal carina only indistinctly interrupted in front of middle coxa, interruption not longer than 0.3 median section of postpectal carina (figs. 13, 22); apical part of mesoscutum with sharp margin and almost vertically descending the prescutellar transverse groove; notaulus deep, almost reaching hind margin of mesoscutum (fig. 21) 11.
- Postpectal carina strongly reduced, interruption longer or at most as long as median section of postpectal carina (fig. 64); apical part of mesoscutum without distinct margin and gently descending the prescutellar transverse groove; notaulus not so distinct, shorter, reaching at most 0.8 mesoscutum (fig. 63) (except in *B. prominens* and *B. illustris*) 15.
11. Postpetiole without dorsal carinae; tergites 2 and 3 red-yellow, with brown-black patches on front corners of tergites (fig. 24); hind legs red-yellow, hind knee, apex of hind tibia and hind tarsus brown-black (fig. 23) 6. *B. fragilis* (GRAV.), ♀♂.
- Postpetiole with strong dorsal carinae reaching its apex (fig. 16); the apex of hind femur brown-black only in *B. alter*; tergites 2 and 3 without brown-black patches on front corners of tergites 12.
12. Propodeum coarsely rugose; ovipositor about 0.6 as long as hind tibia 2. *B. rugulosus* (THOMS.), ♀♂.
- Propodeum only finely rugulose; ovipositor longer, 1.0–1.2 as long as hind tibia 13.
13. Antennae with 29–31 segments; entire flagellum red-yellow; legs red-yellow, the apex of hind femur and the apex of hind tibia brown-black (fig. 7). 3. *B. alter* (KERRICH), ♀♂.
- Antennae with 24–27 segments; flagellum black, rarely partly brown-red below; entire hind femur and hind tibia red. 14.
14. Head with temples weakly narrowed behind the eyes (fig. 9); discocubitus intercepted well before the middle, its basal section 0.5–0.7 as long as the apical; nervellus intercepted at the middle or just below the middle (fig. 10); the base of tergite 2 between thyridiae longitudinally striate; postpetiole in ♀ entire, in ♂ apical 0.3 red; entire middle tergites red or dark red all over; hind tarsus red. 4. *B. argentatus* (GRAV.), ♀♂.
- Head with temples strongly narrowed behind the eyes (fig. 12); discocubitus intercepted near the middle, its basal section 0.7–0.85 as long as the apical (fig. 14); nervellus distinctly intercepted below the middle; in ♀ the base of tergite 2 between thyridiae smooth, with scattered coarse punctures,

in ♂ may be striate; postpetiole only very narrowly red at apex; tergites 2-4 red, often with a pair of central brown spots (fig. 17), sometimes overlapping and forming a transverse band; hind tarsus brown
 5. *B. decipiens* (GRAV.), ♀♂.

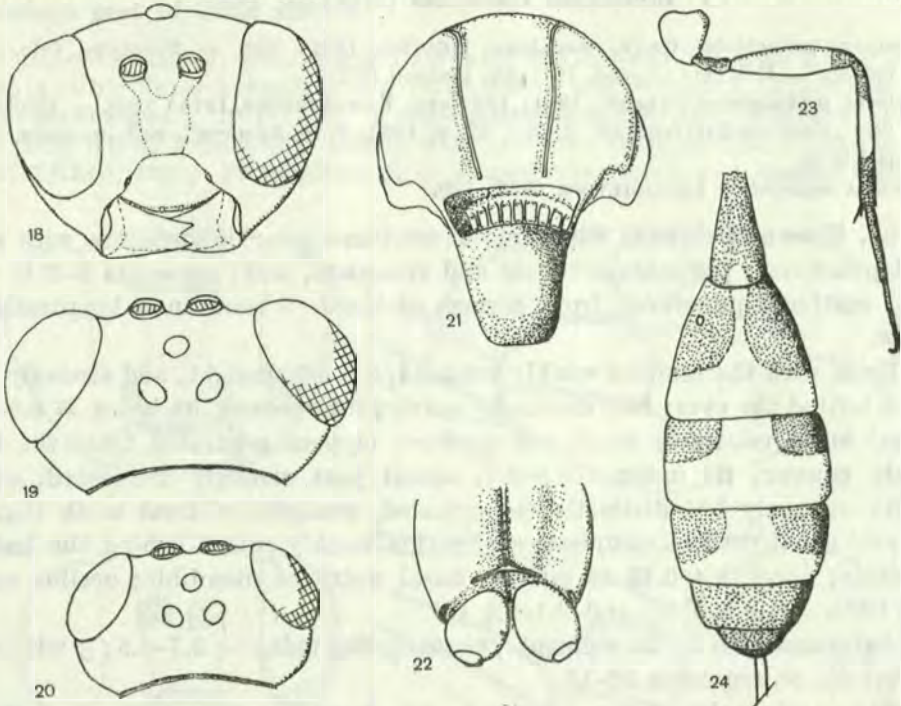


Figs. 11-17. — *Balhythrix decipiens* (GRAV.) ♀: 11 — head, anterior view; 12 — head, dorsal view; 13 — postpectal carina, ventral view; 14 — fore wing; 15 — abdominal segment 1, lateral view; 16 — abdominal segment 1, dorsal view; 17 — abdomen, dorsal view.

15. Ovipositor 0.5-0.9 as long as hind tibia; in ♂ two species face strongly convergent ventrad (figs. 41, 54); head with temples strongly narrowed behind the eyes; abdominal segments at least partly yellow-red. . . . 16.
- Ovipositor 1.6-2.7 as long as hind tibia; face in ♂ at most weakly convergent ventrad (cf. fig. 61); head with temples very weakly narrowed behind the eyes (cf. fig. 6); in two species antire abdomen black. 19.
16. Tergites 1-2 (at least basal half of tergite 2) longitudinally granulate and aciculate or striate; middle abdominal tergites black, with an apical red-yellow band which is wider in the middle than at the side. 17.
- Tergites smooth and polished; at least tergites 3 in ♀ entirely pale red, in ♂ often only apices of tergites paler. 18.

17. Scape transverse (fig. 45); head with temples straightly and strongly convergent behind the eyes (cf. fig. 19); at least basal half of tergites 1-2 longitudinally striate. 15. *B. illustris* sp. nov., ♀.

— Scape longer (fig. 42); head with rounded temples behind the eyes (cf. fig. 12); at least basal half of tergites 1-2 granulate and partly aciculate (in ♂ sometimes striate). 14. *B. prominens* (STROBL), ♀♂.



Figs. 18-24. *Bathythrix fragilis* (GRAV.) ♀: 18 - head, anterior view; 19-20 - head, dorsal view (19 - Norwich, England, HCZI; 20 - holotype: *L. bellulus* KRIECHB.); 21 - mesoscutum and scutellum, dorsal view; 22 - postpectal carina, ventral view; 23 - hind leg, lateral view; 24 - abdomen, dorsal view.

18. Front aspect of the head transverse (fig. 53); the face of ♂ very strongly convergent ventrad (fig. 54); areola and petiolar area lie in the same plane. 17. *B. collaris* (THOMS.), ♀♂.

— Front aspect of the head more rounded (fig. 55); the face of ♂ weakly convergent ventrad (fig. 56); areola and petiolar area usually lie in two different planes. 18. *B. montanus* (SCHMIEDEKN.), ♀♂.

19. Oral carina not strongly raised behind the base of mandible (fig. 58); tergite 1 with more or less distinct dorsolateral carinae; abdomen black. 19. *B. claviger* (TASCHENB.), ♀♂.

— Oral carina very strongly raised behind the base of mandible (figs. 60, 62); tergite 1 without carina between the spiracle and the apical part of tergite, entirely rounded (figs. 66, 67); abdomen black or at least from tergite 2 red. 20.

20. Abdomen from tergite 2 red; hind legs red, hind tibia und hind tarsus brown; cheek — fig. 60. 20. *B. tenuis* (GRAV.), ♀♂.
- Abdomen black; hind legs brown-black, coxa apically and femur basally usually yellow-white; cheek — fig. 62. 21. *B. linearis* (GRAV.), ♀♂.

1. *Bathythrix maculatus* (HELLÉN, 1957)

Ischnurgops pellucidator GRAV. *maculatus* HELLÉN, 1957: 139. — Holotype (♀): „Finström”, „I. HELLÉN”, coll. HELLÉN, Finland (MZH).

Bathythrix protuberator AUBERT, 1964: 153 (syn. SAWONIEWICZ 1978: 129). — ?Holotype (♀): „Pont de Sylvéreal (B. d. R.), 22. 8. 1962, J. F. AUBERT”, coll. AUBERT, Paris (LEEO).

Bathythrix maculatus: SAWONIEWICZ 1978: 129.

♀♂. Face and clypeus with fine, dense punctures; mesoscutum with scattered punctures; propodeum rugose and granulate, mat; segments 2–3(4) with weak, scattered punctures, front corners of tergite 2 sometimes longitudinally striate.

Head with the temples weakly rounded, almost straight, and strongly narrowed behind the eyes; face distinctly convergent ventrad, its index = 0.6–0.7; clypeal fovea relatively small and shallow; clypeus separated from the face, weakly convex, its index = 0.6–0.7, apical part strongly truncated, apical margin narrowly but distinctly emarginated, straight, without teeth (fig. 1); oral and genal carinae complete, oral carina weakly raised behind the base of mandible; cheek 0.4–0.45 as long as basal width of mandible; ocellus small, HO : OOL = 1.6–2.0 (♀) and 2.1–2.3 (♂).

Antennae with 23–26 segments; postannellus index = 3.7–4.5; ♂ with very fine tyloids on segments 12–13.

Thorax. Apical part of mesoscutum with sharp margin and almost vertically descending prescutellar transverse groove; bottom of prescutellar groove with several longitudinal carinae; notaulus deep, reaching almost the full length of mesoscutum; prepectal and postpectal carinae not interrupted; propodeum with all areas distinct, areola hexagonal, longer than wide.

Legs. Hind femur index = 4.2–5.2; middle femur enlarged at the base and with an area of about 6 longitudinal carinae on the inner side (fig. 2).

Wings. Basal vein parallels discocubitus; areolet small, with weak outer vein; nervellus intercepted high, near its lower 0.3.

Abdomen. First segment narrow and high, dorsal carinae reaching the full length of postpetiole, at the base they replace reduced dorsolateral carinae (fig. 3), first segment index = 3.1–3.8, postpetiole index = 1.5–1.9, first plica reaches to 0.5–0.7 postpetiole; in ♀ second segment as long as wide, in ♂ a little longer than wide; ovipositor 0.7–0.8 as long as hind tibia, with distinct nodus and delicate teeth below.

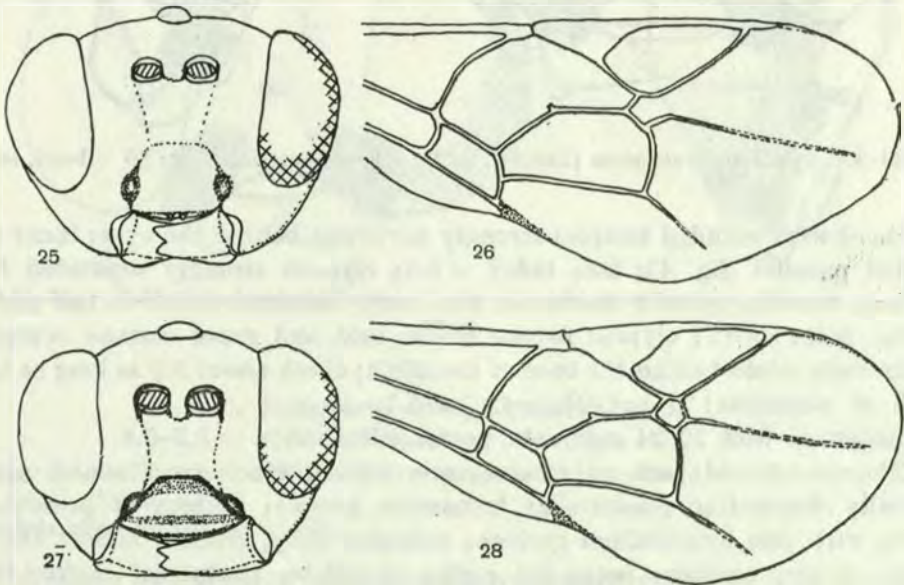
Coloration black. Legs, basal segments of antennae below, tegulae, apex of first abdominal segment, and tergites 2–4 (sometimes more) red-yellow;

tergites 2–4 often with a pair of central brown-black spots, which sometimes are joined and form a band at the base of tergite.

Length: 3–6.5 mm.

Biology. Adults occur in May, July–September. Primary parasite — reared from *Lema lichenis* VOET. (*Chrysomelidae*, *Coleoptera*) (culture E. HAESELBARTH), important pest of some cereals.

Material examined: 34 ♀♀ and 12 ♂♂. Finland: Finnström (holotype, MZH); USSR: Estonia (MN); Poland: Smolniki near Ilawa, Łomna near Warszawa, Chylice near Warszawa (SAWONIEWICZ 1978: 129), Warszawa-Marysinek (IZPAN); Czechoslovakia: Vráž (TC); GDR: Fürstenberg, Leibzig (IPSF); FRG.: München (IAZ); France: Syl-véréal (LEEO); Italy: Pizzighettone (TC); Yugoslavia: Indija near Beograd (IZPAN).



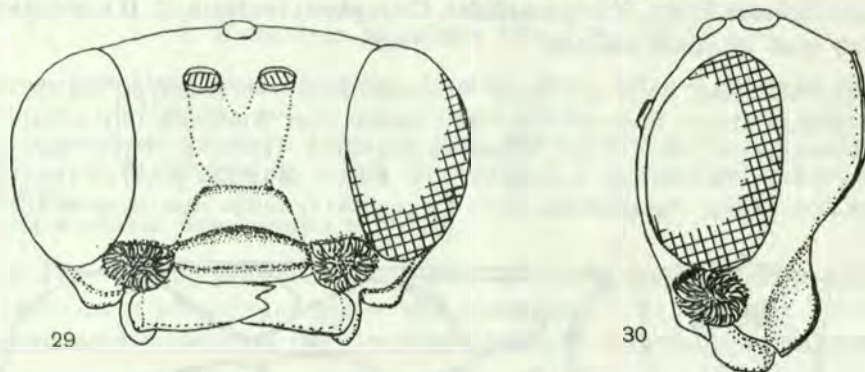
Figs. 25–28. 25–26 — *Bathythrix spheginus* (GRAV.) ♂: 25 — head, anterior view; 26 — fore wing; 27–28 — *Bathythrix pleuralis* sp. n. ♂: 27 — head, anterior view; 28 — fore wing.

Remarks. *B. maculatus* (HELLÉN) is closely related to *B. kuwanae* VIREECK, 1912 (KUWAYAMA 1932: 108), it is likely to be its subspecies. *B. kuwanae* has brown apex of hind femur, base and apex of hind tibia, and hind tarsus; on the area with longitudinal carinae on middle femur contains only three carinae. Material examined: 1 ♀, Japan, Tomari, “larval parasite of *Lema oryzae* Kuway”, det. S. KUWAYAMA (IPSF); 2 ♀♀, Korea and China (*B. maculatus*: SAWONIEWICZ 1978: 129) (IZPAN).

