

Notes on Afrotropical and Palearctic species of the genus *Thinophilus* Wahlberg (Diptera: Dolichopodidae) with descriptions of new species

IGOR YA. GRICHANOV

Grichanov, I. Ya. 1997. Notes on Afrotropical and Palearctic species of the genus *Thinophilus* Wahlberg (Diptera: Dolichopodidae) with descriptions of new species *Int. J. Dipterol. Res.*, 8(3): 135–147.

T. munroi setiscutellatus ssp. n. from Namibia, *T. ciliiventris* sp. n. from South Africa, Botswana, Angola, and Nigeria are described. New records for known Afrotropical and Palearctic species are given. Catalogue and key to species of *Thinophilus* from both Regions are also present.

I. Ya. Grichanov, All-Russian Institute of Plant Protection, Podbelskogo 3, St. Petersburg-Pushkin, 189620, Russia.

Key words. Diptera, Dolichopodidae, *Thinophilus*, key, Tropical Africa, Palearctic Region

Introduction

Widely distributed halophilous species of the genus *Thinophilus* Wahlberg are confined mostly to arid zones and also to sea coast in many Regions of the world. Concerning the fauna of the Old World, I regard that one of the centers of the genus diversity is located at the border dividing Afrotropical and Palearctic Regions. Totally 40 species are known today from the two Regions. 13 species are recorded only from Afrotropical Region, 10 species — only from Palearctic Region, whereas 16 Afrotropical and Palearctic species are located in Saharan-Arabian Transitional Zone. I conditionally refer to this Zone the following countries mentioned in the Catalogs (Dyde & Smith, 1980; Negrobov, 1991): Morocco, Algeria, Tunisia, Egypt, Sudan, Ethiopia, Djibouti, Somalia, and Yemen. The most interest distribution of species are as follows: *T. indigenus* Becker — Mongolia, Iran, Turkey, Algeria, Egypt, Cape Verde Is., Ethiopia, South Yemen, Nigeria (!), Benin (!), Ghana (!), Zaire, Tanzania (!), Madagascar, Angola (!), Namibia (!), South Africa (!), Swaziland (!); Oriental Region; *T. mirandus* Becker — Algeria, Morocco, Tanzania (!); *T. palpatus* Parent — Ethiopia, Nigeria, Angola (!), Namibia (!), Botswana (!). Several Palearctic species had doubtful records from

Tropical Africa, and some Saharan species were also recorded from South Europe and/or Central Asia. I would expect that many species had wider distribution than area known up-to-day. These data induced me to compile the joint key to all Afrotropical and Palearctic species of *Thinophilus* (see below). All the species described and recorded are referred to the subgenus *Thinophilus* s.s. *T. prudens* Curran, probably, cannot be united with *T. versutus* Walker in the subgenus *Schoenophilus* Mik in spite of the presence of 4 dorsocentral setae on mesonotum in both species (compare descriptions in Curran, 1926 and Meuffels & Grootaert, 1984). On the other hand, *T. munroi munroi* Curran and *T. munroi setiscutellatus* ssp. n. should be possibly separated from other species in new subgenus. Some of the species are known from females, others — only from males. Therefore, several species cannot be surely identified without opposite sex of the same series. Treating unidentified material from the collections of the Natural History Museum, London [NHML], the Hungarian Natural History Museum [HNHM], and Lund University, Sweden [Lund], I found many interest species. In this paper descriptions of *T. munroi setiscutellatus* ssp. n. from Namibia, *T. ciliiventris* sp. n. from South Africa, Botswana, Angola, and Nigeria, and new records for known African and Palearctic

species are given. Catalogue and key to known species of *Thinophilus* from both Regions are also present.

Holotypes and paratypes of the new species are deposited in the Natural History Museum (London). Some specimens collected by author are conserved in the collection of Voronezh University, Russia [VU].

List of Afrotropical species of *Thinophilus* unknown from Palearctic and Transitional Afro-Palearctic Regions

(for references see Dyte & Smith, 1980)

- annulitarsis* Parent, 1936: 323 — Tanzania
aquaticus Becker, 1914: 125 — Kenya, Madagascar
bipunctatus Curran, 1926: 27 — South Africa, Zaire
calopus Loew, 1852: 659 — Mozambique, Zaire
capensis Curran, 1926: 26 — South Africa, Zaire
ciliiventris sp. n. — South Africa, Botswana, Angola, Nigeria
imperialis Curran, 1924: 228 (*Nematoproctus*) — South Africa, Botswana (!), Congo, Ghana, Nigeria, Zaire
munroi munroi Curran, 1926: 20 — South Africa
munroi setiscutellatus ssp. n. — Namibia
prudens Curran, 1926: 30 — South Africa, Angola (!), Ghana, Zaire, Senegal (!)
quadrissetus Parent, 1936: 324 — Tanzania, Zaire
rex Curran, 1926: 23 — South Africa, Zaire
splendidus Vanshuylbroeck, 1951: 80 — Zaire
virgatus Curran, 1926: 22 — South Africa

List of Palearctic species of *Thinophilus* unknown from Afrotropical and Transitional Afro-Palearctic Regions

(for references see Negrobov, 1991)

- bicalcaratus* Negrobov, 1971: 901 — Uzbekistan, Tajikistan, Turkmenia
brevicilius Negrobov, 1971: 901 — Uzbekistan, Tajikistan, Kirgizia (!)
longipilus Negrobov, 1971: 902 — Russian Far East
neptunus Frey, 1915: 78 — Sweden
ornatus Negrobov et Grichanov, 1982: 105 — Tajikistan
pollinosus Loew, 1870: 58 — China, Mongolia, Tajikistan
ruficornis Haliday, 1838: 184 (*Medeterus*) — whole Europe, West Siberia (Omsk Region, Novosibirsk Region), North Kazakhstan, Kirgizia, Mongolia, North China

- = *maculicornis* Zetterstedt, 1843: 474 (*Rhaphium*)
setosus Negrobov, 1979: 433 — Mongolia
spinitarsis Becker, 1907: 315 — China, Iran, Tajikistan (!), South Ukraine (Kherson Region)
vanshuylbroeckii Negrobov, 1971: 902 — Azerbaijan, Turkmenistan, Afghanistan

List of Palearctic and Afrotropical species of *Thinophilus* found in Transitional Afro-Palearctic Region

(for references see Dyte & Smith, 1980; Negrobov, 1991)

