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Some new Opiinae (Insecta: Hymenoptera: Braconidae) in the Natural History Museum Vienna

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Abstract

The following species from the collection of the Natural History Museum Vienna are described, most of them as new, one species is redescribed: *Eurytenes (Stigmatopoea) multicellis* sp.n. (India: Bombay), *Opius (Rhogadopsis) bullatianus* sp.n. (Brazil), *Opius (Gastrosema) caracasensis* sp.n. (Venezuela: Caracas), *Opius* (s.str.) *dakarensis* sp.n. (Senegal), *Opius (Gastrosema) krishnagarensis* sp.n. (India: Krishnagar), *Opius (Adontopius) nanocorpus* sp.n. (Bulgaria), *Opius (Tolbia) paraphytomyzae* sp.n. (England), *Opius* (s.str.) *pseudonapomyzae* sp.n. (South Africa), *Opius (Stomosema) punctaticlypeus* sp.n. (South Africa), *Opius (Phaedrotoma) smarti* FISCHER, 1966 (Australian Region, Philippine Islands), *Opius (Phaedrotoma) solanivora* sp.n. (South Africa: Pretoria), *Opius (Gastrosema) vicinigundae* sp.n. (India: Krishnagar; Singapore), *Pokomandya haplomyzae* sp.n. (Argentina: Buenos Aires). All newly described species are distinguished from the taxonomically nearest taxa. Morphological details are figured. New host and distribution records are provided for *Opius (Rhogadopsis) irregularipes* FISCHER, 1963 (new to Colombia; new combination in subgenus *Rhogadopsis*), and *Opius (Mimiropius) obscurifactus* FISCHER, 1968 (new to South Africa: Pretoria). Most species are reared from Agromyzidae (Diptera).

Key words: Hymenoptera, Braconidae, Opiinae, new species, redescription.

Zusammenfassung

Die folgenden Arten aus der Sammlung des Naturhistorischen Museums Wien werden beschrieben. Die meisten sind neu, eine Art wird wiederbeschrieben: *Eurytenes (Stigmatopoea) multicellis* sp.n. (Indien: Bombay), *Opius (Rhogadopsis) bullatianus* sp.n. (Brasilien), *Opius (Gastrosema) caracasensis* sp.n. (Venezuela: Caracas), *Opius* (s.str.) *dakarensis* sp.n. (Senegal), *Opius (Gastrosema) krishnagarensis* sp.n. (Indien: Krishnagar), *Opius (Adontopius) nanocorpus* sp.n. (Bulgarien), *Opius (Tolbia) paraphytomyzae* sp.n. (England), *Opius* (s.str.) *pseudonapomyzae* sp.n. (Südafrika), *Opius (Stomosema) punctaticlypeus* sp.n. (Südafrika), *Opius (Phaedrotoma) smarti* FISCHER, 1966 (Australische Region, Philippinen), *Opius (Phaedrotoma) solanivora* sp.n. (Südafrika: Pretoria), *Opius (Gastrosema) vicinigundae* sp.n. (Indien: Krishnagar; Singapur), *Pokomandya haplomyzae* sp.n. (Argentinien: Buenos Aires). Sie werden von taxonomisch nahe stehenden Taxa unterschieden. Morphologische Einzelheiten werden abgebildet. Neue Wirts- und Verbreitungsangaben werden für *Opius (Rhogadopsis) irregularipes* FISCHER, 1963 (neu für Kolumbien; neue Kombination in der Untergattung *Rhogadopsis*) und *Opius (Mimiropius) obscurifactus* FISCHER, 1968 (neu für Südafrika: Pretoria) gemacht. Die meisten Arten wurden aus Minierfliegen (Diptera, Agromyzidae) gezogen.

Introduction

The paper deals with a series of Opiinae, which the Vienna Museum received as a gift from the dipterist Mr. K. A. Spencer about 40 years ago. This material comes from several continents, e.g., South America, Africa, India, and Europe. The examples are reared from their agromyzid hosts, which makes them especially valuable. Surprising

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is the discovery of the genus *Pokomandya* FISCHER, 1959 in the New World (Argentina). Moreover, *Opius nanocorpus* sp.n., collected by Angel Zaykov, is described from Bulgaria, and *Opius smarti* is redescribed. The Opiinae are solitary parasitoids of their Diptera hosts. This reduces the chance to collect longer series of a given species. Collections contain very often only few or even single specimens of species, especially of new ones. Therefore, descriptions of new species of Opiinae based on only a single or a few specimens, cannot be avoided.

Abbreviations:

a'	anal vein of hind wing
b	basal vein of fore wing
B	brachial cell of fore wing
cc1	1st cubital cross-vein of fore wing
cu1b	vein of fore wing closing B distally below
cu2'	2 nd abscissa of cubital vein of hind wing
Cu2	2 nd cubital cell of fore wing
d	discoidal vein of fore wing
F, F1, F2, etc.	flagellomere(s), 1 st , 2 nd , etc.
Fm, Fp, Fa	a middle, penultimate, apical flagellomere
np	parallel vein of fore wing
nr	recurrent vein of fore wing
nr'	recurrent vein of hind wing
nv	nervulus of fore wing
R	radial cell of fore wing
r'	radial vein of hind wing
r1, r2, r3	the abscissae of radial vein (r) of fore wing
SM'	submedial cell of hind wing
st	pterostigma of fore wing
T, T1, T2, etc.	1 st , 2 nd , etc. metasomal tergite(s)

Genus *Eurytenes* FOERSTER, 1862

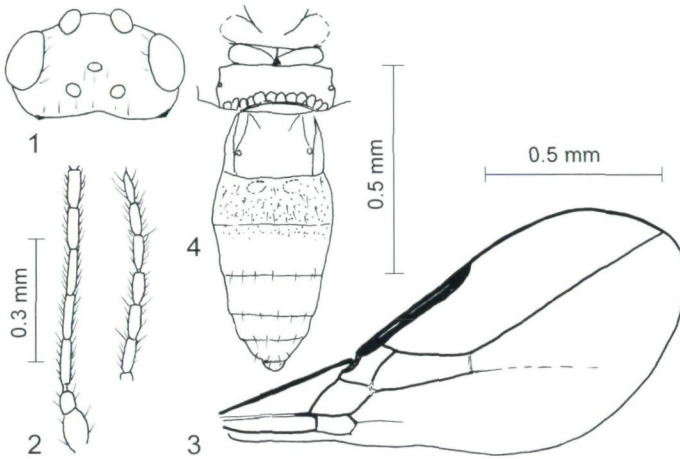
Eurytenes FOERSTER, 1862: 259.

Eurytenes (Stigmatopoea) multicellis sp.n. (Figs. 1 - 4)

Type material: holotype (♂, Natural History Museum Vienna): Bombay, 15.1.60, Ex *Pseudonap. asiatica* SPEN., K. A. Spencer det. 1960.

Description of ♂: Length of body: 1.2 mm.

Head: Twice as wide as long, 1.8 times as wide as face, 1.5 times as wide as meso-scutum, 2.8 times as wide as T1; eyes projecting, twice as long as temples, eyes and



Figs. 1 - 4: *Eurytenes (Stigmatopoea) multicellis* sp.n.: (1) Head dorsal; (2) base and apex of antenna; (3) fore wing; (4) dorsal view of metanotum, propodeum, and metasoma.

temples rounded in a continuous curve, distance between toruli and their distance from eyes as great as their diameter, some sparse hairs laterally and on occiput, the latter only weakly excavated; distance between ocelli a little greater than their diameter, distance between ocelli and eyes as great as width of ocellar area. Face 1.33 times as wide as high, evenly arched, middle elevation weakly indicated, with some scattered erect hairs without recognizable hair-punctures, eye margins parallel. Clypeus 3 times as wide as high, epistomal furrow evenly curved, smooth, excavated below, longitudinally arched, with a row of erect bristles, arising from weak but distinct punctures. Tentorial pits small, distance between them 2.5 times as great as their distance from eyes. Cheeks as long as basal width of mandibles. A gap between clypeus and mandibles, mandibles not expanded at base, maxillary palpi about as long as height of head. Antennae 1.7 times as long as body, 23-segmented; F1 and F2 3 times as long as wide, the following F only slightly shorter, Fm 2.0 - 2.2 times, Fp twice as long as wide, Fa with minute point; the F moderately separated from each other, hairs nearly as long as the width of F, some apical hairs erect, 2 sensilla visible in lateral view.

Mesosoma: 1.25 times as long as high, dorsum very slightly arched, evenly rounded behind. Mesoscutum slightly wider than long, rounded in front, notauli present on declivity, crenulate and margined in front, passing in a curve into marginal furrows, dorsal fovea absent. Prescutellar furrow crenulate. The remainder of mesosoma smooth. Propodeum short, more than twice as wide as long, with a row of closed cells along hind margin, latter broad and curved and high above the articulation of metasoma. Sternaulus absent, all other furrows of the side of mesosoma smooth. Hind femur 5 times as long as wide.

Wing: st parallel sided, abruptly narrowed at apex, reaching distad as far as Cu2, r arising from basal quarter of st, r1 as long as st wide, forming nearly a straight line with r2, r2 1.66 times as long as cc1, r3 3 times as long as r2, bent outwards, R reaching apex of wing, nr postfurcal, Cu narrowed distally, d 1.2 times as long as nr, nv postfurcal by its own width, B closed, np arising from middle of B; hind wing rather narrow, hairs on distal half of hind margin as long as wing wide.

Metasoma: T1 as long as wide, only a little wider behind than in front, dorsal carinae developed only in front, entirely smooth, laterotergites visible in dorsal view. T2 very

finely reticulated, with delicate hairs distributed over surface. T2 with 2 oval, depressed areas near base. T3 reticulated only on extreme base.

Colouration: Brown: head dorsally, flagellum, mesoscutum, scutellum, and metascutum. Yellow: scape, pedicel, face, temples, clypeus, mouth parts, remainder of mesosoma, T1 and T2 (the latter bright yellow). Rest of metasoma black. Wing membrane hyaline.

♀: Unknown.

