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New and little known species of Ichneumoninae Stenopneusticae of the genera *Ulesta* CAMERON, 1903, *Notoplatylabus* HEINRICH, 1934, and *Neischnus* HEINRICH, 1952 (Hymenoptera, Ichneumonidae)

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Abstract

In this paper *Ulesta nigroscutella* sp. nov. from East Europe, *Notoplatylabus podolicus conterraneus* subsp. nov. from Far East and the male of the European species *Neischnus oxygygus* HEINRICH, 1952, are described.

Zusammenfassung

In dieser Arbeit werden *Ulesta nigroscutella* sp. nov. aus Osteuropa, *Notoplatylabus podolicus conterraneus* subsp. nov. aus dem Fernen Osten und das Männchen der europäischen Art *Neischnus oxygygus* HEINRICH, 1952, beschrieben.

Ulesta nigroscutella sp. nov.

Holotype female (fig.1): Flagellum black with white annulus on segment 8-12. Head black; frontal orbits and little stripes on vertex yellow; base and apex of mandibles black, part before apex ferruginous. Thorax entirely black. Legs black; anterior tibiae dorsally and apices of anterior femora yellow ferruginous; base of all femora and tarsi ferruginous; hind tibiae ferruginous in part. Abdomen black, tergites 2 and 3 dark red.

Flagellum: Bristle-shaped, with 39-40 segments; segment 9 square from side; segment 1 1,4 times as long as wide (at apex).

Head: Temples considerable widened behind eyes (seen from above); temples (in the middle) 1,3 times wider than cross diameter of an eye. Head strongly narrowed downwards (seen from front). Face strongly punctured; lateral fields with big punctures, diameter of punctures less than intervals between them; in the intervals with delicate wrinkles; lateral fields shining; middle field of face strongly convex, densely wrinkly punctured, mat; lateral borders of clypeus thickened, front border thin, rounded, without cavity (fig.2); labrum practically not projected out of clypeus; clypeus shining with sparse big punctures. Malar space as long as width of base of mandible. Mandibles almost sickle-shaped, apical tooth long and sharp, subapical one short, moved far to the inner side of mandible (fig.4). The borders of antennal sockets considerably raised; interantennal tubercle strongly developed, in a shape of a short carina. Frons roughly wrinkled, mat.

Thorax: Transverse furrow of pronotum deep; epomia strong. Mesoscutum roughly wrinkly punctured, with developed microsculpture, mat; notauli practically absent. Mesopleura densely wrinkly punctured. Subalarum thin, sharp. Scutellum considerably raised above postscutellum (fig.3), laterally carinated; horizontal part short; vertical part of scutellum wrinkled. Postscutellum wrinkled. Areolation of propodeum distinct and complete; propodeum strongly convex at the place of areola; areola hexagonal, scarcely narrowed forward, costulae behind its middle; basal area with weakly developed protuberance.

Wings: Stigma relatively light; areolet pentagonal; nervulus interstitial. Nervellus of hind wing strongly reclival, broken in hind third; discoidella absent.

Legs: Slender. Hind coxae without a scopa, densely wrinkly punctured. Femora thin.

Abdomen: Slender. Second tergite 1,1 - 1,2 times, third 1,6 times wider than length. Median field of postpetiolus clearly defined; median field from longitudinally twistly wrinkled up to irregularly twistly wrinkled; bell mouth punctation not marked. Gastrocoeli deep, almost beveled. Thyridia distinct, breadth of thyridia three times wider than the interval between them; interval with 6-7 keels. Second tergite densely wrinkly punctured in most parts, third tergite so in middle, fourth with dense surface punctation, the fifth in front half with dense microsculpture, sixth one and seventh in middle practically smooth. Sheaths of ovipositor just project the apex of abdomen. The second sternit with longitudinal fold.

Length: Body 11,0 - 11,2 mm; forewing 7,9 - 8,0 mm.

Material examined: Holotype female, Byelorussia, Beresina National Reserve, Postrejie, Malaise trap, high bog, 28.4.-2.6.1989, A. Tereshkin leg. - Paratype: 1 female from the same place. The ichneumonid wasps were caught with a Malaise trap, which was set up on a small island highland covered with spruce forest, in the middle of a massive high bog. The holotype is deposited in the Zoologische Staatssammlung München. The paratype is deposited in the collection of the Zoological Institute of Sankt Petersburg.

