The *amazonica* species group of the genus *Nitela* Latreille (Hymenoptera: Sphecidae: Crabroninae)

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Zuijlen, J.W.A. van. The *amazonica* species group of the genus *Nitela* Latreille (Hymenoptera: Sphecidae: Crabroninae).
Zool. Med. Leiden 68 (23), 15.xii.1994: 249-269, figs 1-59.— ISSN 0024-0672.
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Key words: Sphecidae; Crabroninae; *Nitela*; *Tenila amazonica* group; Neotropical; key; new species.
Eight new species of the genus *Nitela* Latreille, 1809 (*N. cooperi*, *N. erugifrons*, *N. fuscipes*, *N. intermedia*, *N. longinervis*, *N. menkei*, *N. nigripalpis*, and *N. polaszeki*), are described. Three species previously placed in the subgenus *Tenila* together with the eight species described in this paper are treated here as the *amazonica* species group. A key to the species of the species group is given. A lectotype is designated for *N. amazonica* Ducke, 1903.

Introduction

Brèthes (1913) described the genus *Tenila* for one Brazilian species, *Nitela amazonica* Ducke, 1903. The genus was distinguished from *Nitela* Latreille, 1809, by its prominent, lamelliform frontal carina (fig. 4), and the densely setose eyes. Menke (1968, 1969) relegated *Tenila* to the status of a subgenus of *Nitela*, inferring that its characters were not reliable for recognition as a genus in view of the diversity of head sculpture in *Nitela* worldwide. Menke in Bohart & Menke (1976) reviewed the morphology of *Nitela* in depth and noted that one of the two characters used to identify *Tenila*, its setose eyes, was not diagnostic. My study of the species of *Tenila* has revealed that the eye setosity varies from dense to obsolescent. Thus its more or less pronounced lamelliform frontal carina is the only remaining character for separation of *Tenila*. Therefore, in my opinion this taxon is best regarded as the *amazonica* species group of *Nitela*.

Menke (1968) placed *Rhinonitela guiana* Williams, 1928, in *Tenila*, and shortly afterwards described a third species, *Nitela bifida* Menke, 1969, from Costa Rica. My study has revealed eight more species with a lamelliform frontal carina, all undescribed, bringing the number of species known in the *amazonica* species group to eleven. All of the species are described here and new distribution records are given. New records for countries are preceded by an asterisk (*).

The systematic position of *Nitela* within the subfamily Crabroninae Latreille, 1802, the assemblage containing both Larrinae Latreille, 1810, and Crabroninae of Bohart & Menke (1976) (see Menke, 1993), remains uncertain. Bohart & Menke placed the genus in Miscophini but noted the rather isolated nature of *Nitela*. Lomholdt (1985) hypothesized that "the closest nitelinine relative is to be sought among the Trypoxylini Thomson, 1870".

For measurements of the ocellar triangle see fig. 2; for the terminology used for the wing venation, see fig. 3; for the rest of the terminology, see Bohart & Menke (1976).

The *amazonica* species group of the genus *Nitela*

Diagnosis.— Fronto-clypeal carina continuous and lamelliform; eyes densely to sparsely setose; inner orbits slightly sinuate; antennal socket basins with short, appressed, silvery setae; disc of collar with a weakly developed postero-median prominence, defined by weak lateral depressions.

Distribution.— Neotropical; from southern Mexico to Brazil and Argentina.

Key to species of the *amazonica* species group

1. Fronto-clypeal carina not lamelliform (fig. 1) ..... other species groups of *Nitela*
- Fronto-clypeal carina lamelliform (fig. 4) ..... ***N. amazonica*** species group
2. Propodeal side nearly glabrous, at most sparsely setose postero-basally; wing membrane hyaline 3
- Propodeal side densely setose postero-basally (fig. 6); wings often infuscate 6
3. Vein 1-M of fore wing about 2.5 times longer than vein 2-M+CU1 (fig. 44); basal half of antenna yellowish ..... ***N. longinervis*** spec. nov.
- Vein 1-M of fore wing less than 2.2 times longer than vein 2-M+CU1 (fig. 3); antenna completely black 4
4. Frons largely smooth ..... ***N. erugifrons*** spec. nov.
- Frons distinctly rugose 5
5. Tarsi largely and palpi yellowish; propodeum with lamelliform projection postero-laterally (fig. 51) ..... ***N. menkei*** spec. nov.
- Tarsi and palpi black or blackish; propodeum without lamelliform projection postero-laterally (fig. 55) ..... ***N. nigripalpis*** spec. nov.
6. At least pronotum completely yellowish or reddish-brown; colour of metasoma variable 7
- Mesosoma completely black, at most pronotal lobe yellowish or reddish-brown; metasoma completely black 9
7. Propodeum without lamelliform or thorn-like projection postero-laterally ..... ***N. polaszeki*** spec. nov.
- Propodeum with lamelliform or thorn-like projection postero-laterally (figs 37, 43) 8
8. Propodeum with a lamelliform projection postero-laterally (fig. 37); apex of mandible simple; scutellum yellowish-brown ..... ***N. guiana*** (Williams)
- Propodeum with a tooth-like projection postero-laterally (fig. 43); apex of mandible bifid; scutellum black ..... ***N. intermedia*** spec. nov.
9. Metasoma largely yellowish 7
- Metasoma completely black 10
10. Propodeum without a tooth-like projection postero-laterally (fig. 22) ..... ***N. cooperi*** spec. nov.
- Propodeum with a tooth-like projection postero-laterally (figs 6, 16) 11
11. Lateral ocellus almost touching eye (fig. 13); apex of mandible bifid (almost simple in some specimens) (figs 12, 14); scapus usually completely yellow ..... ***N. bifida*** Menke
- Lateral ocellus widely separated from eye (fig. 9); apex of mandible simple; scapus at least partly darkened 12

12. Palpi yellowish; frontoclypeal lamella wide (figs 4, 5) ..... ***N. amazonica*** Ducke
- Palpi blackish; frontoclypeal lamella less developed (figs 24, 26) ..... ***N. fuscipes*** spec. nov.

Descriptions

Nitela amazonica Ducke, 1903
(figs 3-9)

Nitela amazonica Ducke, 1903: 269-270; 1908: 46; Nascimento & Overal, 1980: 8; Roig, 1988: 14; McC. Callan, 1991: 8.

Nitela (Tenila) amazonica; Menke, 1968: 137; 1969: 200, figs 3, 5, 7, 10, 11; Bohart & Menke, 1976: 324, 325, figs 99 (F-G); Obrecht & Huber, 1993: 175.

Material.— Lectotype [here designated], ♀ (NMBS), "Brasil, Para, 12.x.1902, Ducke", "Typus", "*Nitela amazonica* Ducke, ♀, typ., det. A. Ducke 1903"; 1 ♂ (NMBS), paralectotype, "Brasil, Para, 23.xi.1902, Ducke", "Typus", "*Nitela amazonica* Ducke, ♂, typ., det. A. Ducke 1903". 1 ♀ (BMNH), "Brasil, Para [= Belém], 9.v.1907, Ducke", "*Nitela amazonica* Ducke, det. Ducke 1909", "Brazil. Mus. Goeldi., 1910-90."; 1 ♀ (UCDC), "Brasil, Para", "iv.1907, Ducke", "*Nitela amazonica*, det. Ducke"; 1 ♂ (UCDC), "Brasilien, Nova Teutonia, 27°11'B. 52°23'L, 300-500m, 9.x.1965, Fritz Plaumann"; 1 ♀ (UCDC), id. but 10.iv.1964; 1 ♀ (UCDC), id. but 3.iv.1964; 1 ♀ (UCDC), id. but 22.i.1964; 1 ♀ (USNM), id. but 12.ii.1964; 1 ♀ (AMNH), id. but 20.ii.1964; 1 ♀ (AEIC), "Nova Teutonia, Brazil, 27.v.1952, F. Plaumann", "Santa Catarina", "Collection of R.D. Shenefelt"; 1 ♀ (CUIC), "Nova Teutonia, Santa Catarina, Brasil", "F. Plaumann, 24.i.1957"; 1 ♀ (CUIC), id. but 28.i.1957; 1 ♂ + 5 ♀♀ (BMNH, RMNH), "Trinidad, 2055, 10.vi.1933, D. V. FGr"; 1 ♀ (BMNH), "Trinidad, 4661, ix.1935, FitzGerald", "Com. Inst. Ent., Coll. No. 12446"; 3 ♀♀ (BMNH, RMNH), "Trinidad: St. George, St. Augustine, 15.vii-13.viii.1976, Malaise Trap, J.S. Noyes, B.M. 1976-462"; 1 ♀ (CASC), "Colombia: Cundinamarca, finca Bella Vista, Nr. Sasaima, 1.vi.1965, P.R. & D.L. Craig"; 1 ♀ (ACSK), "Brazil, Represa Rio Grande, Guanabara, viii-ix.1969, Alvarenga"; 1 ♀ (ACSK), "Trinidad, 1-9, Maracas xii.1977, Malaise trap"; 1 ♀ (USNM), "on window, St. Augustine, Trinidad, BWI, 8.ix.1949", "E. McC. Callan Collector"; 1 ♀ (USNM), id. but 16.x.1949; 1 ♀ (USNM), id. but 15.xii.1949; 2 ♂♂ (USNM), id. but 18.i.1950; 1 ♀ (USNM), "Trinidad BWI, iv.1949, E.McC. Callan, 49-5827; 1 ♀ (USNM), "Flies found inside of clock, 26.v.1930, H.A.B. [H.A. Ballou]", "Trinidad"; 3 ♀♀ (USNM), id. but 26.v.1930; 1 ♀ (USNM), id. but 10.vi.1930; 1 ♂ + 2 ♀♀ (USNM), id. but 2.vii.1930"; 1 ♀ (USNM), "Venezuela: Guarico, Hato Masaguaral (44 km S Calabozo), 3-10.v.1985, Menke & Carpenter"; 2 ♀♀ (USNM), "Venezuela, Artua, El Limon, 450 m, 3.ii.1987", "J.L. Garcia col."; 1 ♀ (CMCD), "Ecuador, Morona-Santiago, Macas 1,000 m, 18.v.1981, M. Cooper"; 1 ♀ (CMCD), "Equador, Morona-Santiago, Macas 1,100m, 30.v.1990, M. Cooper".