Taxonomic position: The species belongs to the subgenus *Stigmatopoea* FISCHER, 1986 and most closely resembles *E. cubitalis* (FISCHER, 1959) and *E. cinctiventris* (FISCHER, 1959) (sec. FISCHER 1998). These three species can be separated as follows:

- | | | |
|---|--|--------------------------------|
| 1 | Propodeum very short, more than twice as wide as long, with row of closed cells along hind margin. 1.2 mm. India (Bombay). | <i>E. multicellis</i> sp.n., ♂ |
| – | Propodeum at most a little wider than long, without such row of closed cells along hind margin. | 2 |
| 2 | T3 and following T with hind margins yellow. 3.1 mm. Hungary. ... | <i>E. cinctiventris</i> , ♀♂ |
| – | All T of metasoma without yellow hind margins. 1.9 - 2.2 mm. Finland, Austria, Bulgaria, Japan. | <i>E. cubitalis</i> , ♀♂ |

If one tries to identify this species within the genus *Opius*, it would run to the subgenus *Phaedrotoma* FOERSTER, 1862. It also can be distinguished from the other species as follows:

- | | | |
|---|---|--|
| 1 | Propodeum very short, more than twice as wide as long, with row of closed cells along hind margin. 1.2 mm. India (Bombay). | <i>E. multicellis</i> sp.n., ♂ |
| – | Propodeum at most a little wider than long, without such row of closed cells along hind margin. | nearly all Old World species of <i>Phaedrotoma</i> (see FISCHER 1987a) |

Distribution: India (Bombay).

Host: *Pseudonapomyza asiatica* SPENCER, 1961 (Diptera, Agromyzidae).

Etymology: The name refers to the cells along the hind margin of the propodeum.

Genus *Opius* WESMAEL, 1835

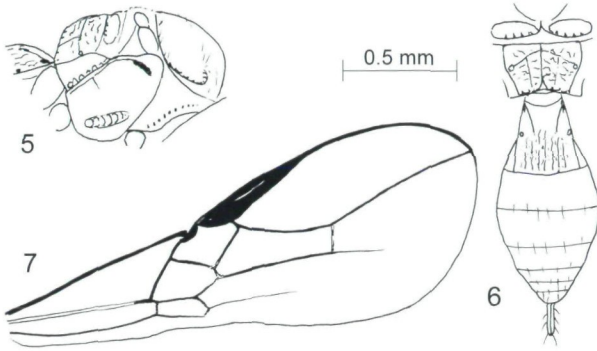
Opius WESMAEL, 1835: 115.

Opius (Rhogadopsis) bullatianus sp.n. (Figs. 5 - 7)

Type material: holotype (♀, Natural History Museum Vienna): Sao Paulo, Bras. Em. 12. 9. 47, Ex *Haplomyza bullati* Sp. R.A. Spencer det. 1963.

Description of ♀: Length of body: 1.75 mm.

Head: 2.1 times as wide as long, twice as wide as face, 1.3 times as wide as mesoscutum, 2.6 times as wide as T1; eyes strongly protruding, twice as long as temples, eyes and temples forming a continuous curve, distance between toruli as well as distance between toruli and eyes as great as their diameter, occiput weakly excavated. Ocelli scarcely protruding, distance between them as great as their diameter, distance between lateral ocel-



Figs. 5 - 7: *Opus (Rhogadopsis) bulatianus* sp.n.: (5) mesosoma lateral; (6) dorsal view of metanotum, propodeum, and metasoma; (7) fore wing.

lus and eye as great as width of ocellar area. Upper surface with scattered hairs laterally and near occiput. Face only a little wider than high, median elevation only vague, with very fine and scattered hairs, hair-punctures scarcely recognizable, eye margins parallel. Clypeus twice as wide as high, weakly arched, excavate below, and distinctly expanded towards face. Tentorial pits round, distance between them twice as great as their distance from eyes. Subocular suture distinct. Cheeks as long as width of mandibles at base. A gap between clypeus and mandibles, mandibles not expanded at base, maxillary palpi as long as height of head. Antennae little longer than body, 24-segmented; F1 4 times as long as wide, Fm and Fp twice as long as wide, Fa pointed; all F clearly separated from each other, hairs shorter than width of F, two sensilla visible in lateral view.

Mesosoma: 1.3 times as long as high, dorsum arched. Mesoscutum 1.4 times as wide as long, lateral lobes rounded, nearly straight in front, notauli developed on declivity, passing in a curve into the smooth, complete marginal furrows, bare except for a few hairs along imaginary course of notauli, dorsal fovea absent. Prescutellar furrow densely crenulate. Postaxillae smooth. Lateral areas of metascutum only by way of suggestion crenulate. Propodeum with central carina, basal carina, pentagonal areola, and costulae, areas rugose or with folds, those on hind corners smooth. Anterior furrow of side of pronotum weakly crenulate. Sternaulus strongly crenulate, shortened on both sides, lower furrow of metapleuron crenulate, other furrows smooth. Hind femora 5 times as long as wide.

Wing: Distal part of st wedge-shaped, r arising from basal quarter of st, rl much shorter than width of st, passing in a curve into r2, r2 twice as long as ccl, r3 curved outwards, 1.8 times as long as r2, Cu2 weakly narrowed distally, nr strongly postfurcal, d 1.5 times as long as nr, nv postfurcal, B closed, np arising from middle of distal side of B; r' absent or recognizable as a fold, cu2' developed as fold, nr' absent.

Metasoma: T1 1.3 times as long as wide, weakly and evenly narrowed towards base, behind 1.5 times as wide as in front, irregularly longitudinally striated, uneven between striae, dorsal carinae reaching as far as hind margin. Ovipositor sheaths as long as T1.

Colouration: Dark brown to black. Yellow: scape, pedicel, anellus, F1 in part, clypeus, mouth parts, all legs, tegulae and anterior margin of the T2. T1 reddish brown. Wing membrane hyaline.

♂: Unknown.

Taxonomic position: The species runs to couplet 7 in the key by FISCHER (2001) to the *O. tucumanus* group of the subgenus *Lissosema* FISCHER, 1972 (synonym for *Rhogadopsis* BRÈTHES, 1913).

Differences between *O. roveretoi* FISCHER, 1962 or *O. euryanthe* FISCHER, 1968 and the new species are as follows:

- 1 Body predominantly reddish brown. Lower margin of clypeus nearly straight. Mesosoma precipitous in region of propodeum (lateral view). Propodeum coarsely rugose. Furrows of metapleuron smooth. 2.2 mm. Argentina. *O. roveretoi*, ♂
- Head and mesosoma dark. Lower margin of clypeus excavated. Upper side of mesosoma evenly arched, not sharply declivous behind. Propodeum with median carina, areola and costulae, areas reticulate or with folds, but areas on posterior corners smooth. Lower furrow of metapleuron crenulate. 1.75 mm. Brazil. *O. bullatianus* sp.n., ♀
- 1 Head and mesosoma reddish brown; only three spots on mesoscutum, one on sides of pronotum and a few more spots dark. Clypeus 3 times as wide as high. Notauli developed only in front, sides of mesoscutum margined only near tegulae. Prepectal furrow crenulate. T1 longitudinally striated; dorsal carinae developed in front, passing into striation. 2.1 mm. Brazil. *O. euryanthe*, ♀
- Head and mesosoma entirely dark. Clypeus twice as wide as high. Notauli developed on declivity, passing into complete marginal furrows. Prepectal furrow smooth. T1 longitudinally rugose; dorsal carinae widely separated from each other, reaching as far as posterior margin. 1.75 mm. Brazil. *O. bullatianus* sp.n., ♀

Distribution: Brazil.

Host: *Haplomyza bullati* SPENCER, 1963 (Diptera, Agromyzidae).

Etymology: The name refers to the specific name of the host.

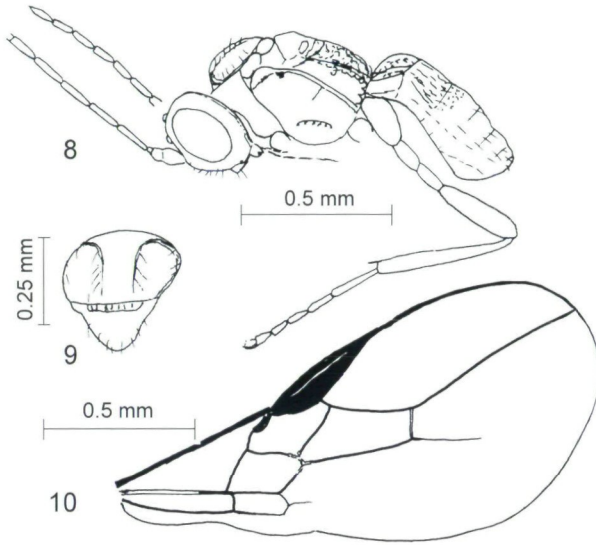
Opius (Gastrosema) caracasensis sp.n. (Figs. 8 - 10)

Type material: holotype (♂, Natural History Museum Vienna): Caracas, Ven., Em. 6. 12. 57[?], ex *Mel.* "pabbiae" sp., K.A. Spencer det 1963.

Remark: The author cannot read exactly the year of emergence and not the word after "*Mel.*". The latter may be "pabbiae".

Description of ♂: Length of body: 1.3 mm.

Head: 2.2 times as wide as long, 1.8 times as wide as face, 1.4 times as wide as mesoscutum, 3 times as wide as T1; eyes protruding, narrowed behind eyes, eyes twice as long as temples, distance of toruli from each other as great as their diameter, distance from eyes a little shorter, upper side with some hairs laterally and on occiput; distance of ocelli from each other as great as their diameter, distance from eyes as great as width of ocellar area. Face 1.25 times as wide as high, with a few scattered hairs, hair-punctures hardly recognizable, middle elevation weak, and eye margins parallel. Clypeus 3.5 times as wide as high, lower margin weakly retracted, lateral corners a little protruding, weakly arched, with a few inconspicuous hairs. Distance of tentorial pits from each other 3 times as great as distance from eyes. Malar space as wide as basal width of mandible. Malar furrow absent. A gap between clypeus and mandibles, mandible not expanded at base, maxillary palpi as long as height of head. Antennae 1.5 times as long as body, 21-



Figs. 8 - 10: *Opius (Gastrosema) caracasensis* sp.n.: (8) head, mesosoma and metasoma with hind leg, base and apex of antenna, lateral; (9) mesoscutum and scutellum, dorsal; (10) fore wing.

segmented; F1, F2 4 times as long as wide, most F 2.5 times, Fp twice as long as wide, Fa with tiny point; F recognizably separated from each other, the longest hairs as long as width of F, hair-punctures visible, in lateral view 2 sensilla discernable.

