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Revision of the Afrotropical genus *Distega* KONOW, 1904 (Hymenoptera: Symphyta: Tenthredinidae: Blennocampinae)

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Abstract

The sawfly genus *Distega*, endemic to the Afrotropical Region, is revised. An illustrated identification key is presented, as well as distribution maps for all species. 37 species are recognised as valid, including 18 species here described as new to science: *D. abnormis* **sp. nov.**, *D. athiensis* **sp. nov.**, *D. bevisioides* **sp. nov.**, *D. brevicornis* **sp. nov.**, *D. chembaensis* **sp. nov.**, *D. costalis* **sp. nov.**, *D. ellisrasensis* **sp. nov.**, *D. kenyensis* **sp. nov.**, *D. limpopoensis* **sp. nov.**, *D. meridiana* **sp. nov.**, *D. minor* **sp. nov.**, *D. namibiensis* **sp. nov.**, *D. natalensis* **sp. nov.**, *D. nigra* **sp. nov.**, *D. nyalaensis* **sp. nov.**, *D. orientalis* **sp. nov.**, *D. pectoraloides* **sp. nov.** and *D. similis* **sp. nov.** The other 19 species are redescribed. New synonymies are [followed by valid species name in brackets]: *Distega coeruleomicans* PASTEELS, 1955 [*D. carbonaria* FORSIUS, 1928], *Xenapates affinis* FORSIUS, 1934 [*D. micans* (FORSIUS, 1934)], *Pachydistega thoracalis* PASTEELS, 1949 [*D. nigeriae* FORSIUS, 1927], *D. bequaerti* FORSIUS, 1928, *D. fumipennis* PASTEELS, 1949, *D. inaequalis* PASTEELS, 1953, *D. luteipes* PASTEELS, 1949, *Xenapates bequaerti* var. *maculata* FORSIUS, 1934, *D. occipitalis* PASTEELS, 1949, *D. pallidiventris* FORSIUS, 1927, *D. ugandana* FORSIUS, 1928, *Distegella velutina* PASTEELS, 1951 [*Distega nigriceps* (ENDERLEIN, 1920)]. Lectotypes are designated for: *Distega mocsaryi* ENSLIN, 1913, and *D. sjoestedti* KONOW, 1904. The larval host plants of only one species are known. These are diverse members of the orders Poales and Commelinales.

Introduction

The sawfly genus *Distega* is endemic to the Afrotropical Region. Hitherto, 25 valid species were listed by TAEGER et al. (2010). As a result of the present taxonomic revision 37 valid species are recognised: 19 species are re-described and 18 species are described as new for science. Thus, it is currently one of the most species-rich genera of Afrotropical Tenthredinidae.

The first *Distega* species, *D. sjoestedti* (type species) was described by KONOW (1904). It is rather surprising that no species was described before this, because two specimens of *D. sjoestedti* stood in the collection of the MFN under "*Tenthredo leucopus* Klug", and were listed in the collection catalogue under the same name. However, this is apparently an unpublished manuscript name. After the publication by KONOW (1904), a small number of species was described by ENSLIN (1911, 1913), ENDERLEIN (1920), and FORSIUS (1927a, b, 1928a, b, 1930). FORSIUS (1934) established the genus *Paradistega* with the type species *Distega bevisi* FORSIUS, 1930 and also included there *P. congonensis* FORSIUS, 1934, *P. nigeriae* (FORSIUS, 1927), *P. nigriceps* (ENDERLEIN, 1920), *P. mocsaryi* (ENSLIN, 1911), and *P. pectoralis* (FORSIUS, 1927). In the same article FORSIUS (1934) described *Xenapates micans* (now placed in *Distega*) and transferred *Distega bequaerti* FORSIUS, 1928 with the new var. *maculata* and *Distega pallidiventris* FORSIUS, 1927 to *Xenapates* W.F. KIRBY, 1882. This is a single example, among many, of the misinterpretation of the limits of *Distega* and *Xenapates*, and illustrates an important and still unresolved taxonomic problem involving many Afrotropical sawflies currently placed in the Blennocampinae and Allantinae (see KOCH & LISTON 2012a). The high point of taxonomic confusion in *Distega* was reached by PASTEELS (1949), with his erection of the genera *Codistega*, *Eudistega* and *Pachydistega*, followed by *Distegella* (PASTEELS 1951). However, PASTEELS (1955a) realized that the recognition of these genera was problematic, and synonymized them all with *Distega*.

During the past 20 years, comprehensive investigations on the sawflies of the Afrotropical Region led to the conclusion that *Distega* is urgently in need of a taxonomic revision. The revision by PASTEELS (1955a) was found to be of little use for identification, and comparison with type specimens was needed to achieve correct determination of other material examined. The current study is intended to improve this situation.

Material and methods

Specimens were studied using Leica® MZ12 and Wild® M8 binocular microscopes. The lancets and penis valves were examined with a Leitz® Laborlux S transmitted-light microscope. Illustrations of the serrulae and penis valves were photographed with a Leica Wild® MPS32 attached to the transmitted-light microscope. The outlines for the illustrations of the ventral parts of the male genital capsule were obtained using a Leo® 1450VP scanning electron microscope. Details of the genitalia were filled in by hand while constantly cross-checking specimens through the microscope. Habitus photos were mostly taken with a Leica® DFC295 camera attached to an Olympus® SZX12 microscope. Composite images with an extended depth of field were created using the software CombineZ5 (http://hadleyweb.pwp.blueyonder.co.uk).

Morphological terminology follows Viitasaari (2002).

Abbreviations used in the text

Material examined originated from the following institutions:

AMGS	Albany Museum, Grahamstown, South Africa.
BMNH	The Natural History Museum [formerly British Museum (Natural History)], London, UK.
CASC	California Academy of Sciences, San Francisco, USA.
HNHM	Hungarian Natural History Museum, Budapest, Hungary.
IITAC	International Institute of Tropical Agriculture, Cotonou, Benin.
MFN	Museum für Naturkunde Berlin, Germany.
MNHN	Muséum d'Histoire Naturelle, Paris, France.
MRAC	Musée Royal de l'Afrique Centrale, Tervuren, Belgium.
NHRS	Naturhistoriska Riksmuseet, Stockholm, Sweden.
NMKE	National Museum of Kenya, Nairobi, Kenya.
NMSA	Natal Museum, Pietermaritzburg, South Africa.
NNIC	Namibian National Insect Collection, Windhoek, Namibia.
OLML	Oberösterreichisches Landesmuseum, Linz, Austria.
PPRI	ARC-Plant Protection Research Institute, Pretoria, South Africa.
RBINS	Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium.
SAMC	Iziko South African Museum, Cape Town, South Africa.
SDEI	Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany.
SMNS	Stattliches Museum für Naturkunde, Stuttgart, Germany.
TMSA	Ditsong National Museumof Natural History (formerly Transvaal Museum), Pretoria, South Africa.
USNM	National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA.
UZMT	Zoological Museum, University of Turku, Finland.
ZMPA	Museum of the Institute of Zoology, Polish Academy of Science, Warszawa, Poland.
ZMUC	Zoological Museum, University of Copenhagen, Copenhagen, Denmark.
ZSM	Zoologische Staatssammlung München, Munich, Germany.

Other abbreviations:

HT	Holotype
LT	Lectotype
PLT	Paralectotype
PT	Paratype.

Results

Character states and species variability

Some species are highly variable in coloration and external morphology. In the key by PASTEELS (1955a) this was not taken into account, so that only a few species can be identified using that work, and many specimens will not key out. Intraspecific variability is especially great in *Distega nigriceps*, which is reflected in the synonymy of ten nominal species with this taxon. However, variability in the other species is usually also significant, so that in several cases it is not possible to reach a clear conclusion as to whether a single variable species is involved, or more than one species. This applies, for example, to *D. micans* (FORSIUS, 1934), *D. bevisi*, and *D. montium* KONOW, 1907.

Examination of the morphology of the genitalic structures does not always result in unequivocal identification of species. This applies particularly to the shape of the penis valve, which can assume a form atypical for the species depending on methods of preparation and conditions of preservation. This phenomenon occurs especially often in *D. nigriceps*: see remarks on that species. Here, the most reliable character for recognition of the male seems to be the shape of the parapenis, although this can be severely distorted in very old or poorly preserved specimens, and may require dissection. Frequent and severe distortion of the shape of the harpe make this character practically useless for taxonomic and identification purposes. A certain doubt may also arise as to the identity of some female specimens. This is particularly so in the species of the *D. bevisi* species group.

Variability also affects the shape of the anterior margin of clypeus, the lateral furrows of the post ocellar area (as in *D. limpopoensis* sp. n. and *D. mocsaryi* ENSLIN, 1913), as well as the shape of the medial interruption of the anterior cross-ridge of the frontal area. Intraspecific variability is discussed in the individidual species accounts. As a result of the unusually high degree of intraspecific variability found in this genus, use of the key presented below may not lead to correct identification of every specimen. Therefore, additional steps in the identification process, usually involving examination of the lancet or genitalia, must be undertaken in some cases.

Remarkable interspecific variability in the shape of the tarsal claws occurs in *Distega*, ranging from the typical shape with basal lobe and a smaller inner tooth as in *D. bevisi* (Fig. 2A), to a very small inner tooth in *D. formosa* (Pasteels, 1949) (Fig. 2D), and only with basal lobe without inner tooth in *D. congonensis* (Fig. 2C). In *D. clypealis* (Fig. 2B) the basal lobe is only notched, so that a very small inner tooth is visible. A further divergence from a generically typical character state is found in *D. nigriceps*, in which the form of the serrulae of the lancet (Fig. 30B) more resemble those of *D. clypealis*, than those of the other known *Distega* species. Apart from this, *D. nigriceps* does not however exhibit any other character states that are significantly atypical for the genus.

It must be mentioned that in *D. minor* sp. nov. and *D. paradoxalis* PASTEELS, 1954 – only the males of both species are known – the hind wing has only one medial cell (M). The penis valves of both species (Figs 23B, 33B) also differ from the general shape found in *Distega*, so that here, too, the possibility that they do not belong to *Distega* should be considered. Before well-grounded decisions can be made on the limits of *Distega*, it will be necessary to continue the currently incomplete revision of the Blennocampinae of the Afrotropical Region (KOCH 2001, KOCH & LISTON 2012a). The latter work recognised only the genera *Aethiocampa* PASTEELS, 1949, *Distega* KONOW, 1904, *Durbadnus* PASTEELS, 1954, *Tesslinia* PASTEELS, 1951, and *Trisodontophyes* ENSLIN, 1911 as valid. However, in addition to a morphological approach, future studies will benefit from molecular phylogenetic analysis, which should also include the Afrotropical tenthredinid genera traditionally placed in the Allantinae.

It was nearly impossible to clearly define species groups in *Distega*, and three of the four which we suggest are tentative, because they are based solely on broad similarities in colour and morphology, without supporting genetic data. Almost half of the species are left unplaced in groups. *Distega clypealis* and *D. congonensis* are exceptional, as discussed further under the genus description (see: Remarks). The *bevisi* and *mocsaryi* groups have a broadly similar colour pattern: pale pronotum and tegula, and abdomen usually partly pale. The *bevisi* group (eight species) is characterized by serrulae of a more or less typical shape: postcalcar broad, scarcely projecting, and connected to the usually pronounced cypsella by a long, nearly straight section (Figs 8B, 9B, 12B, 16B, 26B, 27B, 34C). All species occur within southern Africa, and are mostly difficult to separate, because of the high variability in coloration, and in some cases the structure of lancet, penis valve and parapenis. The *mocsaryi* group differs in that the postcalcar is narrow, clearly projecting, with one of the sides much longer than its width, and cypsella barely developed (Figs 20B, 24B, 28B). The three species are distributed respectively in South, East, and West Africa. More clearly recognisable are the *montium* and *sjoestedti* groups. The *montium* group have pronotum and tegula dark, and abdomen including dorsum mainly pale. One of the three species, *D. montium*, has a very wide distribution in the Afrotropical Region. The other two occur in Central and East Africa. The *sjoestedti* group have a predominantly orange/yellow thorax, and black abdomen with blue metallic lustre. Two species occur in southern Africa, and three in Central to East Africa.

Host plants

Data on the larval host plants and immature stages of *Distega* relate solely to *D. nigeriae* FORSIUS, 1927. This species is associated with diverse genera of Commelinaceae and Poaceae. See under *D. nigeriae* for details.

The species are placed in the following groups:

***bevisi* species group**
- *Distega bevisi* FORSIUS, 1930
- *Distega bevisioides* **sp. nov.**
- *Distega chembaensis* **sp. nov.**
- *Distega ellisrasensis* **sp. nov.**
- *Distega namibiensis* **sp. nov.**
- *Distega natalensis* **sp. nov.**
- *Distega nyalaensis* **sp. nov.**
- *Distega pectoralis* FORSIUS, 1927

***mocsaryi* species group**
- *Distega limpopoensis* **sp. nov.**
- *Distega mocsaryi* ENSLIN, 1913
- *Distega nigeriae* FORSIUS, 1927

***montium* species group**
- *Distega abdominalis* FORSIUS, 1931
- *Distega montium* KONOW, 1907
- *Distega similis* **sp. nov.**

***sjoestedti* species group**
- *Distega kenyensis* **sp. nov.**
- *Distega meridiana* **sp. nov.**
- *Distega orientalis* **sp. nov.**
- *Distega sjoestedti* KONOW, 1904
- *Distega schoutedeni* PASTEELS, 1954

species not assigned to a species group
- *Distega abnormis* **sp. nov.**
- *Distega abyssinica* PASTEELS, 1955
- *Distega athiensis* **sp. nov.**
- *Distega basilewskyi* PASTEELS, 1955
- *Distega brevicornis* **sp. nov.**
- *Distega carbonaria* FORSIUS, 1928
- *Distega clypealis* PASTEELS, 1955
- *Distega congonensis* (FORSIUS, 1934)
- *Distega costalis* **sp. nov.**
- *Distega formosa* (PASTEELS, 1949)
- *Distega humeralis* PASTEELS, 1955
- *Distega micans* (FORSIUS, 1934)
- *Distega minor* **sp. nov.**
- *Distega nigra* **sp. nov.**
- *Distega nigriceps* (ENDERLEIN, 1920)
- *Distega paradoxalis* PASTEELS, 1954
- *Distega pectoraloides* **sp. nov.**
- *Distega rectiserra* (PASTEELS, 1949)

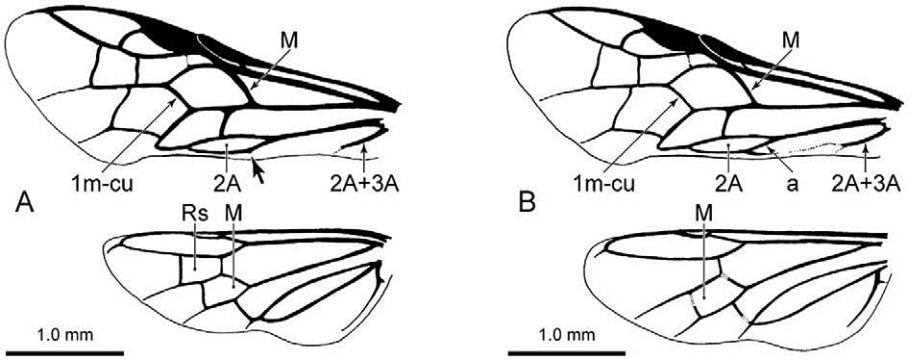


Fig. 1: *Distega* sp.: **(A)** Fore and hind wing, schematised; **(B)** (above) *D. bevisi*: fore wing, vein 2A+3A often more completely indicated than in other species; (below) *D. minor*: hind wing.

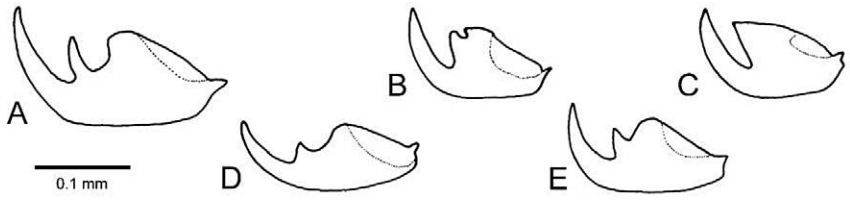


Fig. 2: Tarsal claws: **(A)** *Distega bevisi*; **(B)** *D. clypealis*; **(C)** *D. congonensis*; **(D)** *D. formosa*; **(E)** *D. nigriceps*.

Genus *Distega* KONOW, 1904

Distega KONOW, 1904: 244. Type species: *Distega sjoestedti* KONOW, 1904, by monotypy.
http://www.waspweb.org/Tenthredinoidea/Tenthredinidae/Blennocampinae/Distega/index.htm

Paradistega FORSIUS, 1934: 394, 396. Type species: *Distega bevisi* FORSIUS, 1930, by original designation.

Codistega PASTEELS, 1949: 19, 23. Type species: *Paradistega congonensis* FORSIUS, 1934 [=*Distega congonensis* (FORSIUS, 1934)], by original designation.

Eudistega PASTEELS, 1949: 19, 24. Type species: *Eudistega formosus* PASTEELS, 1949 [=*Distega formosa* (Pasteels, 1949)], by original designation.

Pachydistega PASTEELS, 1949: 19, 20. Type species: *Distega mocsaryi* ENSLIN, 1913, by original designation.

Distegella PASTEELS, 1951: 197, 198. Type species: *Distegella velutina* PASTEELS, 1951 [=*Distega velutina* (PASTEELS, 1951)], by original designation.

Description

Antenna with 8-9 antennomeres; flagellum medially slightly widened, to subclavate (Figs 47, 48). Head without especially conspicuous structures; anterior margin of clypeus truncate (Fig. 49) or emarginate (Fig. 50); malar space absent (Figs 49, 50). Upper and lower halves of mesepisternum separated by continuous transverse suture (Fig. 51). Tarsal claws with a basal lobe and usually a smaller inner tooth (Fig. 2). Fore wing (Fig. 1): anal cell present only distally (cell 2A), petiolate (vein 1A), with 2nd and 3rd anal vein (2A+3A) almost completely obliterated, only a stub present (Fig. 1A), or incompletely outlined (Fig. 1B). Hind wing (Fig. 1) with closed radial cell (R1), with anal cell (A), and one or two middle cells (Rs and M; Rs sometimes missing) (Fig. 1A, B). Tergum 1 with a rather wide and deep median split (Figs 54, 64).

The body coloration is all black, or black with yellowish/orange markings, or yellowish with black markings. Body length ranges from 5.0 to 12.3 mm.

A typical character for this genus, the continuous transverse suture on the mesepisternum (Fig. 51), is not always distinctly visible, especially when the mesopleuron is entirely black or entirely yellow. Although a continuous transverse suture is present in *D. clypealis* PASTEELS, 1955 and *D. congonensis*, these differ from the other *Distega* species in their clearly rounded medial excision of the clypeus (Fig. 50). Additionally, the shape of the serrulae of the lancet (Figs 13B, 14B) and the shape of the penis valve (Figs 13D, 14D) of *D. clypealis* and *D. congonensis* is very different from the generally typical shape in the remaining *Distega* species (eg. Figs 8B, 22B, 28B [serrulae]; 11D, 16D, 25D [penis valve]). Finally, unlike all other species, the inner tooth of the tarsal claw is missing in *D. congonensis* (Fig 2C). The name *Codistega* is available for *D. congonensis* and *D. clypealis*, should it become necessary to place them in a separate genus. Despite these morphological peculiarities, both species are provisionally retained in *Distega* following PASTEELS (1951a), because no phylogenetic study of *Distega* and possibly related taxa has been made.

Remarks: The keys and illustrations in KOCH & LISTON (2012a), and KOCH et al. (2015a) can be used to separate *Distega* from other genera of Afrotropical Blennocampinae and Allantinae.

Key to adults

Some species are keyed more than once, to allow for variability.

1 Anterior margin of clypeus shallowly or deeply circularly excised, and lateral corners conspicuously rounded (Fig. 50); tarsal claws with enlarged basal lobe and without inner tooth (Figs 2B, C) 2

1* Anterior margin of clypeus truncate (Fig. 49) to subtruncate (very slightly emarginate) or slightly elongate medially, lateral corners obtusely angulate or slightly rounded; tarsal claws with small basal lobe, and inner tooth of various sizes (Figs 2A, D, E) 3

2 Anterior margin of clypeus deeply circularly excised; basal lobe of tarsal claws slightly notched (Fig. 2B); basal half of mandible yellow; in males mesepisternum entirely yellow .... ***D. clypealis*** PASTEELS, 1955

2* Anterior margin of clypeus shallowly excised; basal lobe of tarsal claws not notched (Fig. 2C); basal half of mandible black; in males mesepisternum partly black ..... ***D. congonensis*** (FORSIUS, 1934)

3 Hind wing only with cell M present (Fig. 1B) 4

3* Hind wing with cells Rs and M both present (Fig. 1A) 5

4 Antenna with 7 flagellomeres; thorax entirely black; dorsal surface of abdomen black, sterna yellow (Figs 130, 131) ..... ***D. paradoxalis*** PASTEELS, 1954

4* Antenna with 6 flagellomeres; thorax black with yellow pronotum and tegula; abdomen entirely black (Figs 104, 105) ..... ***D. minor*** **sp. nov.**

5 Antenna with 6 flagellomeres 6

5* Antenna with 7 flagellomeres 7

6 Abdomen predominantly yellow (Figs 62, 63) ..... ***D. basilewskyi*** PASTEELS, 1955

6* Abdomen entirely black (Figs 70, 71) ..... ***D. brevicornis*** **sp. nov.**

7 Body entirely black, abdomen with blue metallic luster; antenna 1.4× as long as maximum head width ..... ***D. sjoestedti*** KONOW, 1904

7* Head and thorax entirely black or at least pronotum and tegulae yellow or yellow-orange; abdomen predominantly yellow, or black: if black with blue metallic luster, then antenna very long (about 2.2-2.3× as long as maximum head width) 8

8 ♂♂ 9

8* ♀♀ 28

9 Body entirely black 10

9* Body more or less bicoloured, yellow and black 14

10 Antenna filiform, at least 1.5× as long as head maximum width 11

10* Antenna stocky, conspicuously shorter than 1.5× as long as head maximum width 13

11 Legs entirely or predominantly black (Fig. 59) ..... ***D. abyssinica*** PASTEELS, 1955

11* Legs predominantly yellow (Figs 103, 125) 12

12 Antenna at least more than 1.7× as long as head maximum width; frontal area with large shallow groove, anterior cross-ridge of frontal area not furrowed medially ..... ***D. nigriceps*** (ENDERLEIN, 1920)

12* Antenna shorter, 1.5-1.6× as long as maximum head width; anterior cross-ridge of frontal area medially deeply furrowed ..... ***D. micans*** (FORSIUS, 1934)

13 Fore wing with white costa (Fig. 82); fore and mid femur with black basal half; antenna very short, 0.9× as long as maximum head width, flagellomere 4 conspicuously broader than long ..... ***D. costalis*** **sp. nov.**

13* Fore wing with black costa; fore and mid femur nearly entirely yellow, antenna 1.1-1.3× as long as maximum head width, flagellomere 4 conspicuously longer than broader ..... ***D. carbonaria*** FORSIUS, 1928

14 Antenna filiform, at least 1.5× as long as head maximum width 15

14* Antenna stocky, conspicuously shorter than 1.5× head maximum width 16

15 Antenna about 2× as long as head maximum width; anterior margin of clypeus shallowly excised, anterior cross-ridge of frontal area not interrupted ..... ***D. nigriceps*** (ENDERLEIN, 1920)

15* Antenna 1.5-1.6× as long as maximum head width; anterior margin of clypeus truncate or subtruncate; anterior cross-ridge of frontal area medially interrupted ..... ***D. micans*** (FORSIUS, 1934)

16 Thorax black, abdomen more or less yellow 17

16* Thorax and abdomen more or less yellow, or abdomen entirely black, sometimes with very narrow pale posterior margins of terga and sterna 18

17 Tibiae entirely yellow (Fig. 53); penis valve valviceps with almost circular profile (Fig. 3B) ..... ***D. abdominalis*** FORSIUS, 1931

17* Tibiae very narrowly dark-ringed apically; anterior dorsal part of valviceps with angled lobe (Fig. 25D) ..... ***D. montium*** KONOW, 1907

18 Abdomen entirely or nearly entirely black 19
18* Abdomen extensively yellow coloured 20

19 Hind femur yellow; hind tibia yellow with narrowly black apex (Fig. 121) ..... ***D. nigra* sp. nov.**
19* Hind femur entirely black; hind tibia yellow with black apical half (Fig. 127) ..... ***D. nyalaensis* sp. nov.**

20 Sternum 9 yellow, sometimes with a blackish posterior margin, when more blackish, then hind tibia with black apical half 21
20* Sternum 9 black; hind tibia mostly black-ringed, when with black apical half, then dorsal surface of abdomen nearly entirely black 25

21 Abdomen entirely yellow 22
21* Abdomen more or less black marked 23

22 Hind tibia broadly black-ringed apically; postocellar area with faintly indicated medial furrow; posterior valviceps apex acute (Fig 28D) ..... ***D. nigeriae*** FORSIUS, 1927
22* Hind tibia narrowly black-ringed apically; postocellar area without medial furrow; posterior valviceps apex rounded (Fig 35D) ..... ***D. pectoraloides* sp. nov.**

23 Hind femora predominantly yellow (Fig. 109) ..... ***D. mocsaryi*** ENSLIN, 1913
23* Hind femora nearly entirely black, or completely yellow 24

24 Lateral furrows of postocellar area conspicuously convex and parallel or very slightly diverging towards posterior margin of head ..... ***D. namibiensis* sp. nov.**
24* Lateral furrows of postocellar area straight and conspicuously diverging towards posterior margin of head ..... ***D. chembaensis* sp. nov.**

25 Distal ca. half of hind tibia black (Figs 67, 115) 26
25* Hind tibia only with apical ca. fifth black (Figs 87, 97) 27

26 Anterior ventral part of valviceps evenly rounded (Fig. 26D) ..... ***D. namibiensis* sp. nov.**
26* Anterior ventral part of valviceps more angular, almost lobed (Fig. 8D) ..... ***D. bevisi*** FORSIUS, 1930

27 Hind coxa, hind trochanter and hind femur predominantly black (Fig. 97); antenna as long as head maximum width ..... ***D. limpopoensis* sp. nov.**
27* Hind coxa on apical half, hind trochanter and base of hind femur yellow (Fig. 87), antenna 1.2× long as head maximum width ..... ***D. ellisrasensis* sp. nov.**

28 Body entirely black, or sometimes abdomen dark brown 29
28* Body more or less bicoloured, yellow and black 31

29 Femora and tibiae entirely yellow (Fig. 101) ..... ***D. micans*** (FORSIUS, 1934)
29* At least base of fore and mid femur blackish, apex of hind tibia very narrowly black-ringed (Figs 57, 73) 30

30 Fore and mid femur predominantly, hind femur entirely yellow (Fig. 73); hind tibia very narrowly black-ringed at apex; antenna 1.3-1.4× as long as maximum head width ..... ***D. carbonaria*** FORSIUS, 1928
30* Femora extensively blackish (Figs 56, 57); hind tibia broadly black-ringed at apex; antenna 1.5-1.6× as long as maximum head width ..... ***D. abyssinica*** PASTEELS, 1955

31 Antenna filiform, at least 1.5× as long as head maximum width, middle flagellomeres not strongly thickened (Fig. 47) 32

31* Antenna stocky, not more than 1.5× as long as head maximum width or conspicuously shorter, middle flagellomeres more or less clearly thickened (Fig. 48) 33

32 Frontal area with large shallow groove, anterior cross-ridge not interrupted; serrulae with numerous denticles (Fig. 30B) ..... ***D. nigriceps*** (ENDERLEIN, 1920)

32* Frontal area without large groove, however with distinct lateral grooves, anterior cross-ridge conspicuously interrupted; serrulae as without denticles (Fig. 22B) ..... ***D. micans*** (FORSIUS, 1934)

33 Entire thorax black except for metanotum (Figs 110, 140) 34

33* Pronotum yellow (Figs 90, 91), remaining parts of thorax more or less yellow coloured or entirely black 35

34 Serrula distal of postcalcar strongly sloping (Fig. 25B) ..... ***D. montium*** KONOW, 1907

34* Serrula distal of postcalcar straight (Fig. 38B) ..... ***D. similis*** **sp. nov.**

35 Abdomen entirely black, sometimes with blue metallic lustre 36

35* Abdomen more or less yellow 41

36 Thorax only with pronotum, tegula and mesoscutellum yellow (Fig. 90).... ***D. humeralis*** PASTEELS, 1955

36* Dorsal surface of thorax entirely or nearly entirely yellow-orange 37

37 Mesopleuron entirely black (Fig. 129); metascutellum pale (Fig. 128) ..... ***D. orientalis*** **sp. nov.**

37* At least mesepisternum above the transverse suture yellow-orange (Figs 139, 143); metascutellum black (Figs 138, 142) 38

38 Median lobe of mesoscutum mostly with two black medial spots on anterior margin (Fig. 138) 39

38* Mesoscutum entirely yellow-orange (Fig. 92) 40

39 Hind tibia entirely yellow (Fig. 139); valvula 3 in lateral view pointed apically (Fig. 37A); postcalcar of serrulae scarcely projecting (Fig. 37B) ..... ***D. schoutedeni*** PASTEELS, 1954

39* Hind tibia at least narrowly black-ringed apically (Fig. 99); hind leg usually extensively blackish; valvula 3 in lateral view broadly pointed dorso-apically (Fig. 21A); postcalcar of serrulae strongly projecting (Fig. 21B) ..... ***D. meridiana*** **sp. nov.**

40 Propleuron with sharply delineated yellow posterior margin (Fig. 93); head behind eyes parallel; valvula 3 laterally pointed apically (Fig. 19A); postcalcar of serrulae more symmetrical, project strongly (Fig. 19B) ..... ***D. kenyensis*** **sp.nov.**

40* Propleuron black or with blurred light brown marking (Fig. 143); head slightly narrowed behind eyes; valvula 3 narrowly rounded apically (Fig. 39A); postcalcar of serrulae less symmetrical, project weakly (Fig. 39B) ..... ***D. sjoestedti*** KONOW, 1904