2. *Bathythrix rugulosus* (THOMSON, 1884), **comb. nov.**, ♂ **nov.**

Leptocryptus rugulosus (THOMSON, 1884: 966. — Lectotype (♀) here designated: „Ört.” (= Örtöfta), coll. THOMSON, Lund (ZIL).

♀♂. Face and upper part of clypeus with fine punctures; propodeum coarsely rugose and partly granulate, mat; dorsal and lateral parts of segment 1 very finely granulate, polished; tergite 2 with fine punctures, sometimes front corners finely striate, in ♂ the base of tergite 2 finely rugose.



Figs. 29-30. — *Bathythrix strigosus* (THOMS.) ♀: 29 — head, anterior view; 30 — head, lateral view.

Head with rounded temples strongly narrowed behind the eyes; inner eyes margins parallel (fig. 4); face index = 0.5; clypeus strongly separated from the face, convex, apically flattened, with very indistinct teeth at the middle, clypeus index = 0.7; clypeal foveae small; oral and genal carinae complete, not strongly raised behind the base of mandible; cheek about 0.6 as long as basal width of mandible; HO : OOL = 1 : 1.6-1.7.

Antennae with 22-24 segments, postannellus index = 5.2-5.6.

Thorax. Apical part of mesoscutum with distinct margin and almost vertically descending prescutellar transverse groove; bottom of prescutellar groove with fine longitudinal carinae; notaulus deep, reachin almost the full length of mesoscutum; prepectal carina complete, postpectal carina interrupted in front of each middle coxa, the interruption 0.3 as long as median section of postpectal carina; propodeum with all areas distinct, with high carinae, areola hexagonal, longer than wide, propodeum steeply descending behind areola.

Wings. Basal vein parallels discocubitus, discocubitus intercepted before the middle; nervellus intercepted below the middle.

Legs. Hind femur index = 5.8-7.2.

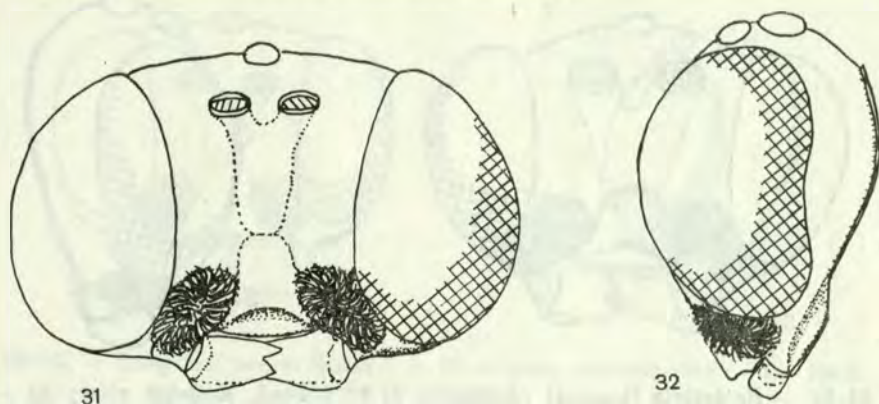
Abdomen. First segment relatively narrow, with almost parallel sides, in ♀ spiracles of first segment just before the middle, in ♂ at its basal 0.4, first segment index = 3.0-3.3 (♀) and 3.4-3.8 (♂), postpetiole index = 1.8-1.9 (♀) and 2.1-2.5 (♂), first plica reaching 0.5-0.6 postpetiole length, dorsal and lateral carinae reaching the full length of postpetiole; second tergite index = 0.9 (♀) and 1.3 (♂); ovipositor straight, about 0.6 as long as hind tibia, with distinct nodus, with ridges below.

Coloration black. Mandibles (except for teeth), tegulae, legs, and tergites 2-4 red-yellow; front coxa and trochanters paler; hind tibia and tarsus more or less brown; basal half of tergite 2 often brown; scape brown to yellow-red.

Length: 4-5 mm.

Biology. Adults occur in June-August, Host unknown.

Material examined: 8 ♀♀ and 2 ♂♂. Sweden: Örtofta (lectotype, 1 ♂,) (ZIL), Skåne (1 ♂) (TC); FRG.: Borkum (MN); Ireland: Kerry (TC).



Figs. 31-32. — *Bathythrix lamina* (THOMS.) ♀: 31 — head, anterior view; 32 — head, lateral view.

3. *Bathythrix alter* (KERRICH, 1942)

Panargyrops alter KERRICH, 1942: 53. I have not seen the type, based on 1 ♀ and 1 ♂: "Kent, Deal ...", coll. BM.

Bathythrix alter: FITTON 1976: 336.

♀♂. Face and clypeus with fine, dense punctures; sides of mesoscutum at the middle rugose or with strong punctures separated by less than their diameter; propodeum rugulose; sides of the dorsal part of postpetiole, tergite 2, at least its basal 0.7, front half of tergite 3, coarsely longitudinally striate.

Head with the temples weakly, roundly narrowed behind the eyes (fig. 6); transverse eye diameter 1.4 as long as smallest temple; face not narrowed ventrad, its index = 0.5; clypeus weakly separated from the face, weakly convex, a little elongated ventrad, with distinct teeth, its index = 0.7; clypeal fovea large (fig. 5); oral and genal carinae complete, oral carina strongly raised behind the base of mandible; cheek 0.5 as long basal as width of mandible; HO : OOL = 1 : 2.3-2.4 (♀) and 2.0 (♂).

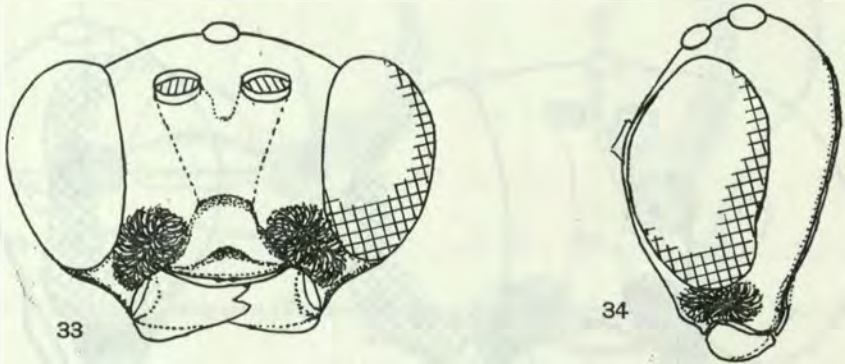
Antennae long, with 29-31 segments; postannellus index = 3.7-4.0; ♂ with tyloids on segments 13-16.

Thorax. Apical part of mesoscutum with sharp margin and almost vertically descending prescutellar transverse groove; notaulus deep, reaching the

full length of mesoscutum; propectal and postpectal carinae complete; propodeum with all areas distinct, areola hexagonal, as long as wider or slightly longer.

Wings. Basal vein parallels discocubitus, discocubitus intercepted before the middle, its basal section 0.6 as long as the apical; nervellus intercepted at or just below the middle; areolet small, open.

Legs. Hind femur index = 5.3–5.4.



Figs. 33–34. — *Bathythrix thomsoni* (KERRICH) ♀: 33 — head, anterior view; 34 — head, lateral view.

Abdomen. First segment strongly convex, particularly postpetiole, lateral carinae strong, complete, dorsal carinae reaching the full length of postpetiole, spiracles just before the middle of the segment, first segment index = 2.2–2.4 (♀) and 3.6 (♂), postpetiole index = 1.1–1.4 (♀) and 2.2 (♂), first plica reaching 0.7–0.8 (♀) and 0.6 (♂) postpetiole; second tergite index = 0.9 (♀) and 1.4 (♂); ovipositor straight, about 1.2 as long as hind tibia, with a weak nodus.

Coloration black. Mandible (except teeth), antennae, tegulae, legs, and abdominal segments 1–3, red-yellow; front coxa and hind tibia paler; scape partially brown; hind femur apically and hind tibia apically black-brown (fig. 7); base of segment 1 brown.

Length: 5.5–7.0 mm.

Biology. Period of adult occurrence unknown. Hyperparasite — reared from *Acropimpla didyma* (GRAV.) and *Iseropus stercorator* (FABE.) (*Ichneumonidae*) on *Philudoria potatoria* (L.) (*Lasiocampidae*, *Lepidoptera*) (KERRICH 1942:55).

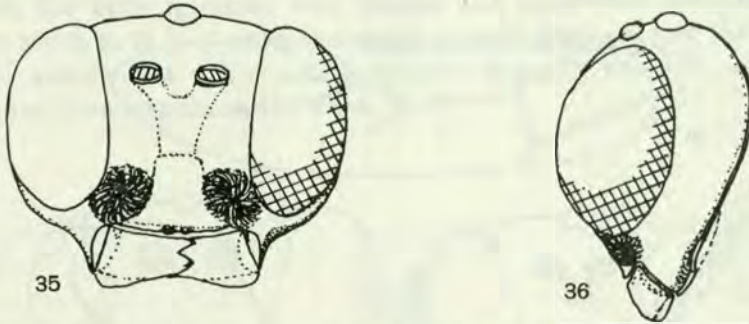
Material examined: 3 ♀♀ and 1 ♂. England: Kent, Deal (BM); Netherlands: Wageningen (PD).

4. *Bathythrix argentatus* (GRAVENHORST, 1829)

Hemiteles argenatatus GRAVENHORST, 1829b: 713. — Holotype (♀) SAWONIEWICZ (FRILLI 1978: 165): without label; head missing, thorax partly damaged (PFANKUCH 1925: 258), coll. GRAVENHORST, Wrocław (UW).

Leptocryptus lacustris SCHMIEDEKNECHT, 1905: 732. **Syn. nov.** — Lectotype (δ) by designation of OEHLKE (OEHLKE, TOWNES 1969: 401): "Teich bei Watzdorf", coll. SCHMIEDEKNECHT, Rudolstadt (SMH). — Paralectotype (φ) here designated: „*Leptocryptus lacustris* φ SCHMIEDEKN.", coll. MN, Berlin.

Bathythrix argentatus: HORSTMANN 1979: 153. Already PFANKUCH (1925: 258) suggested that *L. lacustris* is junior synonym of *B. argentatus*. ROMAN (1925: 12) erroneously synonymized it with *B. pellucidator*, which has already been clarified by KERRICH (1942: 52).



Figs. 35-36. — *Bathythrix aereus* (GRAV.) φ : 35 — head, anterior view; 36 — head, lateral view.

$\varphi\delta$. Face and clypeus with fine, dense punctures; tempora, mesoscutum and mesopleurum with scattered, fine punctures, propodeum rugulose; in φ at least basal half, and in δ entire tergite 2, tergite 3 faintly at the base, sometimes also postpetiole between dorsal and dorsolateral carinae longitudinally striate.

Head with the temples weakly roundly narrowed behind the eyes (fig. 9); transverse eye diameter 1.5–1.8 as long as smallest tempora; face not narrowed ventrad, its index = 0.5; clypeus weakly separated from the face, weakly convex, apical margin with two distinct teeth in the middle, its index = 0.6; clypeal fovea small (fig. 8); oral and genal carinae complete, oral carina weakly raised behind the base of mandible; cheek 0.5–0.6 as long as basal width of mandible; HO : OOL = 1 : 1.7–2.2.

Antennae with 25–27 segments; postannellus index = 3.1–4.0; δ with very fine tyloids on segments 12–15.

Thorax similar to that in *B. alter* and *B. decipiens*, areola weak to strongly elongate.

Wings (fig. 10). Basal vein parallels discocubitus, discocubital cell relatively long (longer than in *B. decipiens*), discocubitus intercepted before the middle, its basal section 0.5–0.7 as long as apical; nervellus intercepted at the middle or just below the middle.

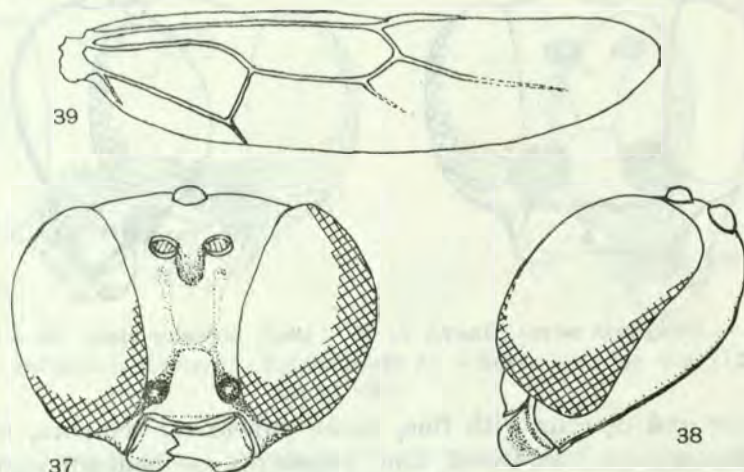
Legs. Hind femur index = 5.0–5.3.

Abdomen. Segment 1 with strong lateral carinae, dorsal carinae reaching the apex of postpetiole, spiracles of segment 1 just before its middle, its index

= 2.2–2.5, postpetiole convex, its index = 1.2–1.3, first plica reaching 0.7–0.8 postpetiole; second tergite index = 0.8–1.0; ovipositor faintly downcurved, 1.0–1.4 as long as hind tibia, with distinct nodus.

Coloration black. Apex of antennae below sometimes brown-black; mandible at the middle, tegulae and legs pale red; apex of hind tibia and sometimes segment 5 of hind tarsus weakly brown; postpetiole and tergite 2–4(6) entirely red-brown, in ♀ postpetiole occasionally, in ♂ often only in apical 0.3 reddish.

Length: 4.5–7.0 mm.



Figs. 37–39. — *Bathythrix margaretae* sp. n. ♀: 37 — head, anterior view; 38 — head, lateral view; 39 — hind wing.

Variability. This species is characterized by a large morphological variability. The description above mainly concerns typical forms. Some specimens, particularly ♂, show intermediate features between *B. argentatus* and *B. decipiens*.

Biology. Adults occur in July–September. Hyperparasite — reared from cocoon of *Philudoria potatoaria* (L.) (*Lasiocampidae*, *Lepidoptera*) (KERRICH 1942: 55) (IPSF), from cocoon of *Zygaena trifolii* (ESP.) (*Zygaenidae*, *Lepidoptera*) (MN).

Material examined: 35 ♀♀ and 12 ♂♂. Poland: Warszawa-Łazienki (IZPAN), Dolny Śląsk (?) (UW); G D R: Schwerin (MN), Watzdorf (lectotype, SCHMIEDEKNECHT 1905) (SMH); F R G: Seewinkel (HCZI), Göttingen, Bremen (MN), Hannover (HC); Netherlands: Wageningen (PD); England: Netley (holotype, GRAVENHORST 1829b) (UW), Cambridgeshire, Wicken Fen (IPSF); Italy: Pizzighettone (TC).

5. *Bathythrix decipiens* (GRAVENHORST, 1829)

Hemiteles decipiens GRAVENHORST, 1829a: 825. — Holotype (♀) Horstmann (FRILLI 1978: 165); without original label, coll. GRAVENHORST, Wrocław (UW).

Leptocryptus pellucidator GRAVENHORST v. *signata* HABERMEHL, 1919: 111. *Syn. nov.* —

Lectotype (♀) here designated: "Worms 31. 7. 09", coll. HABERMEHL, Frankfurt/M. (NMS).