Mesosoma: 1.5 times as long as high, upper side only weakly arched. Mesoscutum 1.3 times as wide as long, lateral lobes round, central lobe separated in front, notauli deep on declivity, margined in front, passing into strong margined lateral furrows, notauli on disc delicate, smooth, with some hairs in a row, but reaching beyond middle of mesoscutum. Dorsal fovea absent. Prescutellar furrow crenulate. Postaxillae smooth. Metascutum with small rugose area, lateral areas nearly smooth. Propodeum irregularly rugose, with two longitudinal carinae, margined laterally behind spiracles. Sternaulus shortened on either side, narrowly crenulate, lower furrow of metapleuron narrowly crenulate, the remaining furrows smooth. Hind femora 5 times as long as wide.

Wing: st moderately wide, r arising from basal third, r1 shorter than width of st, r2 1.2 times as long as cc1, r3 bent outwards, 2.5 times as long as r2, R reaching apex of wing, Cu2 weakly narrowed distally, r2 and cu2 straight, nr postfurcal, d 1.5 times as long as nr, nv nearly interstitial, B closed, np arising from middle of B; r' and nr' absent, cu2' indicated only as fold.

Metasoma: T1 as long as wide, slightly narrowed basally, rugose, dorsal carinae reaching as far as hind margin. T2 rugose with longitudinal tendency, with two impressions at base. T3 very finely sculptured in basal half.

Colouration: Black to dark brown. Sides of mesosoma more or less dark brown. Yellow: Scape, pedicel, anellus, clypeus, mouthparts, legs, tegulae, wing venation, T1 and T2. Wing membrane hyaline.

♀: Unknown.

Taxonomic position: The species belongs to the *O. melanocephalus* group of the subgenus *Gastrosema* FISCHER, 1972. In the key of FISCHER (1977) it can be inserted before

couplet 12 (following from 9') as follows. The given character separates it from all following species.

- 12a Notauli delicate, smooth, with some hairs in row, but reaching beyond middle of mesoscutum. 1.3 mm. Venezuela. ***O. caracasensis* sp.n., ♂**
 – Notauli developed only on declivity (or absent). **12**

The species that key through couplet 12 are *Opius* (*Gastrosema*) *tangens* FISCHER, 1964, *O. (G.) echo* FISCHER, 1968, *O. (G.) eunomia* FISCHER, 1968, *O. (G.) euphemia* FISCHER, 1968, *O. (G.) apertus* FISCHER, 1964, *O. (G.) adductus* FISCHER, 1964, *O. (G.) lantanae* BRIDWELL, 1919, *O. (G.) unificatus* FISCHER, 1963, and *O. (G.) guatemalensis* FISCHER, 1963.

Distribution: Venezuela (Caracas).

Host: *Melanagromyza* sp. (Diptera, Agromyzidae).

Etymology: The name refers to the type locality, Caracas in Venezuela.

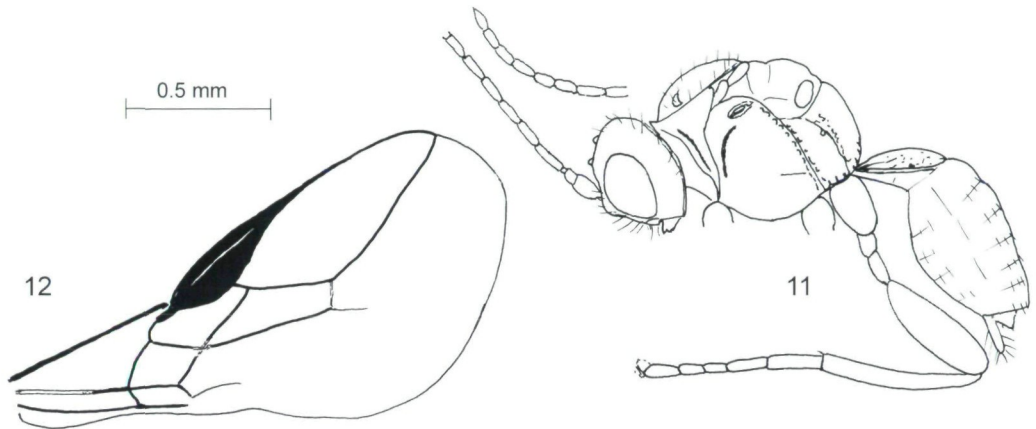
***Opius* (s.str.) *dakarensis* sp.n. (Figs. 11 - 12)**

Type material: holotype (♀, Natural History Museum Vienna): Dakar, West Africa, Em. 10.9.57, Ex *Agromyza* sp. det. K.A. Spencer.

Description of ♀: Length of body: 1.5 mm.

Head: Twice as wide as long, 1.7 times as wide as face, 1.5 times as wide as mesoscutum; eyes scarcely protruding, across temples nearly as wide as across eyes, eyes 1.3 times as long as temples, distance of toruli from each other and from eyes as great as their diameter, occiput clearly excavated; upper side with inconspicuous hairs laterally and on occiput; distance of ocelli from each other as great as their diameter, distance from eyes as great as width of ocellar area. Face 1.3 times as wide as high, middle elevation distinct, with inconspicuous hairs, hair-punctures not discernable, eye margins parallel. Clypeus 3 times as wide as high, flat, lower edge margined and weakly bowed (nearly straight), with about 5 clear hair-punctures in transverse row. Tentorial pits 3.5 times distance from each other as from eyes. Malar space shorter than basal width of mandible. Malar furrow absent. Mouth closed, mandible gradually a little widened towards base, but not expanded here, maxillary palpi (probably) as long as height of head. Antennae scarcely longer than body, 26-segmented; F1 3 times as long as wide, the following little shorter, F12 and Fp 1.8 times as long as wide; F moderately separated from each other, longest hairs as long as width of F, in lateral view 2 sensilla visible.

Mesosoma: 1.3 times as long as high, upper side arched. Mesoscutum 1.25 times as wide as long, middle lobe scarcely separated, notauli present on declivity, smooth, reaching disc only just in front, hardly reaching lateral margin, sides clearly margined only near tegulae, dorsal fovea absent. Prescutellar furrow crenulate. Rest of mesosoma smooth, except for propodeum with very fine sculpture at sides; propodeum separated from metapleuron by an irregular, but more or less straight edge. Sternaulus smooth. Lower edge of metapleuron with very narrow crenulate furrow. Hind femora 3.5 times as long as wide.



Figs. 11 - 12: *Opius* (s.str.) *dakarensis* sp.n.: (11) head, mesosoma and metasoma with hind leg, base and apex of antenna, lateral; (12) fore wing.

Wing: st moderately wide, wedge-shaped distally, r arising before middle, r1 very short, r2 1.1 times as long as cc1, r3 2.33 times as long as r2, R nearly reaching apex of wing, nr interstitial, Cu2 weakly narrowed distally, cu2 and r2 straight, d 1.25 times as long as nr, nv interstitial, B open, culb absent, d passing in a bow into np; r' and nr' absent, cu2' indicated, if at all, as a fold.

Metasoma: T1 1.3 times as long as wide, apically 1.5 times as wide as base, parallel-sided behind, slightly narrowed in front, spiracles on small tubercles, with very weak sculpture, dorsal carinae reaching middle of disc, separated from each other. Ovipositor sheaths not projecting.

Colouration: Reddish yellow. Dark to black: antennae, ocellar area, T3 and following terga. Yellow: scape below, mouthparts, legs, tegulae, and wing venation. Wing membrane hyaline.

♂: Unknown.

Taxonomic position: The species most closely resembles *Opius* (s.str.) *martiarushensis* FISCHER, 1963 (see key by FISCHER 1987a). Several characters distinguish the new species:

- | | |
|---|---|
| 1 | r2 twice as long as cc1, r3 bent outwards, R reaching apex of wing. Body predominantly black. In addition: antennae 32-segmented, F1 2.5-times as long as wide. Mesosoma 1.33-times as long as high, posterior mesopleural furrow smooth. 2.0 mm. Tanzania. <i>O. martiarushensis</i>, ♂ |
| — | r2 1.1 times as long as cc1, r3 bent inwards, R ending before apex of wing. Body predominantly reddish yellow. In addition: antennae 26-segmented, F1 twice as long as wide. Mesosoma 1.25-times as long as high, posterior mesopleural furrow narrowly crenulate. 1.5 mm. Senegal (Dakar). <i>O. dakarensis</i> sp.n., ♀ |

Distribution: Senegal.

Host: *Agromyza* sp. (Diptera, Agromyzidae).

Etymology: The name refers to the type locality Dakar.

***Opius (Gastrosema) krishnagarensis* sp.n.** (Figs. 13 - 14)

Type material: holotype (♀, Natural History Museum Vienna): India, Krishnagar N. Calcutta 24. 1. 60, Ex *Mel.* sp. on *Smilax*, K.A. Spencer det. 1960.

Description of ♀: Length of body: 1.4 mm.

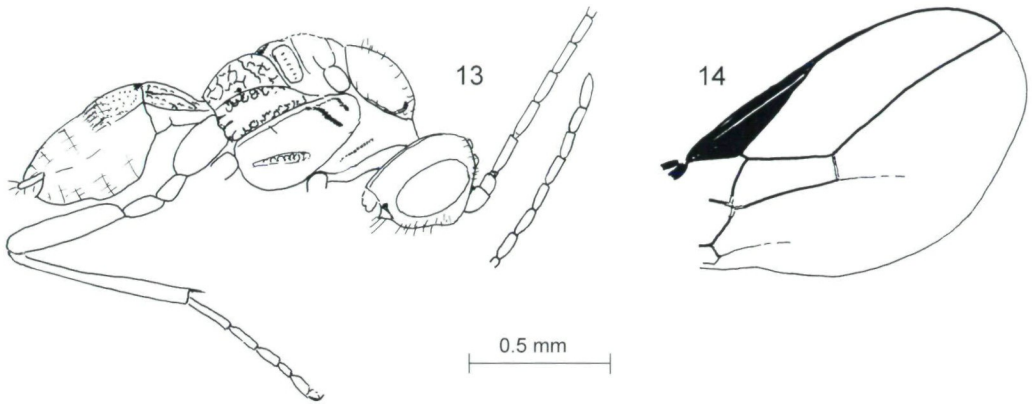
Head: twice as wide as long, 1.9 times as wide as face, 1.3 times as wide as mesoscutum, 2.5 times as wide as T1; eyes protruding, twice as long as temples, eyes and temples rounded in a continuous curve, distance of toruli from each other little greater than from eyes, occiput weakly excavated; upper side of head with fine, scattered hairs, hair-punctures scarcely indicated; distance of ocelli from each other as great as their diameter, distance from eye as great as width of ocellar area. Face 1.25 times as wide as high, longitudinal middle elevation weakly developed, weakly hairy, hair-punctures scarcely recognizable, eye margins parallel-sided. Clypeus twice as wide as high, arched, lower edge emarginate, epistomal suture evenly curved, with scattered long hairs. Distance of tentorial pits from each other twice as great as distance from eyes. Malar space as long as basal width of mandibles. Subocular suture present. A gap between clypeus and mandibles, mandibles not expanded at base, maxillary palpi as long as height of head. Antennae about 1.4 times as long as body, 23-segmented; F3 3 times, F2 2.5 times, Fm twice, Fp twice as long as wide, F1 1.2 times as long as F2, F2 1.2 times as long as F3, following F of same length; F clearly separated from each other, hairs scarcely as long as width of F, 2 sensilla visible in lateral view.