Discussion: *Ulesta* CAMERON, 1903, is a genus small in number of species distributed in the Oriental and Palearctic regions. Up till present in the Palearctic two species were known, of which the transpalearctic species *Ulesta perspicua* (WESMAEL, 1857) is the only one known from Europe.

In 1989 we found one more species belonging to this genus. This species possesses features which make the knowledge about *Ulesta* wider, and a number of features allowed

to consider it as a separate species. The characteristics for *Ulesta* in addition to those of HEINRICH (1934) are given:

Characteristics according to HEINRICH (1934)

1. Gastrocoeli deep and square with narrow interspace. - 2. Postpetiolus broad, convex, without median field, more or less punctured. - 3. Abdomen of females slender, oxypygous. - 4. Head strong, temples broad. - 5. Clypeus flat, scarcely separated from face, with slightly thickened lateral borders. - 6. Mandibles strong, lower tooth slightly shorter than upper one and slightly displaced to inner side of mandible (fig.7). - 7. Flagellum of female slender, bristle-shaped, far from middle slightly widened. - 8. Areolation of propodeum complete.

Complementary characteristics

1. "-. - 2. Median field of postpetiolus clearly defined, longitudinally or twistly wrinkled, without punctuation. - 3. "-. - 4. "-. - 5. "-. - 6. Mandibles more narrow, lower tooth considerably shorter than upper one, moved far to inner side of mandible (fig.4). - 7. "-. - 8. "-.

The comparative characteristics allow to distinguish the new species from *Ulesta perspicua* (WESMAEL, 1857)

Ulesta perspicua, female

Frons relatively shining. - Borders of antennal sockets slightly rased. - Interantennal tubercle absent (fig.5). - Anterior border of clypeus concave, labrum narrow, protruding from clypeus (fig.5). - Notauli developed in front third. - Scutellum white, low, horizontal part long (fig.6). - Postpetiolus with big punctures. - Hind coxae with scopa.

Ulesta nigroscutella sp. nov.

Frons entirely mat. - Borders of antennal sockets considerably rased. - Interantennal tubercle developed (fig.2). - Anterior border of clypeus rounded, labrum hidden (fig.2). - Notauli absent. - Scutellum considerably rased, entirely black (fig.3). - Middle field of postpetiolus longitudinally or irregularly wrikled, without punctures. - Hind coxae without scopa.

Notoplatylabus podolicus conterraneus subsp. nov.

Holotype female: Differs from female of the European subspecies by absolute black thorax: total absence of enlightenments on scutellum and apex of propodeum, lack of a white mark on subalarum and more darkened stigma; legs more dark. Size smaller; body length 5,5 mm.

Male (fig.8): Entirely black with the exception of a white stripe on apical border of tergite 6 and white tergite 7; paramera black; legs entirely light brown, hind coxae dark brown; flagellum black without white annulus.

Flagellum: Bristle-shaped with 31-34 segments; segment 1 as long as wide; tyloides absent.

Head: Sharply narrowed behind eyes. Occiput deeply concave, abrupt just after the ocelli; occipital carina absent dorsally (fig.9). Ocelli very large, high raised; distance between lateral ocellus and eye about 0,7 diameter of an ocellus. Temples after eyes 2,4 times shorter than cross diameter of an eye; malar space 1,2 times longer than width of mandible at base; temples in profile sharply narrowed downwards. Occipital carina angularly curved opposite the lower border of eye and the prominence of pronotum, at the place of fracture interrupted; lower piece broadened up to carinal junction. Inner margins of eyes parallel. Face transversal; middle field considerably convex, wrinkled; lateral fields punctured, shining, with indistinct microsculpture. Clypeus separated from the face by a deep furrow, strongly convex at base, its apical margin thin, with slight cavity; clypeus with space punctures most dense at the base, without microsculpture, shining. Clypeal foveae deep. Cheek (from above) pressed, with strong microsculpture, mat. Borders of antennal sockets raised relatively slight. Frons smooth, shining, antennal sockets slightly pressed.

