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Afrotropical *Syntormon* Loew and new synonyms in the genus *Rhaphium* Loew (Diptera: Dolichopodidae)

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Descriptions of two new species and two new subspecies of the genus *Syntormon*, new records for known African species are given. Holotypes of 15 species have been examined in the collections of European museums. The following pairs of species are synonymized: *Syntormon dorsalis* Vanschuytbroeck (=*Syntormon ruandanus* Vanschuytbroeck), *Syntormon parvus* Vanschuytbroeck (=*Syntormon kivuensis* Vanschuytbroeck), *Rhaphium pectiniger* (Parent) (=*Xiphandrium rweruensis* Vanschuytbroeck, =*Syntormon spiculus* Vanschuytbroeck, =*Rhaphium vanschuytbroecki* Negrobov et al.) and *Rhaphium sexsetosum* (Vanschuytbroeck) (=*Rhaphium grootaerti* Negrobov et al.). *Syntormon palmatus* Vanschuytbroeck is transferred to the genus *Chrysotus*. *S. abbreviatus* Becker and *S. codinai* Parent are excluded from the fauna of the Afrotropics. A revised catalogue and key to Afrotropical species of the genus *Syntormon* are also presented.

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Key words. Diptera, Dolichopodidae, *Syntormon*, *Rhaphium*, Tropical Africa, new species, new synonym, new combination, keys.

Introduction

The cosmopolitan genus *Syntormon* numbers about 100 mostly Holarctic species. The Afrotropical species are poorly known and have not previously been revised. *Syntormon* was recorded for the fauna of the Afrotropics by Curran (1925) for the first time, who described *S. caffer* by a female. I have seen two females of the genus in the South African collection of the Natal Museum (Pietermaritzburg, South Africa), and they can not be associated with any of Central African species. The genus has been comparatively well defined recently by Bickel (1999), although Afrotropical species (except for *S. tamatave* Grichanov, spec. nov.) belong to different groups not relating to Australian species. The last catalogue of Afrotropical *Syntormon* (Dyte and Smith, 1980) listed 16 species.

Treating material from the collections of several European museums, I have found a lot of additional material and a number of misidentifications and synonyms in the genera *Syntormon* and *Rhaphium*. Descriptions of two new species and two new subspecies of the genus *Syntormon*, new records for known African species are given. Palearctic *S. pallipes* and *S. fuscipes* are found in the Afrotropical Region. Holotypes of 15 species have been examined.

The following pairs of species are synonymized: *Syntormon dorsalis* Vanschuytbroeck (=*Syntormon ruandanus* Vanschuytbroeck), *Syntormon parvus* Vanschuytbroeck (=*Syntormon kivuensis* Vanschuytbroeck), *Rhaphium pectiniger* (Parent) (=*Xiphandrium rweruensis* Vanschuytbroeck, =*Syntormon spiculus* Vanschuytbroeck, =*Rhaphium vanschuytbroecki* Negrobov et al.) and *Rhaphium sexsetosum* (Vanschuytbroeck) (=*Rhaphium grootaerti* Negrobov et al.). *Syntormon palmatus* Vanschuytbroeck is transferred to the genus *Chrysotus* Meigen. *S. abbreviatus* Becker and *S. codinai* Parent are excluded from the fauna of the Afrotropics. A revised catalogue and key to Afrotropical species of the genus *Syntormon* are also presented.

Holotypes and paratypes of the new species and other material examined are deposited in the following collections:

HNHM — the Hungarian Natural History Museum, Budapest;

MNHP — the Museum of Natural History, Paris;

MZLU — the Zoological Museum, Lund University, Sweden;

NHML — the Natural History Museum, London;

RINS — the Royal Institute for Natural Sciences, Brussels;

RMCA — the Royal Museum for Central Africa, Tervuren, Belgium;

TAU — the Department of Zoology, Tel Aviv University, Israel;

ZMA — the Zoological Museum, Amsterdam;

ZMC — the Zoological Museum, Copenhagen;

ZMH — the Zoological Museum, Helsinki.

Deposition of types of the new species is mentioned under the species descriptions. Hypopygia removed from dry specimens are placed after alkalisation into glycerol and mounted on the same pin in a cavity of polymer film covered with a piece of adhesive tape. The relative lengths of the podomeres are representative ratios and not measurements (1 mm = 65). Listing material examined, I use here slashes (/) to separate labels on one pin and square brackets [...] to insert my personal remarks. Species diagnosis includes usually key characters and some important features that were missed in original descriptions. Terminology of the antenna morphology has been corrected according to Stuckenberg (1999). The third antennal segment is named here as postpedicel rather than first flagellomere in my previous papers, and arista is renamed in stylus. Bibliography includes works published after the "Catalogue of the Diptera of the Afrotropical Region" (Dyte and Smith, 1980).

List of known Afrotropical species of *Syntormon* Loew

(for references see Dyte and Smith, 1980)

SYNTORMON Loew, 1857b: 35. Type-species: *Rhaphium metathesis* Loew, 1857, by designation of Coquillett (1910: 611).

caffer Curran, 1925b: 177 (female). South Africa.

dorsalis Vanschuytbroeck, 1951c: 101. Congo (Kinshasa); Rwanda, Burundi, Kenya.
=*ruandanus* Vanschuytbroeck, 1951c:105, **syn. nov.**

flexibilis Becker, 1922c:55. Taiwan; China, the Russian Far East, Hawaii, Bonin Is., Tonga, New Caledonia, French Polynesia, Australia; St. Helena.
=*distortitarsis* Van Duzee, 1933:338.
=*miritarsus* Parent, 1926:133.
=*myklebusti* Harmston & Miller, 1966: 90.
=*lindneri* Negrobov, 1975:660.

fuscipes von Roser, 1840: 56 [*Porphyrops*]. Europe, North Caucasus; Kenya, Burundi.
=*spicatus* Loew, 1857: 33 [*Rhaphium*].

longipes Parent, 1938: 414. Kenya; Congo (Kinshasa), Rwanda, Uganda.

opimus Vanschuytbroeck, 1951c: 99. Rwanda.

pallipes pallipes (Fabricius, 1794: 340) [*Musca*]. Germany; St. Helena, Yemen, Tanzania; Egypt, Algeria, Morocco, Azores, Madeira, Europe, Israel, Turkey, the Caucasus, Central Asia, Mongolia, China.
=*hamatus* (Zetterstedt, 1843: 475) [*Rhaphium*].
=*pseudospicatus* Strobl, 1899:126.
=*uncitarsis* Becker, 1902: 53.
=*immaculatus* Santos Abreu, 1929: 414 [as a var. of *Syntormon pallipes* (Fabricius)].

pallipes longistylus Grichanov, **subspec. nov.** Madagascar.

papei papei Grichanov, **spec. nov.** Uganda, Congo (Kinshasa).

papei madagascarensis Grichanov, **subspec. nov.** Madagascar.

parvus Vanschuytbroeck, 1951c: 104. Congo (Kinshasa); Rwanda (!).

=*kivuensis* Vanschuytbroeck, 1951c: 107. Congo (Kinshasa), **syn. nov.**

peregrinus Parent, 1954: 228. Tanzania.

straeleni Vanschuytbroeck, 1951c: 100. Congo (Kinshasa); Uganda, Ethiopia.

tamatave Grichanov, **spec. nov.** Madagascar.

wittei Vanschuytbroeck, 1951c: 102. Congo (Kinshasa); Rwanda.

DESCRIPTIONS, DIAGNOSES AND NEW RECORDS

Syntormon abbreviatus Becker, 1918

Remark. Afrotropical material identified by Vanschuytbroeck (1951, 1952) as *Syntormon abbreviatus* is absent in collections of RINS, MZLU and MNHP. A specimen from Congo (Kinshasa) determined by P. Vanschuytbroeck as *S. abbreviatus* (RMCA, 1B...examined) belongs to *S. longipes*. So, the species should be excluded from the fauna of the Tropical Africa.