Mesosoma: 1.4 times as long as high, upper side arched. Mesoscutum 1.3 times as wide as long, lateral lobes rounded, middle lobe straight in front; notauli impressed on declivity, smooth, passing into marginal furrows, the latter smooth, hairs along imaginary course of notauli and along margins, otherwise bare. Prescutellar furrow crenulate. Scutellum and postaxillae smooth. Lateral areas of metascutum slightly crenulate. Propodeum much wider than long, with numerous deep, irregular cells. Anterior furrow of sides of pronotum very weakly crenulate. Sternaulus narrow, shortened on either side, finely crenulate, posterior mesopleural furrow smooth. Metapleuron smooth with a few hairs, upper and lower furrow strongly crenulate, posterior depression with a few cross folds. Hind femora 5 times as long as wide.

Wing: st moderately wide, r arising from basal third, distal part wedge-shaped, rl much shorter than width of st, r2 twice as long as ccl, r3 weakly bent outwards, 2.3 times as long as r2, R reaching apex of wing, Cu2 weakly narrowed distally, nr weakly postfurcal, d 1.3 times as long as nr, nv postfurcal by its own width, B closed, np arising from middle of distal side; r' and cu2' recognizable only as folds, nr absent.

Metasoma: T1 scarcely longer than apical width, lateral margins straight, evenly narrowed towards base, at apex twice as wide as at base, densely rugose, dorsal carinae reaching hind edge. T2 fine rugose, in the middle at base with a smooth elevation, with a depressed area on either side. T3 densely longitudinally striate at base. Ovipositor sheaths not reaching beyond apex of metasoma.

Colouration: Yellow: scape, pedicel, anellus, head with mouth parts, mesopleuron below, legs, tegulae, wing venation, T2 and basal half of T3. Remainder of mesosoma and T1 dark brown, only two lines on mesoscutum and scutellum weakly reddish. Hind third of metasoma black. Wing membrane hyaline.



Figs. 13 - 14: *Opius (Gastrosema) krishnagarensis* sp.n.: (13) head, mesosoma and metasoma with hind leg, base and apex of antenna, lateral; (14) part of fore wing.

♂: Unknown.

Taxonomic position: This species of the subgenus *Gastrosema* keys to *O. retracticauda* FISCHER, 1997 (FISCHER 1997). The species can be separated as follows:

- 1 Mesopleuron finely coriaceous. Sternaulus more strongly coriaceous, but not crenulate. Head in part dark. 2.3 mm. Ruanda, Burundi, Republic Congo. *O. retracticauda*, ♀♂
- Mesopleuron smooth. Sternaulus narrow, distinctly crenulate. Head entirely reddish yellow. 1.4 mm. India. *O. krishnagarensis* sp.n., ♀

Distribution: India.

Host: *Melanagromyza* sp. (Diptera, Agromyzidae).

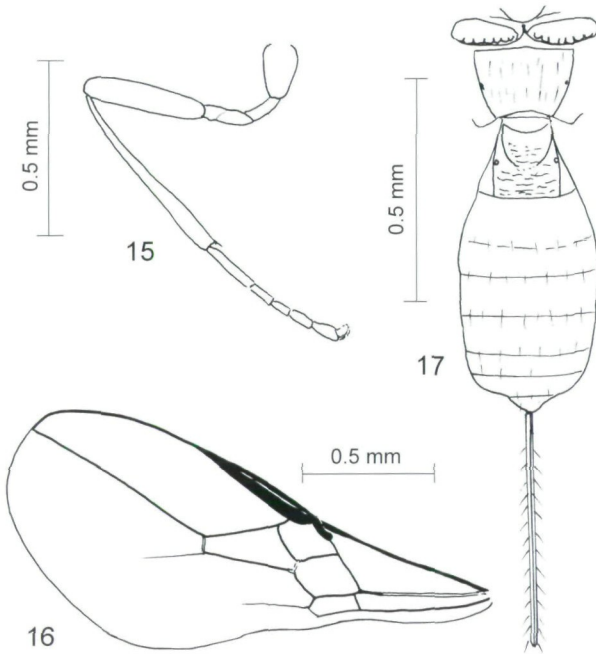
Etymology: The name refers to the type locality, Krishnagar in India.

Opius (Adontopius) nanocorpus sp.n. (Figs. 15 - 17)

Type material: holotype (♀, Natural History Museum Vienna): Plovdiv, 22.05.93, leg. Zaykov; paratypes: same data, 2 ♀♀; same data, except 21.05.93, 1 ♀.

Description of ♀: Length of body: 1.5 mm.

Head: twice as wide as long, 1.7 times as wide as face, 1.5 times as wide as mesoscutum, 2.2 times as wide as T1; eyes 1.5 times as long as temples, little protruding, eyes and temples rounded in a continuous curve, distance of toruli from each other and from eyes as great as their diameter, occiput very weakly excavated; upper side nearly bare, ocelli smaller than distance from each other, distance from eyes as great as width of ocellar area. Face 1.4 times as wide as high; middle elevation broadened below, with a few inconspicuous hairs without recognizable hair-punctures, eye margins parallel. Clypeus 3 times as wide as high, arched, lower edge straight in frontal view, with some long erect hairs, hair-punctures recognizable. Tentorial pits 3 times as distant from each other as from eyes. Malar space shorter than basal width of mandible. Malar furrow distinct. A gap between clypeus and mandibles, mandible not expanded at base, maxillary palpi as



Figs. 15 - 17: *Opius (Adontopius) nanocorpus* sp.n.: (15) hind leg; (16) fore wing; (17) lateral areas of metascutum, propodeum and metasoma, dorsal.

long as head height. Antennae a little longer than body, 23-segmented; F1 4 times as long as wide, following F slightly shorter, Fm 2.2 times, Fp twice as long as wide; F clearly separated from each other, longest hairs as long as width of F, in lateral view 2 sensilla visible.

Mesosoma: 1.33 times as long as high, upper side arched. Mesoscutum 1.25 times as wide as long, nearly evenly rounded in front of tegulae; notauli present only on declivity, on disc nearly absent, dorsal fovea absent, laterally margined near tegulae. Prescutellar furrow very narrow and crenulate. Scutellum triangular, flat, a few hairs laterally. Postaxillae and propodeum smooth, the latter only with a few inconspicuous hairs. Lateral areas of metascutum very narrowly crenulate behind. Sides of mesosoma smooth, sternaulus nearly absent, all furrows smooth. Hind femora 5 times as long as wide.

Wing: st wedge-shaped distally, r arising from basal forth, r1 as long as width of st, forming straight line with r2, r2 1.5 times as long as cc1, r3 3 times as long as r2, bent outwards, R reaching apex of wing, nr postfurcal, Cu2 narrowed distally, d 1.3 times as long as nr, nv postfurcal by its own width, B closed, np arising from middle of distal side of B; r', cu2' and nr' absent.

Metasoma: T1 as long as wide, twice as wide as at base, sides straight, converging anteriorly, rather evenly rugose, dorsal carinae bent backwards, uniting in the centre. Ovipositor sheaths as long as metasoma.

Colouration: Black. Yellow: base of antennae as far as F2, clypeus, mouthparts, legs, tegulae, and wing venation. T2+3 black mixed with yellow. Wing membrane hyaline.

Variability: antennae 23-24-segmented.

♂: Unknown.

Taxonomic position: The species most closely resembles *Opius* (*Adontopius*) *nanosoma* FISCHER, 1989 (see FISCHER 1989). It can be distinguished as follows.

- | | | |
|---|---|-------------------------------|
| 1 | T1 smooth to longitudinally fissured. Dorsal carinae of T1 straight converging beyond middle. Ovipositor sheaths 0.7 times as long as metasoma. Face yellow. 1.5 mm. Slovakia. | <i>O. nanosoma</i> , ♀ |
| – | T1 rather evenly rugose. Dorsal carinae of T1 curved medially, uniting in centre. Ovipositor sheaths as long as metasoma. Face dark. 1.5 mm. Bulgaria. | <i>O. nanocorpus</i> sp.n., ♀ |

Distribution: Bulgaria.

Etymology: The name indicates the small size of the species.

Opius (*Tolbia*) *paraphytomyzae* sp.n. (Figs. 18 - 22)

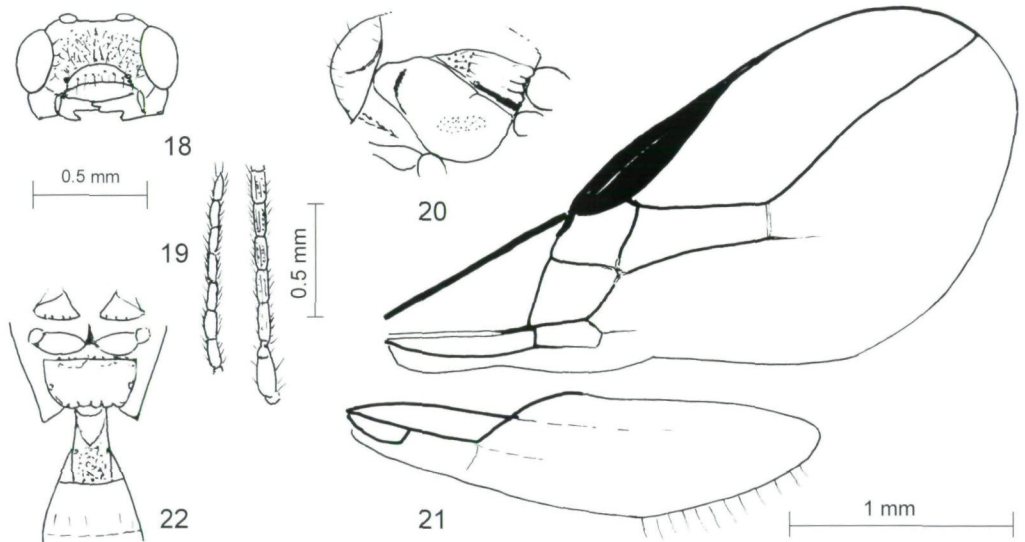
Type material: holotype (♂, Natural History Museum Vienna): England: Cambridge, 19.4.61, ex *Paraphytomyza* sp. det. G.C.D. Griffiths '65, on *Galium aparine* emerged 1.5.62.