41 Thorax dorsally entirely yellow, or only metanotum blackish spotted 42

41* Thorax dorsally more or less black 45

42 Thorax dorsally entirely yellow 43

42* Only metanotum blackish spotted 44

43 Abdomen entirely yellow (Fig. 118) ..... ***D. nigeriae*** FORSIUS, 1927

43* Basal and distal terga more or less black marked (Fig. 132) ..... ***D. pectoralis*** FORSIUS, 1927

44 Only tergum 1 marked brown medially, following terga completely yellow (Fig. 74) ..... ***D. chembaensis*** **sp. nov.**

44* Tergum 1 and following terga marked brown medially (Fig. 112) ..... ***D. namibiensis* sp. nov.**

45 Dorsal surface of abdomen extensively black coloured (Figs 64, 68) 46
45* Dorsal surface of abdomen predominantly yellow (Figs 116, 118) 47

46 Postcalcar of serrulae less obtuse, cypsella gently recurved (Fig. 8B) ..... ***D. bevisi*** FORSIUS, 1930
46* Postcalcar of serrulae more obtuse, cypsella abruptly recurved (Fig. 9B) ..... ***D. bevisioides* sp. nov.**

47 Mesonotum entirely black (Fig. 116) ..... ***D. natalensis* sp. nov.**
47* Mesonotum more or less yellow (Figs 118, 134, 136) 48

48 Abdomen entirely yellow, very rarely with two small medial spots on tergum 1..... 49
48* Black coloration of abdomen more extensive 51

49 Mesonotum with only a blackish spot of variable size on each lateral mesoscutal lobe (Fig. 118) .....
..... ***D. nigeriae*** FORSIUS, 1927
49* Black coloration on mesonotum more extensive 50

50 Lateral lobe of mesoscutum with black posterior half (Fig. 136); postcalcar of serrulae upright, strongly tapering (Fig. 36B) ..... ***D. rectiserra*** (PASTEELS, 1949)
50* Lateral lobe of mesoscutum entirely black (Fig. 134); postcalcar of serrulae slanting, weakly tapering (Fig. 35B) ..... ***D. pectoraloides* sp. nov.**

51 As well as tergum 1, terga 2-7 with very small median spots, connected to form a very thin median line
..... ***D. formosa*** (PASTEELS, 1949)
51* Black spots on terga of different size 52

52 Mesopleuron entirely black, except for the yellow anepimeron (Fig. 95) 53
52* Mesepisternum above the transverse suture yellow (Fig. 51) 54

53 Antenna as long as maximum head width, flagellomere 4 conspicuously shorter than wide; postcalcar of serrulae subtriangular, cypsella scarcely developed (Fig. 20B) ..... ***D. limpopoensis* sp. nov.**
53* Antenna 1.3× as long as maximum head width, flagellomere 4 conspicuously longer than wide; postcalcar of serrulae rounded, cypsella strongly developed (Fig. 8B) ..... ***D. bevisi*** FORSIUS, 1930

54 Sterna black, sometimes with narrow yellow posterior margin (Fig. 61) ..... ***D. athiensis* sp. nov.**
54* Sterna entirely yellow (Figs 55, 85) 55

55 Basal part of sawsheath (valvifer 2) black (Fig. 55) ..... ***D. abnormis* sp. nov.**
55* Basal part of sawsheath (valvifer 2) yellow (Fig. 85) 56

56 Tergum 1 with two small blackish medial spots, terga 3-5(6) with obscure small brown medial markings, becoming conspicuously narrower towards apex of abdomen (Fig. 84) .....
..... ***D. ellisrasensis* sp. nov.**
56* Tergum 1with two large blackish medial spots or almost entirely black, terga 2-7/8 with nearly equally wide medial markings (Fig. 64)..... 57

57 Mesoscutum predominantly black, only narrow antero-lateral spots of median lobe of mesoscutum yellow (Fig. 106); flagellomeres 5 and 6 slightly broader than long; postcalcar of serrulae more acute, cypsella not developed (Fig. 24B) ..... ***D. mocsaryi*** ENSLIN, 1913
57* Mesoscutum more extensively yellow, sometimes only medial lobe of with large black antero-medial spot; flagellomeres 5 and 6 slightly longer than wide; postcalcar of serrulae more obtuse, cypsella clearly developed (Fig. 8B) ..... ***D. bevisi*** FORSIUS, 1930

Distega abdominalis FORSIUS, 1931

Distega abdominalis FORSIUS, 1931: 26-27. Described: Male. Type locality: Uganda, Mount Kokanjero, south west of Elgon, 6400 ft.

Male (Figs 52, 53)

Head and thorax black. Legs yellow with following blackish: coxae, trochanters and distal tarsomeres. Wings slightly infuscate; intercostal area somewhat darker, stigma, costa, subcostaand rest of venation blackish. Abdomen yellow; tergum 1, 2 with vary narrow blackish anterior margin, sternum 9 blackish.

Head narrowed behind eyes. Antenna 1.2× as long as maximum head width; distal flagellomeres slightly longer than wide. Eyes converging below. Anterior margin of clypeus subtruncate to very slightly emarginate; malar space linear. Postocellar area: width : length = 1.0 : 0.7 (HT) - 0.5; lateral furrows slightly convex and parallel-sided (HT) or slightly diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge of conspicuously interrupted medially.

Vertex smooth and shiny, gena moderately densely micropunctate and sub-shiny; pubescence brownish. Mesoscutum scarcely punctate, shiny; pubescence similar to that on head. Abdomen smooth and shiny. Genitalia: Fig. 3.

Length: 5.5-5.8 mm.

Female: Unknown.

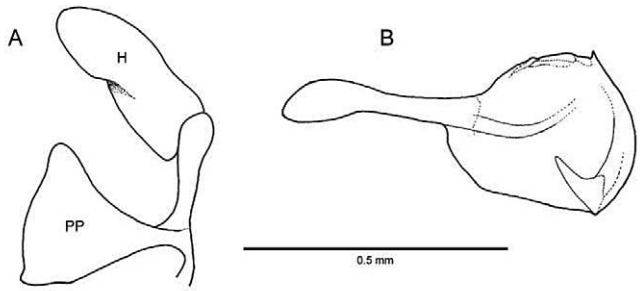


Fig. 3: *Distega abdominalis*: **(A)** Parapenis (PP) and harpe (H) (right, ventral aspect); **(B)** Penis valve (left, lateral aspect).

Type material examined.

Holotype: ♂. Labels: "Type" (red-edged circle); "B. M. Type, Hym. 1.346"; "Uganda Prot[ectorate]. Mt. Kokanjero, S. W. of Elgon, 6.400 ft."; "Aug[ust]. 7-9, 1911, S. A. Neave"; "1912-193"; "*Distega abdominalis* n. sp. ♂, Holotype, R. Forsius det."; "Holotypus, *Distega abdominalis* Forsius, teste: F. Koch, 2015" (red); "*Distega abdominalis* Forsius ♂, det.: F. Koch 2015" (BMNH).

Other material examined. Democratic Republic of the Congo: 3 specimens (MFN, MRAC); **Uganda:** 1 specimen (SAMC).

Distribution: Democratic Republic of the Congo, Uganda (Fig. 46).

Remarks.

The similarly coloured *D. montium* differs in the narrowly blackish-ringed apex of tibiae and in the shape of penis valve (Fig. 25D).

Variability is visible in the coloration, especially of the blackish apex of the abdomen, but terga 7/8 are usually blackish. Furthermore, the ratio of width : length of the postocellar area, and the shape of the lateral furrows vary.

Distega abnormis sp. n.

Female (Figs 54, 55)

Head black. Thorax black with following yellow: dorsal margin of propleuron, pronotum, lateral margin of median and lateral lobe of mesoscutum, mesoscutellum and mesoscutellar appendage, tegula, postspiracular sclerite, mesepisternum above the transverse suture and anepimeron. Legs black with following yellow: hind trochanter, broad apex of fore femur, narrow apices of mid and hind femur, fore and mid tibia, hind tibia except for black apical third, fore tarsus and more or less basal tarsomeres of mid tarsus. Wings indistinctly bicoloured: basal half subhyaline and apical half slightly infuscate; intercostal area infuscate, stigma black, costa black with dirty whitish basal half, subcosta and rest of venation blackish. Abdomen yellow; terga 1-7 broadly black medially; valvifer 2 and valvula 3 black.

Head parallel-sided behind eyes. Antenna 1.1× as long as maximum head width; flagellomeres 5-7 about as long as wide. Eyes converging below. Anterior margin of clypeus truncate; malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows conspicuously convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge conspicuously interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence white. Abdomen smooth and shiny. Valvula 3 in lateral view rounded apically (Fig. 4A). Lancet with about 20 serrulae (Fig. 4B).

Length: 9.3 mm.

Male: Unknown.

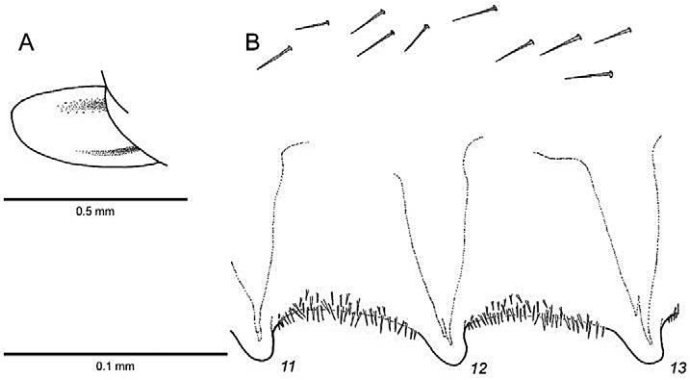


Fig. 4: *Distega abnormis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13.

Type material.

Holotype: ♀. Labels: "Zimbabwe, Bulawayo airport, 20°00'S/28°38'E, 21.I.1995, W.J. Pulawski cllctr. [collector]"; "Holotypus, *Distega abnormis* sp. n. ♀, det.: F. Koch, 2016" (red) (CASC).

Distribution: Zimbabwe (Fig. 43).

Remarks.

On superficial examination this species is similarly coloured to species such as *D. mocsaryi* or *D. bevisi*, but *D. abnormis* is distinguished by its uniquely shaped serrulae.

Etymology.

The name, an adjective, refers to the uniquely shaped serrulae, which are curved back towards the base of the lancet, in contrast to all other species of this genus.

Distega abyssinica PASTEELS, 1955

Distega abyssinica PASTEELS, 1955a: 408-409. Described: Male. Type locality: Ethiopia, Addis-Ababa [Adis-Abeba], 8000 ft.

Female (Figs 56, 57)

Head, including antenna, and thorax black. Legs blackish except for: ventral surface of hind coxa, hind trochanter and base of hind femur white; anterior surface of fore tibia, mid tibia except for its narrow apex, base of hind tibia and bases of all basitarsomeres pale. Wings conspicuously infuscate; intercostal area somewhat darker, stigma and venation black. Abdomen black; tergum 1 with two large pale lateral spots.

Head parallel-sided behind eyes. Antenna 1.5-1.6× as long as head maximum width; distal flagellomeres conspicuously longer than wide. Eyes slightly converging below. Anterior margin of clypeus subtruncate to very slightly elongated medially; malar space very narrowly developed. Postocellar area: width : length = 1.0 : 0.7; lateral furrows slightly convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge scarcely interrupted medially, lateral furrows slightly convex. Interantennal area with a large groove.

Vertex, frons and supraclypeal area smooth and shiny; posterior half of gena, and paraantennal area micropunctate, shiny; pubescence black. Mesoscutum scattered micropunctate, shiny; pubescence brownish to black. Abdomen smooth and shiny. Valvula 3 in dorsal view narrow, in lateral view pointed apically (Fig. 5A). Lancet with about 23 serrulae (Fig. 5B).

Length: 7.8–8.7 mm.

Male (Figs 58, 59)
Body entirely black, with slight blue metallic lustre. Antenna very long (Pasteels 1955a, 407: fig. 61): 2.2-2.3× as long as head maximum width. Other characters as for female. Genitalia: Figs 5C, D.

Length: 6.6-7.2 mm.

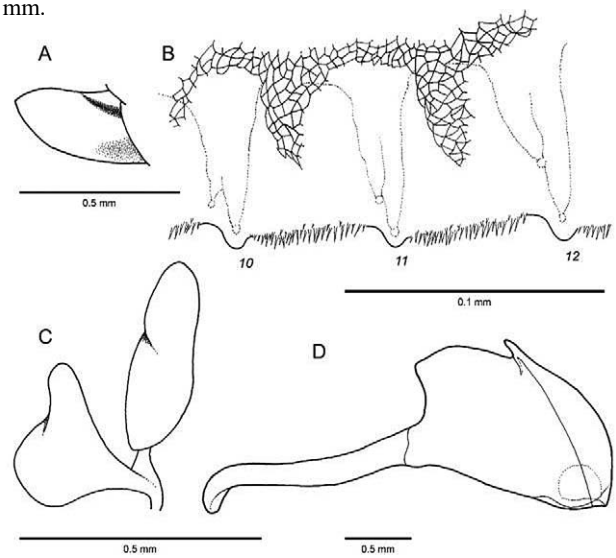


Fig. 5: *Distega abyssinica*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 10-12; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material examined.
Holotype: ♂. Labels: "Type" (red circle); "Ethiopia: Addis Ababa, 8000 ft, 28.VII.–15.VIII.[19]45, K. M. Guichard. B. M. 1945-39."; "Type" (red); "B. M. Type, Hym., 1-787"; "*Distega abyssinica* n. sp., J. Pasteels det., 1954."; "Holotypus, *Distega abyssinica* Pasteels ♂, teste: F. Koch 2014" (red); "*Distega abyssinica* Pasteels ♂, det.: F. Koch 2014" (BMNH).
Other material examined. Ethiopia: 12 specimens (MFN, RBINS, USNM).

Distribution: Ethiopia (Fig. 46).

Remarks.
Distega abyssinica is the only known *Distega* species with a nearly entirely black body in combination with long antennae, especially in males.

Variability of females is apparent in the coloration of legs, which may be nearly entirely black or bicoloured (see description); sometimes also tergum 2 and base of tergum 3 brightened. The females differ from males in the ratio length of antenna to maximum width of head and mostly in the coloration of legs, which are sometimes partly pale in females and entirely black in males.

The previously unknown female of *Distega abyssinica* was found and described during ecological investigations in Ethiopia (KOCH et al. 2015b).

Distega athiensis sp. n.

Female (Figs 60, 61)
Head black; clypeus and interantennal area yellowish. Thorax black with following yellow: pronotum, two lateral spots of median lobe of mesoscutum adjacent to pronotum, a broad lengthwise median stripe on mesoscutellum, tegula and dorsal half of mesepisternum. Legs yellow with following black: coxae except for apical margin of hind coxa, fore and mid trochanter, basal half of fore and mid trochanter, ventral surface of hind femur, apex of hind tibia and hind tarsus. Wings subhyaline; intercostal area infuscate, stigma black, costa whitish with broad black apex adjacent to stigma, subcosta and rest of venation black. Abdomen black; terga broadly yellow laterally, terga 8-10 entirely yellow, sterna sometimes with narrow pale posterior margin.

Head parallel-sided behind eyes. Antenna as long as maximum head width, flagellomeres 4-7 conspicuously broader than long. Eyes slightly converging below. Anterior margin of clypeus slightly emarginate with an obtusely angulate mid tooth; malar space absent. Postocellar area: width : length = 1.0 : 0.7;

lateral furrows convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge not interrupted medially.

Vertex, gena and mesoscutum smooth; pubescence white. Abdomen smooth and shiny. Valvula 3 in lateral view dorsally pointed apically (Fig. 6A). Lancet with about 24-25 serrulae (Fig. 6B).

Length: 7.5-8.5 mm.

Male: Unknown.

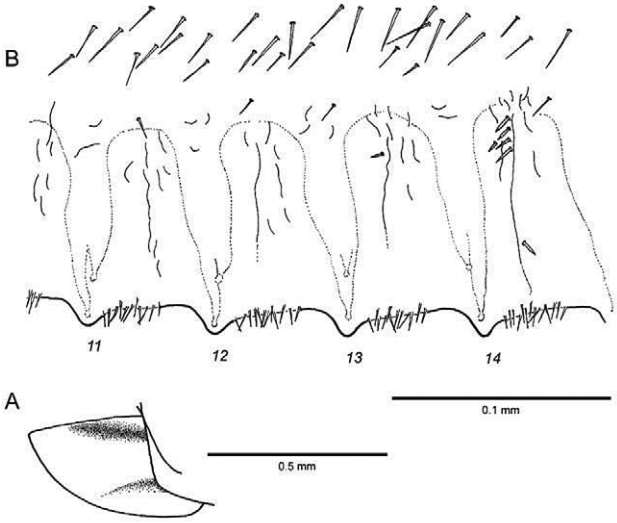


Fig. 6: *Distega athiensis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-14.

Type material.

Holotype: ♀. Labels: "Kenya, Eastern Prov[ince], At Athi River, Malaise trap, 22.-29.XI.1999, 2°38.51'S, 38°21.98'E, R. Copeland"; "*Distega athiensis* sp. n. ♀, det.: F. Koch, 2016" (red) (USNM).

Paratypes: 2 ♀♀: same data as holotype, except: 8.-15.XI.1999 (1 ♀) (MFN); Kenya, Nutter's Farm, near Athi River (Tsavo), 2°38.51'S, 38°21.98'E, Malaise trap, 18.III.[19]99, R. Copeland (USNM).

Distribution: Kenya (Fig. 45).

Remarks:

The black sterna in combination with the broad yellow lateral stripes of abdomen, and the obtusely angled mid tooth of the yellow clypeus separate this species well from all other *Distega* species.

Variability is visible especially in the extent of yellow on the interantennal area, which is completely black in one of the paratypes. Also, in this paratype the hind femur is entirely yellow.

Etymology.

The species name, an adjective, refers to the type locality, Athi River, a town in southern Kenya.

Distega basilewskyi PASTEELS, 1955

Distega basilewskyi PASTEELS, 1955b: 372-373. Described: Female. Type locality: Ruanda: Gitarama 1850 m. Terr. Nyanza.

Female (Figs 62, 63)

Head black. Thorax black with following yellow: dorsal margin of propleuron, pronotum, two lateral spots on median lobe of mesoscutum adjacent to pronotum and a large median spot on posterior margin adjacent to lateral lobe of mesoscutum, mesoscutellum and mesoscutellar appendage, tegula, postspiracular sclerite, anterior half of mesepisternum above the transverse suture, and anepimeron. Legs black with following yellow: apical half of hind coxa, hind trochanter, anterior surface of hind femur, anterior surface of fore and mid tibia, more or less fore tarsus. Wings infuscate; intercostal area somewhat darker, stigma, costa, subcosta and rest of venation black. Abdomen yellow; anterior margin of tergum 1 broadly and tergum 2 medially black; valvula 3 black.

Head parallel-sided behind eyes. Antenna with 6 flagellomeres, 1.1× as long as head maximum width; flagellomeres 5-6 about as long as wide. Eyes converging below. Anterior margin of clypeus truncate; malar space absent. Postocellar area: width : length = 1.0 : 0.6; lateral furrows nearly straight and diverging

towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge scarcely developed, not interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view broadly pointed dorso-apically (Fig. 7A). Lancet with about 22 serrulae (Fig. 7B).

Length: 7.0 mm.

Male: Unknown.

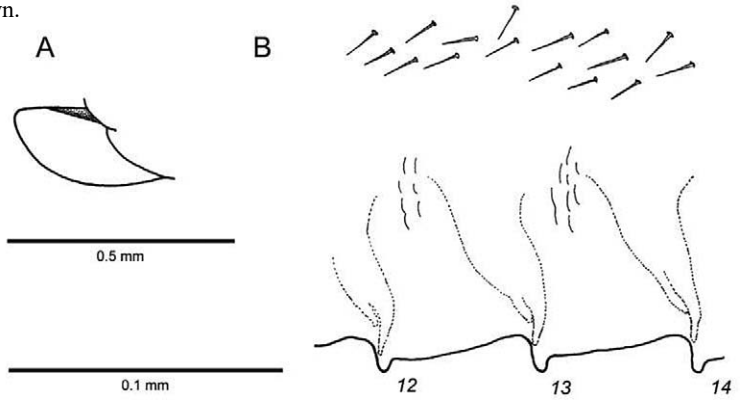


Fig. 7: *Distega basilewskyi*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14.

Type material examined.

Holotype: ♀. Labels: "Holotypus" (red); "Coll. Mus. Congo, Ruanda: Gitarama, 1850 m, terr. Nyanza, I-1953"; "Holotype (red)"; "R. Det. J., 6581"; "*Distega Basilewskyi* n. sp., J. Pasteels det., 1954"; "RMCA ENT, 000017526"; "Holotypus, *Distega basilewskyi* Pasteels ♀, teste: F. Koch, 2015" (red); "*Distega basilewskyi* Pasteels ♀, det.: F. Koch, 2015". (MRAC).

Distribution: Rwanda (Fig. 46).

Remarks.

The six antennal flagellomeres in combination with the body coloration separate *D. basilewskyi* clearly from all other *Distega* species.

Distega bevisi FORSIUS, 1930

Distega bevisi FORSIUS, 1930: 71-73. Described: Female. Type locality: Widenham, Natal [KwaZulu-Natal, South Africa].

Female (Figs 64, 65)

Head black. Thorax black with following yellow: pronotum, mesoscutellum, tegula and postspiracular sclerite. Legs black with following yellow: narrow apical margin of hind coxa, dorsal surface of hind trochanter, dorsal surface of fore and mid femur, narrow apex of hind femur, fore and mid tibia, basal half of hind tibia, more or less fore tarsus, basal half of mid basitarsomere. Wings slightly bicoloured with slightly infuscate basal half and more infuscate apical half; intercostal area fuscous; stigma, costa, subcosta and rest of venation black. Abdomen yellow; terga 1-8 broadly black coloured; Valvula 3 black, valvifer 2 yellow.

Head parallel-sided behind eyes. Antenna 1.3× as long as maximum head width; flagellomeres 5-7 slightly longer than wide. Eyes converging below. Anterior margin of clypeus subtruncate, very slightly elongated medially; malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows slightly convex and diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge scarcely interrupted medially.

Vertex smooth and shiny; gena scattered micropunctate, shiny; pubescence whitish. Mesoscutum nearly impunctate, shiny; pubescence similar to that on head. Abdomen smooth and shiny. Valvula 3 in lateral view obtusely pointed apically (Fig. 8A). Lancet covered with long sensilla (Fig. 8B), with about 21 serrulae, serrulae 12/13 narrowly rounded apically (Fig. 8B).

Length: 10.0-11.0 mm.

Male (Figs 66, 67)

Coloration similar to that of female, except for entirely black mesonotum, metanotum and mesopleuron. Terga 1-8 broadly black, only laterally narrowly yellow, sternum 9 black.

Antenna 1.4× as long as maximum head width. Postocellar area: width : length = 1.0 : 0.6; lateral furrows nearly parallel-sided towards posterior margin of head.

Vertex and gena smooth and shiny; pubescence light brown. Mesoscutum smooth and shiny; pubescence dirty whitish. Other features as for female. Genitalia: Figs 8C, D.

Length: 8.7-9.7 mm.

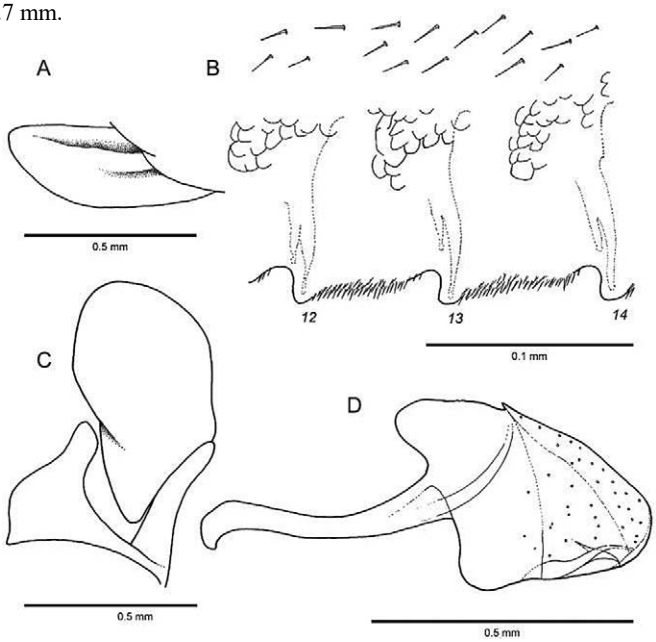


Fig. 8: *Distega bevisi*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material examined.

Holotype: ♀. Labels: "S[outh] Africa, Durban Mus[eum], 1915-195"; "Widenham, 13.XII.[19]14, L. Bevis, 1481"; "*Distega bevisi* Forsius ♀, R. Forsius det."; "Holotypus, *Distega bevisi* Forsius ♀, teste: F. Koch, 2015" (red); "*Distega bevisi* Forsius ♀, det.: F. Koch, 2015". (BMNH). Additional images: http://www.zoosphere.net/sequence/123

Paratype: 1 ♀. Umbilo, Durban, Natal, 12.X.1919, A. L. Bevis, 2469 (UZMT).

Other material examined. South Africa: 7 specimens (AMGS, CASC, MFN, NMSA, PPRI, TMSA); **Mozambique:** 1 specimen (TMSA).

Distribution: Mozambique, South Africa (Fig. 44).

Remarks.

Distega bevisi belongs to the species group named after it. The differential diagnosis to *D. bevisioides* is given under that species.

Variability in the coloration of *D. bevisi* is strong. The redescribed dark form (holotype, paratype and one non type specimen) was collected only in the area of Durban. The pale form (figs 149 a-c in KOCH et al. 2015a) with predominantly yellow dorsal surface of thorax and yellow mesepisternum above the transverse suture is distributed on the East Coast north to Mozambique, and in the mountain region of Limpopo Province. Also the proportion of flagellomeres 5-7 varied from slightly longer than broad to slightly broader than long. No differences in the shape of serrulae were found between the differently coloured specimens examined. Nevertheless, the possibility cannot be excluded that two different species are involved.

In South Africa *D. bevisi*, including the holotype, has been reported from various areas near the coast of the KwaZulu-Natal Province, as well as from the mountain region of the Limpopo Province (Fig. 44). Zoogeographically, this species belongs to the fauna of the East African Coastal District, which is defined by WINTERBOTTOM (1978). This is a narrow belt between the Indian Ocean and the escarpment (Drakensberg mountain system) with some finger-like extensions further into the inland. Therefore the vegetation consists of lowland and mangrove forests at the coast and savanna and mountain forests on the plateau of the escarpment. *Distega bevisi* is the second known species, beside *Arge braunsi* KONOW, 1904, which has this pattern of distribution (KOCH & LISTON 2012b).

Distega bevisioides sp. n.

Female (Figs 68, 69)

Head black. Thorax black with following yellow: pronotum except for ventro-lateral corners and tegulae. Legs black with following yellow: narrow apical margin of mid and hind coxa, hind trochanter, narrow base and apex of hind femur, anterior surface of fore and mid tibia, basal half of hind tibia and fore basitarsomere. Wings conspicuously infuscate; intercostal area fuscous; stigma, costa, subcostal and rest of venation black. Abdomen yellow; terga 1-7 predominantly black, tergum 8 with blackish anterior margin; base of valvifer 2 narrowly and valvula 3 black.

Head slightly narrowed behind eyes. Antenna 1.3× as long as maximum head width; flagellomeres 5-7 slightly longer than wide. Eyes converging below. Anterior margin of clypeus very slightly elongated medially; malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows nearly straight and slightly diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge interrupted medially.

Vertex and gena scattered micropunctate, shiny; pubescence brownish. Mesoscutum smooth and shiny; pubescence similar to that on head. Abdomen smooth and shiny. Valvula 3 in lateral view obtusely pointed apically (Fig. 9A). Lancet covered with short sensilla (Fig. 9B), with about 24-25 serrulae, serrulae 12/13 broadly rounded apically (Fig. 9B).

Length: 10.0-12.3 mm.

Male: Unknown.

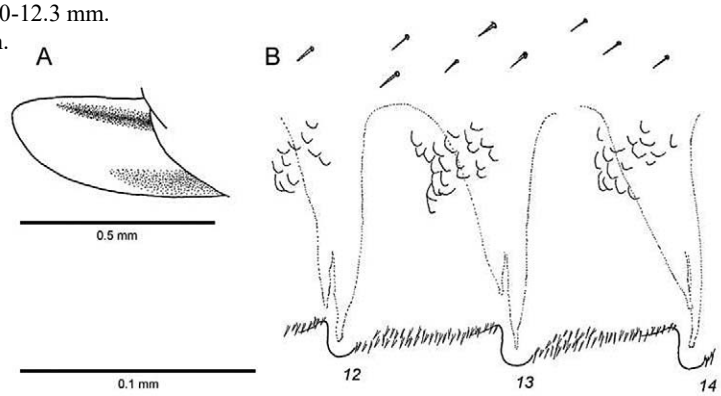


Fig. 9: *Distega bevisioides*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14.

Type material.

Holotype: ♀. Labels: "RSA, KwaZulu-Natal, Sodwana Bay Nat.[ional] Park, 27°40'S/32°19'E, 16.II.2012, leg.: F. Koch"; "Holotypus, *Distega bevisioides* sp. n. ♀, det.: F. Koch, 2016" (red) (PPRI).

Paratypes: 12 ♀♀: **RSA:** same data as holotype, except: 5.II.1995 (♀); 21.XI.1995 (2♀♀); 25.II.1997 (♀); Limpopo, Soutpansberg, Lajuma, 23°02'S/29°26'E, 25.II-2.III.2003 (2♀♀); Kosi Bay Nat.[ure] Res.[erve] (1♀) (MFN, PPRI); Limpopo, Lekgalameetse Nat.[ure] Reserve, 24°11'S/30°21'E, 19.-23.II.2003, F. Koch (1♀) (MFN); Pienaars River, 1898, v. Jutrzencka (1♀); Mfongosi, Zululand, W.E. Jones (1♀) (SAMC); Natal, Durban, Burman Bush, 12.III.1960, Empey Collection (1♀) (AMGS); **Mozambique:** Masine, XII.1923, E.F. Lawrence (2♀♀) (SAMC).