Female.— Length of body 3.4-4.0 mm, of fore wing 2.1-2.5 mm.

Head.— POL:diameter of ocellus:OOL = 3:2:1; ratio of clypeal width to minimum interocular distance 2.3; frons rugulose or granulate, vertex granulate; frontal line ending at four fifths of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; eyes densely setose; contour of fronto-clypeal lamella as in fig. 4; clypeal margin with median lobe (fig. 7); width of malar space two thirds of diameter of anterior ocellus; apex of mandible simple.

Mesosoma.— Pronotal dorsum superficially coriaceous, pronotal side more or less ridged; mesonotum rugose, with longitudinal rugulae posteriorly (may be almost absent); mesopleuron largely rugulose, more or less granulose around scrope, episternal sulcus weakly crenulate, hypersternaulus crenulate, ending at level of scrobe or almost reaching middle coxa, pleural suture crenulate; scutellum and metanotum rugulose; metapleuron largely smooth and shiny; propodeal dorsum medially longitudinally ridged, with interconnecting sculpture, laterally reticulate,

interspaces smooth and shining; posterior surface reticulate or transversily ridged with interconnecting sculpture, bordered by a circumferential carina which bears a thorn-like projection (fig. 6); propodeal side obliquely ridged with interconnecting sculpture, interspaces smooth and shining, postero-basally setose (fig. 6).

Wings.— Fore wing (fig. 3): r:1-RS+M:1+2-CU1 = 10:12:15; 1-RS:1-M:2-M+CU1 = 5:20:12.

Legs.— Length of hind femur and tibia 3.5-3.6 and 4.6-4.9 times their maximum width, respectively; length of hind femur 1.6 times length of hind basitarsus.

Metasoma.— Terga I-II rather sparsely setose, other terga more densely, uniformly setose, setae appressed; terga largely smooth and shining, sculpture only weakly developed.

Colour.— Black; palpi, apical half of mandible, basal third of antenna, pronotal lobe more or less, and tegula yellowish; legs yellowish, coxae, femora (with exception of yellow line on anterior side of middle femur), last tarsal segment, and apical third of hind tibia blackish; legs sometimes almost completely yellowish; wings hyaline, weak maculation at the apex of 1-M present (sometimes hardly visible).

Male.— Fronto-clypeal lamella less pronounced (fig. 5), and clypeal outline different (fig. 8); otherwise similar to female.

Discussion.— According to Nascimento & Overal (1980) there are 10 specimens of *N. amazonica* from Brazil present in the collection of the "Museu Paraense Emilio Goeldi" (MPEG). Among this material are specimens from Pará which may belong to the type series (being paralectotypes), although Nascimento (1979) does not mention type material of *N. amazonica* in his catalogue of entomological types of the MPEG. I did not have the material of the collection of the MPEG at my disposal for this study. Obrecht & Huber (1993) note that Goeldi, who was the director of the MPEG from 1894 to 1907, deposited a parallel collection of duplicate specimens of the MPEG at the Natural History Museum in Bern. Among this material two specimens (a male and a female) of *N. amazonica* from Pará, both labelled "type", are present. I studied these specimens and have no doubt that they indeed belong to the type series. Therefore, I designate in this paper, the female as the lectotype and the male as a paralectotype. For the characters to distinguish *N. amazonica* from *N. bifida*, *N. cooperi* and *N. fuscipes* see the discussions of these species.

Distribution.— *Argentina; Brazil; *Colombia; *Ecuador; Trinidad; *Venezuela.

Nitela bifida Menke, 1969
(figs 10-16)

Nitela (Tenila) bifida Menke, 1969: 199, figs 1-2, 4, 9; Bohart & Menke, 1976: 323, 325, figs 98(D-E).

Material.— Paratype of *N. bifida*, ♀ (USNM), "Turrialba CR [Costa Rica] 49F14", "Paratype *Nitela (Tenila) bifida* Menke, Arnold S. Menke". 1 ♀ (USNM), "Kartabo, B.G. vii-viii.1920", "W.M. Wheeler Collection"; 1 ♀ (BMNH), "Colombia: Meta, Villavicencio, 7.v.1974, M. Cooper, B.M. 1974-327"; 2 ♀♀ (BMNH, RMNH), "Colombia: Meta, Cord. Macarena, 15-28.ii.1976, M. Cooper, B.M. 1976-305; 1 ♀ (BMNH), "Ecuador: Napo, Napo. 500m., 12.iv.1976, M. Cooper, B.M. 1976-290", "Carrying Zorapteran prey to hole in rock"; 1 ♀ (BMNH), "Ecuador: Morona-Santiago, Cord, Cutucu, C. 6 km. E Macas.c. 1000 m., 21.x.1978, M. Cooper, B.M. 1979-20"; 1 ♀ (BMNH), "Brazil: Bahia, Itubuna, CEPEC, xi.1978, F.P. Benton Mucuri"; 1 ♀ (CMCD), "Ecuador, Morona-Santiago, Cord de Cutucu 6 K. E of Macas, 1,100 m, 6.vi.1981, M. Cooper"; 1 ♀ (CUIC), "Ecuador: Pinch. Prov. 15 km e Sto. Domingo, Tinalandia 2000', 25-26.xi.1981, Howden".

Female.— Length of body 3.8 mm, of fore wing 2.8 mm.

Head.— POL:diameter of ocellus:OOL = 5:4:1; ratio of clypeal width to minimum interocular distance 2.7; frons and vertex densely granulate; frontal line ending at two thirds of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; eyes densely setose; contour of fronto-clypeal lamella as in fig. 11; clypeal outline as in fig. 15; malar space narrow, width one third of diameter of anterior ocellus; apex of mandible distinctly bifid in some specimens, but may be almost simple in others (figs 12, 14).

Mesosoma.— Pronotal dorsum coriaceous, pronotal side largely coriaceous with some rugulae ventrally; mesonotum rugose; mesopleuron largely rugulose, episternal sulcus crenulate, hypersternaulus weakly crenulate, ending at level of scrobe, pleural suture almost smooth to distinctly crenulate; scutellum and metanotum superficially granulate; metapleuron smooth and shiny; dorsal surface of propodeum longitudinally ridged with interconnecting sculpture, interspaces smooth and shiny; posterior surface of propodeum largely smooth with some weak carinae medially to reticulate, bordered by a circumferential carina which bears a thorn-like process laterally (fig. 16); lateral surface of propodeum longitudinaly ridged with some interconnecting sculpture, postero-basally densely setose.

Wings.— Fore wing (fig. 10): r:1-RS+M:1+2-CU1 = 10:14:15; 1-RS:1-M:2-M+CU1 = 4:18:14.

Legs.— Length of hind femur and hind tibia 3.6 and 4.8 times their maximum width, respectively; length of hind tibia 1.5 times length of hind basistarsus.

Metasoma.— Terga I-II sparsely setose, other terga more densely and uniformly setose; all terga smooth and shiny.

Colour.— Black; palpi, mandible, and base of antenna yellowish; legs largely orange brown, middle femur posteriorly, apex of hind femur, and apical half of hind tibia blackish, base of hind tibia pale orange brown, last tarsal segments of all legs blackish, coxae only blackish basally to completely black; wings hyaline with weak band-like infuscation (fig. 10).

Male.— Unknown.

Discussion.— In *N. bifida* the lateral ocelli almost touch the eyes, a character that distinguishes it from *N. amazonica* in which the lateral ocelli are well separated from the eyes. A less reliable character for *bifida* is the bifid mandible apex. Unfortunately, the mandible is weakly bifid in some specimens of *bifida*. For the characteristics that distinguish *N. bifida* from *N. cooperi* and *N. fuscipes* see the discussions under these species.

Distribution.— *Brazil; *Colombia; Costa Rica; *Ecuador; *Guyana.

Biology.— One of the examined specimens bears a lable which reads: 'Carrying Zorapteran prey to hole in rock'. A microvial with the prey is pinned beneath the specimen. From what remains of the prey, the wing venation appears different from the wing venation of zorapteran genera figured by Kukalova-Peck & Peck (1993). It might be interesting to have this prey studied by a specialist to make sure to which order the specimen really belongs.

Nitela cooperi spec. nov.
(figs 17-22)

Material.— Holotype, ♀ (BMNH), "Ecuador, Morona-Santiago, Cord de Cutucu, 6K. E of Macas, 1,100 m, 8.v.1981, M. Cooper". Paratypes, 1 ♂ + 6 ♀♀ (CMCD, RMNH): 1 ♀, "Ecuador, Morona-Santiago,

Cord de Cutucu, 6 K. E of Macas, 1,100 m, 8.v.1981, M. Cooper"; 1 ♀, id. but 4.v.1981; 1 ♀, id. but 13.v.1981; 1 ♂, id. but 20.v.1981; 1 ♀, id. but 24.v.1981; 1 ♀, id. but 5.i.1982; 1 ♀ (with psocopteran prey), id. but 4.ii.1982.

Holotype, ♀, length of body 3.7 mm, of fore wing 2.4 mm.

Head.— POL:diameter of ocellus:OOL = 4:4:1; ratio of clypeal width to minimum interocular distance = 3.1; frons rugulose, vertex granulate; frontal line ending at two fifths of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; eyes densely setose; contour of fronto-clypeal lamella as in fig. 18; clypeal margin with median lobe (fig. 19); malar space absent; apex of mandible simple.