Distribution. Tunisia.

Syntormon codinai Parent, 1924

Remark. Treating Afrotropical material identified by Vanschuytbroeck and deposited in RMCA, RINS, MZLU and MNHP, I have not located this species. Nevertheless, I believe that the species is absent in the Afrotropical fauna, as I have found a huge number of mistakes and misidentifications made by the author.

Distribution. Morocco (Tangier).

Syntormon dorsalis Vanschuytbroeck

Type material examined. ♂, **Congo belge**: Ruanda, Nyabitsindi (entre Volc. Bishoke-Musule), 2400 m, 18.II.1935, G.F. de Witte: 1160 / Holotype [red label] / P. Vanschuytbroeck det., 195?, *Syntormon* ♂ *dorsalis* n.sp. [RMCA]; ♂, Congo belge: P.N.A., vers Rweru (Volc. Mikeno), 2400 m (Bambous), 26 au 27.VII.1934, G.F. de Witte: 501 / holotype [red label] / P. Vanschuytbroeck det., 1949, *Syntormon* ♂ *ruandanus* n.sp. [RMCA]; 3 ♂, 1 ♀, Congo belge: Ruanda, Nyabitsindi (entre Volc. Bishoke-Musule), 2400 m, 18.II.1935, G.F. de Witte: 1155, 1157, 1159 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Syntormon dorsalis* n.sp. [RINS].

Material examined. 1 ♂, 1 ♀, Congo belge, Ruanda, Ruhengeri (riv. Penge), 1800—1825 m, 30 et 31.VIII.1934, 29.IX.1934, G.F. de Witte: 555, 664 [RINS]; 1 ♂, Congo belge, Ruanda, Kanzenze (pied volc. Karisimbi), 24000 m, 4.III.1935, G.F. de Witte: 1207 [RINS]; 2 ♂, Congo belge: P.N.A., vers Rweru (Volc Mikeno), 2400 m (Bambous), 26 et 27.VII.1934, G.F. de Witte: 501 [one of the males with additional label:] *Saccopheronta hirsuticosta* Parent, P. Vanschuytbroeck det., 1951 [RINS]; 5 ♂, Congo belge: Kivu, Tshumba (Mushari), 2100 m, 28.IV au 1.V.1934, G.F. de Witte: 373 [RINS]; 2 ♂, Congo belge: Kivu, Kalondo (lac. Ndaraga, Mokoto), 1750 m, 22 au 27.III.1934, G.F. de Witte: 325 [RINS]; 1 ♀, Congo belge: P.N.A., Mt. Sesero, pres Bitashimva (Bambous), 2000 m, 1 au 2.VIII. 1934, G.F. de Witte: 505 [RINS]; 1 ♂, Urundi, Bururi, 1800 m, 8.III.1953 / R.I.Sc. N.B. I.G. 24452 [RINS]; 1 ♂, Kenya, 17.XII. 1970, A.E. Stubbs, B.M. 1972—211 / Kisumu, 3781 feet [NHML].

Diagnosis. Hind tibia simple, without long ventral setae; hind basitarsus 1/3 to 1/2 length of 2nd segment, densely ciliated ventrally, with short lateral process at apex; antennal postpedicel short.

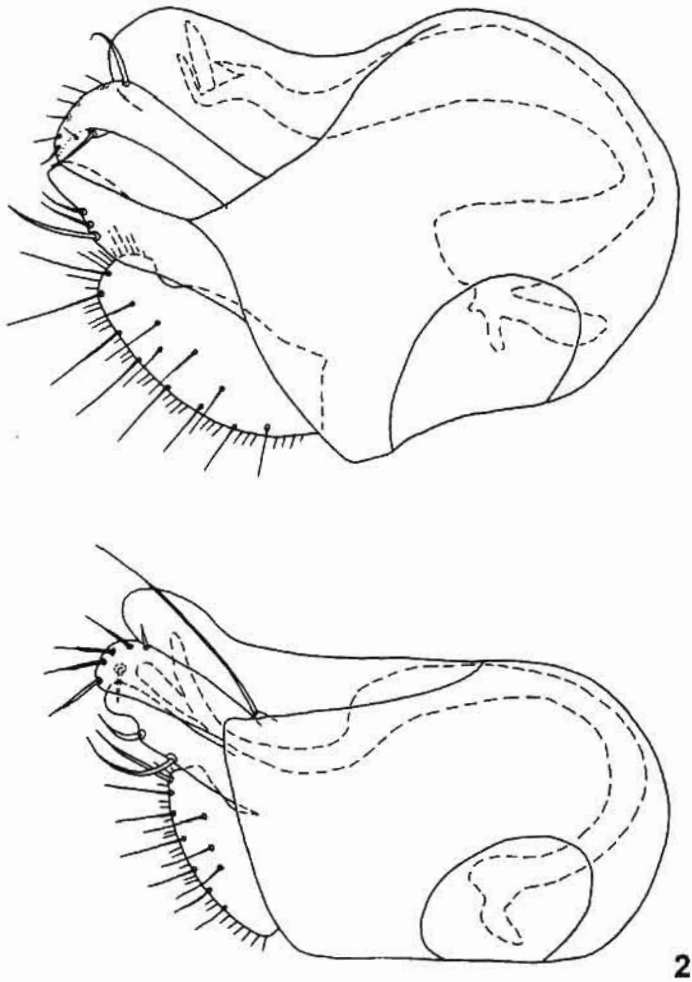
Remark. About 20 more paratypes labelled as *S. dorsalis* and *S. ruandanus* are deposited in the collection of RINS. Different species are found among them [RINS]: *Sympycnus munroi* Curran (5 ♂, 2 ♀), *Rhaphium pectiniger* (3 ♂), indeterminable species of the genera *Syntormon* and *Saccopheronta*.

Distribution. Congo (Kinshasa); Rwanda, Burundi (!), Kenya (!).

Syntormon fuscipes (von Roser) (Fig. 1)

Material examined. 2 ♂, 1 ♀, **Kenya**: Aberdare Range, X.1934, B.M. E.Afr. Exp., B.M. 1935—203 / Mt. Kinangop, 8000—10000 feet, F.W. Edwards [NHML]; 1 ♂, 1 ♀, Africa, Kenya, Mt. Kenya, Sirimon, Higher Moorland, 22—23.I.1971, J.H. & M. Lourens [ZMA]; 1 ♀, Africa, Kenya, J.H. & M. Lourens / Mt. Kinangop, e. slope source, Mwathe riv., Lower Moorland, 27.I.1971 [ZMA]; 1 ♂, **Urundi**: Bururi, alt. 1950 m, 8.I.1949, F. François / R.I.Sc.N.B. I.G. 24452 [RMCA]

Description. Male.



Figs 1—2. Hypopygium, left lateral veiew.
1, *Syntormon fuscipes* (von Roser); **2,** *Syntormon papei* Grichanov, spec. nov.

Head. Frons metallic blue-violet; face with black ground colour, densely silvery-white pollinose; palpi and proboscis brown; antenna black; pedicel medianly with long projection; postpedicel tapering, 2.2 times longer than high; stylus dorsoapical, simple, with microscopic hairs; postoculars in single row, ventrally pale and dorsally black.

Thorax. Mostly bluish black, with dusting of grey pruinosity; setae black; 6 (sometimes 5) dorsocentrals; 8—9 acrostichals long, biiseriate; median scutellars strong, laterals as weak side hairs, and 2 pairs of microscopic hairs medianly along scutellar margin.

