

Eight new species of *Medetera* Fischer von Waldheim (Diptera: Dolichopodidae) from Tropical Africa

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M. polleti sp. n., *M. chumakovi* sp. n., *M. rikhterae* sp. n., and *M. subchevi* sp. n. from Namibia, *M. norlingi* sp. n. from Namibia, Botswana, and Angola, *M. edwardsi* sp. n. from Uganda, *M. cederholmi* sp. n. from Sierra Leone and Ghana, *M. pospelovi* sp. n. from Ghana are described. Two names are synonymized. New records and key to 29 known species of Afrotropical *Medetera* are given.

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Key words. Diptera, Dolichopodidae, *Medetera*, Tropical Africa.

Introduction

The world fauna of the genus *Medetera* s.l. numbers nearly 400 mostly Holarctic species. The Palearctic fauna of the genus was recently revised by Negrobov & Stackelberg (1971–1977), Nearctic fauna by Bickel (1985), Neotropical fauna (partly) by Robinson (1975), and Oriental fauna by Bickel (1987; see also Negrobov et al., 1991). Grichanov (in litt.) transferred 52 species of the “*aberrans*” group to the genus *Saccopherronta*. The “*melanesiana*” group (Bickel, 1987), probably, should be separated as independent genus of Medeterinae. The last key to Afrotropical species of *Medetera* was published by Parent (1936). Some species mostly described by females have doubtful status. Treating unidentified material from the collections of the Natural History Museum, London [NHML], the Hungarian Natural History Museum [HNHM], the Zoological Institute, St. Petersburg [ZIN], and Lund University, Sweden [Lund], I found 14 Afrotropical species. In this paper *M. polleti* sp. n., *M. chumakovi* sp. n., *M. rikhterae* sp. n., and *M. subchevi* sp. n. from Namibia, *M. norlingi* sp. n. from Namibia, Botswana, and Angola, *M. edwardsi* sp. n. from Uganda, *M. cederholmi* sp. n. from Sierra Leone and Ghana, *M. pospelovi* sp. n. from Ghana are described. Two names are syno-

nymized. *Medetera turneri* Parent is transferred to the genus *Saccopherronta* (Grichanov, in litt.). New records and key to 29 known species of Afrotropical *Medetera* are given below. Holotypes and paratypes of the new species including a male paratype of *M. pospelovi* are deposited in the Natural History Museum (London). Holotype and paratypes of *M. pospelovi* are conserved in the Hungarian Natural History Museum. Paratype of *M. norlingi*, holotype and paratype of *M. cederholmi* are deposited in Lund University.

List of Afrotropical species of *Medetera*

(for references see Dyte & Smith, 1980)

- afra* Curran, 1927: 15 — South Africa, Kenya
= *longitarsis* Curran, 1924: 227
araneipes Parent, 1929: 43 — Sudan
beckeri Parent, 1929: 44 [new name for *Oligochaetus*
sp. n. unnamed, Becker, 1923: 12] — Kenya,
Zaire, Cameroun, Nigeria, Ghana, Togo (!),
Congo (!), Gambia (!), Angola (!), Zambia (!).
= *currani* Parent, 1931: 46 (female), **n. syn.**
= *viridipalpa* Negrobov et Schumann, 1990: 229,
n. syn.
capensis Curran, 1926: 13 — South Africa

- cederholmi* sp. n. — Sierra Leone, Ghana
chumakovi sp. n. — Namibia *calensis* Parent, 1936: 10 — Zaire
edwardsi sp. n. — Uganda
griseus de Meijere, 1916: 259 — Seychelles, Mauritius (!); Burma, India, Nepal, Bangladesh, Ceylon, Taiwan, Indonesia, Thailand, Vietnam, Malaysia, Samoa, New Caledonia, Hawaii, Australia
= *hawaiiensis* Van Duzee, 1933: 343
= *atrata* Van Duzee, 1933: 344
= *cilifemorata* Van Duzee, 1933: 344
= *palmae* Hardy, 1939: 351
hamata Parent, 1936: 11 — Zaire
luteoscutata lachaisei Couturier, 1985: 287 (as species), **n. stat.** — Ivory Coast, Sierra Leone (!)
luteoscutata luteoscutata Parent, 1936: 12 — Zaire, Tanzania (!)
mainei Curran, 1925: 117 — Zaire
munroi Curran, 1925: 176 — South Africa
nocturna Curran, 1927: 15 (female) — Sierra Leone, Zaire
norlingi sp. n. — Namibia, Botswana, Angola
normalis Curran, 1924: 226 — South Africa, Tanzania, Namibia (!), Congo (!), Ghana (!), Sierra Leone (!), Gambia (!)
otiosa Parent, 1934: 135 — South Africa, ?Zaire
penura Curran, 1926: 401 — South Africa
polita Parent, 1936: 12 — Zaire
polleti sp. n. — Namibia
pospelovi sp. n. — Ghana
praedator Curran, 1926: 401 — South Africa
rikhterae sp. n. — Namibia
rutilans Parent, 1935: 126 — Zaire
simplicis Curran, 1924: 227 — South Africa, Namibia (!), Zaire
subchevi sp. n. — Namibia
subviridis Parent, 1939: 278 (female) — Kenya
variitibia Parent, 1935: 127 (female) — Zaire, Tanzania

Descriptions and new records

Medetera beckeri Parent

Material examined. 1 male & 2 females, **Togo:** Lome, 14.VIII.1971, R.Mable [ZIN]; 2 males & 1 female, **Congo Brazzaville,** Orstom Park / 1.I.1964, leg. Endrody-Y., Balogh, Zicsi [HNHM]; 1 male, **Congo:** Kindamba, Meya / 9—27.XI.1963, leg. Balogh, Zicsi [HNHM]; 1 male, **Ghana:** Kwadaso / 10—24.VII.1965, leg. Endrody-Y. [HNHM]; 3 males, **Ghana:** Kumasi, 1—25.VI.1965, leg. Endrody-Y. [HNHM]; 1 female, **Gambia:** Bakau, Cape St. Mary at Sun Wing Hotel, swept in veg. along the beach, 5.XI.1977, UTM

28PCK1991, Loc. 26 / Lund Univ., Syst. Dept., Sweden
Gambia/Senegal. Nov. 1977, Cederholm - Danielsson - Hammarstedt - Hedquist - Samuelsson; 1 male & 4 females, **Gambia:** Kotu stream about 3 km SW Bakau, swept in veg. 22—23.XI.1977, UTM 28PCK1688, Loc. 3 / Lund Univ., Syst. Dept., Sweden
Gambia/Senegal. Nov. 1977, Cederholm - Danielsson - Hammarstedt - Hedquist - Samuelsson; 1 male, **Ghana:** E. Region, Accra, Legon, At light, 9.III.1969, O.W. Richards, B.M. 1969—210; 3 males & 3 females, **Nigeria:** Ile-Ife, W State, 15 Aug. 1971, Col. J.T. Medler / DD-45-48 [NHML]; 3 males & 2 females, **Nigeria:** Niger Prov., Abuja, X.1954, R.W. Crosskey / Com. Inst. Ent. Coll. No. 14043; 2 females, CK. 97, Keneba, **Gambia,** M.C.D. Speight, 21 Sept. 1975: rainy season / in malaise trap by 4 ft. grass between lawn & Arachis crop [NHML]; 5 males & 4 females, **Ndola, N. Rhodesia** / Com. Inst. Ent. Coll. No. 12312; 1 female, **Angola** (A26), Salazar, I.I.A.A. 9—15.III.1972 / Southern African Exp. B.M. 1972—1; 2 males & 2 females, Caught on wall on house at Oct. 3.64, **Waniehambu** / Presented by Liverpool Sch. Trop. Med., B.M. 1971—458.

Diagnosis. *M. beckeri* differs from other species by the following characters. Two strong scutellars with a pair of greatly reduced lateral hairs; 4 strong dorsocentrals; 2 black propleural setae; legs mostly reddish-yellow, coxae entirely and femora in basal half brown; 1st to 4th tarsomeres of midtarsus with distinct apical setulae.

Remark. Becker (1923) briefly described *Oligochaetus* sp. n. unnamed by a male and a female from South Camera (Hosemann coll.), which Parent (1929a, b) discussed as *Medetera beckeri* Parent. These specimens were redescribed by Negrobov and Schumann (1990) as *M. viridipalpa* sp. n. Parent (1931) also described a female of *M. currani* sp. n. having no difference from *M. viridipalpa*. So, I regard these names as synonyms to *M. beckeri*. This species is possible synonym to *M. mainei* Curran or *M. praedator* Curran.

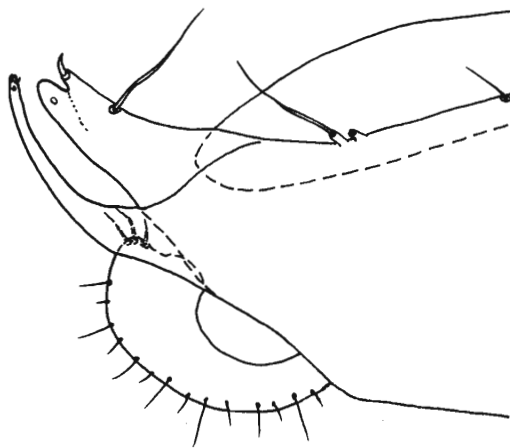
Distribution. Kenya, Zaire, Camera, Nigeria, Ghana, Togo (!), Congo (!), Gambia (!), Angola (!), Zambia (!).

Medetera otiosa Parent

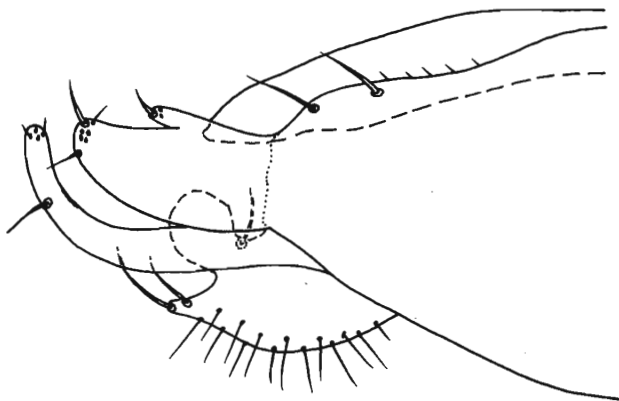
(Fig. 1)

Material examined. 2 males and 2 females, **RSA:** Cape Prov., Wilderness, N. Park, 17 km SE George, 33°59'S, 22°39'E, 14.X.1994, Loc. 18, leg. R. Danielsson [Lund].