- achylleus* Mik, 1900: 73 — Egypt, Tunisia, Italy, Spain
 = *albidus* Macquart, 1849 (*Hydrophorus*)
argyropalpis Becker, 1910: 25 — Egypt, Tunisia, South Arabia, Iran, Uzbekistan, Turkmenia, Tajikistan (!), Kazakhstan, South Russia (Volgograd Region), Ukraine (Odessa Region)
atritarsis Parent, 1929: 53 — Sudan
flavipalpis Zetterstedt, 1843: 472 (*Rhaphium*) — Egypt, West Europe (except North), Ukraine (Odessa Region, Zaporozh'e Region, Crimea), South Russia (Rostov Region), Caucasus, Kazakhstan, Kirgizia, Mongolia; ?Mozambique
indigenus Becker, 1902: 481 — Mongolia, Iran, Turkey, Algeria, Egypt, Cape Verde Is., Ethiopia, South Yemen, Nigeria (!), Benin (!), Ghana (!), Zaire, Tanzania (!), Madagascar, Angola (!), Namibia (!), South Africa (!), Swaziland (!); India, Nepal, Malaya, Borneo, Philippines, Taiwan
maculatus Parent, 1929: 50 — Sudan
mirandus Becker, 1907: 112 — Algeria, Morocco, Tanzania (!)
modestus Becker, 1902: 50, 75 — Egypt, ?Austria
ochripalpis Becker, 1910: 139 — South Yemen, Somalia
palpatus Parent, 1930: 101 — Ethiopia, Nigeria, Angola (!), Namibia (!), Botswana (!)
promotus Becker, 1910: 23 — South Yemen, Djibouti
quadrifasciatus Becker, 1902: 49 — Egypt, Tunisia, Algeria, Tajikistan, Iran; ?Zaire
setulipalpis Bezzi, 1906: 302 — Ethiopia (Eritrea), Zaire, ?Italy
spinulosus Parent, 1929: 48 — Sudan, Somalia, Nigeria
tinctus Parent, 1929: 51 — Sudan, ?Madagascar, Zaire (Schoenophilus)
versutus Haliday in Walker, 1851: 192 — Algeria, Morocco, Central and South Europe, Ukraine (Lugansk Region)
 = *maculipennis* Strobl, 1899: 123 (*Pseudacroscilus*)

Descriptions and new records

Thinophilus quadrimaculatus Becker

Material examined. Male, South **Tadzhikistan**: Tigrovaya Balka, tugai, 21.VII.1984, Grichanov [Author's Coll.].

Diagnosis. The species is well recognizable by four black lateral spots on mesonotum and smoky spot near the end of R_{2+3} and R_{4+5} on wing.

Distribution. Egypt, Tunisia, Algeria, ?Zaire; Tadzhikistan.

Thinophilus indigenus Becker

Material examined. 2 males, 1 female, **Swaziland**: 3 km N Simunye, 26°11' S, 31°57' E, 27.X.1994, loc. 36, leg. R. Danielsson [Lund]. Female, **RSA**: Cape Prov., Cedarberg, 3 km ESE Kriedowkrans, 32°22' S, 18°59' E, 350 m, 06.X.1994, loc. 10, leg. R. Danielsson [Lund]. 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. Male & female, Manuara Steppe, 1979.IV.20, leg. Eory-Sipos [HNHM]. 5 males & 3 females, **S.W. Africa** (W1): Nr. Onseepkans, Orange R. banks, 8—10.I.1972 / Southern African Exp. B.M. 1972—1. 2 males, **Angola** (A11): Bruco, 26.II—2.III.1972 / Southern African Exp. B.M. 1972—1. 2 females, **Angola** (A32): Cachoeiras, 20 mls. SW Gabela, 18—19.III.1972 / Southern African Exp. B.M. 1972—1. Female, **S.W. Africa** (W52): Swakop R., 3 mls. S. Okahandja, 7.IV.1972 / Southern African Exp. B.M. 1972—1. Female, **S. Africa** (S24): C.P., Dwyka R., Merwevilk-Koup rd., 2.I.1972 / Southern African Exp. B.M. 1972—1. Female, **Nigeria**: Ile-Ife, W State, 15 Aug. 1971, Col. J.T. Medler / DD-46 [NHML]. Female, **Tanganyika** T.: Morogoro, 29.I.1917, A. Loveridge / Pres. by Imp. Inst. Ent. Brit. Mus. 1932—301. Female, **Gold Coast**: Taimong nr. Accra, 18.III.1922, Dr. J.W. Scott Macfie / From edge of washing pool / Pres. by Imp. Bur. Ent. Brit. Mus. 1923—6.

Diagnosis. The species can be recognized by five dark spots on mesonotum and simple tarsi.

Distribution. Mongolia, Iran, Turkey, Algeria, Egypt, Cape Verde Is., Ethiopia, South Yemen, Nigeria (!), Benin (!), Ghana (!), Zaire, Tanzania (!), Madagascar, Angola (!), Namibia (!), South Africa (!), Swaziland (!), India, Nepal, Malaya, Borneo, Philippines, Taiwan.

Thinophilus rex Curran

Material examined. 2 females, **S. Africa**: R.E. Turner, Brit. Mus. 1932—145 / Cape Province, Heidelberg dist., Breede River, 6.II.1932.

Diagnosis. *T. rex* differs from other species with maculated thorax by hyaline wing, four spots on mesonotum and two spots on scutellum.