Description of ♂: Length of body: 2.0 mm.

Head: Twice as wide as long, 1.8 times as wide as face, 1.4 times as wide as mesoscutum, 3 times as wide as T1; eyes twice as long as temples, eyes and temples rounded in a continuous curve, distance of toruli from each other and from eyes as great as their diameter, occiput weakly excavated; upper side with a few scattered hairs, vertex and frons fine coriaceous, smooth behind; ocelli small, their distance from each other greater than their diameter. Face scarcely wider than high, coriaceous, longitudinal middle elevation clearly developed, moderately hairy, lateral hairs erect, and eye margins parallel. Clypeus 3 times as wide as high, arched, distinctly excavated below, with strong punctation and long hairs. A gap between clypeus and mandibles, mandibles expanded at base, maxillary palpi about as long as height of head. Malar space as long as basal width of mandibles. Malar suture present. Antennae 1.5 times as long as body, 30-segmented; F1 3 times as long as wide, following F a little shorter, Fm twice as long as wide, Fp 1.8 times as long as wide; sensilla distinct, 3 visible in lateral view, hair-punctures visible between them, hairs not longer than width of F.

Mesosoma: 1.33 times as long as high, mesoscutum 1.3 times as wide as long, rounded in front, notauli deep on declivity, crenulate, passing into marginal furrows, their imaginary course indicated by a few hairs; marginal furrows smooth, deviating from the margin a bit in front, anterior corners rugose; dorsal fovea absent. Prescutellar furrow crenulate. Scutellum margined in anterior half. Postaxillae and narrow areas between metascutum and propodeum smooth. Propodeum predominantly smooth, only in front weakly rugose and with uneven spots, and with transverse row of long hairs and some closed cells along middle of hind margin. Anterior furrow of side of pronotum as well as lower part of mesopleuron weakly coriaceous. Furrows smooth. Metapleuron clearly delimited behind, weakly rugose anteriorly, lower furrow broad in posterior half. Hind femora 5 times as long as wide.

Wing: st wedge-shaped distally, r arising from basal third, rl much shorter than width of st, r2 1.9 times as long as ccl, r3 a little curved outwards, 2.2 times as long as r2, R reaching apex of wing, Cu2 narrowed distally, nr postfurcal, d 1.2 times as long as nr,



Figs. 18 - 22: *Opius (Tolbia) paraphytomyzae* sp.n.: (18) head, frontal; (19) base and apex of antenna; (20) mesosoma, lateral; (21) fore and hind wing; (22) part of mesosoma and base of metasoma, dorsal.

nv postfurcal by its own width, B closed, np arising from middle of distal side; r', nr' and cu2' indicated only as folds, hairs in distal half of hind edge of hind wing shorter than wing width.

Metasoma: T1 twice as long as wide, only slightly wider behind than in front, nearly parallel-sided; densely, strongly, irregularly rugose and evenly arched.

Colouration: Black. Yellow: scape, pedicel, anellus, clypeus, mouth parts, legs, tegulae, wing venation, and T2+3. Wing membrane hyaline.

♀: Unknown.

Taxonomical position: The species belongs to the subgenus *Tolbia* CAMERON, 1907. It runs to *Opius caesus* HALIDAY, 1837 in the key by FISCHER (1987b), from which it may be distinguished as follows:

- | | | |
|---|--|--|
| 1 | r2 1.5 times as long as ccl. Mandibles not expanded at base. Propodeum more or less evenly sculptured. Sternaulus clearly crenulate. 1.7 - 2.0 mm. Palearctic region as far as North Africa and Kamtchatka. | <i>O. caesus</i> , ♀ |
| — | r2 nearly twice as long as ccl. Mandibles expanded at base. Propodeum predominantly smooth. Sternaulus only fine coriaceous. 2.0 mm. England. | <i>O. paraphytomyzae</i> sp.n., ♂ |

If one overlooks the weak sculpture of the mesopleuron, the species would run to *Opius staryi* FISCHER, 1958 in the key by FISCHER (1987b). The distinction is as follows.

- | | | |
|---|---|--|
| 1 | Vertex and face with fine coriaceous sculpture. 2.0 mm. England. | <i>O. paraphytomyzae</i> sp.n., ♂ |
| — | Vertex and face without such a sculpture. About 1.5 mm. Europe from England to the Balkan Peninsula. | <i>O. staryi</i> , ♀ |

Distribution: England.

Host: *Paraphytomyza* sp. (Diptera, Agromyzidae) on *Galium aparine*.

Etymology: The name refers to the generic name of the host.

***Opius* (s.str.) *pseudonapomyzae* sp.n. (Figs. 23 - 27)**

Type material: holotype (♀, Natural History Museum Vienna): South Africa, Natal, Griffiths, Em. 23. 2. 64, Ex larva, leg. 29. 1. 64 on *Justicia* sp., Ex *Pseudonap.* sp.n.? K.A. Spencer det. 1964.

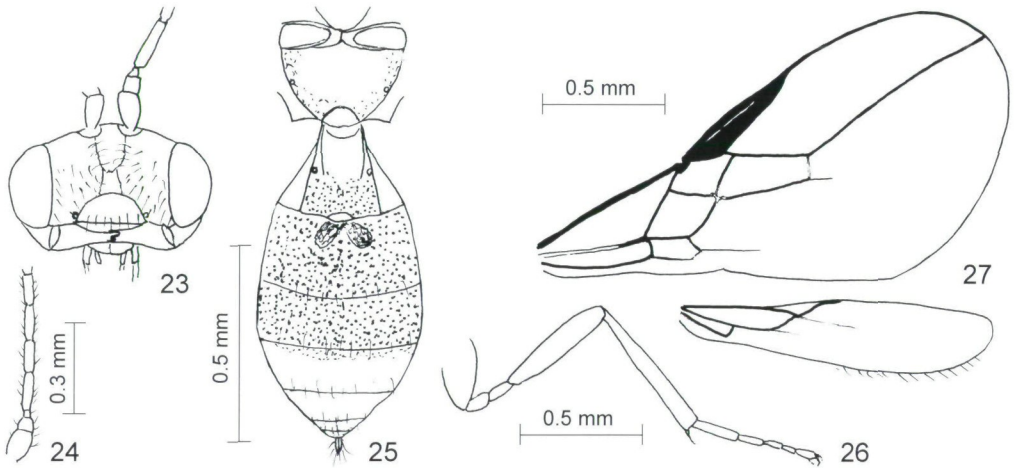
Description of ♀: Length of body: 1.6 mm.

Head: Twice as wide as long, 1.8 times as wide as face, 1.5 times as wide as mesoscutum, 2.6 times as wide as T1; eyes twice as long as temples, protruding, eyes and temples rounded in a continuous curve, distance of toruli from each other and from eyes as great as their diameter. Upper side only with a few hairs laterally and near occiput, distance of ocelli from each other as great as their diameter, distance from eyes as great as width of ocellar area. Face as wide as high, an impressed area from between antennal sockets about as far as middle of face, with clear longitudinal middle elevation, with scattered, inconspicuous hairs, eye margins parallel. Clypeus in same plane as face, 2.5 times as wide as high, lower edge straight, with a few erect hairs without recognizable hair-punctures. Distance between tentorial pits 2.5 times as great as their distance from eyes. Malar space shorter than basal width of mandible. Malar suture distinct. No clear gap between clypeus and mandible, the latter not expanded at base, maxillary palpi about as long as height of head. Antennae little longer than the body, 27-segmented; F1, F2, F3 3 times as long as wide, following F gradually shorter, Fm to Fp twice as long as wide, F of apical third a little narrower; F moderately separated from each other, hairs not longer than width of F, 2 sensilla visible in lateral view.

Mesosoma: 1.25 times as long as high, upper side arched. Mesoscutum 1.3 times as wide as long, oval in front of the tegulae, notauli absent on disc, forming only a shallow, smooth groove on declivity, not uniting with complete marginal furrows, dorsal fovea absent, nearly without hairs. Praescutellar furrow crenulate. Rest of mesosoma smooth, only propodeum weakly rugose with shining spots. Sternaulus and other furrows of side of pronotum and the mesopleuron smooth. Upper furrow of metapleuron inconspicuously crenulate, lower furrow wide, passing in front in depressed area. Hind femur 5 times as long as wide.

Wing: st moderately wide, distal part wedge-shaped, r arising from basal quarter, r1 very short, r2 1.9 times as long as cc1, r3 curved outwards, nearly 3 times as long as r2, R reaching apex of wing, nr postfurcal, Cu2 narrowed a little distally, d as long as nr, nv postfurcal by its own width, B closed, np arising from middle of distal side of B; r' and cu2' indicated as folds, nr' absent.

Metasoma: Rather wide in middle. T1 1.25 times as long as wide, behind 1.5 times wider at apex than at base, straight-sided and narrowed towards base; recognizably arched behind, densely rugose, dorsal carinae developed as far as middle and widely separated from each other. T2+3 strongly coriaceous, T4 only weakly coriaceous in basal half. Ovipositor sheaths hardly projecting beyond tip of metasoma.



Figs. 23 - 27: *Opilus* (s.str.) *pseudonapomyzae* sp.n.: (23) head, frontal; (24) base of an antenna; (25) part of mesosoma and metasoma, dorsal; (26) hind leg; (27) fore and hind wing.

Colouration: Mesosoma, flagellum, T1 and apical third of metasoma dark. Rest of body with legs, wing venation, scape, anellus and mouth parts yellow. Wing membrane hyaline.

♂: Unknown.