Distribution: Mozambique, RSA (Fig. 40).

Remarks.

Distega bevisioides belongs to the *bevisi* group. The main differences between *D. bevisi* and *D. bevisioides*, otherwise morphologically very similar, are the shape of the serrulae, and especially the length of sensilla which cover the surface of the lancet (Fig. 9).

Variability in the coloration of *D. bevisioides* is similarly large to that in *D. bevisi*. Therefore, in coloration and other external morphological characters it seems to be impossible to find significant differences between these species. The dark form coloured similarly to the holotype (Figs 68, 69) and five further paratypes, was recorded from the type locality (1♀) as well as from Kosi Bay, Durban, Mfongosi, and Masiene [Maciene] (Mozambique). The pale form with a predominantly yellow dorsal surface of thorax and a yellow mesepisternum above the transverse suture is also known from Sodwana Bay as well as the northern Drakensberg mountain system (Soutpansberg, Lekgalameetse, and Pienaars River). In Sodwana Bay the holotype and one dark paratype were collected in February, while the pale variation was collected in February and November. The variability therefore seems neither to be dependent on the geographical region, nor on the collecting season.

According to the pattern of distribution (Fig. 40), *D. bevisioides* belongs to the fauna of the East African Coastal District (see under *D. bevisi*).

Etymology.
The name *bevisioides*, an adjective, refers to the similarity to *D. bevisi*: the suffix–*oides* is derived from Ancient Greek εἶδος (pronounced *eîdos*, "likeness").

Distega brevicornis sp. n.

Male. (Figs 70, 71)
Head black. Thorax black with tegula and pronotum except for lateral corners yellow. Legs yellow with following black: fore coxa, mid and hind coxa except for narrow apical margin, fore and mid trochanter, posterior surface and basal half of anterior surface of fore and mid femur, apical half of hind femur, narrow apex of hind tibia; hind tarsomeres more or less blackish. Wings subhyaline; intercostal area infuscate, stigma black, costa whitish except for blackish apex adjacent to stigma, subcosta black and rest of venation blackish. Abdomen black; narrow posterior margin of terga laterally whitish, sterna with narrow whitish posterior margin.

Head conspicuously narrowed behind eyes. Antenna 0.9× as long as head maximum width, with 6 flagellomeres; flagellomeres 4-6 conspicuously broader than long. Eyes converging below. Anterior margin of clypeus very slightly emarginate with an obtusely angulate mid tooth; malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows convex and diverging towards posterior margin of head. Frontal area distinctly delimited, with a large shallow groove in front of the frontal ocellus, anterior cross-ridge slightly interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence white. Abdomen irregularly microsculptured, slightly shiny. Genitalia: Figs 10A, B.

Length: 6.0 mm.

Female: Unknown.

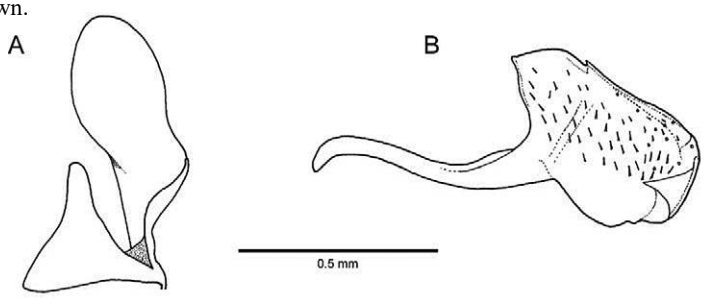


Fig. 10: *Distega brevicornis*: **(A)** Parapenis and harpe (right, ventral aspect); **(B)** Penis valve (left, lateral aspect).

Type material.
Holotype: ♂. Labels: "Kenya, Eastern Prov[ince], At Athi River, 2°38.51'S, 38°21.98'E, 8.-15.XI.1999, Malaise trap, R. Copeland"; "*Distega brevicornis* sp. n. ♂, det.: F. Koch, 2016" (red) (USNM).

Distribution: Kenya (Fig. 40).

Remarks.
With its six antennal flagellomeres in combination with the nearly entirely black body, *D. brevicornis* is easily distinguished from most other *Distega* species. Only *D. minor* has similar coloration and also six flagellomeres, but it has only one middle cell (M) in the hind wing.

Etymology.
The Latin adjective *brevicornis* means "short-horned", with reference to the short antennae.

Distega carbonaria FORSIUS, 1928

Distega carbonaria FORSIUS, 1928a: 329-331. Described: Female. Type locality: Belgian Congo [Democratic Republic of the Congo], Katanga, Lubumbashi.

Distega coeruleomicans PASTEELS, 1955a: 394, 400. Described: Female. Type locality: South Rhodesia [Zimbabwe], Vambu [Vumba] Mounts. [Mountains]. **Syn. nov.**

Female (Figs 72, 73).

Head and thorax black. Legs yellow with following black: fore and mid coxa, hind coxa except for apical half, fore and mid trochanter, fore and mid femur broadly at base, hind tibia very narrowly at apex, more or less distal tarsomeres of fore and mid legs, hind tarsus. Wings very slightly infuscate; intercostal area infuscate, stigma, costa, subcosta and rest of venation black.

Abdomen black.

Head parallel-sided behind eyes. Antenna 1.2× as long as head maximum width; flagellomeres 5-7 about as long as wide. Eyes slightly converging below. Anterior margin of clypeus very slightly emarginate; malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows very slightly convex and slightly diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge scarcely interrupted medially.

Vertex and gena smooth and shiny; pubescence brownish. Mesoscutum smooth and shiny, pubescence dirty whitish. Abdomen irregularly microsculptured, subshiny. Valvula 3 in lateral view narrowly rounded dorso-apically (Fig. 11A). Lancet with 22-23 serrulae; serrulae (Fig. 11B).

Length: 8.3-10.0 mm

Male

Coloration of body, wings and legs similar to that of female; femora entirely yellow or with base of fore and mid femur narrowly black.

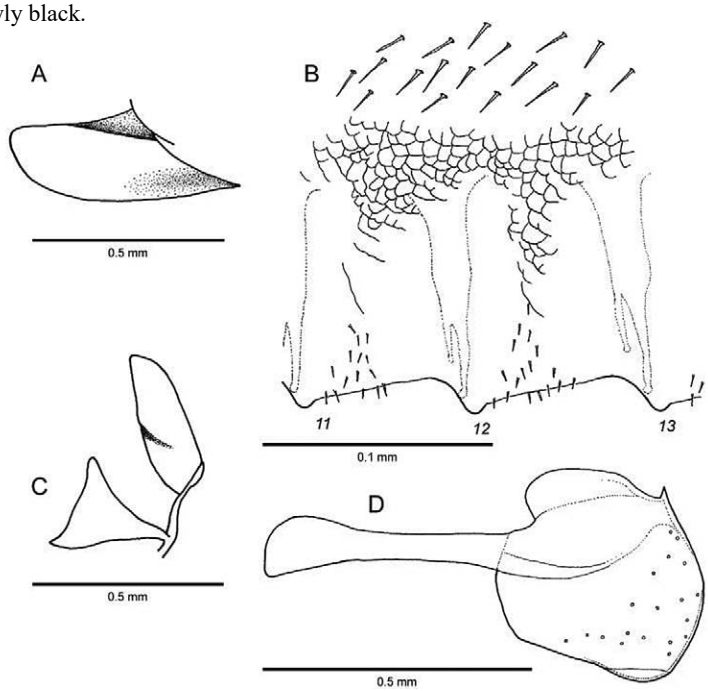


Fig. 11: *Distega carbonaria*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Antenna narrowed behind eyes. Antenna 1.2× as long as head maximum width. Clypeus truncate. Anterior cross-ridge of frontal area distinctly narrowly interrupted medially. Other features as for female. Genitalia: Figs 11C, D.

Length: 6.0-6.7 mm.

Type material examined.

***Distega carbonaria*, Holotype:** ♀. Labels: "Holotypus, *carbonaria* Fors. ♀" (red); "Genit. ♀, H.4. 38."; " Musée Du Congo, (R. Lubumbashi), 16-I-1921, Dr. M. Bequaert"; "R. Dét. T., 1479"; "R. Det. S., 5196"; "Di 4"; "*Distega carbonaria* n. sp. ♀, R. Forsius det."; "*Distega sjoestedti* Knw., J. Pasteels det., 1947"; "RMCA ENT 000017534"; "Holotypus, *Distega carbonaria* Forsius ♀, teste: F. Koch, 2015" (red); "*Distega carbonaria* Forsius ♀, det.: F. Koch, 2015" (MRAC). Dissected genitalia slide, Mus. Cong. H.4, 38; Di. 4 (MRAC). Additional images: http://www.Zoo sphere.net/sequence/124/Distega/carbonaria

Distega coeruleomicans, **Holotype:** ♀. Labels: "Type" (red-edged circle); "S. Rhodesia, Vumbu Mts, II.1928, Rhodesia Museum"; "*Distega coeruleomicans* n. sp. ♀, Holotypus, R. Forsius det."; "*Distega coeruleomicans* n. sp., J. Pasteels det., 1954"; "spur bifid"; "Holotypus, *Distega coeruleomicans* Pasteels, teste: F. Koch, 2015" (red); "*Distega carbonaria* Forsius ♀, det.: F. Koch, 2015" (BMNH).
Other material examined. Kenya: 28 specimens (MFN, SDEI, USNM, UZMT); **South Africa:** 12 specimens (MFN, PPRI); **Tanzania:** 1 specimen (NHRS); **Zimbabwe:** 50 specimens (MFN, NHRS, PPRI, SDEI).

Distribution:
Democratic Republic of the Congo, Kenya, South Africa, Tanzania, Zimbabwe (Fig. 46).

Remarks.
The combination of length of antenna and coloration of the body of this species distinguish it well from most other *Distega* species. Only the dark form of *D. micans* is similarly coloured, but its conspicuously longer than wide distal flagellomeres and the entirely yellow legs distinguish it from *D. carbonaria*. Additionally, the genitalia of *D. micans* (Fig. 22) are distinctly different.

The holotype of *Distega coeruleomicans* has been examined, and it was impossible to find any differences to *D. carbonaria* which are sufficient to consider them to be different species. Accordingly, *D. coeruleomicans* is here synonymised with *D. carbonaria.*
The male of *D. carbonaria* is described for the first time.

Distega chembaensis sp. n.

Female (Figs 74, 75)
Head black. Thorax yellow with following black: mesosternum, mesepisternum below the transverse suture and katepimeron. Legs black with following yellow: hind tarsus, dorsal surface of fore femur, fore and mid tibia, basal half of hind tibia, more or less fore and mid tarsus. Wings slightly infuscate; intercostal area infuscate, stigma, costa, subcosta and rest of venation blackish. Abdomen yellow; tergum 1 with two large black medial spots; valvula 3 black.

Head slightly narrowed behind eyes. Antenna 1.3× as long as head maximum width; distal flagellomeres 5-7 about as long as wide. Eyes converging below. Anterior margin of clypeus truncate; malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows slightly convex and slightly diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge not interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view moderately pointed apically (Fig. 12A). Lancet with about 23 serrulae; serrulae (Fig. 12B).

Length: 8.3 mm.

Male (Figs 76, 77)
Head and thorax black, only pronotum yellow with black ventro-lateral corners. Legs and wings similarly coloured to that of female. Abdomen with medial areas obscurely blackish on tergum 1 and terga 6-8.

Head narrowed behind eyes. Antenna 1.3× as long as head maximum width. Postocellar area: width : length = 1.0 : 0.7; lateral furrows straight and conspicuously diverging towards posterior margin of head. Anterior cross-ridge of frontal area narrowly interrupted medially. Other characters as for female. Genitalia: Figs 12C, D.

Type material.
Holotype: ♀. Labels: "Museum Paris, Zambèze, Nova Choupanga, Près Chemba, P. Lesne"; "*Distega pectoralis* Forsius ♀, J. Pasteels det., 1950"; "Holotypus, *Distega chembaensis* sp. n. ♀, det.: F. Koch, 2016" (red) (MNHN).
Paratype: 1 ♂: same data as holotype (MNHN).

Distribution: Mozambique (Fig. 41).

Remarks.
Distega chembaensis belongs to the *D. bevisi* species group. In coloration this species is similar to *D. namibiensis*. The differences between them are mainly the more extensive black coloration of the abdomen in *D. namibiensis*, the shape of the serrulae (Fig. 12B), and especially the shape of the parapenis (Fig. 12C).

Etymology.
The species name, an adjective, refers to the type locality, Chemba, a small town on the River Zambezi in Mozambique.

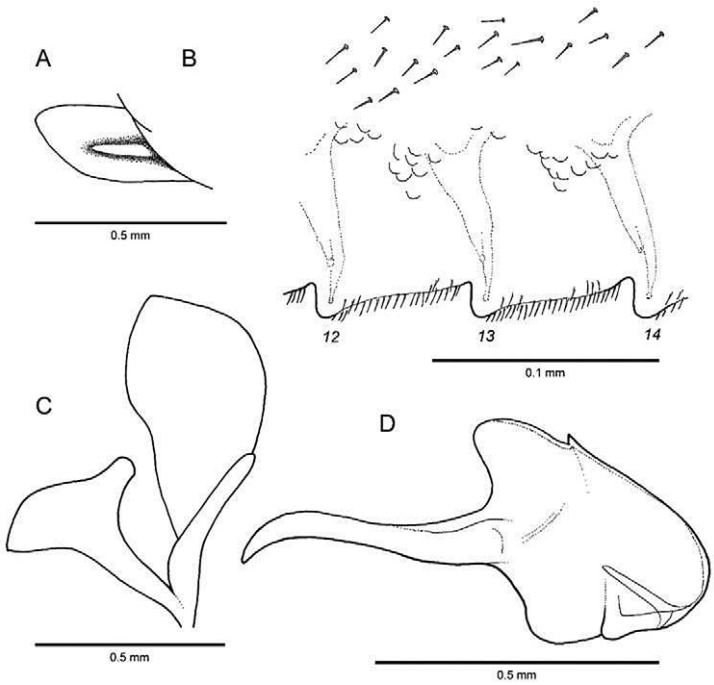


Fig. 12: *Distega chembaensis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Distega clypealis PASTEELS, 1955

Distega clypealis PASTEELS, 1955a: 406-408. Described: Female. Type locality: Kenya, "Kbato" [given in error for Kabete].

Female (Figs 78, 79)

Head black; labrum, clypeus and interantennal area yellow; antenna black with yellow base on scape. Thorax yellow. Legs yellow; tibiae with black apex and blackish striped in basal half of posterior surface, hind tarsus except for basitarsomere blackish. Wings subhyaline; intercostal area infuscate, stigma, costa, subcostal and rest of venation blackish. Abdomen yellow with valvula 3 black.

Head narrowed behind eyes. Antenna 1.7× as long as head maximum width; distal flagellomeres conspicuously longer than wide. Anterior margin of clypeus excised, lateral corners conspicuously rounded; malar space absent. Postocellar area as long as wide; lateral furrows straight and diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge distinctly broadly shallowly interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence yellowish. Abdomen smooth and shiny. Valvula 3 in lateral view rounded apically (Fig. 13A). Lancet with about 20 serrulae (?) (apex is broken); serrulae (Fig. 13B).

Length: 7.0 mm.

Male

Coloration of legs, wings, and body similar to that of female except for the blackish mesonotum.

Antenna 1.6× as long as head maximum width. Postocellar area: width : length = 1.0 : 0.8. Other features as for female. Genitalia: Figs 13C, D.

Length: 5.3-6.0 mm.

Type material examined.

Holotype: ♀: Labels: "Type" (red-edged circle); "B. M. Type, Hym. 1.796"; "Kenya Colony: Kabete, IV.1922, H. E. Box"; "Brit.-Mus. 1922-357"; "*Distega bequaerti* Forsius, R. Forsius det."; "*Distega clypealis* n. sp., J. Pasteels det., 1954"; "Holotypus, *Distega clypealis* Pasteels, teste: F. Koch, 2015" (red); "*Distega clypealis* Pasteels ♀, det.: F. Koch, 2015" (BMNH).

Distribution: Kenya (Fig. 43).

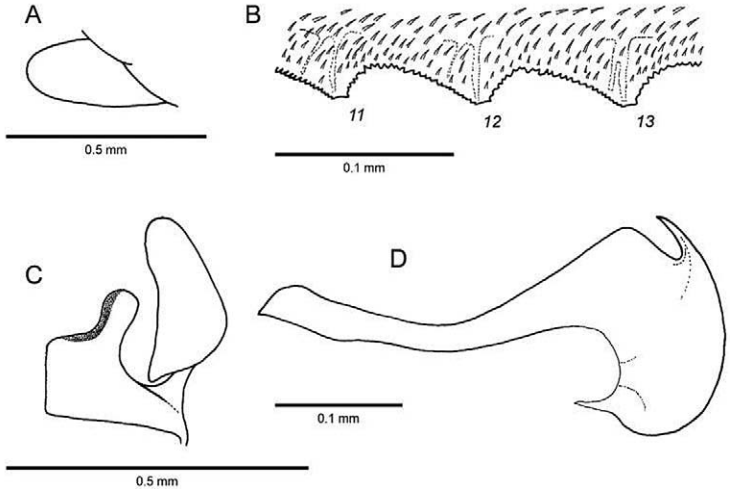


Fig. 13: *Distega clypealis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Remarks.
Based on the strongly emarginate clypeus, tarsal claws (Fig. 2B), and unusually shaped serrulae, *D. clypealis* is possibly not a member of *Distega*. However, it seems premature to assign this species to a different genus, and therefore *D. clypealis* is provisionally retained in *Distega* (see also *D. congonensis* and *D. nigriceps*).

The male of *D. clypealis* is described for the first time. Variability of the males is visible in the coloration of the abdomen. Sometimes the basal terga are blackish coloured medially, and sternum 9 is sometimes blackish. Also, the anepimeron can be narrowly blackish-margined dorsally, including the postspiracular sclerite.

Distega congonensis (FORSIUS, 1934)

Paradistega congonensis FORSIUS, 1934: 396-398. Described: Female. Type locality: Lomami, Kanima [Democratic Republic of the Congo].
Codistega congonensis: PASTEELS 1949: 23.
Distega congonensis: PASTEELS 1955a: 392.
Distega stenocephala PASTEELS, 1952: 54-55. Described: Female. Type locality: Congo belge [Democratic Republic of the Congo], Territoire de Dibaya; Kamponde.

Female (Figs 80, 81)
Head black; labrum, clypeus and interantennal area yellow. Thorax yellow; mesonotum and tegula black. Legs yellow; tibiae with narrow blackish apex, and distal tarsomeres blackish. Wings flavescent-hyaline; intercostal area flavescent, stigma, costa, subcosta and venation brownish. Abdomen yellow; valvula 3 black.

Head slightly narrowed behind eyes. Antenna 1.7× as long as head maximum width; distal flagellomeres conspicuously longer than wide. Anterior margin of clypeus excised, lateral corners conspicuously rounded (Fig. 50). Malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows straight and very slightly diverging towards posterior margin of head. Frontal area indistinctly delimited, with a large anterior furrow reaching to the anterior ocellus; anterior cross-ridge indistinct.

Vertex, gena and mesoscutum smooth and shiny; pubescence white. Abdomen smooth and shiny. Valvula 3 in lateral view rounded apically (Fig. 14A). Lancet with about 15 serrulae; serrulae (Fig. 14B).

Length: 5.7-6.2 mm.

Male.
Head similarly coloured to that of female, but interantennal area brown. Thorax black with posterior half and katepimeron yellow.
Legs and wings similarly coloured to female. Abdomen yellow, with distal terga blackish. Antenna 1.7× as long as head maximum width. Other characters as for female. Genitalia: Figs 14C, D.

Length: 5.0-5.3 mm.

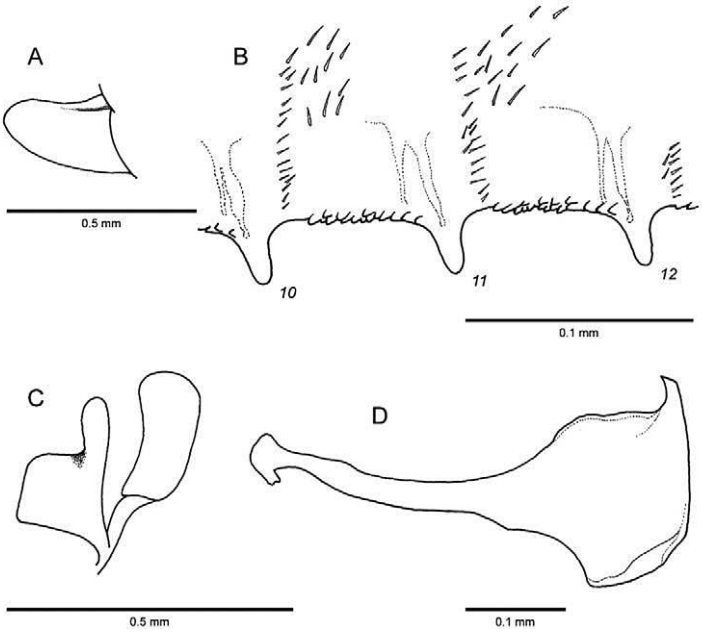


Fig. 14: *Distega congonensis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 10-12; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material examined.

***Paradistega congonensis*, Holotype:** ♀. Labels: "Holotype ♀" (red); "Musée Du Congo, Lomami: Kaniama -1931, R. Massart"; "R. Det. Y., 2749"; "R. Det. R., 5196"; "Pasteels 1947, *Codistega* n. gen."; "(*Paradistega*) *congonensis* n. sp., Holotypus, R. Forsius det. ♀"; "Holotypus, *Paradistega congonensis* Forsius, teste: F. Koch, 2015" (red); "*Distega congonensis* (Forsius) ♀, det.: F. Koch, 2015" (MRAC).

***Distega stenocephala*, Holotype**: ♀. Labels: "Holotype" (red); "Coll. Mus. Congo, Terr. de. Dibaya, Kamponde, 1945, Rév. Fr. Allaer."; "Type"; "R. Det. eC., 5760", "*Distega sternalis* n. sp. J. Pasteels det.1951"; "*Distega sternalis* Past. (= *Codistega congonensis* Fors.)"; "Holotypus, *Distega stenocephala* Pasteels ♀, teste: F. Koch, 2015" (red); "*Distega congonensis* (Forsius) ♀, det.: F. Koch, 2015" (MRAC).

Other material examined. Democratic Republic of the Congo: 2 specimens (MRAC, RBINS); **Malawi:** 1 specimen (USNM).

Distribution: Democratic Republic of the Congo, Malawi (Fig. 43).

Remarks.

Based on the shape of the clypeus (Fig. 50), tarsal claws (Fig. 2C) and serrulae, *D. congonensis* is possibly not a member of *Distega*. However, at the moment it seems premature to place this species in a different genus, and it is provisionally retained in *Distega*.

In females the coloration of the pronotum varies from yellow to blackish; sometimes the median lobe of mesoscutum is laterally pale-margined. The mesepisternum varies from partly black on anterior margin, to entirely yellow.

Distega costalis sp. n.

Male (Figs 82, 83)

Body black. Legs yellow with following black: coxae except for broad apical margin of hind coxa, fore and mid trochanter, more or less basal half of fore and mid femur, apex of hind tibia indistinctly, and distal tarsomeres blackish. Wings subhyaline; intercostal area slightly infuscate, costa white except for blackish apex adjacent to stigma, postmarginal vein dirty white, stigma, subcosta and rest of venation blackish. Abdomen black.

Head narrowed behind eyes. Antenna 0.9× as long as maximum head width; flagellomeres 5/6 distinctly broader than long. Eyes converging below. Anterior margin of clypeus subtruncate to very slightly

prolonged medially; malar space absent. Postocellar area: width : length = 1.0 : 0.6; lateral furrows slightly convex and very slightly diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge narrowly interrupted medially.

Vertex and gena smooth and shiny, pubescence conspicuously long, about twice as long as diameter of lateral ocellus, whitish. Mesoscutum slightly micropunctate, shiny; pubescence similar to that on head. Abdomen smooth and shiny. Genitalia: Figs 15A, B.

Length: 6.3 mm.

Female: Unknown.

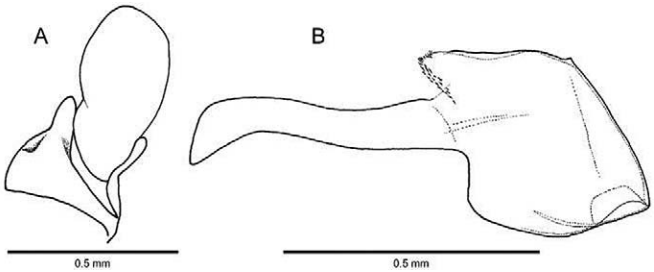


Fig. 15: *Distega costalis*: **(A)** Parapenis and harpe (right, ventral aspect); **(B)** Penis valve (left, lateral aspect).

Type material.
Holotype: ♂. Labels: "Kenya, Rift Valley, Ol Pejeta Conservancy, 0°01.306N, 36°54.818E, mixed woodland, next to swampy area, Malaise trap, 10-24.III.2006" "Holotypus, *Distega costalis* sp. n. ♂, det.: F. Koch, 2016" (red) (USNM).

Distribution: Kenya (Fig. 45).

Remarks.
With its short antenna, white costa, and very long pubescence, *D. costalis* is easily separated from the similarly coloured *D. micans*.

Etymology: The name of this species, an adjective, refers to the white costa.

Distega ellisrasensis sp. n.

Female (Figs 84, 85)
Head black. Thorax yellow with following black: lateral lobe of mesoscutum, propleuron, mesosternum, katepimeron, and mesepisternum except above transverse suture. Legs yellow with following black: tibiae except for narrow apical margin of hind coxa, fore and mid trochanter, femora except for narrow base, broad apex of hind tibia, distal tarsomeres of mid tarsus, hind tarsus. Wings subhyaline; intercostal area conspicuously infuscate; stigma, costa and subcosta black; rest of venation blackish. Abdomen yellow; tergum 1 with two small blackish medial spots, terga 3-5(6) with blackish medial markings, becoming conspicuously narrower towards apex of abdomen; valvula 3 and base of valvifer 2 black.

Head parallel-sided behind eyes. Antenna 1.3× as long as maximum head width; flagellomere 5 as long as wide, flagellomere 6 broader than long. Eyes converging below. Anterior margin of clypeus subtruncate, slightly elongated medially; malar space absent. Postocellar area: width : length = 1.0 : 0.6; lateral furrows nearly straight and diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge scarcely interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view obtusely pointed apically (Fig. 16A). Lancet with about 23 serrulae, serrulae 12-14 broadly pointed (Fig. 16B).
Length: 10.0-11.0 mm.

Male (Figs 86, 87)
Head black. Thorax black, with pronotum except for ventro-lateral corners and tegula yellow. Terga 1-8 broadly black, sternum 9 black.

Head narrowed behind eyes. Antenna 1.2× as long as maximum head width. Other characters as for female. Genitalia: Figs 16C, D.

Length: 8.2-8.7 mm.

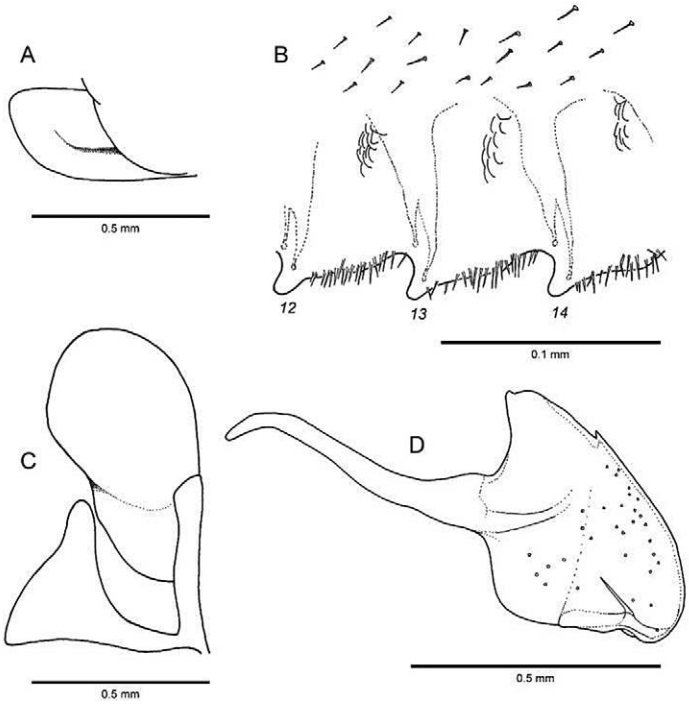


Fig. 16: *Distega ellisrasensis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material.
Holotype: ♀. Labels: "South Africa, N.[orth] Western Transv. [aal], Ellisras, 6.IV.1962, Empey Collection"; "*Distega rectiserra* Past., J. Pasteels det., 1973"; "Holotypus, *Distega ellisrasensis* sp. n. ♀, det.: F. Koch, 2016" (red) (AMGS).
Paratypes: 6 ♂♂: **RSA:** same data as holotype (AMGS, MFN).

Distribution: South Africa (Fig. 40).

Remarks.
Distega ellisrasensis belongs in the *bevisi* species group, as shown by the similarities with *D. bevisi*, especially in the shape of serrulae. The female of *D. ellisrasensis* is similarly coloured to *D. chembaensis* and *D. namibiensis*, but it differs in the black lateral lobes of mesoscutum. The males of *D. ellisrasensis* are similarly coloured to *D. bevisi*, but the antenna is slightly shorter (*D. bevisi*: antenna 1.4× as long as maximum head width). Furthermore the distal flagellomeres of *D. ellisrasensis* are as long as wide, whereas in *D. bevisi* these flagellomeres are longer than wide. This character is also visible in females. Other differences are visible in the shape of the male genitalia, especially the parapenis (Figs 8C, 16C), and in the shape of serrulae (Figs 8B, 16B).