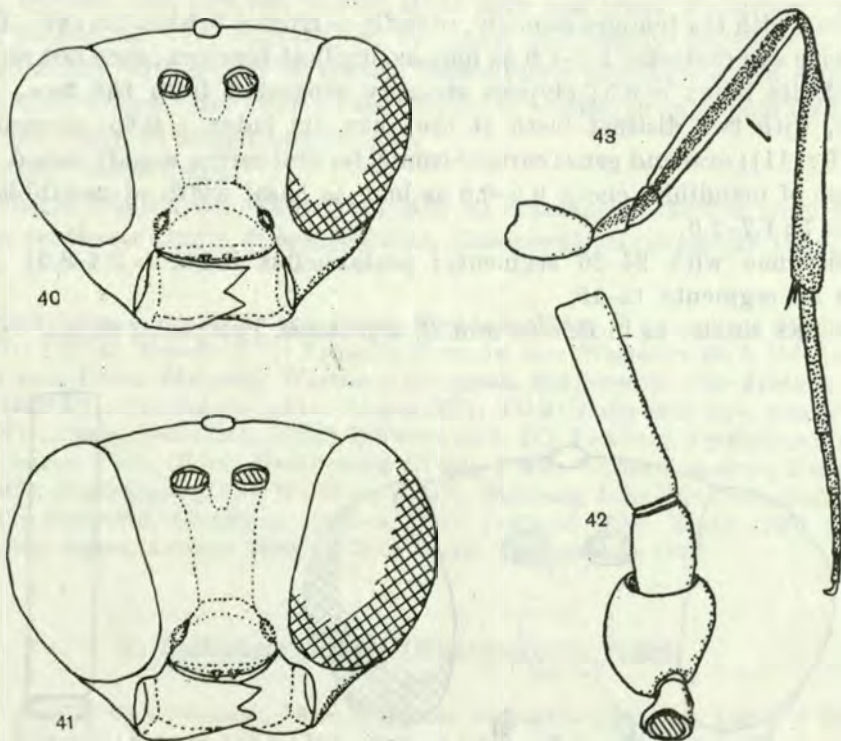
Leptocryptus pellucidator: auct.

Panargyrops lacustris SCHMIEDEKNECHT *meridionator* AUBERT, 1960: 62. **Syn. nov.** — Holotype (♀): "Calvi (Corse), 7. 8. 1959, J. F. AUBERT". — Paratype (♂): as above, 6. 8. 1959. Coll. AUBERT, Paris (LEEO).

Panargyrops lacustris meridionator AUBERT f. *fumatus* AUBERT, 1962: 171 (LEEO).

Bathythrix decipiens: AUBERT 1968b: 185.

From the type specimen only thorax and hind coxa are preserved. The abdomen stuck to it is of unknown origin since it does not suit the original description, namely, its entire middle tergites are red, while in the type they should have brown spots on the sides.



Figs. 40-43. — *Bathythrix prominens* (STROBL): 40 — head, anterior view, ♀; 41 — head, anterior view, ♂; 42 — basal antennal segments, ♀; 43 — hind leg, lateral view.

B. decipiens belongs to the group of species with strong postpectal carina, which is not interrupted at all, or the interruption in front of each middle coxa not longer than 0.3 median section of postpectal carina. AUBERT (1968b: 185) erroneously considered *B. decipiens* as junior synonym of *B. pellucidator*. These are surely two different species since *B. pellucidator* has considerably reduced

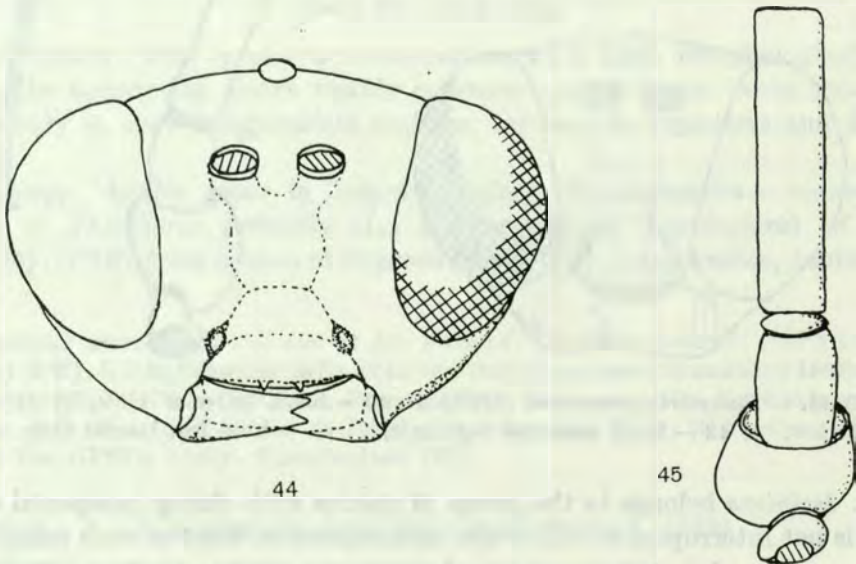
postpectal carina. *B. decipiens* was distinguished from closely related species on the basis of existing thorax and original description by GRAVENHORST (1829a: 825). It differs from *B. rugulosus* and *B. maculatus* by rugulose propodeum, moreover, from *B. maculatus* by postpectal carina indistinctly intercepted and black scape; from *B. alter* by dark flagellum, from *B. alter* and *B. argentatus* by punctures on tergite 2, almost completely black postpetiole, and a pair of central brown spots on middle tergites; from *B. fragilis* by presence of dorsal carinae on postpetiole, dark flagellum, and absence of brown patches on front corners of tergite 2.

♀♂. Face and clypeus with more or less dense and fine punctures; propodeum rugulose; tergites 2 and 3 in ♀ usually with strong, scattered punctures, while in ♂ (occasionally in ♀) more or less longitudinally striate, at least at the base.

Head with the temples strongly, roundly narrowed behind the eyes (fig. 12); transverse eye diameter 1.7–1.9 as long as smallest tempora; face not narrowed ventrad, its index = 0.5; clypeus strongly separated from the face, weakly convex, with two distinct teeth at the apex, its index = 0.65; clypeal fovea small (fig. 11); oral and genal carinae complete, oral carina weakly raised behind the base of mandible; cheek 0.5–0.6 as long as basal width of mandible; HO : OOL = 1 : 1.7–2.0.

Antennae with 24–26 segments; postannellus index = 3.4–3.9; ♂ with tyloids on segments 12–15.

Thorax similar as in *B. alter* and *B. argentatus*. Postpectal carina — fig. 13.



Figs. 44–45. — *Bathythrix illustris* sp. n. ♀: 44 — head, anterior view; 45 — basal antennal segments.

Wings — fig. 14. Basal vein parallels discocubitus, discocubitus intercepted nearer to the middle than in *B. argentatus*, its basal section 0.7–0.85 as long as the apical; discocubital cell shortened; nervellus intercepted well below the middle.

Legs. Hind femur index = 5.0–5.4.

Abdomen. First segment with strong lateral carinae (fig. 15), dorsal carinae reaching the full length of postpetiole (fig. 16), spiracles of first segment just before its middle, first segment index = 2.2–2.9 (♀) and about 3.3 (♂), postpetiole index = 1.2–1.6 (♀) and about 1.9 (♂), first plica reaching 0.7–0.8 postpetiole; tergite 2 in ♀ slightly transverse, in ♂ a little elongate; ovipositor straight, 1.0–1.2 as long as hind tibia, with a rather distinct nodus.

Coloration black. Apex of antennae below brown-black, mandible at the middle, tegulae, and legs red-yellow; front coxa and front trochanters yellow-white; postpetiole very narrowly at the apex, and tergites 2–3(5) red, middle tergites usually with a pair of central brown spots (fig. 17), which sometimes are joined in a transverse band at the middle of tergite, brown spots on tergites 2–4 do not reach to their front corners.

Length: 4.0–6.5 mm.

Biology. Adult from occur from May to September. Reared from *Cryptcephalus janthinus* GERM. (*Chrysomelidae*, *Coleoptera*) (HABERMEHL 1919, NMS; MN).

Material examined: 70 ♀♀ and 23 ♂♂. Sweden: Skåne, Västmanland (UU), Kyrkhult (PD); USSR: Moscow (TC); Poland: Brwinów near Warszawa (GC), Gdańsk-Stogi, Smolniki near Hawa, Białystok, Warszawa-Marysinek, Gościeradów near Kraśnik, Ząbkowice Śl. (IZPAN); Czechoslovakia: Prague (TC); GDR: Nisky (holotype, GRAVENHORST 1829, UW), Leipzig, Berlin (MN, IPSF), Schwerin (MN, TC), Freyburg, Kyffhäuser, Frankenhäuser, Dessau, Thale (Harz), Mecklenburg (IPSF); FRG: Worms (lectotype, HABERMEHL 1919, NMS), Ziegenhagen (IAZ), Würzburg (IPSF), Namburg, Lohr (MN), Neunhof, Gräfenberg (BC), Hannover, Göttingen, Einbeck (HC); Ireland (BM), Kerry (TC); France: Calvi (Corse) (types, AUBERT 1960, LEEO); Italy: Pizzighettone (TC).

6. *Bathythrix fragilis* (GRAVENHORST, 1829)

Hemiteles fragilis GRAVENHORST, 1829a: 828, nec *B. fragilis* (VIREECK, 1903). — Holotype (♀) KERRICH (AUBERT 1968b: 182): without label, coll. GRAVENHORST, Wrocław (UW).

Hemiteles formosus DESVIGNES, 1860: 211 (syn. MORLEY 1907: 106, AUBERT 1975: 16, FITTON 1976: 327). Not examined.

Leptocryptus geniculosus THOMSON, 1884: 966 (syn. PFANKUCH 1923: 85). — Lectotype (♀) by designation of AUBERT 1966: 129: "Sm" (= Småland), coll. THOMSON, Lund (ZIL).

Leptocryptus albomarginatus KRIECHBAUMER, 1892: 371 (syn. SAWONIEWICZ 1978: 127). — Lectotype (♀) by designation of AUBERT (1968: 193): "M. Pull. 26. 6. 84 KRCHB.", coll. KRIECHBAUMER, München (ZSBS).

Leptocryptus albomarginatus v. *grandimacula* KRIECHBAUMER, 1892: 372, syn. nov. Holotype (♀) lost, on the basis of original description.

Leptocryptus bellulus KRIECHBAUMER, 1892: 372, syn. nov. — Holotype (♀) AUBERT 1968b:

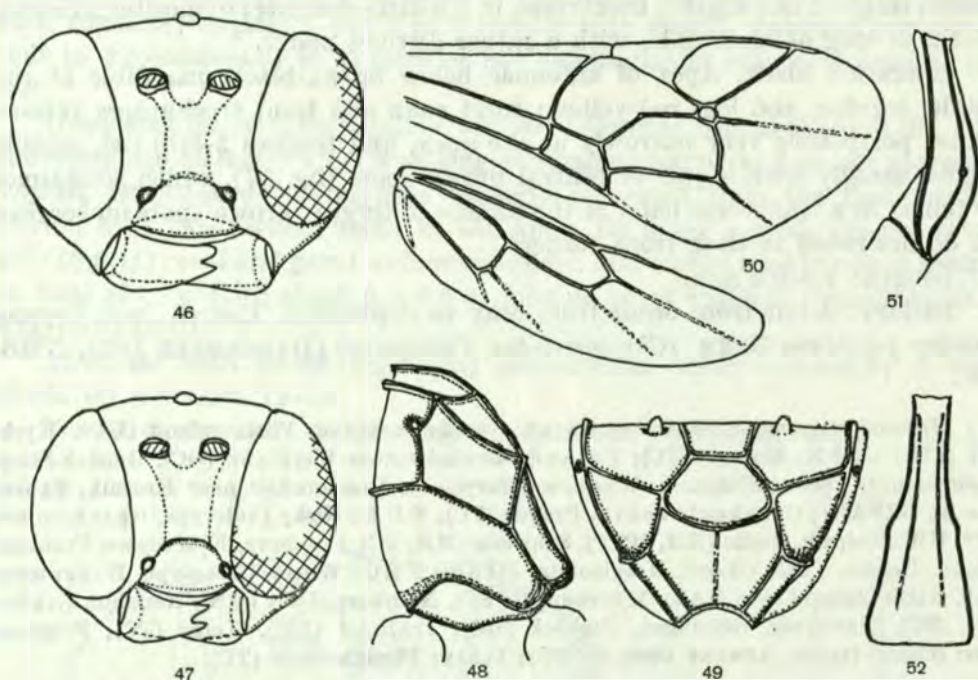
193: "M. Isar, 21. 5. 85. KRCHB.", "Bavar. 11. *bellulus* ♀. KRCHB." (without abdomen), coll. KRICHBAUMER, München (ZSBS).

Leptocryptus geniculosus: PFANKUCH 1913: 332, description of ♂.

Leptocryptus urticarum HABERMEHL, 1930: 109, *syn. nov.* — Lectotype (♀) here designated: "... Markkokon, Winter 1916/17", "ein trockenen Stengel von *Urtica dioica* ...", "*Leptocryptus urticarum* ♀ HABERM., Prof. HABERMEHL det.". — Paratype (♂): "aus Kokon wie ♀ *Leptocryptus urticarum* HABERM.". Coll. HABERMEHL, Frankfurt/M. (NMS).

Bathythrix fragilis: AUBERT 1968a: 138.

MORLEY (1907: 106) erroneously synonymized *H. fragilis* with *Gnotus tenuis* (GRAV.).

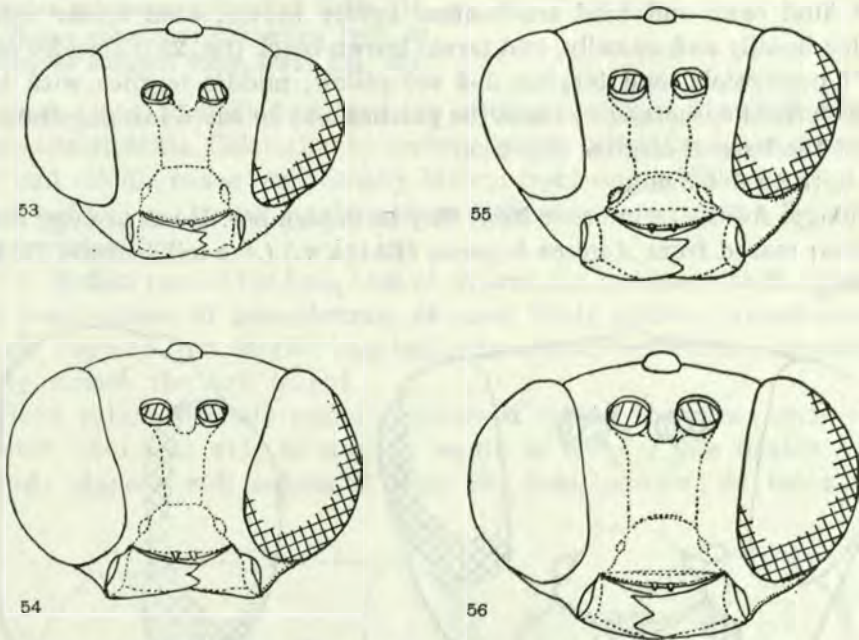


Figs. 46–52. — *Bathythrix pellucidator* (GRAV.): 46 — head, anterior view, ♀; 47 — head, anterior view, ♂; 48 — propodeum, lateral view; 49 — propodeum, dorsal view; 50 — wings; 51 — abdominal segment 1, lateral view, ♀; 52 — abdominal segment 1, dorsal view, ♀.