Mesosoma.— Pronotum superficially coriaceous, some rugulae in front of pronotal lobe; mesonotum rugose; mesopleuron largely rugulose, granulate around scrobe, episternal sulcus crenulate, hypersternaulus crenulate, ending at level of scrobe, pleural suture microcrenulate, almost smooth; scutellum and metanotum rugulose; metapleuron largely smooth with some ridges dorsally; propodeal dorsum longitudinally ridged with interconnecting sculpture, laterally reticulate, interspaces smooth and shining; posterior surface with median carina, largely smooth with some scattered rugulae, bordered by a circumferential carina, without a thorn-like or lamelliform process; propodeal side finely obliquely ridged dorsally, more reticulate ventrally, postero-basally setose (fig. 22).

Wings.— Fore wing (fig. 17): r:1-RS+M:1+2-CU1 = 10:10:11; 1-RS:1-M:2-M+CU1 = 5:15:13.

Legs.— Length of hind femur and tibia 2.9 and 5.0 times their maximum width, respectively; length of hind femur 1.7 times length of hind basitarsus.

Metsoma.— Terga I-II rather sparsely setose, other terga more densely, uniformly setose, setae appressed; terga largely smooth and shining, sculpture only weakly developed.

Colour.— Black; palpi, apical two thirds of mandible, front and middle femora (with exception of a black dorsal line), hind femur ventrally, fore tibia, basal fourth of hind tibia, and basitarsi yellowish; tibial spurs pale yellow, almost white; wings hyaline with weakly developed infuscation (fig. 17).

Variation.— Length of body 3.6-3.7 mm, of fore wing 2.3-2.4 mm.

Male.— Fronto-clypeal lamella only slightly less pronounced than that of female; clypeal outline as in fig. 21; otherwise similar to female.

Discussion.— Among the species in which the propodeal side is densely setose postero-basally, there are several black ones (*N. amazonica*, *N. bifida* and *N. fuscipes*). *N. cooperi* can be easily distinguished from these by the lack of a thorn-like process on the propodeum postero-laterally.

Etymology.— This species is named after Mr M. Cooper, who collected a large part of the material used for this study.

Distribution.— *Ecuador.

Biology.— One female was caught with a psocopteran prey.

Nitela erugifrons spec. nov.
(figs 30-33)

Material.— Holotype, ♂ ,(BMNH), "Colombia: Putumayo, Mocoa, 15.vii.1978, M. Cooper, B.M. 178-

431". Paratypes, 3 ♂♂: 1 ♂ (CMCD), "Ecuador, Morona-Santiago, Cord de Cutucu 6 K. E of Macas 1,100 m, 4.v.1981, M. Cooper"; 1 ♂ (CMCD), id. but 13.v.1981; 1 ♂ (RMNH), id. but 4.vi.1981.

Holotype, ♂, length of body 3.0 mm, of fore wing 1.9 mm.

Head.— POL:diameter of ocellus:OOL = 5:4:1; ratio of clypeal width to minimum interocular distance 1.8; frons punctate, largely smooth and shiny, vertex finely granulate; frontal line ending at two thirds of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; eyes sparsely pubescent; contour of fronto-clypeal lamella as in fig. 31; clypeal margin as in fig. 32; malar space narrow, width one fourth of diameter of anterior ocellus; apex of mandible simple.

Mesosoma.— Pronotal dorsum coriaceous, pronotal side superficially ridged; mesonotum rugose; mesopleuron superficially rugose in front of weakly crenulated episternal sulcus, remainder of mesopleuron weakly granulate, almost smooth and shiny, hypersternaulus crenulate, ending at the level of the scrobe, pleural suture microcrenulate; scutellum granulate; metapleuron smooth and shiny; dorsal surface of propodeum longitudinally ridged, with interconnecting sculpture; posterior surface of propodeum reticulate, interspaces smooth and shiny, without a lamelliform or thorn-like projection laterally (fig. 33); lateral surface of propodeum obliquely ridged, almost without interconnecting sculpture, interspaces smooth, with only a few setae postero-basally.

Wings.— Fore wing (fig. 30): r:1-RS+M:1+2-CU1 = 10:12:13; 1-RS:1-M:2-M+CU1 = 3:11:9.

Legs.— Length of hind femur and hind tibia 3.3 and 4.8 times their maximum width, respectively; length of hind tibia 1.6 times length of hind basitarsus.

Metasoma.— Terga I-II largely glabrous, rest of terga sparsely setose; terga with microsculpture, almost smooth, shiny.

Colour.— Black; tarsi dark brown; wings hyaline.

Female.— Unknown.

Discussion.— *N. erugifrons* can be easily separated from all other species of the *amazonica* group by the largely smooth frons (sculptured in the other species).

Etymology.— The species name refers to the largely smooth frons.

Distribution.— *Colombia; *Ecuador.

Nitela fuscipes spec. nov.
(figs 23-29)

Material.— Holotype, ♀ (AMNH), "Arg. - Salta, Rosario Lerma, Fritz - x.1992". Paratypes, 124 ♂♂ + 14 ♀♀ (AMNH, RMNH): 3 ♂♂, "Arg. - Salta, Rosario, Lerma, Fritz - iii.1988"; 1 ♂ + 1 ♀, id. but 1.ii.1990; 2 ♂♂, id. but 15.ii.1990; 6 ♂♂ + 1 ♀, id. but iii.1990; 4 ♂♂, id. but 1.iv.1990; 39 ♂♂ + 6 ♀♀, id. but x.1990; 18 ♂♂ + 2 ♀♀, id. but xi.1990; 2 ♀♀, but xii.1990; 12 ♂♂, id. but x.1991; 13 ♂♂ + 1 ♀, id. but xi.1991; 26 ♂♂ + 1 ♀, id. but x.1992.

Holotype, ♀, length of body 4.1 mm, of fore wing 2.8 mm.

Head.— POL:diameter of ocellus:OOL = 3:2:1; ratio of clypeal width to minimum interocular distance 1.9; frons rugulose, vertex granulate; frontal line ending at one third of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; eyes densely setose; contour of fronto-clypeal lamella as in fig. 24; clypeal margin with median lobe (fig. 25); width of malar space one half of diameter of anterior ocellus; apex of mandible simple.

Mesosoma.— Pronotal dorsum superficially coriaceous, pronotal side largely rugulose with a few ridges in front of the pronotal lobe; mesonotum rugose; mesopleuron largely rugulose, granulose above scrobe, episternal sulcus crenulate, hypersternaulus crenulate, ending just beyond level of scrobe, pleural suture microcrenulate; scutellum and metanotum rugulose; metapleuron superficially ridged, interspaces rugulose; propodeal dorsum longitudinally ridged, with interconnecting sculpture, laterally reticulate, interspaces smooth and shining; posterior surface reticulate, bordered by a circumferential carina which bears a thorn-like projection laterally (fig. 29); propodeal side obliquely ridged with interconnecting sculpture, interspaces smooth and shining, postero-basally setose (fig. 29).

Wings.— Fore wing (fig. 23): r:1-RS+M:1+2-CU1 = 5:6:7; 1-RS:1-M:2-M+CU1 = 4:20:9.

Legs.— Length of hind femur and tibia 3.3 and 4.7 times their maximum width, respectively; length of hind femur 1.7 times length of hind basitarsus.

Metasoma.— Terga I-II rather sparsely setose, other terga more densely, uniformly setose, setae appressed; terga largely smooth and shining, sculpture only weakly developed.

Colour.— Black; trochanter and femur of middle leg ventrally, trochanter of front leg, and apical half of mandible yellowish-brown; wings hyaline.

Variation.— Femora and tibiae more or less yellowish-brown.

Male.— Similar to female, but fronto-clypeal lamella less pronounced (fig. 26); clypeal outline as in fig. 28; legs more or less yellowish-brown; length of body 3.4-4.1 mm.

Discussion.— *N. fuscipes* is similar to *N. amazonica*. It may be separated from that species by the blackish palpi, which are yellowish in *N. amazonica*, and the fronto-clypeal lamella, which is more pronounced in *N. amazonica*. It can be easily separated from *N. bifida* by the lateral ocelli, which are distinctly separated from the eyes (almost touching eyes in *N. bifida*), and the simple apex of the mandibles (bifid in *N. bifida*).

Etymology.— The epithet *fuscipes* refers to the blackish legs.

Distribution.— *Argentina.

Nitela guiana (Williams, 1928)
(figs 34-38)

Rhinonitela guiana Williams, 1928: 168, fig. 220.
Nitela (Tenila) guiana; Menke, 1968: 137; 1969: 200-201, figs 6, 8; Bohart & Menke, 1976: 225.

Material.— Holotype, ♀ (BPBM), "Blairmont, B.G. x.1923", "F. X. Williams, Collector", "Holotype *Rhinonitela guiana* ♀ Holotype", "*Rhinonitela guiana* ♀ F. X. Williams, 148A, det. F. X. Williams", "*Nitela (Tenila) guiana* (Wms.), det. A. S. Menke". 1 ♀ (ACSK), "Brazil, Jatal, Goias, x.1972, F.M. Olivieira"; 1 ♀ (AEIC), "Amazonas, Brazil, 71°38'W, 4°37'S, ix.'79, Alvarenga"; 1 ♀ (AEIC), "Sinop, M. Grosso, 12°31'S 55°37'W, x.1974, Brazil, M. Alvarenga"; 6 ♀♀ (USNM), "Costa Rica, Puntar. [Puntarenas], Golfo Dulce, 3 km SW Rincón, 10 m, iii-v.1989, Hanson", "*Nitela (Tenila) guiana* (Williams), det. A. S. Menke 91"; 2 ♀♀ (USNM, RMNH), "Costa Rica, Puntar., Golfo Dulce, 24 km W. Piedras Blancas, 200 m, vi-viii.1989, Hanson"; 1 ♀ (USNM), "Costa Rica, Puntar., P.N Corcovado, Est Sirena, 50 m, iv-viii.1989", 1 ♀ (USNM), "Costa Rica, Puntar., Pen. Osa, 23 km N. Pt. Timenet, 10 m, i-iv.1991, P. Hanson"; 2 ♀♀ (USNM), "Costa Rica, Alajuel, San Pedro de la Tigra, Cacao, 200 m, xii.1989, R. Céspedes"; 2 ♀♀ (USNM, RMNH), id. but iii-iv.1990; 1 ♀ (USNM), "Costa Rica, San José, Ciudad Colón, 800 m, iv-v.90, col. Luis Fournier"; 3 ♀♀ (BMNH, RMNH), "Costa Rica: Guanacaste Pv, Sta.