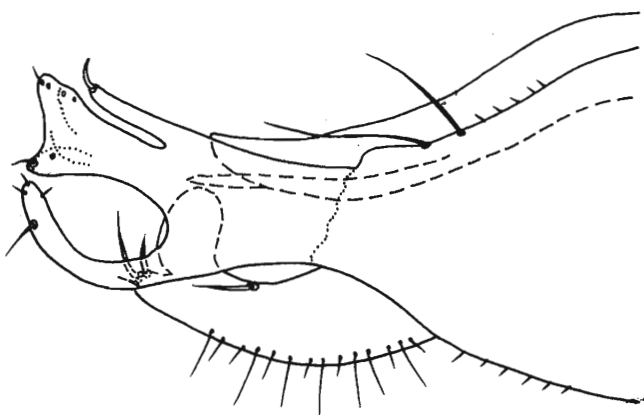
Diagnosis. *M. otiosa* differs from other species by the following characters. Two strong scutellars with a pair of greatly reduced lateral hairs; 2 strong dorsocentrals with a row of hairs anteriorly; antenna



1



2



3

Figs 1—3. Apex of hypopygium, lateral view.
1, *M. otiosa* Parent; 2, *M. edwardsi* sp. n.; 3, *M. norlingi* sp. n.

black; legs black, knees reddish; posterior basitarsomere 2/5 as long as next tarsomere; *m-cu* slightly shorter than apical part of *CuA*₁.

Distribution. South Africa, ?Zaire.

Medetera edwardsi sp. n.

(Fig. 2)

Holotype. Male, **Uganda**: Mbarara, 15.XI.1934, F.W. Edwards, B.M. 1935—203.

Description. Male. Frons and face entirely grey pollinose, with green ground colour. A row of several fine short black postocular setae at the top of eye and a row of white postocular setae in the middle present. One strong vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae. Ventral postcranium covered with sparse white irregular setae. Face widest under antennae. Ratio of height of epistome to its maximal width to height of clypeus to its minimal width, 13 : 9 : 7 : 7. Antenna short, mostly yellow; pedicel slightly swollen, with ring of short apical setulae; first flagellomere mostly brown, rounded, with short terminal hairs. Arista apical, pubescent. Length ratio of scape to pedicel to first flagellomere to arista, 3 : 3 : 4 : 39. Palpus and proboscis short, dark-brown, grey pollinose, with light hairs. Thorax bronze-black, grey pollinose, with brown-black setae. Two pairs of strong dorsocentral setae with the 1st one half as long as the 2nd and a row of hairlike setae gradually decreasing in size anteriorly. Two rows of short acrostichals extending to mesonotal flattening. Scutellum with a pair of strong median setae and two lateral hairs, 1/3 as long as medians. Legs mostly yellow, anterior coxa at base, midcoxa and hindcoxa and last tarsomeres of all tarsi brown. Coxae with light setae and hairs; fore and middle coxae with numerous hairs; middle and hind coxae each with one fine external seta. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth), 20 : 32 : 30 : 12 : 7 : 5 : 4 : 4. Middle tibia with one antero-dorsal, one posterodorsal at base and two apical setae. 1st to 4th tarsomeres each with 1 or 2 short apico-ventral setulae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 15 : 37 : 42 : 17 : 10 : 8 : 5 : 5. Hind femora without long setae. Hind tibia with several short subapical dorsal setae, with yellow apical postero-ventral scale. Hind tarsus simple. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 12 : 40 : 42 : 9 : 16 : 10 : 6 : 6. Wings hyaline, veins yellow-brownish. Costa without long hairs. Ratio of apical to basal part of *M*₁₊₂, 65 : 45. *R*₄₊₅ and *M*₁₊₂ weakly convergent. *M*₁₊₂ slightly bowed anteriorly. Ratio of

cross-vein *m-cu* to maximal distance between *R*₄₊₅ and *M*₁₊₂ to apical part of *CuA*₁, 7 : 11 : 18. Lower calypter yellow, with dirty-yellow cilia. Halteres yellow. Abdomen bronze-black, with short setae; 1st tergum with longer lateral white hairs along posterior margin; 7th segment short. Epandrium elongate, narrowed apicad. Foramen baso-lateral. Hypandrium elongate, narrow, raising at basal 1/3 of epandrium. Epandrial lobi reduced to 2 separate setae. Short epandrial hairs and simple epandrial seta at base of hypandrium present. Cercus short, with pointed apex bearing 2 strong setae, large rounded baso-ventral process, and one strong basoventral seta, dorsally densely setosed. Surstylus represented by the long-est narrow dorsal process, median lobe with narrowed rounded apex, and short narrow ventral process.

Female unknown.

Length: body without antennae 1.5 mm, antenna 0.6 mm, wing-length 2.0 mm,

Distribution. Uganda.

Etymology. The species is named for the collector, Dr. F. W. Edwards.

Diagnosis. *M. edwardsi* sp. n. is a sister species to *M. norlingi* sp. n., having only fine difference in colouration and ratios of podomeres mainly. Study of hypopygium morphology of these two species (Figs 2—3) demonstrates distinct specific characters. See also diagnosis of *M. norlingi*.

Medetera norlingi sp. n.

(Fig. 3)

Holotype. Male, **S.W. Africa** (29), Kahn River, 5 mls. N. Usakos, 30—31.I.1972 / general sweeping / Southern African Exp. B.M. 1972—1.

Paratype. Male, **Botsw.**: Kgatleng Distr., Pilane 7 km SW Mochudi, On grass and herbs, 21.12.1981, Ulf Norling [Lund].

Additional material. 3 females, **S.W. Africa** (W43), Onguma Fm., 55 mls NW Tsumeb, 17—19.II.1972 / Southern African Exp. B.M. 1972—1; 10 females, South West Africa (W31), Okahanja, Camping place, 4.II.1972, Riverside vegetation, Malaise-Trap / Southern African Exp. B.M. 1972—1; 1 female, **Angola** (A11): Bruco, 26.II—3.III.1972 / Malaise trap / Southern African Exp. B.M. 1972—1.

Description. Male. Frons and face entirely grey pollinose, with green ground colour; face slightly shining near suture. A row of several fine short postocular setae at the top of eye and a row of white postocular setae in the middle present. Ventral postcranium covered with sparse white irregular long setae. Face widest under antennae, with almost parallel sides. Ratio of height of epistome to its maximal width to height of clypeus to its minimal width, 12 : 9 : 7 : 7. Antenna short, mostly yellow; pedicel

slightly swollen, with ring of short apical setulae; first flagellomere mostly brown, ovate, slightly higher than long, with short terminal hairs. Arista apical, microscopically pubescent. Length ratio of scape to pedicel to first flagellomere to arista, 3 : 3 : 4 : 36. Palpus and proboscis short, brown, grey pollinose, with light hairs. Thorax bronze-blue-black (holotype) or dark-green-black (paratype), grey pollinose, with dark-brown (holotype) or light-brown (paratype) setae. Two pairs of strong dorsocentral setae with the 1st one half as long as the 2nd and a row of hairlike setae gradually decreasing in size anteriorly. Two rows of short acrostichals extending to mesonotal flattening. Propleura with one light seta. Scutellum with a pair of strong median setae and two lateral hairs, 1/3 to 1/2 as long as medians. Legs mostly yellow, 5th tarsomeres of all tarsi brown, middle and hind coxae more or less brownish. Coxae with light setae and hairs; fore and middle coxae with numerous hairs; middle and hind coxae each with one fine external seta. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth), 23 : 38 : 35 : 14 : 8 : 6 : 5 : 5. Middle tibia with one antero-dorsal, one posterodorsal at base and one or two apical brown setae. 1st to 4th tarsomeres each with 1 or 2 short brown apico-ventral setulae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 17 : 38 : 43 : 24 : 15 : 10 : 5 : 5. Hind femora without long setae. Hind tibia with one or two short subapical dorsal setae, with yellow apical postero-ventral scale. Hind tarsus simple. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 15 : 43 : 47 : 10 : 19 : 11 : 6 : 5. Wings hyaline, veins yellow. Costa without long hairs. Ratio of parts of costa between R_{2+3} and R_{4+5} to those between R_{4+5} and M_{1+2} , 14 : 5. Ratio of apical to basal part of M_{1+2} , 62 : 42. R_{4+5} and M_{1+2} weakly convergent. M_{1+2} slightly bowed anteriorly. Ratio of cross-vein $m-cu$ to maximal distance between R_{4+5} and M_{1+2} to apical part of CuA_1 , 8 : 11 : 15. Lower calypter yellow, with white cilia. Halteres light-yellow. Abdomen bronze-black, with short light setae; 1st tergum with longer lateral white hairs along posterior margin; 7th segment short. Epandrium elongate, narrowed apically. Foramen baso-lateral. Hypandrium long and narrow, raising at basal 1/3 of epandrium. Epandrial lobi reduced to 2 separate setae. Short epandrial hairs and pedunculate epandrial seta at base of hypandrium present. Cercus with narrow blunt apex bearing 2 strong setae, large rounded apico-ventral process, and one strong midventral seta, dorsally densely setosed. Surstylus represented by single structure with long and narrow dorsal and ventral processes, and median lobe expanded apically.

Female. Similar to male except lacking male secondary sexual characters.

Length: body without antennae 1.6 mm, antenna 0.6 mm, wing-length 1.9 mm, wing-width 0.7 mm.

Distribution. Namibia, Botswana, Angola.

Etymology. The species is named for the collector, Dr. Ulf Norling.

Diagnosis. *M. norlingi* sp. n. and *M. edwardsi* sp. n. can be included into "*petulca*" group (Bickel, 1985), differing from other species by mostly yellow legs, two strong dorsocentrals with the 1st one half as long as the 2nd, yellow-brownish antenna, and long narrow dorsal process on surstylus. See also diagnosis of *M. edwardsi*.