Thorax: Pronotum with a sharp prominence below; epicnemiae strong; transverse furrow of pronotum interrupted by numerous keels; pronotum without microsculpture, smooth, shining, its upper margins with deep cavities laterally of epomiae. Middle field of mesoscutum high elevated, roughly wrinkled, mat at the middle, laterally slightly shining. Notauli very deep and long, extended almost to furrow before scutellum, with strong cross keels, laterally at full length bordered by sinuous keels (fig.11). Lateral fields of mesonotum densely wrinkly punctured, slightly shining. Mesonotum bordered by a deep furrow with cross keels. Furrow before scutellum deep, with a polished surface. Scutellum considerably raised above postscutellum, bordered by vertical keels, dorsal surface cellular. Prepectus of front coxae strongly concave; furrow bordered prepectus in front crossed by strong keels. Prepectal carina high, sharp, furrow behind it with strong keels. Sternauli deep, long, with transversal keels. Mesopleura twistily wrinkled with the exception of the absolutely smooth and shining area of speculum. Mesopleural hole very deep. Longitudinal furrow of the mesosternum very deep with transversal keels, strongly broadening backwards. Propodeum roughly retinaculated with numerous strong twist ribs; costulae, keels limiting basal area and areola very high; basal area with a right-angled protuberance. All areas of propodeum with strong twist ribs forming deep cells. Spiracles of propodeum little, almost round, scarcely elongated. Carinae of area dentipara at apex and apical transverse carina of a second pleural area form a short tooth-like projection. Horizontal part of the propodeum 1,8 times shorter than area posteromedial.

Legs: Hind coxae ventrally superficially wrinkly punctured; hind legs stumpy; femora strongly broadened, at distal third sharply excavate, on outside at the place of maximum broadening with the elongated press which is one third of femur length; femur at place of press superficially wrinkly punctured.

Wings: Stigma broad, dark; ramulus absent; areolet 4-angled, pointed in front. Nervellus of hind wing broken in hind third, discodella pigmented.

Abdomen: Petiolus slightly flattened in the middle, laterally carinated with strong transverse keels among carinae; median field of postpetiolus clearly defined, at apex with large deep punctures, interspace between them wider than diameter of a puncture; lateral fields of postpetiolus approximately two times narrower than middle field. Gastrocoeli long; thyridia broad and long, breadth of thyridia and interval between them the same; base

of tergite 2 punctured up to apex, punctuations more superficially to the apex; tergite 2 transverse, 1,4 times wider than length; tergite 3 densely punctured at most parts by small punctures, with a slight microsculpture, tergite 4 with slight evident punctures, tergites 4-7 smooth, shining, without microsculpture.

Length: Body 5,7 - 5,8 mm; forewing 4,3 - 4,5 mm.

Material examined: Holotype female, Far East, Ussurijsk, Kajmanovka, 5.8.1992, A. TERSHKIN leg. - Paratypes: 7 females, Ussurijsk, Kajmanovka, 1.-10.8.1992; 2 females, Ussurijsk outskirts, 11.-13.8.1992; 3 males, Ussurijsk, Kajmanova, 2.-10.8.1992; 1 male, Far East, Khabarovsk, Novotroizkoje, 12.8.1983; all A. TERESHKIN leg. - The holotype is deposited in the collection of the Zoological Institute of Sankt Petersburg. The paratypes (2 females and 2 males) are deposited in the Zoologische Staatssammlung München.

Discussion: Two species, *Notoplatylabus podolicus* HEINRICH, 1934, described from the Ukraine and Germany and *Notoplatylabus birmanicus* HEINRICH, 1974, from North-East Burma belong to the *Notoplatylabus* genus. The males of both species are unknown. Females of the known species of *Notoplatylabus* possess such signs pointing out the similarity with Cryptinae as the developed sternauli and notauli.

Intensive insect collecting during many years on the territory of Byelorussia gave the opportunity to find *N. podolicus* females. The females fly from the end of May up to the end of August. During ten years we have been trying to find males of the present species. But the search has not brought successful results.