Sometimes the yellow coloration of the dorsal surface of abdomen in males is reduced to a narrow lateral stripe.

Etymology.
The species name, an adjective, refers to the type locality Ellisras [Lephalale], a town in Limpopo Province, South Africa.

Distega formosa (PASTEELS, 1949)

Eudistega formosus [sic!] PASTEELS, 1949: 24-26. Described: Female. Type locality: Lulua: Kapanga [Democratic Republic of the Congo].
Distega formosa: PASTEELS 1955a: 390.

Female (Figs 88, 89)
Head black; interantennal area brown. Thorax black with following yellow: pronotum, antero-lateral corners of median lobe of mesoscutum, mesoscutellum, mesoscutellar appendage, tegula, mesepisternum above the

transverse suture, and anepimeron. Legs black with following yellow: narrow apical margin of mid coxa, broad apical margin of hind coxa, narrow apices of femora, hind femur narrowly at base, fore and mid tibia, hind tibia except for broad apex, basal tarsomeres of fore tarsus and basitarsomere of mid tarsus. Wings slightly infuscate; intercostal area darker, stigma, costa, subcosta and rest of venation black. Abdomen yellow with following black: tergum 1 with two large medial spots, terga 2-6/7 with very narrow medial spots connected to a very narrow median line, valvula 3, and a spot on base of valvifer 2.

Head slightly enlarged behind eyes. Antenna 1.2× as long as maximum head width; flagellomeres 5/6 broader than long. Eyes slightly converging below. Anterior margin of clypeus subtruncate, very slightly emarginate; malar space linear. Postocellar area: width : length = 1.0 : 0.6; lateral furrows nearly straight or very slightly convex and diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge with small obtuse lateral humps and distinctly interrupted medially. Inner tooth (subapical tooth) of tarsal claw very small (Fig. 2D).

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view pointed dorso-apically (Fig. 17A). Lancet with about 22-23 serrulae; serrulae (Fig. 17B).

Length: 7.8-8.8 mm.

Male: Unknown.

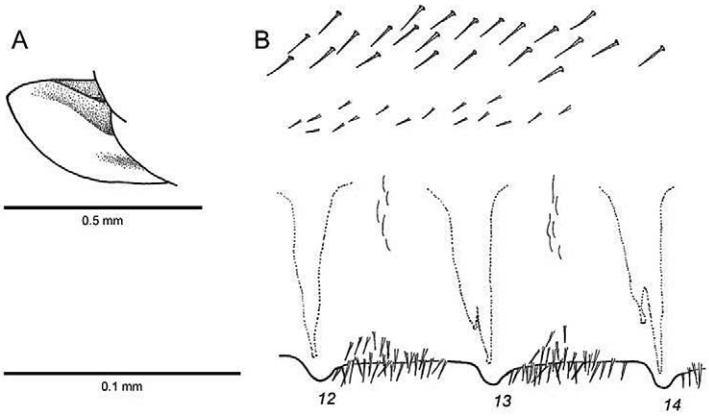


Fig. 17: *Distega formosa*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14.

Type material examined.
Holotype: ♀. Labels: "Holotypus, *formosa* Past. ♀" (red); "Genit. ♀, H.4. 40."; "Musée Du Congo, Lulua: Kapanga, XII-1932, F. G. Overleat"; "Holotype (red)"; "R. Det. N., 5196"; "Di, 6"; "*Eudistega formosa* n. g., n. sp., J. Pasteels det., 1947"; "Holotypus, *Eudistega formosa* Pasteels ♀, teste: F. Koch, 2015" (red); "*Distega formosa* (Pasteels) ♀, det.: F. Koch, 2015" (MRAC). Dissected genitalia slide, Mus. Cong. H.4, 40; Di. 6 (MRAC).
Other material examined. Democratic Republic of the Congo: 1 ♀. Lusambo, 1921, Lt. Ghesquière (UZMT).

Distribution: Democratic Republic of the Congo (Fig. 46).

Remarks.
In coloration, especially of the thorax, *D. formosa* resembles some species of the *bevisi* group, but differs in the serrulae having no indication of a cypsella (Fig. 17B). The very thin black median line on the dorsal surface of the abdomen is unique to *D. formosa* in this genus.

With only two specimens available, which are very similar, variability can scarcely be assessed.

Distega humeralis PASTEELS, 1955

Distega humeralis PASTEELS, 1955a: 393, 395-396. Described: Female, male. Type locality: Nairobi [Kenya]. ♂(MRAC) BMNH, ♂(MRAC).

Female (Figs 90, 91)
Head black. Thorax black with following yellow: pronotum except for black ventro-lateral corners, mesoscutellum, mesoscutellar appendage, more or less metascutellum and tegula. Legs yellow with following black: fore and mid coxa, hind coxa at base, fore and mid trochanter, basal half of fore and mid femur; hind tibia narrowly blackish-ringed apically, distal tarsomeres of fore and mid tarsus, hind tarsus blackish except for base. Wings infuscate; intercostal area fuscous, stigma, costa, subcosta and rest of venation black. Abdomen black.

Head parallel-sided behind eyes. Antenna 1.1× as long as maximum head width; flagellomeres 5/6 broader than long. Eyes converging below. Anterior margin of clypeus truncate; malar space linear. Postocellar area: width : length = 1.0 : 0.6 - 0.7(HT); lateral furrows convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge distinctly narrowly interrupted medially.

Vertex, gena and mesonotum smooth and shiny. Pubescence on head yellowish, on mesonotum whitish. Abdomen irregularly microsculptured, slightly shiny. Valvula 3 obtusely pointed apically (Fig. 18A). Lancet with about 26 serrulae; serrulae (Fig. 18B).

Length: 8.0-8.8 mm.

Male: See remarks.

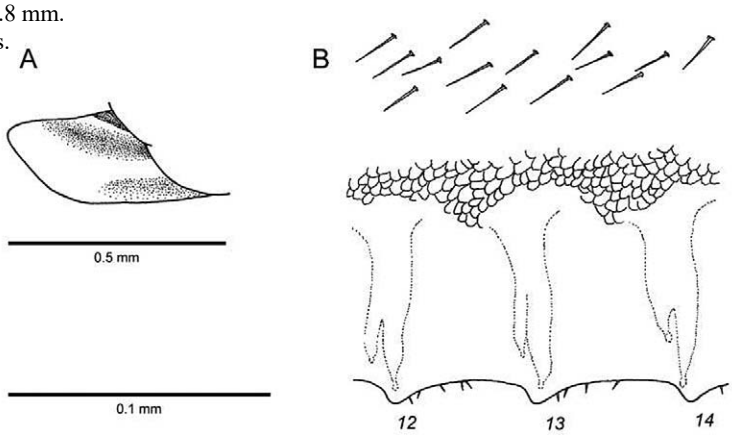


Fig. 18: *Distega humeralis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14.

Type material examined.
Holotype: ♀. Labels: "Paratypus" (red); "Kenya, Nairobi, Coll. Le Moult"; "coll. Mus. Congo, ex. Le Moult"; "Paratype" (red); "*Distega humeralis* n. sp., J. Pasteels det., 1954"; "Holotypus, *Distega humeralis* Pasteels ♀, teste: F. Koch, 2015" (red); "*Distega humeralis* Pasteels ♀, det.: F. Koch, 2015" (MRAC).
Paratype: 1♀. Nairobi, III.[19]22 (BMNH).

Distribution: Kenya (Fig. 44).

Remarks.
Its coloration clearly distinguishes *D. humeralis* is from all other species of *Distega*.

The real holotype of *D. humeralis* was originally erroneously labelled as paratype, and therefore the specimen which is labelled as holotype (BMNH) is objectively a paratype. According to PASTEELS (1955a) the male (allotype) and a further female (paratype) with the same data should be deposited in the BMNH collection, but the male could not be found there. Because the male could not be examined, a standard description is omitted here. The description of the male by PASTEELS (1955a) is very short. The characters are similar to those of the female: only the antenna is shorter and broader, sternum 9 is oval and enlarged, and in the hind wing only one middle cell is developed. The penis valve is illustrated by PASTEELS (1955a: 407, fig. 65). Because only one middle cell in the hind wing is present, perhaps the described male belongs to another species.

Distega kenyensis sp. n.

Female (Figs 92, 93)
Head black. Thorax black with following yellow-orange: posterior margin of propleuron, pronotum, mesonotum, mesoscutellar appendage, mesepisternum above transverse suture, and anepimeron. Legs black with following whitish: apical half of hind tibia, hind trochanter, fore and mid tibia except for a blackish stripe on the posterior surface, narrow apex of fore femur, base of hind femur, basal half of hind tibia. Wings slightly infuscate; intercostal area fuscous; stigma, costa, subcosta and rest of venation black. Abdomen black with blue metallic lustre.

Head parallel-sided behind eyes. Antenna 1.4× as long as maximum head width; flagellomeres 5/6 longer than wide. Eyes converging below. Anterior margin of clypeus subtruncate, very slightly elongated medially; malar space linear. Postocellar area: width : length = 1.0 : 0.8; lateral furrows nerly straight or

slightly convex and parallel sided or very slightly diverging. Frontal area distinctly delimited, anterior cross-ridge not or very slightly interrupted medially.

Vertex, gena and mesonotum smooth and shiny; pubescence on head and mesonotum white. Abdomen smooth and shiny. Valvula 3 in lateral view pointed apically (Fig. 19A). Lancet with about 21 serrulae; serrulae (Fig. 19B).

Length: 7.8-9.7 mm.

Male: Unknown.

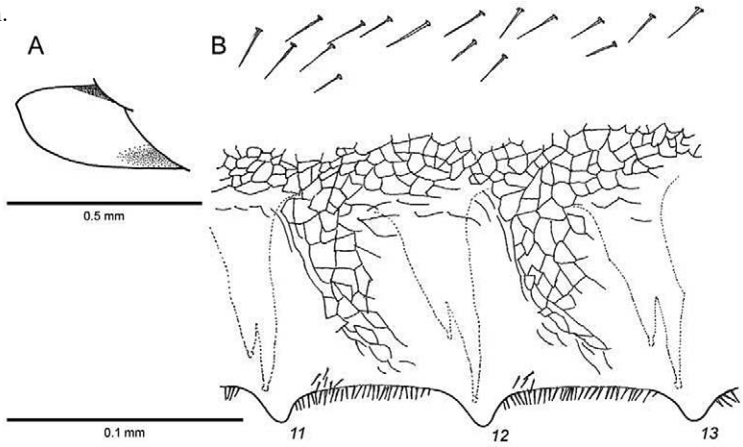


Fig. 19: *Distega kenyensis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13.

Type material.
Holotype: ♀. Labels: "Kenya, Coast Prov., Arabuko-Sokoke Forest, 3°25.21'S/39°53.81'E, 17.-24.IX.1999, Malaise trap, R. Copeland"; "Holotypus, *Distega kenyensis* sp. n. ♀, det.: F. Koch, 2016" (red) (USNM).
Paratypes: 5 ♀♀: **Kenya:** Gazi, Kwale, District, 21.-23.VIII.1982, Sea Level, Malais 3, R. Barnet (2 ♀♀) (MFN, SDEI); **Tanzania:** Mto-ja, Kifaru, Katona (1 ♀), Usambara, Nguelo (1 ♀) (MFN); Mts [Mountains] Uluguru, Kinola, for[est] transition, alt[itute] 1500-1750 m, 6.-13.VI.[19]71, Mission Mts Uluguru, L. Berger, L. Leleup, L. Debecker, V/VIII/[19]71 (1 ♀) (MARC); Usambara Mts [Mountains], Amani, 1000 m, 5.VIII.1979, M. Stoltze (1 ♀) (ZMUC).

Distribution: Kenya, Tanzania (Fig. 42).

Remarks.
Distega kenyensis belongs to the *sjoestedti* group, and differs from the similarly coloured *D. sjoestedti* especially in the shape of the serrulae, which are flatter in the latter.

Morphological variability in the new species is scarcely visible in the examined material. Only the development of the anterior cross-ridge of the frontal area varies in the shape of the medial interruption from conspicuously developed to scarcely visible.

Etymology.
The new species is named after Kenya, where its type locality is located.

Distega limpopoensis sp. n.

Female (Figs 94, 95)
Head black. Thorax black with following yellow: dorsal margin of propleuron, pronotum, antero-lateral corners and a small spot at posterior apex of median lobe of mesoscutum, mesoscutellum, mesoscutellar appendage, metanotum, tegula, more or less postspiracular sclerite, and anepimeron. Legs black with following yellow: dorsal surface of hind trochanter, broad apex of fore femur, narrow apex of mid femur, dorsal surface at base and narrow apex of hind femur, fore and mid tibia except for apical half of posterior surface, about two-thirds of hind tibia basally, fore and mid basitarsomere. Wings infuscate; intercostal area fuscous; stigma, costa except for whitish basal half, subcosta, and rest of venation black. Abdomen yellow; terga 1-7 with black markings medially, narrowing towards apex (Fig. 94); valvula 3 black.

Head parallel-sided behind eyes. Antenna as long as head maximum width; flagellomeres 4-6 conspicuously broader than long. Eyes converging below. Anterior margin of clypeus truncate, malar space absent. Postocellar area: width : length = 1.0 : 0.6; lateral furrows more or less convex and more or less

diverging towards posterior margin of head. Frontal area delimited, anterior cross-ridge distinctly interrupted medially.

Vertex, gena and mesonotum smooth and shiny; pubescence whitish. Abdomen shiny. Valvula 3 in lateral view broadly pointed dorso-apically (Fig. 20A). Lancet with about 24-25 serrulae; serrulae (Fig. 20B).

Length: 8.7-9.7 mm.

Male (Figs 96, 97).

Thorax black, only pronotum except for ventro-lateral corners and tegula yellow. Leg colour similar to female. Costa black with narrow whitish stripe. Dorsal surface of abdomen black, only laterally narrowly yellow margined; sterna vary from nearly entirely yellow to predominantly black, sternum 9 always black. Head slightly narrowed behind eyes. Antenna as long as head maximum width. Other characters as for female. Genitalia: Figs 20C, D.

Length: 7.3-8.0 mm.

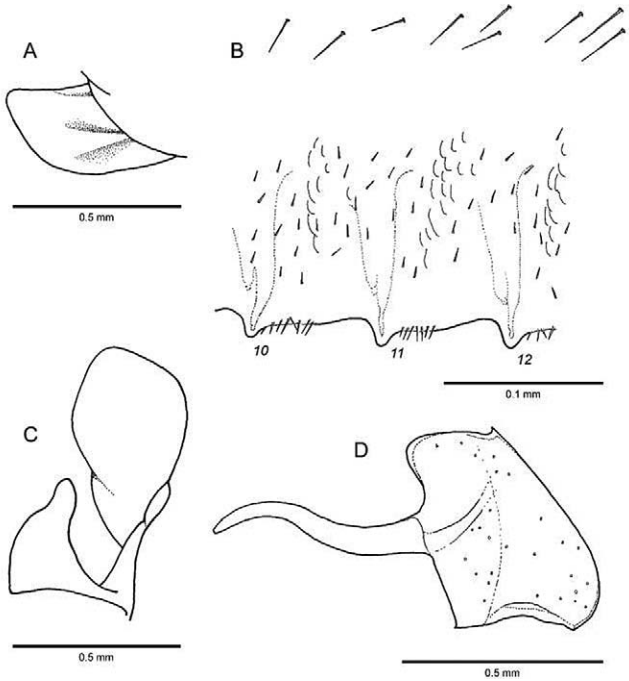


Fig. 20: *Distega limpopoensis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 10-12; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material.

Holotype: ♀. Labels: "R.S.A., Limpopo, Nylsvlei Nat.[ure] Res.[erve], 5.-8.XI.2010, 24°39'S/28°40'E, leg.: F. Koch"; "Holotypus, *Distega limpopoensis* sp. n. ♀, det.: F. Koch, 2016" (red) (PPRI).

Paratypes: 31 ♂♂, 4 ♀♀: **RSA:** same data as holotype, except: yellow pan (23 ♂♂, 1 ♀) (PPRI, MFN, SDEI).

Distribution: South Africa (Fig. 45).

Remarks.

The general coloration of *D. limpopoensis* closely resembles that of *D. mocsaryi*, but in females of the latter species the mesepisternum above the transverse suture is yellow. In male *D. limpopoensis* the black coloration of dorsal surface of abdomen is usually more extensive than in *D. mocsaryi*, and sternum 9 is black. In the new species the flagellomeres 5/6 are distinctly broader than long. Further distinct differences are visible in the shape of serrulae (Figs 20B, 24B), penis valve (Figs 20D, 24D) and valvula 3 (Figs 20A, 24A). The differences in the shape of the parapenis of these species are small.

Etymology.

The new species is named after the province Limpopo, where the type locality Nylsvlei Nature Reserve is located.

***Distega meridiana* sp. n.**

Female (Figs 98, 99)

Head black. Thorax black with following yellow-orange: pronotum, mesonotum except for two antero-medial spots on median lobe of mesoscutum, mesoscutellar appendage, mesepisternum above transverse suture, and anepimeron. Legs black with following whitish: apical margin of hind coxa, hind trochanter, narrow base of hind femur, apices of femora, fore tibia, mid tibia except for narrow blackish apex, hind tibia with broad black apex, fore and mid basitersomere. Wings slightly infuscate; intercostal area fuscous; stigma, costa, subcosta and rest of venation black. Abdomen black with blue metallic lustre.

Head slightly enlarged behind eyes. Antenna 1.2 × as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes converging below. Anterior margin of clypeus truncate; malar space linear. Postocellar area: width : length = 1.0 : 0.7; lateral furrows nearly straight and diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge not, or narrowly interrupted medially.

Vertex, gena and mesonotum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view narrowly rounded dorso-apically (Fig. 21A). Lancet with about 25-26 serrulae; serrulae (Fig. 21B).

Length: 8.7-10.2 mm.

Male: Unknown.

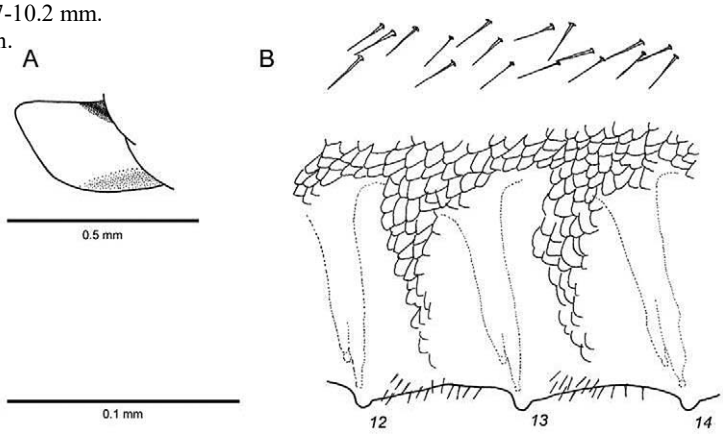


Fig. 21: *Distega meridiana*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14.

Type material.

Holotype: ♀. Labels: "Cape Province, Hilton, Grahamstown, 26.II.-3.III.1971, F. W. Gess"; "Malaise trap"; "Holotypus, *Distega meridiana* sp. n. ♀, det.: F. Koch, 2016" (red) (AMGS).

Paratypes: 9 ♀♀: **South Africa:** Cape Province, Kenton-on-Sea, 15.-30.XI.1970, R. A. Jubb (1 ♀) (AMGS); O[range] F[ree] S[tate], Tussen-die-Riviere Res[erve] nr. Bethuli 30°30'S/26°12'E, 20.-26.I.1994, C. D. Eardley (2 ♀♀) (PPRI); Natal National Park, Drakensberg, 5.I.1980, D. Reavell (1 ♀) (NMSA); Transvaal, Ermelo, 21.XI.1948, N. C. Mokhehle (1 ♀) (SAMC); Limpopo, Lekgalameetse Nat[ure] Reserve, 24°11'S/30°21'E, F. Koch (1 ♀); Transvaal, Wolkberg, 13.-17.II.1997, Falle 22, F. Koch (1 ♀); **Zimbabwe:** Inyanga Nat[ional] Park, 18°18'S/32°48'E, 6.XII.1993, F. Koch (2 ♀♀) (MFN).

Distribution: South Africa, Zimbabwe (Fig. 42).

Remarks.

Distega meridiana belongs to the *sjoestedti* group. From the similarly coloured *D. schoutedeni*, with entirely yellow hind tibia, the new species differs in the more or less blackish-ringed apex of hind tibia. Compared to *D. meridiana* (Fig. 21B), the serrulae of *D. schoutedeni* (Fig. 37B) are very flat.

Intraspecific variability of the new species in coloration is pronounced, especially on the mesonotum, which may be entirely yellow-orange. Furthermore the whitish colour of the legs is more extensive in the material from Zimbabwe: the femora are nearly entirely whitish and the apex of hind tibia is only very narrowly blackish-ringed. The morphology of the anterior cross-ridge with the medial interruption of the frontal area is variable, similarly to *D. kenyensis*: from conspicuously developed to scarcely noticeable. Also, the lateral furrows of postocellar area diverge more or less towards the posterior margin of head.

Etymology.

From Latin *meridianus*, an adjective, "of or belonging to midday or to the south, southern", with reference to the range of the species in southern Africa.

Distega micans FORSIUS, 1934

Xenapates micans FORSIUS, 1934: 395. Described: Male. Type locality: W. Ruwenzori, Kalonge [Democratic Republic of the Congo].

Xenapates affinis FORSIUS, 1934: 394-395. Described: Female, male. Type locality: Kivu, Tshibinda [Democratic Republic of the Congo]. Primary homonym of *Xenapates affinis* FORSIUS, 1927b [= *Neoxenapates affinis* (FORSIUS, 1927)]. **Syn. nov.**

Distega forsiusi BLANK, LISTON & TAEGER in BLANK et al. (2009): 21. Replacement name for *Xenapates affinis* FORSIUS, 1934.

Female (Figs 100, 101)

Head and thorax black. Legs yellow with following black: fore coxa, base of mid and hind coxa, distal tarsomeres darkened. Wings infuscate; intercostal area darker, stigma, costa, subcosta and rest of venation blackish. Abdomen black, but can vary from blackish to dark brown, or yellow with basal and apical terga blackish, to entirely yellow; valvula 3 black.

Head parallel-sided behind eyes. Antenna 1.7-1.8× as long as maximum head width; flagellomeres 5-7 conspicuously longer than wide. Eyes slightly converging below. Anterior margin of clypeus subtruncate, very slightly emarginate; malar space linear. Postocellar area: width : length = 1.0 : 0.6-0.7; lateral furrows convex and slightly diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge distinctly narrowly interrupted medially.

Vertex irregularly microsculptured, shiny, gena micropunctate, sub-shiny, mesonotum with scattered micropunctures, shiny; pubescence on head and mesonotum brownish. Abdomen smooth and shiny. Valvula 3 in lateral view narrowly rounded apically (Fig. 22A). Lancet with about 20-22 serrulae; serrulae (Fig. 22B).

Length: 6.3-8.0 mm.

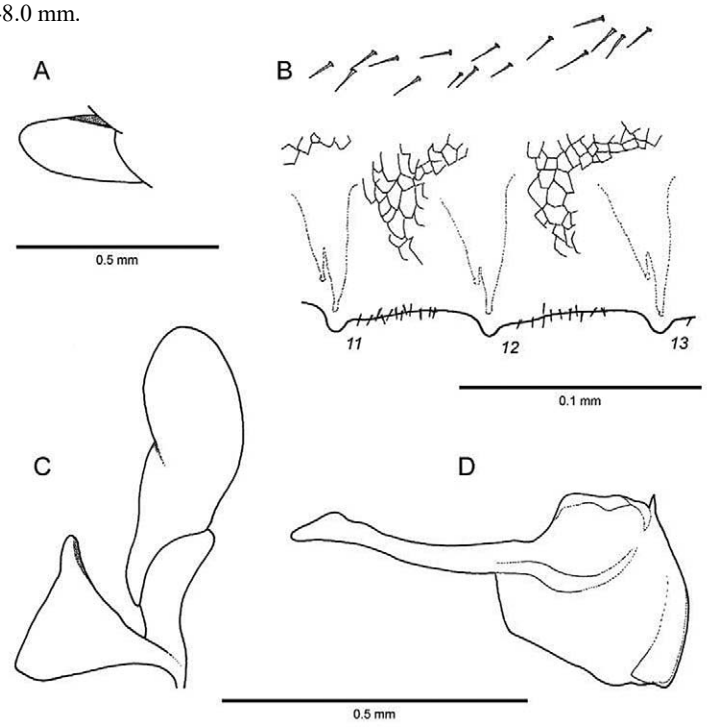


Fig. 22: *Distega micans*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Male (Figs 102, 103)

Coloration similar to that of female. When abdomen entirely yellow, then sternum 9 always blackish; terga 1/8 usually with blackish markings.

Head slightly narrowed behind eyes. Antenna 1.5-1.6× as long as maximum head width. Other features as for female. Genitalia: Figs 22C, D.

Length: 5.3-6.8 mm.

Type material examined.

Xenapates micans

Holotype: ♂. Labels: "Holotype ♂" (red); "Musée du Congo, W. Ruwenzori: Kalonge (2050 m), 4.VII.1932, L. Burgeon"; "R. Dét, 2749"; "*Distega micans* n. sp. ♂, Holotypus, R. Forsius det."; "Holotypus, *Xenapates micans* Forsius ♂, teste: F. Koch, 2015" (red); "*Distega micans* (Forsius) ♂, det.: F. Koch, 2015" (MRAC).

Xenapates affinis

Holotype: ♂. Labels: "Allotype ♂" [red]; "Musée du Congo, Kivu: Tshibinda 18/26-XI-1932, L. Burgeon"; "R. DÉT. DD 2749"; "*Distega affinis* n. sp. Allotypus R. Forsius det. ♂"; "Holotypus *Xenapates affinis* Forsius ♂ teste: F. Koch 2015"; "*Distega micans* (Forsius), det.: F. Koch, 2016" (MRAC).

Paratypes: 1 ♂, 1♀: same data as holotype, except: 2-XII-1932 (1 ♂) (UZMT); Kivu: Lulenga, 24-IX-1932, L. Burgeon (1♀) (MRAC).

Other material examined: Democratic Republic of the Congo: 23 specimens (CASC, MFN, MNHN, MRAC); **Burundi:** 2 specimens (MNHN); **Ethiopia:** 3 specimens (SMNS); **Kenya:** 2 specimens (USNM); **Uganda:** 2 specimens (CASC, USNM);

Distribution: Burundi, Democratic Republic of the Congo, Ethiopia, Kenya, Rwanda, Uganda (Fig. 45).

Remarks.

See under *D. carbonaria* for differential diagnosis.

In both males and females of *D. micans*, significant variability exists only in the coloration: especially the abdomen varies from blackish to entirely yellow. Both extremes are known from the same localities. This variability led to the description of two species by FORSIUS (1934): *Xenapates affinis* (replacement name: *Distega forsiusi* BLANK, LISTON & TAEGER, 2009) and *Xenapates micans*. The genitalia of the holotypes of the more or less pale *X. affinis* and the dark *X. micans* have been examined, and it was impossible to find any differences between these nominal taxa which support the hypothesis that they are different species. *X. affinis* is therefore synonymized with *D. micans*.

The real holotype of *Xenapates affinis* (male) was originally erroneously labelled as allotype and the specimen labelled as holotype (female) is actually a paratype (FORSIUS 1934).

Distega minor n. sp.

Male (Figs 104, 105)

Head black. Thorax black: yellow are pronotum except for lateral corners, and tegula. Legs black with following yellow: apical margin of hind coxa, hind trochanter, apex of fore and mid tibia, hind femur, basal half of fore and mid tibia. Wings infuscate; intercostal area strongly infuscate, stigma black, costa black with broad whitish base, subcosta black and rest of venation blackish. Abdomen black.

Hind wing only with one middle cell (M) present (Fig. 1B). Head narrowed behind eyes. Antenna 1.1× as long as head maximum width, with 6 flagellomeres; flagellomeres 4-5 slightly longer than wide. Eyes converging below. Anterior margin of clypeus truncate; malar space absent. Postocellar area: width : length = 1.0 : 0.8; lateral furrows very slightly convex and diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge interrupted medially.

Vertex irregularly microsculptured, subshiny, gena micropunctate, subshiny, mesonotum irregularly microsculptured, subshiny; pubescence whitish. Abdomen smooth and shiny. Genitalia: Figs 23A, B.

Length: 5.3 mm.

Female: Unknown.

Type material.

Holotype: ♂: "Kenya, Rift Valley Prov[ince], Nguruman, Oloibortoto River irrigation scheme, 1°48'S, 36°04'E, 4-25. III.1999, Malaise trap, R. Copeland"; "Holotypus ♂ *Distega minor* sp. n. det. F. Koch 2016" (red) (USNM).

Distribution: Kenya (Fig. 43).

Remarks.

The combination of six antennal flagellomeres and only one middle cell in hind wing separates *D. minor* from all other *Distega* species. Only *D. brevicornis* is similarly coloured, and also has six flagellomeres, but in the hind wing both middle cells (Rs and M) are present.

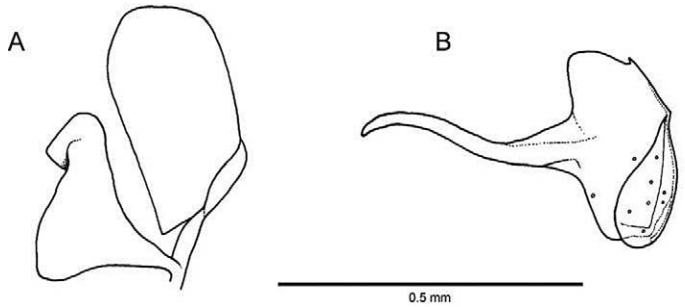


Fig. 23: *Distega minor*: **(A)** Parapenis and harpe (right, ventral aspect); **(B)** Penis valve (left, lateral aspect).

Etymology.
From Latin; minor (rather small), an adjective, referring to the small size of the body.