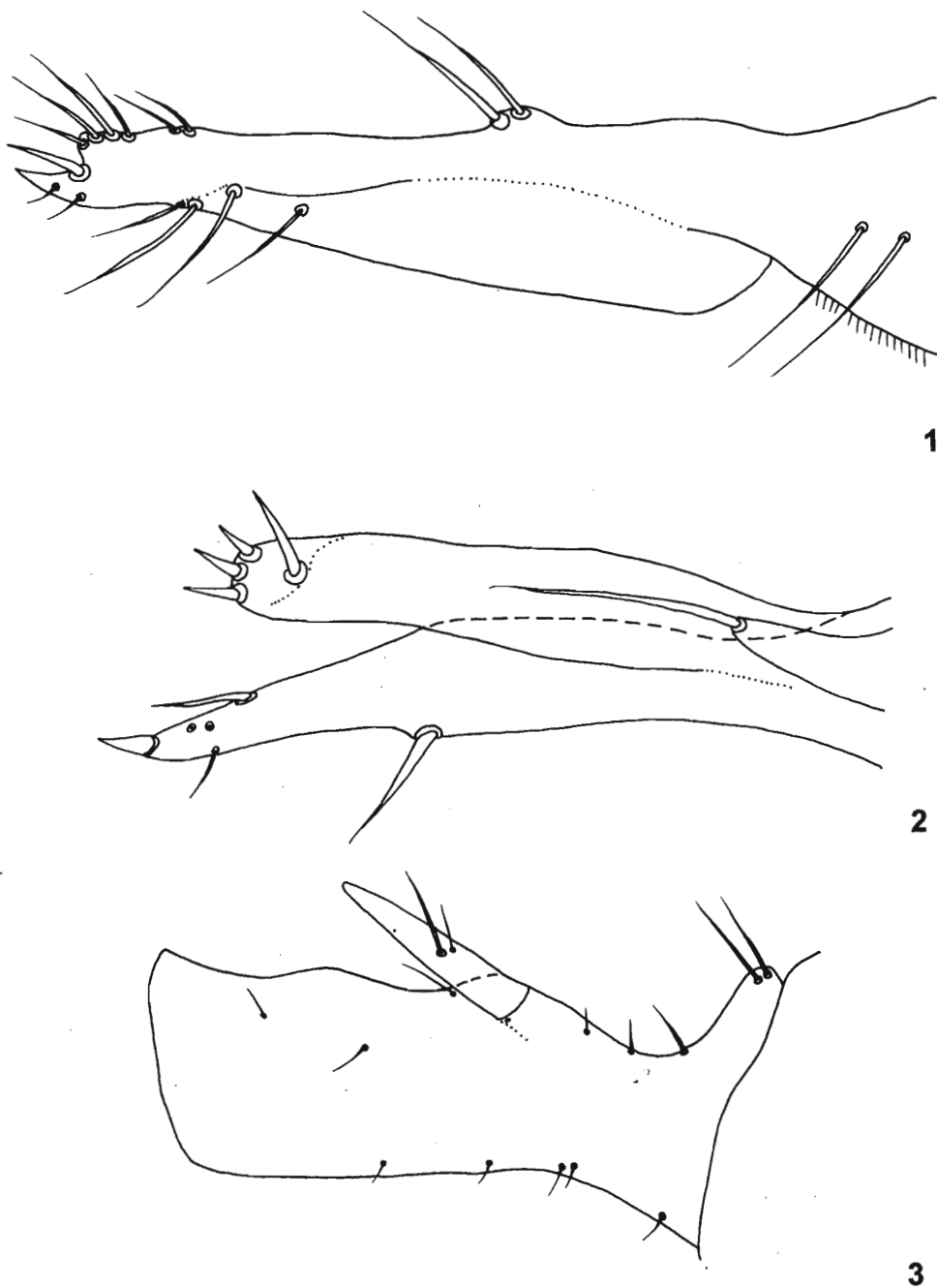
Distribution. South Africa, Zaire.

Thinophilus prudens Curran

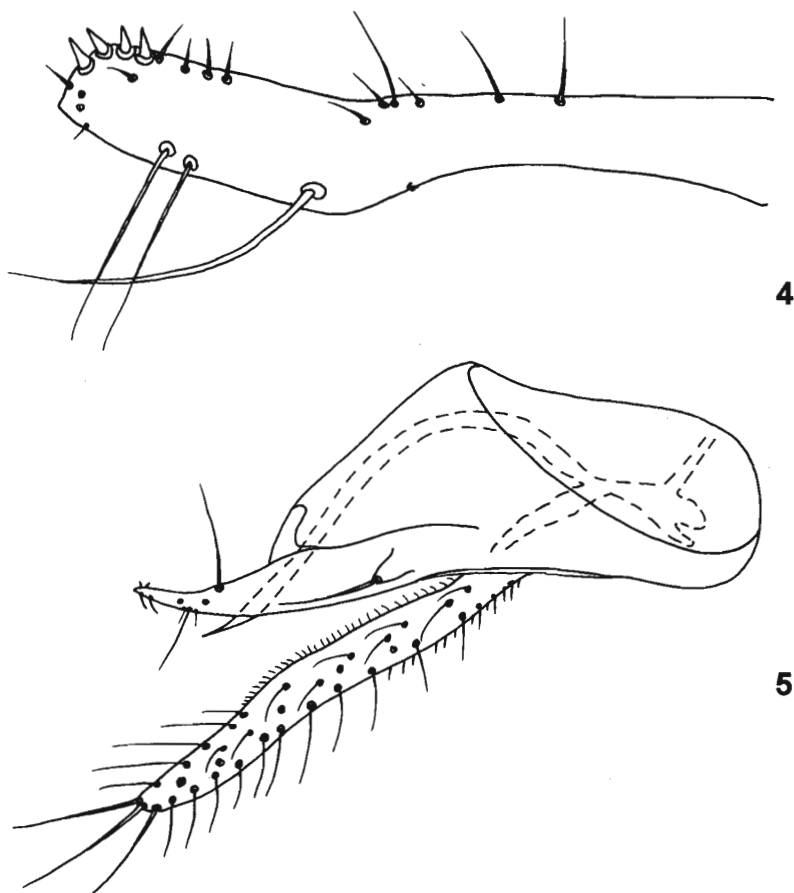
(Fig. 5)

Material examined. Male & female, **Senegal**: in forest 1.5 km NE Djibelor ca. 6.5 km SW Ziguinchor, 8.III.1977, At light 19.00—21.30, Loc. No. 23A, UTM 28PCJ575885. / Lund Univ., Syst. Dept., Sweden Gambia/Senegal. Febr.-March 1977, Cederholm - Danielsson - Larsson - Mirestrom - Norling - Samuelsson. Male, **Angola**: Huila District, J. Balfour-Browne, B.M. 1954—797 / Rio Coroca, 8 mls. N. of Porto Alexandre, 23. VI.1954, s.l. flying round pools / Stn. No. 290. Female, **Angola** (A2): Rocadas, R. Cumene, 19—22.II.1972 / at light / Southern African Exp. B.M. 1972—1;

Description (male from Angola). Frons bronze-green. Black postocular setae in upper row on either side present, one black vertical seta laterally on frons, one pair of ocellar setae, one pair of occipital setae. Ventral postcranium covered with dirty-white irregular postocular setae. Face metallic, grey pollinose. Clypeus nearly twice as wide as high. Antenna short, mostly dark-brown, scape and pedicel ventrally yellow, first flagellomere rounded, with short terminal hairs. Arista dorsal, bare, thick at base. Length ratio of first flagellomere to arista, 7 : 36. Palpus yellow, nearly twice as high as clypeus, greyish pollinose, with sparse dark hairs mainly along internal margin. Proboscis black, with white hairs. Thorax bronze-green, grey pollinose, without dark spots. Pleura densely whitish pollinose. Four strong dorsocentral bristles with short hair in front of the first one somewhat laterally; no acrostichals. Propleura with a few white hairs. Scutellum with 2 strong black setae. Legs yellow, tarsi brown except base of basitarsomeres. Fore coxa yellow, with short white hairs. Middle and hind coxae dark except apex, grey pollinose, with a few short light hairs. Fore femora with ventral row of very fine hairs, twice as long as diameter of femora. Fore tibia with fine postero-dorsal seta. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth) — 30 : 45 : 45 : 17 : 6 : 6 : 6 : 7. Middle femora with a row of



Figs 1—3. Surstylus (=gonopode), lateral view.
1, *T. mirandus* Becker; 2, *T. munroi setiscutellatus* ssp. n.; 3, *T. ciliventris* sp. n.