Rosa NP, Bosq. Hum-12–C", "Janzen & Gauld, 8.ii-2.iii.86"; 2 ♀♀ (BMNH), id. but 2-23.iii.1986"; 1 ♀ (BMNH), id. but 23.iii-13.iv.1986"; 1 ♀ (AEIC), "S. Rosa Park, Guan., C. Rica, 16.i.1977, D.H. Janzen, Riparian"; 4 ♂♂ (BMNH, RMNH), "Colombia: Amaz., Leticia, 21.viii.1974, M. Cooper, B.M. 1974-503", "Note 179: Hovering in front of trunk of tree in forest. Trunk contained small beetle emergence holes but no wasps seen to enter. *Nitela* sp. (4)."; 4 ♂♂ (CMCD, RMNH), "Ecuador, Napo, Muyuna, 600 m., 5 K. W of Tena, 19.iv.1981, M. Cooper"; 1 ♀ (ACSK), "Ecuador: Pich, Rio Palenque, ii.1976, Mal. tr., J. Bellwood"; 1 ♀ (ACSK), "Mexico, Chiapas, Muste, 440 m. near Huixtla, 21.ix.1970, Mal. trap, Welling"; 1 ♀ (RMNH), "Museum Leiden, M. Panama, Level III, Barro, Colorado Island, 9°9'30"N-79°51'W, 1-7.vi.1977, H. Wolda, at light"; 1 ♀ (ACSK), "Panama: Colon, Santa Rita Ridge, 15 km. E Colon, 10-12.vi.1977, S . + J. Peck, Mal. tr."; 1 ? (BMNH), "Trinidad: Caroni, Bran Couva, 27.vi.1976, J.S. Noyes, Brit. Mus., 1976-462"; 1 ♀ (ACSK), "Trinidad, Simla, nr. Arima 250 m., 25.xi-3.xii.77, Mal. Trap, Mason"; 1 ♀ (ACSK), "Venezuela: Aragua Rancho Grande N.P., 18.viii-3.ix.1992, L. Masner Mawinet, cloud for. 1100m".

Female.— Length of body 3.5-3.8 mm, of fore wing 2.0-2.4 mm.

Head.— POL:diameter of ocellus:OOL = 7:5:1; ratio of clypeal width to minimum interocular distance 2.6-2.7; frons and vertex finely, densely granulate; frontal line ending at two thirds of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; contour of frontal lamella as in fig. 35; clypeal margin evenly rounded (fig. 36); malar space absent; apex of mandible simple.

Mesosoma.— Pronotal dorsum superficially rugose, more strongly on lateral parts, pronotal side rugose with some weak ridges ventrally; mesonotum pimply rugose; mesopleuron superficially rugulose, partly (sometimes largely) smooth and shining, episternal sulcus weakly crenulate, hypersternaulus crenulate, almost reaching middle coxa or at level of scrobe; ventral half of pleural suture crenulate; scutellum rugulose; metapleuron superficially ridged or almost smooth, weakly shiny; dorsal surface of propodeum longitudinally ridged, with interconnecting sculpture, giving the surface a reticulate appearance, interspaces smooth and shiny; posterior surface of propodeum shining, superficially coriaceous, medially with some carinae, bordered by a circumferential carina which bears a lamelliform projection, which is variable in length, laterally (figs 37, 38); lateral surface of propodeum obliquely ridged, interspaces smooth and shiny, densely setose posterobasally (fig. 37).

Wings.— Fore wing (fig. 34): r:1-RS+M:1+2-CU1 = 10:12:15; 1-RS:2-M:2-M+CU1 = 5:14:8; 2-RS:m-cu = 1:1.

Legs.— Length of hind femur and tibia 3.4 and 5.2 times their maximum width, respectively; length of hind femur 1.5 times length of hind basitarsus.

Metasoma.— Terga uniformly setose, setae appressed; terga largely smooth and shining, sculpture only weakly developed.

Colour.— Yellowish-brown; head (with exception of antennae, frontal lamella, clypeus and mouthparts), mesonotum medially, mesopleuron ventral to hypersternaulus, dorsal and posterior part of propodeum, base and apex of hind femur (and sometimes of middle femur), apical three fifths of hind tibia, metasoma with exception of last two segments, blackish (but may be largely yellowish); basal two fifths of hind tibia pale yellowish, almost white; wings hyaline with a brown band-like pattern (fig. 34).

Male.— Similar to female, but length of body 3.0-3.3 mm.

Discussion.— For the characteristics to separate this species from *N. intermedia* and *N. polaszeki*, see discussions under these species.

Distribution.— *Brazil; *Colombia; *Costa Rica; *Ecuador; Guyana; *Mexico; *Panama; *Trinidad; *Venezuela.

Nitela intermedia spec. nov.
(figs 39-43)

Material.— Holotype, ♀ (USNM), "Costa Rica, Puntar., Golfo Dulce, 24 km W Piedras Blancas, 200 m, vi-viii.1989, Hanson". Paratypes (6 ♀♀): 1 ♀ (AEIC), "Vila Vera Brazil, W50°30'S12°30', x.1973, M. Alvarenga"; 1 ♀ (RMNH), "Brazil: Bahia, Itabuna, CEPEC, 5.xii.1984, F.P. Benton"; 1 ♀ (AEIC), "Jacreacanga, Pará, Braz., xii.1968, Moacir Alvarenga"; 1 ♀ (BMNH), "Ecuador, Morona-Santiago, Cord. de Cutucu 6 K.e.of Macas 1,100 m, 15.vi.1981, M. Cooper"; 1 ♀ (BMNH), "Trinidad, 3217, xii.1934, FitzGerald", "Com. Inst. Ent., Coll. No. 12446"; 1 ♀ (ACSK), "Trinidad, 1-9, Maracas, xii.1977, Malaise trap", "*Nitela (Tenila)* new sp. ♀, det. 1980 A.T. Finnamore".

Holotype, ♀, length of body 3.5 mm, of fore wing 2.1 mm.

Head.— POL:diameter of ocellus:OOL = 5:4:1; ratio of clypeal width to minimum interocular distance 2.8; frons and vertex finely, densely granulate; frontal line ending at two thirds of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; contour of frontal lamella as in fig. 40; clypeal margin evenly rounded (fig. 42); malar space absent; apex of mandible bifid (fig. 41).

Mesosoma.— Pronotal dorsum superficially rugulose, side of pronotum superficially coriaceous; mesonotum and scutellum rugulose; mesopleuron superficially rugulose, partly smooth and shining, episternal sulcus weakly crenulate, hypersternaulus crenulate, ending at level of scrobe; dorsal surface of propodeum longitudinally ridged, with interconnecting sculpture, giving the surface a reticulate appearance, interspaces smooth and shiny; posterior surface of propodeum largely smooth, medially with some carinae; posterior surface of propodeum bordered by a circumferential carina which bears a thorn-like process laterally (fig. 43); metanotum and side of propodeum obliquely ridged with some interconnecting sculpture, interspaces smooth and shiny, densely setose postero-basally (fig. 43).

Wings.— Fore wing (fig. 39): r:1-RS+M:1+2-CU1 = 10:12:13; 1-RS:2-M:2-M+CU1 = 5:13:14; 2-RS:m-cu = 1:1.

Legs.— Length of hind femur and tibia 3.6 and 5.6 times their maximum width, respectively; length of hind femur 1.4 times length of hind basitarsus.

Metasoma.— Tergum I sparsely setose, other terga more densely, uniformly setose; terga smooth and shiny, weakly granulate medio-posteriorly.

Colour.— Yellowish-brown; head (with exception of antennae, frontal lamella, clypeus and mouthparts), mesonotum medially, scutellum, mesopleuron ventral to hypersternaulus, dorsal and posterior part of propodeum, base and apex of middle and hind femora, apical three fifths of middle and hind tibiae, terga medio-basally, and sterna largely, blackish; basal two fifths of hind and middle tibiae pale yellowish, almost white; wings hyaline with a brown band-like pattern (fig. 39).

Variation.— Length of body 3.5-3.6 mm, of fore wing 2.1-2.3 mm; antenna almost completely yellowish or only basal half yellowish; pronotum, mesonotum and lateral surface of propodeum largely yellowish-brown to completely black.

Male.— Unknown.

Discussion.— The colour of the mesosoma is variable. The colour of the scutellum, however, seems to be very constant. *N. intermedia* is close to *N. guiana*, but can be

easily distinguished from that species by the black scutellum, the presence of the thorn-like lateral process on the propodeum, and the bifid apex of the mandible. When the mesosoma is completely black, the species resembles *N. bifida*, but can still be distinguished by the largely yellowish metasoma (which is completely black in *N. bifida*).

Etymology.— For this species the eptithet *intermedia* is used because it is similar to *N. guiana* in colour, and to *N. bifida* in the presence of a thorn-like process on the propodeum and the bifid apex of the mandible.

Distribution.— *Brazil; *Costa Rica; *Ecuador; *Trinidad.

Nitela longinervis spec. nov.
(figs 44-47)

Material.— Holotype, ♀ (BMNH), "Colombia: Putumayo, Mocoa, 20.viii.1978, M. Cooper, B.M. 1978-431".

Holotype, ♀, length of body 4.4 mm, of fore wing 2.8 mm.

Head.— POL:diameter of ocellus:OOL = 7:5:4; ratio of clypeal width to minimum interocular distance 1.8; frons pimply coriaceous, vertex granulate; frontal line almost reaching the anterior ocellus; eyes densely pubescent; contour of fronto-clypeal lamella as in fig. 45; clypeal margin see fig. 46; malar space narrow, width equal to one fourth of anterior ocellus; apex of mandible simple.