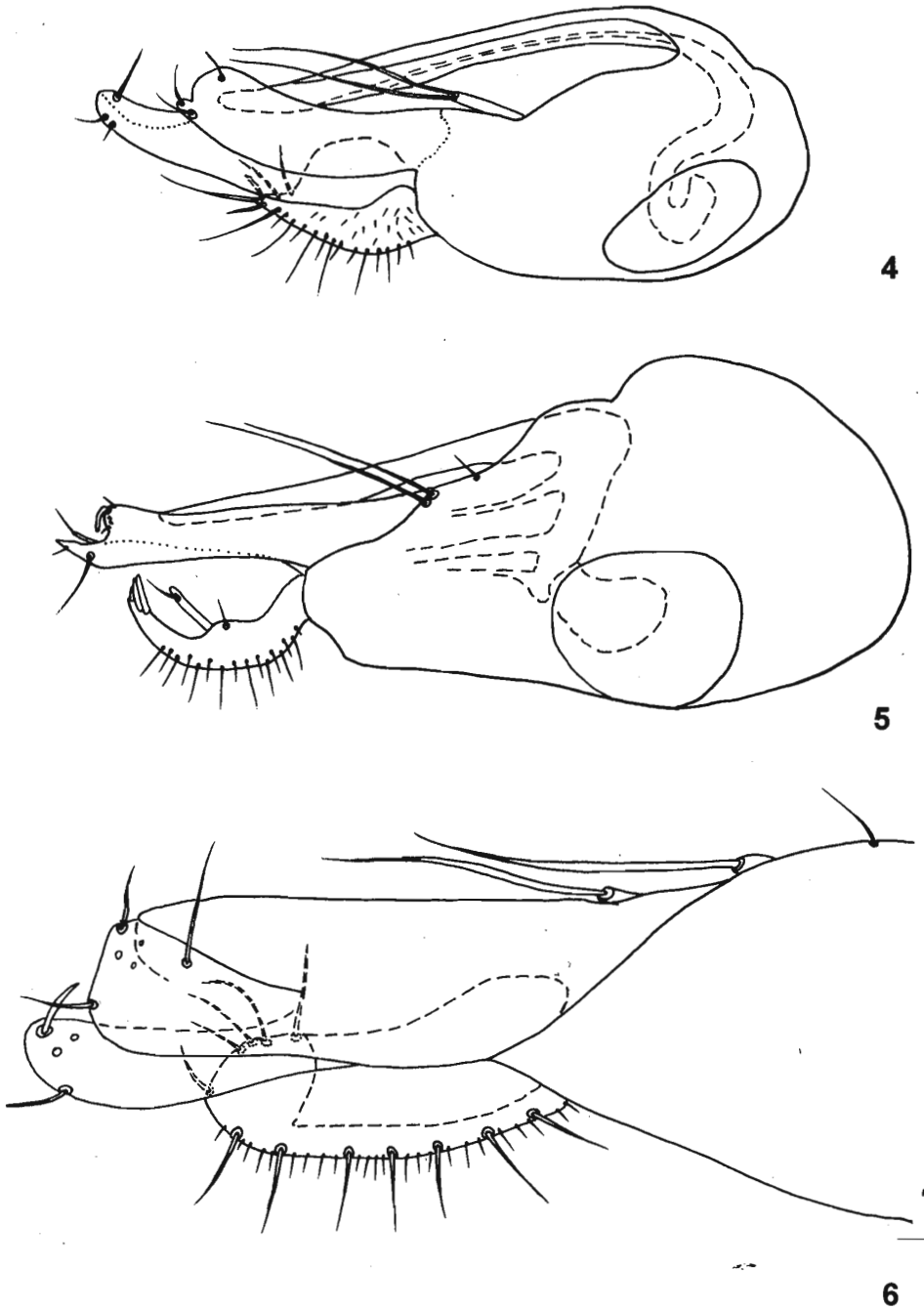
Medetera subchevi sp. n.

(Fig. 4)

Holotype. Male, South West Africa (W31), Okahanja, Camping place, 4.II.1972, Riverside vegetation, Malaise-Trap / Southern African Exp. B.M. 1972—1.

Paratypes. 4 males & 3 females, same labels (1 male with additional label "at light"); 1 male & 4 females, S.W. Africa (W39), Kombat, 16—17.II.1972 / Southern African Exp. B.M. 1972—1; 1 female, S.W. Africa (W36), Otjikoko Sud Fm., 33 mls ENE Omaruru, 10—13.II.1972 / at light / Southern African Exp. B.M. 1972—1.

Description. Male. Frons and face entirely densely grey pollinose. A row of fine short black postocular setae at the top of eye present. One strong vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae. Ventral postcranium covered with sparse long white irregular setae. Face widest under antennae, with nearly parallel sides. Ratio of height of epistome to its maximal width to height of clypeus to height of palpus, 19 : 11 : 9 : 9. Antenna short, scape and pedicel orange-brownish; pedicel somewhat swollen, with short hairs; first flagellomere black, rounded, as long as high, with short terminal hairs. Arista apical, microscopically pubescent. Length ratio of scape to pedicel to first flagellomere to arista, 3 : 3 : 5 : 40. Palpus short, shining-black, slightly pollinose, with marginal hairs. Proboscis short, brown, with light hairs. Thorax bronze-black, entirely grey pollinose. Three pairs of strong dorsocentral setae, gradually decreasing in size anteriorly with short setulae in front of the first one. Acrostichals short, biseriate. Propleura with two white setae. Scutellum with a pair of strong median setae and two short lateral hairs. Legs light-yellow, trochanters and 5th tarsomeres of all tarsi brownish; coxae black with brownish apices, grey pollinose. Anterior coxa with short white hairs and several yellow apical setae. Middle and hind coxae each with one fine external

Figs 4—6. *Medetera* sp.

4, *M. subchevi* sp. n., hypopygium, lateral view; 5, *M. polleti* sp. n., hypopygium, lateral view; 6, *M. normalis* Curran, apex of hypopygium, lateral view.

seta; midcoxa with light hairs also. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth), 30 : 43 : 42 : 27 : 17 : 14 : 10 : 8. Midfemora with a row of fine yellow ventral setae in basal half, nearly as long as diameter of femora, and a row of sparse short ventral setae in apical half. Middle tibia with one antero-dorsal, one posterodorsal yellow setae at base, and one apico-ventral yellow seta. 1st to 4th tarsomeres each with a few strong brown apical setulae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 22 : 58 : 61 : 37 : 19 : 15 : 10 : 9. Hind femora with a row of short yellow dorsal setae in basal half. Hind tibia with several short yellow subapical dorsal setae, with apical postero-ventral scale, and 2 to 4 apical brown spinules. Hind basitarsomere simple, with one or two strong apical setulae. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 16 : 55 : 61 : 14 : 36 : 21 : 12 : 9. Wings hyaline, veins yellow. Costa without long hairs. R_1 short, extending to basal third of wing. Ratio of parts of costa between R_{2+3} and R_{4+5} to those between R_{4+5} and M_{1+2} , 22 : 6. Ratio of apical to basal part of M_{1+2} , 62 : 53. R_{4+5} and M_{1+2} weakly convergent, nearly parallel at apex. Ratio of cross-vein m-cu to maximal distance between R_{4+5} and M_{1+2} to apical part of CuA_1 , 10 : 14 : 14. Lower calypter yellow, with white cilia. Halteres yellow. Abdomen olive-bronze-green, with short dark setae; 7th segment short; 8th segment large. Hypopygium black with brown appendages. Epandrium narrowed apicad. Foramen baso-lateral. Hypandrium baso-ventral, long, narrow. Epandrial lobi fused, with two long simple bristles. No epandrial seta. Cerci fused in basal 2/3. Cercus with wide ventral eminence and rounded apex (in dorsal view), dorsally and apically setosed. Lobi of surstylus partly fused, broad, with short subapical setae.

Female. Similar to male except lacking male secondary sexual characters. Acanthophorites thin, much longer than cercus; cercus small, bearing long apical seta.

Length: body without antennae 1.8—2.1 mm, antenna 0.7 mm, wing-length 2.1 mm, wing-width 0.7 mm.

Distribution. Namibia.

Etymology. The species is named for Bulgarian entomologist, Dr. M. Subchev.

Diagnosis. *M. subchevi* sp. n. has some relations to North American "*petulca*" group of species (Bickel, 1985). It is keyed to Afrotropical *M. araneipes* Parent, differing by wing vein m-cu distinctly shorter than apical part of CuA_1 and another ratio of podomeres.

Medetera polleti sp. n.

(Fig. 5)

Holotype. Male, S.W. Africa (29), Kahn River, 5 mls. N. Usakos, 30—31.I.1972 / general sweeping / Southern African Exp. B.M. 1972—1.

Paratypes. 2 males & 1 female, same labels; 1 male & 1 female, S.W. Africa (11), Aar Farm, 25 mls ESE Aus, 15—17.I.1972 / Southern African Exp. B.M. 1972—1; 2 females, S.W. Africa (13), Barby Farm, 25 mls W Helmeringhausen, 17—18.I.1972 / general sweeping / Southern African Exp. B.M. 1972—1; 2 males, South West Africa (W31), Okahanja, Camping place, 4.II.1972, Riverside vegetation, Malaise-Trap / Southern African Exp. B.M. 1972—1.

Description. Male. Frons and face entirely grey pollinose. A row of several fine short black postocular setae at the top of eye and a row of white postocular setae in the middle present. One strong vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae. Ventral postcranium covered with sparse white irregular setae. Face narrow, widest under antennae. Ratio of height of epistome to its maximal width to height of clypeus to its minimal width, 24 : 12 : 10 : 8. Antenna short, scape and pedicel dark-yellow; pedicel slightly swollen, with ring of short apical setulae; first flagellomere black, ovate, slightly longer than high, with short terminal hairs. Arista subapical, microscopically pubescent. Length ratio of scape to pedicel to first flagellomere to arista, 2 : 4 : 6 : 35. Palpus short, black, grey pollinose, with light hairs. Proboscis short, black, with light hairs. Thorax bronze-black, grey pollinose. Three pairs of strong dorsocentral setae gradually decreasing in size anteriorly, with microscopic hairs in front of the first one. Two rows of short acrostichals extending to mesonotal flattening. Propleura with one light seta and 3 short hairs. Scutellum with a pair of strong median setae, no lateral hairs. Legs mostly yellow, 5th tarsomeres of all tarsi and anterior femora in basal third brown; sometimes (in females) all femora yellow-brownish. Coxae, femora, and tibiae with light setae and hairs. Coxae black, fore and middle coxae with numerous hairs; middle and hind coxae each with one fine external seta. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth), 37 : 57 : 55 : 28 : 20 : 15 : 10 : 7. Middle tibia with one antero-dorsal, one posterodorsal at base, and one or two apical setae. 1st to 4th tarsomeres each with 3 or 4 short black apico-ventral setae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 25 : 65 : 73 : 45 : 27 : 19 : 13 : 10. Hind femora without setae. Hind tibia with several short subapical dorsal setae,

with black apico-ventral scale. Hind basitarsomere with small baso-ventral tooth. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 20 : 67 : 79 : 19 : 53 : 25 : 14 : 11. Wings hyaline, veins yellow-brownish. Costa without long hairs. Ratio of parts of costa between R_{2+3} and R_{4+5} to those between R_{4+5} and M_{1+2} , 26 : 8. Ratio of apical to basal part of M_{1+2} , 80 : 58. R_{4+5} and M_{1+2} weakly convergent, nearly parallel at apex. M_{1+2} slightly bowed anteriorly, nearly straight. Ratio of cross-vein *m-cu* to maximal distance between R_{4+5} and M_{1+2} to apical part of CuA_1 , (17) : 15 : 8. Lower calypter yellow, with white cilia. Halteres light-yellow. Abdomen black, with short light setae; 1st tergum with long lateral white hairs along posterior margin; 7th segment short; 8th segment large, with short light hairs. Hypopygium black with brown appendages. Epandrium inflated basally, narrowed apically. Foramen mid-lateral. Hypandrium mid-ventral, elongate, narrow, tapering. Epandrial lobi reduced, bearing long bristles. Short epandrial seta present. Cerci fused except apices. Cercus narrow, with narrow baso-ventral process bearing subapical seta, three short flattened apical setae, dorsally densely setosed. Lobi of surstylus fused. Surstylus long, narrow, with pointed apex bearing subapical seta, with narrow ventral subapical setiferous process and ventral subapical prominence bearing thick seta.