Figs 4—5. *Thinophilus* sp.

4, *T. palpatus* Parent, surstylus (=gonopode), lateral view; 5, *T. prudens* Curran, hypopygium, lateral view.

ventral hairs in basal half, as long as diameter of femora. Middle tibia with one antero-dorsal, one postero-dorsal and row of fine ventral hairs in apical 2/3, as long as tibia diameter. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth) — 25 : 60 : 60 : 21 : 12 : 9 : 7 : 8. Hind femora with row of sparse black ventral setae, longer than half of femora diameter, with one preapical antero-dorsal seta. Hind tibia with ventral and dorsal rows of hairs, as long as tibia diameter. Length ratio of hind coxa to femora to tibia to tarsus (segments first to fifth) — 13 : 70 : 65 : 15 : 15 : 10 : 7 : 9. Wings hyaline, veins brown. R_1 ending at basal 1/3 of wing. Ratio of parts of costa between R_{2+3} and R_{4+5} to those between R_{4+5} and M_1 — 21 : 15. R_{4+5} and M_{1+2} straight, parallel in apical half. Ratio of cross-vein *m-cu* to apical part of CuA_1 — 13 : 20. Lower calipter yellow, small, with short

light hairs. Halteres yellow. Abdomen dark bronze-green, flattened dorso-ventrally, subtriangular in dorsal view, with short dark setulae. Hypopygium dark-brown. Cercus yellow, very long, band-like, approximately as long as 4th and 5th terga combined, white setose along entire length, with rounded apex; all hairs of equal length except the longest 2 or 3 apical cilia, 1/4 as long as cercus. Surstylus simple, narrow, thin in apical third, ending at apical 1/3 length of cercus, with one strong dorsal and one strong ventral preapical cilia, 2 apico-dorsal short setulae.

Female. Similar to male except lacking male secondary sexual characters; postero-dorsal seta on anterior tibia indiscernible.

Length: body 2.1 mm, antenna 0.4 mm, wing-length 2.3 mm, wing-width 0.8 mm.

Diagnosis. This very small species can be recog-

nized by 4 dorsocentral setae on mesonotum and very long male cercus reaching almost to the base of abdomen. Legs yellow. Base of antenna yellow ventrally. It can be hardly united with *T. (Schoenophilus) versutus* Walker in one subgenus. Male from Angola (see description above) slightly differs from the description of *T. prudens* by Curran and from male collected in Senegal. Cercus of the last male somewhat longer, as long as 3rd, 4th, and 5th terga, with about 10 apical cilia, nearly half as long as cercus; surstylus ending in front of the middle of cercus, with somewhat finer preapical cilia. Female from Senegal differs from female collected in Angola only by distinctly developed postero-dorsal seta on fore tibia.

Distribution. South Africa, Angola (!), Zaire, Ghana, Senegal (!).

Thinophilus imperialis (Curran)

Material examined. 7 males & 11 females, **Gold Coast:** Tamale, November 1916, J.J. Simpson / Pres. by Imp. Inst. Ent. B.M. 1935—576. Male, **Nigeria:** Ilorin, Apl. 1912, J.W. Scott Macfie, 1912—429 [NHML]. Male, **Nigeria:** Zaria, Samaru, 17.X.1968 / J.C. Deeming, m.v. trap [NHML]. 2 females, **Nigeria:** Ile—Ife, W State, 10815 Aug. 1971, Col. J.T. Medler [NHML]. Female, **Botswana** (B24): R. Shashe, 20 mls. NW Francistown, 24.IV.1972 / Southern African Exp. B.M. 1972—1.

Diagnosis. *T. imperialis* differs from other species with long curved apico-ventral setae on anterior tibia by very long cercus extending to the base of abdomen.

Distribution. South Africa, Botswana (!), Congo, Ghana, Nigeria, Zaire.

Thinophilus flavipalpis (Zetterstedt)

Material examined. 1 male & 2 females, **Russia:** Rostov Region, Azov distr., Port-Katon, 3 & 9.VI.1996, Grichanov [Author's Coll.]. Male, **North Kazakhstan:** Tselinograd env., Novoishimka, 17.VII.1989, Grichanov [Author's Coll.]. 30 males and females, **Kirgizia:** Issyk-Kul Lake: Anan'ovo, Kuturga, Darkhan, Ottuk, 1978—1979, Grichanov [VU]. 9 males and females, **Ukraine:** Odessa Region: Berezovka, 12.VIII.1977, Tiligul'skii Liman, 11.VIII.1977, Bolgrad, 18.VIII.1977, Grichanov [VU].

Diagnosis. This is a large species with black femora, ornamented anterior tarsus, relatively simple middle tarsus, and short cercus. It is closely related to *T. ornatus* Negrobov et Grichanov.

Distribution. Egypt, West Europe (except North), Ukraine (Odessa Region, Zaporozh'e Region, Cri-

mea), South Russia (Rostov Region), Caucasus, Kazakhstan, Kirgizia, Mongolia; ?Mozambique.

Thinophilus brevicilius Negrobov

Material examined. 2 males and 1 female, **Kirgizia:** Issyk-Kul Lake: Anan'ovo, Ottuk, 1978—1979, Grichanov [VU].

Diagnosis. *T. brevicilius* is closely related to *T. setosus* Negrobov and similar to other species having black femora and ornamented anterior tarsus, differing from these by simple 3rd and 4th tarsomeres of anterior tarsus, posterior femora without long ventral setae, and mostly yellow tibiae.

Distribution. Uzbekistan, Tadjikistan, Kirgizia (!).

Thinophilus mirandus Becker

(Fig. 1)

Material examined. 3 males and 2 females, **Tanzania:** Matombo, Morogoro reg. / 11.IX.1977, leg. Mahunka [HNHM].