Legs. Mostly yellow; fore coxa yellow; mid and hind coxae black with yellow apex; fore coxa with short pale anterior hairs and some strong yellow apical setae; hind femur brown dorsally at apex; hind tibia brown in distal ¼; fore and mid tarsi black from tip of basitarsus; hind tarsus black. Fore femur with short ventral hairs; fore tibia without strong setae, with short but distinct anterodorsal setal serration along distal half; fore tarsus simple. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 60 : 60 : 32 : 12 : 10 : 8 : 8. Mid femur with strong subapical anterior and posterior setae, and with very short ventral hairs; mid

tibia with strong anterodorsal setae at 1/5, 1/3, 3/5 and apically, with posterodorsal setae at 1/6, 3/4 and apically, and with 1 ventral seta at middle; mid tarsus simple. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 85 : 88 : 39 : 20 : 15 : 10 : 9. Hind femur with strong anterior subapical seta, without posterior subapical seta, but with weaker subapical anteroventral and posteroventral setae; hind tibia with anterodorsal setae at 1/5, 1/2 and 3/4, with row of 5—6 posterodorsal setae and some short ventral setae, with posteroventral row of erect setulae and anterior row of somewhat elongate setulae, as long as diameter of tibia; hind basitarsus swollen ventrally in basal 1/5, excavated ventrally in middle 1/3; the swelling having a small tubercle bearing bunch of 1 worm-like and 4—5 shorter thick setae, one of which weakly sclerotized, distinctly flattened and widened apically. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 90 : 105 : 25 : 27 : 19 : 13 : 10.

Wing. Brownish; ratio of cross-vein *m-cu* to apical part of CuA_1, 30 : 34; lower calypter yellow with fan of brownish setae; halter yellow.

Abdomen. Violet black, with 2nd sternum brown, and with black vestiture; 1st tergum bearing light hairs laterally; 5th segment ventrally expanded to form hood for hypopygium; hypopygium black with black cerci.

Female. Similar to male except lacking male secondary sexual characters, otherwise as follows. Face broad, clypeus strongly bulging; postpedicel as long as high; stylus 1.5 times longer than postpedicel; hind femur and hind tibia entirely yellow or dirty yellow at distal apices.

Length (mm): body 3.5, antenna 1.1, wing 3.5, hypopygium 0.4.

Distribution. Europe, North Caucasus; Kenya, Burundi.

Diagnosis and remark. There are two Afrotropical phenotypes of the species, having no difference in hypopygium morphology. The two phenotypes have hind tibia simple, without long ventral setae; hind basitarsus with basoventral tubercle bearing bunch of modified setae, at most slightly shorter than 2nd segment. Most part of the Afrotropical specimens are close to *S. valae* from Mongolia described by Negrobov and Zhilina (1986), differing in trilobate rather than simple aedeagus. A male collected from Burundi has mostly yellow 2nd tergum and broadly yellow 3rd—4th terga of abdomen (in lateral view); it is identical to description of *S. spicatus* (=*S. fuscipes*) by Loew (1857) and Parent (1938); this phenotype has accumbent posteroventral setulae on hind tibia and anterior row of about 10 fine setae, 2 times as long as diameter of hind tibia. Neither Parent (1938), nor Loew (1857) and Negrobov and Zhilina (1986) noted anterior elongate or posteroventral erect cilia on hind tibia in their descriptions. I have not seen European *S. fuscipes* and Mongolian *S. valae*. Therefore African specimens may represent different species. *S. fuscipes* is also very close to European *S. francoisi* Meuffels & Grootaert, 1999 (=*S. parvus* Vaillant, 1983, nec Vanschuytbroeck) and *S. silvianus* Pârvu, 1989.

Syntormon longipes Parent

Type material examined. ♂, Decembre / **Kenya**, Elgon Saw mill, Mt Elgon, Vers Est (Camp II, 2470 m) / Museum Paris, Miss. de l'Omo, C. Arambourg, P.-A. Chappuis & R. Jeannel 1932—33 / Type [red label] / *Syntormon longipes* n.sp. O. Parent [MHNP].

Material examined. 4 ♂, 2 ♀, **Congo belge**: Ruanda, Ruhengeri (Sources Kirili), 1800—1825 m, 31.VIII, 1 & 2.X.1934, G.F. de Witte: 562, 665 & 666 / P. Vanschuytbroeck det., 1951, *Syntormon longipes* Parent [RINS]; 1 ♂, Coll. Mus. Congo, Kivu: contr. S Kahuzi, 2200 m, 27.III.1953, P. Basilewsky [RMCA]; 1 ♂, Congo belge, Kivu, Rutshuru (riv. Rodahira), 1825 m, 2.VII.1935, G.F. de Witte: 1675 [RINS]; 1 ♂, 1 ♀, Congo belge: P.N.A., Kanyabayongo (Kabasha), 1760 m, 6.XII. 1934, G.F. de Witte: 671 [RINS]; 44 ♂, 40 ♀, Congo Belge: P.N.G. Miss H. De Saeger, 2.I.1951, 17.II. 1951, 23.II.1951, 16.IV.1951, 23.IV.1951, 8.V.1951, 22.V.1951, 26.V.1951, 26.VI.1951, 28.VII.1951, 3.III.1951, 11.IX.1951, 28.IX.1951, 20.X.1951, 8.XI.1951, 14.XII.1951, 28.XII.1951, 3.I.1952, 15.I.1952, 19.I.1952, 24.I.1952, 30.I.1952, 12.II.1952, 26.II.1952, 27.II.1952, 8.III.1952, 11.III.1952, 13.III.1952, 22.III.1952, 31.III.1952, 10.IV.1952, 30.VII.1952, 8.VIII.1952, 1.IX.1952, 2.IX.1952, 9.IX.1952, 10.IX.1952, H. De Saeger [RMCA]; 1 ♂, **Uganda**: Kampala, 12.XII.1934, F.W. Edwards, B.M. 1935—203 [NHML]; 1 ♂, Uganda: Kigezi dist., XI.1934, B.M. E.Afr. Exp., B.M. 1935—203/ Mt. Sabinio, 8000 ft., F.W. Edwards [NHML].

Diagnosis. Hind tarsus simple; fore and mid tarsi with slightly elongate dorsal setulae. Scu-

tellum with 3—5 pairs of short but strong marginal setae in addition to major setae.

Distribution. Kenya; Congo (Kinshasa), Rwanda (!), Uganda (!).

Syntormon opimus Vanschuytbroeck

Type material examined. ♂, **Congo belge**: Ruanda, Kundhuru ya Tsuve, Rutabagwe, 2600 m, 13—14.IX.1934, G.F. de Witte: 595 / Holotype [red label] / P. Vanschuytbroeck det., 1951, *Syntormon opimus* n.sp. [RMCA]; 18 ♂, 16 ♀, Congo belge: Ruanda, Kundhuru ya Tsuve, 2600 m (2 ♀: Kitondo, 2000 m), 13—15.IX.1934 [7/23.I.1935], G.F. de Witte: 595, 601, 1025 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Syntormon opimus* n.sp. [RINS]; 21 ♂, Congo belge: Ruanda, Kundhuru ya Tsuve, 2600 m, 13—15.IX.1934 [7/23.I.1935], G.F. de Witte: 595, 601, 1025 / Paratype [red label] / P. Vanshuytbroeck det., 1951, *Syntormon straeleni* n.sp. [RINS].

Material examined. 8 ♂, Congo belge: Ruanda, Kundhuru ya Tsuve, Rutabagwe, 2600 m, 13—14.IX.1934, G.F. de Witte: 595 [RINS]; 1 ♂, Congo belge: Ruanda, Kundhuru ya Tsuve (Col Gahinga-Sabinyo), 2600 m (Bambous), 15.IX.1934, G.F. de Witte: 601 [RINS].