Female. Similar to male except lacking male secondary sexual characters. Tergum 9+10 with a pair of long acanthophorites, with long lateral setae; cercus rather short, bearing fine apical seta.

Length: body without antennae 2.4—2.6 mm, antenna 0.8 mm, wing-length 2.5—2.8 mm, wing-width 0.8—0.9 mm.

Distribution. Namibia.

Etymology. The species is named for Belgian dipterologist, Dr. M. Pollet.

Diagnosis. *M. polleti* sp. n. can be associated with "*diadema-velae*" group of species (Bickel, 1985, 1987), though having epandrial seta and just 3 strong dorsocentrals, and lacking lateral scutellars. Wing vein *m-cu* twice longer than apical part of CuA_1 , scape and pedicel yellow-brownish, legs mostly yellow. Hypopygium strongly differs from this in other Afrotropical species of the genus.

Medetera normalis Curran

(Fig. 6)

Material examined. 1 female, **Gambia**: Kotu stream about 3 km SW Bakau, swept in veg. 22—23.XI.1977, UTM 28PCK1688, Loc. 3 / Lund Univ., Syst. Dept., Sweden Gambia/Senegal. Nov. 1977, Cederholm - Danielsson - Hammarstedt - Hedquist - Samuelsson;

2 females, **Gambia**: Bakau at Tropic Bungalow, swept in meadow rich in flowers, at the beach, 16—18.XI.1977, UTM 28PCK1790, Loc. 25 / Lund Univ., Syst. Dept., Sweden Gambia/Senegal. Nov. 1977, Cederholm - Danielsson - Hammarstedt - Hedquist - Samuelsson; 1 male, **Sierra Leone**: Freetown, Cape Sierra Hotel area, 13°17'W, 8°31'N, 1.XII.1993, loc. 2, on windows / Lund University Sierra Leone Expedition 1993, leg. L. Cederholm - R. Danielsson - R. Hall; 2 males, **Congo Brazzaville**, Congo river / 21—31.XII.1963, leg. Endrody-Y., Balogh, Zicsi [HNHM]; 1 female, **Ghana**: New Longoro / VII—VIII.1965, leg. Endrody-Y. [HNHM]; 1 female, **Ghana**: Bobiri, forest res. / 25—30.VI.1969, leg. Endrody-Y. [HNHM]; 2 males & 5 females, **S.W. Africa** (W39), Kombat, 16—17.II.1972 / Southern African Exp. B.M. 1972—1; 1 female, **S.W. Africa** (30), Ameib Farm, 19 mls NW Karibib; 31.I—2.II.1972 / Southern African Exp. B.M. 1972—1; 1 female, **Natal**: Weenen, XII.1923, H.P. Thomasset / Pres. by Imp. Inst. Ent. Brit. Mus. 1932—338; 1 female, **Zanzibar**, Nazi Moja, X—XI. 1924, H.J. Snell / Pres. by Imp. Bur. Ent. Brit. Mus. 1926—212.

Diagnosis. *M. normalis* differs from other species by the following complex of characters. Face entirely pollinose; first flagellomere ovate, arista dorsal; two strong dorsocentrals with a row of small setae anteriorly; four strong scutellars with lateral ones half as long as medians; one long and one short black propleural setae; femora blackish except apices, tibiae reddish-yellow; coxae with light, sometimes brown, setae; posterior basitarsomere 1/3 as long as next tarsomere; *m-cu* equal or somewhat shorter than apical part of CuA_1 ; *m-cu* 1.5 to 2 times shorter than maximum distance between R_{4+5} and M_{1+2} .

Distribution. South Africa, Tanzania, Namibia (!), Congo (!), Ghana (!), Sierra Leone (!), Gambia (!).

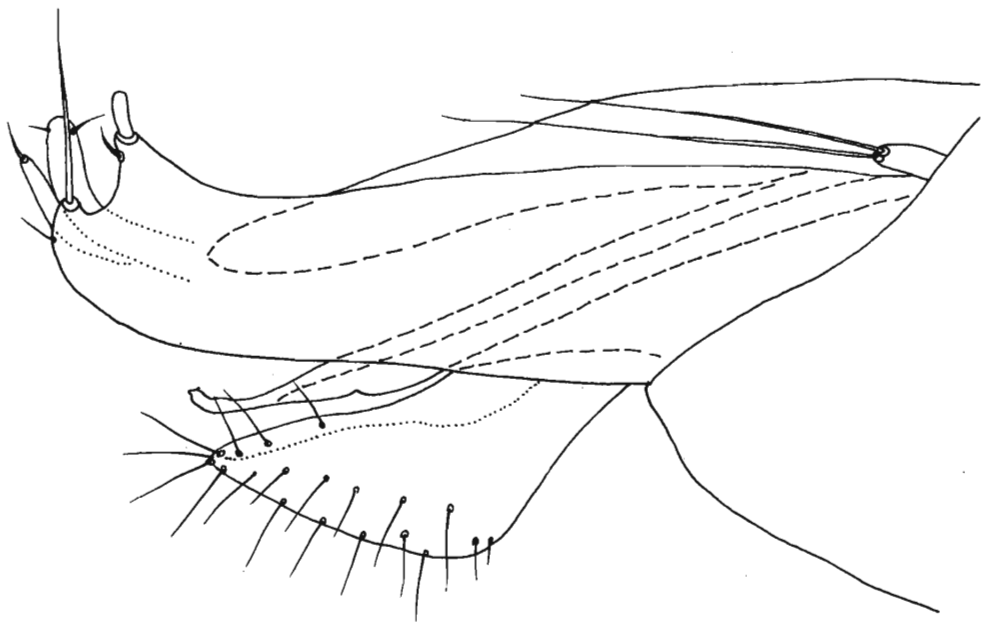
Medetera rikhterae sp. n.

(Fig. 7)

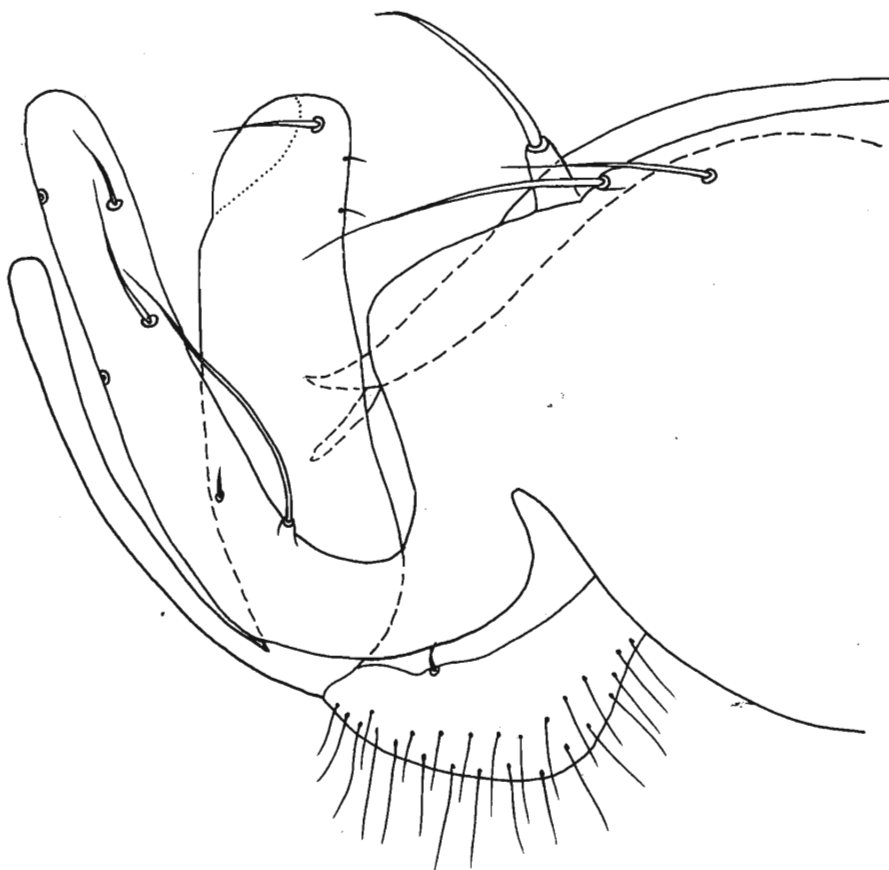
Holotype. Male, **S.W. Africa** (11), Aar Farm, 25 mls ESE Aus, 15-17.I.1972 / Southern African Exp. B.M. 1972-1.

Paratype. Female, same labels.

Description. Male. Frons black, entirely grey pollinose. Lower part of epistome and clypeus metallic violet, weakly pollinose. A row of several fine short black postocular setae at the top of eye and a row of white postocular setae in the middle present. One strong vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae. Ventral postcranium covered with sparse white irregular setae. Face somewhat narrowed in the middle. Ratio of height of epistome to its maximal width to height of clypeus to its minimal width, 20 : 12 : 11: 11.



7



8

Figs 7—8. Apex of hypopygium, lateral view.
7, *M. rikhterae* sp. n.; 8, *M. pospelovi* sp. n.

Antenna short, black; pedicel slightly swollen, with ring of short apical setulae; first flagellomere rounded, as long as high, with short hairs. Arista apical, practically bare. Length ratio of scape to pedicel to first flagellomere to arista, 4 : 4 : 7 : 45. Palpus short, black, grey pollinose, with short light hairs. Proboscis short, black, with sparse short hairs. Thorax bronze-blue-black, weakly grey pollinose; mesonotum with copper and violet reflection in places. Two pairs of strong dorsocentral setae with the 1st one half as long as the 2nd and a row of short setulae in front of the first one. Two rows of microscopic acrostichals extending to mesonotal flattening. Propleura with 3 or 4 light seta. Scutellum with a pair of strong median setae and 2 lateral setae, half as long as medians. Legs entirely black. Coxae and femora with light setae and hairs. Fore and middle coxae with numerous hairs; middle and hind coxae each with one external seta. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth), 40 : 53 : 55 : 32 : 29 : 20 : 8 : 7. Middle tibia with one antero-dorsal, one posterodorsal fine setae at base, and one or two apical setae. 1st to 4th tarsomeres each with 1 or 2 short black apico-ventral setae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 25 : 65 : 65 : 51 : 29 : 17 : 8 : 6. Hind femora with several long dorsal setae in basal third. Hind tibia slightly thickened at apex, with subapical posterior excavation and 2 apical spurs. Hind basitarsomere with small baso-ventral tooth. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 20 : 67 : 78 : 18 : 44 : 25 : 9 : 7. Wings hyaline, veins brown. Costa without long hairs. Ratio of parts of costa between R_{2+3} and R_{4+5} to those between R_{4+5} and M_{1+2} , 23 : 5. Ratio of apical to basal part of M_{1+2} , 88 : 80. R_{4+5} and M_{1+2} strongly convergent. M_{1+2} slightly bowed anteriorly, nearly straight. Ratio of cross-vein $m-cu$ to maximal distance between R_{4+5} and M_{1+2} to apical part of CuA_1 , 14 : 23 : 12. Anal vein foldlike. Lower calypter yellow, with white cilia. Halteres yellow. Abdomen black, with short light setae; 7th segment short; 8th segment large, with short hairs. Hypopygium black with brown appendages. Epandrium broad, narrowed apicad. Foramen mid-lateral. Hypandrium mid-ventral, elongate, narrow. Epandrial lobi fused, forming a single pedicel bearing two long bristles. Cerci separated. Cercus subtriangular, simple, dorsally and apico-ventrally setosed. Lobi of surstylus fused to the apex. Surstylus long, nearly straight, with 3 short apical setiferous processes.