Distega mocsaryi ENSLIN, 1913

Distega mocsaryi ENSLIN, 1913: 314-315. Described: Female, male. Type locality: not stated. Lectotype designated below.

Female (Figs 106, 107)
Head black; clypeus brownish. Thorax black with following yellow: dorsal margin of propleuron, pronotum, antero-lateral corners, and sometimes a small spot at posterior apex of median lobe of mesoscutum, mesoscutellum, mesoscutellar appendage, metanotum, tegula, postspiracular sclerite, mesepisternum above the transverse suture, and anepimeron. Legs black with following yellow: apical margin of mid and hind coxa, hind trochanter, more or less apical half of fore femur, apex of mid femur, narrow base and apex of hind femur, fore and mid tibia sometimes narrowly blackish-ringed apically, more than basal half of hind tibia, more or less fore and mid basitarsomere. Wings flavescent-hyaline; intercostal area infuscate, stigma, costa, subcosta and rest of venation black. Abdomen yellow with following black; tergum 1with two large medial spots, terga 2-7/8 with wide medial markings; valvula 3, and sometimes a blackish spot at base of valvifer 2.

Head slightly enlarged behind eyes. Antenna 1.1× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes slightly converging below. Anterior margin of clypeus truncate or very shallowly emarginate; malar space absent. Postocellar area: width : length = 1.0 : 0.6; lateral furrows more or less convex and more or less diverging towards posterior margin of head. Frontal area delimited, anterior cross-ridge narrowly interrupted medially.

Vertex, gena and mesonotum smooth and shiny; pubescence on head and mesonotum whitish. Abdomen irregularly microsculptured, subshiny. Valvula 3 in lateral view pointed apically (Fig. 24A). Lancet with about 21 serrulae; serrulae (Fig. 24B).

Length: 8.8-9.5 mm.

Male (Figs 108, 109)
General coloration similar to that of female. Pronotum with black ventro-lateral spots; mesonotum, metanotum and mesopleuron entirely black, postspiracular sclerite blackish. Legs nearly entirely yellow, with coxae black at base, hind tibia sometimes blackish-ringed, and hind tarsus blackish. Costa dirty whitish, apical half more or less blackish. At least tergum 1with blackish medial spots.

Head parallel-sided behind eyes. Antenna 1.5-1.6× as long as maximum head width. Other features as for female. Genitalia: Figs 24C, D.

Length: 6.0-7.7 mm.

Type material examined.
Lectotype, hereby designated: ♀. Labels: "Africa or., KATONA"; "Arusha-Ju, X.1905"; "Type" (red); "*Distega mocsaryi*, Enslin ♀, Dr. Enslin det."; "Lectotypus, *Distega mocsaryi* Enslin, des.: F. Koch, 2012" (red) (HNHM).
Paralectotype: 1 ♂. **Tanzania:** Africa or[ientalis], Arusha-Ju, X.1905, Katona (HNHM).
Other material examined: Kenya: 9 specimens (MFN, USMN); **Tanzania:** 2 specimens (MNHN, ZSM).

Distribution: Kenya, Tanzania (Fig. 42).

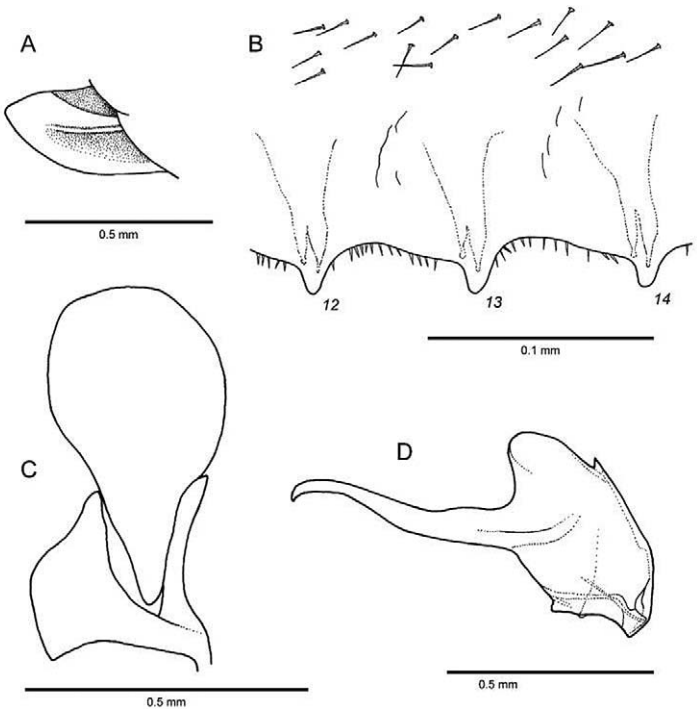


Fig. 24: *Distega mocsaryi*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Remarks.
The females of *D. mocsaryi* are similarly coloured to those of *D. bevisi*. The latter species is separated by the longer than wide flagellomeres 5/6, and especially in the shape of serrulae (Fig. 8B). Furthermore, the range of *D. bevisi* is located in southern Africa, whereas *D. mocsaryi* is distributed in eastern Africa.

Intraspecific variability is especially apparent in the colour pattern of males. Most males are coloured similarly to females, but in some the black markings are strongly reduced, so that the abdomen is more or less entirely yellow: at the palest extreme only tergum 1 is medially blackish-marked. At the darkest extreme, the dorsal surface of the abdomen and mesonotum is entirely black, and the apex of sternum 9 is narrowly blackish margined.

Distega montium KONOW, 1907

Distega montium KONOW, 1907: 2-3. Described: Female, male. Type locality: Africa or. (Kilimandjaro) [Tanzania]. Lectotype designated by Koch et al (2015b).

Distega braunsi ENSLIN, 1911: 667. Described: Female. Type locality: Lichtenberg [sic!] [=Lichtenburg], Transvaal [South Africa]. Synonymised with *D. montium* by KOCH et al. (2015b).

Distega brunniventris ENSLIN, 1913: 314. Described: female. Type locality: Atusha-Ju (Ostafrika) [Tanzania]. Synonymised with *D. montium* by KOCH et al. (2015b).

Female (Figs 110, 111)
Head black. Thorax black with metanotum and metapleuron yellow. Legs yellow; fore coxa and fore trochanter, basal half of mid coxa, narrow apices of tibiae and tarsi blackish, only basal half of basitarsomeres yellowish. Wings infuscate; intercostal area fuscous, stigma, costa, subcosta and rest of venation blackish. Abdomen yellow; valvifer 2 black , valvula 3 black with extreme base yellow.

Head parallel-sided behind eyes. Antenna 1.3-1.4× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes converging below. Anterior margin of clypeus subtruncate; malar space very narrowly developed. Postocellar area: width : length = 1.0 : 0.7; lateral furrows slightly convex and very slightly diverging towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge conspicuously interrupted medially.

Vertex smooth and shiny; gena micropunctate, shiny; pubescence light brown. Mesoscutum nearly impunctate, shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view narrowly rounded apically (Fig. 25A). Lancet with about 21 serrulae; serrulae (Fig. 25B).

Length: 7.5-9.2 mm.

Male

Coloration similar to that of female. Thorax entirely black; tergum1 black, posterior margin of tergum 6, dorsal surface of terga 7/8 and sternum 9 blackish.

Head conspicuously narrowed behind eyes. Antenna 1.3× as long as maximum head width. Malar space absent. Other characters as for female. Genitalia : Figs 25C, D.

Length: 8.0-9.0 mm.

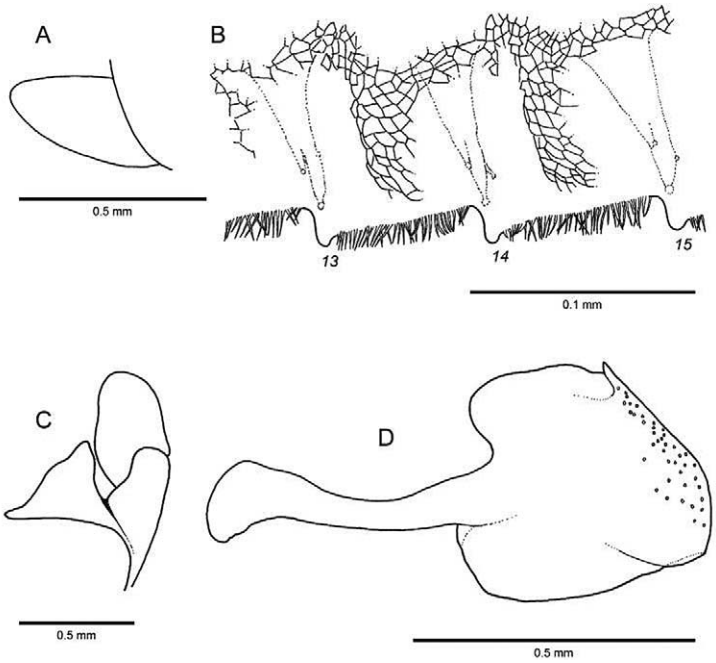


Fig. 25: *Distega montium*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 13-15; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material examined.

Distega montium

Lectotype: ♀. Labels: "Kilimandjaro"; "Type" (red); "Coll. Konow"; "*Distega montium* Knw., Africa or."; "GBIF-GISHym 2964"; "Lectotypus, *Distega montium* Konow, des.: F. Koch, 2012" (red) (SDEI).

Paralectotypes: 3 ♀♀: **Tanzania:** Meru Nieder, Ngara na nyuki, 25.XI., Sjöstedt (1 ♀); Kilimandj[aro], Obstgarten, Steppe, 22.III., Sjöstedt (1 ♀); Kilimandj[aro], Kibinoto, 15.V., Sjöstedt (1 ♀) (NHRS).

Distega braunsi

Holotype: ♀. Labels: "Lichtenburg, Transvaal, Dr. Brauns, 1.I.1906"; "Type, H618, *Distega braunsi* Enslin ♀" (red); "*Distega braunsi* n. sp. ENSLIN, Type"; "Holotypus, teste: F. Koch 2002" (red); "*Distega montium* Konow ♀, det.: F. Koch '02" (red) (TMSA).

Distega brunniventris

Holotype: ♀. Labels: "Type" (red); "Arusha-Ju, 1906"; "Africa or., Katona"; "*Distega brunniventris* n. sp. Enslin ♀, Dr. Enslin det."; "Holotypus, *Distega brunniventris* Enslin ♀, teste: F. Koch, 2012" (red); "*Distega montium* Konow ♀, det.: F. Koch, 2012" (HNHM).

Other material examined: Burundi: 7 specimens (MFN, MNHN); **Democratic Republic of the Congo:** 48 specimens (CASC, HNHM; MFN, MRAC, SMNS); **Ethiopia:** 8 specimens; (RBINS, SMNS); **Kenya**: 3 specimens (NHRS, USNM); **Namibia:** 1 specimen; **South Africa:** 2 specimens (PPRI); **Tanzania:** 6 specimens (NHRS, ZMUC, SMNS, ZSM); **Uganda:** 6 specimens (MFN, MRAC, SAMC, USNM).

Distribution: Burundi, Democratic Republic of the Congo, Ethiopia, Kenya, Namibia, South Africa, Tanzania, Uganda (Fig. 41).

Remarks.
The colour pattern of this species distinguishes it from all others, except for *D. similis*, with differently shaped serrulae.

Distega montium is a very widely distributed species in the Afrotropical Region. Apart from negligible differences in coloration, it was not possible to find any morphological differences, especially in their genitalia, between specimens from southern Africa and those from eastern Africa. Nevertheless, it cannot be excluded that two or more different species are involved, especially in eastern Africa. Extensive material with similar external characters from the eastern provinces of the Democratic Republic of the Congo, Uganda and Burundi has been examined, and a remarkable variability in the shape of serrulae was found, partly with fluid transitions. Accordingly, it was decided not to describe further new species. Only the identically coloured *D. similis* is distinguished as separate, because it invariably has flatter serrulae (Fig. 38B) than the more projecting ones in *D. montium* (Fig. 25B).

The holotypes of *Distega braunsi* and *D. brunniventris* have been examined (KOCH et al. 2015b), and no differences to *D. montium* could be found which justify distinguishing them as separate species. Accordingly, they are synonymized with *D. montium*.

In Ethiopia, near Lake Chamo, adults were found flying among understory plants. The species may prefer humid habitats, since many older records are from near lakes. In Namibia the material was collected at the foot of the Waterberg Mountain, located in the Thornbush Savanna Biome. The habitat there is moist, with dense vegetation.

Distega namibiensis sp. n.

Female (Figs 112, 113)
Head black. Thorax yellow with following black: propleuron, sometimes postspiracular sclerite, mesepisternum below transverse suture, katepimeron and metapleuron, sometimes metascutum blackish-spotted and metascutellum blackish. Legs black with following yellow: narrow apices of mid and hind coxa, hind trochanter, fore and mid tibia except for apex of posterior surface, broad base of hind tibia, more or less fore and mid basitarsomere. Wings slightly bicoloured, with slightly infuscate basal half and more infuscate apical half; intercostal area infuscate, stigma, costa, subcosta and rest of venation blackish. Abdomen yellow with following black: tergum 1with two large medial spots, terga 2-7 with more or less broad medial markings, becoming narrower towards apex of abdomen; valvula 3.

Head slightly narrowed behind eyes. Antenna 1.4× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes slightly converging below. Anterior margin of clypeus truncate; malar space very narrowly developed. Postocellar area: width : length = 1.0 : 0.7; lateral furrows moderately convex and slightly diverging towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge not interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view narrowly rounded dorso-apically (Fig. 26A). Lancet with about 21-23 serrulae (Fig. 26B).

Length: 7.5-10.7 mm.

Male (Figs 114, 115)
Thorax black, except for yellow pronotum with black ventro-lateral corners, and yellow tegula. Legs similarly coloured to those of female. Wings negligibly bicoloured. Abdomen broadly blackish-striped dorsally; sternum 9 varies from black to yellow with blackish posterior margin.

Head narrowed behind eyes. Antenna 1.3× as long as maximum head width. Malar space absent. Other characters as for female. Genitalia (Figs 26C, D).

Length: 7.0-8.3 mm.

Type material.
Holotype: ♀. Labels: "Namibia, W. Caprivi Park Nova. 5km N, 18°09'56"S/21°44'31"E., 16.-18.-XII.1999, Marais, Mann & Newmann MMN8: Yellow pan"; "Holotypus, *Distega namibiensis* sp. n. ♀, det.: F. Koch 2016" (red) (NNIC).
Paratypes: 5 ♂♂, 5 ♀♀: **Botswana:** B1, 42 mls. W. Kalkfontein 11-12.iv.1972, Southern African Exp. B.M. 1972-1 (1 ♀) (BMNH); **Namibia:** same date as holotype (1 ♂); same data as holotype, except: Malaise trap (1 ♂, 1 ♀) (MFN, NNIC); B8, 19km E. Nyangana, 28.III.1992, C. W. & L. B. O'Brien & G. B. Marshall (1 ♀) (CASC); 60 km E Rundu, 21.I.1993, M. Schwarz (1♂) (OLML); Rundu, 30.I.1993 (1 ♂); 31.I.1993 (1♀) J. Gusenleitner (MFN,); Etoscha Nat[ional] Park, Renostervlei, E 19°09'59''S/14°33'12''E, 26.-27.XII.1999, Malaise trap, Marais, Mann & Newmann, MMN7 (1 ♂, 1 ♀) (NNIC).
Other material studied: 2 ♂♂: **Namibia:** 3 km W Kuru, Bushmanland, 19°56'S/20°36'E, 09.-28.I.1991, Pres pitf[all] traps, E. Marais (1 ♂) (MFN); Tsumkwe Dist[rict], 1 km Nhoma River, 19°10'00''S/ 20°36'09''E, 28.-29.XII.1998, Malaise trap, Kirk-Spriggs & Marais (1 ♂) (MFN).

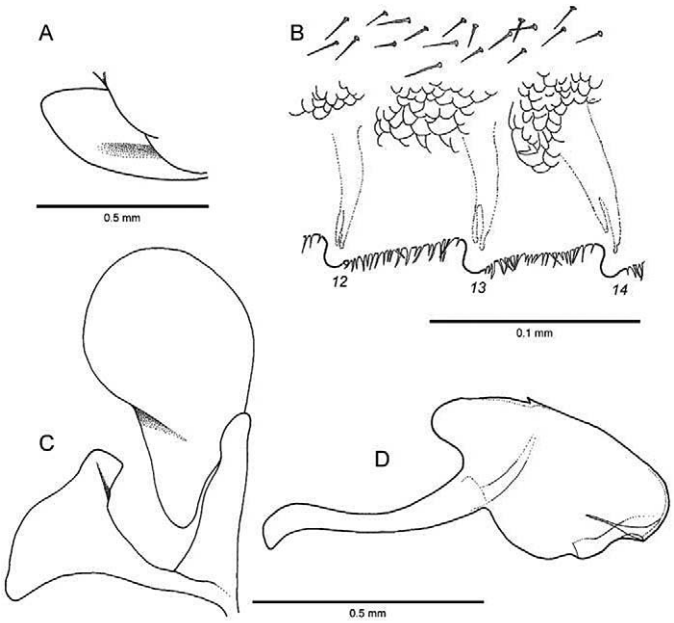


Fig. 26: *Distega namibiensis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Distribution: Botswana, Namibia (Fig. 40).

Remarks.
Distega namibiensis is considered to belong to the *bevisi* group. Especially the shape of the serrulae supports this placement. In coloration the new species resembles *D. chembaensis*, especially in males. The males of both species share a more or less blackish coloured surface of abdomen, which is more distinctly developed in *D. namibiensis*. However, one specimen of the latter has the black coloration on the abdomen strongly reduced to markings only on terga 1/6-8, and sternum 9 except for entirely yellow posterior margin. The males of these species are separated by the different shape of the parapenis (Fig. 12C). The females of *D. namibiensis* also differ from *D. chembaensis* in the more extensive black coloration of the abdomen, and in the shape of the serrulae (Fig. 12B). Finally, based on the large intraspecific variability both in coloration and shape of serrulae in the *D. bevisi* group, it cannot be entirely excluded that *D. namibiensis* and *D. chembaensis* are conspecific.

In contrast to the typical coloration of *D. namibiensis* with the entirely yellow surface of the thorax, one female was recorded from Etoscha National Park with a large black medial spot adjacent to the pronotum. The other characters are similar to those of the other type specimens.

It was impossible to identify clearly two males (other material studied) as *D. namibiensis* because the parapenis differs from the typical shape (Fig. 26C). However, both specimens are similarly coloured to the paratypes.

Etymology.
The new species is named after Namibia, the country where its type locality is located.

Distega natalensis sp. n.

Female (Figs 116, 117)
Head black. Thorax black with pronotum except for ventro-lateral corners, and tegula yellow; sometimes postspiracular sclerite yellow. Legs yellow with following black: coxae, fore and mid trochanter, more or less hind trochanter, base of fore and mid femur, wide apex of hind tibia, tarsi except for base of fore and mid basitarsomere. Wings infuscate; intercostal area fuscous; stigma, costa, subcosta and rest of venation blackish. Abdomen yellow with following black; tergum 1, very narrow medial spots on terga 2-4, whole sawsheath, except narrow junction of valvifer 2 / valvula 3.

Head parallel-sided behind eyes. Antenna 1.3× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes slightly converging below. Anterior margin of clypeus truncate; malar space linearly developed or absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge with small obtuse lateral humps, negligibly interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence light yellow. Abdomen smooth and shiny. Valvula 3 in lateral view narrowly rounded dorso-apically (Fig. 27A). Lancet with about 23-24 serrulae; serrulae (Fig. 27B).

Length: 9.2-10.8 mm.

Male: Unknown.

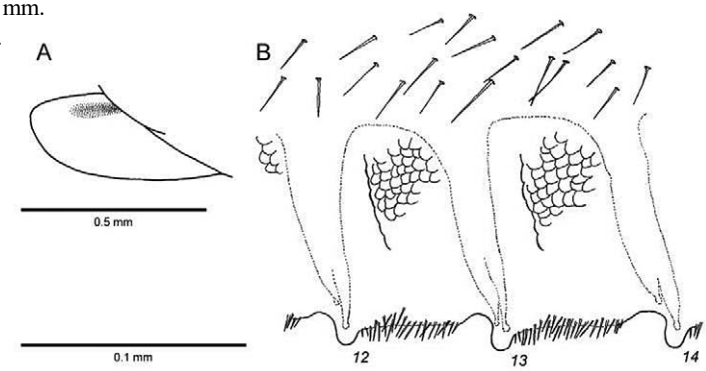


Fig. 27: *Distega natalensis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14.

Type material.

Holotype: ♀. Labels: "Natal, Coedmore nr. Durban, 16.X.1955, C. Jacot-Guillarmod"; "Holotypus, *Distega natalensis* sp. n. ♀, det.: F. Koch 2016" (red) (BMNH).

Paratypes: 4♀♀: same data as for holotype (2♀♀) (BMNH, MFN); Natal, Umbilo, Durban, 20.X.1956, C. Jacot-Guillarmod (1♀) (BMNH); KKloff [Karkloof], Marley 1.XI.[19]15 (1♀) (SAMC).

Distribution: South Africa (Fig. 41).

Remarks.

Based on the shape of serrulae (Fig. 27B) *Distega natalensis* is placed in the *bevisi* group and is distinguished from the other species of the group by the restriction of the yellow coloration to the pronotum and tegulae and the predominantly yellow abdomen. In the other species the yellow coloration of thorax extends partly to the mesonotum and mesopleuron, whereas the abdomen is mostly more extensively yellow.

Intraspecific variability is visible in the black coloration of the abdomen, whilst blackish medial spots are developed also on terga 5/6, and tergum 2 may be nearly entirely black.

Etymology.

The new species is named after the province KwaZulu-Natal, where the type locality Coedmore is located.

Distega nigeriae Forsius, 1927

Distega nigeriae Forsius, 1927a: 79. Described: Female. Type locality: Nigeria, Ibadan. *Distega nigeriae*: Koch et al. 2015a, treated as valid species.

Pachydistega thoracalis Pasteels, 1949: 21-22. Described: Female. Type locality: Sénégal: M'Bambey. **Syn. nov.**

Distega thoracalis (Pasteels, 1949): Pasteels 1955a.

Female (Fig. 118)

Head black. Thorax yellow with following black: a lengthwise spot and mostly a separate small blackish spot on the inner margin of lateral lobe of mesoscutum, anterior surface of propleuron, mesepisternum below transverse suture, katepimeron. Legs black with following yellow: outer surface of mid coxa, inner surface and narrow apex of hind coxa, hind trochanter, apex of fore femur, basal third of hind tibia, fore and mid basitarsomere. Wings strongly infuscate; intercostal area fuscous; stigma, costa, subcosta and rest of venation black. Abdomen yellow; valvula 3 black.

Head parallel-sided or very slightly enlarged behind eyes. Antenna 1.2× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes converging below. Anterior margin of clypeus sub-

truncate, very shallowly emarginate; malar space linearly developed or absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge with small obtuse lateral humps, shallowly interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view pointed dorso-apically (Fig. 28A). Lancet with about 21-22 serrulae; serrulae (Fig. 28B).

Length: 8.7-9.7 mm.

Male (Fig. 119)

Thorax black, except for yellow pronotum, tegula, posterior half of mesoscutellum and metanotum. Legs similarly coloured to those of female. Wings somewhat darker than in female. Abdomen yellow, sometimes sternum 9 with indistinct dark brown posterior margin.

Antenna 1.2× as long as maximum head width. Postocellar area with faintly indicated medial furrow. Malar space absent. Other characters as for female. Genitalia (Figs 28C, D).

Length: 6.5-7.1 mm.

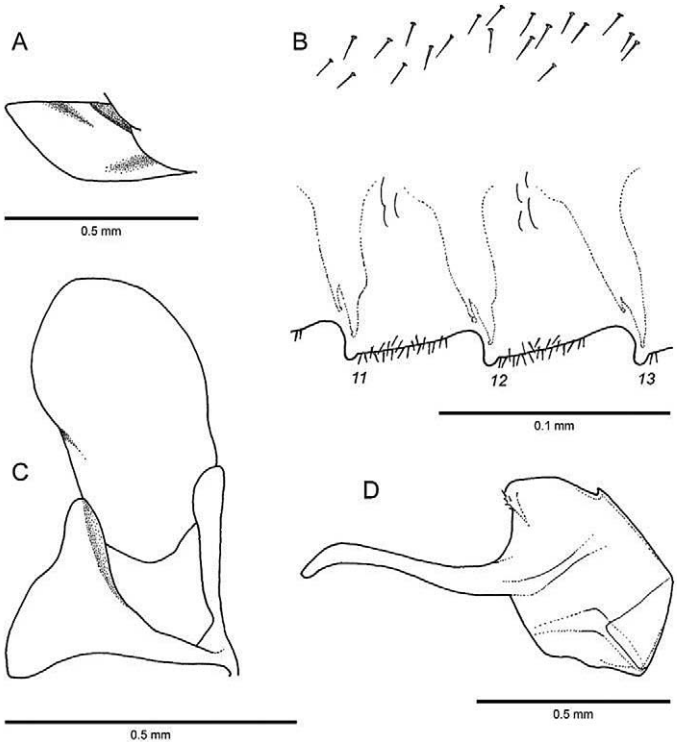


Fig. 28: *Distega nigeriae*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material examined.

Distega nigeriae

Holotype: ♀: "Type, H. T." (red-edged circle); "B. M. Type, Hym. 1.374"; "Ibadan, Nigeria, 20.VII.1924, Coll. F. D. Golding"; "Pres. by Imp. Bur. Ent., Brit.- Mus. 1927-452."; "2122"; "*Distega nigeriae* Forsius n. sp. ♀, Holotype, R. Forsius det."; "Holotypus, *Distega nigeriae* Forsius, teste: F. Koch, 2008" (red); "*Distega nigeriae* Forsius ♀, det.: F. Koch, 2008" (BMNH). Dissected genitalia slide, Mus. Cong. H.4, 41; Di. 7 (MRAC).

Distega thoracalis

Holotype: ♀. Labels: "Holotypus, *thoracalis* Past. ♀" (red); "Genit. ♀, H. 4. 41."; "Coll. Mus. Congo, Sénégal: Mt Bambey, 10-20-VII-1939, M. Risbec"; "R. Det. P., 5196"; "Di 7"; "*Pachydistega thoracalis* n. sp. ♀, J. Pasteels det., 1947"; "RMCA 000017538"; "Holotypus, *Pachydistega thoracalis* Pasteels ♀, teste: F. Koch, 2015" (red); "*Distega thoracalis* (Pasteels) ♀, det.: F. Koch, 2015" (MRAC).

Distribution: Benin, Mali, Nigeria, Senegal, Togo (Fig. 41).

Host plants.
Commelina communis LINNAEUS (Asiatic dayflower), *C. benghalensis* LINNAEUS (Bengal dayflower) (Commelinaceae), and *Digitaria horizontalis* WILLDENOW (Jamaican crabgrass) (Poaceae) (KOCH et al. 2015a). Rearing of the species by G. GOERGEN at the IITAC from larvae found in Benin on the above three host plants enabled all immature stages to be studied. They are partly illustrated in KOCH et al. (2015a). Detailed descriptions, and an account of the bionomy of the species will be published separately. The record by RISBEC (1950), of larvae of a species that he identified as *D.* aff. *nigeriae* feeding on "Mil" in Senegal, is difficult to interpret. The identity of the sawfly requires verification, and the French common name of the plant can refer to various genera of Poaceae, such as *Panicum*, *Pennisetum*, or *Setaria*. However, in the context of African agriculture, and specifically in Senegal (BEZANÇON et al. 1997), it is near certain that the plant was pearl millet, *Pennisetum glaucum* (L.) R.BR. (=*Cenchrus spicatus* (L.) Cav.). RISBEC noted that damage to the host plant during the period of his observations was not significant.

Remarks.
The males of *D. nigeriae* are distinguished from the similarly coloured *D. pectoraloides* by the broadly black apex of the hind tibia of the former. In females, the dorsal surface of the thorax of *D. pectoraloides* is more intensively black coloured. Furthermore, these species can be separated by the shape of the genitalia (*D. pectaraloides*: Fig. 35).

Distega nigeriae and *D. pectoralis* FORSIUS, 1927 were synonymized by PASTEELS (1955a) with *D. mocsaryi* ENSLIN, 1913. The holotype of *D. nigeriae* was examined and compared with the types of the other species, recognized as a valid species, and removed from synonymy with *D. mocsaryi* (KOCH et al. 2015a). *D. nigeriae* differs from *D. mocsaryi* in having a mostly yellow propleuron, predominantly yellow legs, entirely yellow abdomen, an apically in lateral view conspicuously pointed valvula 3 (Fig. 28A), and more acute serrulae (Fig. 28B). The differences to *D. pectoralis* are discussed under that species.

The male of *D. nigeriae* is described here for the first time. Sexual dimorphism in this species is pronounced, and apparent in the predominantly black coloured thorax in males. In females the dorsal surface of the thorax is mostly entirely yellow. In the holotype and some other studied females the lateral lobes of the mesoscutum are blackish spotted, as described.

The morphology including genitalia of the holotypes of *D. nigeriae* and *D. thoracalis* have been examined, and no differences were found between these nominal species which justify distinguishing them as separate species. Therefore *D. thoracalis* is synonymized with *D. nigeriae*.

Distega nigra sp. n.

Male (Figs 120, 121)
Head black. Thorax black with pronotum except for ventro-lateral corners, and tegula yellow. Legs yellow with following black: coxae except for posterior margin of hind coxa, fore and mid trochanter, wide base of fore and mid femur, moderately wide apex of hind tibia, hind tarsus. Wings infuscate; intercostal area black; stigma, costa except dirty whitish basal half, subcosta and rest of venation black. Abdomen black.

Head slightly narrowed behind eyes. Antenna 1.4× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes converging below. Anterior margin of clypeus truncate; malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows moderately convex and slightly diverging towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge with small obtuse lateral humps, narrowly and shallowly interrupted medially.