Diagnosis. The species is a sister species to *S. straeleni*. Mid tibia with 1 ventral seta behind middle; hind tibia in apical 1/2 or 1/3 strongly thickened, with ventral stiff cilia 2 times longer than diameter of tibia; hind basitarsus with erect ventral process in middle bearing several short remarkable setae; postpedicel 2.5—3 times longer than high; stylus as long as or shorter than postpedicel. Hind femur black in apical 1/4; hind tibia gradually darkened from yellow at extreme base to black in apical 1/3. See also diagnosis of *S. straeleni*.

Distribution. Rwanda.

Syntormon pallipes pallipes (Fabricius)

Material examined. 1 ♂, **Sainte-Hélène**: Centre High Central Ridge, 2500 ft, IV.1967 / Coll. Mus. Tervuren, Seconde Mission Zoologique à Sainte-Hélèna, J. Decelle, N. et J. Leleup / P. Vanschuytbroeck Det. 1974, *Xiphandrium macrocerum* Meig. [RMCA]; 1 ♂, **Yemen**, Sana'a, III.1992, R. Linnavuori [ZMH]; 1 ♂, Yemen, Ghaiman, about 9 miles SE of San'a, ca. 8700 ft., 18.II.1938 / found near irrigation stream / B.M. Exp. to S.W. Arabia, H. Scott & E.B. Britton, B.M. 1938—246 [NHML]; 1 ♂, 3 ♀, **Tanzania**, Kimboza, Forest Reserve / 11.IX.1977, leg. Mahunka [HNHM].

Palaearctic material. 1 ♂, [Egypt:] **Israel**, Sinai, Qzanna, 1.VIII.1972, A. Freidberg [TAU]; 2 ♂, [Egypt:] Israel, Sinai, Wadi Tala, 8.VI.1973, A. Freidberg [TAU]; 1 ♂, [Egypt:] Israel, Sinai Mts., El Arbain, 14.VII.1974, F. Kaplan [TAU]; 4 ♂, 5 ♀, Wadi Kabala, Judean Hills, Palestine, O. Theodor, 12.VI.1945 [TAU]; 3 ♂, 4 ♀, Israel, Kalia, 8 & 29.III.1976, A. Freidberg [TAU]; 9 ♂, 1 ♀, Israel, Banias, 20.IV.1974, 9.VI.1976, 24.IV.1982, 13—14.X.1982, A. Freidberg, F. Kaplan [TAU]; 1 ♂, Israel, Park HaYarden, 24.VI.1982, A. Freidberg [TAU]; 1 ♂, Israel, Majdel Chams, 14.X.1982, F. Kaplan [TAU]; 2 ♂, Israel, Tel Aviv Dunes, 8.IV.1981, A. Freidberg [TAU]; 3 ♂, Israel, W. Faria, 1.III.1973, A. Freidberg [TAU]; 1 ♂, 1 ♀, Israel, Golan, Nafech, 10.XII.1973, A. Freidberg [TAU]; 1 ♂, Israel, N. Dishon, nr. Bar'am, 11.V.1982, A. Freidberg [TAU]; 2 ♂, Israel, Akko, 27.XI.1971 & 29.III.1975, A. Freidberg [TAU]; 1 ♂, Israel, Monfort, 10.III.1981, F. Kaplan [TAU]; 2 ♂, Israel, Ein Mur, 31.III.1981, A. Freidberg [TAU]; 1 ♂, Israel, Hadera, 22.II.1981, T. Furman [TAU]; 1 ♂, Israel, W. Ara, 2.III.1978, A. Freidberg [TAU]; 1 ♂, Israel, Kjar Shamai, 14.V.1974, A. Freidberg [TAU]; 1 ♂, Israel, Abu Kabir, 15.III.1976, F. Kaplan [TAU]; 1 ♂, 1 ♀, **Greece**, Crete, Heraklion env., 7.VI.2000, I. Shamshev [Author's coll.]; 1 ♀, Greece, Crete, Therisso, 7.VII.1981, A. Freidberg [TAU]; 1 ♂, **S. Tadzhikistan**, Dusti, 24.VIII.1987, I. Grichanov [Author's coll.]; 31 ♂♀, **Russia**: Krasnodar Terr.: Elizavetinskaya, 45°02' N, 38°54' E, Shepeleva, 44°19' N, 38°37' E, Yuzhnaya Ozereyevka, 44°40' N, 37°37' E, Arkhipo-Osipovka, 2 km N Ubinskaya, Krasnodar env., 24.VI.1992, 6.VI.2000, 17.VI.2000, 15.VI.2001, 5.VIII.2001, 10.VIII.2001, I. Grichanov, E. Ovsyannikova [Author's coll.]; 2 ♂, [Russia:] Rostov-na-Donu, bank of Don river, 12.05.1997, Grichanov [Author's coll.]; 3 ♂, 1♀, [Russia:] Rostov Region, Azov distr., Port-Katon, 11 & 12.05.1997, Grichanov [RINS & Author's coll.]; 21 ♂, Russia: Kabardino-Balkaria: Ozen, 43°13' N, 43°19' E, Bezengi, 43°10' N, 43°14' E, 13—15 & 18—19.VI.2001, Grichanov [Author's coll.]; 5 ♂, 3 ♀ [mostly in alcohol], Russia: N. Osetia-Alania, Verkhnii Tsei env., Alagir env., 5 & 9.VII.2000, Grichanov [Author's coll.]; 15 ♂, Russia: Pskov Region, Velikie Luki, 9.VI.1997, 9.VIII.1998, 17.VIII.1998, I. Grichanov, E. Ovsyannikova [RINS & Author's coll.].

Remarks. Both *pallipes* and *pseudospicatus* phenotypes are present in Europe and Israel. Afrotropical material as well as a male from Tadzhikistan is related to *pseudospicatus* phe-

notype. The type of *Musca pallipes* Fabricius is entirely destroyed [ZMC, examined]; designation of a neotype from a *pallipes* phenotype is preferable. Specimens from Congo (Kinshasa) determined by P. Vanschuytbroeck as *Syntormon pallipes* (RINS, 11 ♂ examined) belong to the genera *Sympycnus* and *Chrysotus* (2 or 3 spp.). So, the species should be excluded from the fauna of Congo (Kinshasa). See also diagnosis under *S. p. longistylus*.

Distribution. Germany; St. Helena, Yemen (!), Tanzania (!); Egypt, Morocco, Europe, Israel, Turkey, the Caucasus, Central Asia, Mongolia, China.

Syntormon pallipes longistylus Grichanov, subspec. nov.

Holotype. ♂, Manyakatompo, X.1951, N.S.H. Krauss / Institut Scientifique Madagascar / R.I.Sc.N.B. I.G. 17.793 [RINS].

Description. Male.

Head. Frons metallic blue-violet; face densely silvery white pollinose; palpi and proboscis brown; antenna black; pedicel medianly with long projection; postpedicel tapering, 2.3 times longer than high; stylus subapical, simple, with microscopic hairs; postoculars in single row, ventrally pale and dorsally black, and with some setae near cervix. Length ratio of scape to pedicel to postpedicel to stylus, 10 : 12 : 25 : 41.

Thorax. Mostly greenish black, with dusting of grey pruinosity, metaepimeres yellow; setae black; 5 strong dorsocentrals; 7—8 pairs of acrostichals in 2 irregular rows; 2 strong scutellars and 4—5 pairs of fine pale hairs along scutellar margin.