Female. Similar to male except lacking male secondary sexual characters. Posterior tibia and tarsus simple.

Length: male body without antennae 2.7 mm, female body 3.1 mm, antenna 0.9 mm, male wing-length 2.8 mm, female wing-length 3.3 mm, male wing-width 0.9 mm, female wing-width 1.1 mm.

Distribution. Namibia.

Etymology. The species is named for Russian dipterologist, Dr. V. Rikhter.

Diagnosis. *M. rikhterae* sp. n. has some relations to Oriental "*gracilis*" group and widely distributed "*diadema-veles*" group of species (Bickel, 1985, 1987), differing from other species by entirely black legs, modified posterior tibia, simple cercus etc. It differs from Afrotropical species of the genus having black legs by 4 strong scutellars, 2 pairs of strong dorsocentrals, white cilia on coxae and femora, modified posterior tibia and tarsus, and short apical section of CuA_1 on wing.

Medetera pospelovi sp. n.

(Fig. 8)

Holotype. Male, **Ghana**: Mampong, 21-27.12.1965, leg. Endrody-Younga [HNHM].

Paratypes. 3 males & 4 females, same labels; 1 male & 2 females, **Ghana**: Bobiri / 13.1.1966, leg. Endrody-Younga [HNHM].

Description. Male. Frons bronze-black. A row of fine black postocular setae ending with short postvertical seta at the top of eye present. One strong vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae. Ventral postcranium covered with sparse long light irregular setae. Face somewhat narrowed in the middle. Epistome metallic blue-green, clypeus silvery pollinose. Ratio of height of epistome to height of clypeus to its minimal width, 20 : 14 : 11. Antenna short, black; pedicel with incomplete ring of apical setae; first flagellomere asymmetric, higher than long, with short hairs. Arista apico-dorsal, microscopically pubescent. Length ratio of scape to pedicel to first flagellomere to arista, 3 : 3 : 5 : 55. Palpus short, metallic-black, with dark seta. Proboscis short, black, with dark hairs. Thorax black-brown, with blue reflection, greyish-silvery pollinose. Three pairs of strong dorsocentral setae decreasing in size anteriorly, with a row of hairs in front of the first one. Two rows of acrostichals extending to mesonotal flattening. Propleura with one light seta and one short hair. Scutellum with a pair of strong median setae and 2 lateral setae, nearly 2/3 length of medians. Legs entirely brown. Coxae brown-black, grey pollinose, with black ciliation. Fore coxa with lateral row of short hairs and several apical hairs; middle and hind coxae each with one fine external seta. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora

to tibia to tarsus (segments from first to fifth), 40 : 57 : 55 : 42 : 28 : 21 : 12 : 10. Middle tibia with one antero-dorsal, one posterodorsal at base, and several apical setae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 30 : 60 : 67 : 52 : 30 : 20 : 11 : 5. Hind femora with a row of black dorsal setae in basal half. Hind tibia with strong subapical dorsal seta. Hind tarsus simple. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 20 : 68 : 62 : 51 : 30 : 21 : 10 : 6. Wings hyaline, veins brown. Costa without long hairs. Ratio of parts of costa between R_{2+3} and R_{4+5} to those between R_{4+5} and M_{1+2} , 16 : 4. Ratio of apical to basal part of M_{1+2} , 85 : 70. R_{4+5} and M_{1+2} convergent. M_{1+2} slightly bowed posteriorly. Ratio of cross-vein *m-cu* to maximal distance between R_{4+5} and M_{1+2} to apical part of *CuA*, 11 : 18 : 16. Lower calypter yellow, with light cilia. Halteres yellow. Abdomen short, black, greyish pollinose, with short dark cilia; 7th segment short. Hypopygium dark-brown with brown appendages. Epandrium rounded. Foramen baso-lateral. Hypandrium baso-ventral. Epandrial seta long, positioned near epandrial lobes. Epandrial lobi small, bearing strong bristles. Cercus divided into basal setosed section articulated with large expanded ventrally distal section bearing outer elongate finger-like projection. Surstylus fused to epandrium, undivided, U-shaped, with 3 ventral setae as figured.

Female. Similar to male except lacking male secondary sexual characters. Tergum 9+10 with a pair of short acanthophorites, with long setae; cercus long and narrow, bearing long apical seta.

Length: body without antennae 2.1–3.2 mm, antenna 0.8 mm, wing-length 2.7 mm, wing-width 0.8 mm.

Distribution. Ghana.

Etymology. The species is named for Russian entomologist, Dr. S. M. Pospelov.

Diagnosis. *M. pospelovi* sp. n. is the only Afrotropical representative of Australasian "*salomonis*" group of species (Bickel, 1987). It differs from the closest *M. austrofemoralis* Bickel by 3 pairs of strong dorso-centrals, legs without silvery pruinosity, and morphology of hypopygium.

Medetera luteoscutata luteoscutata Parent (Fig. 9)

Material examined. Male, **Tanzania:** Amani, Tanga region / 1-18.II.1987, leg. Mahunka, Zicsi [HNHM].

Diagnosis. *M. luteoscutata* differs from major part of known species of the genus by black body, one pair of strong dorso-centrals, and more haired anterior half of mesonotum; male fore basitarsomere with

antero-ventral apical process, half as long as next tarsomere; 3rd tarsomere of the same tarsus with postero-dorsal apical process almost reaching apex of the next article. Antenna black; arista apical, pubescent; 4 strong scutellars; anterior coxa with apical hook of glued hairs; midtibia with 2 dorsal setae at base; *m-cu* half as long as apical section of *CuA*; halter knob yellow-brown. Examined male from Tanzania slightly differs from original description (Parent, 1936) in colouration as follows. Scutellum entirely dark-brown, somewhat paler at margin; all coxae yellow; midfemora in apical half and hindfemora in apical 4/5 brown; hindtibia dark except apices. Anterior tarsus looks like this figured by Couturier (1985).

Distribution. Zaire, Tanzania (!).

Medetera luteoscutata lachaisei Couturier

Material examined. Female, **Sierra Leone:** S. of Freetown, close to Sussex, 13°11'W, 8°20'N, 30.XI. 1993, loc. 4, swept at road side / Lund University Sierra Leone Expedition 1993, leg. L. Cederholm - R. Danielsson - R. Hall.

Diagnosis. Examined female from Sierra Leone is identical to description of *M. lachaisei* by Couturier (1985). It differs from the description of *M. luteoscutata* (Parent, 1936) and examined male from Tanzania by entirely yellow scutellum and midfemora.

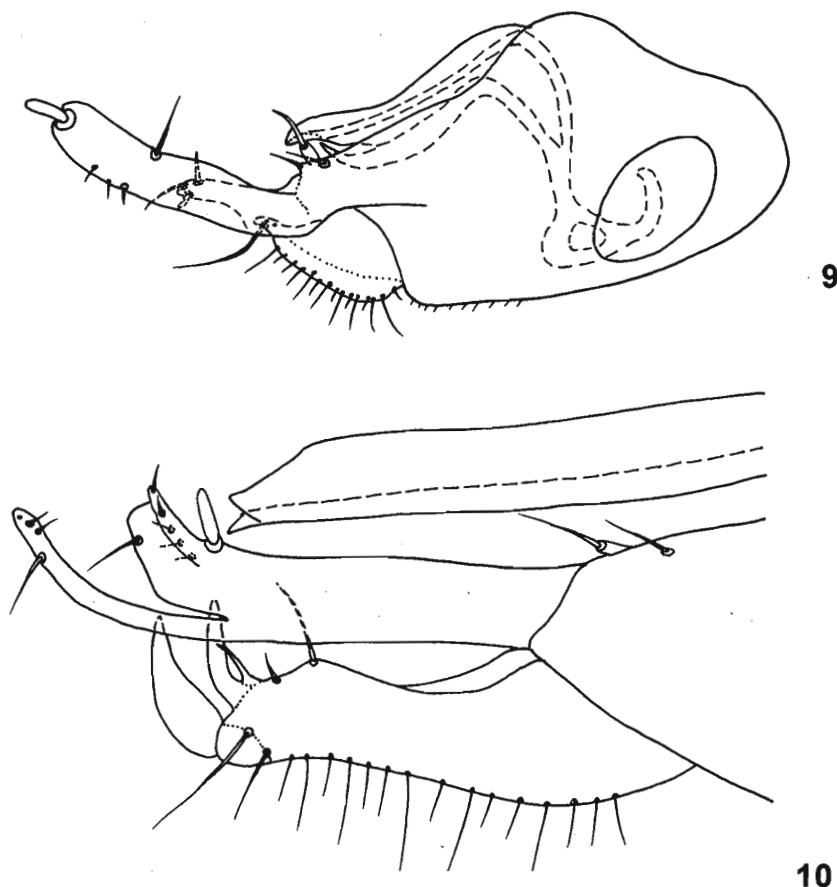
Distribution. Ivory Coast, Sierra Leone (!).

Medetera chumakovi sp. n.

(Fig. 10)

Holotype. Male, **South West Africa** (W31), Okahanja, Camping place, 4.II.1972, Riverside vegetation, Malaise-Trap / Southern African Exp. B.M. 1972-1.

Description. Male. Frons and face greenish-black, entirely pollinose. A row of several fine short brown postocular setae ending with longer postvertical seta at the top of eye, and a row of white postocular setae in the middle present. One strong vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae. Ventral postcranium covered with sparse white irregular setae. Face with nearly parallel sides. Ratio of height of epistome to its maximal width to height of clypeus to its minimal width, 15 : 10 : 9 : 8. Antenna short, black; pedicel slightly swollen, with ring of short apical setulae; first flagellomere subtriangular with rounded apex, as long as high, with short terminal hairs. Arista middorsal, practically bare. Length ratio of scape to pedicel to first flagellomere to arista, 5 : 4 : 5 : 36. Palpus and proboscis short, shining black, with short hairs.

Figs 9—10. *Medetera* sp.

10, *M. chumakovi* sp. n., apex of hypopygium, lateral view; 9, *M. luteoscutata luteoscutata* Parent, hypopygium, lateral view.