Description. Frons bronze-green, violet in the middle, slightly grey-brownish pollinose. A row of black postocular setae ending with postvertical seta at the top of eye present. One black vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae and several hairs. Ventral postcranium covered with dense long white irregular setae. Face metallic blue-green, slightly pollinose, the narrowest under antennae. Ratio of height of epistome to its minimal width to height of clypeus to its maximal width to height of palpus, 21 : 12 : 10 : 20 : 30. Antenna short, entirely yellow-orange, first flagellomere rounded, with short terminal hairs. Arista dorsal, bare, brownish, thick at base. Length ratio of scape to pedicel to first flagellomere to arista — 5 : 5 : 9 : 31. Palpus yellow, white pollinose, with sparse long black hairs. Proboscis brown, with white hairs. Thorax olive-bronze-green, entirely grey-brownish pollinose, without dark spots. Six dorsocentral bristles, the last one is the longest; no acrostichals. Prothorax and propleura with a few white hairs. Scutellum with 2 strong black setae and 2 very small hairs. Legs yellow, apical segments of tarsi partly darkened. Fore coxa yellow, white pollinose, with black hairs. Middle and hind coxae olive-green except apex, grey pollinose, each with one external seta, middle coxa also with dark hairs. Fore femora with a row of black poster-ventral hairs in apical half, half as long as diameter of femora. Fore tibia with 2 rows of somewhat elongated ventral setulae, and a row of dorsal setae of various length, with 3 long black curved preapical postero-ventral setae; antero-

ventral side bare. First tarsomere with nearly right angle bend, with ventral excavation at base; baso-ventral prominence bearing a group of very short spinules; 1st and 2nd tarsomeres with a row of elongated posterior setulae; 3rd and 4th tarsomeres each with a group of long black dorsal hairs, twice as long as diameter of tarsomere; 4th tarsomere also with one long dorsal seta, as long as three last segments of fore tarsus together; 5th tarsomere whitish and flattened; all tarsomeres bare ventrally and darkened at tip. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth) — 30 : 48 : 40 : 19 : 9 : 6 : 5 : 8. Middle femora with a few dark fine ventral setae in apical two thirds, nearly half as long as diameter of femora, and with a few stronger black posterior preapical setae. Middle tibia with two or three antero-dorsal, two or three postero-dorsal and one ventral setae. Middle tarsomeres each with a few strong apical setulae; 4th and 5th tarsomeres flattened, partly white, ventrally bare. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth) — 26 : 53 : 57 : 29 : 10 : 7 : 6 : 10. Hind femora with poster-dorsal and postero-ventral hairs in apical half, shorter than half-diameter of femora. Hind tibia with 4 or 5 setae on each of antero-dorsal, postero-dorsal, antero-ventral and postero-ventral sides. 5th tarsomere slightly flattened, ventrally bare. Length ratio of hind coxa to femora to tibia to tarsus (segments first to fifth) — 18 : 66 : 75 : 19 : 15 : 10 : 7 : 9. Wings hyaline, veins mostly brown, partly yellow in basal half. 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 — 26 : 16. R_{4+5} and M_{1+2} nearly parallel at apex, without distinct curvations. Ratio of cross-vein $m-cu$ to apical part of CuA_1 — 20 : 35. Lower calipter yellow, with white hairs. Halteres yellow. Abdomen olive-bronze-green, with short dark setae; 6th segment darker; 8th segment with white pubescence and dark hairs. Hypopygium dark-brown, white pollinose. Cercus yellow, band-like, with rounded apex, somehow protruding behind the end of surstylus. Surstylus brown, stick-shape, densely setose in apical third, with two dorsal setae in the middle. Two epandrial setae at base of surstylus present. Hypandrium asymmetric, nearly as wide as cercus, reaching the end of surstylus.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: ratio of height of epistome to its minimal width to height of clypeus to its maximal width to height of palpus, 21 : 17 : 13 : 25 : 30. Femora lacking long setae except several long postero-dorsal hairs in apical third of hind femora. Fore tibia with 3 strong antero-dorsal, 3 short postero-dorsal and 3 short ventral

setae. Tarsi simple, but 5th tarsomere of all tarsi slightly flattened.

Length: body without antennae 3.9—5.5 mm, wing-length 3.9—5.3 mm, wing-width 1.3—1.6 mm.

Diagnosis. *T. mirandus* is easily recognized by the anterior basitarsomere having nearly right angle bend. Middle femora with postero-ventral setae in middle part, at least half as long as femora diameter. Females can be separated by 6 dorsocentrals, entirely yellow antenna, black setation on palpus, and maculated wing.

Distribution. Algeria, Morocco, Tanzania (!).

Thinophilus spinitarsis Becker

Material examined. Male, South Tadjikistan: Dusti env., 13.VII.1991, Grichanov [Author's Coll.].

Diagnosis. *T. spinitarsis* is closely related to *T. vanschuytbroeckii* Negrobov. It differs from other species with yellow femora and ornamented anterior tarsus by fairly curved anterior basitarsomere, hyaline wing, and long dorsal lobe of surstylus in male genitalia.

Distribution. China, Iran, Tadjikistan (!), South Ukraine (Kherson Region).

Thinophilus munroi munroi Curran

Material examined. Female, S. Africa: R.E. Turner, Brit. Mus. 1935—73 / Cape Province, Mossel Bay, Dec. 1934.

Diagnosis. *T. munroi munroi* strongly differs from all other species by setation of scutellum having 6 to 8 pairs of short spines in addition to one pair of long setae. It is closely related to *T. munroi setiscutellatus* ssp. n., differing by distinctly annulate posterior tarsus in both sexes, dark setation on anterior coxa and femora, and many other characters. Wing vein R_1 conspicuously shorter than in *T. munroi setiscutellatus*, being also unusually long.

Distribution. South Africa.

Thinophilus munroi setiscutellatus ssp. n. (Fig. 2)

Holotype. Male, S.W. Africa (25), Swakopmund, 26—30.I.1972 / Southern African Exp. B.M. 1972—1.

Paratypes. 7 males and 4 females, the same labels.

Description. Frons and occiput bronze-green, densely grey-brownish pollinose. 7 to 10 short black postocular setae in irregular upper row on either side, the last upper seta slightly stronger. One short black

vertical seta laterally on frons. One pair of ocellar setae. Ventral postcranium covered with dense dirty-white irregular postocular setae. Face densely grey-yellowish pollinose, the narrowest under antennae. Ratio of height of epistome to its minimal width to height of clypeus to its maximal width to height of palpus, 20 : 17 : 11 : 24 : 15. Terminal margin of clypeus covered with short dense white hairs. Antenna short, orange, first flagellomere brown in apical third, rounded, with short terminal hairs. Arista dorsal, bare, thick and brown at base, otherwise fine and whitish. Length ratio of scape to pedicel to first flagellomere to arista — 4 : 3 : 9 : 35. Palpus whitish-yellow, greyish-white pollinose, with sparse long white hairs. Proboscis black, with white hairs. Thorax olive-bronze-green, entirely grey-brownish pollinose, without dark spots. Six or seven dorsocentral bristles, the last one is the longest; no acrostichals. Propleura with a few white hairs. Scutellum with 3 to 5 short black setae on each side in addition to a pair of normal long bristles. Legs yellow, apical segments of fore and middle tarsi and apices of all tarsomeres of hind tarsus darkened. Fore coxa olive-green, entirely white pollinose, with short white hairs. Middle and hind coxae olive-green except apex, grey pollinose, with a few short dark hairs. Fore femora with a few light ventral hairs at base, half as long as diameter of femora. Fore tibia with very small, almost indiscernible setae: two antero-dorsal, two postero-dorsal and one ventral. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth) — 30 : 47 : 46 : 19 : 8 : 7 : 5 : 7. Middle femora bears a group of dark antero-ventral hairs in apical half, hardly as long as diameter of femora, also with one stronger preapical anterior seta of the same length, and with a few very short fine white hairs in basal half. Middle tibia with very small setae: two antero-dorsal, two postero-dorsal and one postero-ventral. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth) — 22 : 54 : 57 : 30 : 10 : 8 : 5 : 7. Hind femora without long hairs. Hind tibia with short setae: two antero-dorsal, two postero-dorsal and one ventral. Hind basitarsomere slightly broadened at apex, with apical group of short dense posterior setulae. Length ratio of hind coxa to femora to tibia to tarsus (segments first to fifth) — 15 : 80 : 66 : 25 : 14 : 10 : 6 : 9. Wings hyaline, veins mostly brown, partly yellow in basal half. R_1 long, extending to the middle of wing. Ratio of parts of costa between R_{2+3} and R_{4+5} to those between R_{4+5} and M_1 — 20 : 14. R_{4+5} and M_{1+2} nearly parallel at apex. M_{1+2} with indistinct curvature. Ratio of cross-vein $m-cu$ to apical part of CuA_1 — 22 : 47. Lower calipter yellow, with short yellow hairs. Halteres yellow. Abdomen