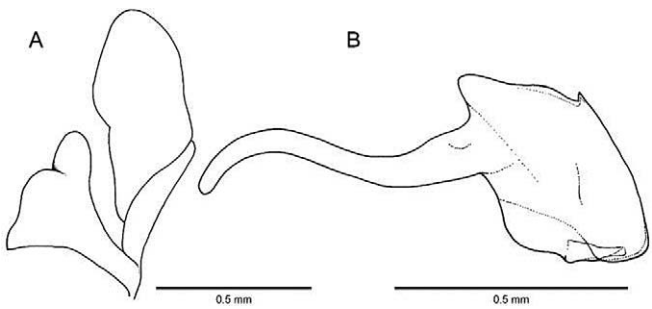


Fig. 29: *Distega nigra*: **(A)** Parapenis and harpe (right, ventral aspect); **(B)** Penis valve (left, lateral aspect).

Vertex and gena smooth and shiny; pubescence whitish. Mesoscutum weakly and irregularly microsculptured, shiny; pubescence similar to that on head. Abdomen smooth and shiny. Genitalia (Figs 29A, B). Length: 8.8 mm

Female: Unknown.

Type material.
Holotype: ♂. Labels: "South Africa, Natal, Mkuze Reserve, 2732Cb, 3.-11.X.1977, 300 m, JGH Londt"; "Holotypus, *Distega nigra* sp. n. ♂, det.: F. Koch 2016" (red) (NMSA).

Distribution: South Africa (Fig. 45).

Remarks.
In coloration, especially the entirely black abdomen, *D. nigra* is distinctly separated from all other *Distega* species. In superficial assessment, *D. nigra* could belong to the *D. bevisi* species group. However, at least the male is at present difficult to place there, because the shape of penis valve (Fig. 28B) and parapenis (Fig. 28A) are different to the other males of that group.

Etymology.
A Latin adjective meaning black, with reference to the body colour.

Distega nigriceps (ENDERLEIN, 1920)

Xenapates nigriceps ENDERLEIN, 1920: 349. Described: Male. Type locality: Fernando Po [Equatorial Guinea]
Distega nigriceps: PASTEELS 1949: 26.
Distega bequaerti FORSIUS, 1928a: 331-332. Described: Female. Type locality: Belgian Congo [Democratic Republic of the Congo], Coquilhatville. **Syn. nov.**
Distega fumipennis PASTEELS, 1949: 27, 32. Described: Male. Type locality: Eala [Democratic Republic of the Congo]. **Syn. nov.**
Distega inaequalis PASTEELS, 1953: 119. Described: Female, male. Type locality: Lusinga [Democratic Republic of the Congo]. **Syn. nov.**
Distega luteipes PASTEELS, 1949: 27, 33. Described: Male. Type locality: Congo Belge [Democratic Republic of the Congo]: Lulua, Kapanga. **Syn. nov.**
Xenapates bequaerti var. *maculata* FORSIUS, 1934: 396. Described: Female, male. Type locality: Stanleyville [Democratic Republic of the Congo]. **Syn. nov.**
Distega bequaerti var. *maculata*: KOCH 1995: 370.
Distega occipitalis PASTEELS, 1949: 28, 37. Described: Female. Type locality: Ruanda [Rwanda]: Ruhengeri (riv. Penge), 1.800-1.825m. **Syn. nov.**
Distega pallidiventris FORSIUS, 1927a: 81-82. Described: Female. Type locality: Uganda, Kampala. **Syn. nov.**
Distega ugandana FORSIUS, 1928b: 41-42. Described: Female. Type locality: Uganda, Kampala. **Syn. nov.**
Distegella velutina PASTEELS, 1951: 198-199. Described: Male. Type locality: Haut Uélé: Paulis [Democratic Republic of the Congo]. **Syn. nov.**
Distega velutina: PASTEELS 1955a: 404.

Female (Figs 122, 123)
Head black; basal half of mandible light brown, labrum sometimes light brown or yellowish, sometimes antenna brownish, becoming darker towards apical flagellomeres. Thorax entirely yellow or dorsal surface more or less blackish, sometimes also mesosternum and mesopleuron more or less blackish. Legs yellow with following blackish; narrow apex of mid tibia, wide apex of hind tibia, more or less mid and hind tarsus. Wings flavescent hyaline to infuscate; corresponding intercostal area darker; stigma, costa, subcosta and rest of venation light brown to blackish. Abdomen yellow; valvula 3 black.

Head parallel-sided or slightly narrowed behind eyes. Antenna filiform; 1.8-1.9 × as long as maximum head width; distal flagellomeres conspicuously longer than wide. Eyes very slightly converging below. Anterior margin of clypeus very slightly emarginate, sometimes negligibly elongated medially; malar space narrow, about a half diameter of lateral ocellus. Postocellar area: width : length = 1.0 : 0.7; lateral furrows nearly straight and very slightly diverging towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge not interrupted. Frontal area with large, shallow, rounded groove adjacent to the anterior ocellus.

Vertex and gena smooth and shiny; pubescence from pale to blackish. Mesoscutum weakly, irregularly microsculptured, shiny; pubescence similar to that on head. Abdomen smooth and shiny. Valvula 3 in lateral view narrowly rounded apically (Fig. 30A). Lancet with about 16-18 serrulae; serrulae (Fig. 30B).

Length: 7.0-8.2 mm.

Male (Figs 124, 125)
Head entirely black, sometimes antenna brownish. Thorax yellow except for blackish dorsal surface. Abdomen yellow, sometimes distal terga with blackish markings. Legs similarly coloured to those of female, sometimes apical half of dorsal surface of mid and hind femur blackish, mid and hind tibiae and tarsi black. Wings somewhat darker than in female.

Head narrowed behind eyes. Antenna 1.9-2.1x as long as maximum head width. Other characters as for female. Genitalia (Figs 30C, D).

Length: 6.2-6.8 mm.

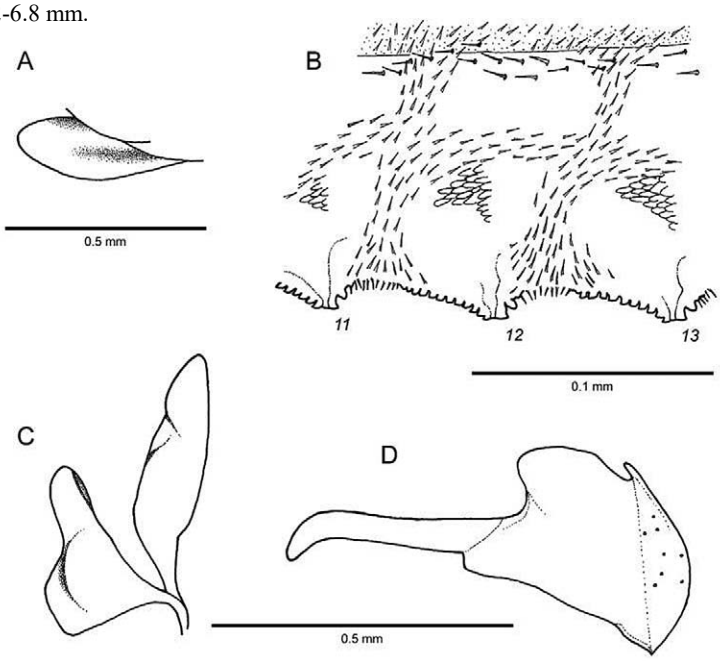


Fig. 30: *Distega nigriceps*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material examined.

Xenapates nigriceps

Holotype: ♀. Labels: "Type" (red); "Fernando Po, Conradt"; "*Xenapates nigriceps* Enderl., Type, Dr. Enderlein det. 1918"; "Holotype *Xenapates nigriceps* Enderlein, 1920, ♀, det. T. Huflejt, 1989" (red); "*Distega nigriceps* (Enderlein) ♀, det. T. Huflejt, /89"; "Holotypus, *Xenapates nigriceps* Enderlein ♀, teste: F. Koch 2007" (red); "*Distega nigriceps* (Enderlein) ♀, det.: F. Koch 2007" (ZMPA).

Distega bequaerti

Holotype: ♀. Labels: "Holotypus, *bequaerti* Fors., ♀" (red); "Musée du Congo, Coquilhatville, 15.X.1922, Dr. Bequaert"; "R. Dét., 1479"; "*Distega bequaerti* n. sp. ♀, R. Forsius"; "R. Det., 5196"; "*Distega pallidiventris* Fors., J. Pasteels det., 1947"; "RMCA 000017531"; "Holotypus, *Distega bequaerti* Forsius ♀, teste: F. Koch, 2007", "*Distega nigriceps* (Enderlein) ♀, det.: F. Koch, 2007" (MRAC).

Distega fumipennis

Holotype: ♂**.** Labels: "Typus. ♂, *fumipennis* Past." (red); "Musée du Congo, Eala, XI.1934, J. Ghesquière"; "R. Det., D. 5197"; "*Distega fumipennis* n. sp. ♂, J. Pasteels det., 1947"; "RMCA 000017527"; "Holotypus" (red); "Holotypus, *Distega fumipennis* Pasteels ♂, teste: F. Koch 2015" (red); "*Distega nigriceps* Enderlein ♂, det.: F. Koch 2015" (MRAC).
Paratype: 1 ♀. **Democratic Republic of the Congo:** Same data as holotype, except: IV. 1933, A. Corbisier (MRAC).

Distega inaequalis

Holotype: ♀**.** Labels: "Holotypus" (red); "Type" (red/white striped); "Congo belge: P. N. U., Lusinga (1.760 m), 1.-8.X.1947 [VII] [the printed VII written over by hand], Mis. G. F. de Witte. 1126a"; "Coll. Mus. Congo"; (ex coll. I. P. N. C. B.)"; "*Distega inaequalis* n. sp. ♀, J. Pasteels det., 1952"; "RMCA 000017528"; "Holotypus, *Distega inaequalis* Pasteels ♀, teste: F. KOCH 2015" (red); "*Distega nigriceps* Enderlein ♀, det.: F. Koch 2015" (MRAC).
Paratype: 1 ♂. **Democratic Republic of the Congo:** Same data as holotype except: 8.V.1947 (MRAC).

Distega luteipes

Holotype: ♂**.** Labels: "Holotypus *luteipes* Past. ♂" (red); "Musée du Congo, Lulua: Kapanga, -III.1933, F. G. Overleat";

"R. Det., Z. 5197"; "*Distega luteipes* n. sp. ♂, J. Pasteels det., 1947"; "RMCA 000017529"; "Holotypus, *Distega luteipes* Pasteels ♂, teste: F. KOCH 2015" (red); "*Distega nigriceps* Enderlein ♂, det.: F. Koch 2015" (MRAC).

Paratype: 1 ♀. **Democratic Republic of the Congo:** Stanleyville, 11.VII.1932, J. Vrydagh (MRAC).

***Xenapates bequaerti* var. *maculata*.**

Holotype: ♀. Labels: "Holotypus, var. *maculata* Fors. ♀, var. de *Bequaerti* Fors." (red); "Musée du Congo, Stanleyville, 20.VII.1929, A. Collart"; "R. Dét, 2749"; "*Distega bequaerti* For. v. *maculata* n. var., ♀, Holotype, R. Forsius det."; "R. Dét.,5196"; "*Distega pallidiventris* Fors., J. Pasteels det. 1947"; "RMCA 000017532"; "Holotypus, *Xenapates bequaerti* var. *maculata* Forsius, teste: F. Koch, 2015" (red); "*Distega nigriceps* (Enderlein) ♀, det.: F. Koch, 2007" (MRAC).

Distega occipitalis

Holotype: ♂**.** Labels: "♂"; "Holotypus (red)"; "Type (red)"; "Congo belge: Ruanda, Ruhengeri (riv. Penge), 1800-1825 m, 29.IX.1934, G.F. de. Witte: 664"; "Coll. Mus. Congo, (ex coll. I. P. N. C. B.)"; "*Distega occipitalis* n. sp. ♂, J. Pasteels det., 1947"; "RMCA 000017530"; "Holotypus, *Distega occipitalis* Pasteels ♂, teste: F. Koch 2015" (red); "*Distega nigriceps* Enderlein ♂, det.: F. Koch 2015" (MRAC).

Distega pallidiventris

Holotype: ♀. Labels: "Type" (red-edged circle); "B. M. Type, Hym. 1.375"; "Kampala, Uganda, 7.X.1915, 5279, C. C. Gowday"; "Pres. by Imp. Bur. Ent., Brit.- Mus. 1927-452."; "*Distega pallidiventris* Forsius n. sp. ♀, Typus, R. Forsius det."; "Holotypus, *Distega pallidiventris* Forsius, teste: F. Koch, 2007" (red); "*Distega nigriceps* (Enderlein) ♀, det.: F. Koch, 2007" (BMNH).

Distega ugandana

Holotype: ♀. Labels: "Type" (red-edged circle); "B. M. Type, Hym. 1.377"; "Uganda, H. Hargreaves."; "Uganda, Kampala, 12.V.[26], H. H."; "Imp. Bur. Entom."; "Pres. by Imp. Bur. Ent., Brit.- Mus. 1927-465."; "*Distega ugandana* n. sp. ♀, Holotype, R. Forsius det."; "Holotypus, *Distega ugandana* Forsius, teste: F. Koch, 2015" (red); "*Distega nigriceps* (Enderlein) ♀, det.: F. Koch, 2015" (BMNH).

Distegella velutina

Holotype: ♂. Labels: "Holotypus, *velutina* Past. ♂" (red); "Coll. Mus. Congo, Mt Uele: Mauda, III-1925, Dr. H. Schouteden"; "R. Det. W., 5515"; "*Distegella velutina* n. sp., J. Pasteels det., 1950"; "RMCA 000017535"; "Holotypus, *Distegella velutina* Pasteels ♂, teste: F. Koch, 2015" (red); "*Distega nigriceps* (Enderlein) ♂, det.: F. Koch, 2015" (MRAC).

Other material examined: Angola: 2 specimens (BMNH); **Benin:** 24 specimens (MFN, IITAC); **Cameroon:** 2 specimens (MFN); **Democratic Republic of the Congo:** 37 specimens (MARC, MFN, UZMT, RBINS); **Gaboon:** 1 specimen (RBINS); Ghana: 5 specimens (MFN, OLML); **Kenya:** 5 specimens (MFN, USNM); **Malawi:** 2 specimens (UZMT); **Republic of the Congo:** 1 specimen (MFN); **Sierra Leone:** 1 specimen (USNM); **Togo:** 18 specimens; (MNF, IITAC);

Distribution: Angola, Benin, Cameroon, Central African Republic, Democratic Republic of the Congo, Equatorial Guinea, Gaboon, Ghana, Kenya, Liberia, Malawi, Republic of the Congo, Rwanda, Togo, Uganda (Fig. 40).

Remarks.

The combination of the large rounded groove on the frontal area adjacent to the anterior ocellus, and the very long antenna separate *D. nigriceps* easily from all other *Distega* species. In the very distinctive shape of its serrulae, *D. nigriceps* resembles *D. clypealis*, and it is possible that both species do not belong to *Distega*. As mentioned under the discussion of character states, above, the outline of the distal part of the penis valve of this species appears to have two different basic shapes: rounded as in Fig. 30D, or truncate. An apparently truncate profile is caused by the folding back of the (rounded) distal portion of the valve, so that it overlaps the more caudal part. Male *D. nigriceps* can additionally be readily recognised by the presence of an arcuate ridge on the parapenis, absent in all other species.

Distega nigriceps is the most widely distributed *Distega* species, occurring from the west coast nearly to the east coast, and from Togo in the North to Malawi in the South. Variability, especially in coloration, is strongly developed and correspondingly many synonym taxa have been described.

The holotype (female) of *D. bequaerti* is in very bad condition: no antennae, no tarsi, and no fore wings. The holotype was already in a poor state, when FORSIUS (1928) described this nominal species. The coloration of thorax and abdomen is entirely yellow. The body of the holotype (male) of *D. fumipennis*, is dorsally black, with yellow sterna. The paratype (female) is yellow, resembling the holotype of *D. bequaerti*. The same is valid for the holotype (female) of *D. inaequalis*. In *D. luteipes* the holotype (male) is coloured similarly to that of *D. fumipennis*, but the paratype (female) is again entirely yellow. The holotype of the *Xenapates bequaerti* var. *maculata* (female) is entirely yellow except for blackish lateral lobe of mesoscutum and tegula. The holotype (male) of *D. occipitalis* is characterized by a black thorax and a predominantly yellow abdomen with blackish marked terga and sternum 9. In the holotype (female) of *D. pallidiventris* the dorsal surface of thorax is blackish and the abdomen is yellow. Similarly coloured is the holotype (female) of *D. ugandana*. The body of the holotype (male) of *D. velutina* is entirely black, except for basal sterna.

All holotypes of the mentioned species were examined, including the genitalia, and compared with the holotype of *D. nigriceps*, and no significant differences in morphology were found. Therefore these species are here synonymized with *D. nigriceps*.

Distega nyalaensis sp. n.

Male (Figs 126, 127)
Head black. Thorax black; yellow are pronotum except for ventro-lateral corners, and tegula except for narrow inner margin. Legs black with following yellow: coxae, hind trochanter, dorsal surface of fore and mid femur, fore and mid tibia except for a very narrow blackish stripe on the posterior surface, fore and mid tarsus. Wings infuscate; intercostal area fuscous; stigma, costa, subcosta and rest of venation black. Abdomen black; terga laterally and ventrally with very narrow pale posterior margins.

Head slightly narrowed behind eyes. Antenna 1.4× as long as maximum head width; flagellomeres 5/6 negligible longer than wide. Eyes slightly converging below. Anterior margin of clypeus truncate; malar space absent. Postocellar area: width : length = 1.0 : 0.8; lateral furrows slightly convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge negligible or not interrupted medially.

Vertex smooth and shiny, gena and mesoscutum micropunctate, shiny; pubescence whitish. Abdomen smooth and shiny. Genitalia (Figs 31A, B).

Length: 7.7 mm.

Female: Unknown.

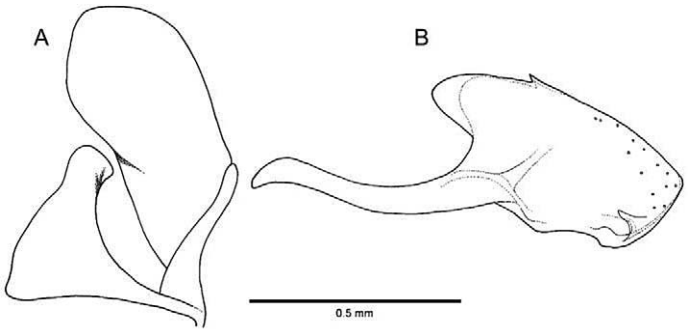


Fig. 31: *Distega nyalaensis*: **(A)** Parapenis and harpe (right, ventral aspect); **(B)** Penis valve (left, lateral aspect).

Type material.
Holotype: ♂. Labels: "South Africa, Tvl [Transvaal], D'Nyala Nat[ure] Res[erve], Ellisras District, 23.458 27.49E, 10-14.XI.1986, G. L. Prinsloo"; "Malaise Trap"; "National Coll[ection] of Insects Pretoria. S[outh] Afr[ica]"; "Holotypus, *Distega nyalaensis* sp. n. ♀, det. F. Koch 2016" (red) (PPRI).
Paratype: 1♂: Same data as holotype (PPRI).

Distribution: South Africa (Fig. 41).

Remarks.
Based on the shape of the parapenis, which in *D. nyalaensis* is similar to that of *D. namibiensis*, the species is placed in the *D. bevisi* species group. In the black coloration of the abdomen *D. nyalaensis* is easily separated from all other *Distega* species except for *D. nigra*, which is distinguished by its conspicuously paler legs and in the shape of genitalia (Figs 29A, B).

Etymology.
This species is named after the D'Nyala Nature Reserve (Limpopo Province, South Africa), in which its type locality is situated.

Distega orientalis sp. n.

Female (Figs 128, 129)
Head black. Thorax black with following yellow-orange: pronotum except for black ventro-lateral spots, mesonotum, mesoscutellar appendage, and metascutellum (which is sometimes blackish-margined on anterior margin). Legs yellow with following black: coxae, fore and mid trochanter, base of fore and mid

femur, narrow apex of hind tibia, distal tarsomeres of fore and mid leg, hind tarsus except for basitarsomere. Wings subhyaline; intercostal area strongly infuscate; costa dark brown except for pale base; stigma, subcosta and rest of venation black. Abdomen black with blue metallic lustre.

Head parallel-sided or very slightly enlarged behind eyes. Antenna 1.1× as long as maximum head width; flagellomeres 5/6 broader than long. Eyes converging below. Anterior margin of clypeus truncate or very slightly elongated medially; malar space linear, nearly absent. Postocellar area: width : length = 1.0 : 0.6; lateral furrows convex and parallel-sided or slightly diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge not or narrowly interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen transversely microsculptured, but shiny. Valvula 3 in lateral view obtusely pointed dorso-apically (Fig. 32A). Lancet with about 24-25 serrulae; serrulae (Fig. 32B).

Length: 6.0-7.0 mm.

Male: Unknown.

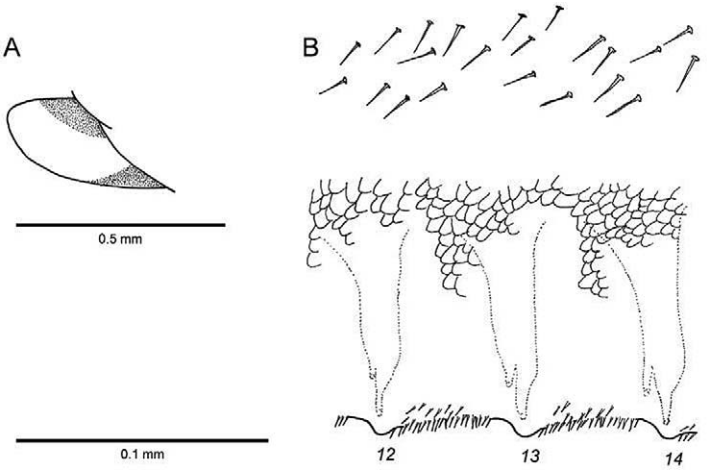


Fig. 32: *Distega orientalis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 12-14.

Type material.
Holotype: ♀. **Kenya**: Labels: "Aberdare Country Club, Mweiga, 6500 ft., Apr. 1975, Kenya, M. P. Clifton, D. Angwin, I. Hardy"; "Holotypus, *Distega orientalis* ♀ sp. n., det.: F. Koch, 2016" (red) (NMKE).
Paratypes: 3 ♀♀. **Kenya:** Same data as holotype (1 ♀) (NMKE); Nairobi Alluaud & Jeannel Nov. 1911, 1660 m St. 10 (1♀) (BMNH); **Tanzania:** Serengeti, Bwawana, 03.02.2004 (1♀) (MFN).

Distribution: Kenya, Tanzania (Fig. 42).

Remarks.
Distega orientalis belongs to the *sjoestedti* species group. With its entirely black mesopleuron, *D. orientalis* is clearly distinguished from all other species of this group.

The small intraspecific variability of the new species is already described in the description. In contrast to the other material, in the specimen from Tanzania the interruption of the anterior cross-ridge of the frontal area is conspicuously developed. Generally, in the *D. sjoestedti* species group the morphology of the anterior cross-ridge with the medial interruption of the frontal area seems to be variably developed, from distinctly visible to scarcely noticeable (see *D. kenyensis* and *D. meridiana*).

Etymology.
A Latin adjective, meaning "of the East", with reference to the distribution in eastern Africa.

Distega paradoxalis PASTEELS, 1954

Distega paradoxalis PASTEELS, 1954: 499-500. Described: Male. Type locality: Guinée française [Guinea]: Région Kindia, Damakanya.

Male (Figs 130, 131)
Head and thorax black. Legs yellow with fore coxa blackish laterally, hind tibia with very narrow blackish apex, and tarsi brownish. Wings infuscate; intercostal area strongly infuscate; stigma, costa, subcosta and rest of venation dark brown. Abdomen black; terga ventro-laterally light brown, sterna yellow.

Hind wing only with cell (M) present (Fig. 1B). Head slightly narrowed behind eyes. Antenna 1.3× as long as head maximum width; flagellomeres 4/5 slightly longer than wide. Eyes converging below. Anterior margin of clypeus subtruncate, very slightly emarginate; malar space absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge not interrupted.

Vertex smooth, except for micropunctate postocellar area, shiny; gena and mesoscutum micropunctate, shiny; pubescence brownish. Abdomen smooth and shiny. Genitalia: Figs 33A, B.

Length: 6.7 mm.

Female: Unknown.

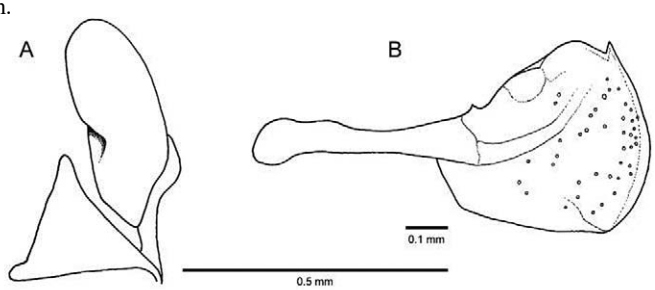


Fig. 33: *Distega paradoxalis*: **(A)** Parapenis and harpe (right, ventral aspect); **(B)** Penis valve (left, lateral aspect).

Type material examined.
Holotype: ♂. Labels: "Exp. Mus. G. Frey, Franz-Guinea 1951, W. Afr. leg. Bechyne"; "Région Kindia, Damakanya, 29.-30.IV.[19]51"; "IFAN 1953"; "Museum Paris"; "Holotype" (red); "*Distega paradoxalis* n. sp. J. Pasteels det., 1953"; "Holotype ♂" (red); "Holotypus, *Distega paradoxalis* Pasteels ♂, teste: F. Koch, 2015" (red); "*Distega paradoxalis* Pasteels ♂, det.: F. Koch, 2015" (MNHN).

Distribution: Guinea (Fig. 46).

Remarks.
At present, two species of *Distega* are known with one middle cell (M) in the hind wing: *D. minor* and *D. paradoxalis*. *Distega paradoxalis* differs in its entirely black thorax, whereas in contrast to *D. minor* the ventral surface of abdomen is yellow (sterna) and the lateral edges light brown (edges of terga).

Distega pectoralis FORSIUS, 1927 sp. rev.

Distega pectoralis FORSIUS, 1927a: 77-79. Described: Female. Type locality: Mlanje, Nyassaland [Malawi].

Female (Figs 132, 133)
Head black. Thorax yellow with following black; propleuron, mesosternum, mesepisternum below transverse suture, katepimeron. Legs black with following yellow: apical margin of coxae, hind trochanter, narrow base of hind femur, fore and mid tibia except for a blackish stripe on posterior surface, basal third of hind tibia, more or less fore tarsus. Wings infuscate; intercostal area strongly infuscate, stigma, costa, subcosta and rest of venation blackish. Abdomen yellow; tergum 1 with two large black medial spots, tergum 2/3 with moderately large and terga 4/6-8 with very small medial spots; valvula 3 black.

Head slightly narrowed behind eyes. Antenna about as long as the thorax (FORSIUS 1927a) (HT); flagellomeres 5/6 as long as wide (FORSIUS 1927a). Eyes converging below. Anterior margin of clypeus truncate (Fig. 34A); malar space linear. Postocellar area: width : length = 1,0 : 0,7; lateral furrows convex and slightly diverging towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge narrowly interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence yellowish. Abdomen smooth and shiny. Valvula 3 in lateral view narrowly rounded dorso-apically (Fig. 34B). Lancet with about 22 serrulae; serrulae at centre moderately rounded apically (Fig. 34C).

Length: 9.0-9.2 mm.

Male: Unknown.

Type material examined.
Holotype: ♀. Labels: "Type, H. T." (red-edged circle); "B. M. Type, Hym.,1.373"; Nyasaland. Mlanje, 29 Apl[April] 1913, S. A. Neave."; "Pres. by Imp. Bur. Ent., Brit. Mus., 1927-452."; "*Distega pectoralis* n. sp. ♀, holotype, R. Forsius det."; "Holotypus, *Distega pectoralis* Forsius ♀, teste: F. Koch, 2009" (red); "*Distega pectoralis* Forsius ♀, det.: F. Koch, 2009" (BMNH).

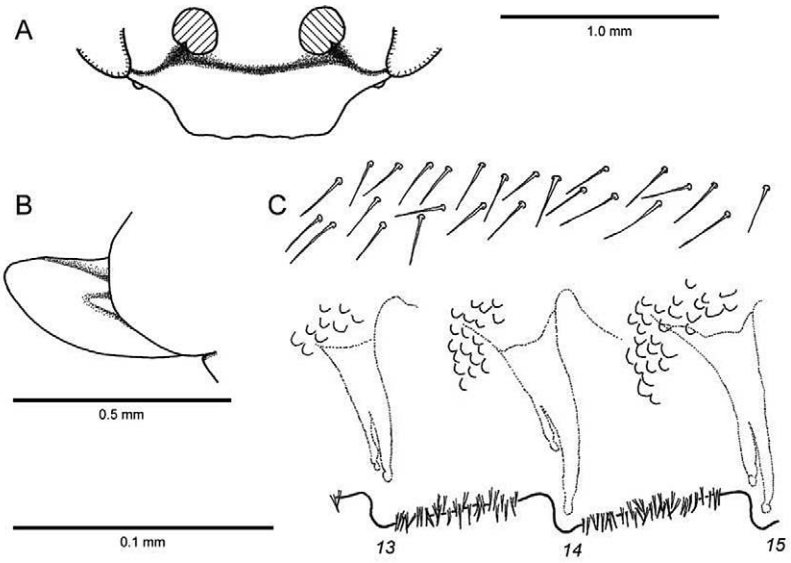


Fig. 34: *Distega pectoralis*: **(A)** Clypeus; **(B)** Valvula 3 (lateral aspect); **(C)** Serrulae 13-15.

Other material studied: 1 ♀. **Mozambique:** Inhacoro, Près Chemba, 1938, R. Thénot (MNHN).

Distribution: Malawi, Mozambique (Fig. 43).

Remarks.