B. fragilis is very variable, particularly, in the form of head. It has been agreed that specimens with transverse head very strongly narrowed behind the eyes (fig. 19) (types: *L. geniculosus*, *L. albomarginatus*) and with the head weakly narrowed behind the eyes (fig. 20) (types: *L. bellulus*, *L. urticarum*) belong to the same species. Type *H. fragilis* has rather intermediary head between the two forms. Similarly van ROSSEM (1966: 24) considered the degree of head convergence in *Trychosia legator* (THUNB.) as a variable character. It is possible that the high variability of this character is related to the fact that larvae of *Trychosia* spp. and *B. fragilis* live in spider cocoons.

♀♂. Face and basal clypeus with very fine and dense punctures; tempora and mesoscutum with scattered punctures; propodeum rugulose, polished; tergites 2 and 3 with scattered punctures, sometimes side part of postpetiole longitudinally strigose, and basolateral part of tergite 2 sometimes longitudinally strigate and granulate, exceptionally in ♂ entire tergite 2 longitudinally strigate.

Head with the temples very strongly (fig. 19) to weakly (fig. 20) roundly narrowed behind the eyes; transverse diameter of eye 1.6–2.2 as long as smallest tempora; face slightly narrowed ventrad; clypeus weakly separated from the face, a little convex, apical margin faintly flattened with two teeth in the middle; clypeal foveae small (fig. 18); oral and genal carinae strong, oral carina rather strongly reised behind the base of mandible; cheek 0.55–0.45 (♀) and up to 0.3 (♂) as long as basal width of mandible; HO : OOL = 1 : 1.6–2.2.



Figs. 53–56. 53–54 – *Bathythrix collaris* (THOMS.), head, anterior view: 53 – ♀, 54 – ♂; 55–56 – *Bathythrix montanus* (Schmiedekn.), head, anterior view: 55 – ♀, 56 – ♂.

Antennae with 24–30 segments; postannellus index = 3.7–5.4; ♂ with tyloids on segments 12–15.

Thorax. Collar dorsally with distinct longitudinal carina; apical part of mesoscutum with sharp margin, almost vertically descending prescutellar transverse groove; notaulus deep, reaching to apical margin of mesoscutum (fig. 21); postpectal carina distinctly interrupted in front of each hind coxa, interruption about 0.3 as long as median part of postpectal carina (fig. 22); propodeum with all areas distinct, areola hexagonal, usually conspicuously

longer than wide, with almost parallel sides, propodeum distinctly intercepted — areola and petiolar area lie in two different planes.

Wings. Basal vein parallels discocubitus, discocubitus intercepted before the middle, its basal section about 0.8 as long as the apical; nervellus intercepted below the middle.

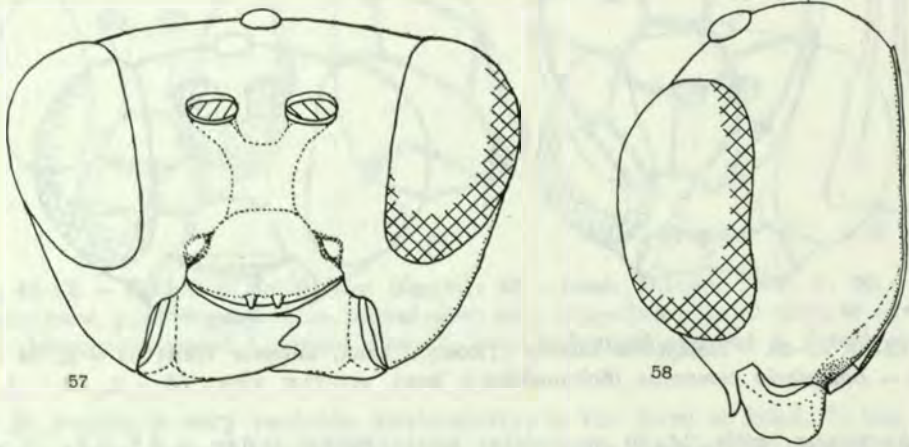
Legs — fig. 23. Hind femur swelled, its index = 4.4–5.1.

Abdomen. First segment weakly convex, lateral carinae strong, dorsal carinae absent (exceptionally in ♂ weak), spiracles just before the middle, its index = 2.8–3.4 (♀) and 3.6–4.3 (♂), postpetiole index = 1.4–1.9 (♀) and 2.2–2.4 (♂), first plica reaching to 0.6–0.8 postpetiole; ovipositor almost straight, 1.0–1.3 as long as hind tibia, with a weak nodus.

Coloration black. Antennae below (at least basally), mandible at the middle, tegulae, red-yellow; legs red-yellow, front coxa and trochanters paler, side face of hind coxa and hind trochanters lightly brown, hind femur apically, hind tibia basally and apically, and tarsus brown-black (fig. 23); apically central spots of postpetiole, and tergites 2–4 red-yellow, middle tergites with brown patches on front corners, sometimes the patches may be fused forming transverse bands at the base of tergites (fig. 24).

Length: 3.0–6.5 mm.

Biology. Adults from occur from May to September. Hosts are egg cocoons of spiders; reared from *Agroeca brunnea* (BLACKW.) (*Aranei*) (culture R. HINZ, HC; BM).



Figs. 57–58. — *Bathythrix claviger* (TASCHENB.) ♀: 57 — head, anterior view; 58 — head, lateral view.

Material examined: 83 ♀♀ and 40 ♂♂. Sweden: Småland (lectotype, THOMSON 1860, ZIL), Uppsala, Örtofta, Kärrobo (UU), Skåne, Stockholm (TC), Kurkhult (PD); Finland: Parikkala (MZH); USSR: Moscow (TC); Poland: Wrocław (GC), Smolniki near Hawa, Warszawa-Marysinek, Hamernia near Warszawa, Rogów near Kuluszki, Gościeradów near Kraśnik, Pieniny (SAWONIEWICZ 1978) (IZPAN); Czechoslovakia: Stribrna Lhota (TC);

Austria: near Wildon (Styria) (ZSBS); GDR: Frankfurt/O., Eberswalde, Fürstenberg, Halle, Eilenberg (IPSF), Leipzig (IPSF, MN), Jena, Thüringen (MN); FRG: Göttingen (holotype GRAVENHORST 1829, UW), near München (lectotypes KRIECHBAUMER 1892, ZSBS), Worms (NMS, ?lectotype HABERMEHL 1930), Spessart, Ferlach (HCZI), Kiel (HCZI, TC), Eschwege (TC), Traunstein, Nürnberg Gräfenberg, Waltenau (Schwarzwald) (BC), near Heidelberg (IAZ), Hannover (HC, UW), Orel, Göttingen, Einbeck, Celle (HC); Netherlands: Ede (PD); England: Norwich (HCZI), Leicester (TC), New Forest (BM); France: Paris (TC); Italy: Pizzighettone (TC).

7. *Bathythrix spheginus* (GRAVENHORST, 1829), **comb. nov.**, ♀ **nov.**

Mesoleptus spheginus GRAVENHORST, 1829a: 49. — Holotype (♂) lost: locus typicus Volhynia. — **Neotype** (♂) here designated: Poland, Warszawa-Jelonki, 4. V. 1977, leg. J. SĄWONIEWICZ, coll. IZPAN, Warszawa.

Mesoleptus spheginus: STEPHENS 1835: 219.

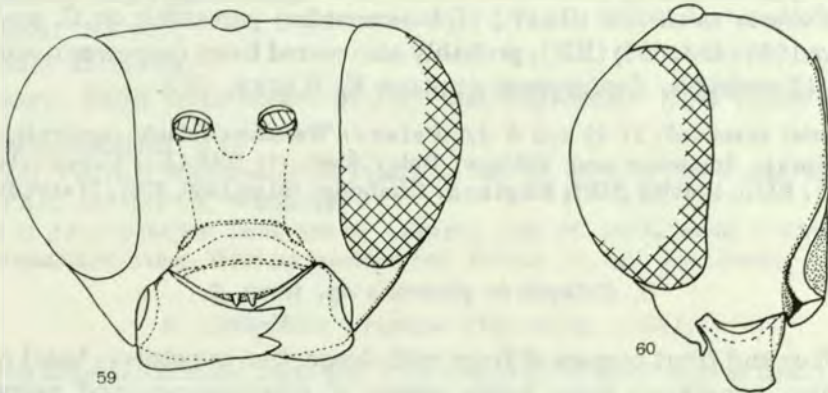
Leptocryptus spheginus: PFANKUCH 1906: 22.

Leptocryptus bellulus: SALT 1931: 494, 504.

Neotype (♂) identified on the basis of GRAVENHORST, STEPHENS and PFANKUCH's descriptions. Coloration of neotype partly differs from the descriptions: front and middle coxae only basally brown, front and middle trochanters and femurs red-yellow. In my opinion, these differences in coloration lie within the species variability.

♀♂. Median part of the face, base of clypeus and of frons with fine punctures; front lower corner of mesopleurum at most finely striate; propodeum rather strongly rugose; first tergite longitudinally striate or strigose; second tergite usually striate the full length.

Head rather strongly roundly narrowed behind the eyes; transverse eye diameter 1.6–1.8 as wide as smallest length of temple; face weakly narrowed ventrad; clypeus well separated from the face, narrow, its index = about



Figs. 59–60. — *Bathythrix tenuis* (GRAV.) ♀: 59 — head, anterior view; 60 — head, lateral view.

0.7 (♀) and about 0.85 (♂), rather strongly convex, at apex only narrowly flattened, with two rather distinct small teeth in the middle; clypeal fovea small (fig. 25); genal and oral carinae complete, oral carina weakly raised behind the base of mandible; ocellus small, HO : OOL = 1 : 2.5–4.7.

Antennae with 24–27 segments; postannellus index = 3.7–4.7; ♂ with very fine tyloids on segments 11–13.

Thorax. Apical part of mesoscutum rather without sharp margin, almost gently descending prescutellar transverse groove; notaulus reaching 0.7 mesoscutum; postpectal carina distinctly interrupted in front of each middle coxa, in ♀ the interruption 0.25 as long as middle part of postpectal carina, in ♂ a little less; propodeum with all areas distinct; areola hexagonal, usually as long as wide or indistinctly longer, areola and petiolar area lie in two different planes.

Legs. Hind femur index = 5.3–5.6.

Wings — fig. 26. Radial cell short; basal vein short, parallels discocubitus; discocubitus intercepted at the middle; areolet open; postnervulus weakly sloping, intercepted at the middle; nervellus rather oppositus, intercepted below the middle.

Abdomen. First segment with distinct dorsolateral carinae and without distinct dorsal carinae, first segment index = 2.3 (♀) and 3.0 (♂), postpetiole index = 1.2 (♀) and 1.6 (♂), first plica reaching 0.9 (♀) and 0.7 (♂) postpetiole length; second tergite in ♀ transverse, its index = about 0.7), in ♂ as long as wide; ovipositor about 0.8 as long as hind tibia.

Coloration black. Tegulae red; front and middle legs usually almost entire red-yellow, hind coxa and hind femur almost entire, hind tibia basally and apically brown-black; tergites 2–4 red-yellow, often with brown patches or bands at bases of tergites; antennae below more or less brightened.

Length: 3.5–5.5 mm.

Biology. Adults forms occur in April–May, July–August. Primary parasite of *Cephus pygmaeus* (L.) (*Cephididae*, *Hymenoptera*), sometimes hyperparasite — attacks *Collyria calcitrator* (GRAV.) (*Ichneumonidae*) parasiting on *C. pygmaeus* (L.) (SALT 1930: 483, 505) (BM); probably also reared from *Laspeyresia nigricana* (STEPH.) (*Tortricidae*, *Lepidoptera*) (culture F. KAGAN, GC).

Material examined: 11 ♀♀ and 6 ♂♂. Poland: Warszawa-Jelonki (neotype), Łomna near Warszawa, Grabowiec near Pińczów, Dolny Śląsk (?) (IZPAN); Czechoslovakia (TC); FRG: Rhein-Provinz (MN); England: Cambridge (SALT 1930, BM); Italy: Piacenza (TC).

8. *Bathythrix pleuralis* sp. nova ♂.

♂. Face and front corners of frons with dense, fine punctures; basal clypeus with coarse punctures; front lower corner of mesopleurum and propodeum (except areola) strongly rugose; petiole rugose or strigose; postpetiole strigose; second tergite striate or strigose up to the apex.

Head with the temples roundly narrowed behind the eyes (in paratype from Austria strongly narrowed); transverse eye diameter 1.4–1.6 as wide as smallest length of tempora; face faintly enlarged ventrad; clypeus well separated from the face, wide, its index = 0.5, strongly convex, from 0.6–0.7 of the length strongly truncate apically, with the apical margin narrowly flattened and a little upwards, without distinct teeth in the middle; clypeal fovea small (fig. 27); oral and genal carinae complete, normal; ocellus small, HO : OOL = 1 : 2.5–2.9.

Thorax. Apical part of mesoscutum rounded, without sharp margin; notaulus reaching about 0.7 mesoscutum; postpectal carina distinctly interrupted in front of each middle coxa, interruption 0.25 as long as median part of postpectal carina; propodeum with all areas rather distinct, areola hexagonal as long as wide, weakly convergent backwards, areola and petiolar area situated in two different planes.

Legs. Hind femur index = 4.8–5.3.

Wings — fig. 28. Radial cell short; basal vein short, not paralleling discocubitus; discocubitus intercepted near the middle; areolet closed; postnervulus strongly sloping, distinctly intercepted below the middle; nervellus weakly antyfurcal, intercepted low.

Abdomen. First segment with weak dorsal and dorsolateral carinae (postpetiole strigose), spiracles before the middle, first segment index = 2.5–3.2, postpetiole index = 1.4–1.6, first plica reaching 0.8–0.9 postpetiole; second tergite slightly wider than long.

Coloration black. In holotype the median part of mandible, antennae below, tegulae, legs yellow-red; base of middle coxa, hind coxa and hind femur brown-black; middle tergites 2–3 with a red-yellow apical band which is wider in the middle than at the side. In paratypes antennae brown-black; front and middle coxae and trochanters partly, and front and middle femur basally, and hind leg entire brown-black; abdomen brown-black, middle tergites with an apical narrow red-yellow band.

Length: 3–4 mm.

Female unknown.

Biology. Adult from occurs in July and September. Host unknown.

Material examined: 3 ♂♂.

Holotype (♂): Poland, Warszawa, Park Praski, 12.–24. IX. 1975, in yellow cups, leg. Ekipa IZ PAN, coll. IZPAN, Warszawa.

Paratypes (2 ♂♂): "Scheffau Tirol, 800 m, Austria, July 26, 1958, David TOWNES", coll. TOWNES, Ann Arbor. Without label, ex coll. Förster (?), coll. MN, Berlin.