olive-bronze-green, with short dark setulae. Hypopygium dark-brown, with white pubescence. Cercus yellow, densely white setose along entire length, spatulate, flat, band-like with rounded apex, narrowed distad; all hairs of equal length, approximately as long as width of cercus. Surstylus brown, bilobate, with thin lobes, approximately as long as cercus, although protruding behind the end of cercus; external lobe shorter, flat, with 3 apical and 1 subapical spinose setae; interior lobe longer, cylindrical, narrowed apicad, with 1 dorsal seta in the middle, 1 apical spinose seta, and several subapical hairs. Epandrial lobe at base of surstylus present, having long apical seta. Hypandrium broadened in distal half, as wide as cercus, narrowed at apex, pointed, reaching the end of external lobe of surstylus.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: ratio of height of epistome to its minimal width to height of clypeus to its maximal width to height of palpus, 25 : 21 : 13 : 29 : 20. Arista whitish. Palpus with short white hairs. Upper row of 6 or 7 short black postocular setae present, separate row of 2 or 3 same setae at the top of eye, one short occipital seta, one vertical seta. Fore and middle femora without long hairs. Otherwise similar to male.

Length: male body without antennae 4.5—4.7 mm, wing-length 4.3—5.2 mm, wing-width 1.4—1.6 mm.

Distribution. Namibia.

Etymology. The subspecies name reflects the presence of excessively developed setation on scutellum.

Diagnosis. *T. munroi setiscutellatus* is an allied subspecies for *T. munroi munroi*. It can be separated by weaker developed setation on scutellum, only pale hairs on anterior coxa and femora, and not so strongly annulate posterior tarsus as in *T. munroi munroi*. Females have the same differences. The species forms a separate group, possibly, subgenus, having such characters as long vein R_1 and excessively setose scutellum.

Thinophilus ciliventris sp. n.

(Fig. 3)

Holotype. Male, S. Africa (S19): R. Magalakwena, 23°26' S, 28°37' E, 26.IV.1972 / Southern African Exp. B.M. 1972—1.

Paratypes. 2 females, the same labels; 1 male & 3 females, Angola (A32): Cachoeiras, 20 mls. SW Gabela, 18—19.III.1972 / Southern African Exp. B.M. 1972—1; 2 females, Botswana (B24): R. Shashe, 20 mls. NW Francistown, 24.IV.1972 / Southern African Exp. B.M. 1972—1; male, N. Nigeria: Zaria,

Description. Frons blue-violet, slightly pollinose. A row of short black postocular setae ending with a few postvertical hairs at the top of eye present; one strong occipital seta; one black vertical seta laterally on frons. Ocellar tubercle with one pair of strong setae and several short hairs. Ventral postcranium covered with long dense white irregular setae. Face violet, slightly pollinose, the narrowest in the middle of epistome. Ratio of height of epistome to its minimal width to height of clypeus to its maximal width to height of palpus, 26 : 17 : 14 : 25 : 33. Antenna short, mostly dark-brown, all segments ventrally yellow-orange, scape with pale interior spine, first flagellomere rounded, with short terminal hairs. Arista dorsal, bare, brown, thick at base, otherwise fine. Length ratio of scape to pedicel to first flagellomere to arista, 12 : 9 : 13 : 51. Palpus yellow, white pollinose, with sparse short black hairs. Proboscis black, with white hairs. Mesonotum metallic green with copper and blue reflection mostly grey-brownish pollinose, without dark spots. Pleura olive-green, grey pollinose. Six or seven dorsocentral bristles, the last one is the longest; no acrostichals. Propleura and prothorax with long white hairs. Scutellum with 2 strong black setae and 2 very short hairs. Legs mostly yellow-orange, apical segments of fore and middle tarsi darkened, apex of hind femora, extreme base and apex of hind tibia, and hind tarsus brown. Fore coxa olive-green at base, entirely white pollinose, with dark hairs in apical half, with shorter white hairs in basal half. Middle and hind coxae olive-green except apex, grey pollinose, each with one external seta; middle coxa also with a few short dark hairs, hind coxa with microscopic light hairs. Fore femora with a row of black ventral setae, half as long as diameter of femora, with a few longer poster-ventral setae in apical fourth. Fore tibia with 3 to 5 dorsal and several simple apical setae, with a row of ventral setulae, more than half as long as tibia diameter, and a row of shorter antero-ventral spinules along entire length; anterior side bare. First tarsomere with ventral row of spinules, half as long as diameter of tarsomere; other tarsomeres with somewhat elongated terminal setulae. Length ratio of fore coxa to femora to tibia to tarsus (segments from first to fifth) — 36 : 60 : 50 : 17 : 8 : 6 : 5 : 7. Middle femora with very short black ventral setae in basal half, also with one stronger preapical anterior seta. Middle tibia with three antero-dorsal, two postero-dorsal, one antero-ventral and three postero-ventral setae of various strength. Last three tarsomeres slightly flattened, with bare ventral side. Length ratio of middle coxa to femora to tibia to tarsus (segments from first to fifth) — 29 : 63 : 73 :