Legs. Fore and hind coxae yellow; mid coxa black, with yellow apex; fore coxa with short pale anterior hairs and some strong black apical setae; trochanters, femora and tibiae yellow; tarsi black-brown from tip of basitarsus. Fore femur with short hairs; fore tibia with 1 strong posterodorsal seta at 1/3, and with short but distinct anterodorsal setal serration along distal half; fore tarsus simple. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 65 : 68 : 41 : 19 : 14 : 10 : 10. Mid femur with pair of strong subapical anterior and posterior setae; mid tibia with strong anterodorsal setae at 1/5, 1/3 and 3/5 apically, with posterodorsal setae at 1/5 and 2/3, and with anteroventral seta at middle; mid tarsus simple. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 84 : 98 : 46 : 22 : 16 : 10 : 8. Hind femur with strong anterior subapical seta, without posterior subapical seta, but with weaker subapical anteroventral and posteroventral setae; hind tibia with anterodorsal setae at 1/8, 1/3 and 2/3, and with posterodorsal setae at 1/10, 1/4, 1/2 and 7/10, with pair of antero- and posteroventral setae at 4/5, and with some short ventral setae; hind basitarsus slightly swollen ventrally in 2nd quarter, slightly excavated in 3rd quarter, with 2 strong ventral hooks just before middle, and group of elongate ventral setulae in last quarter. Length ratio of mid femur to tibia to tarsus (segments from first to to tarsus (segments from first to fifth), 95 : 126 : 28 : 32 : 21 : 15 : 10.

Wing. Greyish; ratio of cross-vein *m-cu* to apical part of CuA_1, 23 : 32; lower calypter yellow with brown rim and fan of pale setae; halter yellow.

Abdomen. Ventrum yellow; 1st, 4th and 5th terga dark brown dorsally; 2nd and 3rd terga mostly yellow, narrowly brown along sutures; abdomen with black vestiture; 1st tergum with white hairs laterally; 5th segment ventrally expanded to form hood for hypopygium; hypopygium dark brown with brown cerci.

Female. Unknown.

Length (mm): body 3.5, antenna 1.1, wing 3.5/1.2, hypopygium 0.4.

Distribution. Madagascar.

Etymology. The subspecies is named for the long antennal stylus (Lat. *longus*; Gr. *stylos*, "with long stylus").

Diagnosis. The new subspecies is closely related to nominotypical subspecies (*pseudospicatus* phenotype), differing in many fine characters of the habitus (see description). *S. pallipes pallipes* has antennal postpedicel being 3—3.5 times longer than high, with stylus usually shorter than postpedicel; acrostichals being anteriorly uniseriate, becoming biseriate posteriad; scutellum having at most 2 pairs of microscopic marginal hairs in addition to major setae; and hind basitarsus bearing hooks strictly at 1/4.

***Syntormon papei papei* Grichanov, sp. n.**
(Fig. 2)

Holotype. ♂, **Uganda**: Kigezi dist., XI.1934, B.M. E.Afr. Exp., B.M. 1935—203 / Mt. Sabinio, 8000 ft., F.W. Edwards [NHML].

Paratype. 1 ♂, **Congo belge**: P.N.A., Lac Kanyamenoni, vers Volc. Musule, 2300 m, 14.VIII. 1934, G.F. de Witte: 531 [RINS].

Description. Male.

Head. Frons metallic blue-green; face densely white pollinose; palpi and proboscis brown; antenna black; pedicel medianly with long projection; postpedicel tapering, 1.5 times longer than high; stylus dorsoapical, simple, with short hairs; postoculars in single row, ventrally pale and dorsally black. Length ratio of scape to pedicel to postpedicel to stylus, 7 : 7 : 14 : 25.

Thorax. Weakly pollinose, mesonotum metallic green-blue, pleura mostly yellow; setae black; 6 dorsocentrals; acrostichals absent; 2 strong scutellars, 2 lateral and 4 median microscopic marginal hairs.

Legs including coxae mostly yellow; distal segments of tarsi brown; fore coxa with short pale anterior hairs and some strong black apical setae. Fore femur with posteroventral row of short hairs in distal half; fore tibia with ventral row of hairs along entire length, as long as diameter of tibia; fore tarsus simple, with hairs not longer than diameter of tarsomeres. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 48 : 50 : 23 : 17 : 15 : 10 : 8. Mid femur with strong subapical anterior and posterior setae, and with irregular ventral row of fine setae in basal 1/4, slightly longer than diameter of femur; mid tibia with strong anterodorsal setae at 1/5, 1/2 and apically, and with posterodorsal seta at 1/4; mid tarsus simple. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 60 : 73 : 31 : 16 : 15 : 9 : 7. Hind femur with strong anterior subapical seta, without posterior subapical seta, but with weaker subapical anteroventral and posteroventral setae; hind tibia with dorsal setae at 1/2, 2/3 and subapically, and with some short ventral setae; hind tarsus unmodified. Length ratio of mid femur to tibia to tarsus (segments from first to fifth), 72 : 86 : 18 : 22 : 14 : 8 : 7.

Wing. Brownish; ratio of cross-vein *m-cu* to apical part of CuA_1, 15 : 23; lower calypter yellow with fan of brown setae; halter yellow.

Abdomen. Mostly brown, broadly yellow ventrally and laterally, and with black vestiture; 5th segment ventrally expanded to form hood for hypopygium; hypopygium dark brown with brown cerci.

Female. Unknown.

Length (mm): body 2.3, antenna 0.7, wing 2.9, hypopygium 0.3.

Distribution. Uganda, Congo (Kinshasa).

Etymology. The species is named for the Swedish dipterist, Dr. Thomas Pape.

Diagnosis. The new species is closely related to *S. dorsalis*, differing in leg setation and hind basitarsus being simple.

***Syntormon papei madagascarensis* Grichanov, subspec. nov.**

Holotype. B...[in alcohol], Madagascar: Tamatave Province, Ambatondrazaka, 22.IV.1992, A. Pauly coll. [RINS].

Diagnosis. Male. S. papei madagascarensis is almost identical to nominotypical subspecies in any respect including morphology of hypopygium except for distinctly thicker inner seta on ventral lobe of surstylus. Postpedicel broken. Fore femur and tibia with ordinary very short ventral hairs. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 40 : 40 : 20 : 10 : 8 : 6 : 5. Hind tibia with anterodorsal setae at 1/4, 1/2 and 3/4, with dorsal setae at 1/3, 2/3 and subapically, and with 1 ventral seta at middle. Length ratio of mid femur to tibia to tarsus (segments from first to third), 60 : 73 : 16 : 15 : 12.

Ratio of cross-vein *m-cu* to apical part of CuA_1, 11 : 22.

Female. Unknown.

Length (mm): body 2.5, wing 2.3/0.7, hypopygium 0.3.

Distribution. Madagascar.

Etymology. The subspecies is named for the island of origin.

***Syntormon parvus* Vanschuytbroeck**

Type material examined. ♂, **Congo belge** [...] G.F. de Witte: 604 / Type [red label] / P. Vanschuytbroeck det., 1951, *Syntormon parvus* n.sp..

[RMCA]; ♂, Congo belge [...] G.F. de Witte: 604 / Type [red label] / P. Vanschuytbroeck det., 1951, *Syntormon kivuensis* n.sp. [RMCA]; 1♂(?), Congo belge: Ruanda, Kundhuru ya Tsuve (Col. Gahinga-Sabinyo), 2000 m (Bambous), 15.IX.1934, G.F. de Witte: 601 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Syntormon parvus* n.sp. [RINS]; 2 ♂, Congo belge: P.N.A., vers Rweru (Volc Mikeno), 2400 m (Bambous), 3.VII.1934, G.F. de Witte: 469 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Syntormon kivuensis* n.sp. [RINS].

Diagnosis. Coxae and femora yellow. Fore tibia simple, without dorsal seta, with one posteroventral and one posterior rows of elongate cilia, as long as diameter of tibia. Fore femur with anteroventral hairs, half as long as diameter of femur, with several posteroventral subapical cilia in apical 1/3, as long as diameter of femur. Hind femur with elongate ventral cilia in basal 1/3 and several subapical posteroventral cilia. Fore tarsus without long setae dorsally. Fore basitarsus enlarged, with small subapical ventral protuberance forming anterior convexity; hind tarsus simple. Mesonotum metallic green. Pleura yellow; 6 dorsocentral setae, no acrostichals.