9. *Bathythrix strigosus* (THOMSON, 1884)

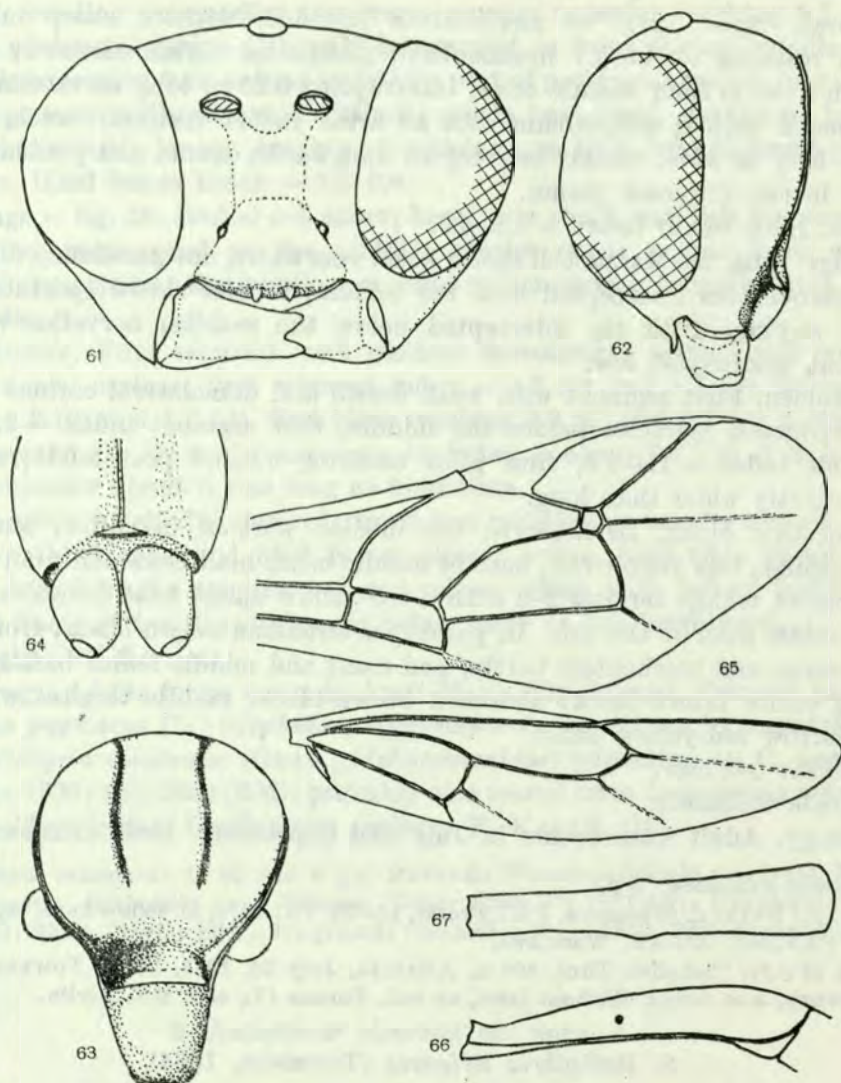
Leptocryptus strigosus THOMSON, 1884: 964. — Lectotype (♀) by designation of HINZ (AUBERT 1972: 148): "Hbg" (= Helsingborg), coll. THOMSON, Lund (ZIL).

♀ *Leptocryptus strigosus* THOMS. f. *ruficollis* HABERMEHL, 1919: 110, ♀, type lost.

Bathythrix strigosus: AUBERT 1972: 148.

MEYER (1933: 192) erroneously synonymized this species with *B. aereus* GRAY., and HELLEN (1967: 108) erroneously included *B. thomsoni* KERRICH to its synonyms. *B. strigosus*: OEHLKE (1966: 846) nec *B. strigosus* THOMS. belongs to *B. thomsoni* KERRICH.

♀♂. Face, frons, and mesoscutum with fine punctures; propodeum finely rugulose, shining; lateral and ventral parts of first segment granulate; dorsal



Figs. 61-67. — *Bathythrix linearis* (GRAV.) ♀: 61 — head, anterior view; 62 — head, lateral view; 63 — mesoscutum and scutellum, dorsal view; 64 — postpectal carina, ventral view; 65 — wings; 66 — abdominal segment 1, lateral view; 67 — abdominal segment 1, dorsal view.

part of first abdominal segment, entire second tergite, and basal half of third tergite distinctly longitudinally aciculate to striate.

Head — figs. 29, 30. Face not narrowed ventrad, wide, its index = 0.4–0.5; clypeal fovea wide and deep, joining the margin of eye, side margin of clypeus, and about 0.5 basal width of mandible, with dense, very long, silver hairs; face very distinctly overhanging the clypeal fovea; clypeus wide, its index = 0.7–0.8, strongly separated from face, convex in profile, its apical half truncate, apical margin narrowly flattened, without teeth; mandible index = 1.4–1.5; oral carina complete, genal carina completely reduced before the base of mandible; gene concave, 0.7–0.9 as long as basal width mandible; ocellus large, HO : OOL = 1 : 1.3–1.5 (♀) and 1.1–1.3 (♂); head with the temples rather strongly narrowed behind the eyes.

Antennae with 26–30 segments; postannellus weakly curved, its index = 4–5; ♂ with tyloids on segments 12–14.

Thorax. Apical part of mesoscutum with sharp margin and vertically descending prescutellar transverse groove; notaulus distinct and deep, reaching almost to the apical margin of mesoscutum; prepectus without transverse carina; prepectal carina complete, postpectal carina almost completely reduced; propodeum with all the areas distinct, areola hexagonal.

Legs. Hind femur index = 4.8–6.0 mm.

Wings. Basal vein parallels discocubitus, discocubitus intercepted well before the middle; nervellus opposite, occasionally very faintly and low intercepted.

Abdomen. First segment with rather distinct lateral carinae, postpetiole without dorsal carinae, first segment index = 2.6–3.2 (♀) and 3.3–3.7 (♂), postpetiole index = 1.2–1.6 (♀) and 1.8–2.2 (♂), first plica reaching 0.6–0.8 postpetiole length; second tergite index = 1.1–1.3 (♀) and 1.6–1.7 (♂); ovipositor downcurved, 1.0–1.4 as long as hind tibia.

Coloration black. Legs yellow-red, front and middle coxae and trochanters whitish, hind legs — particularly tibia and tarsus — more or less brown; scape white-yellow in ♀, whitish in ♂; tegulae whitish; prothorax at least partly yellow-red; apical of the postpetiole, tergite 2 and 3 along the midline, and apical tergites often entirely brown-yellow, tergites 2 and 3 with more or less wide pale apical band, sometimes almost entire abdomen black.

Length: 3.5–6.0 mm.

Biology. Adults occur in May–October. Hyperparasite (?), reared from *Erannis defoliaria* (CLERCK) (*Geometridae*, *Lepidoptera*) (HC).

Material examined: 27 ♀♀ and 19 ♂♂. Finland: Helsingborg (lectotype, ZIL); USSR: Moscow (TC); Poland: Łomna near Warszawa, Hamernia near Warszawa, Warszawa (Bielany, Łazienki, Ogród Saski), Rogów near Kuluszki (IZPAN); GDR: Fürstenberg (IPSF), Berlin, Schwerin (MN); FRG: Köln (IPSF), Düsseldorf (TMA), Würzburg, Kiel (HCZI), Göttingen (HC), Transtein (BC); Netherlands: Radio-Kootwijk (Assel) (PD); Italy: Pizzighettone (TC).

10. *Bathythrix lamina* (THOMSON, 1884)

Leptocryptus lamina THOMSON, 1884: 965. — Lectotype (♀) by designation of AUBERT (1972: 148): "Yd" (= Yddinge), coll. THOMSON, Lund (ZIL).

Bathythrix lamina: AUBERT 1964: 152.

♀♂. Face and basal part of clypeus with rather dense, fine punctures; mesopleurum almost smooth; mesoscutum with scattered punctures; propodeum rugulose, partly mat; tergite 1–3 and occasionally 4 longitudinally aciculate at the base.

Head — figs. 31, 32. Face distinctly narrowed ventrad, its index = 0.7; clypeal fovea wide, joining eye margin, clypeus side, and 0.5 basal width of mandible, with dense and very long, silver hairs; face slightly overhanging the clypeal fovea; clypeus narrow, its index = 1.0–1.1, strong convex, its apical 0.3 truncate, apical margin narrowly flattened, without distinct teeth; mandible short, as long as basally wide; oral carina strong; genal carina completely reduced just before oral carina; cheek 0.6–0.8 as long as basal width of mandible, concaved; ocellus large, HO : OOL = 1 : 1.0–1.3; head with the temples straightly narrowed behind the eyes.

Antennae with 24–31 segments; postannellus curved, its index = 5.8–7.0; ♂ with tyloids on segments 12–15.

Thorax. Apical part of mesoscutum with sharp margin and almost vertically descending prescutellar transverse groove; notaulus distinct, reaching almost the full length of mesoscutum; prepectal carina present only on mesopleurum, mesosternum without prepectal carina; posterior face of front coxa enclosed by a high, transverse carina lying on lower part of prepectus; postpectal carina widely interrupted in front of each middle coxa; propodeum with all areas distinct, carinae weak, areola hexagonal, almost oval, indistinctly transverse to slightly elongate.

Wings. Basal vein parallels discocubitus; nervellus opposite, not intercepted.

Abdomen. First segment with distinct lateral carinae, dorsal carinae absent, its index = 2.9–3.5, postpetiole index = 1.4–1.7, first plica reaching 0.7 postpetiole length; second tergite index = 1.1–1.2 (♀) and 1.3–1.6 (♂); ovipositor 0.5–0.7 as long as hind tibia.

Coloration black. Antennae below, hind corner of pronotum, tegulae, legs, postpetiole at apex, apical band of tergites 2–4 (apical band is wider in the middle than at the side), sometimes entire tergites yellow-red; front and middle coxae and trochanters paler, in ♂ whitish; hind trochanters laterally, hind tibia, hind tarsus, and mandible at the middle, more or less brown-red; scape in ♂ whitish.

Length: 3.0–7.0 mm.

Variability. Nervellus weakly and low intercepted. In small specimens:

head more or less roundly narrowed behind the eyes; tergites 2 and 3 almost all smooth.

Biology. Adult from occur from May to October. Parasite of *Ichneumonidae* and *Braconidae* cocoons — hyperparasite. Reared from *Apanteles* sp. (*Braconidae*) on *Aglais urticae* (L.) (*Nymphalidae*, *Lepidoptera*) (culture J. F. AUBERT, LEEO); *Apanteles* spp., *Rogas rugulosus* (NEES) (*Braconidae*) on *Acronycta menyanthidis* (VIEW.) (*Noctuidae*, *Lepidoptera*) (culture M. R. SHAW, UR); *Porizontinae* (UU, IAZ); *Diadegma armillata* (GRAV.) (*Ichneumonidae*) on *Yponomeuta padella* (L.) (*Yponomeutidae*, *Lepidoptera*) (culture J. KARCZEWSKI, IZPAN); *Plutella maculipennis* (CURT.) (*Plutellidae*, *Lepidoptera*) (culture R. HINZ, HC).

Material examined: 141 ♀♀ and 63 ♂♂. Norway (MN); Sweden: Yddingen (lectotype, ZIL), Uppsala, Skåne, Kvikkjokk (UU); Finland: Helsinki (TC); USSR: Moscow (TC, IPSF); Poland: Białowieża near Hajnówka (GC), Pomorze (IPSF), Wrocław (PD), Niedźwiady near Miastko, Smolniki near Hawa, Puszcza Biała (Leszczydół) near Wyszaków, Kampinoski PN (Długie Bagno) near Warszawa, Łomna near Warszawa, Hamernia near Warszawa Warszawa-Białoleka, Warszawa-Bielany, Gościeradów near Kraśnik, Jędrzejów, Bieszczady (Liszna), Pieniny (Sawoniewicz 1976: 205) (IZPAN); Czechoslovakia: Vrehlubi (IPSF), Starkoc (TC); Hungary: Budapest (TC); Austria: Tirol (Scheffau), Vienna (TC); GDR: Thüringen (MN, TC), Eberswalde (IPSF, TC); Mecklenburg, Darß/Perow (IPSF), Leipzig, near Berlin (IPSF, MN), Erfurt, Großsteinberg, Halle (MN), Beckow (TC); FRG: Bremen (IPSF), Auchen, near Bremen (MN), Erlangen, Leuzenberg (BC), Spessart (HCZI, IAZ), Bodental, Würzburg (HCZI), Riva (Tirol), München, Geierlambach, near Nürnberg (IAZ), Göttingen, Einbeck (HC); Denmark: Copenhagen (TC); Netherlands: Ede, near Amsterdam (PD); England: Cheshire, Cumbria (UR), Oxford, Dorking, Leicester (TC); Ireland: Dublin, Wicklow (TC); France: Pare de Sceaux (LEE0); Yugoslavia: Indija near Beograd, Irig near Novi Sad (IZPAN); Italy: Garda (IAZ).

11. *Bathythrix thomsoni* (KERRICH, 1942)

Leptocryptus aereus: THOMSON 1884: 965, nec GRAVENHORST, 1829.

Thysiotorus thomsoni KERRICH, 1942: 56. — Lectotype (♀): "38. 7. ii. 65. Ld" (= Lund), coll. THOMSON, Lund (ZIL).

Panargyrops aereus corsicator AUBERT, 1961: 171, **syn. nov.** — ♀ Holotype (♀): "J. F. AUBERT, 16. 8. 1959, Vizzavona (Corse)", coll. AUBERT, Paris (LEE0).

Theroscopus thomsoni: FITTON 1976: 336.

Bathythrix strigosus: OEHLKE 1966: 846, description.

Bathythrix thomsoni: SAWONIEWICZ 1978: 129.

HELLÉN (1967: 108) erroneously synonymized this species with *B. strigosus*.

Face and frons with fine punctures; mesoscutum sparsely punctulate; propodeum faintly rugulose; first tergite (sometimes except to the middle of postpetiole), second tergite almost to the apical margin, and at least basal half of the third tergite longitudinally strigose and granulate, mat.

Head — figs. 33, 34. Head with the temples strongly roundly narrowed behind the eyes; face index = 0.6–0.7; cheek 1.3–1.4 (♀) and 1.6 (♂) as long as

basal width of mandible; clypeus sharply separated from the face, strongly convex, with the apical margin narrowly but strongly flattened, without distinct teeth; clypeal fovea large, with dense, long silver hairs, joining the margin of eye, side margin of clypeus, and extending to 0.5 basal width of mandible; ocelli relatively large, HO : OOL = 1 : 1.3–1.6, genal and oral carinae strong.

Antennae with 20–25 segments; ♂ with tyloids on segments 11–14.

Thorax. Apical part of mesoscutum rather sharp and steeply descends the prescutellar transverse groove; notaulus reaching to the apical part of mesoscutum; prepectal carina complete, postpectal carina almost completely reduced; carinae of propodeum weak, areola hexagonal, almost circular or transversally oval.

Legs. Hind femur index = 4.6–5.4.

Wings. Basal vein parallels discocubitus; areola with faint outer vein; nervellus opposite, not intercepted.