In 1983 in the outskirts of Khabarovsk (Far East) we found a male of *Notoplatylabus*. It was impossible to distinguish the species, as the sexual dimorphism degree of the given genus species is not known. At last in 1992 in Primorye we managed to catch males and females. Investigations showed, that females of the found species are almost in full similar with the European *Notoplatylabus podolicus* HEINRICH. Females of the Far East population are distinguished by darker body protective coloration and smaller size. The discovered males in comparison with the females have more strongly developed notauli and sternauli and display a considerable degree of sexual dimorphism.

The comparative characteristic of females and males to prove the mentioned facts

Notoplatylabus podolicus HEINRICH

1. Eyes very large, their cross diameter 1,6 times less than the width of the face, their longitudinal diameter 2,7 times more than the height of the face. - 2. Head sculpture delicate. - 3. Ocelli only raised over the level of the eyes (fig.12). - 4. Pronotum with a small number of slightly developed keels. - 5. Mesonotum sculpture relatively delicate. - 6. Upper surface of scutellum ascending to a conical shape, smooth. - 7. Area of speculum mat with microsculpture. - 8. Spiracles short-oval. - 9. Propodeum areas with slight cells; carina dentipara externa and pleural carina clearly defined. - 10. Apophyses flat, long. - 11. Dorsal petiolus carinae not defined, middle field of postpetiolus practically not defined.

Notoplatylabus podolicus conterraneus subsp. nov., male

1. Eyes proportionally smaller, their cross diameter 2,7 times less than the face width, their longitudinal diameter 2,4 times more than the height of the face. - 2. Head sculpture rough. - 3. Ocelli high raised above the level of the eyes (fig.10). - 4. Pronotum with a great number of strong keels. - 5. Mesonotum sculpture rough, notauli more deep (fig.11). - 6. Upper surface of scutellum slope down, dorsal surface cellular with strong keels (fig.11). - 7. Area of speculum polished. - 8. Spiracles practically circular. - 9. Propodeum areas with deep cells; carina dentipara externa and pleural carina slightly defined (fig.11). - 10. Apophyses shorter, slightly defined. - 11. Dorsal petiolus carinae sharp.

Neischnus oxygygus HEINRICH, 1952

Male (fig.13): Body black; yellowish white: front surface of scapus, face entirely, frontal orbits, outer orbits narrowly above to broadly below, cheek and mandibles with the exception of darkened teeth, collar of pronotum, dorsal part of pronotum, tegulae, subalarum, sides of scutellum broadly. Anterior and middle coxae and trochanters entirely white; femora, tibiae and tarsi yellowish white. Hind coxae black with a white mark at the apices; femora and tibiae yellowish red excluding darkened apices and trochanters of hind legs from above; hind tarsi darkened in part.

Flagellum: Filiform, with 30 segments, with slight transversal ridges from segment 6-7; segment 1 1,4 times as long as wide (at the apex), approximately segment 17 square from the side; tyloides absent.

Head: Thick; temples (in profile) 1,3 times wider than the cross diameter of an eye; malar space 2,5 times shorter than mandible width at base; occipital carina developed along whole length and joins with carina oralis practically at base of mandible, abscissula practically absent. Mandibles relatively broad with two almost eubequal teeth, being approximately in the same plane. Clypeal foveae very deep; furrow, separated clypeus from the face absent; clypeus transverse, 2,5 times as wide as long, anterior border rounded and thick. Middle field of face relatively slight elevated above lateral fields; surface of face shining, practically without microsculpture, with sparse superficial punctures. Frons strongly convex, punctured, shining between punctures.

Thorax: Transversal furrow of a pronotum shallow, without transversal keel; epomiaie slight, developed only at the base. Mesonotum densely punctured, middle field with dense microsculpture, slightly shining; microsculpture of the lateral areas slightly developed; notauli slightly developed only in front third.

Mesopleurae shining, without microsculpture; sternauli only noticeable in front third. Scutellum flat, laterally carinated only at base. Propodeum sloping down backward; horizontal part 1,4 times shorter than area posteromedia; propodeum with a complete set of keels with exception of slightly developed keels, limiting basal area; basal area without protuberance; area superomedia semioval, costulae before middle; spiracles shortly oval 1,2 times as long as wide; propodeum shining dense punctured, punctures on propleurae more sparse; propodeum with light hairs.

Wings: Stigma relatively light; arcolet 5-angled; third radiomedial vein effaced. Nervellus of hind wing broken in hind fourth.