Mesosoma.— Pronotal dorsum coriaceous, pronotal side weakly ridged; mesonotum coriaceous; mesopleuron coriaceous, almost smooth just below scrope, episternal sulcus and hypersternaulus crenulate, hypersternaulus ending at level of scrobe, pleural suture weakly crenulate; metapleuron almost smooth; scutellum granulate; dorsal surface of propodeum longitudinally ridged with interconnecting sculpture, interspaces smooth and shiny; posterior surface of propodeum irregularly ridged, reticulate medially and laterally, interspaces smooth and shiny, bearing a lamelliform projection laterally (fig. 47); lateral surface of propodeum obliquely ridged with interconnecting sculpture, interspaces smooth and shiny, posterolaterally with sparse long hairs (fig. 47).

Wings.— Fore wing: r:1-RS+M:1+2-CU1 = 10:13:16; 1-RS:1-M:2-M+CU1 = 1:5:2.

Legs.— Length of hind femur and tibia 3.4 and 4.5 times their maximum width, respectively; length of hind femur 1.5 times length of hind basitarsus.

Metasoma.— Terga I-II sparsely pubescent, remainder of terga more densely and uniformly pubescent; terga almost smooth and shiny.

Colour.— Black; mandible, palpi, basal two thirds of antenna, pronotal lobe more or less, and tegulae yellowish; legs largely yellowish, coxae, last segment of tarsi, and apical third of hind tibia black, middle femur strongly darkened; wings hyaline.

Male.— Unknown.

Discussion.— *N. longinervis* can be easily separated from all the other species of the *amazonica* species group by the high ratio of vein 1-M of fore wing to vein 2-M+CU1. The ratio is 2.5 in *N. longinervis* and less than 2.2 in the other species.

Etymology.— The epithet refers to the relatively long vein 1-M of the fore wing.

Distribution.— *Colombia.

Nitela menkei spec. nov.
(figs 48-51)

Material.— Holotype, ♀ (USNM), "Peru: Dept. Loreto, Explornapo Camp on Rio Sucusari, 2 km upstream from Rio Napo (160 km NE Iquitos), 24.vi-20.vii.1990, Menke & Avertschenko", "Collected in malaise trap", "*Nitela (Tenila)* near ?*guiana*, det. A.S. Menke 91". Paratypes, 2 ♀♀ (CMCD, RMNH): 1 ♀, "Ecuador, Morona, Santiago, Cord de Cutucu 6 K. E of Macas, 1,100 m, 4.v.1981, M. Cooper"; 1 ♀, id. but 15.vi.1981.

Holotype, ♀, length of body 2.8 mm, of fore wing 1.7 mm.

Head.— POL:diameter of ocellus:OOL = 4:3:1; ratio of clypeal width to minimum interocular distance 1.9; frons rugose, vertex granulate; frontal line ending at two thirds of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; contour of fronto-clypeal lamella as in fig. 49; clypeal margin evenly rounded (fig. 50); malar space narrow, width one third of diameter of anterior ocellus; apex of mandible simple.

Mesosoma.— Pronotal dorsum rugose, side of pronotum superficially ridged; mesonotum rugose; mesopleuron rugulose, partly smooth and shining, episternal sulcus weakly crenulate, hypersternaulus crenulate, ending at level of scrobe; scutellum and metanotum superficially granulate; metapleuron smooth and shiny; dorsal surface of propodeum longitudinally ridged, with interconnecting sculpture, giving the surface a reticulate appearance, interspaces smooth and shiny; posterior surface of propodeum superficially reticulate bordered by a circumferential carina which bears a lamelliform projection laterally (fig. 51); lateral surface of propodeum obliquely ridged with some interconnecting sculpture, interspaces smooth and shiny.

Wings.— Fore wing (fig. 48): r:1-RS+M:1+2-CU1 = 10:12:13; 1-RS:2-M:2-M+CU1 = 4:12:12.

Legs.— Length of hind femur and tibia 3.4 and 4.6 times their maximum width, respectively; length of hind tibia 1.5 times length of hind basitarsus.

Metasoma.— Terga I-II largely glabrous, rest of terga uniformly setose; terga with microsculpture, almost smooth and shiny.

Colour.— Black; palpi, mandible, first two antennal segments more or less, legs with exception of coxae, femora and last segment of the tarsi yellowish; wings hyaline.

Variation.— Tibiae may be more or less blackish.

Male.— Unknown.

Discussion.— *N. menkei* can be distinguished from *N. longinervis* and *N. erugifrons* by the characteristics mentioned in the discussion of these species. It can be distinguished from *N. nigripalpis* by the presence of the lamelliform projection on the propodeum laterally, and by the largely yellowish tarsi (black in *N. nigripalpis*).

Etymology.— This species is named after Dr A.S. Menke who, by all his valuable comments, contributed considerably to the realization of this paper.

Distribution.— *Ecuador; *Peru.

Nitela nigripalpis spec. nov.
(figs 52-55)

Material.— Holotype, ♀ (BMNH), "Colombia: Huila, Lae, Cuevas de los Guacheros, 1,800-1,900 m., 14-24.v.1976, M. Cooper, B.M. 1976-354". Paratypes, 1 ♂ + 1 ♀ (BMNH, RMNH): topotypic, same date.

Holotype, ♀, length of body 3.6 mm, of fore wing 2.3 mm.

Head.— POL:diameter of ocellus:OOL= 7:5:2; ratio of clypeal width to minimum interocular distance 2.1; frons rugose, vertex granulate and punctate; frontal line almost reaching anterior ocellus; eyes densely pubescent; contour of fronto-clypeal lamella as in fig. 53; clypeal outline as in fig. 54; malar space narrow, width one fourth of diameter of anterior ocellus; apex of mandible simple.

Mesosoma.— Pronotal dorsum coriaceous, pronotal side largely rugose, partly superficially ridged; mesonotum rugose; mesopleuron rugose in front of crenulated episternal sulcus, rest of mesopleuron granulate; hypersternaulus ending at level of scrobe, weakly crenulate, pleural suture microcrenulate, almost smooth; scutellum and metanotum superficially granulate; metapleuron largely smooth and shiny, dorsal third superficially granulate; dorsal surface of propodeum longitudianally ridged with interconnecting sculpture; posterior surface of propodeum superficially reticulate, bordered by a circumferential carina which bears no thorn-like or lamelliform projection laterally (fig. 55); lateral surface of propodeum obliquely ridged, almost without interconnecting sculpture, with only a few setae postero-basally (fig. 55).

Wings.— Fore wing (fig. 52): r:1-RS+M:1+2-CU1 = 10:12:13; 1-RS:1-M:2-M+CU1 = 3:12:10.

Legs.— Length of hind femur and hind tibia 3.1 and 4.3 times their maximum width, respectively; length of hind tibia 1.5 times length of hind basitarsus.

Metasoma.— Terga I-II largely glabrous, rest of terga sparsely setose; terga with microsculpture, almost smooth and shiny.

Colour.— Black; wings hyaline, apex of 2-RS weakly infuscate.

Male.— Similar to female.

Discussion.— For the characteristics to distinguish *N. nigripalpis* from *N. erugifrons*, *N. longinervis*, and *N. menkei* see under the discussion of these species.

Etymology.— This species is named after its black palpi.

Distribution.— *Colombia.

Nitela polaszeki spec. nov.
(figs 56-59)

Material.— Holotype, ♀ (BMNH), "Costa Rica: Guanacaste Pv, St. Rosa NP, Bosq. Hum-11–O", "Janzen & Gauld, 18.i-8.ii.1986". Paratypes (68 ♀♀): 1 ♀ (BMNH), topotypic, same date; 16 ♀♀ (BMNH, RMNH), id. but 8.ii-2.iii.1986; 26 ♀♀ (BMNH, RMNH, USNM), id. but 2-23.iii.1986; 9 ♀♀ (BMNH, RMNH), id. but 23.iii-13.iv.1986; 7 ♀♀ (BMNH, RMNH), id. but 13.iv-4.v.1986; 6 ♀♀ (BMNH, RMNH), id. but 4-24.v; 2 ♀♀ (USNM), "Costa Rica, Guanac, Cerro el Hacha, NW Vocán Orosi, 300 m, 1988"; 1 ♀ (BMNH), "Colombia: Magd., 10-15 km. E Santa Marta, 4-5.xii.1976, M. Cooper, B.M. 1977-84".

Holotype, ♀, length of body 3.7 mm, of fore wing 2.2 mm.

Head.— POL:diameter of ocellus:OOL = 6:4:1; ratio of clypeal width to minimum interocular distance 2.6; frons and vertex finely, densely granulate, with superficial rugose appearance; frontal line ending at two thirds of the distance from the dorsal margin of the antennal socket basin to the anterior ocellus; contour of frontal lamella as in fig. 57; clypeal margin as in fig. 58; malar space narrow, width one third of diameter of anterior ocellus; apex of mandible simple.

Mesosoma.— Pronotal dorsum coriaceous, pronotal side largely coriaceous with some superficial ridges; mesonotum rugose; mesopleuron largely rugose, granulose just above scrobe, episternal sulcus crenulate, hypersternaulus weakly crenulate, ending at level of scrobe; scutellum and metanotum superficially rugose; metapleuron with superficial rugulae; dorsal surface of propodeum longitudinally ridged with interconnecting sculpture; posterior surface of propodeum reticulate, without lamelliform or thorn-like projection, laterally (fig. 59); lateral surface of propodeum obliquely ridged with interconnecting sculpture giving it a reticulate appearance, postero-basally densely setose (fig. 59).

Wings.— Fore wing (fig. 56): r:1-RS+M:1+2-CU1 = 10:11:12; 1-RS:1-M:2-M+CU1 = 3:15:12.