Remark. Twelve more paratypes labelled as *S. parvus* and *S. kivuensis* are deposited in the collection of RINS. They belong to different species: *Sympycnus munroi* Curran (2 ♂), *Rhaphium pectiniger* (2 ♂, 3 ♀), indeterminable species of the genera *Syntormon*, *Sympycnus* and *Saccopheronta*.

Distribution. Congo (Kinshasa); Rwanda (!).

Syntormon straeleni Vanschuytbroeck

Type material examined. ♂, **Congo belge**: Kivu, Sake (Lac Kivu), 1460 m, 19/22.II.1934, G.F. de Witte: 253 / Type [red label] / P. Vanshuytbroeck det., 1949, *Syntormon straeleni* n.sp. [RMCA]; 1♂, Rutshuru, 26.XII.1934, G.F. de Witte, Parc Nat. Albert, 140 / Paratype [red label] / P. Vanshuytbroeck det., 1951, *Syntormon straeleni* n.sp. [RINS].

Material examined. 7 ♂, **Uganda**: Ruwenzori Range, XII.1934—I.1935, B.M. E. Afr. Exp., B.M. 1935—203 / Kilembe, 4500 ft., F.W. Edwards [NHML]; 1 ♂, **Ethiopia**, Kefa, Jimma, 30 km S River, 2200m, 11.II.2000, A Freidberg & I. Yarom [TAU]; 1 ♂, Ethiopia, Gamo Gofa, Chencha, 40 km NW Arba Minch, 2800m, 6.II. 2000, I. Yarom & A. Freidberg [TAU].

Diagnosis. Postpedicel 2—2.5 times longer than high; stylus as long as or shorter than postpedicel. Mid tibia without ventral seta; hind femur black in apical 1/4; hind tibia gradually darkened from yellow at extreme base to black in apical 1/3, swollen in distal half, with fine ventral cilia 3 times longer than diameter of tibia. Abdomen entirely dark, sometimes venter yellowish at base. Body length, 2.4—3.2 mm.

Remark. Paratypes from Rwanda (RINS, 21 ♂...examined) belong to *S. opimus*. So, the species should be excluded from the fauna of the country.

Distribution. Congo (Kinshasa); Uganda (!), Ethiopia (!).

Syntormon tamatave Grichanov, sp. n.

(Fig. 3)

Holotype. ♂...[in alcohol], **Madagascar**: Tamatave Province, Morarano-Chrome, 1—15.VIII.1991, A. Pauly, Forêt, 25 km W [RINS].

Description. Male.

Head. Frons metallic blue-violet; face with black ground colour; palpi and proboscis yellow brown; antennal scape and pedicel brown; pedicel medianly with long projection, as long as scape; postpedicel broken; postoculars in single row, ventrally pale and dorsally black, and with some setae near cervix.

Thorax. Mostly dark brown, mesonotum with metallic green-bronze reflections, metaepimeres yellow; setae black; 6 dorsocentrals; 7—8 acrostichals short, uniseriate; median scutellars strong, laterals as weak side hairs, and with pair of fine pale hairs medianly along scutellar margin.

Legs. Coxae mostly yellow; mid coxa with narrow brown stripe on outer side; fore coxa with short pale anterior hairs and some strong black apical setae; trochanters, femora and tibiae yellow; 3 basal segments of fore tarsus yellowish, 4—5th brownish; hind basitarsus dirty yellow, 2nd—3rd segments brown. Fore femur with some short ventral hairs at base, and with subapical posteroventral seta; fore tibia with 2 strong dorsal setae at 2/5 and at apex, 1 posterior apical seta, and with short but distinct anterodorsal setal serration along distal half; fore basitarsus slightly swollen ventrally at apex, with 2 ventral rows of short strong setulae in distal half, not longer than diameter of tarsomere; 1st—2nd segments of the same tarsus with 2 dorsal rows of numerous strong erect setae, 3—4 times longer than

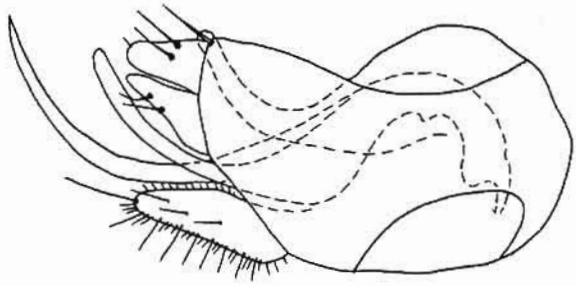


Fig. 3. *Syntormon tamatave* Grichanov, spec. nov., hypopygium, left lateral veiew.

diameter of tarsomeres; 3rd segment with dorsal row of shorter setae decreasing in length distally. Length ratio of fore femur to tibia to tarsus (segments from first to fifth), 55 : 52 : 20 : 19 : 13 : 5 : 5. Mid femur with strong subapical anterior and posterior, and with 2 black ventral setae at 1/4, nearly 2 times longer than diameter of femur; mid tibia with strong anterodorsal setae at 1/5, 1/3, 3/4 and apically, and with posterodorsal seta at 1/4; mid tarsus broken. Length ratio of mid femur to tibia, 72 : 81. Hind femur with strong anterior subapical seta, without posterior subapical seta, but with weaker subapical anteroventral and posteroventral setae; hind tibia with anterodorsal setae at 1/5, 2/5 and 3/4, and with posterodorsal setae at 1/6, 1/4, 1/2, 3/5 and subapically, with some shorter dorsal setae, and with some short ventral setae; 1st–3rd segments of hind tarsus unmodified. Length ratio of mid femur to tibia to tarsus (segments from first to third), 81 : 105 : 22 : 23 : 17.

Wing. Brownish; ratio of cross-vein *m-cu* to apical part of CuA_1, 20 : 25; lower calypter yellow with fan of black setae; halter yellow.

Abdomen. Mostly yellow, narrowly brown along sutures, and with black vestiture; 5th segment ventrally expanded to form hood for hypopygium; hypopygium dark brown with yellow cerci.

Female. Unknown.

Length (mm): body 2.9, wing 2.8, hypopygium 0.5.

Distribution. Madagascar.

Etymology. The species is named for the country (province) of origin.

Diagnosis. The new species is closely related to *S. singularis* group of Australian species with elongate postpedicel, unmodified male hind tarsus and male mid femur often having modified ventral setae (Bickel, 1999). *S. tamatave* differs from the Australian, as well as from all Afrotropical species of the genus in having very long dorsal setae on fore tarsus and 2 long ventral setae on mid femur.

Syntormon wittei Vanschuytbroeck

Type material examined. ♂, **Congo belge**: P.N.A., Lac Magera, 2000 m, 6.III.1934, G.F. de Witte: 276 / Coll. Mus. Congo (ex coll. IPCNB) / Type [red label] / P. Vanschuytbroeck det. 1949, *Syntormon* B...*wittei* n.sp. [RMCA]; 2 ♂, Congo belge: P.N.A. Kitondo (pres Gandjo), 2000 m, 7 au 23.I.1935, G.F. de Witte: 1033 / Paratype [red label] / P. Vanschuytbroeck det., 1949, *Syntormon* B...*wittei* n.sp.; 1♂, Congo belge: P.N.A. Kanyabayongo (Kabasha), 1760 m, 6.XII.1934, G.F. de Witte: 871 / Paratype [red label] / P. Vanschuytbroeck det., 1949, *Syntormon* B...*wittei* n.sp.