Legs: Slender; hind coxae ventrally shining, without microsculpture, densely punctured (diameter of punctures less than interspace between them).

Abdomen: Narrow, elongate; tergites 2-3 longer than their width, tergite 4 square, the others transverse. Tergite 1 (in profile) sharply broadened towards apex; median dorsal petiolus carinae and dorsolateral carinae slightly marked; middle field of postpetiolus not carinated, smooth, shining; lateral fields with sparse punctures. Gastrocoeli deep and long. Thyridia slanted, their breadth and intervals between them the same; interval between thyridia and tergite 2 up to the middle densely wrinkly punctured, other part of tergite densely punctured. Tergite 3 at the base with transverse impressions similar with thyridia in structure with a narrow interval between them. Tergite 3 up to its middle wrinkly punctured, other tergites superficially punctured with a slight microsculpture. Pygostyle with long hairs, slightly protrude behind apex of abdomen. Paramera and aedeagus see fig.13; lateral parts of tergites from apex of tergite 3 on bended inside; sternites 2-4 unsclerotized in most parts, sternites 5-6 with longitudinal fold; hypopygium with rounded projection.

Length: Body 7,4 mm; forewing 5,5 mm.

Material examined: Male, Byelorussia, Khojniki, Alnetum urticosum, Malaise trap, 19.6.-24.7.1990, A. TERESHKIN leg.

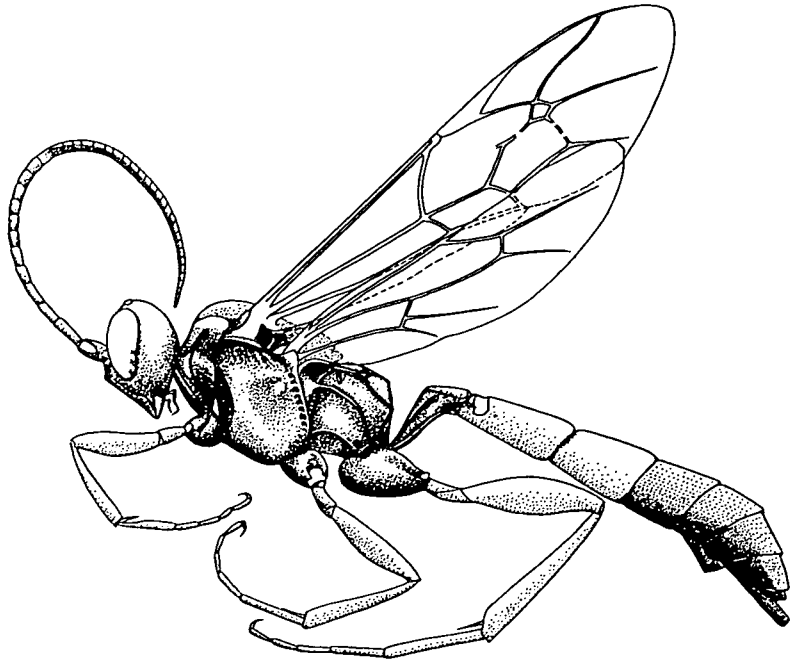
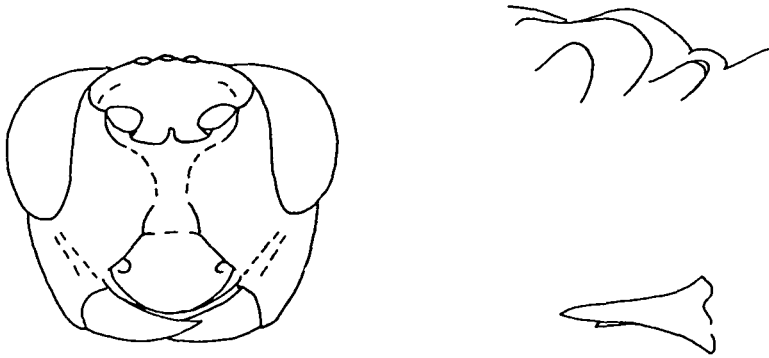
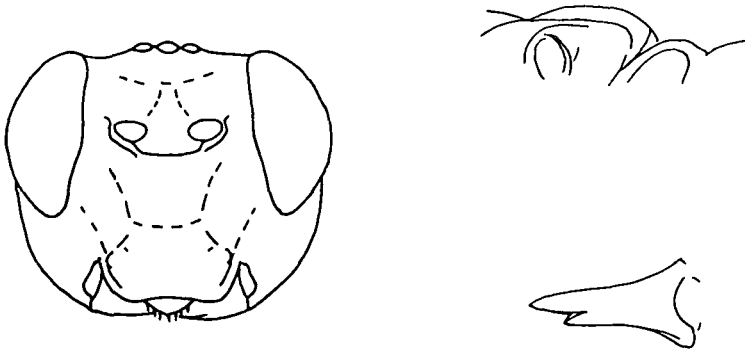