Based on the shape of the serrulae, *D. pectoralis* appears to be a member of the *D. bevisi* species group. *Distega pectoralis* differs from the similarly coloured *D. nigeriae* in having predominantly black legs, an extensively black marked abdomen, and in the shape of serrulae (*D. nigeriae* Fig. 28B). Furthermore, in *D. nigeriae* valvula 3 is conspicuously pointed dorso-apically (Fig. 28A). *Distega mocsaryi* differs from *D. pectoralis* in having a black mesoscutum, and an extensively black dorsal surface of abdomen. Additionally, their serrulae and valvulae 3 are differently shaped (*D. nigeriae*: Fig. 28).

The holotype of *D. pectoralis* is in poor condition: left antenna is missing and right antenna is only pentamerous; fore tarsi completely missing, mid and hind tarsi more or less and hind tibia missing; fore and hind wing right broken. Therefore the redescription, especially of tarsi and antennae, partly follows the description by FORSIUS (1927a).The female from Mozambique differs from the holotype in the paler legs and abdomen: fore coxa only blackish-margined basally and laterally, hind coxa with yellow apical half, anterior surface of fore femur black, mid femur black with yellow dorsal surface, hind tibia with black apical third, mid tarsus with yellow basitasomere, and on the abdomen only terga 1/6 with blackish medial markings.

Distega pectoralis and *D. nigeriae* were synonymized by Pasteels (1955a) with *D. mocsaryi*. The holotype of *D. pectoralis* was examined and compared with the types of the other species, recognized as a valid species, and is now removed from the synonymy with *D. mocsaryi* and *D. nigeriae*.

Distega pectoraloides sp. n.

Female (Figs 134, 135)

Head black; clypeus and malar space yellowish, labrum and supraclypeal area brownish or sometimes entirely black. Thorax yellow with following black: median lobe except for lateral margin, lateral lobe of mesonotum, mesosternum, mesepisternum below transverse suture, sometimes a lengthwise spot at the posterior margin of mesepisternum above transverse suture adjacent to anepimeron, katepimeron. Legs yellow with following black: sometimes apex of hind femur, wide apex of hind tibia, distal tarsomeres of mid tarsus, hind tarsus. Wings infuscate; intercostal area darker; stigma, costa, subcosta and rest of venation blackish. Abdomen yellow; valvula 3 black.

Head parallel-sided or very slightly enlarged behind eyes. Antenna 1.3× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes converging below. Anterior margin of clypeus truncate; malar space linearly developed or absent. Postocellar area: width : length = 1.0 : 0.6; lateral furrows slightly convex and slightly diverging towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge not interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view pointed dorso-apically (Fig. 35A). Lancet with about 24-25 serrulae; serrulae (Fig. 35B).

Length: 8.7-10.3 mm.

Male

Thorax black, except for yellow pronotum, tegula, dorsal half of propleuron, and postspiracular sclerite. Legs yellow; fore coxa black-margined at base, mid and hind coxa with blackish spot at base and hind tibia narrowly blackish-ringed apically.

Head slightly narrowed behind eyes. Antenna 1.3× as long as maximum head width; flagellomeres 5/6 slightly broader than long. Anterior cross-ridge weakly interrupted medially. Malar space absent. Other characters as for female. Genitalia (Figs 35C, D).

Length: 7.2-7.8 mm.

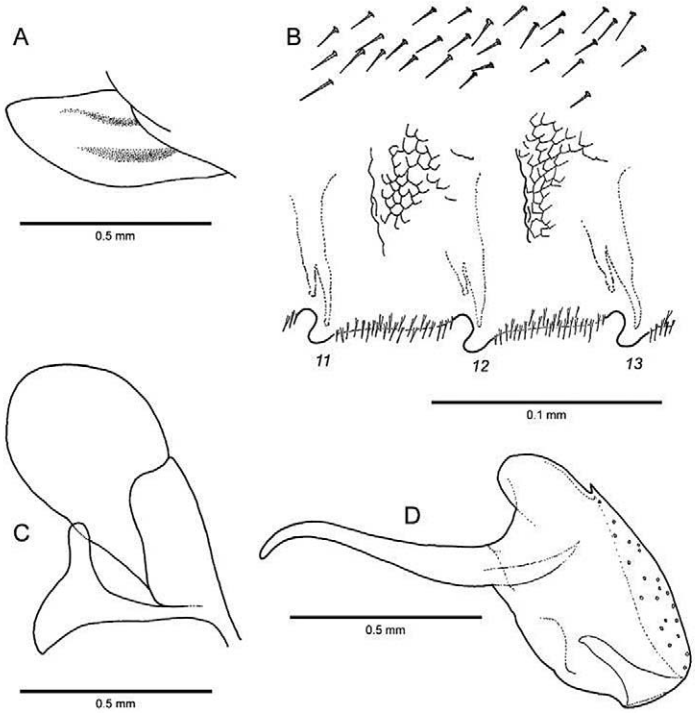


Fig. 35: *Distega pectoraloides*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Type material.

Holotype: ♀. **Tanzania:** Labels: "Dar es Salaam, 18.XII.1958-5.I.1959, Lindner leg."; "Holotypus, *Distega pectoraloides* sp. n. ♀, det. F. Koch 2016" (red) (SMNS).

Paratypes: 3 ♂♂, 4 ♀♀. **Kenya:** Mombasa, 12.-13.II.1912, S. A. Neave (1 ♀) (BMNH); Gazi Beach, Kwale District, 7.-8.VIII.1982, R. J. Barnett, Malaise 2 (1 ♀) (MFN); **Mozambique:** Nyaka, P[ortuguese] E[ast] Afr[ica], II.1924, R. F. Lawrence (1 ♀) (SAMC); **Tanzania:** Same data as for holotype (1 ♂) (SMNS); East Africa, Dar-es-Salaam, 11.V.1918, A. W. J. Pomeroy, 1919-276 (1 ♂) (BMNH); Dar Es Salaam, 20.VI.1979, M. Stoltze (1 ♂) (ZMUC); Tanganjika, Dar-es-Salaam, 29.VII.1952, Lindemann & Pavlitzki (1 ♀) (ZSM).

Distribution: Kenya, Mozambique, Tanzania (Fig. 44).

Remarks.
Distega pectoraloides differs from the similarly coloured *D. pectoralis* and *D. rectiserra* in its entirely black lateral mesonotal lobe. In *D. pectoralis* this is entirely pale, and in *D. rectiserra* bicoloured, with the apical half black. Furthermore, the shape of the serrulae differs conspicuously between these species (*pectoralis* Fig. 34C, *rectiserra* Fig. 36B).

The new species varies especially in the coloration of thorax and legs of the female. In the female from Mozambique the median lobe of mesonotum is nearly entirely yellow and the femora are entirely black. In other females the femora are entirely yellow, or the hind femur is only blackish-ringed apically. Sometimes the black coloration extends over the apical half of the hind tibia. In the female from Mombasa, tergum 1 has two large blackish medial spots. Intraspecific variability in the coloration of males is negligible.

The locality "Nyaka, Portuguese East Africa" is not mapped, because it could not be located. However, the collector R. F. LAWRENCE collected almost entirely in southern Mozambique.

Etymology.
An adjective, formed with the suffix –oides (Ancient Greek: εἶδος, pronounced eîdos, meaning "form" or "likeness") and indicating that the species resembles *D. pectoralis* in coloration.

Distega rectiserra (PASTEELS, 1949)

Pachydistega rectiserra PASTEELS, 1949: 21. Described: Female. Type locality: Congo Belge [Democratic Republic of the Congo], Barumba.

Female (Figs 136, 137)
Head black; clypeus yellowish. Thorax yellow with following black: median lobe of mesonotum except for lateral margins, posterior half of lateral lobe of mesonotum, and mesepisternum below transverse suture. Legs yellow with following black: fore and mid coxa, base of hind coxa, fore and mid trochanter, wide base of fore and mid femur, apex of hind tibia, mid tarsomeres of fore and mid tarsus, hind tarsus. Wings infuscate; intercostal area fuscous, stigma, costa, subcosta and rest of venation black. Abdomen yellow; valvula 3 black.

Head parallel-sided to very slightly enlarged behind eyes. Antenna 1.3× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes converging below. Anterior margin of clypeus subtruncate, very slightly emarginate; malar space missing. Postocellar area: width : length = 1.0 : 0.7; lateral furrows very slightly convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge with two small obtuse lateral humps, not interrupted medially.

Vertex, gena and mesoscutum smooth and shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view broadly pointed dorso-apically (Fig. 36A). Lancet with about 22 serrulae; serrulae (Fig. 36B).

Length: 7.7 mm.
Male: Unknown.

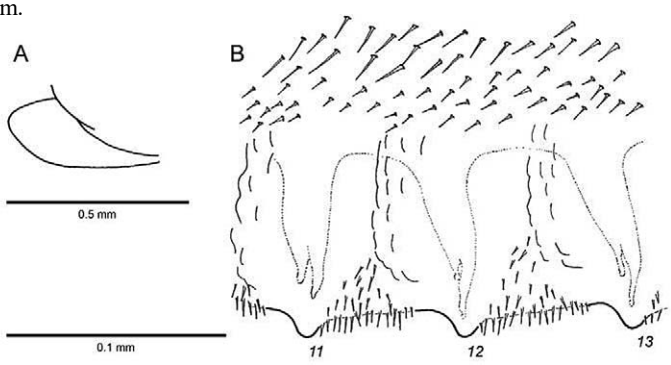


Fig. 36: *Distega rectiserra*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13.

Type material examined.
Holotype: ♀. Labels: "Holotypus, *rectiserra* Past. ♀" (red); "Genit. H.4., 39."; "Musée du Congo, Barumbu, -VII-1925, Lt J. Ghesquière"; "R. Dét., M. 2749"; "*Paradistega mocsaryi* Ensl[in] ♀, R. Forsius det."; "R. Det. O.,5196"; "Di, 5"; "*Pachydistega rectivalis* n. sp. ♀, J. Pasteels det., 1947"; "RMCA 000017535"; "Holotypus, *Pachydistega rectiserra* Pasteels ♀, teste: F. Koch, 2015" (red); "*Distega rectiserra* Pasteels ♀, det.: F. Koch, 2015" (MRAC). Dissected genitalia slide, Mus. Cong. H.4, 39; Di. 5 (MRAC).

Distribution: Democratic Republic of the Congo (Fig. 43).

Remarks. *Distega rectiserra* is coloured similarly to *D. pectoraloides*. The differential diagnosis is given under the latter species.

Distega schoutedeni PASTEELS, 1954

Distega schoutedeni PASTEELS, 1954: 501. Described: Female. Type locality: Lubumbashi [Democratic Republic of the Congo].

Female (Figs 138, 139)

Head black. Thorax black with following yellow-orange: pronotum, mesonotum except for two antero-medial spots at median lobe of mesoscutum, mesoscutellar appendage, narrow posterior margin of metascutellum whitish, posterior corner of propleuron, postspiracular sclerite, mesepisternum above transverse suture and anepimeron. Legs black with following yellow: very narrow apical margin of mid coxa, apical half of hind coxa, hind trochanter, hind tibia, apical half of fore and mid femur, hind femur, tibiae, tarsi except for mid tarsomeres. Wings infuscate; intercostal area fuscous; stigma, costa, subcosta and rest of venation black. Abdomen black with blue metallic lustre.

Head slightly enlarged behind eyes. Antenna 1.3× as long as maximum head width; flagellomeres 5/6 about as long as wide. Eyes converging below. Anterior margin of clypeus truncate; malar space linear. Postocellar area: width : length = 1.0 : 0.7; lateral furrows slightly convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge not, or very weakly, interrupted medially.

Vertex, gena and mesonotum smooth and shiny; pubescence on head and mesonotum whitish. Abdomen smooth and shiny.

Cercus 4.0× as long as width. Hind tibia 3.1× as long as hind basitarus length. Valvula 3 in lateral view conspicuously pointed apically (Fig. 37A). Lancet with about 24 serrulae, or more (base missing); serrulae (Fig. 37B).

Length: 9.7 mm.

Male: Unknown.

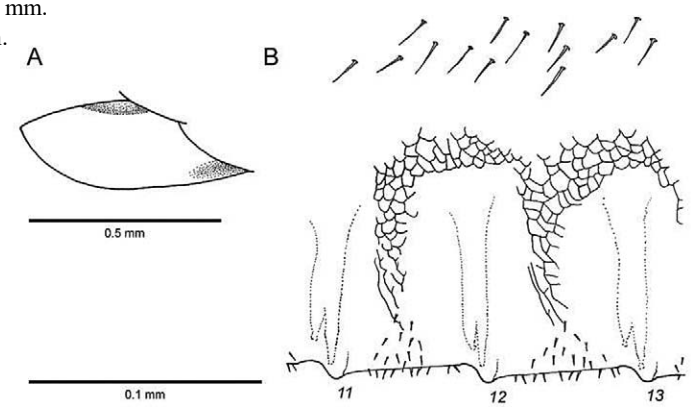


Fig. 37: *Distega schoutedeni*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13.

Type material examined.

Holotype: ♀. Labels: "Musée du Congo, ~~Elisabethville~~ (R. Lubumbashi) 8.I.1921, Dr. M Bequaert"; "Mich. Bequaert, Coll."; "Lubumbashi, Katanga BCgo, 11,45S. 27,40E, 8.I.[19]21"; "Genit. ♀, H. 4. 36."; "Di 1"; "*Distega sjoestedti* Kon. ♀, R. Forsius det."; "Holotypus, *Distega schoutedeni* J. Pasteels ♀, teste. F. Koch, 2015" (red); "*Distega schoutedeni* J. Pasteels ♀, det.: F. Koch, 2015" (MRAC).

Distribution: Democratic Republic of the Congo (Fig. 42).

Remarks.

Distega schoutedeni belongs to the *sjoestedti* group. The body of *D. schoutedeni* is similarly coloured to *D. meridiana* except for the hind tibia, which is in the latter species at least black-ringed apically. Additionally, these species are distinguished in the shape of the serrulae (*meridiana*: Fig. 21B).

According to the original description of *D. schoutedeni* the date of collection of the holotype is 18.I.1920, but on the specimen label this is corrected by hand from 1920 to 1921. A further problem is that

the labels of the mentioned specimens of *D. schoutedeni* and *D. sjoestedti* including their genitalia slides are partly incorrectly labelled. The specimen from Durban is really *D. sjoestedti* but it is labelled as holotype of *D. schoutedeni*. Labels: "Holotype ♀" (red); "Genit. ♀, H. 4. 35."; "Coll. Mus. Congo, Durban, ex. Coll. Schouteden"; "R. Det. F., 5937"; "Di 2"; "*Distega schoutedeni* n. sp. ♀, J. Pasteels det., 1952"; "RMCA 000017533"; "*Distega sjoestedti* Konow ♀, det.: F. Koch, 2016" (MRAC). The corresponding genitalia slide is labelled: "*Distega sjoestedti* Konow, Scie"; "Mus. Congo: H.4 36., riv. Lubumbashi (Katanga), 8.I.1921 (Dr. M. Bequaert), montage Dr. Pasteels, Di.2." (MRAC). On the other hand, the genital slide of the holotype of *D. schoutedeni* is labelled: "*Distega schoutedeni* Pasteels, Type, Scie"; "Mus. Congo: H.4 35., Durban (leg. Schouteden), montage Pasteels, Di.1." (MRAC).
The original description of *D. schoutedeni* is very short. It is only a differential diagnosis to *D. sjoestedti*, which he erroneously reported from Congo Belge [Democratic Republic of the Congo] (PASTEELS 1949, 1954). He stated that *D. schoutedeni* differs from *D. sjoestedti* in the ratio of width to length of the cerci (1.0 : 4.0; 1.0 : 1.3) and in the ratio of length of tibia to hind basitarsus (1.0 : 3.1; 1.0 : 2.4). These characters have been confirmed (see redescriptions).

Distega similis sp. n.

Female (Figs 140, 141)
Head black. Thorax black with metanotum and metapleuron yellow. Legs yellow; fore coxa, basal half of mid coxa and fore trochanter, narrow apices of tibiae and tarsi blackish except for basal and distal tarsomeres of fore and mid tarsus and basitarsomere of hind tarsus. Wings infuscate; intercostal area dark fuscous; stigma, costa, subcosta and rest of venation black. Abdomen yellow; valvifer 2 and valvula 3 black except narrowly where they join.

Head parallel-sided behind eyes. Antenna 1.4-1.5× as long as maximum head width; flagellomeres 5/6 slightly longer than wide. Eyes converging below. Anterior margin of clypeus subtruncate, very slightly emarginate; malar space very narrowly developed. Postocellar area: width : length = 1.0 : 0.7; lateral furrows slightly convex and parallel-sided towards posterior margin of head. Frontal area distinctly delimited; anterior cross-ridge conspicuously narrowly interrupted medially.

Vertex smooth and shiny; gena micropunctate, shiny; pubescence light brown. Mesoscutum nearly impunctate, shiny; pubescence whitish. Abdomen smooth and shiny. Valvula 3 in lateral view broadly pointed apically (Fig. 38A). Lancet with about 20-21 serrulae; serrulae (Fig. 38B).

Length: 7.3-9.7 mm.

Male. Unknown.

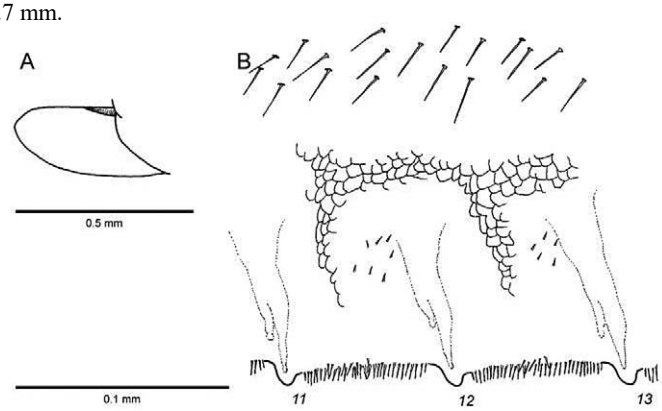


Fig. 38: *Distega similis*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13.

Type material.
Holotype: ♀. Labels: "Congo Belge, P[ark]N[ational].G[aramba], Miss[ion]. H. De Saeger II/gd/17, 30-vi-1952, H. de Saeger. 3719"; "Holotypus, *Distega similis* sp. n. ♀, det.: F. Koch 2016" (red) (MRAC).
Paratypes: 12 ♀♀. **Democratic Republic of the Congo:** P.N.G. Miss. H. De Saeger Inimvua, 20.V.1952, H. De Saeger, 3488 (1 ♀) (MRAC); Miss. H. De Saeger II/fd/11, 18.IX.1951, H. De Saeger, 2447 (1 ♀) (MRAC); Miss. H. De Saeger II/fd/17, 8.V.1951, H. De Saeger, 1671 (1 ♀) (MRAC); Ituri: Forest de Kawa, 26.IV.1929, A. Collart (1 ♀) (UZMT); **Kenya:** Karura Forest, VI.1941(1 ♀) (NMKE); Broderick Falls, Kabras, K. C., V.1952, E. Pinhey (1 ♀) (NMKE); Meru, IX.1 957, S. Chojnacki (1 ♀) (NMKE); Rift Valley, Saiwa Swamp, 1°05.65N/35°07.10E, 2474 m, swamp edge, Mal[aise]

trap, 7.-21.V.2006 (1 ♀) (USNM); 1882 m, 21.V.-4.VI.2006, Malaise (1 ♀) (USNM); 12.-26.III.2006, Malaise (1 ♀) (MFN); **Tanzania:** West Usambara Mts[Mountains], Mazumbai, 1600m, 01.VIII.1980, M. Stoltze & N. Scharff (1 ♀) (ZMUC); **Uganda:** S.W. Maramegambo Forest, 1900m 5.i.1996 I. Yarom & A. Freidberg (1 ♀) (USNM);

Distribution: Democratic Republic of the Congo, Kenya, Tanzania, Uganda (Fig. 44).

Remarks.
In external morphology and coloration *D. similis* is very similar to *D. montium*. The species are separated by the shape of serrulae (*montium*: Fig. 25B): see further remarks under the latter species.

Intraspecific variability is scarcely developed. Sometimes the mesoscutellum is posteriorly blackish-margined, and the hind coxa is laterally marked blackish at the extreme base.

Etymology.
The species name is the Latin adjective *similis*, meaning "like, resembling", alluding to a likeness with *D. montium*.

Distega sjoestedti KONOW, 1904

Distega sjoestedti KONOW, 1904: 245. Described: Female, male. Type locality: Africa mer[idionalis] [South Africa] (Caffraria). Lectotype designated below.

Female (Figs 142, 143)
Head black. Thorax black with following yellow-orange: pronotum, mesonotum, mesoscutellar appendage, postspiracular sclerite, mesepisternum above transverse suture and anepimeron, posterior half of propleuron sometimes light brown. Legs black with following whitish: very narrow apical margin of mid coxa, apical half of hind coxa, hind trochanter, basal half of hind femur, fore and mid tibia except for blackish narrow apex and a stripe on apical half of posterior surface, hind tibia except for broad apex, more or less base of fore and mid basitarsomere. Wings infuscate; intercostal area somewhat darker; stigma, costa, subcosta and rest of venation black. Abdomen black with blue metallic lustre.

Head slightly narrowed behind eyes. Antenna 1.4× as long as maximum head width; flagellomeres 5/6 distinctly longer than wide. Eyes converging below. Anterior margin of clypeus truncate; malar space linear, nearly absent. Postocellar area: width : length = 1.0 : 0.7; lateral furrows nearly straight and slightly diverging towards posterior margin of head. Frontal area distinctly delimited, anterior cross-ridge conspicuously interrupted medially.

Vertex, gena and mesonotum smooth and shiny; pubescence on head dirty whitish, on mesonotum whitish. Abdomen smooth and shiny.

Cercus 1.3× as long as width. Hind tibia 2.4× as long as hind basitarus length. Valvula 3 in lateral view narrowly rounded dorso-apically (Fig. 39A). Lancet with about 20-21 serrulae; serrulae (Fig. 39B).

Length: 8.5-11.3 mm.

Male (Figs 144, 145)
Body entirely black; abdomen with blue metallic luster. Legs yellow with following black: fore and mid tibia, basal half of hind tibia, distal tarsomeres. Antenna1.2× as long as maximum head width; flagellomeres 5/6 about as long as wide. Other features as for female. Genitalia (Figs 39C, D).

Length: 6.8-7.8 mm.

Type material examined.
Lectotype, hereby designated: ♀. Labels: "Caffraria"; "Typus" (red); "Coll. Konow"; "Coll. DEI, Eberswalde"; "Lectotypus, *Distega sjoestedti* Konow ♀, des.: F. Koch, 2016" (red); "*Distega sjoestedti* Konow ♀, det.: F. Koch, 2016"; "GBIF-GISHym 2868"; "http://coll.mfn-berlin.de/u/123bob" (SDEI).
Additional images: http://www.zoosphere.net/sequence/120/Distega/sjoestedti
Paralectotype: 1 ♂. **South Africa:** Same data as for lectotype, except: *Distega sjöstedti* Knw., Africa m[eridionalis], GBIF-GISHym 2867, http://coll.mfn-berlin.de/u/123afl (SDEI).
Additional images: http://www.zoosphere.net/sequence/121/Distega/sjoestedti
Other material examined: South Africa: 26 specimens (AMGS, MFN, MRAC, PPRI, SAMC, SDEI, TMSA, USNM).

Distribution: South Africa (Fig. 42).

Remarks.
The South African *Distega sjoestedti* belongs to the species group to which it gives its name. The differential diagnosis to *D. schoutedeni* is given under that species. The similarly coloured East African *D. kenyensis* differs in the sharply delineated yellow posterior margin of propleuron, in the parallel-sided head behind eyes, and in the shape of the serrulae (Fig. 19B).

Intraspecific variability is scarcely developed. On the other hand, sexual dimorphism is very pronounced. At a first glance, it would seem to be improbable that the entirely black male belongs to the conspicuously bicoloured female.

Zoogeographically, *D. sjoestedti* belongs to the fauna of the East African Coastal District.

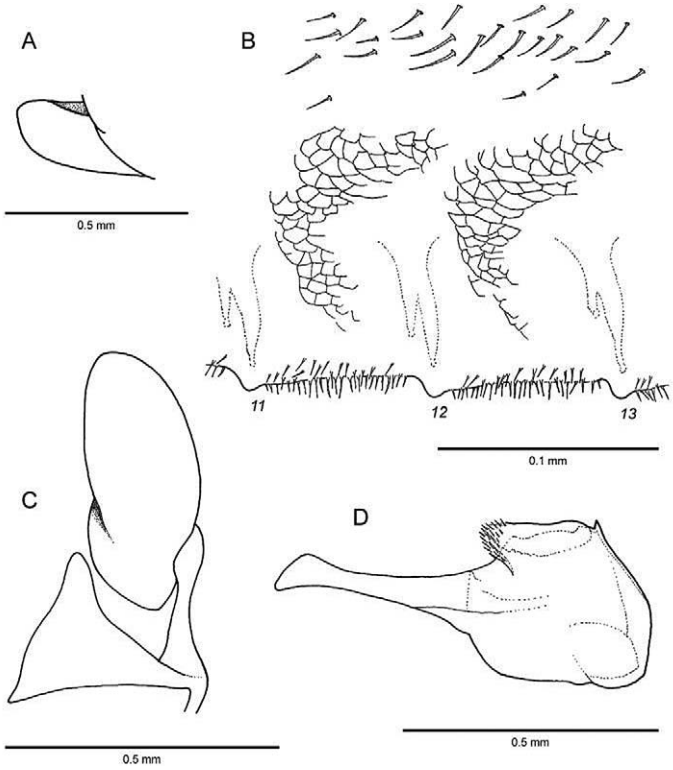


Fig. 39: *Distega sjoestedti*: **(A)** Valvula 3 (lateral aspect); **(B)** Serrulae 11-13; **(C)** Parapenis and harpe (right, ventral aspect); **(D)** Penis valve (left, lateral aspect).

Discussion

Clarification of some of the unresolved taxonomic problems mentioned above could obviously be attempted using data from DNA sequencing. However, at present very few *Distega* species are represented by accessible specimens of sufficient freshness.

Fourteen of the 37 currently recognised species are at present known from only one or two specimens. This strongly indicates that further species still await discovery.

Knowledge of the host plant associations and biology of all but a single *Distega* species is completely lacking. Because of the relatively high number of species in the genus, reducing this deficit will be important in improving our general understanding of the ecological role played by Tenthredinidae in the Afrotropical Region. For example, one would like to know whether Afrotropical tenthredinids are mainly associated with non-woody host plants. Extrapolation of the very few existing data suggests that an unusually low number of tenthredinid taxa may be associated with shrubs and trees in this region, compared with the comparatively well-investigated faunas of the Palaearctic and Holarctic Regions. Answering this question could in turn give us new insights on the origin and evolution of the Afrotropical Tenthredinidae.

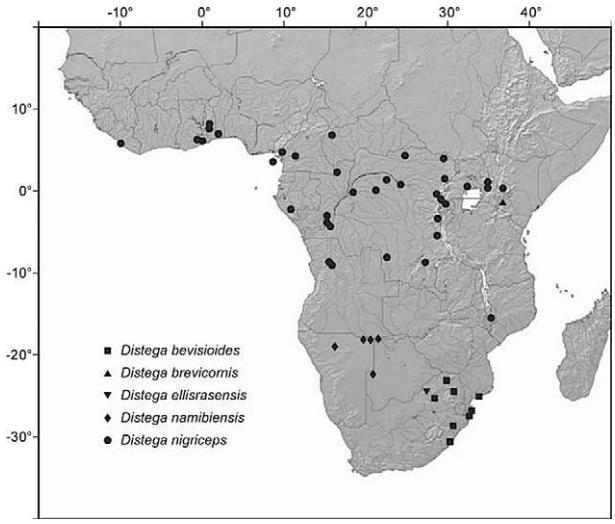


Fig. 40: Distribution map for *Distega bevisioides* sp. n., *D. brevicornis* sp. n., *D. ellisrasensis* sp. n., *D. namibiensis* sp. n., *D. nigriceps* (ENDERLEIN).

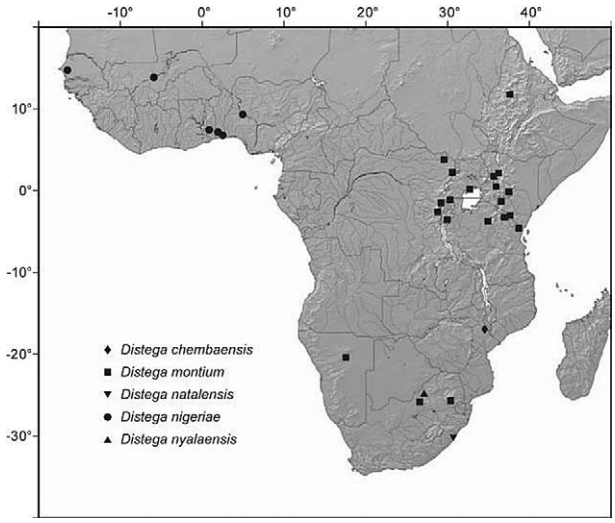


Fig. 41: Distribution map for *Distega chembaensis* sp. n., *D. montium* KONOW, *D. natalensis* sp. n., *D. nigeriae* FORSIUS, *D. nyalaensis* sp.n.

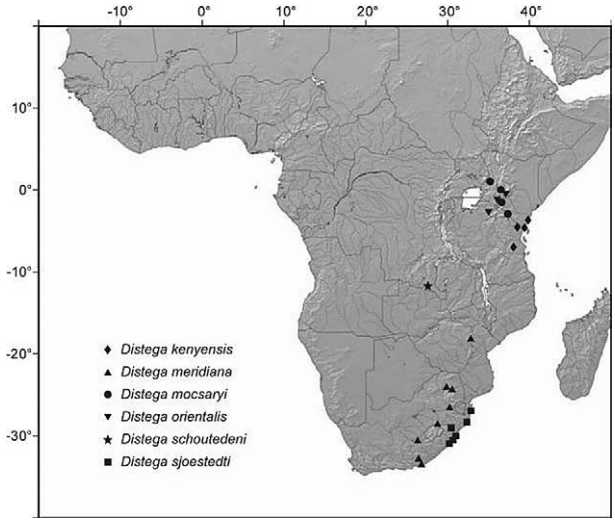


Fig. 42: Distribution map for *Distega kenyensis* sp. n., *D. meridiana* sp. n., *D. mocsaryi* ENSLIN sp. n., *D. orientalis* sp. n., *D. schoutedeni* PASTEELS, *D. sjoestedti* KONOW.