Thorax dark-bronze-blue, entirely grey pollinose. Five pairs of strong dorsocentral setae, gradually decreasing in size anteriorly, with anterior 3 setae half as long as 4th one, 4th seta 2/3 as long as 5th one, and microscopic hairs in front of the first one. Two rows of acrostichals extending to mesonotal flattening, with setae longer than distance between rows. Propleura with one light seta. Scutellum with a pair of strong median setae and 2 lateral setae, half as long as medians. Legs mostly yellow, 5th tarsomeres of all tarsi brown; trochanters and anterior femora at base darkened. All coxae brown-black, fore and middle coxae with numerous dark, though shining light, hairs; middle and hind coxae each with one external seta. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth), 28 : 40 : 41 : 18 : 13 : 9 : 6 : 6. Middle trochanter with one dorsal seta.

Middle tibia with one antero-dorsal, one posterodorsal at base, and one or two apical setae. 1st to 4th tarsomeres each with 1 or 2 short apico-ventral setae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 18 : 44 : 47 : 26 : 16 : 11 : 6 : 6. Hind leg without strong setae. Hind tibia with short apico-ventral spur. Hind tarsus simple. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 12 : 45 : 58 : 14 : 27 : 15 : 8 : 6. Wings hyaline, veins yellow-brownish. Costa without long hairs. Ratio of parts of costa between R_{2+3} and R_{4+5} to those between R_{4+5} and M_{1+2} , 18 : 5. Ratio of apical to basal part of M_{1+2} , 65 : 58. R_{4+5} and M_{1+2} weakly convergent. M_{1+2} slightly bowed anteriorly, nearly straight. Ratio of cross-vein $m-cu$ to maximal distance between R_{4+5} and M_{1+2} to apical part of CuA_1 , 11 : 14 : 17. Basal 2/3 of basal section of CuA_1 .

distinctly thickened. Lower calypter yellow, with white cilia. Halteres yellow. Abdomen bronze-blue-black, with short light setae; 7th segment 2/3 as long as epandrium; 8th segment large, with short hairs. Epandrium elongate, narrowed apicad. Foramen basolateral. Hypandrium baso-ventral, long, narrow. Epandrial lobi reduced to short separated pedicels, each bearing short bristle. Cerci divided. Cercus elongate, with two flattened apical setae, dorsally and apico-ventrally setosed. Lobi of surstylus fused. Surstylus long, narrow, with narrow dorsal subapical process and short ventral subapical setiferous process bearing thick ventral seta.

Female. Unknown.

Length: body without antennae 1.9 mm, antenna 0.6 mm, wing-length 2.3 mm, wing-width 0.8 mm.

Distribution. Namibia.

Etymology. The species is named for Russian entomologist, Dr. M. A. Chumakov.

Diagnosis. *M. chumakovi* sp. n. can be included into widely distributed "apicalis" group of species, being closely related to Oriental *M. liwo* Bickel (Bickel, 1987), differing from the last species in hypopygium morphology. It can be distinguished by the following characters: 4 scutellars; 5 strong dorsocentrals decreasing in size anteriorly; all coxae brown-black; legs yellow; arista middorsal; basal part of *CuA*₁ thickened.

Medetera grisea de Meijere

Material examined. Male, **Mauritius**: Trou aux Cerfs, 15.VI.1971 (A.M. Hutson), B.M.1971-346.

Diagnosis. Bickel (1987, redescription) belongs this species to "diadema-velae" group, which is characterized by the following characters: 4 strong dorsocentrals decreasing in size anteriorly; male posterior basitarsomere with antero-ventral basal tooth; hypopygium inflated basally; epandrial seta lost; surstylus fused almost to tip. *M. grisea* has lateral scutellars about 2/3 length of medians; epandrial lobe bristles branched distally; cercus with apical toothed blade-like seta and midventral clavate projection. Examined male from Mauritius somewhat differs from the description by Bickel: ratio of *m-cu* crossvein to distal section of *CuA*₁, 0.9 rather than 0.6; ratio of first three posterior tarsomeres, 0.8 : 2.0 : 1.0 rather than 0.7 : 1.6 : 0.7; apical seta on surstylus somewhat wider, and seta at base of cercal projection longer.

Distribution. Seychelles, Mauritius (!); Burma, India, Nepal, Bangladesh, Ceylon, Taiwan, Indonesia, Thailand, Vietnam, Malaysia, Samoa, New Caledonia, Hawaii, Australia.

Medetera cederholmi sp. n.

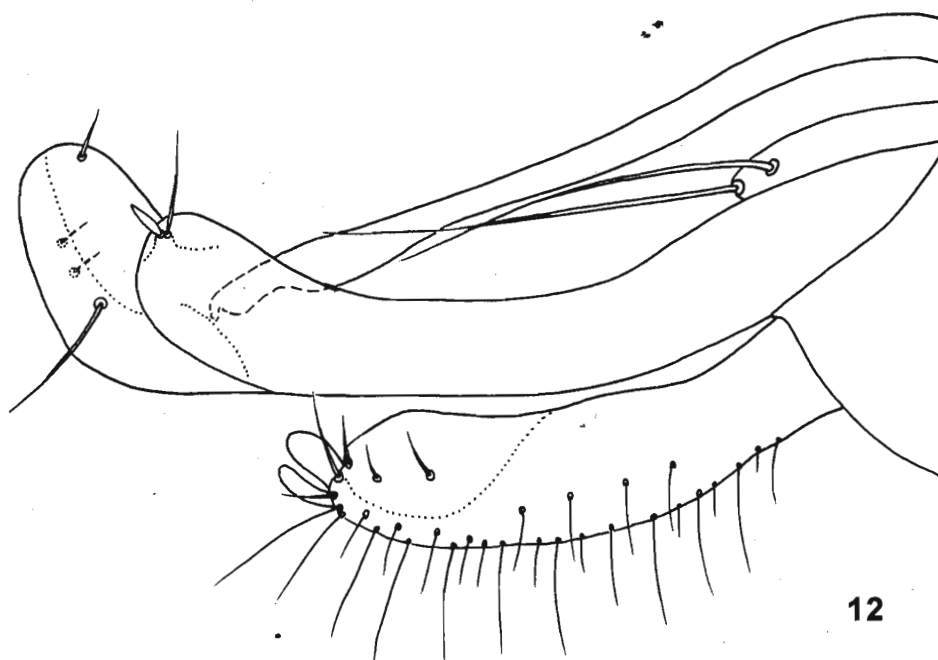
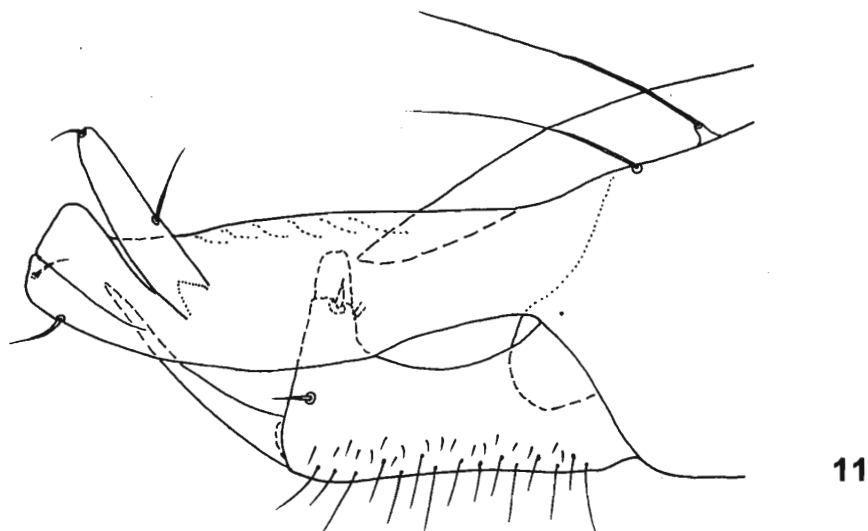
(Fig. 11)

Holotype. Male, **Sierra Leone**: Freetown, Cape Sierra Hotel area, 13°17'W, 8°31'N, 23.XI.1993, loc. 2, at light 18-24 / Lund University Sierra Leone Expedition 1993, leg. L. Cederholm - R. Danielsson - R. Hall.

Paratype. Female, the same labels.

Additional material. Female, **Ghana**: Kumasi, 26.V.1967, leg. Endrody-Y. [HNHM].

Description. Male. Frons and face entirely grey pollinose, epistome metallic, weakly pollinose. A row of several fine short black postocular setae at the top of eye and a row of white postocular setae in the middle present. One strong vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae. Ventral postcranium covered with sparse white irregular setae. Face somewhat narrowed in the middle. Ratio of height of epistome to its maximal width to height of clypeus to its minimal width, 19 : 12 : 10 : 10. Antenna short, black; pedicel slightly swollen, with ring of short apical setae; first flagellomere rounded, as long as high, with short terminal hairs. Arista subapical, microscopically pubescent. Length ratio of scape to pedicel to first flagellomere to arista, 4 : 4 : 5 : 48. Palpus short, shining green, with light hairs. Proboscis short, black, with light hairs. Thorax blueish-black, pollinose. Two pairs of strong posterior dorsocentral setae of equal length, with a row of short setulae gradually decreasing in size anteriorly. Two rows of short acrostichals extending to mesonotal flattening. Propleura with one long and one short light setae. Scutellum with a pair of strong median setae and 2 curved lateral setae, nearly 2/3 length of medians. Legs including coxae yellow, 5th tarsomeres of all tarsi brown. Coxae with light setae and hairs. Fore and middle coxae with several hairs; middle and hind coxae each with one external seta. Legs very long, thin. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth), 45 : 63 : 72 : 48 : 37 : 29 : 16 : 10. Middle tibia with one antero-dorsal, one posterodorsal at base, and one or two apical short setae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 23 : 60 : 88 : 64 : 48 : 28 : 11 : 7. Hind femora with several short dorsal setae in basal third. Hind tibia with one short subapical dorsal seta, with short black apico-dorsal spur. Hind tarsus simple. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 16 : 65 : 108 : 23 : 72 : 34 : 13 : 8. Wings hyaline, veins yellow-brownish. Costa without long hairs. Ratio of parts of costa between *R*₂₊₃ and *R*₄₊₅



Figs 11—12. Apex of hypopygium, lateral view.
11, *M. cederholmi* sp. n.; 12, *M. simplicis* Curran.

distinctly thickened. Lower calypter yellow, with white cilia. Halteres yellow. Abdomen bronze-blue-black, with short light setae; 7th segment 2/3 as long as epandrium; 8th segment large, with short hairs. Epandrium elongate, narrowed apicad. Foramen basolateral. Hypandrium baso-ventral, long, narrow. Epandrial lobi reduced to short separated pedicels, each bearing short bristle. Cerci divided. Cercus elongate, with two flattened apical setae, dorsally and apico-ventrally setosed. Lobi of surstylus fused. Surstylus long, narrow, with narrow dorsal subapical process and short ventral subapical setiferous process bearing thick ventral seta.