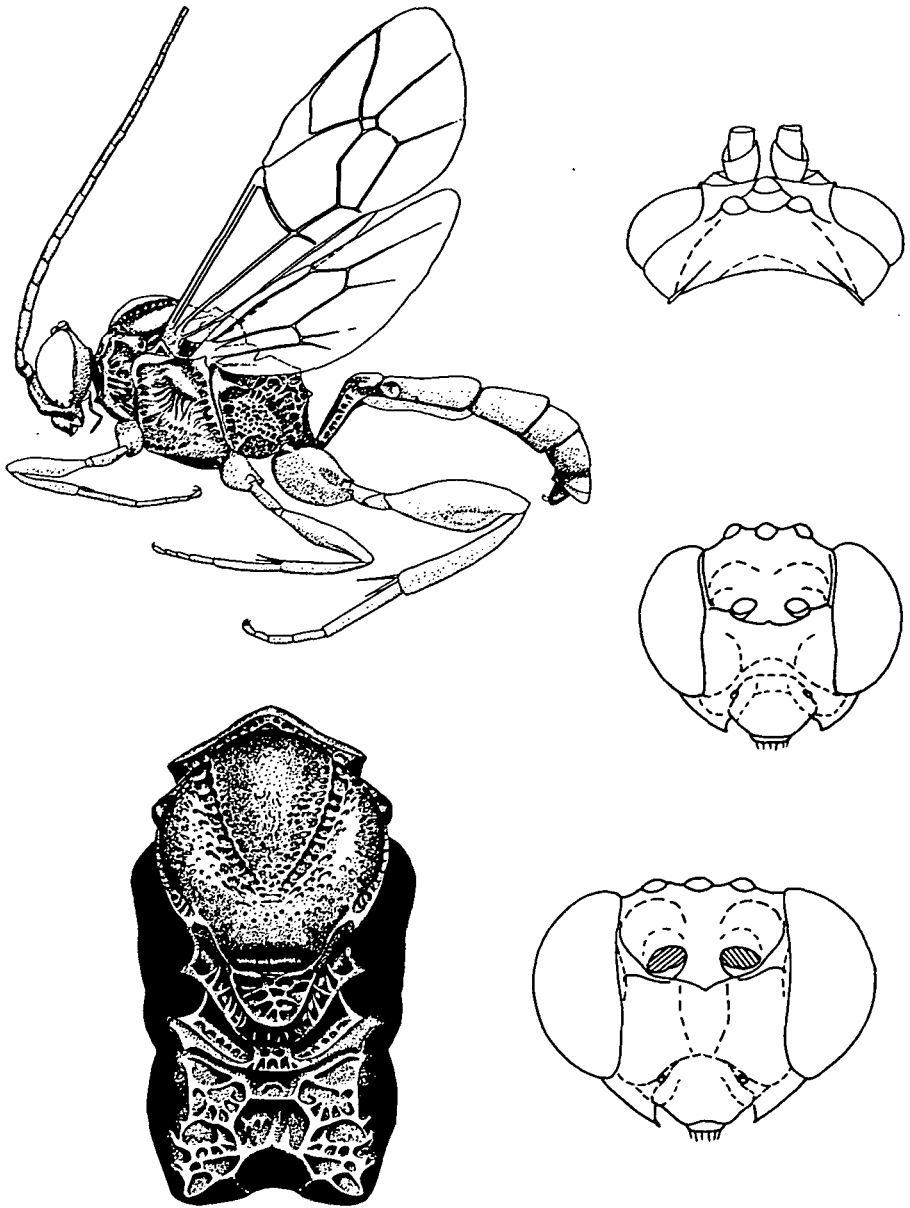
Fig. 1: Ulesta nigroscutella sp. nov., female.