42 : 13 : 8 : 6 : 9. Hind femora with ventral and antero-dorsal rows of seta, shorter than half-diameter of femora. Hind tibia with four antero-dorsal, four postero-dorsal and three ventral setae of various strength. Length ratio of hind coxa to femora to tibia to tarsus (segments first to fifth) — 19 : 95 : 105 : 26 : 19 : 11 : 8 : 9. Wings practically hyaline, veins mostly brown, partly yellow at base. 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 — 30 : 20. R_{4+5} and M_{1+2} nearly parallel at apex, M_{1+2} without distinct curvations. Ratio of cross-vein $m-cu$ to apical part of CuA_1 — 27 : 29. Lower calipter yellow, with short white hairs. Halteres yellow. Abdomen mostly bronze-green with copper reflection, with short dark setulae; 5th segment with violet reflection; 6th segment entirely violet; 3rd and 4th sternites with a tuft of numerous long white hairs; 8th segment with white pollination and white pubescence. Hypopygium black, white pollinose. Cercus light-brown, long, flat, band-like, pointed on apex, with short dark hairs along entire length and one somewhat longer cilia on extreme apex, reaching the end of surstylus. Surstylus brown, broad and flat, mitten-like, with dorso-lateral horn-like process bearing two small setae, with two cilia near epandrium, and several scattered short hairs. Hypandrium narrow, slightly broadened in distal half, reaching the middle of surstylus.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows: anterior coxa sometimes imparting mostly olive-green; fore femora without strong setae; anterior tibia with 3 or 4 antero-dorsal, 3 or 4 postero-dorsal and 2 or 3 ventral setae; tarsi simple.

Length: male body without antennae 5.8—7.1 mm, wing-length 4.8—6.2 mm, wing-width 1.4—1.6 mm; female body 5.6—6.1 mm, wing 5.5—6.0 mm.

Distribution. South Africa, Botswana, Angola, Nigeria.

Etymology. The species name reflects the presence of long cilia on abdominal venter.

Diagnosis. Judging from the examined material and published descriptions, none Afrotropical or Palearctic species has abdominal venter with long white hairs. Only *T. bicalcaratus* bears 2 bundles of strong black bristles on the 4th sternite of abdomen. Other diagnostic characters are as follows: anterior coxa yellow haired in basal half; posterior femora brown from above in apical third, without long antero-ventral setae; fore tibia and basitarsomere with ventral row of very short spinules along entire length; propleura with white setation; $m-cu$ as long as apical part of CuA_1 .

Thinophilus palpatus Parent

(Fig. 4)

Material examined. Male, N. Nigeria: Zaria, Samaru, 23.II.1968 / J.C. Deeming, m.v. trap [NHML]; female, Nigeria: N.W. State, Mokwa, I.A.R., Mile 1, 8—17.VIII.1970, P.H. Ward, B.M. 1970—604; 2 females, N. Nigeria: Ilorin, 22.02.1912, Dr. J.V. Scott-Macfie / Pres. by Imp. Inst. Ent. Brit. Mus. 1931—287; male, S.W. Africa (W1): Nr. Onseepkans, Orange R. banks, 8—10.I.1972 / Southern African Exp. B.M. 1972—1; female, S.W. Africa: Otjitambi Fm., 27 mls ESE Kamanjab, 13—15.II.1972 / Southern African Exp. B.M. 1972—1; male, S.W. Africa (W30): Ameib Farm, 31.I—2.II.1972, on vegetation around pools / Southern African Exp. B.M. 1972—1; 2 females, Angola (A2): Rocadas, R. Cumene, 19—22.II.1972 / at light / Southern African Exp. B.M. 1972—1; 8 females, Angola (A32): Cachoeiras, 20 mls. SW Gabela, 18—19.III.1972 / Southern African Exp. B.M. 1972—1; 2 females, Angola (A16): 2 mls. N. Mocamedes, 29.II.1972 / Southern African Exp. B.M. 1972—1; female, Angola (A37): 5 mls. NE Negola, 25.III.1972 / Southern African Exp. B.M. 1972—1; female, Botswana (B7): Kuke Pan, 20°59'S, 22°25'E, 14—15.IV.1972 / Southern African Exp. B.M. 1972—1; female, Botswana (B16): Maun, 21.IV.1972 / Southern African Exp. B.M. 1972—1.

Diagnosis. This is a comparatively small (3.5 mm) species with simple yellow legs, narrow face, leaf-like male cercus, differing from *T. ruficornis* and related species mainly by hypopygium morphology and wing veins $CuA_1/m-cu$ length ratio.

Distribution. Ethiopia, Nigeria, Angola (!), Namibia (!), Botswana (!).

Thinophilus ruficornis (Haliday)

Material examined. 3 males & 3 females, South Russia: Rostov Region, Azov distr., Port-Katon, 3, 9, 18 & 26.06.1996, Grichanov [Author's Coll.]. 7 males & females, Ukraine: Odessa Region: Khadzhibeiskii Liman, 28.VIII.1977, Tiligulskii Liman, 19.VII.1976, Berezovka, 12.VIII.1977, Grichanov [VU]. Male, Russia: Novosibirsk Region, Krasnozerskoe, 20.VI.1989, Grichanov [Author's Coll.]. 12 males & females, Kirgizia: Issyk-Kul Lake: Anan'ovo, Kuturga, Ottuk; 1978—1979, Grichanov [VU].

Diagnosis. This is a comparatively small species with simple yellow legs, narrow face, short and narrow male cercus, and small surstylus.

Distribution. Whole Europe, West Siberia (Omsk Region, Novosibirsk Region), North Kazakhstan, Kirgizia, Mongolia, North China.

Thinophilus argyropalpis Becker

Material examined. 2 males, South Tadjikistan: Dusti env., 22 & 24.VI.1985, Grichanov & Shamshev. [Author's Coll.].

Diagnosis. *T. argyropalpis* is small species with simple yellow legs, closely related to *T. vanschuytbroeckii* Negrobov. It differs from other species by only two setae on scutellum, silvery-white palpus, grey pollinose face, and partly yellow antenna.

Distribution. Egypt, Tunisia, South Arabia, Iran, Uzbekistan, Turkmenia, Tadjikistan (!), Kazakhstan, South Russia (Volgograd Region), Ukraine (Odessa Region).

Key to Afrotropical and Palearctic species of *Thinophilus*

1. Mesonotum and/or scutellum with distinct dark lateral spots 2
— Mesonotum without dark lateral spots 8
2. Wing with dark spot near the end of R_{2+3} and R_{4+5} ; anterior spot of mesonotum nearly as large as notopleura, no prescutellar spot
 *quadrimaculatus* Becker
— No spot at wing apex 3
3. Mesonotum with additional spot in front of scutellum 4
— Mesonotum without spot in front of scutellum 6
4. Mesonotum with four lateral spots
 *indigenus* Becker
— Mesonotum with six lateral spots 5
5. Anterior basitarsomere with simple setulae, without spinules; small species (2.75 mm)
 *maculatus* Parent
— Anterior basitarsomere with a row of very short spinules *splendidus* Vanschuytbroeck
6. Wing distinctly maculated at $m-cu$ and on M_{1+2} curvature *bipunctatus* Curran
— Wing hyaline 7
7. 5 dorsocentrals; scutellum with one spot; legs mostly yellow, anterior femora without ventral comb of setae, middle tibia curved in the middle *setulipalpis* Bezzi
— At least 6 dorsocentrals; scutellum with 2 lateral spots; legs mostly black, anterior femora with ventral comb of black setae, middle tibia simple *rex* Curran
8. 4 dorsocentrals; small species (2—2.5 mm) 9
— 5 or 6 dorsocentrals present, front one usually short; size usually larger than 3 mm 10