Taxonomic position: The species belongs to the subgenus *Opilus*. It runs in the key by FISCHER (1987a) to *Opilus maraquoanus* FISCHER, 1963, and can be separated from the latter as follows:

- | | | |
|---|---|--|
| 1 | Clypeus arched, lower edge convex. T1 shining, T2+3 weakly, very fine reticulate.
1,9 mm. Ethiopia, South Africa. | <i>O. maraquoanus</i> , ♀♂ |
| – | Clypeus flat, lower edge straight. T1 coarsely rugose, T2+3 with dense rugosity.
1,6 mm. South Africa. | <i>O. pseudonapomyzae</i> sp.n. , ♀ |

If one overlooks the lack of a gap between between clypeus and mandibles, because of the straight lower edge of the clypeus, the species would run to the subgenus *Phaeditoma* FOERSTER, 1862: Here it most closely resembles *Opilus* (*Phaeditoma*) *atomosus* FISCHER, 1963 (key by FISCHER 1987). The two species can be distinguished from each other as follows:

- | | | |
|---|--|--|
| 1 | Clypeus excavate below, weakly arched. T2 near base very finely rugose, rest of metasoma shining. 1.7 mm. Ethiopia, South Africa. | <i>O. atomosus</i> , ♀♂ |
| – | Clypeus flat, lower edge straight. T1 coarsely rugose, T2+3 with dense rugosity.
1,6 mm. South Africa. | <i>O. pseudonapomyzae</i> sp.n. , ♀ |

Distribution: South Africa.

Host: *Pseudonapomyza* sp. (undescribed.?) (Diptera, Agromyzidae).

Etymology: The name refers to the generic name of the host.

***Opius (Stomosema) punctaticlypeus* sp.n.** (Figs. 28 - 30)

Type material: holotype (♀, Natural History Museum Vienna): South Africa: Town Bush, Pietermaritzburg, South Africa, Dec. 1961, ex *Agromyza* sp., K.A. Spencer det. 1962.

Description of ♀: Length of body: 2.0 mm.

Head: twice as wide as long, 1.8 times as wide as face, 1.2 times as wide as mesoscutum, twice as wide as T1; eyes weakly protruding, only 1.1 times as long as temples, across temples a little narrower than across eyes, distance of toruli from each other and from eyes as great as their diameter; occiput clearly excavated, upper surface delicately and densely coriaceous, inconspicuous hairs near eyes and occiput; diameter of ocelli equal to their distance from each other, distance from eyes greater than width of ocellar area. Face 1.1 times as wide as high, very delicate and evenly coriaceous, longitudinal middle elevation clearly recognizable, weakly, but rather densely hairy, eye margins parallel. Clypeus 3 times as wide as high, in same plain as the face, epistomal suture evenly curved, lower edge medially weakly excavated, with deep punctures and long hairs. Distance of tentorial pits from each other 2.5 times as great as distance from eye. Cheeks shorter than basal width of mandibles. A gap between clypeus and mandibles, mandibles not expanded basally, outer surface with long, curved, inwardly directed hairs; maxillary palpi about as long as height of head. Antennae about 1.5 times as long as body, 29-segmented; F1 and F2 twice as long as wide, Fm and Fp also twice as long as wide, F of apical third gradually narrowing, all F moderately separated from each other; hairs rather shorter than width of F, in lateral view 2 or 3 sensilla visible.

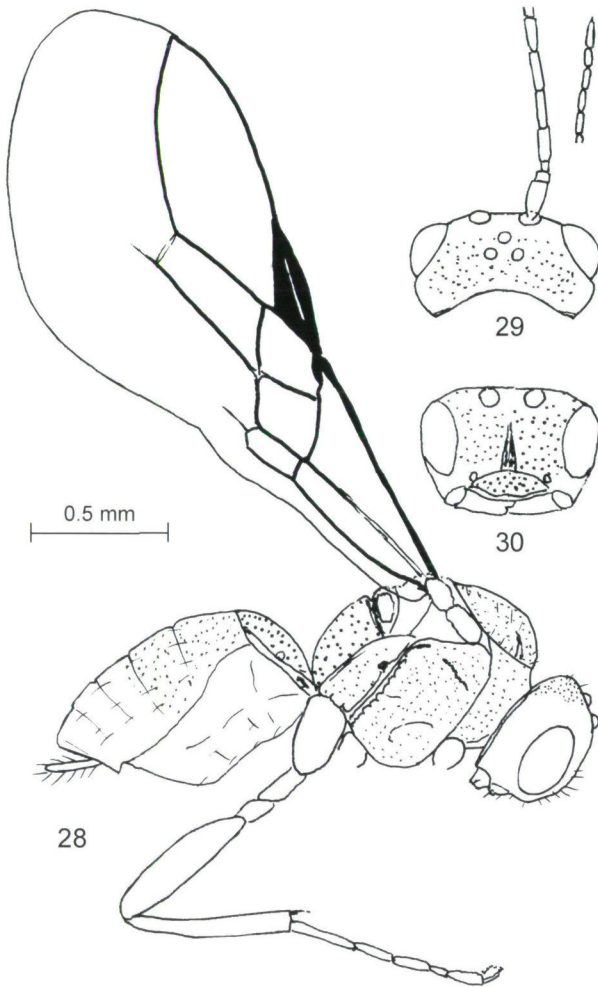
Mesosoma: 1.2 times as long as high, upper side strongly arched. Mesoscutum 1.25 times as wide as long, evenly rounded in front, very finely micro-sculptured, notauli present on the declivity, weakly crenulate, passing in a curve into the complete marginal furrows, absent on disc, dorsal fovea absent. Prescutellar furrow narrow, not shortened laterally. Scutellum wider than long, rounded behind, with a few hairs. Postaxillae obviously without sculpture (not exactly recognizable). Lateral areas of metascutum very finely crenulate in depression. Propodeum evenly coriaceous. Side of mesosoma densely coriaceous, sternaulus impressed and coriaceous as well, furrows smooth. Hind femora 4 times as long as wide.

Wing: Distal part of st wedge-shaped, r arising from middle, r1 nearly absent, r2 1.2 times as long as cc1, ccl shallowly bisinuate, r3 straight, 2.5 times as long as r2, R reaching tip of wing, nr strongly postfurcal, Cu2 narrowed distally, d 1.5 times as long as nr, nv postfurcal, B closed, np arising above middle of distal side; SM' nearly completely compressed, r' indicated as a fold, cu2' and a' very short.

Metasoma: T1 as long as its apical width, straight-sided and narrowed towards base, weakly arched, finely coriaceous, dorsal carinae converging caudad, reaching as far as middle. T2 and T3 finely coriaceous. Ovipositor sheaths not reaching beyond tip of metasoma.

Colouration: Black. Yellow: head, anellus, all legs, T2 and T3, the latter dark behind; only in middle of T2+3 a light brown spot. T1 dark brown. Wing venation yellow, base of st brown. Wing membrane hyaline.

♂: Unknown.



Figs. 28 - 30: *Opius (Stomosema) punctaticlypeus* sp.n.: (28) body, lateral; (29) head with base and apex of antenna, dorsal; (30) head, frontal.

Taxonomic position: The species belongs to the subgenus *Stomosema* FISCHER, 1972. It runs in the key by FISCHER (1987a) to *O. hluluhwegamenicus* FISCHER, 1974 at couplet 9, from which it can be distinguished as follows:

- 1 Clypeus nearly smooth and shining, with long, scattered hairs; lower edge straight. Longitudinal median elevation of face indistinct. Posterior mesopleural furrow entirely smooth. r1 1.66 times as long as width of st. Hind femora 4 times as long as wide. Head and mesosoma dark. 2.2 mm. South Africa. ... *O. hluluhwegamenicus*, ♀
- Clypeus deeply punctate, lower edge medially a little excavate. Longitudinal median elevation of face distinctly bulging. Posterior mesopleural furrow very narrowly crenulate. r1 nearly absent. Hind femora 5 times as long as wide. Head predominantly yellow, T2 and part of T3 yellow, too. 2.0 mm. South Africa. *O. punctaticlypeus* sp.n., ♀

Distribution: South Africa.

Host: *Agromyza* sp. (Diptera, Agromyzidae).

Etymology: The name is derived from the punctate clypeus.

***Opius (Phaerotoma) smarti* FISCHER, 1966 (Figs. 31 - 32)**

Opius smarti FISCHER, 1966: 1: 118, ♀. — Type location: Finsch Haven [= Finschhafen], Papua New Guinea. Typus: British Museum, London.

Opius smarti: FISCHER 1971: 3, ♂.

Opius (Phaerotoma) smarti: FISCHER 1987: 481 (key), 514 (redescription), 546 (key).

Redescription of ♀: Length of body: 1.2 mm.

Head: Twice as wide as long, 1.4 times as wide as face, 1.4 times as wide as mesoscutum, 2.5 times as wide as T1; eyes protruding, nearly twice as long as temples, eyes and temples rounded in a continuous curve, upper side only laterally and behind with a few hairs, distance between toruli and distance between toruli and eyes as great as their diameter, occiput emarginate; ocelli scarcely protruding, distance from each other a little greater than width of ocellus, distance of ocellus from eye as great as width of ocellar area. Face 1.4 times as wide as high, with a few inconspicuous hairs, hair-punctures scarcely recognizable, longitudinal central elevation clearly developed. Clypeus nearly sickle-like, 4 times as wide as high, with bent middle-bulge, below flat, excavate below. Tentorial pits small, 3 times farther from each other than from eyes. Cheeks shorter than basal width of mandibles. A gap between clypeus and mandibles, mandibles basally not expanded, maxillary palpi about as long as height of head. Antennae two thirds longer than body, 23-segmented; F1 2.5 times as long as wide, F2 to F5 only slightly shorter, following F twice as long as wide, and Fp nearly so; most F clearly separated from each other, most hairs rather shorter than width of F; sensilla on examined example not recognizable.