Female. Unknown.

Length: body without antennae 1.9 mm, antenna 0.6 mm, wing-length 2.3 mm, wing-width 0.8 mm.

Distribution. Namibia.

Etymology. The species is named for Russian entomologist, Dr. M. A. Chumakov.

Diagnosis. *M. chumakovi* sp. n. can be included into widely distributed "*apicalis*" group of species, being closely related to Oriental *M. liwo* Bickel (Bickel, 1987), differing from the last species in hypopygium morphology. It can be distinguished by the following characters: 4 scutellars; 5 strong dorsocentrals decreasing in size anteriorly; all coxae brown-black; legs yellow; arista middorsal; basal part of *CuA*₁ thickened.

Medetera grisescens de Meijere

Material examined. Male, **Mauritius**: Trou aux Cerfs, 15.VI.1971 (A.M. Hutson), B.M.1971-346.

Diagnosis. Bickel (1987, redescription) belongs this species to "*diadema-velae*" group, which is characterized by the following characters: 4 strong dorsocentrals decreasing in size anteriorly; male posterior basitarsomere with antero-ventral basal tooth; hypopygium inflated basally; epandrial seta lost; surstylus fused almost to tip. *M. grisescens* has lateral scutellars about 2/3 length of medians; epandrial lobe bristles branched distally; cercus with apical toothed blade-like seta and midventral clavate projection. Examined male from Mauritius somewhat differs from the description by Bickel: ratio of *mcu* crossvein to distal section of *CuA*₁, 0.9 rather than 0.6; ratio of first three posterior tarsomeres, 0.8 : 2.0 : 1.0 rather than 0.7 : 1.6 : 0.7; apical seta on surstylus somewhat wider, and seta at base of cercal projection longer.

Distribution. Seychelles, Mauritius (!); Burma, India, Nepal, Bangladesh, Ceylon, Taiwan, Indonesia, Thailand, Vietnam, Malaysia, Samoa, New Caledonia, Hawaii, Australia.

Medetera cederholmi sp. n.

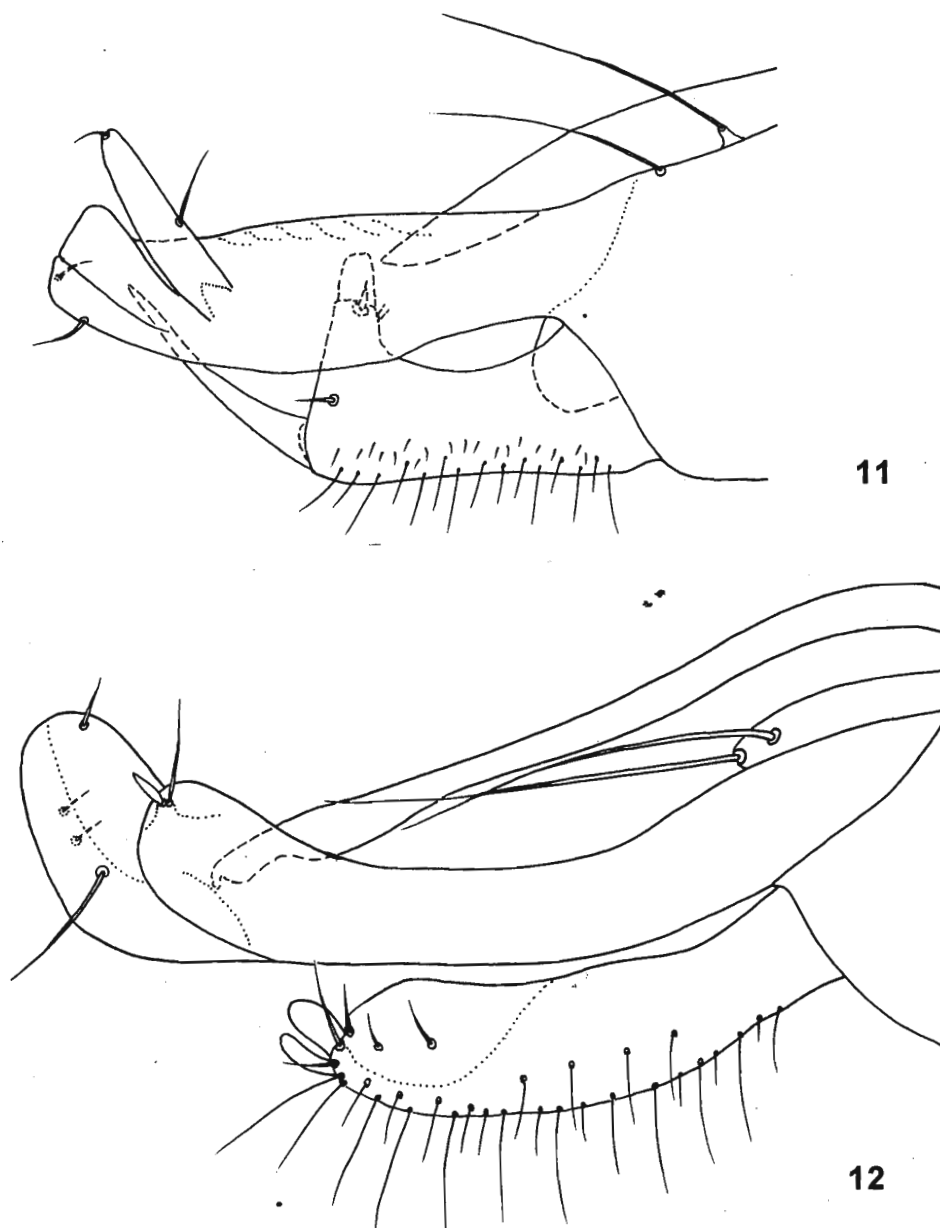
(Fig. 11)

Holotype. Male, **Sierra Leone**: Freetown, Cape Sierra Hotel area, 13°17'W, 8°31'N, 23.XI.1993, loc. 2, at light 18-24 / Lund University Sierra Leone Expedition 1993, leg. L. Cederholm - R. Danielsson - R. Hall.

Paratype. Female, the same labels.

Additional material. Female, **Ghana**: Kumasi, 26.V.1967, leg. Endrody-Y. [HNHM].

Description. Male. Frons and face entirely grey pollinose, epistome metallic, weakly pollinose. A row of several fine short black postocular setae at the top of eye and a row of white postocular setae in the middle present. One strong vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae. Ventral posteranum covered with sparse white irregular setae. Face somewhat narrowed in the middle. Ratio of height of epistome to its maximal width to height of clypeus to its minimal width, 19 : 12 : 10 : 10. Antenna short, black; pedicel slightly swollen, with ring of short apical setae; first flagellomere rounded, as long as high, with short terminal hairs. Arista subapical, microscopically pubescent. Length ratio of scape to pedicel to first flagellomere to arista, 4 : 4 : 5 : 48. Palpus short, shining green, with light hairs. Proboscis short, black, with light hairs. Thorax blueish-black, pollinose. Two pairs of strong posterior dorsocentral setae of equal length, with a row of short setulae gradually decreasing in size anteriorly. Two rows of short acrostichals extending to mesonotal flattening. Propleura with one long and one short light setae. Scutellum with a pair of strong median setae and 2 curved lateral setae, nearly 2/3 length of medians. Legs including coxae yellow, 5th tarsomeres of all tarsi brown. Coxae with light setae and hairs. Fore and middle coxae with several hairs; middle and hind coxae each with one external seta. Legs very long, thin. Fore legs without setae. Fore tarsus simple. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth), 45 : 63 : 72 : 48 : 37 : 29 : 16 : 10. Middle tibia with one antero-dorsal, one posterodorsal at base, and one or two apical short setae. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth), 23 : 60 : 88 : 64 : 48 : 28 : 11 : 7. Hind femora with several short dorsal setae in basal third. Hind tibia with one short subapical dorsal seta, with short black apico-dorsal spur. Hind tarsus simple. Length ratio of hind coxa to femora to tibia to tarsus (segments from first to fifth), 16 : 65 : 108 : 23 : 72 : 34 : 13 : 8. Wings hyaline, veins yellow-brownish. Costa without long hairs. Ratio of parts of costa between R_{2+3} and R_{4+5}



Figs 11—12. Apex of hypopygium, lateral view.
11, *M. cederholmi* sp. n.; 12, *M. simplicis* Curran.

to those between R_{4+5} and M_{1+2} , 14 : 3. Ratio of apical to basal part of M_{1+2} , 78 : 78. R_{4+5} and M_{1+2} strongly convergent. M_{1+2} nearly straight. Ratio of cross-vein *m-cu* to maximal distance between R_{4+5} and M_{1+2} to apical part of CuA_1 , 11 : 18 : 20. Anal vein foldlike. Lower calypter yellow, with yellow cilia. Halteres light-yellow. Abdomen blueish-black, with short dark setae; 7th segment as long as epandrium; 8th segment large. Epandrium elongate, narrowed in apical third. Foramen baso-lateral. Hypandrium raising at basal third of epandrium. Epandrial lobi reduced to short pedicels, bearing long bristles. Short epandrial seta present. Cerci fused except apices. Cercus with long narrow apico-dorsal process, and broad apicoventral prominence bearing apical lobe and short seta, dorsally densely setosed. Lobi of surstylus fused except apex. Surstylus long, with longitudinal suture at apex, with long lateral subapical process bearing two short setae.

Female. Similar to male except lacking male secondary sexual characters. Tergum 9+10 with a pair of thin acanthophorites, shorter than cercus, with longer lateral setae; cercus with one subapical and one basolateral long setae. Midcoxa darkened at base.

Length: body without antennae 2.6 mm, antenna 0.8 mm, wing-length 2.6 mm, wing-width 0.9 mm.

Distribution. Sierra Leone, Ghana.

Etymology. The species is named for Swedish entomologist, Dr. L. Cederholm.

Diagnosis. *M. cederholmi* sp. n. is most closely related to Oriental *M. longa* Negrobov & Thuneberg (Bickel, 1987, redescription), differing by yellow coxae, 2 dorsocentrals only, another hypopygium morphology. It is keyed to Afrotropical *M. afra* and *M. simplicis*, though strongly differing by very long legs, long 7th tergum and many other characters.

Medetera simplicis Curran

(Fig. 12)

Material examined. Male and female, S.W. Africa (W37), Otjitambi Fm., 27 mls ESE Kamanjab, 13-15.II.1972 / Southern African Exp. B.M. 1972-1; 1 male, Natal: Weenen, III.1924, H.P. Thomasset / Pres. by Imp. Inst. Ent. Brit. Mus. 1932-338.

Diagnosis. *M. simplicis* differs from other species by the following characters. Frons and face pollinose, clypeus shining in the middle; antenna black, arista apical; 4 strong scutellars with lateral ones 1/2 to 2/3 length of medians; 4 strong dorsocentrals; 2 white propleural setae; legs reddish-yellow, anterior coxa dirty-yellow, greyish in anterior view, with white setae; 2nd tarsomere of hindtarsus 2.5 times as long as the 1st; *m-cu* equal or somewhat shorter than apical section of CuA_1 ; *m-cu* 1.5 times shorter than maximum distance between R_{4+5} and M_{1+2} .