- 6 or 7 dorsocentrals present; last tarsomeres entirely black; arista white; size 6 mm *virgatus* Curran
31. Scutellum with 2 strong and 2 short setae; face nearly twice as high as wide near suture 32
- Scutellum with 2 setae; face approximately as high as wide near suture 36
32. 4th sternite of abdomen with 2 bundles of strong black bristles; anterior coxa with black hairs; posterior femora with long antero-ventral setae near apex *bicalcaratus* Negrobov
- 4th sternite of abdomen without bundles of black bristles; anterior coxa yellow haired in basal half; posterior femora without long antero-ventral setae 33
33. 3rd and 4th sternites with a tuft of long white hairs; fore tibia and basitarsomere with ventral row of very short spinules along entire length *ciliventris* sp. n.
- Abdominal venter without tuft of long hairs 34
34. Anterior basitarsomere with postero-ventral setae longer than tarsomere diameter; apical part of *CuA*₁ thrice as long as *m-cu* *pollinosus* Loew
- Anterior basitarsomere without long setae; apical part of *CuA*₁ no more than twice as long as *m-cu* 35
35. Cercus short and narrow, shorter than surstylus; surstylus small, dorsal lobe hook-shaped on apex, without long dorsal setae; apical part of *CuA*₁ approximately twice as long as *m-cu* *ruficornis* (Haliday)
- Cercus broad, leaf-shaped, longer than surstylus; surstylus narrowed towards apex; apical part of *CuA*₁ approximately as long as *m-cu* *palpatus* Parent
36. Face shining metallic, slightly pollinose; sutural setae distinctly developed; abdomen with long hairs *achylleus* Becker
- Face silvery or greyish-white pollinose; sutural setae small, 1/3 to 1/4 as long as supraalary setae; abdomen with short hairs 37
37. Palpus yellow; face silvery-white pollinose; antenna mostly dark *vanschuytbroeckii* Negrobov
- Palpus silvery-white; face grey pollinose; antenna distinctly yellow from below *argropalpis* Becker
38. 5 dorsocentrals 39
- At least 6 dorsocentrals present, front one usually short 44
39. Palpus with white hairs 40
- Palpus with black hairs 41
40. Anterior coxa yellow *quadrisetus* Parent
- All coxae black *calopus* Loew
41. Antenna entirely yellow *ochripalpis* Becker
- Antenna partly black 42
42. Wing strongly infuscated *tinctus* Parent
- Wing hyaline, at most with spots at *m-cu* and on *M*₁₊₂ curvature 43
43. Tarsi entirely black *atritarsis* Parent
- Tarsi partly light *aquaticus* Becker
44. Antenna entirely yellow 45
- Antenna partly black 50
45. Palpus with pale setation 46
- Palpus with black setation 48
46. Face shining metallic, practically without pollination; scutellum with 2 setae *achylleus* Mik
- Face pollinose; if face weakly pollinose, than scutellum with 2 strong and 2 small setae 47
47. Anterior coxa yellow *quadrisetus* Parent
- All coxae black *calopus* Loew
48. Wing without spots; tarsi at least partly black *spinulosus* Parent
- Wing maculated with 2 smoky spots on *m-cu* and *M*₁₊₂ curvature 49
49. Scutellum with 2 setae; 5 dorsocentrals *ochripalpis* Becker
- Scutellum with 2 strong and 2 small setae; 6 dorsocentrals *mirandus* Becker
50. Palpus with pale setation 51
- Palpus with black setation 55
51. Scutellum with 4 setae *quadrisetus* Parent
- Scutellum with 2 setae 52
52. Hind tarsomeres annulate with yellow and black; 8 dorsocentrals; no distinct prothoracic setulae; anterior coxa with exclusively pale fine hairs *annulitarsis* Parent
- Hind tarsomeres non-annulate 53
53. Palpus silvery-white; tarsi black; anterior coxa with pale hairs *argropalpis* Becker
- Palpus yellow-orange; tarsi mostly yellow 54
54. Anterior coxa with pale hairs *vanschuytbroeckii* Negrobov
- Anterior coxa with black hairs *virgatus* Curran
55. Hind femora with long dorsal setae 56
- Hind femora without long dorsal setation, at most with single anterior preapical seta 59
56. Upper postocular setae in two rows *modestus* Becker
- Upper postocular setae in one row 57
57. Propleura with 2 or 3 strong black setae and white hairs; hind femora yellow *longipilus* Negrobov
- Propleura with white setation 58

58. Hind femora brown from above in apical third
 *ciliventr* sp. n.
 — Hind femora entirely yellow . . . *palpat* Parent
59. Apical part of *CuA*₁ thrice as long as *m-cu*;
 posterior coxa mostly yellow
 *pollinosus* Loew
 — Apical part of *CuA*₁ no more than twice as long
 as *m-cu* 60
60. Apical part of *CuA*₁ 1/3 longer than *m-cu*;
 posterior coxa mostly dark; tibiae at base and
 at apex dark *capensis* Curran
 — Apical part of *CuA*₁ approximately twice as long
 as *m-cu*; posterior coxa mostly yellow; all tarsi
 and apex of tibiae dark
 *ruficornis* (Haliday)

Acknowledgements

I am sincerely grateful to Dr. Brian Pitkin, Dr. Laslo Papp, and Dr. Roy Danielsson for their kindness in furnishing an opportunity to study the collections of the Natural History Museum (London), the Hun-

garian Natural History Museum (Budapest), and Lund University.

References

- Curran, C. H. 1926. Records of African Dolichopodidae with descriptions of new species. *Rev. Zool. Afr.*, 14(1): 1—39.
- Dyte, C. E. & K. G. V. Smith. 1980. Family Dolichopodidae. In: R.W. Crosskey (ed.). *Catalogue of the Diptera of the Afrotropical Region*. Brit. Mus. (Nat. Hist.), London: 443—463.
- Grootaert, P. & H. J. G. Meuffels. 1984. Dolichopodidae (Diptera) from Papua New Guinea. II. Some new species of the genus *Thinophilus* Wahlberg, 1844, from the lowland. *Indo-Malayan Zoology*, 2: 209—223.
- Negrobov, O. P. 1991. Dolichopodidae. In: *Catalogue of Palearctic Diptera. Dolichopodidae-Platypezidae*. Akad. kiado. Budapest, 7: 1—291.

Received 2.X.1996