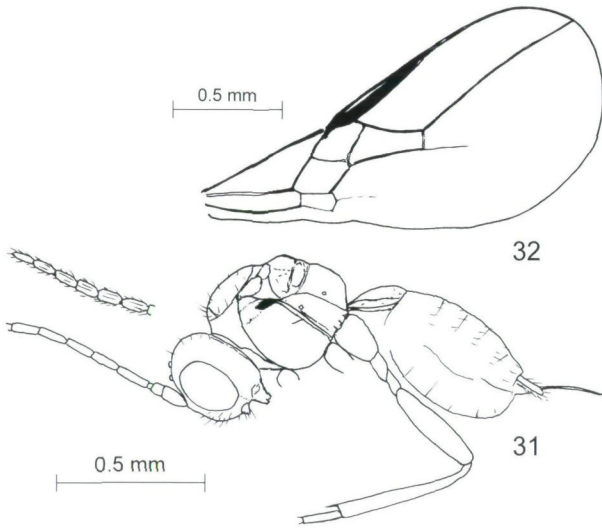
Mesosoma: 1.33 times as long as high, upper side arched. Mesoscutum 1.15 times as wide as long, lateral lobes curved, middle lobe anteriorly rather straight, front corners less emphasized. Notauli developed only on declivity, missing on disc, passing into smooth lateral furrows, dorsal pit absent. Prescutellar furrow crenulate. Scutellum rounded behind. Propodeum considerably wider than long, posterior margin medially with upwardly-directed semicircular carina, only here weakly crenulate. All furrows of side of mesosoma smooth, sternauli absent, posterior metapleural furrow with a few cross folds. Hind femora 5 times as long as wide.

Wing: st narrow, distal part wedge-shaped, r1 arising from basal third, passing into r2 without angle, r2 1.5 times as long as ccl, r3 curved outwards, nearly 3 times as long as r2, R reaching tip of wing, nr postfurcal, Cu2 narrowed distally, d as long as nr, nv postfurcal by a distance nearly as great as own length, B closed, 2.5 times as long as wide, weakly widened distally; nr' absent.

Metasoma: T1 1.3 times as long as wide, sides straight-lined narrowing towards base, only weakly arched, surface at most uneven, dorsal carinae recognizable only near base. T2 weakly coriaceous on small areas laterally. Suture 2 very fine. Ovipositor sheaths projecting only a little beyond tip of metasoma.

Colouration: Black: head, antennae, mesopleurum and metasoma from T3 onwards. Rest of metasoma dark brown. Yellow: anellus, clypeus, mouth parts, legs, tegulae, wing venation, T1 and T2. Wing membrane hyaline.

♂: Similar to ♀.



Figs. 31 - 32: *Opius (Phaeditoma) smarti*: (31) head, mesosoma and metasoma with hind leg, base and apex of antenna, lateral; (32) fore wing.

Variability: The paratype in the London collection also has finely coriaceous sculpture visible at the base of T3. The yellow colouration of the metasoma may also extend as far as T3 and T4. The head of the males from south-eastern Australia is entirely yellow. In the paratype the postaxilla has a great, margined fovea. The metasoma is sometimes smooth.

Distribution: Papua New Guinea, western and south-eastern Australia, Philippine Islands, Bismarck-Archipelago.

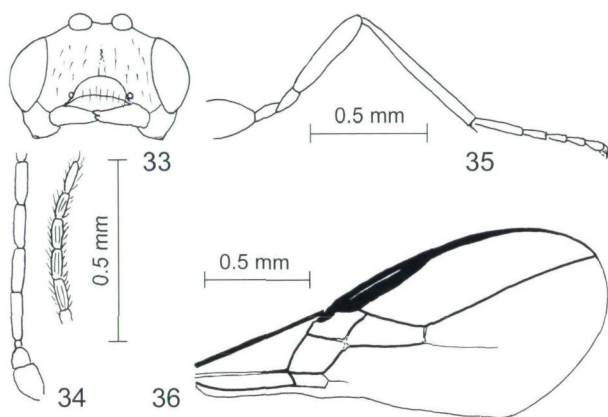
Remarks: There exist several very similar examples from diverse localities, which differ only very slightly from each other; the colours are often different. It is not quite clear, if all these specimens belong to the same species. I hope that the redescription above with added figures based on the holotype will assist with the identification of diverse specimens.

Opius (Phaeditoma) solanivora sp.n. (Figs. 33 - 36)

Type material: holotype (♂, right in front of the card, Natural History Museum Vienna): Pretoria, em. 2.12.64, Ex *Ophiomyia solanivora* Sp., K.A. Spencer det. 1964; paratypes: 2 ♂♂ (on same card with holotype).

Description of ♂: Length of body: 1.7 mm.

Head: Twice as wide as long, 1.8 times as wide as face, 1.33 times as wide as mesoscutum; head wider across eyes than across temples, eyes twice as long as temples, eyes and temples rounded in a continuous curve, distance of toruli from each other a bit greater than distance from eyes, occiput weakly excavated; upper side of head only laterally and near occiput with scattered hairs; distance of ocelli from each other slightly greater than diameter of ocellus, distance from an eye less than width of ocellar area. Face 1.25 times as wide as high, longitudinal middle elevation flattened downwards, with scattered hairs, hair-punctures weakly recognizable, eye margins parallel. Clypeus 3 times



Figs. 33 - 36: *Opius (Phaedrotoma) solanivorae* sp.n.: (33) head, frontal; (34) base and apex of antenna; (35) hind leg; (36) fore wing.

as wide as high, weakly arched, excavated below, with some long, erect hairs, hair-punctures hardly recognizable. Tentorial pits small, their distance from each other 2.5 times as great as distance from eye. Malar space little shorter than basal width of mandibles, Subocular furrow present. A gap between clypeus and mandibles, mandibles not expanded at base, maxillary palpi rather short, 5 articles visible. Antennae 26-segmented, little longer than body; F1 3.5 times, F2 3 times as long as wide, following F only a little shorter, Fm 2.5 times, Fp twice as long as wide, Fa finely pointed; F moderately separated from each other, hairs scarcely as long as width of F, some apical hairs little longer, 2 sensilla visible in lateral view.

Mesosoma: 1.3 times as long as high, upper side arched. Mesoscutum a little wider than long, evenly rounded in front of tegulae, notauli present on declivity, passing in a curve into marginal furrows, absent on disc, their imaginary course indicated by row of hairs, dorsal fovea absent. Prescutellar furrow narrow, densely crenulate. Postaxillae smooth. Lateral areas of metascutum weakly crenulate. Propodeum smooth, spiracles situated between weak longitudinal suture and lateral edge. Sides of pronotum in part uneven. Sternaulus impressed, but smooth. Other furrows of side of mesopleuron also smooth. Metapleuron smooth, with long hairs, lower and upper furrow weakly crenulate. Hind femora 5 times as long as wide.

Wing: Distal part of st wedge-shaped, r arising from basal quarter, r1 shorter than width of st, forming a straight line with r2, r2 1.9 times as long as ccl, r3 curved outwards, 3 times as long as r2, R reaching apex of wing, Cu2 narrowed distally, nr postfurcal, d a little longer than nr, nv nearly interstitial, B closed, np arising from middle of distal side; nr* absent.

Metasoma: T1 only 1.2 times as long as wide, evenly narrowed towards base, apex twice as wide as base, dorsal carinae developed in front, medially a little arched, rather densely rugose. T2 and base of T3 very fine reticulate.

Colouration: Black. Yellow: base of antennae as far as F1, head, mouth parts, legs, tegulae, wing venation, T1 and utmost base of T2. Ocellar area as far as occiput dark. Mesoscutum with two reddish lines. Wing membrane hyaline.

♀: Unknown.

Taxonomic position: The species is near *Opius smarti* and morphologically extremely similar (key by FISCHER 1987a). The two species are readily separated because of the completely different colouration, as well as the widely disjunct distribution.

- 1 Head black. Legs and base of metasoma brown. (Clypeus 5 times as wide as high. Antennae 23-segmented. Hind femora 4 times as long as wide.) 1.4 mm. Papua New Guinea, western and south-eastern Australia, Philippine Islands, Bismarck Archipelago. *O. smarti*, ♂
- Head reddish yellow. Legs and base of metasoma clearly yellow. (Clypeus 4 times as wide as high. Antennae 26-segmented. Hind femora 5 times as long as wide.) 1.7 mm. Pretoria. *O. solanivora* sp.n., ♂

Note: The morphological details listed in brackets may merely reflect individual variability, but should be useful when taken as a whole.

Distribution: South Africa: Pretoria.

Host: *Ophiomyia solanivora* SPENCER, 1961 (Diptera, Agromyzidae).

Etymology: The name refers to the specific name of the host.

Opius (Gastrosema) vicinigundae sp.n. (Fig. 37)

Type material: holotype (♂, Natural History Museum Vienna): India, Krishnagar N. Calcutta, 26.1.60, ex *Mel.* [= *Melanagromyza*] sp. on *Smilax*, K. A. Spencer det. 1960; paratypes: Bombay, 21.1.60, Ex *Pseudonap. alternantherae*, K.A. Spencer det. 1960, 1 ♀; Singapore, Em. 7.2.60, Ex *Pseudonap. spicata* (MALL.), K.A. Spencer det. 1960, 1 ♀.

Description of ♂: Length of body: 1.4 mm.

Head: Twice as wide as long, 1.8 times as wide as face, 1.5 times as wide as mesoscutum, 2.3 times as wide as T1; across eyes scarcely wider than across temples, eyes and temples rounded in a continuous curve, eyes 1.5 times as long as temples, distance of toruli from each other and from eyes as great as their diameter, occiput slightly emarginate, upper side nearly bare; distance of ocelli from each other as great as their diameter, their distance from eyes as great as width of ocellar area. Face 1.25-times as wide as high, longitudinal median elevation widening a little downwards, with a few scattered hairs, hair-punctures not discernable, eye margins nearly parallel. Clypeus 3 times as wide as high, lower edge retracted, very weakly arched, with inconspicuous hairs only. Distance of tentorial pits from each other 2.5 times as great as their distance from eyes. Malar space as long as mandible basally wide. Malar furrow weak. A gap between clypeus and mandibles, mandible not expanded at base, maxillary palpi as long as head height. Antennae longer than body, 23-segmented; F1 and F2 3 times as long as wide, following F only slightly shorter, most F more than twice as long as wide, Fp twice as long as wide; F clearly separated from each other, longest hairs as long as width of F, 2 sensilla visible in lateral view.