Legs.— Length of hind femur and hind tibia 3.4 and 4.8 times their maximum width, respectively; length of hind tibia 1.6 times length of hind basitarsus.

Metasoma.— Terga I-II largely glabrous, other terga uniformly setose; terga almost without sculpture, smooth and shiny.

Colour.— Black; palpi, mandible, basal half of antenna, pronotum and small postero-laterally patches on terga orange brown; front leg orange brown, middle leg blackish, trochanter, femur anteriorly, tibia at base and apex orange brown, first four tarsal segments yellowish; hind legs blackish, femur orange brown ventrally, basal fourth of tibia and tarsus pale yellowish; wings hyaline with a brown band-like pattern (fig. 56).

Variation.— Length of body 3.0-3.7, of fore wing 1.8-2.2; the orange brown colouration may be more yellowish; middle leg may be almost completely yellowish.

Male.— Unknown.

Discussion.— *N. polaszeki* seems to be most similar to *N. guiana* and *N. intermedia*. It can be separated from them by the lack of a lamelliform or thorn-like process on the propodeum postero-laterally.

Etymology.— Named after Dr A. Polaszek who stimulated me to study these wasps, by discovering a specimen of this species group among the unidentified Bethylidae of the RMNH collection.

Distribution.— *Costa Rica; *Colombia.

Acknowledgements and abbreviations

I wish to express my gratitude to Dr A.S. Menke (Washington D.C.), and Dr C. van Achterberg (Leiden), for their valuable comments during the realization of this paper; to Prof. Dr E. Gittenberger (Leiden), Dr A. Polaszek (Amsterdam) and the late Mr J.C. Felton (Brighton) for their comments on earlier drafts. Further I wish to express my gratitude to Dr J.M. Carpenter (New York); Mr M. Cooper (Dorset), Mr E.R. Hoebeke (Ithaca), Dr Ch. Huber (Bern), Dr J. Huber (Ottawa), Mr T. Huddleston (London), Dr L.S. Kimsey (Davis), Dr A.S. Menke (Washington D.C.), Dr G.M. Nishida (Honolulu), Mr D.J. Preston (Honolulu), Dr W.J. Pulawski (San Francisco), Mr E.L. Quinter (New York), and Dr D. Wahl (Gainesville) for the loan of types and other specimens.

For the abbreviations of the collections the "codens for insect and spider collections of the world" (Arnett et al., 1993) is followed. ACSK = Agriculture Canada Research Station, Ottawa; AEIC = American Entomological Institute, Gainesville;

AMNH = American Museum of Natural History, New York; BMNH = The Natural History Museum, London; BPBM = Bernice P. Bishop Museum, Honolulu; CASC = California Academy of Sciences, San Francisco; CMCD = Collection of Martin Cooper, Dorset; CUIC = Cornell University, Ithaca; NMBS = Naturhistorisches Museum Bern; RMNH = Nationaal Natuurhistorisch Museum, Leiden; UCDC = University of California, Davis; USNM = National Museum of Natural History, Washington.

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Received: 5.ix.1994
Accepted: 19.ix.1994
Edited: C. van Achterberg

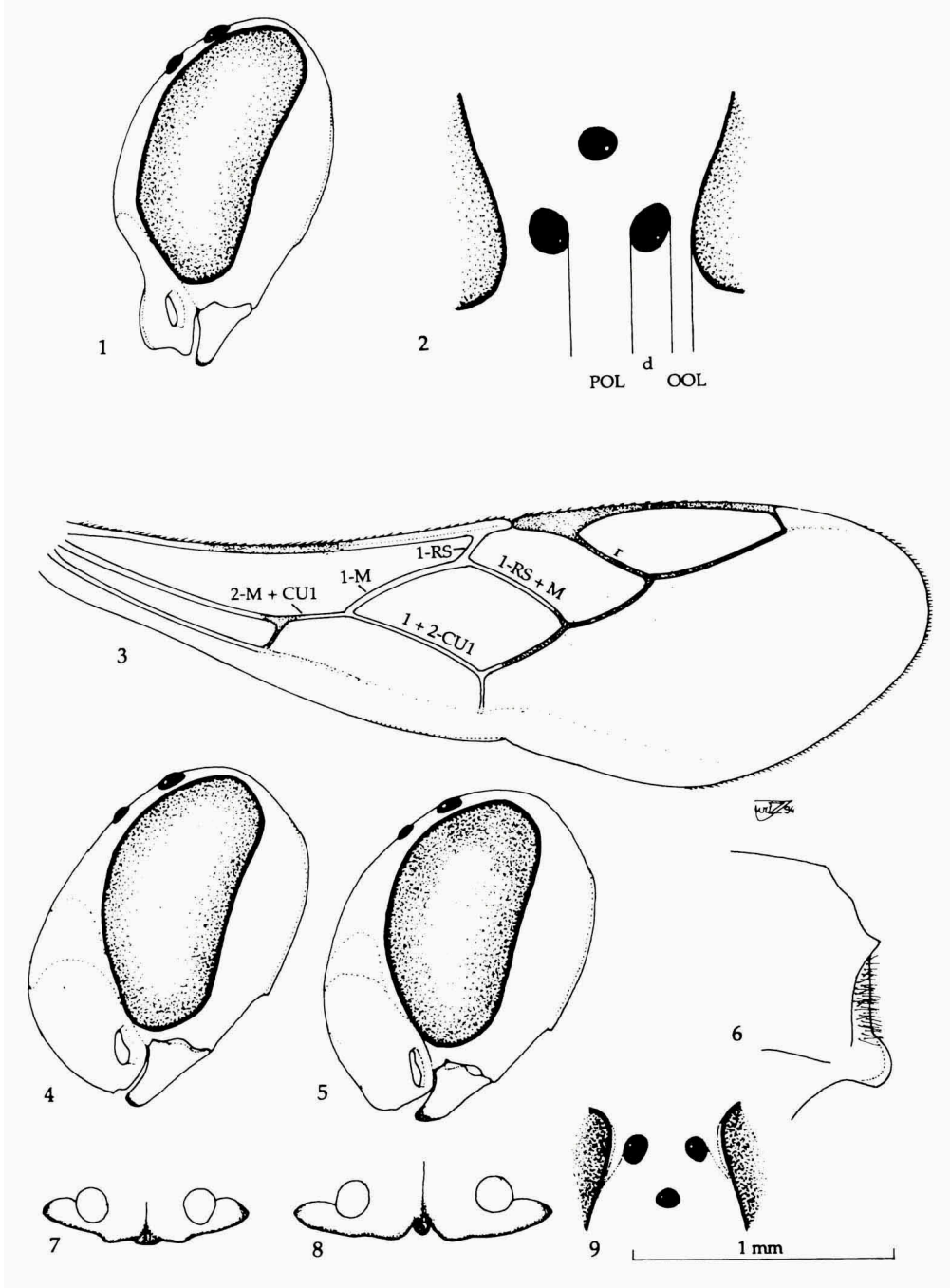
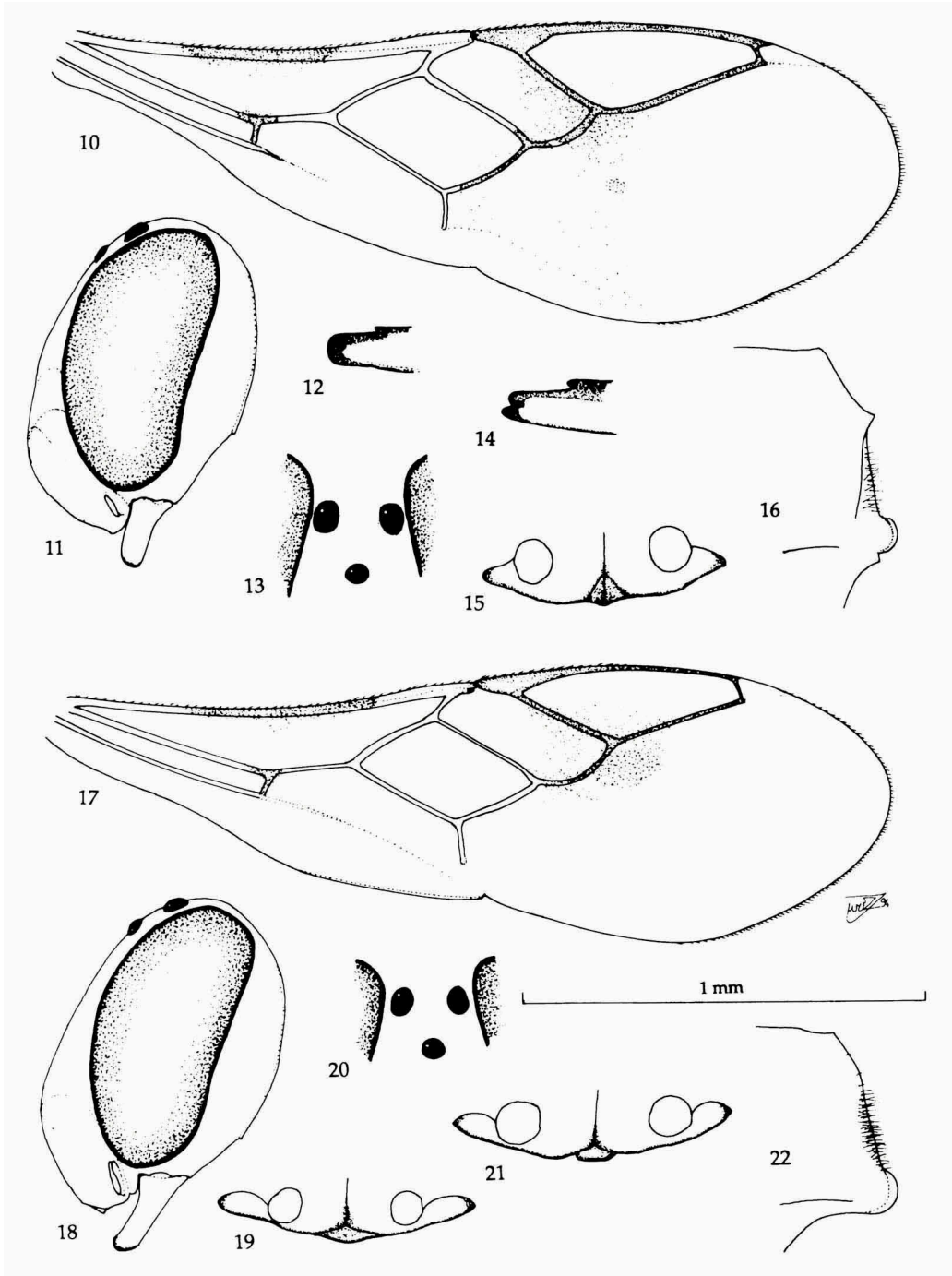
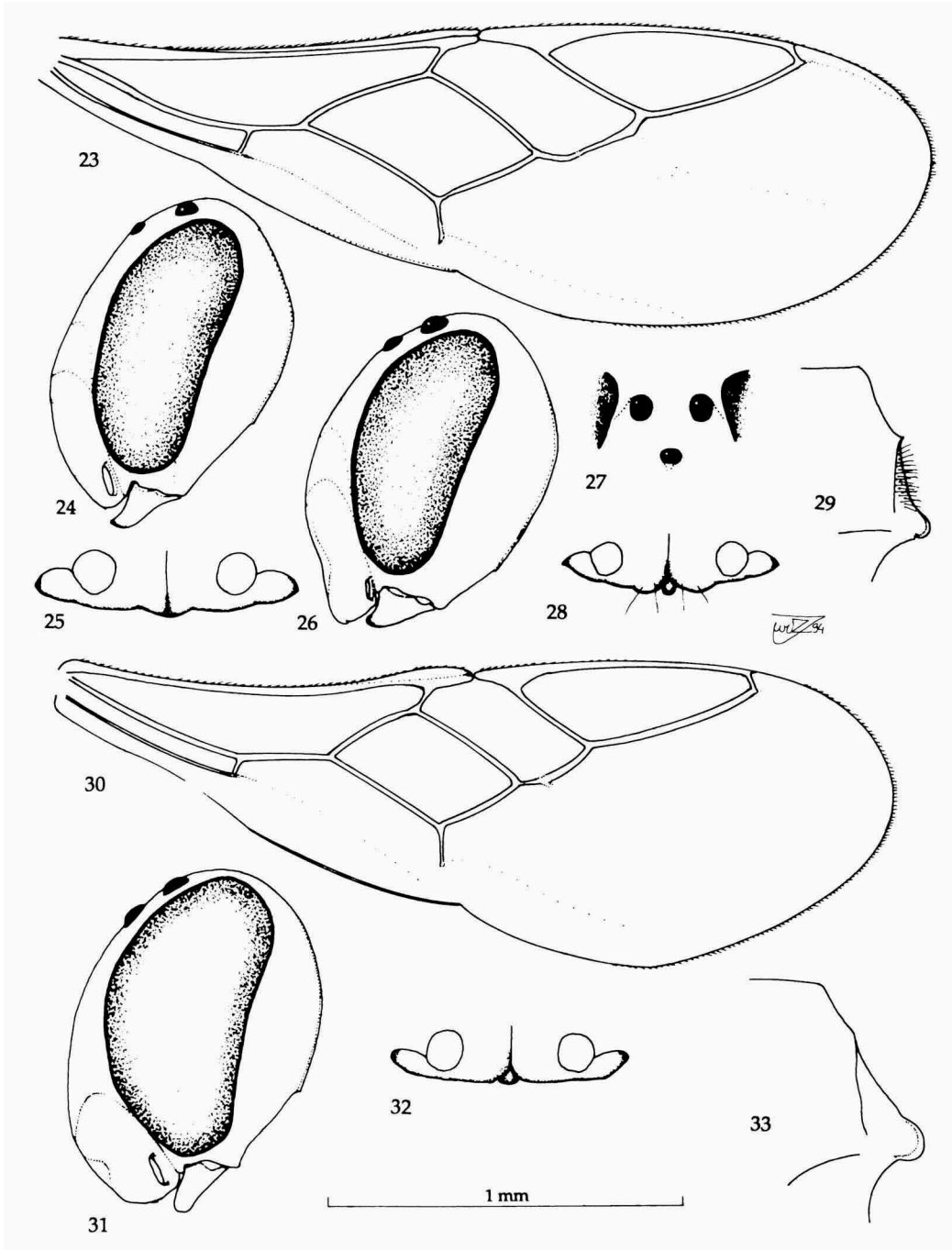