Figs. 2- 4: *Ulesta nigroscutella* sp. nov. female. - 2) head in front view; 3) scutellum in profile; 4) mandible.



Figs. 5-7: *Ulesta perspicua* (WESMAEL, 1857) female. - 5) head in front view; 6) scutellum in profile; 7) mandible.



Figs. 8-11: *Notoplatylabus podolicus conterraneus* subsp. nov. male. - 8) whole; 9) head in dorsal view; 10) head in front view; 11) thorax in dorsal view.

Fig. 12: *Notoplatylabus podolicus* HEINRICH, 1934, female, head in front view.

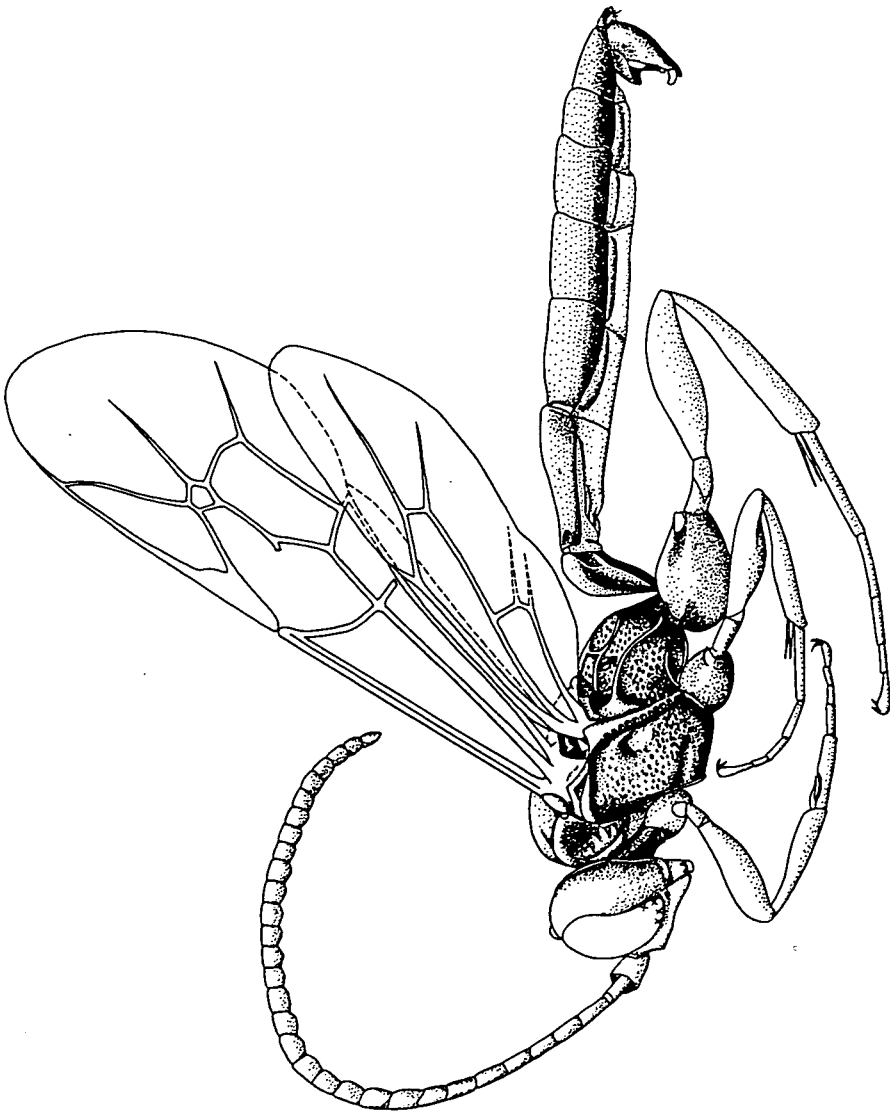


Fig. 13: *Neischnus oxypygus* HEINRICH, 1952, male.

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