Mesosoma: 1.5 times as long as high, upper side only weakly arched. Mesoscutum a little wider than long, evenly curved in front of tegulae, notauli developed on declivity, margined in front, nearly smooth, passing into smooth marginal furrows, very weakly indicated on disc as far as centre, dorsal fovea absent. Prescutellar furrow crenulate. Scutellum and postaxillae smooth. Lateral areas of metascutum weakly crenulate in depression. Propodeum with great cells behind and small cells in front. Side of mesosoma

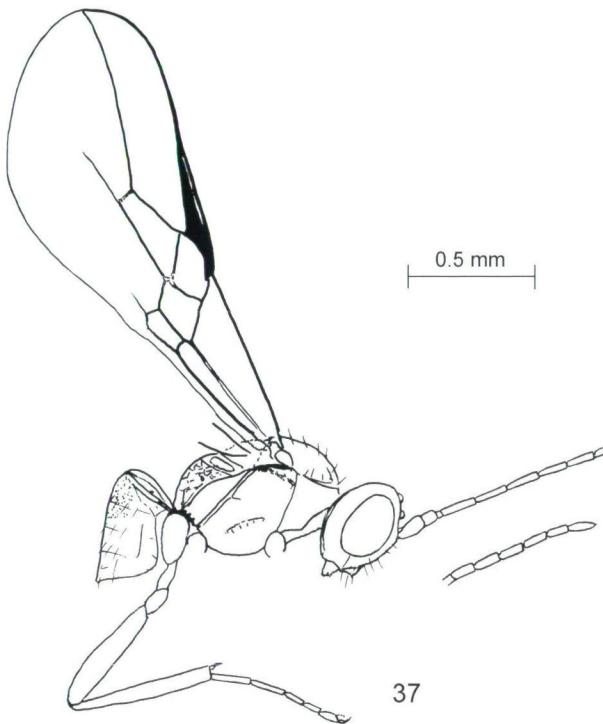


Fig. 37: *Opius (Gastrosema) vicinigundae* sp.n., body, lateral.

smooth, sternaulus crenulate, shortened on either side, anterior furrow of side of pronotum hardly recognizable crenulate, posterior mesopleural furrow smooth. Metapleuron separated from propodeum by carina below spiracle, which is connected with posterior carinae of metapleuron and propodeum, lower marginal furrow crenulate along edge. Hind femora 5 times as long as wide.

Wing: Distal part of st wedge-shaped, r arising from basal third, r1 shorter than width of st, passing into r2 without an angle, r2 1.3 times as long as cc1, r3 bent outwards, 3 times as long as r2, R reaching apex of wing, Cu2 narrowing distally, r2 and cu2 straight, nr postfurcal, d 1.33 times as long as nr, nv weakly postfurcal, B closed, np arising from middle of distal side of B; r', cu2' and nr' absent.

Metasoma: T1 as long as wide, apex twice as wide as base, lateral margins narrowing towards base, hind corners flat, rest arched and rugose, dorsal carinae reaching as far as middle. T2 and basal half of T3 densely coriaceous to rugose.

Colouration: Reddish yellow: head, mesosoma and T2+3. Black: flagellum, posterior half of metasoma, and mesoscutum predominantly. Yellow: base of antennae as far as F1, palpi, legs, tegulae and wing venation. Wing membrane hyaline.

Description of ♀: Antennae 23 - 24-segmented. Ovipositor sheath not projecting beyond tip of metasoma.

Taxonomic position: Keys to *Opius wellgunda* FISCHER, 1972 in FISCHER (1987a). The species can be separated as follows:

- 1 T1 nearly parallel-sided behind, in front weakly narrowed. Dorsal carinae of T1 developed only anteriorly. Marginal furrows of mesoscutum weakly crenulate. Propodeum granulate to irregularly rugose. Anterior furrow of side of pronotum crenulate. Antennae of ♀ 29 - 31-segmented, of ♂ 32-segmented. 2.2 mm. South Africa. *O. wellgunda*, ♂♂
- T1 distinctly narrowed from apex to base. Dorsal carinae of T1 reaching hind edge. Marginal furrows of mesoscutum smooth. Propodeum with great cells behind, with small cells in front. Anterior furrow of side of pronotum smooth. Antennae of ♂ 23-segmented. 1.4 mm. India, Singapore. *O. vicinigundae* sp.n., ♂♂

Distribution: India, Singapore.

Hosts: *Melanagromyza* sp., *Pseudonapomyza alternantherae* SÉGUY, 1951, *Pseudonapomyza spicata* (MALLOCH, 1914) (Diptera, Agromyzidae).

Etymology: Neighbour (taxonomically near) of *Opius* (*Gastrosema*) *wellgunda*.

Genus *Pokomandya* FISCHER, 1959

Pokomandya FISCHER, 1959: 250.

Pokomandya haplomyzae sp.n. (Figs. 38 - 42)

Type material: holotype (♂, mounted on the left side of the card, Natural History Museum Vienna) and paratype (1 ♂, mounted on the right side of the same card): B. Aires, Arg. Em. 5.9.57, *Haplomyza tigrensis* SPENCER.

Description of ♂: Length of body: 1.0 mm.

Head: 3 times as wide as long, about 1.6 times as wide as face, 1.4 times as wide as mesoscutum, 1.4 times as wide as T1; eyes weakly protruding, twice as long as temples, eyes and temples rounded in a continuous curve; distance of toruli from each other slightly greater than distance between torulus and eye; occiput weakly excavated. Upper surface nearly bare, ocelli small, distance between them greater than their diameter, the distance between ocelli and eyes as great as width of ocellar area. Face a little wider than its height, longitudinal middle elevation very weakly developed, with a few scattered hairs only, hairs near eyes longer and erect, eye margins probably parallel (not exactly visible because of preparation). Clypeus about 4 times as wide as high, arched, sickle-shaped, excavate below. Tentorial pits small. Cheeks clearly shorter than basal width of mandible. A gap between clypeus and mandibles, mandibles expanded at base, maxillary palpi shorter than height of head, 5 articles recognizable, some hairs longer than width of F. Antennae only a little longer than body, 15-segmented; F1 and following F 3 times as long as wide, about three apical F slightly shorter, Fa pointed; sensilla scarcely recognizable, most hairs shorter than width of F.

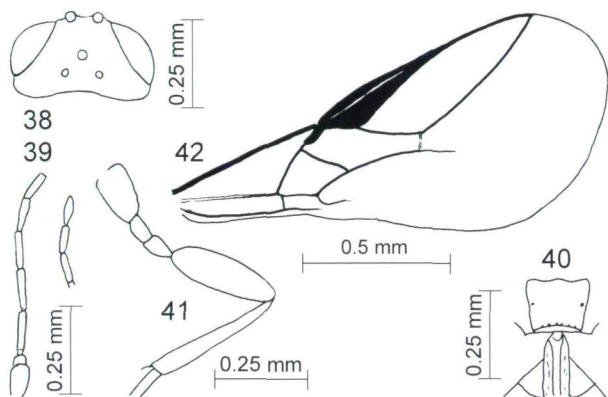
Mesosoma: 1.33 times as long as high, upper side arched. Mesoscutum a little wider than long, rounded in front, notauli absent, margined only near tegulae, dorsal fovea absent, nearly completely bare. Prescutellar furrow narrow, crenulate. Remainder of mesosoma without sculpture. Hind corners of propodeum with round impression each, between these a narrow area, which is delimited by curved suture. Posterior marginal depression of metapleuron as far as depression of propodeum with longitudinal folds. All other furrows smooth. Hind femora 4 times as long as wide.

Wing: Distal part of st wedge-shaped, r arising from basal third, r3 curved inwards, 2.3 times as long as rl+r2, R ending before tip of wing, nr forming continuous curve with cu2, d as long as nr, nv only a little postfurcal, B open, d passing in curve into np.

Metasoma: T1 twice as long as wide, narrow, parallel-sided, smooth, dorsal carinae reaching as far as hind margin.

Colouration: Black. Yellow: base of antennae as far as F1, clypeus, mouth parts, all legs, tegulae, and wing venation. T1 and base of T2 yellowish. Wing membrane hyaline.

♀: Unknown.



Figs. 38 - 42: *Pokomandya haplomyzae* sp.n.: (38) head, dorsal; (39) base and apex of antenna; (40) propodeum and T1, dorsal; (41) hind leg; (42) fore wing.

Taxonomic position: Only one species of the genus is known until now, i.e. *P. curticornis* FISCHER, 1959 from Czech Republic, Hungary, and Asia Minor. The new species, the second one known, provides the first record from the New World. It is noteworthy that there is also a host record. The two species can be separated from each other by several characters.

- 1 Eyes as long as temples. Clypeus situated in same plane as face, lower edge straight. Cheeks as long as basal width of mandibles. Antennae 17-segmented. Notauli reaching as smooth impressions onto disc. np interstitial. B open distally, culb absent. T1 a little less than twice as long as wide, parallel-sided behind, weakly narrowed in front. T1 - T4 brown. 1.5 mm. Czech Republic, Hungary, and Asia Minor. *P. curticornis*, ♀
- Eyes 3 times as long as temples. Clypeus weakly arched, excavated below. Cheeks shorter than basal width of mandibles. Antennae 15-segmented. Notauli on disc completely absent. np not interstitial, forming a curve downwards as far as middle height of B, beyond this curve nearly absent. T1 2.5 times as long as wide, parallel-sided, behind as wide as in front. Only T2+3 dark brown. 1.0 mm. Argentina. *P. haplomyzae* sp.n., ♂

Distribution: Argentina.

Host: *Haplomyza tigrensis* SPENCER, 1963 (Diptera, Agromyzidae).

Etymology: The name refers to the generic name of the host.

New host and distribution records

Opius (Rhogadopsis) irregularipes FISCHER, 1963, sgen. comb.n.

Opius irregularipes FISCHER, 1968: 344, ♀♂.

Opius (Lissosema) irregularipes: FISCHER 1977: 541.

Material examined: Tequendama Falls, Colombia, Em. 10.1.59, Ex *Calycomyza* sp., 169A on *Quapaliam elegans* det. K.A. Spencer 1959, 2 ♀♀, 1 ♂.

Distribution: Costa Rica, Colombia (new location).

Host: *Calycomyza* sp. (Diptera; Agromyzidae, new host).

Opius (Mimiropius) obscurifactus* FISCHER, 1968Opius obscurifactus* FISCHER, 1968: 152, 190, ♀.*Opius (Mimiropius) obscurifactus*: FISCHER 1987: 46.**Material examined:** Pretoria, S.A. Dec. 1961, Ex *Mel. crotalariae* HG., K.A. Spencer det 1962, 4 ♀♀, 2 ♂♂.**Distribution:** Congo Republic, Pretoria (new location).**Host:** *Melanagromyza crotalariae* HERING, 1957 (Diptera, Agromyzidae, new host).**Acknowledgements**

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