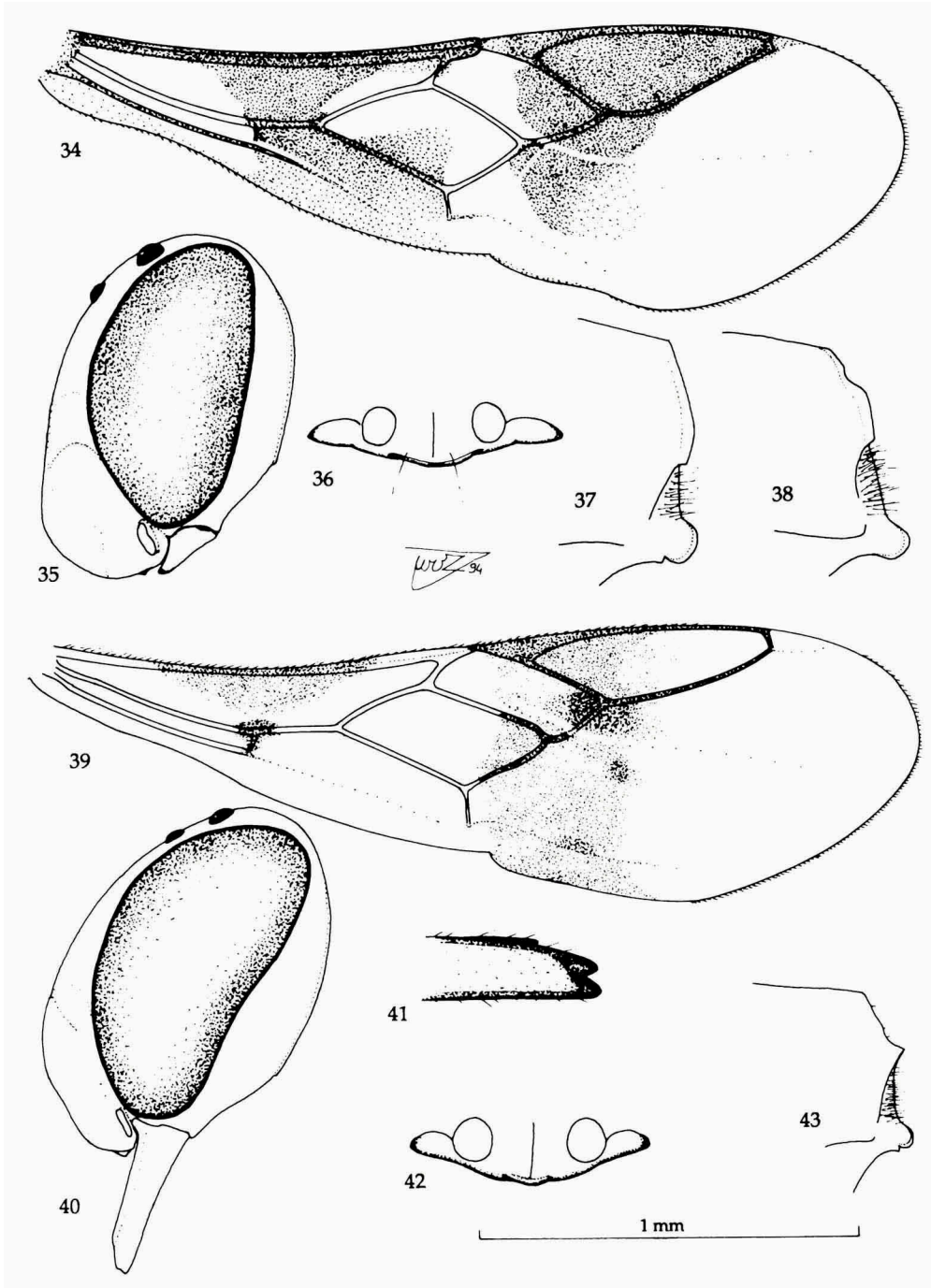
Fig. 1, *Nitela* spec., Suriname, Phedra; fig. 2, *Nitela* spec., Brazil, Belém; figs 3-9, *Nitela amazonica* Ducke, figs 3, 4, 6, 8, 9, ♀, lectotype, figs 5, 8, ♂, paralectotype. 1, 4, 5, head, lateral aspect; 2, 9, ocellar triangle, POL = post-ocular line, d = diameter of ocellus, OOL = ocellar-ocular line; 3, fore wing; 6, propodeum, lateral aspect; 7, 8, clypeal outline. 1: scale-line (= 1 ×); 2: 2.8 ×; 3, 7, 8: 1.5 ×; 4: 1.7 ×; 5, 9: 1.6 ×; 6: 2.1 ×.