Abdomen. Dorsal carinae of first segment extend only to postpetiole, dorsolateral carinae weak, disappear on the hind part of postpetiole, first segment index = 2.3–2.8, postpetiole index = 1.3–1.4, first plica reaches to 0.7–0.8 postpetiole; second tergite index = 0.8–0.9 (♀) and about 1.2 (♂); ovipositor 0.6–0.7 as long as hind tibia, with a weak nodus.

Coloration black. Legs yellow-red, front and middle legs slightly paler (coxae and trochanters whitish), hind legs more or less brown; scape below and tegulae white-yellow; flagellum below yellow-brown; apical part of postpetiole, apical part of tergites 2 and 3 (wide triangular patches) and apical tergites often almost entirely red-yellow.

Length: 2.5–5.0 mm.

Variability. In small specimens head faintly narrowed behind the eyes, less transverse and more rounded. Propodeum short, from base of areola sharply descends, hind coxa shortened, abdomen wide, middle segments of abdomen very large.

Biology. Adult from occur from May to October. Hyperparasite, attacking various cocoons, reared from cocoons of *Casinaria* spp. (UR), *Diadegma armillata* (GRAV.) on *Yponomeuta padella* (L.) (*Yponomeutidae*, *Lepidoptera*) (culture J. KARCZEWSKI, IZPAN), *Porizontinae* (*Ichneumonidae*) (IZPAN), *Apanteles* spp. (UR, GC), *Apanteles* sp. on *Choristoneura murinana* (HÜBN.) (*Tortricidae*, *Lepidoptera*) (culture H. ZWÖLFER, IAZ), *Meteorus* sp. (*Braconidae*) (GC); it is also likely to be a primary parasite as it was obtained from capsules of *Coleophora* sp. (*Coleophoridae*) and *Caloptilia* sp. (*Gracillariidae*, *Lepidoptera*) (culture M. R. SHAW, UR), and from cocoons of *Diprion* sp. (IPSF, HCIZ).

Material examined: 314 ♀♀ and 54 ♂♂. Sweden: Lund (lectotype, KERRICH 1942, ZIL), Skåne, Messaure, Yddinge (TC); Finland: Hogland (MZN); USSR: Moscow (TC); Poland: Brwinów, Podkowa L. near Warszawa (GC), Niedźwiady near Miastko, Brodnica, Białystok, Katrynka near Białystok, Łomna near Warszawa, Hamernia near Warszawa, Młochów near Warszawa, Warszawa (Ursynów, Białoleka, Łazienki, MDM), Rogów near

Koluszki, near Jędrzejów, Gościeradów near Kraśnik; Czechoslovakia: near Praha (TC); GDR: Freiberg, near Malchow, near Berlin (IPSF), Thüringen, Schwerin (MN); FRG: Köln (IPSF), Druchwald (Berg Neukirchen) (HCIZ), Nürnberg (BC), Hannover, Göttingen (HC), Ziegenhagen, Staufeu, Helledau, Glonn, Wiesen/Spessart, München, Geierlambeck (IAZ); Netherlands: Ede (PD); England: Cheshire (UR), Leicester, Oxford (TC); Ireland: Kerry (TC); France: Vizzavona (Corse) (holotype, AUBERT 1961, LEEO); Italy: Pizzighettone (TC).

12. *Bathythrix aereus* (GRAVENHORST, 1829)

Cryptus aereus GRAVENHORST, 1829a: 578. — Lectotype (♀) by designation of AUBERT (1968b: 182): "f". — Paralectotype (♂) by designation of SAWONIEWICZ (1978: 126): "m". Coll. GRAVENHORST, Wrocław (UW).

Leptocryptus brevis THOMSON, 1884: 965 (syn. SAWONIEWICZ 1978: 126). — Lectotype (♀) by designation of SAWONIEWICZ (1978: 126): "Lund", coll. THOMSON, Lund (ZIL).

Bathythrix aereus: OEHLKE 1966: 845.

MEYER (1933: 192) erroneously synonymized it with *B. strigosus* THOMS.

♀♂. Face with fine punctures; propodeum rugose; first tergite usually entire and at most basal half of second tergite finely longitudinally aciculate and finely granulate.

Head — figs 35, 36. Head with the temples roundly narrowed behind the eyes; face index = 0.6; clypeus rather weakly separated from the face, almost flat, apical part upcurved, with two tuberkeln at the middle; clypeal fovea large, reaching the margin of eye, side margin of clypeus, and upper corner of the base of mandible (they do not extend beyond the basal half of mandible), with very long silver hairs; cheek 0.5 (♀) and 0.45–0.35 (♂) as long as basal width of mandible; ocellus small, HO : OOL = 1 : 1.7–2.0; genal und oral carinae strong.

Antennae with 21–24 segments; postannellus not curved, its index = 4–4.5; ♂ with tyloids on segments 11–14.

Thorax. Apical part of mesoscutum with sharp margin and almost vertically descending prescutellar transverse groove; notaulus deep, extending almost to the end of mesoscutum; prepectal carina complete; postpectal carina almost completely reduced; propodeum with all the areas distinct, areola hexagonal.

Legs. Hind femur index = 5.4–6.4.

Wings. Basal vein parallels discocubitus; nervellus opposite, not intercepted, areola with faintly pigmented second intercubitus.

Abdomen. Dorsal and laterodorsal carinae of first segment disappearing at its apical part, first segment index = 3.1–3.8, postpetiole index = 1.5–1.9, first plica reaching about 0.7 postpetiole; second tergite index = 0.8 (♀) and 1.2 (♂); ovipositor about 0.7 as long as hind tibia, with a weak nodus.

Coloration black. Legs red-yellow, front and middle coxae and trochanters paler (in ♂ also hind coxa), hind legs more or less brown; base of antennae below,

tegulae, apex of first tergite, and triangular patches on apical part of tergites 2-4 (often extending to the base of tergites), red-yellow.

Length: 3-5(6) mm.

Biology. Adult from occurs from April to October. Hyperparasite, reared from *Apanteles glomeratus* (L.) (*Braconidae*) in *Pieris brassicae* (L.) (*Pieridae*, *Lepidoptera*) (culture T. PLEWKA, IZPAN), *Apanteles* sp. on *Lymantria dispar* (L.) (*Lymantriidae*, *Lepidoptera*) (culture J. GŁOWACKI, GC), *Apanteles* spp. (IPSF, MN).

Material examined: 147 ♀♀ and 124 ♂♂. Sweden: Lund (lectotype, Thomson 1884, ZIL), Skåne (TC); Finland: Parikkala (MZH); USSR: Latvia (MN) Moscow (TC); Poland: Brwinów near Warszawa (GC), Gutkowo near Olsztyn, Białystok, Dziekanów L. near Warszawa, Łomna near Warszawa, Palmiry near Warszawa, Hamernia near Warszawa, Warszawa (Służewiec, Jelonki, Park SGGW), Rogów near Koluszki, Gościeradów near Kraśnik, Bieszczady (near Lesko), Pieniny (SAWONIEWICZ 1978); Czechoslovakia: Bohemia (TC); Hungary: Tass (IZPAN); Austria (TC); Switzerland: Bern (MN); GDR: near Bitterfeld (IPSF) Leipzig (IPSF, MN), Gotha, Thüringen, Mecklenburg (MN), Triptis (IZPAN); FRG: near Sickershausen (lectotype, GRAVENHORST 1829, UW), Lübke Koog, near Zülpich, Borgsiel, Bordolino, Hundebusch (HCIZ), Nürnberg (BC), Hannover, Göttingen (HC); Netherlands: Ede, Venlo (PD); England: Leicester (TC); France: Paris (TC); Italy: Pizzighettone (TC); Yugoslavia: Vincovci, Indija near Beograd (IZPAN).

13. *Bathythrix margaretae* sp. nova, ♀.

♀. Face with fine punctures; propodeum finely rugose; tergite 1 entire and 2 only at the base more or less longitudinally aciculate.

Head — figs 37, 38. Head with the temples strongly narrowed behind the eyes; face very strongly convergent ventrad, so that inner margin of eye almost reach mandible base; cheek narrow, about 0.1 as long as basal width of mandible; clypeal fovea relatively small, but reaching inner margin of the eye and clypeus; clypeus narrow, sharply separated from face, convex, with apex slightly up-curved, without distinct teeth; transverse diameter of eye 5.5 as long as smallest temples; oral carina complete, genal carina at mandible base faintly interrupted; HO : OOL = 1 : 1.3-1.4.

Antennae with 25-26 segments, postannellus index = about 7.0.

Thorax. Upper side of collar with a weak carina crossing the transverse sulcus; apical part of mesoscutum with weak transverse margin; notaulus sharp, reaching almost the full length of mesoscutum; epomia short; propectal carina complete, postpectal carina widely interrupted in front of each middle coxa; propodeum with all the areas distinct, areola hexagonal, as long as broad or a little elongate, receiving the costula well before the middle, areola and petiolar area situated in the same plane.

Wings. Basal vein parallel to discocubitus, discocubitus intercepted before the middle; areolet without second intercubitus; stigma broad; postnervulus

intercepted slightly above the middle; nervellus vertical, not intercepted, discoidella absent (fig. 39).

Legs. Hind femur index = 6.2–7.3, hind tibia a little broader from the length of spurs.

Abdomen. Spiracles of first segment at its midlength, lateral and dorsal carinae more or less distinct, first segment index = 3.9–4.5, postpetiole index = 2.1–2.5, first plica reaching to 0.5–0.6 postpetiole; second tergite as long as wide, apical part of second tergite about 3 times as wide as at the base; ovipositor 0.5–0.6 as long as hind tibia, nodus distinct.

Coloration black. Mandible (except tooth), basal antennae, pronotum and tegulae, yellow-red; abdomen brown-black, apical tergites yellowish, tergites 2 and 3 with broader apical band, which is wider in the middle than at the side, tergite 3 often more or less brightened at the median part; legs white-yellow, hind coxa and femur, particularly laterally brownish, hind tibia brown, at the middle brightened, hind tarsi brown.

Length: 3–4 mm.

Male unknown.

Biology. Adult form occurs in July and September. Host unknown.

Material examined: 5 ♀♀.

Holotype (♀): Poland, Hamernia near Warszawa, 21. VII. 1977, *Alnetum*, leg. Ekipa IZ PAN, coll. IZPAN, Warszawa.

Paratypes (4 ♀♀): — “Coll. SCHMIEDEKNECHT”, “*Leptocryptus* n. sp.”; — “*Ischnurgops* m., (*Hemiteloidae*)”, “ex coll. FÖRSTER”; — GDR: “Thüringen, O. SCHMIEDEKNECHT S.”, “24289” (*Phygadeuon teneriventris* GRAV., det. ? O. SCHMIEDEKNECHT); — Denmark: “Kopenhagen, Skodsborg-Klampenb., 9. 9. 1901, Dr. G. ENDERLEIN S.”. Coll. MN, Berlin.

I dedicate this species to my wife Margaret.

14. *Bathythrix prominens* (STROBL, 1901)

Leptocryptus prominens STROBL, 1901: 228. — Holotype (♀) det. OEHLKE (AUBERT 1970: 276): “45”, “*Leptocryptus aereus* ... ♀, 14/9 95 ...”, coll. STROBL, Admond (SC).

Bathythrix prominens: AUBERT 1970: 276.

Face with fine, dense punctures; propodeum finely rugulose; entire first abdominal segment and basal half of the second tergite granulate, postpetiole and basal part of second tergite more or less longitudinally aciculate.

♀. Head with the temples weakly roundly narrowed behind the eyes; transverse eye diameter 2.1–2.4 as long as smallest temple; face slightly narrowed ventrad; clypeus weakly separated from face, almost flat, weakly flattened apically, with two very weak teeth; clypeal fovea small; cheek 0.43–0.5 as long as basal width of mandible (fig. 40); oral and genal carinae complete, normal; HO : OOL = 1 : 1.8–2.2.

Antennae with 24–28 segments; scape not transverse (fig. 42); postannellus index = 4.2–5.0.

Thorax. Collar with distinct longitudinal carina; apical part of mesoscutum without sharp margin, gently descending prescutellar transverse groove; notaulus distinct to 0.8 mesoscutum; postpectal carina distinctly interrupted in front of each middle coxa, interruption as long as median section of postpectal carina; propodeum with all areas distinct, areola hexagonal, slightly longer than wide, areola and petiolar area lie the same plane, apical transverse carina of propodeum strongly raised.

Wings. Basal vein parallels discocubitus, discocubitus distinctly intercepted before the middle, its basal section 1.4 as long as the apical; areoled closed; nervellus intercepted below the middle.

Legs — fig. 43. Hind femur index = 7.0–7.4; hind tibia wide, as wide as hind femur, strongly narrowed at the base.

Abdomen. First segment without distinct dorsal and dorsolateral carinae, which are usually completely reduced, its index = 2.6–3.6, its spiracles before the middle, postpetiole index = 1.5–1.9, first plica reaching 0.7–0.8 postpetiole; second tergite slightly transverse; ovipositor straight, about 0.8 as long as hind tibia, with a rather distinct nodus.

Coloration black. Antennae basally, mandiblae (except teeth), collar, hind corners of pronotum, tegulae, legs, and apical band (median widely) of tergites red-yellow; front and middle coxae and trochanters a little paler, hind trochanter and hind femur with lateral longitudinal stripe, hind tibia basally, apically and laterally, and entire hind tarsus, brown (fig. 43).

♂ rather significantly differ from ♀. Face strongly convergent, its index = 0.6–0.7; transverse diameter of eye about 3.1 as long as smallest temple; cheek 0.14–0.15 as long as basal width of mandible (fig. 41); abdomen a little slender, second tergite index = about 1.3; scape white-yellow; tergites 3–5 with the median part red-yellow.

Length: 3.0–5.5 mm.

Biology. Adult from occurs in June–September. Hosts unknown.

Material examined: 9 ♀♀ and 10 ♂♂. Sweden: Skåne, Messaure (TC); USSR: Moscow (TC); Poland: Hamernia near Warszawa, Warszawa-Marysinek, Rogów near Kuluszki; Austria: Waldhohlwege near Admont (holotype, SC); GDR: near Eberswalde (IPSF); FRG: Meran (IAZ), Würzburg (HCZI), Franstein (BC), Göttingen (HC); England: Oxford (TC), Glenasmole (BM); Ireland: Kerry (TC).

15. *Bathytrix illustris* sp. nova, ♀

♀. This species is very closely related to *B. prominens*.

Face with fine, dense punctures; temple with fine, sparse punctures; mesoscutum with single, coarse punctures; propodeum finely rugulose; basal part of first segment granulate; dorsal part of postpetiole at least on sides, at least basal half of tergite 2 longitudinally striate; postpetiole and tergite 2 non-granulate; tergite 3 with scattered punctures.

Head with the temples strongly and almost straight narrowed behind the eyes; transverse eye diameter 2.7–3.3 of the smallest temple; face faintly narrowed ventrad, its index = 0.5; clypeus distinctly separated from the face, weakly convex, its apical margin narrowly flattened, with two rather distinct teeth in the middle; clypeal fovea small (fig. 44); oral and genal carinae complete, oral carina slightly raised behind the base of mandible; cheek 0.33–0.45 as long as basal width of mandible; HO : OOL = 1 : 1.8–2.0.

Antennae with 29 segments; scape transverse, strongly shortened (fig. 45); postannellus index = 4.5–4.9.