Material examined. 1 ♂, 1 ♀, Congo belge, Ruanda, Ruhengeri (riv. Penge), 1800—1825m, 4 et 5.X.1934, G.F. de Witte: 675 [RINS]; 1 ♂, Congo belge: P.N.A., Nyarusambo (Kikere), 2226m, 28—29.VI.1934, G.F. de Witte: 453 [RINS]; 1 ♂, Congo belge: Kivu, Tshengelero (près Munagano), 1750m, 17.VIII.1934, G.F. de Witte: 537 [RINS]; 1♂, Congo belge: P.N.A., Kanyabayongo (Kabasha), 1760 m, 6.XII.1934, G.F. de Witte: 671 [RINS].

Diagnosis. Antenna black; postpedicel twice longer than high. Stylus longer than postpedicel. Mesonotum dark; pleura, coxae, femora ant tibia yellow; abdomen laterally and ventrally yellow. Fore tibia without dorsal setae; fore tarsus simple; hind tibia darkened at apex, simple, with 2 anterodorsal, 2 posterodorsal, 1 ventral setae. Hind basitarsus black, as long as next segment, with row of 6 thick erect ventral spines of glued setae in basal half, otherwise simple.

Remark. 55 more paratypes labelled as *S. wittei* are deposited in the collection of RINS.

They belong to different species: *Syntormon dorsalis* (7 ♂), *Sympycnus munroi* Curran (2 ♂, 27 ♀), *Rhaphium pectiniger* (2 ♂, 1 ♀,), indeterminable females of the genus *Syntormon*.

Distribution. Congo (Kinshasa); Rwanda (!).

Key to Afrotropical species of *Syntormon* Loew (males)

1. Hind tarsus simple 2
— 1st or 2nd segments of hind tarsus modified 5

2. Scutellum with 3—5 pairs of short but strong marginal setae in addition to major setae ..... ***S. longipes***
— Scutellum with 2 or more pairs of short fine marginal hairs in addition to major setae 3
3. 1st and 2nd segments of fore tarsus with 2 dorsal rows of long and strong erect setae; mid femur with 2 long ventral setae at base ..... ***S. tamatave***
— Fore tarsus without long setae dorsally ... 4
4. Fore basitarsus enlarged, with small subapical ventral protuberance forming anterior convexity; hind basitarsus with white subapical ring ..... ***S. parvus***
— Fore basitarsus enlarged at apex, projecting ventrally, equal in length to 2nd—5th tarsomeres combined; mid femur with 3—4 ventral setae at base ..... ***S. peregrinus***
— Fore basitarsus simple; next segments evenly decreasing in length 4a
4a. Fore femur with posteroventral row of short hairs in distal half; fore tibia with ventral row of hairs along entire length, as long as diameter of tibia; hind tibia with 3 dorsal setae and with some short ventral setae ..... ***S. papei papei***
— Fore femur and tibia with ordinary very short ventral hairs; hind tibia with 3 anterodorsal, 3 dorsal setae and with 1 ventral seta at middle ..... ***S. papei madagascarensis***
5. 2nd segment of hind tarsi very short, with small process; hind basitarsus simple ..... ***S. flexibilis***
— Hind basitarsus with remarkable setae, hooks or processes 6
6. Hind basitarsus with only two bare ventral hooks, without long setae or process; mid femur without strong ventral setae 6a
— Hind basitarsus with either long remarkable setae or process bearing short setae 7
6a. Postpedicel 3—3.5 times longer than high, nearly 2 times longer than stylus ..... ***S. pallipes pallipes***
— Postpedicel 2 times longer than high, 2/3 length of stylus ..... ***S. pallipes longistylus***
7. Hind tibia in apical 1/2 or 1/3 strongly thickened, with very long ventral setae; hind basitarsus with ventral process in middle bearing several short remarkable setae 8
— Hind tibia simple, without long ventral setae 9
8. Mid tibia with 1 ventral seta behind middle; hind tibia with stiff ventral cilia 2 times longer than diameter of tibia; postpedicel 2.5—3 times longer than high ..... ***S. opimus***
— Mid tibia without ventral seta; hind tibia with fine ventral cilia 3 times longer than diameter of tibia; postpedicel 2—2.5 times longer than high ..... ***S. straeleni***
9. Hind basitarsus 1/3 to 1/2 length of 2nd segment, densely ciliated ventrally, with short lateral process at apex ..... ***S. dorsalis***
— Hind basitarsus at most slightly shorter than 2nd segment 10
10. Hind basitarsus with row of several erect spines of glued setae, otherwise simple ... ***S. wittei***
— Hind basitarsus with basoventral tubercle bearing bunch of modified setae ..... ***S. fuscipes***

New combinations and new synonyms

Chrysotus palmatus (Vanschuytbroeck), comb. nov.

= *Syntormon palmatus* Vanschuytbroeck, 1952c: 41.

Type material examined. ♂, holotype, **Congo belge**: P.N.U., Mukana (1810 m), 15—19.I.1948, Miss. G.F. de Witte, 1248a / Type [red label] / P. Vanschuytbroeck det., *Syntormon palmatus* n.sp. [RMCA].

Remark. The species belongs to a group of *Chrysotus* species having antennal stylus inserted in apical incision of postpedicel; 2nd—4th segments of fore tarsus broad, moniliform; mid and hind tarsi simple, with shortened 2nd—5th segments.

Distribution. Congo (Kinshasa).

***Rhaphium pectiniger* (Parent), comb. nov.**

= *Sympycnus pectiniger* Parent, 1938: 408.
= *Xiphandrium rweruensis* Vanschuytbroeck, 1951: 108, **syn. nov.**
= *Syntormon spiculus* Vanschuytbroeck, 1952c: 41, **syn. nov.**
= *Rhaphium vanschuytbroecki* Negrobov, Grichanov & Bakary, 1982: 190, **syn. nov.**
= *Xiphandrium sexsetosum* Vanschuytbroeck, 1951: 110 (part of paratypes).
= *Syntormon kivuensis* Vanschuytbroeck, 1951: 107 (part of paratypes).
= *Syntormon ruandanus* Vanschuytbroeck, 1951: 105 (part of paratypes).
= *Syntormon wittei* Vanschuytbroeck, 1951: 102 (part of paratypes).