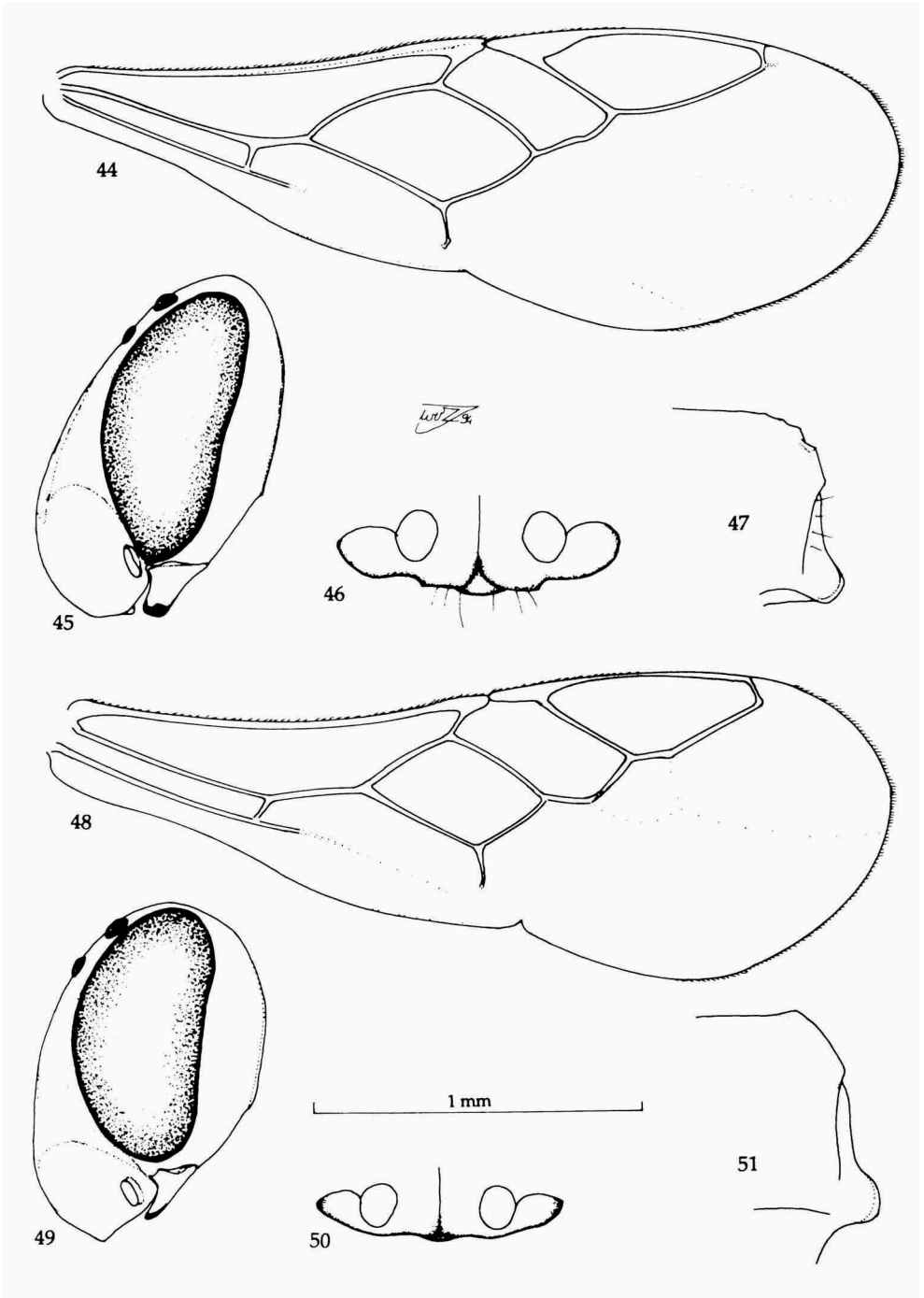
Figs 10-16, *Nitela bifida* Menke, 11, 13-16, ♂, paratype, 10, 12, ♂, Colombia, Meta. Figs 17-22, *Nitela cooperi* spec. nov., ♀, holotype, but 21 of ♂, paratype. 10, 17, fore wing; 11, 18, head, lateral aspect; 12, 14, apex of mandible; 13, 20, ocellar triangle; 15, 19, 21, clypeal outline; 16, 22, propodeum, lateral aspect. 10, 11, 17, 18: scale-line (= 1 ×); 12-14: 1.9 ×; 15, 20-22: 1.3 ×; 16: 1.1 ×; 19: 0.9 ×.



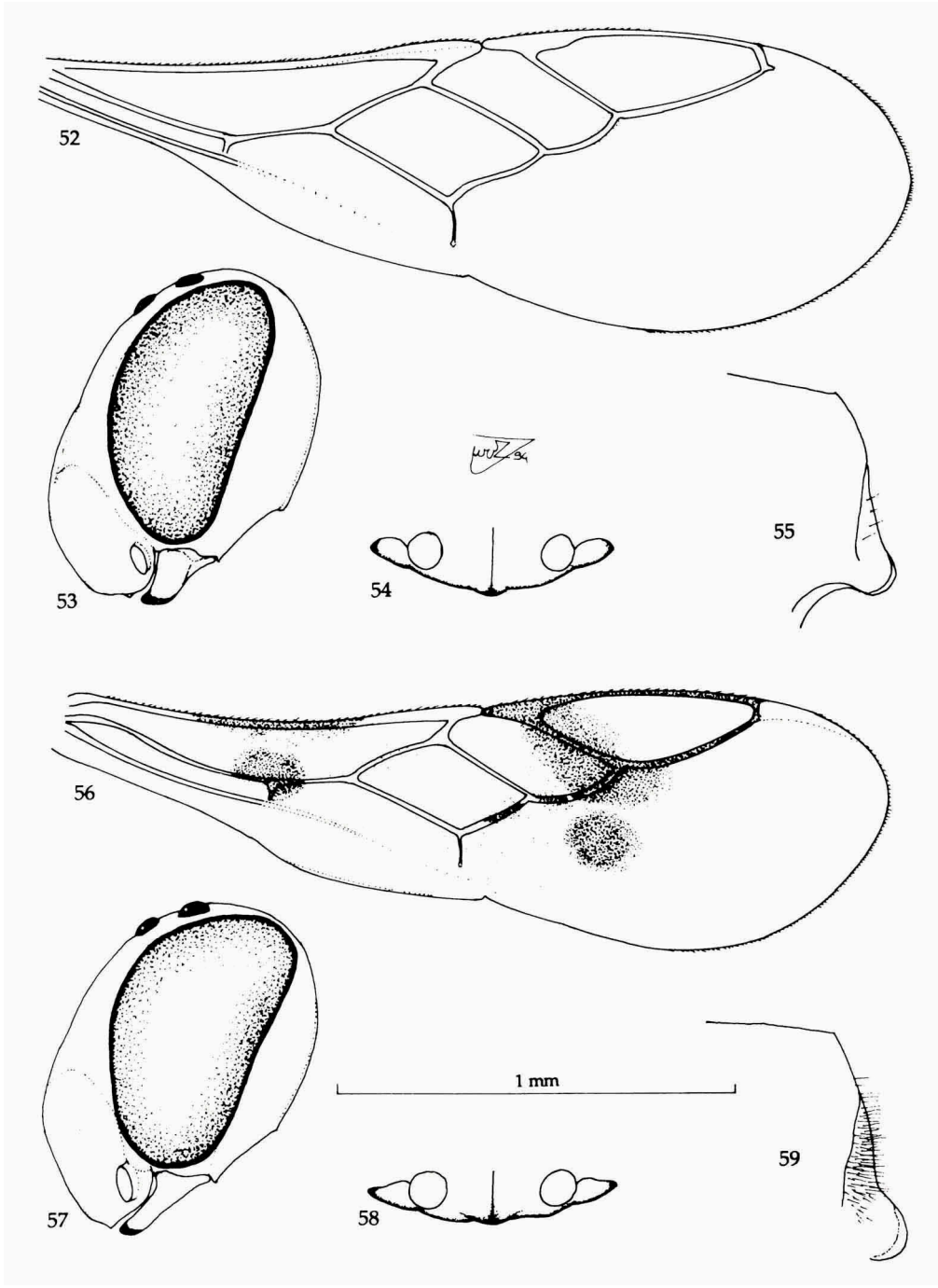
Figs 23-29, *Nitela fuscipes* spec. nov., ♀, holotype, but 26, 28, ♂, paratype. Figs 30-33, *Nitela erugifrons* spec. nov., ♂, holotype. 23, 30, fore wing; 24, 26, 31, head, lateral aspect; 25, 28, 32, clypeal outline; 27, ocellar triangle; 29, 33, propodeum, lateral aspect. 23, 24: scale-line (= 1 ×); 25: 1.1 ×; 26: 0.8 ×; 27: 1.6 ×; 28: 1.3 ×; 29, 30: 1.4 ×; 31: 1.2 ×; 32: 1.5 ×; 33: 2.1 ×.



Figs 34-38, *Nitela guiana* (Williams), fig. 34, ♀, Panama, Barro; figs 35, 36, 38, ♀, holotype; fig. 37, ♀ Brazil, Sinop. Figs 39-43, *Nitela intermedia* spec. nov., ♀, holotype. 34, 39, fore wing; 35, 40, head, lateral aspect; 36, 42, clypeal outline; 37, 38, 43, propodeum lateral aspect; 41, apex of mandible. 34, 35, 39, 40: scale-line (= 1 ×); 36, 42, 43: 1.1 ×; 37, 38: 1.6 ×; 41: 2.0 ×.



Figs 44-47, *Nitela longinervis* spec. nov., ♀, holotype. Figs. 48-51, *Nitela menkei* spec. nov., ♀, holotype. 44, 48, fore wing; 45, 49, head, lateral aspect; 46, 50, clypeal outline; 47, 51, propodeum lateral aspect. 45: scale-line (= 1 ×); 44: 0.9 ×; 46, 48: 1.4 ×; 47: 1.2 ×; 49: 1.3 ×; 50: 1.6 ×; 51: 2.2 ×.



Figs 52-55, *Nitela nigripalpis* spec. nov., ♀, holotype. Figs 56-59, *Nitela polaszeki* spec. nov., ♀, holotype. 52, 56, fore wing; 53, 57, head, lateral aspect; 54, 58, clypeal outline; 55, 59, propodeum lateral aspect. 52, 57, 58: scale-line (= 1 ×); 53: 1.5 ×; 54: 1.2 ×; 55, 59: 1.6 ×; 56: 1.1 ×.