Thorax. Collar with distinct longitudinal carina; apical part of mesoscutum with rather sharp margin and rather steeply descending prescutellar transverse groove; notaulus distinct, reaching almost the full length of mesoscutum; postpectal carina conspicuously interrupted in front of each middle coxa, each interruption 0.7 as long as median section of postpectal carina; propodeum with all the areas distinct, areola hexagonal, about 1.3 as long as wide, areola and petiolar area lie in the same plane, apical transverse carina of propodeum strongly raised.

Wings. Basal vein parallels discocubitus, discocubitus distinctly intercepted before the middle, its basal section 0.7–0.8 as long as the apical; areolet open or with very faint second intercubitus; nervellus intercepted below the middle.

Legs. Hind femur index = 6.6–7.0, base of hind tibia slightly less narrowed than in *B. prominens*.

Abdomen. First segment with dorsal carinae only at the base, its index = 3.5–3.7, lateral carinae more or less distinct, spiracles of the first segment before the middle, postpetiole index = 1.7–2.0, first plica reaching 0.6–0.9 postpetiole; second tergite index = 1.0–1.1; terebra straight, 0.6–0.7 as long as hind tibia, with faint nodus.

Coloration black. Antennae below, mandible (except teeth), collar, front part and hind corner of pronotum, tegulae, scutellum and postscutellum at least apically, legs, and tergites apically, red-yellow; front and middle coxae and trochanters paler; hind trochanter laterally, hind tibia basally, laterally and apically, and hind tarsus, brown; outer side of hind femur without brown longitudinal stripe; tergite 2 and 3 with a red-yellow, apical triangular patch which extending from apex to the middle of tergites, tergite 4 paler in the median part.

Length: 5–6 mm.

Male unknown.

Biology. Adults occur in May, July–August. Host unknown. One ♀ caught in the herb layer of an about 60 years old deciduous forest — *Tilio-Carpinetum*.

Material examined: 5 ♀♀.

Holotype (♀): Poland, Gościeradów near Kraśnik, 25. V. 1971, *Tilio-Carpinetum*, leg. J. SAWONIEWICZ, coll. IZPAN, Warszawa.

Paratypes (4 ♀♀): — FRG: "23. 8. 1967, Ebrach", coll. BAUER, Großschwarzenlohe; — ?FRG: "ex coll. FÖRSTER", 2 ♀♀ probably from Aachen, coll. MN, Berlin; — Bulgaria: "Vitoscha Geb./Bulg., 22. 7. 1967, J. OEHLKE", coll. IPSF, Eberswalde.

16. *Bathythrix pellucidator* (GRAVENHORST, 1829)

Cryptus pellucidator (GRAVENHORST, 1829a: 581. — Lectotype (♂) by designation of KERRICH (SAWONIEWICZ 1978: 127, FRILLI 1978: 157): — Paralectotype (♂) by designation of SAWONIEWICZ (1978: 127). The two types without labels. Coll. GRAVENHORST, Wrocław, UW.

Hemiteles ruficaudatus BRIDGMAN, 1883: 149 (syn. SAWONIEWICZ 1978: 127). — Lectotype (♀) by designation of HORSTMANN (1972: 220): only yellow label, coll. BRIDGMAN, Norwich (CM).

Bathythrix pellucidator: AUBERT 1968b: 182.

Bathythrix ruficaudatus BRIDGMAN f. *nigripes* AUBERT 1969: 60.

Synonyms were discussed by SAWONIEWICZ (1978: 128).

Face and frons with rather dense and very fine punctures; temple, mesopleurum, and mesonotum with scattered punctures; propodeum finely rugulose, areola and petiolar area usually smoother than other areas; dorsolateral parts of postpetiole and second abdominal segment, occasionally only at the base, more or less longitudinally striate and granulate, particularly in ♂.

♀. Head — fig. 46. Face weakly narrowed ventrad; cheek about 0.4 as long as basal width of mandible; clypeus distinctly separated from the face, a little convex, apical margin with weak tubercle in the middle; clypeal fovea rather deep but small; head with the temples roundly narrowed behind the eyes; smallest temple 0.6 (in *B. ruficaudatus* f. *nigripes* AUB. — 0.7) as long as width of the eye; genal and oral carinae strong; cheek often with a more or less distinct depression and additional short carina at the junction of carinae.

Antennae with 19–24 segments, postannellus index = 3.6–4.4, apical segments as long as breadth.

Thorax. Mesoscutum transverse, its index = 0.8; notaulus rather shallow, in the apical part indistinct and reaching at most 0.8 mesoscutum; apical part of mesoscutum without sharp margin and gently descending prescutellar groove; postpectal carina distinctly interrupted in front of each middle coxa, interruption a little longer than median part of postpectal carina; propodeum characteristic, with strong carinae, areola and petiolar area at least partly situated in the same plane, in typical forms areola transversely oval (figs 48, 49).

Legs strong, hind femur index = 5.1–6.3, hind tibia wide, gradually narrowed basad.

Wings — fig. 50. Discocubital cell rather short, basal vein short and not parallels discocubitus at any section; ramellus usually very short, joining discocubitus at the middle; stigma wide; nervellus weakly antefurcal, distinctly intercepted below the middle.

Abdomen widely oval; first segment relatively wide, its index = about 2.2,

spiracles behind the middle, lateral carinae distinct, dorsal carinae weak, postpetiole index = 0.9–1.1, oft with longitudinal furrow on the median part, first plica extends almost to spiracles (figs 51, 52); segments 2 and 3 large, transverse; thyridium on tergite 2 transverse, often reniform; ovipositor 0.5–0.6 as long as hind tibia, with distinct nodus.

Coloration black. Veins brown, whitish at the base; abdomen red or red-yellow at least from the middle of the second tergite often to the end; legs red, hind tibia apically and tarsus brown; antennae at least in part, particularly basally, brightened, brown-red; hind corner of pronotum brown; tegulae yellow-red.

♂ distinctly differ from ♀: face strongly convergent ventrad, eye very close to base of mandible, cheek 0.2–0.25 as long as basal width of mandible (fig. 47); antennae with 21–25 segments; hind femur index = 5.8–6.9; abdomen narrow, postpetiole index = 1.9–2.3, first plica reaches only about 0.6 postpetiole, abdominal tergites 2 and 3 a little longer than wide; abdominal segment 1 and tergite 2 black-brown, apex of postpetiole and apical half of second tergite with transverse band, wider in the middle than at the side, the other tergites often entirely red-yellow; legs yellow-red, particularly hind leg more or less brown.

Length: 3–6 mm.

Variability. Areola transverse to elongate; abdomen and legs almost entirely black.

Biology. Adults occur in May–October. Parasite of aphidophagous *Syrphidae* (*Diptera*). Reared from *Platychirus scutatus* (MEIG.) (HORSTMANN, 1964:112 HCZI), *Syrphus balteatus* (DEG.) (*Bathythrix* sp.: WNUK 1974, IZPAN), *Sphaerophoria scripta* (L.) (culture R. BAŃKOWSKA, IZPAN).

Material examined: 291 ♀♀ and 432 ♂♂. Norway: Lilleström (MN); Sweden: near Uppsala (UU), Stockholm, Skåne, Ringsjön (TC); USSR: Moscow (TC); Poland: Vratislaviam (= Wrocław) (?) (lectotype GRAVENHORST 1829), Brwinów, Podkowa L. near Warszawa, Pieniny (Krościenko) (GC), Warszawa (TC), Dolny Śląsk (?) (UW), Wolin, Gdańsk-Stogi, Smolniki near Hawa, Białystok, Puszcza Biała (Leszczycydół) near Wyszaków, Kampinoski PN (Kromnów, Łąki Strzeleckie, Niepustowy Bór), Łomna, Hamernia, near Warszawa, Warszawa (Stawki, Ursynów, Wierzbno, Białoleka, Jelonki, Marysinek, Radość, Służewiec, MDM, Ogród Saski, Łazienki, CMZR), Rogów near Koluszki, Kalisz, Gościeradów near Iława, Kraków, Czechów near Jędrzejów, Tatry (Bukowina Tatrzńska), Babia Góra, Beskid Sądecki (near Krynica), Bieszczady (Chryszczata, near Lesko, Solina), Pieniny (SAWONIEWICZ 1976) (IZPAN); Czechoslovakia: near Praha (TC, IPSF), Brno (IPSF), Stribrna Lhota, Bohemia, Storkoc (TC); Hungary: Baros-Jenö (TMA); Austria: Salzkammergut, Deutschen Altenburg near Vienna (MN), Vienna (TC), Tirol – Scheffau (TC), Sterzing (MN, IPSF); GDR: Frankenhausen, Kyffhäuser, Mecklenburg, Harzburg, Ostsee (Daraß), Eberswalde, Oranienburg, Spitzkunnersdorf (IPSF), near Berlin, Leipzig (IPSF, MN), Warnemünde, Schwerin, Rothental, Greiz, Meißen, Thanandt (MN), Thüringen (MN, UW); FRG: Köln, near Düsseldorf, Gerolstein, Wiesbaden, Crefeld, Aachen, Rheinprovinz (MN), Obersdorf, Hochfelln, Franstein, Hinterstein (BC), Hannover, Göttingen (HC, HCZI), Mallnitz, Elbufer, Einbeck, Iburg (HCZI), Schliersee, Eschwege (TC), Kiel (HCZJ, TC), München, Bramwald, Glonn, Geierlambach (IAZ), Iburg, Vöschleberg (HC), Worms (PD);

Netherlands: Ede, Planten Wambius, Kookoij Loobos (PD); England: Kingsteignton, Leicester (TC), Shere in Surrey, Suffolk (BM), near Shere (lectotype BRIDGMAN 1883, CM); Ireland, Kerry (TC); France: Paris (TC), Pas de l'Alguille (Isère) (PD), Casalabriva (Corse) (LEEO); Bulgaria: Vitoscha Geb., Rhodopen (Velingrad) (IPSF); Iran: Elbrus (IZPAN); Italy: Trento, Marling, Garda, St. Peter, Ahrn Valley, Partschins near Merano (IAZ).

17. *Bathythrix collaris* (THOMSON, 1896)

Leptocryptus collaris THOMSON, 1896: 2388. — **Lectotype** (♀) here designated: "Röst." (= Röstanga), coll. THOMSON, Lund (ZIL).

Bathythrix collaris: SAWONIEWICZ 1976: 205.

♀♂. Face and clypeus basally with very dense fine punctures, propodeum very weakly rugose, almost completely smooth and polished.

Head. Front aspect wide; temples strongly roundly narrowed behind the eyes, transverse eye diameter 2.1–2.2 (♀) and 3.3–3.9 (♂) as long as smallest temple; in ♀ face weakly narrowed ventrad, its index = about 0.5 (fig. 53), in ♂ very strongly narrowed, its index = 0.65 (fig. 54); clypeus rather well separated from the face (in ♂ not so well), faintly convex, apical margin narrowly, weakly flattened, with two more or less distinct median teeth; clypeal fovea small; oral and genal carinae complete, oral carina weakly raised behind the base of mandible; cheek about 0.4 (♀) and about 0.13 (♂) as long as basal width of mandible; in ♂ temple distinctly narrowed ventrad; HO : OOL = 1 : 1.7–2.0.

Antennae with 25–26 segments; postannellus index = 3.8–4.7; in ♂ without tyloids.

Thorax. Apical part of mesoscutum without distinct margin and gently descending prescutellar transverse groove; notaulus reaching 0.75 mesoscutum; postpectal carina distinctly interrupted in front of each middle coxa, interruption longer than the median part of postpectal carina, propodeum with all areas distinct, areola hexagonal, as long as wide or longer, areola and postpetiolar area situated in the same plane.

Wings. Basal vein parallels discocubitus, discocubitus intercepted near the middle; areola large, closed; nervellus intercepted below the middle.

Legs. Hind femur index = 6.1–7.0.

Abdomen. First segment rather slender, with distinct lateral carinae, dorsal carinae weak, more distinct only in the median part of the segment, spiracles before the middle of the segment, first segment index = 3.1–4.2, postpetiole index = 1.6–2.3; first plica reaches to 0.5–0.6 postpetiole; ovipositor straight, about 0.9 as long as hind tibia, with rather distinct nodus.

Coloration black. Mandible (except teeth) white-yellow; antennae below (at least basally), tegulae, legs, and abdomen red-yellow; front and middle coxae, and trochanters white-yellow; side face of hind trochanter, hind tibia dorsally and laterally, and hind tarsus more or less brown; the base of post-

petiole, sometimes front corners of tergite 2, and hind tergites brownblack; hind tergites sometimes with very narrow white apical band; collar and side part of pronotum (at least hind corner pronotum) red-brown; in ♂ also hind coxa and trochanter, and base of antennae below white-yellow, abdomen often brown-black, only postpetiole and tergite 2 with apical pale band.

Length: 4.0–7.0 mm.

Biology. Adults occur in May–July. Mountain species. Hosts unknown.

Material examined: 16 ♀♀ and 5 ♂♂. Sweden: Röstanga (lectotype, ZIL), Ring sjö (BM); Finland: Lemland (MZH); Poland: Dolny Śląsk (MN, UW), Pieniny (SAWONIEWICZ 1976) (IZPAN); Czechoslovakia: Český Rudol (IPSF); GDR: Thüringen (MN), near Oranienburg (IPSF); FRG: Obersdorf, Iphafen (IPSF), Fichtelgebirge (BC).

18. *Bathythrix montanus* (SCHMIEDEKNECHT, 1905), **comb. nov.**

Leptocryptus montanus SCHMIEDEKNECHT, 1905: 732. — **Lectotype** (♀) here designated: "Thüringen, O. SCHMIEDEKNECHT S.", "25968", "Cotype", "*Leptocryptus montanus* ♀ SCHMIED.", without ovipositor, coll. MN, Berlin.

♀♂. This species is very closely related to *B. collaris*, being only a little larger and a little stronger constitution.

Head — figs 55, 56. Front aspect more rounded, face in ♀ and ♂ relatively little narrowed ventrad, face index = 0.4–0.5, clypeus index = 0.6; cheek 0.4–0.55 (♀) and 0.2–0.25 (♂) as long as basal width of mandible; transverse eye diameter 1.9–2.1 (♀) and 2.3–2.5 (♂) as long as smallest temple; temple and front part of mesopleurum with scattered punctures; antennae in ♀ with up to 29 segments, in ♂ with up to 31 segments; areola and petiolar area lie in two different planes.

Length: 5–8 mm.

Besides, like *B. collaris*.

Biology. Adults occur in May–August. Mountain species. Reared from *Pristiphora abietina* (HART.) (*Hymenoptera: Tenthredinidae*) (culture E. HASELBARTH, IAZ).

Material examined: 14 ♀♀ and 7 ♂♂. Sweden: Kvikkjokk (UU), Messaure, Skåne (TC); Poland: Rytko near Nowy Sącz (IZPAN); Austria: Carinthia (Ostkarawanke) (PD), Ahrntal (IAZ), Semmeringgebiet, Mayrhofen (BM); GDR: Thüringen (lectotype, SCHMIEDEKNECHT 1905, MN); FRG: Waldmünchen, Berchtesgaden (TC), Omach, Krünn, Hochfelln (BC), Haidenburg (IAZ), Hindelang, Berchtesgaden (HC); Italy: Franzensfeste (TC); St. Peter, Ahrn Valley (IAZ).