Type material examined. ♀, **Kenya**, Elgon Saw mill, Mt. Elgon, Vers Est (Camp III), 2470 m / Mus. Paris, Miss. de l'Omo, C. Arambourg, P.-A. Chappuis & R. Jeannel, 1932—33 / December / Type [red label] / *Sympycnus pectiniger* n.sp., Type, O. Parent [NHMP]; ♂, Holotypus [red label] / Congo belge: P.N.A., vers Rweru (Volc. Mikeno), 2400 m (Bambous), 26 au 27.VII.1934, G.F. de Witte: 501 / Coll. Mus. Congo (ex coll. IPNCB) / Type [red label] / P. Vanschuytbroeck det., 1950, *Xiphandrium rweruensis* n.sp. [RMCA]; 2 ♂, 1 ♀, same labels [RMCA]; ♀, holotype, Congo belge: P.N.U., Lusinga, 7.IV.1947, Miss. G.F. de Witte, 180a / Type [red label] / P. Vanschuytbroeck det., *Syntormon spiculus* n.sp. [RMCA]; ♂, Congo Belge: P.N.A., 25—29.VIII.1952, P. Vanschuytbroeck & L. Kekenbosch, 840—43 / Massif Ruwenzori, Kalonge, 2480 m (étage bambous), riv. Nyamwamba-Ihongero / Holotypus, *Rhaphium vanschuytbroecki* Negrobov, Grichanov & Bakary [red label] [RINS]; 1♂, Congo belge: P.N.A., vers Rweru (Volc. Mikeno), 2400 m (Bambous), 26 au 27.VII.1934, G.F. de Witte: 502 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium rweruensis* n.sp. [RMCA]; 1 ♂, Congo belge: P.N.A., vers Rweru (Volc. Mikeno), 2400 m (Bambous), 26 au 27.VII. 1934, G.F. de Witte: 501 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium sexsetosum* n.sp. [RMCA]; 11 ♂, 10 ♀, same labels [RINS]; 1 ♂, Congo belge: P.N.A.: Mt. Sesero, pres Bitashimva (Bambous), 2000, 1—2.VIII.1934; G.F. de Witte: 505 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium sexsetosum* n.sp. [RINS]; 1 ♂, Congo belge: P.N.U., Lusinga (1760 m), 3.VII.1947, Mis. G.F. de Witte: 544a / Paratype [red label] / P. Vanschuytbroeck det., 195?, *Xiphandrium sexsetosum* n.sp. [RMCA]; 1 ♂, Congo belge: P.N.U., Mabwe (Lac Upemba) (585 m), 1—12.VIII.1947, Mis. G.F. de Witte: 650a / Paratype [red label] / P. Vanschuytbroeck det., 1952, *Xiphandrium sexsetosum* n.sp. [RMCA]; 1 ♂, Congo belge: Ruanda, Kundhuru ya Tsuve (Col. Gahinga-Sabinyo) 2600 m (Bambous), 15.IX.1934, G.F. de Witte: 601 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium sexsetosum* n.sp. [RINS]; 2 ♀, Congo belge: Kashva (entre Ngesho-Bishakeshaki) 2000 m, 7—23.I.1935, G.F. de Witte: 1010, 1011 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium sexsetosum* n.sp. [RINS]; 1 ♂, 1 ♀, Bishoke: 2800—3300 m, 13—14.II.1935, G.F. de Witte: Parc Nat. Albert, 1128—1129 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium sexsetosum* n.sp. [RINS]; 1 ♀, Congo belge: P.N.A., Kitondo (pres Gadjo), 2600 m, 2000 m, 7/23.I.1935, G.F. de Witte: 1025 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium sexsetosum* n.sp. [RINS]; 1 ♀, Congo belge: Ruanda, Kundhuru ya Tsuve, Rutabagwe 2600 m, 13—14.IX.1934, G.F. de Witte: 595 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium sexsetosum* n.sp. [RINS]; 8 ♂, 2 ♀, Congo belge: P.N.A., vers Rweru (Volc Mikeno), 2400 m (Bambous), 3.VII.1934 [26 au 27.VII.1934], G.F. de Witte: 501, 502, 469 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Xiphandrium rweruensis* n.sp. [RINS]; 2 ♂, 1 ♀, Congo belge: P.N.A., vers Rweru, G.F. de Witte: 501 / Paratype [red label] / P. Vanschuytbroeck det., 1949, *Syntormon* B...*wittei* n.sp. [RINS]; 2 ♂, Congo belge: P.N.A., vers Rweru (Volc Mikeno), 2400 m (Bambous), 26 au 27.VII. 1934, G.F. de Witte: 601 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Syntormon ruandana* n.sp. [RINS]; 1 ♂, Congo belge: P.N.A., Lac Kanyamenoni, vers Volc Musule, 2300 m, 14.VIII. 1934, G.F. de Witte: 531 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Syntormon ruandana* n.sp. [RINS]; 2 ♂, 3 ♀,Congo belge: P.N.A., vers Rweru (Volc Mikeno), 2400 m (Bambous), 3.VII. 1934, G.F. de Witte: 469 / Paratype [red label] / P. Vanschuytbroeck det., 1951, *Syntormon kivuensis* n.sp. [RINS].

Additional material. 3 ♂, 1 ♀, **Congo belge**: P.N.A., vers Rweru (Volc. Mikeno), 2400 m (Bambous), 26 au 27.VII.1934, G.F. de Witte: 502 / P. Vanschuytbroeck det., 1951, *Xiphandrium anale* Becker [RMCA]; 3 ♂, 3 ♀. Congo belge: P.N.A. vers Rweru (Volc. Mikeno), 2400 m., Bambous), 26 au 27.VII.1934, G.F. de Witte, 501 [RINS]; 5 ♀. Congo belge: P.N.A. Mt.Sesero. pres Bitashimva (Bambous), 2000 m., 1 au 2.VIII.1934, 26 au, 27.VII.1934, G.F. de Witte, 505 [RINS]; 2 ♀. Congo belge: P.N.A. Kitondo (pres Gandjo), 2000 m., 7 au 23.1.1935, G.F. de Witte, 1018, 1034 [RINS]; 1 ♀. Congo belge: P.N.A. Kashwa (entre Ngesho-Bishaki-shaki), 200 m., 7 au 23.1.1935, de Witte,

1009 [RINS]; 1 ♂, **Uganda**: S.W., Ichuya Forest, Kanaba Gap, 2500 m, 28.XII.1995, I. Yarom & A. Freidberg [TAU].

Diagnosis. Rh. pectiniger is placed in the group of species with a row of 5—10 anterodorsal bristles on fore tibiae and three pairs of strong dorsocentral bristles, and can be distinguished from other species by long ventral hairs on fore tibiae, simple male cerci, two lobes and two bundles of long bristles in apical half of surstylus.

Remark. One more male paratype of *Xiphandrium ruweruensis* belongs to *Sympycnus munroi* Curran, and one female paratype belongs to an indeterminable species of *Sympycnus*.

Distribution. Congo (Kinshasa); Uganda, Kenya.

Rhaphium sexsetosum (Vanschuytbroeck)

= *Xiphandrium sexsetosum* Vanschuytbroeck, 1951: 110.

= *Rhaphium grootaerti* Negrobov, Grichanov & Bakary, 1982: 192, **syn. nov.**

Type material examined. ♂, Holotypus [red label] / **Congo belge**: P.N.A., vers Mt. Kamatembe, vers 2300 m 7/23.I.1935, G.F. de Witte: 1054 / Coll. Mus. Congo (ex coll. IPNCB) / Type [red label] / *Xiphandrium sexsetosum* n.sp. [RMCA]; ♂, Congo Belge: P.N.A., 7—15.X.1952, P. Vanschuytbroeck & L. Kekenbosch, 840—43 / Massif Ruwenzori, Kyandolire, 1700 m, Camp de Gardes / Holotypus, *Rhaphium grootaerti* Negrobov, Grichanov & Bakary [red label] [RINS].

Additional material. 1 ♂, Coll. Mus. Congo, **Urundi**: Bururi, X.1948, F. François [RMCA]; 2 ♂, Urundi: Bururi, alt. 1950 à 2050 m, V.1948, 19.XII.1949, F. François [RINS]; 1 ♂, 1 ♀. **Congo belge**: P.N.A. vers. Mt. Kamatembe, 2300 m. 7 au 23.I.1935, G.F. de Witte, 1055 [RINS]; 1 ♂, **Uganda**, S.W. Ichuya Forest, Canaba Gap, 2500 m, 28.XII. 1995, I. Yarom & A. Freidberg [TAU].

Diagnosis. Rh. sexsetosum can be easily separated from other species having a row of 5—10 anterodorsal bristles on fore tibia and three pairs of strong dorsocentral bristles by bifurcated cercus. Surstylus has three distal lobes of various shape.

Remark. Rhaphium pectiniger, *Sympycnus munroi* Curran (23 ♂, 46 ♀), species of the genera *Sympycnus* (1 ♀), *Saccopheronta* (1 ♂, 1 ♀) and *Syntormon* (13 ♂♀) were also found among paratypes of *Xiphandrium sexsetosum* deposited in RINS.

Distribution. Congo (Kinshasa); Uganda, Burundi (!).

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