Distribution. South Africa, Namibia (!), Zaire.

Key to Afrotropical species of *Medetera*

1. Two strong scutellar setae with greatly reduced lateral hairs 2
 - Four strong scutellars, lateral ones at least half as long as medians 11
2. Four pairs of strong dorsocentrals with the 1st one at least half as long as the 4th; legs mostly reddish-yellow, coxae entirely and femora in basal half brown or black 3
 - Two or three strong dorsocentrals with 2 or more hair-like setulae in front of the first one . . . 4
3. Scutellum with two pairs of lateral hairs
 - *mainei* Curran
 - Scutellum with one pair of lateral hairs
 - *beckeri* Parent
4. Two strong dorsocentrals with 2 hair-like setae anteriorly 5
 - Three strong dorsocentrals gradually decreasing in size anteriorly; legs mostly yellow; scape and pedicel reddish-yellow or brown 9
5. Femora mostly black, antenna black 6
 - Legs yellow, antenna brownish 8
6. Femora black in basal half; tibiae yellow (female) *nocturna* Curran
 - Legs entirely black 7
7. Frons and face shining *otiosa* Parent
 - Frons and face entirely pollinose (female)
 - *rutilans* Parent
8. Median lobe of surstylus expanded apically
 - *edwardsi* sp. n.
 - Median lobe of surstylus narrowed and rounded apically *norlingi* sp. n.
9. Anterior coxa mostly yellow, greyish anteriorly; posterior basitarsomere half as long as 2nd tarsomere; arista apical; *m-cu* slightly longer than apical part of CuA_1 ; Sudan
 - *araneipes* Parent
- Anterior coxa black except extreme apex; posterior basitarsomere 1/3 length of 2nd tarsomere; Namibia 10
10. Wing vein *m-cu* equal to or shorter than apical part of CuA_1 ; arista apical; posterior tarsus simple *subchevi* sp. n.
 - Wing vein *m-cu* nearly twice longer than apical part of CuA_1 ; arista dorsal; posterior basitarsus with basoventral tooth *polleti* sp. n.
11. Legs mostly black-brown, sometimes knees reddish-yellow or tibiae brownish 12
 - Legs mostly reddish-yellow, sometimes femora mostly dark 20
12. Anterior coxa with pale cilia 13
 - Anterior coxa with black cilia 17

13. Frons purple brilliant; face polished, entirely brilliant violet; lower calypter with black cilia *polita* Parent
- Frons and face entirely pollinose, faintly brilliant; lower calypter with pale cilia 14
14. Tibia reddish-yellow; antenna brown, arista dorsal; 3 mm *normalis* Curran
- At least anterior tibia black; antenna black, arista apical 15
15. Only anterior tibia black; *m-cu* as long as apical part of *CuA*₁; posterior basitarsus 2/5 length of second tarsomere; 2 mm (female) *varitibia* Parent
- Legs entirely black 16
16. Wing-vein *m-cu* as long as apical part of *CuA*₁; posterior basitarsus 1/3 length of second tarsomere, with basal tooth; posterior tibia apically swollen, with two apico-lateral hooks; size about 3 mm *rikhterae* sp. n.
- Wing-vein *m-cu* 2/3 length of apical part of *CuA*₁; posterior basitarsus half length of second tarsomere; posterior tibia simple; 2 mm *calensis* Parent
17. Anterior coxa with apical hook of glued setae; postocular setae entirely black; lower calypter with black cilia; 1.75 mm *hamata* Parent
- Anterior coxa with simple ciliation; 2.5 to 3 mm 18
18. Hind femora without anterior setae; cercus articulated with large distal part; surstylus fine, greatly curved ventrad; Ghana *pospelovi* sp. n.
- Hind femora with several anterior setae in apical half; cercus simple; surstylus straight, long, narrow; South Africa 19
19. Postocular setae partly yellow; lower calypter with yellow cilia; halter yellow *capensis* Curran
- Postocular setae entirely black; lower calypter with black cilia; halter brown *munroi* Curran
20. Hind femora blackish in apical 2/3; all coxae yellow; male fore basitarsomere with antero-ventral apical process, half as long as next tarsomere; one pair of strong dorsocentrals 20a
- Hind femora entirely yellow or dark in basal part with yellow apex; middle and hind coxae usually dark; male fore basitarsomere simple; 2 or more pairs of strong dorsocentrals 21
- 20a. Scutellum entirely yellow *luteoscutata lachaisei* Couturier
- Scutellum mostly greenish-brown *luteoscutata luteoscutata* Parent
21. Clypeus wholly white or brown pollinose; face and frons similarly clothed, ground colour almost entirely hidden; two pairs of strong dorsocentrals and six or more short hair-like ones in a row in front of suture; antenna brown; arista dorsal; coxae black; femora blackish except apices *normalis* Curran
- Clypeus not wholly pollinose, at least the middle shining, or if pollinose, then femora yellow; other features various 22
22. Basal half of anterior four femora black; thorax and abdomen black 23
- Anterior four femora wholly pale or but little darkened basally 24
23. Propleura with 2 or 3 black setae; coxae with blackish cilia; cercus black with black hairs; surstylus brownish-red; 2.0 to 2.5 mm *praedator* Curran
- Propleura with white setae; coxae with pale cilia; 3.75 mm (female) *subviridis* Parent
24. First flagellomere subtriangular with dorsal arista; all coxae black-brown; femora yellow; basal part of *CuA*₁ thickened in male *chumakovi* sp. n.
- First flagellomere usually rounded with apical arista; basal part of *CuA*₁ simple 25
25. Lateral scutellars about 2/3 length of median ones; frons pollinose; hind femora black in basal half, or if yellow, then epandrium greatly inflated basally 26
- Lateral scutellars half as long as median ones; femora usually yellow, or if brown above, then frons mostly shining; epandrium gradually narrowed apicad 27
26. Clypeus shining black with sides pollinose; thorax and scutellum tawny brown pollinose, vittae of mesonotum not distinct; femora reddish, hind femora black in basal half, middle femora sometimes slightly darkened basally; cercus brown with black hairs; surstylus brown, bare *penura* Curran
- Clypeus satiny metallic blue-green; thorax grey-brown pollinose, with 3 bronze vittae; 4 to 6 strong dorsocentrals, decreasing in size anteriorly; femora yellow, sometimes infuscated at base; male hind basitarsomere with antero-ventral basal tooth; epandrium greatly inflated basally; cercus yellow *grisescens* De Meijere
27. Antenna mostly yellow with 1st flagellomere mostly brown; surstylus with long and narrow basodorsal process *norlingi* sp. n.
- Antenna entirely black; surstylus without long basodorsal process 28
28. All coxae yellow, slightly pollinose; second tarsomere of hind tarsus 3.2 times longer than first; 7th abdominal segment approximately as long as epandrium *cederholmi* sp. n.

- Middle and hind coxae distinctly dark-greenish, densely pollinose; second tarsomere of hind tarsus 2.5 times longer than first; 7th abdominal segment shorter than epandrium 29
29. Frons shining brownish black; epistome dark-green, pollen not dense; coxae appearing rather greenish; scutellum shining green basally, brownish pollinose on apical half and margin; cercus yellow, with fine yellow hairs; surstylus reddish-brown, slightly thickened towards apex, with considerable yellow hair at apex *afra* Curran
- Frons only shining in the middle above; epistome densely brown pollinose; anterior coxa distinctly reddish-yellow; base of scutellum shining brownish with scarcely a greenish tinge; cercus brownish-red; surstylus without considerable apical hair *simplicis* Curran

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References

- Becker, Th.** 1923. Dipterologische Studien: Dolichopodidae. D. Aethiopische Region. *Entomol. Mitteilungen*, **12**(1): 1—50.
- Bickel, D. J.** 1985. A revision of the Nearctic *Medetera* (Diptera: Dolichopodidae). *United States Department of Agriculture Technical Bulletin*, **1692**: 1—109.
- Bickel, D. J.** 1987. A Revision of the Oriental and Australasian *Medetera* (Diptera: Dolichopodidae). *Records of the Australian Museum*, **39**: 131—182.
- Couturier, G.** 1985. *Medetera lachaisei*, espece nouvelle de Diptere Dolichopodidae des Ficus

de la foret de Tai (Cote d'Ivoire). *Revue Fr. Entomol.* (N.S.), **7**(5): 287—289.

- Dyde, C. E. & K. G. Smith.** 1980. Family Dolichopodidae. In: R. W. Crosskey (ed.), *Catalogue of the Diptera of the Afrotropical Region*. Brit. Mus. (Nat. Hist.), London: 443—463.
- Grichanov, I. Ya.** 1997. Four new species of *Saccophoronta* Becker (Diptera: Dolichopodidae) from Tropical Africa with notes on the world fauna of the genus. *Int. J. Dipter. Res.*, **8**(3): 123—134.
- Negrobov, O. P. & A. A. Stackelberg.** 1971—1977. Dolichopodidae, Unterfamilie Medeterinae. In: E. Lindner (ed.), *Die Fliegen der Palaearktischen Region*. Stuttgart, IV, **29**, 284 (1971), 289 (1972), 302 (1974), 316 (1977): 238—354.
- Negrobov, O. P. & H. Schumann.** 1990. Eine neue Art der Gattung *Medetera* Fischer, 1814 aus Kamerun und Zaire (Diptera, Dolichopodidae). *Dtsch. Entom. Z.*, **37**(4—5): 229—230.
- Negrobov, O. P., Tsurikov, M. N. & A. B. Esenin.** 1991. New species of *Medetera* from Vietnam. *Vest. Zool.*, **5**: 19—25. (In Russian).
- Parent, O.** 1929a. Contribution a la faune dipterologique d'Egypte. Dolichopodides de la region de Halaib. *Bull. Soc. Roy. Entomol. d'Egypte*, **13**(1): 42—58.
- Parent, O.** 1929b. Les Dolichopodides de la Region Ethiopienne. *Etude Systematique. Bull. Soc. Roy. Entomol. d'Egypte*, **13**(4): 151—190.
- Parent, O.** 1931. Quelques Dolichopodides nouveaux conserves au British Museum. *Ann. Soc. Sci. Bruxelles, B, Mem.*, **51**: 3—47.
- Parent, O.** 1936. Dipteres Dolichopodides du Congo Belge, conserves au Musee royal d'Histoire naturelle de Belgique. *Bull. Mus. roy. Hist. nat. Belg.*, **12**(15): 1—19.
- Robinson, H.** 1975. Bredin-Archbold-Smithsonian Biological Survey of Dominica: The family Dolichopodidae with some related Antillean and Panamanian species (Diptera). *Smithson. Contr. Zool.*, **185**: 1—141.