19. *Bathythrix claviger* (TASCHENBERG, 1865)

Cryptus claviger TASCHENBERG, 1865: 76, ♂, type lost.

Mesostenus sericeus PROVANCHER, 1875, syn. TOWNES 1944: 170.

Cryptus sericeifrons PROVANCHER, 1879, syn. TOWNES 1944: 170.

Cryptus ater BRISCHKE, 1881: 337, ♀♂, type lost, syn. DALLA TORRE 1902: 714.

Bathythrix tibialis CUSHMAN, 1917, syn. TOWNES 1944: 171.

?*Panargyrops texanus* CUSHMAN, 1920, syn. TOWNES 1944: 171.

Panargyrops pacificus CUSHMAN, 1920, syn. TOWNES 1944: 171.

Thysiotorus tegularis VIERECK, 1925, syn. TOWNES 1944: 171.

Thysiotorus conjunctus VIERECK, 1925, syn. TOWNES 1944: 171.

Bathythrix claviger: TOWNES 1944: 170.

Bathythrix claviger: OEHLKE 1966: 845, description.

Face with very dense, fine punctures and granulate; frons, temple, and thorax rather densely and coarsely punctulate (in larger specimens) to fine and scattered punctulation (in smaller specimens); propodeum smooth or only very faintly rugulose.

♀. Head — figs 57, 58. Face not narrowed ventrad, its index = 2.1–2.5; cheek 0.4–0.6 as long as basal width of mandible; clypeus flat, weakly separated from the face, apical margin with two distinct teeth; clypeal fovea small, distinct; temples weakly roundly narrowed behind the eyes, in smaller specimens narrower; transverse diameter of eye 1.2–1.5 as long as smallest temple; genal and oral carinae strong but not raised behind the base of mandible.

Antennae with 24–30 segments; postannellus index = 3.1–4.0.

Abdomen. Mesoscutum only slightly longer than wide; notaulus reaching to 0.7 mesoscutum; apical part of mesoscutum without sharp margin, gently descending prescutellar transverse groove; postpectal carina distinctly interrupted, its median part as long as the interruption in front of each middle coxa; propodeum with strong carinae, areola hexagonal, as long as wide or a little longer.

Legs. Hind femur index = 6.0–7.0, occasionally about 5.7.

Wings. Basal vein in larger specimens distinctly weakly intercepted two times, in smaller specimens only once, parallels discocubitus, discocubitus indistinctly intercepted before the middle; areoled closed; nervellus intercepted below the middle.

Abdomen elongated, its apical part weakly laterally flattened; first segment index = 3.3–3.8, postpetiole index = 1.7–2.0, first plica reaching to 0.6–0.8 postpetiole, dorsal carinae of segment 1 absent or very weak, not reaching the apical margin of postpetiole, dorsolateral carinae more or less distinct, median part of postpetiole often with longitudinal groove; ovipositor downcurved, 1.9–2.7 as long as hind tibia.

Coloration black. Mandible (except teeth), hind corner of pronotum, and tegulae red-white; scape below brown; legs red, coxae 1 and 2 yellow-red, dorsal part of hind tibia and tarsus more or less brown; abdomen black, occasionally tergites at apex only very narrowly whitish.

♂ slender than ♀, postpetiole index = 2.2–2.7, first abdominal segment index = 4.2–5.5, second tergite index = 2.4–2.7, hind femur index = 6.8–7.6; scape below, mandible (except to teeth), front and middle coxae and trochanters yellow-white; flagellum without tyloids.

Length: 5–12 mm.

Variability. In smaller specimens dorsolateral carina between spiracle and the apex of postpetiole sometimes absent; in larger specimens, particularly ♂, with second tergite fine granulate.

Biology. Adults occur in April–October. Reared from *Diprion* spp. (BRISCHKE 1881, OEHLKE 1965), *Strongylogaster* sp. (*Hymenoptera*, *Symphyla*) (culture T. HUFLEJT, IZPAN).

Material examined: 140 ♀♀ and 82 ♂♂. Sweden: Kvikkjokk (UU), Upland (TMA, MN, TC), Åby, Messaure, Skåne, Stockholm (TC); Finland: Kevo, Puolanka (JC); USSR: Moscow (TC); Poland: Podkowa L. (GC), Dolny Śląsk (UW), Smolniki near Hawa, Puszcza Białowieska near Hajnówka, Puszcza Biała (Dalekie) near Wyszaków, Hamernia near Warszawa, Rogów near Koluszki, Beskidy Zachodnie (Zawoja), Pieniny (SAWONIEWICZ 1976), Gościeradów near Kraśnik (IZPAN); Czechoslovakia: Radovice (IPSF); GDR: Dessau, Fürstenberg, near Freibad (IPSF), Schwerin, Rostock, Erzgebirge, Leipzig, Gotha (MN), Mecklenburg (IPSF, MN), Thüringen (MN, UW); FRG: Würzburg, Handorfer, Kiel (HCZI), Einbeck, Bodman(?), Berchtesgaden, Haag Amper, Waldmünchen (TC), Obersdorf, Nürnberg (BC), near Gauting, Bayern (IAZ), Einbeck, Hannover, Berchtesgaden, Trittau, Örel, Cotte, Göttingen (HC); Austria: Tirol (Scheffau) (TC); Netherlands: Ede, Lutten, Nunspeet (PD); Norway: Hatfjelddal (IPSF); England: Leicester (TC); Ireland: Dublin (TC); Scotland: Kinlochewe (TC); Italy: Naturns (TC), Villnöss (Funes) near Bolzane (PD).

20. *Bathythrix tenuis* (GRAVENHORST, 1829)

Cryptus tenuis GRAVENHORST, 1829a: 544. — Lectotype (♂) by designation of AUBERT (1968b: 182). Paralectotype (♂) here designated. Both types without labels. Coll. GRAVENHORST, Wrocław, UW.

Leptocryptus rubens KRIECHBAUMER, 1892: 373, syn. PFANKUCH 1921: 226. — Holotype (♀): "Worms 5. 7. 91. HABERM.", "Bawar. 12. *rubens* ♀ KRCHB.", coll. KRIECHBAUMER, München, ZSBS.

?*Leptocryptus rubens* KRIECHB. f. *brunnicans* CONSTANTINEANU, 1929: 524, not examined.

?*Leptocryptus rubens* KRIECHB. f. *rufescens* CONSTANTINEANU, 1929: 525, not examined.

Bathythrix tenuis: AUBERT 1968b: 182.

MORLEY (1907: 106) erroneously synonymized *C. tenuis* GRAV. with *Hemiteles fragilis* GRAV. and *H. formosus* DESV., while HELLEN (1967: 108) erroneously synonymized it with *Cryptus pellucidator* GRAV.

♀♂. Face with very dense and fine punctures; clypeus basally, frons, meso-scutum, and mesopleurum with scattered punctures; temples with coarse, dense punctures, often separated by less than their diameter; propodeum; propodeum smooth or indistinctly rugulose, polished; abdomen smooth, polished.

Head with the temples very weakly roundly narrowed behind the eyes; transverse eye diameter only 1.6–1.8 as long as smallest temple; face weakly narrowed ventrad; clypeus very distinctly separated from the face: very strongly convex, with two strong teeth at the apex; clypeal fovea small (fig. 59); oral and genal carinae complete, strong, oral carina strongly raised behind the base

of mandible (fig. 60); cheek 0.3–0.35 as long as basal width of mandible; HO : OOL = 1 : 1.8–2.2.

Antennae with 28–30 (♀) and 32–33 (♂) segments; postannellus index = 3.2–3.7; in ♂ without tyloids.

Apex. Apical part of mesoscutum without sharp margin, gently descending prescutellar transverse groove; notaulus reaching 0.8 mesoscutum; postpectal carina distinctly interrupted in front of each middle coxa, interruption as long as median part of postpectal carina; propodeum as in *B. linearis*.

Wings. Basal vein parallels discocubitus; discocubitus intercepted just before the middle, occasionally at the middle; nervellus intercepted more or less below the middle.

Legs. Hind femur index = 5.4–6.0 (♀) and 6.4–6.5 (♂).

Abdomen. First segment with almost parallel sides, elongate, spiracles just before the middle, ventrolateral carinae complete, dorsolateral and dorsal carinae reduced, dorsal carine occasionally in ♂ present, first segment index = 3.7–4.4 (♀) and 4.5–5.8 (♂), postpetiole index = 2.0–2.4 (♀) and 2.4–3.2 (♂), first plica reaches 0.5–0.6 postpetiole; second tergite longer than wide, its index = 1.2–1.4 (♀) and 2.1–2.7 (♂); ovipositor downcurved, about 2 as long as hind tibia.

Coloration black. Mandible (except to teeth), tegulae, front and middle legs red-yellow; postpetiole at apex, tergites 2–5(7) dark red; front and middle coxae and trochanters, and in ♂ scape white-yellow; hind trochanter laterally, hind tibia almost entire (below a little paler), and hind tarsus black-brown; flagellum below brown.

Length: 6.5–8.0 mm.

Biology. Adults occur in June–August. Host unknown.

Material examined: 15 ♀♀ and 15 ♂♂. Poland: Białystok, Warszawa (Białoleka, Ra-
dość), Rogów near Koluszki (IZPAN), Wrocław (Scheidnich) (types, GRAVENHORST 1829, UW); Czechoslovakia: Moravia (Brno-Hády) (IPSF); Hungary: Pistyan(?) (IPSF), Budapest (TC); GDR: Mecklenburg (IPSF, MN), Schwerin, Rostock, near Berlin (MN); FRG: Steiermark near Göttingen (TC), Augsburg (BC), Worms (holotype, KRIECHBAUMER 1892, ZSBS); Italy: Cremona near Pizzighettone (TC).

21. *Bathythrix linearis* (GRAVENHORST, 1829).

Nematopodius linearis GRAVENHORST 1829a: 958, ♂, type lost.

Leptocryptus heteropus THOMSON, 1884: 1040, syn. ROMAN 1914: 25. ♀ designated by HINZ (present publication) as lectotype has a label with inscription "Yddinge" (coll. THOMSON, Lund, ZIL), it was not considered in the description by THOMSON.

Bathythrix linearis: TOWNES, MOMOI, TOWNES 1965: 127.

♀♂. Median part of the face and clypeus at the base with very dense and fine punctures; temple with coarse punctures; mesopleurum and mesoscutum

with scattered punctures; propodeum and abdomen almost completely smooth and polished.

Head — figs. 61, 62. Head with the temples rather long and weakly roundly narrowed behind the eyes; transverse eye diameter 1.9–2.1 as long as smallest temple; face weakly narrowed ventrad; clypeus weakly separated from the face, weakly convex, apical margin narrowly faintly flattened, with two distinct teeth; clypeal fovea small; oral and genal carinae complete, oral carina very strongly raised behind the base of mandible; cheek narrow, 0.25–0.27 (♀) and 0.17–0.21 (♂) as long as basal width of mandible; HO : OOL = 1 : 2.0–2.5.

Antennae with 28–34 segments; postannellus index = 4.0–4.4; in ♂ without tyloids.

Thorax. Apical part of mesoscutum without sharp margin, gently descending prescutellar transverse groove (fig. 63); notaulus reaching 0.85 mesoscutum; postpectal carina distinctly interrupted in front of each middle coxa, the interruption as long as median part of postpectal carina (fig. 64); propodeum with all areas distinct, carinae strong, areola hexagonal, often almost oval, usually longer than wide.

Wings — fig. 65. Basal vein parallels discocubitus, discocubitus intercepted before the middle, its basal section 0.8–0.9 as long as the apical; areolet closed; nervellus intercepted below the middle.

Legs rather slender, hind femur index = 6.4–7.5.

Abdomen elongate; first segment (figs. 66, 67) with almost parallel sides, elongate, spiracles before its middle, at its basal 0.4, spiracles laterally projecting, dorsal and dorsolateral carinae entirely reduced, ventrolateral carinae complete, first segment index = 4.7–6.2, postpetiole index = 2.6–3.6, first plica reaches to about 0.4 postpetiole; second tergite longer than wide, its index = about 1.8 (♀) and 2.5–3.1 (♂); ovipositor distinctly downcurved, 1.6–1.8 as long as hind tibia, nodus weak.

Coloration black. Mandible (except for teeth), tegulae and legs white-yellow; hind coxa at least basally, hind trochanters, hind femur, hind tibia and hind tarsus black (or black-brown) almost all over; collar and hind corner of pronotum brown; antennae below brown in ♀, white-yellow in ♂; abdomen black, apical part of tergites with very narrow white-red band.

Length: 6.0–10.5 mm.

Biology. Adults occur in May–September. Host unknown.

Material examined: 16 ♀♀ and 24 ♂♂. Sweden: Yddinge (ZIL); USSR: Latvia, Ukraine (Vostochnye Karpaty) (IZPAN); Poland: Goleniów near Szczecin, Borówki near Sepulno Kraińskie, Gruszki near Augustów, Wyrzysko near Pila, Kampinoski PN (Laski) near Warszawa, Gościeradów near Kraśnik, Rez. Obrożyńska near Muszyna, Bieszczady (Komańcza), Pieniny (SAWONIEWICZ 1976) (IZPAN), Dolny Śląsk (? (UW); GDR: Erz Gebirge, Scherwin, Blanckenburg in Thüringen (MN), Mecklenburg, Frankenhäuser (IPSF); FRG: Bayern (MN), Leuzenberg, Erlangen (BC), Iburg, Einbeck, Hildesheim, Freiburg, Göttingen (HC).

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Institut Zoologii PAN
ul. Wilcza 64
00-679 Warszawa, Poland

STRESZCZENIE

[Tytuł: Rewizja europejskich gatunków z rodzaju *Bathythrix* FOERSTER (*Hymenoptera*, *Ichneumonidae*)]

Praca zawiera systematyczną rewizję europejskich gatunków rodzaju *Bathythrix* FOERST. Spośród 21 wyróżnionych gatunków 3 opisano jako nowe: *B. pleuralis* sp. n. z Polski i Austrii, *B. margaretae* sp. n. z Polski, NRD i Danii oraz *B. illustris* sp. n. z Polski, RFN i Bułgarii. Ponadto wyznaczono neotyp *Mesoleptus spheginus* GRAV. oraz zsynonimizowano 6 nazw szczebla gatunkowego i podano nowe kombinacje dla 2 gatunków. W oparciu o nie uwzględniane do tej pory cechy morfologiczne przedstawiono klucz do oznaczania gatunków. Dla niektórych gatunków podano żywiciela.

РЕЗЮМЕ

[Заглавие: Ревизия европейских видов из рода *Bathythrix* FOERSTER (*Hymenoptera*, *Ichneumonidae*)]

Работа является систематической ревизией европейских видов из рода *Bathythrix* FOERST. Среди 21 выделенных видов три описали как новые: *B. pleuralis* sp. n. — из Польши и Австрии, *B. margaretae* sp. n. — из Польши, ГДР и Дании, *B. illustris* sp. n. — из Польши, ФРГ и Болгарии. Выбрали неотип *Mesoleptus spheginus* GRAV., синонимизировали 6 названий видового уровня и привели новые комбинации для 2 видов. На основании новых не использованных до настоящего времени морфологических признаков составили определитель видов. Для некоторых видов привели хозяев.

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