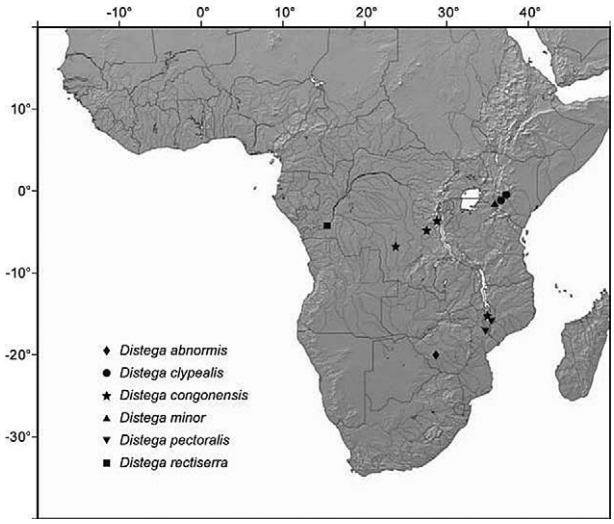


Fig. 43: Distribution map for *Distega abnormis* sp. n., *D. clypealis* PASTEELS, *D. congonensis* (FORSIUS), *D. minor* sp. n., *D. pectoralis* FORSIUS, *D. rectiserra* (PASTEELS).

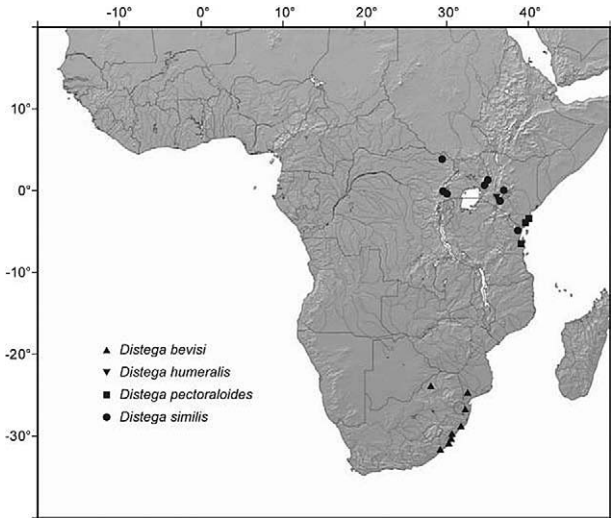


Fig. 44: Distribution map for *Distega bevisi* FORSIUS, *D. humeralis* PASTEELS, *D. pectoraloides* sp. n., *D. similis* sp. n.

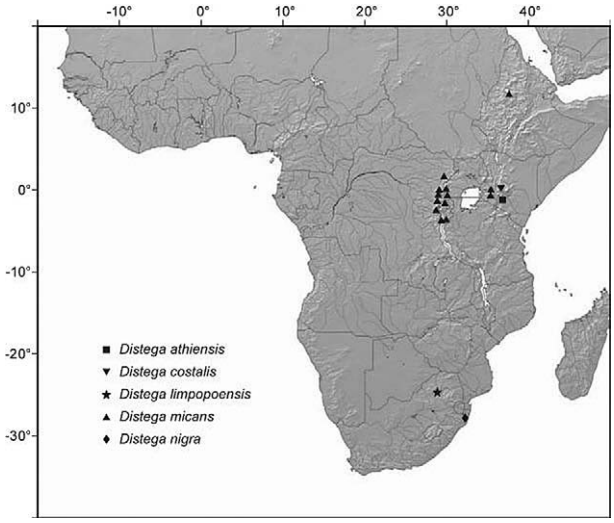


Fig. 45: Distribution map for *Distega athiensis* sp. n., *D. costalis* sp. n., *D. limpopoensis* sp. n., *D. micans* (FORSIUS), *D. nigra* sp. n.

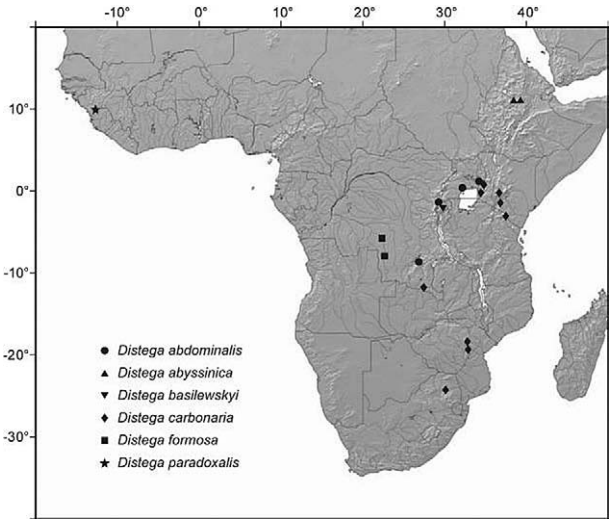


Fig. 46: Distribution map for *Distega abdominalis* FORSIUS, *D. abyssinica* PASTEELS, *D. basilewskyi* PASTEELS, *D. carbonaria* FORSIUS, *D. formosa* (PASTEELS), *D. paradoxalis* PASTEELS.

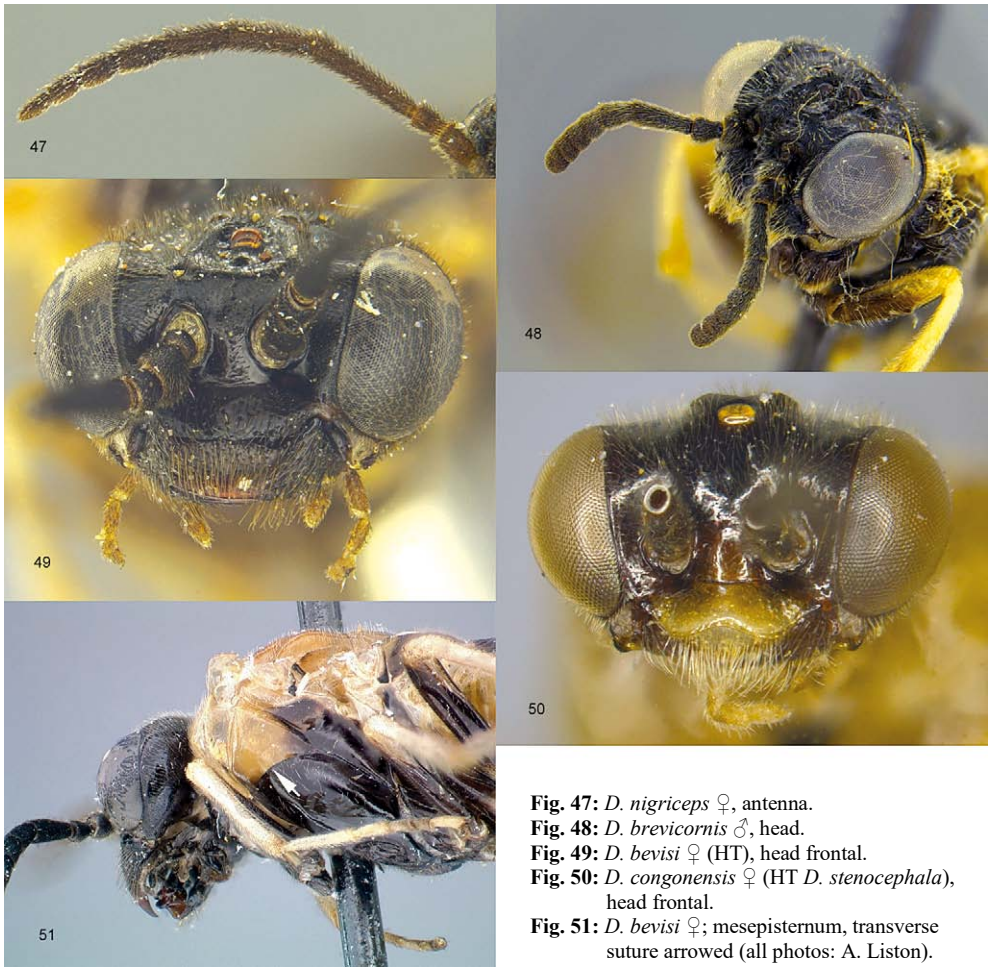
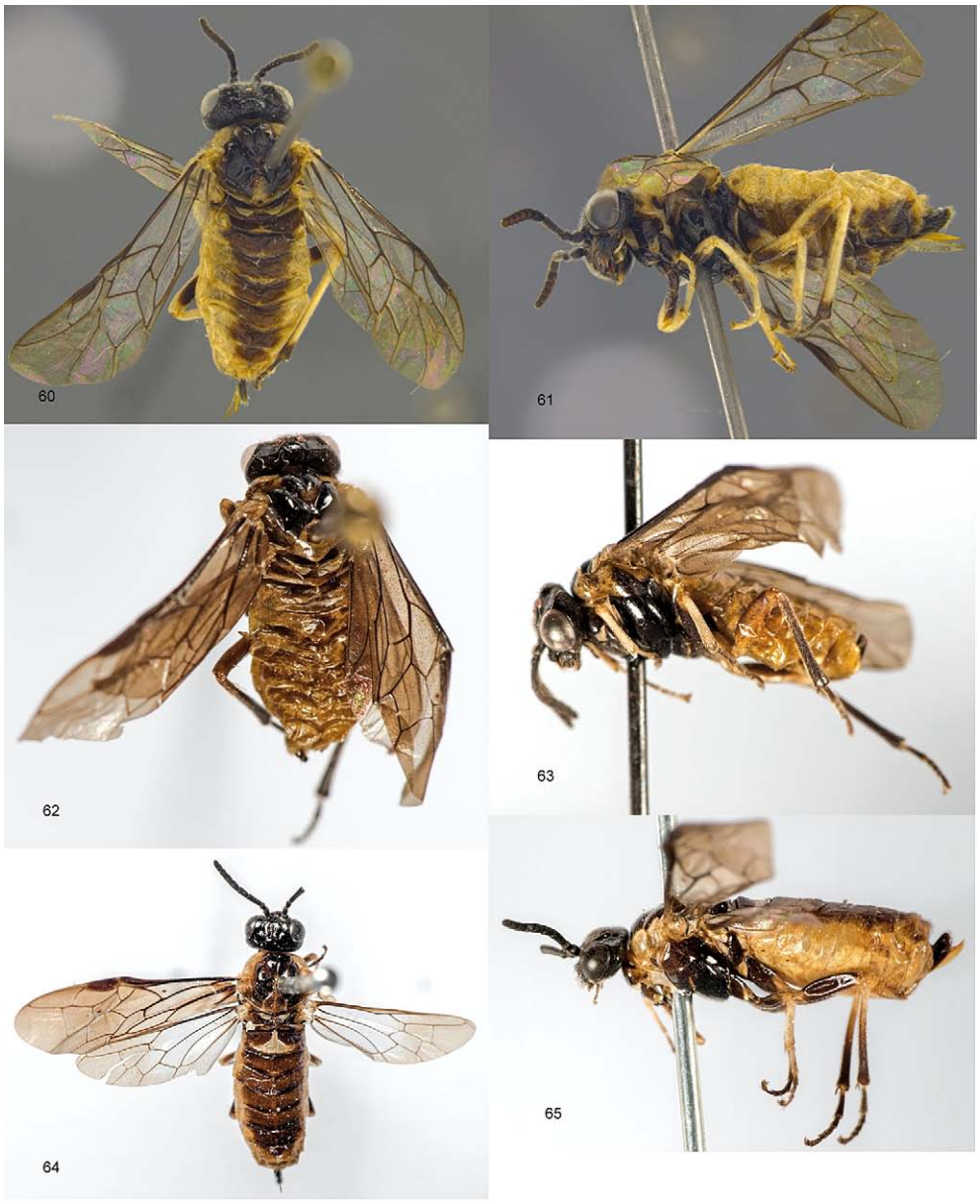
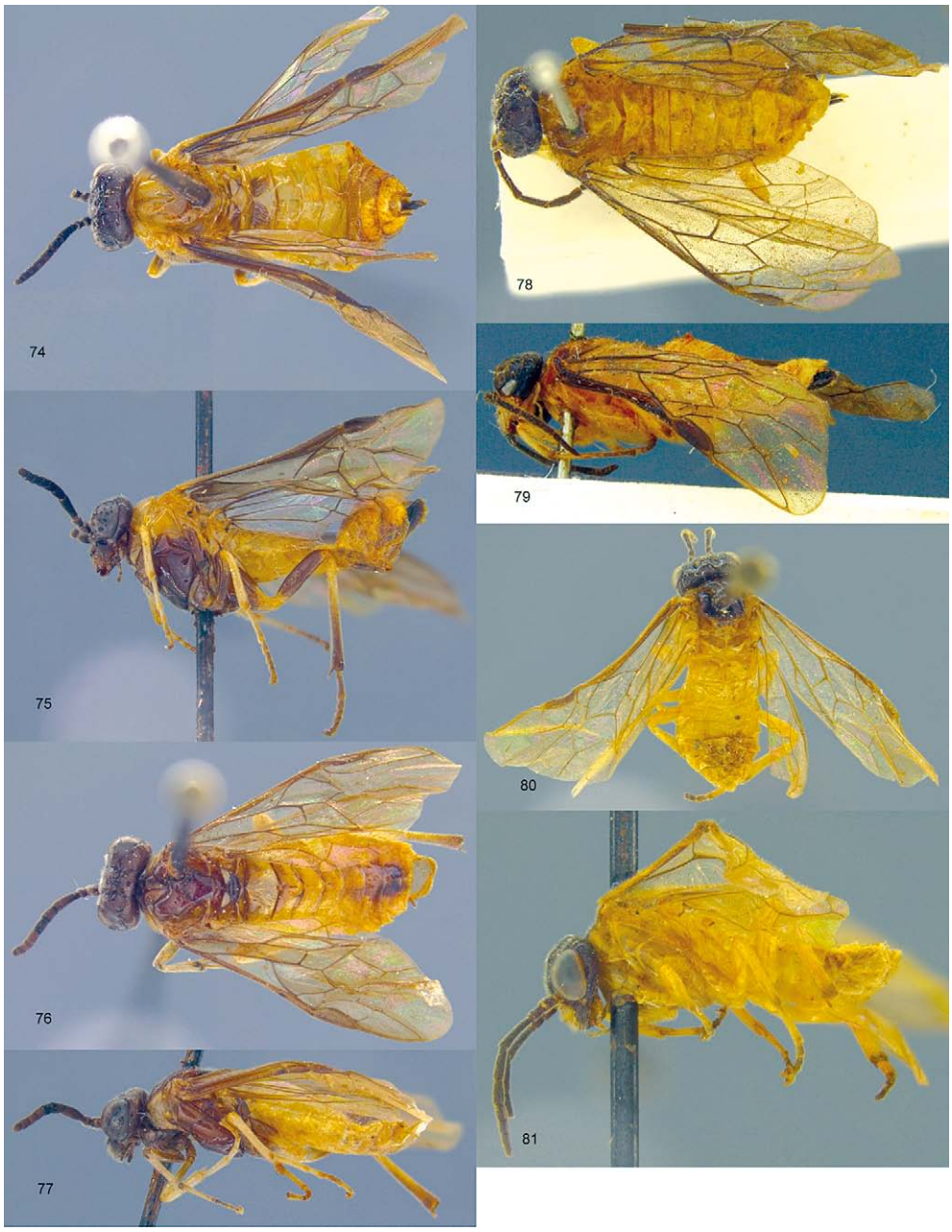


Fig. 47: *D. nigriceps* ♀, antenna.
Fig. 48: *D. brevicornis* ♂, head.
Fig. 49: *D. bevisi* ♀ (HT), head frontal.
Fig. 50: *D. congonensis* ♀ (HT *D. stenocephala*), head frontal.
Fig. 51: *D. bevisi* ♀; mesepisternum, transverse suture arrowed (all photos: A. Liston).

Figs 52, 53: *D. abdominalis* ♂; dorsal, ventrolateral (photos: H. Goetz). **Figs 54, 55:** *D. abnormis* ♀ (HT): dorsal, lateral (photos: A. Liston). **Figs 56, 57:** *D. abyssinica* ♀: dorsal, lateral (photos: J.-L. Boevé). **Figs 58, 59:** *D. abyssinica* ♂: dorsal, lateral (photos: J.-L. Boevé).



Figs 60, 61: *D. athiensis* ♀; dorsal, ventrolateral (photos: A. Liston). **Figs 62, 63:** *D. basilewskyi* ♀ (HT); dorsal, lateral (photos: H. Goetz). **Figs 64, 65:** *D. bevisi* ♀ (HT); dorsal, lateral (photos: M. Pluta).



Figs 74, 75: *D. chembaensis* ♀ (HT); dorsal, lateral. **Figs 76, 77:** *D. chembaensis* ♂ (PT); dorsal, lateral. **Figs 78, 79:** *D. clypealis* ♀ (HT); dorsal, lateral. **Figs 80, 81:** *D. congonensis* ♀ (HT); dorsal, lateral (all photos: A. Liston).

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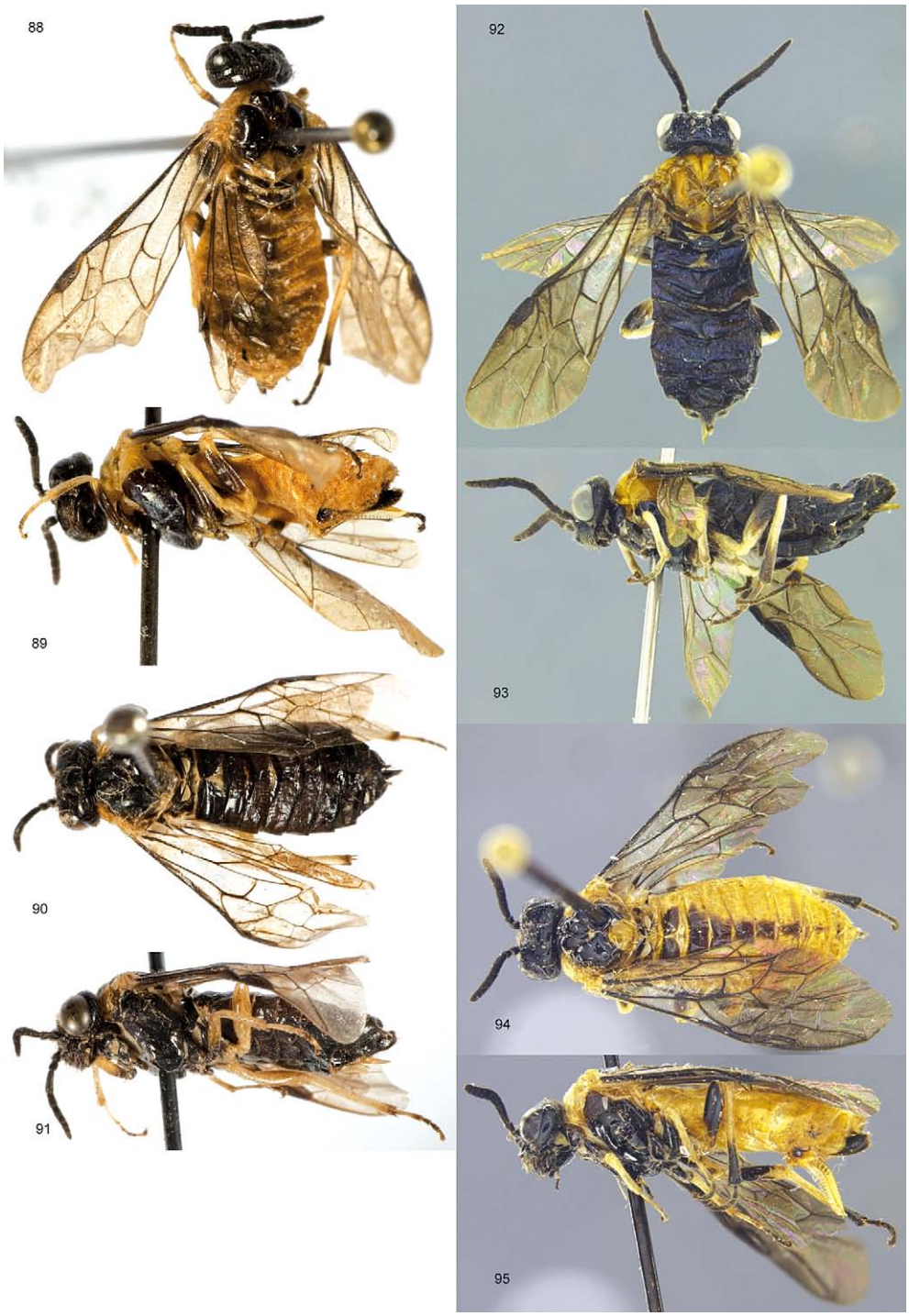
Figs 66, 67: *D. bevisi* ♂; dorsal, ventrolateral. **Figs 68, 69:** *D. bevisioides* ♀ (HT); dorsal, ventrolateral. **Figs 70, 71:** *D. brevicornis* ♂ (HT); dorsal, lateral. **Figs 72, 73:** *D. carbonaria* ♀; dorsal, lateral (horizontally flipped) (all photos: A. Liston).

Figs 82, 83: *D. costalis* ♂ (HT); dorsal, lateral. **Figs 84, 85:** *D. ellisrasensis* ♀ (HT); dorsal, lateral. **Figs 86, 87:** *D. ellisrasensis* ♂ (PT); dorsal, ventrolateral (all photos: A. Liston).



Figs 88, 89: *D. formosa* ♀; dorsal, ventrolateral (photos: H. Goetz). **Figs 90, 91:** *D. humeralis* ♀; dorsal, ventrolateral (photos: H. Goetz). **Figs 92, 93:** *D. kenyensis* ♀; dorsal, ventrolateral (photos: A. Liston). **Figs 94, 95:** *D. limpopoensis* ♀ (HT); dorsal, lateral (photos: A. Liston).

Figs 96, 97: *D. limpopoensis* ♂ (PT); dorsal, ventrolateral (photos: A. Liston). **Figs 98, 99:** *D. meridiana* ♀ (HT); dorsal, lateral (photos: A. Liston). **Figs 100, 101:** *D. micans* ♀; dorsal, ventrolateral (photos: H. Goetz). **Fig. 102:** *D. micans* ♂; dorsal (photos: H. Goetz).

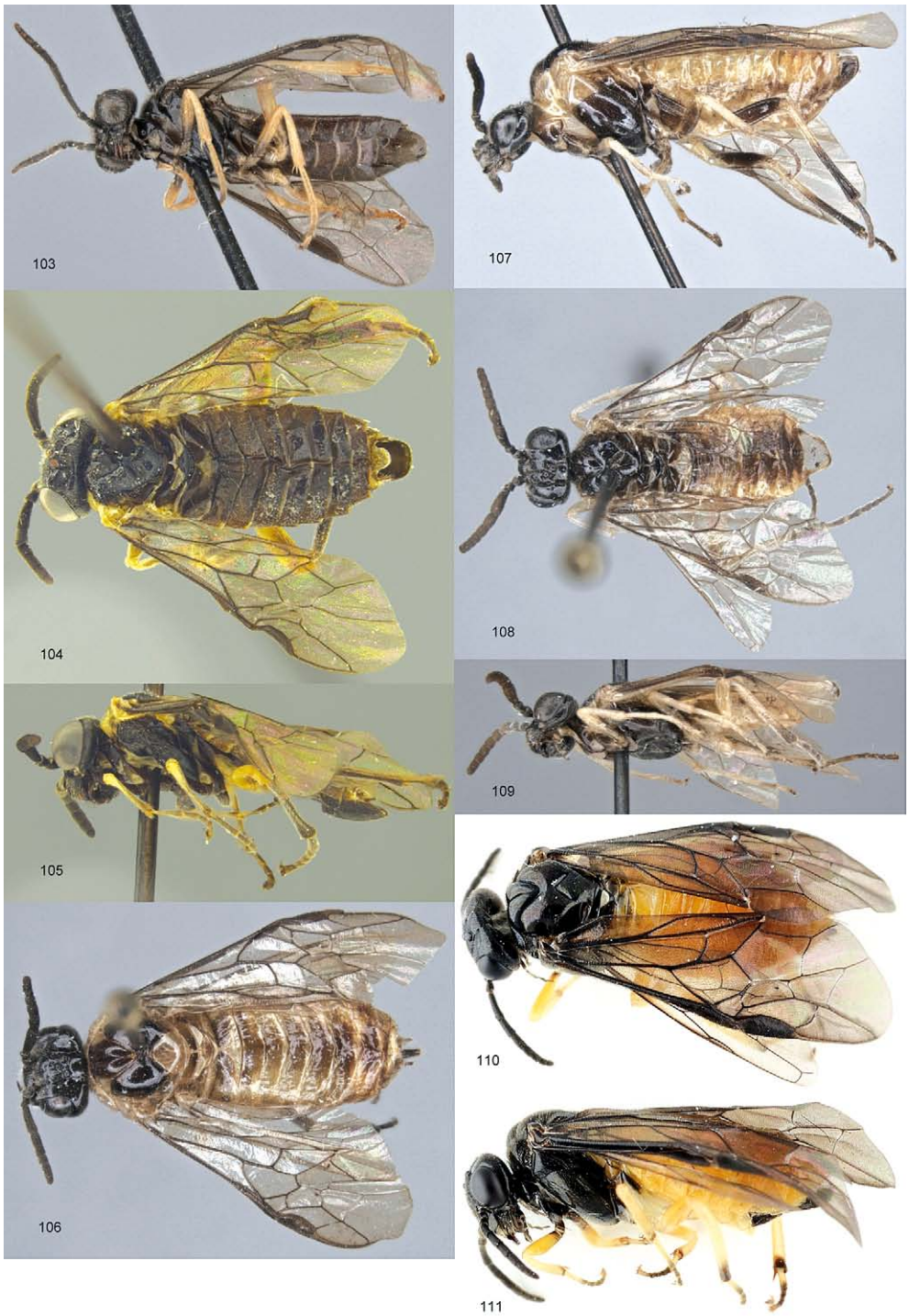
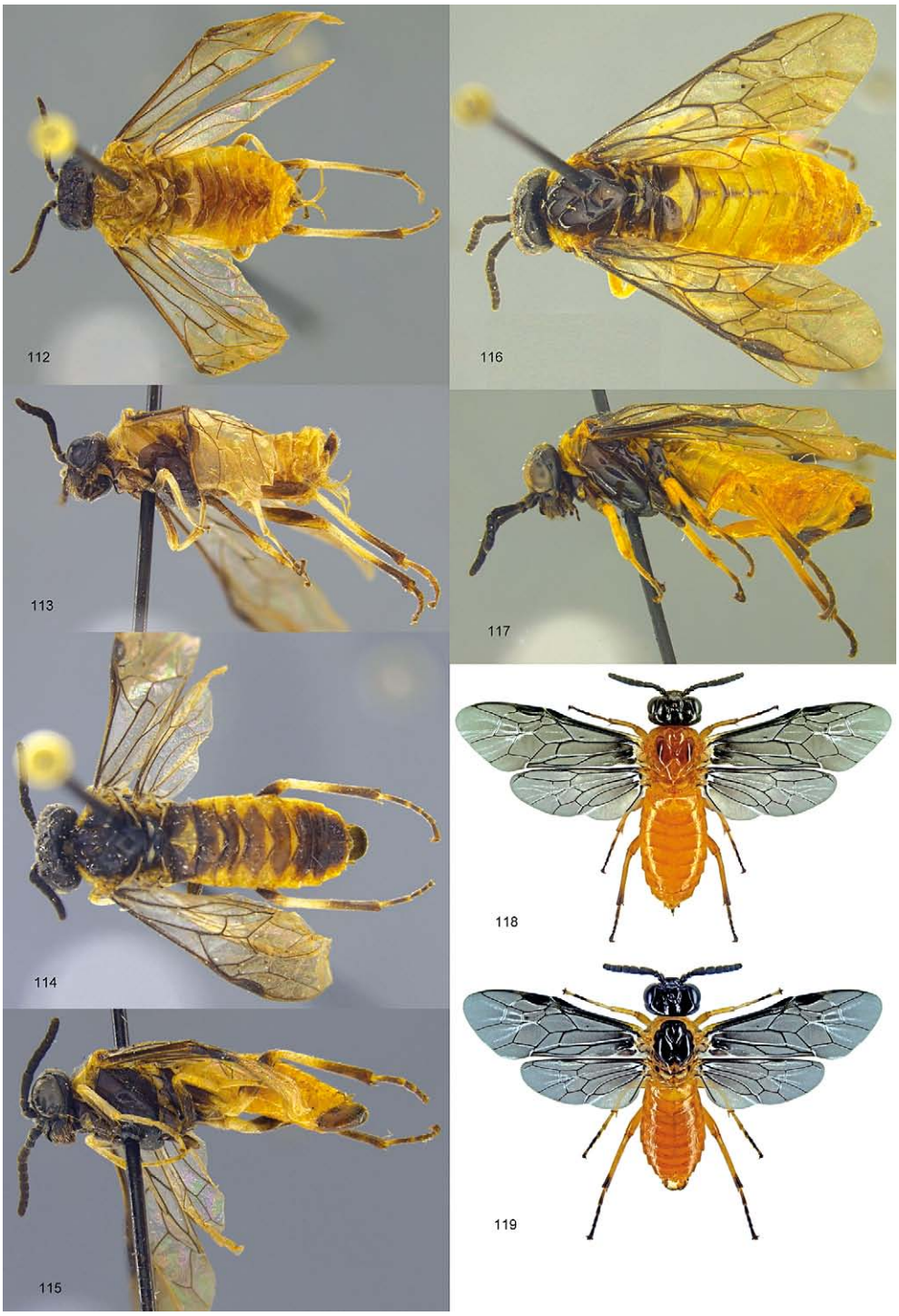
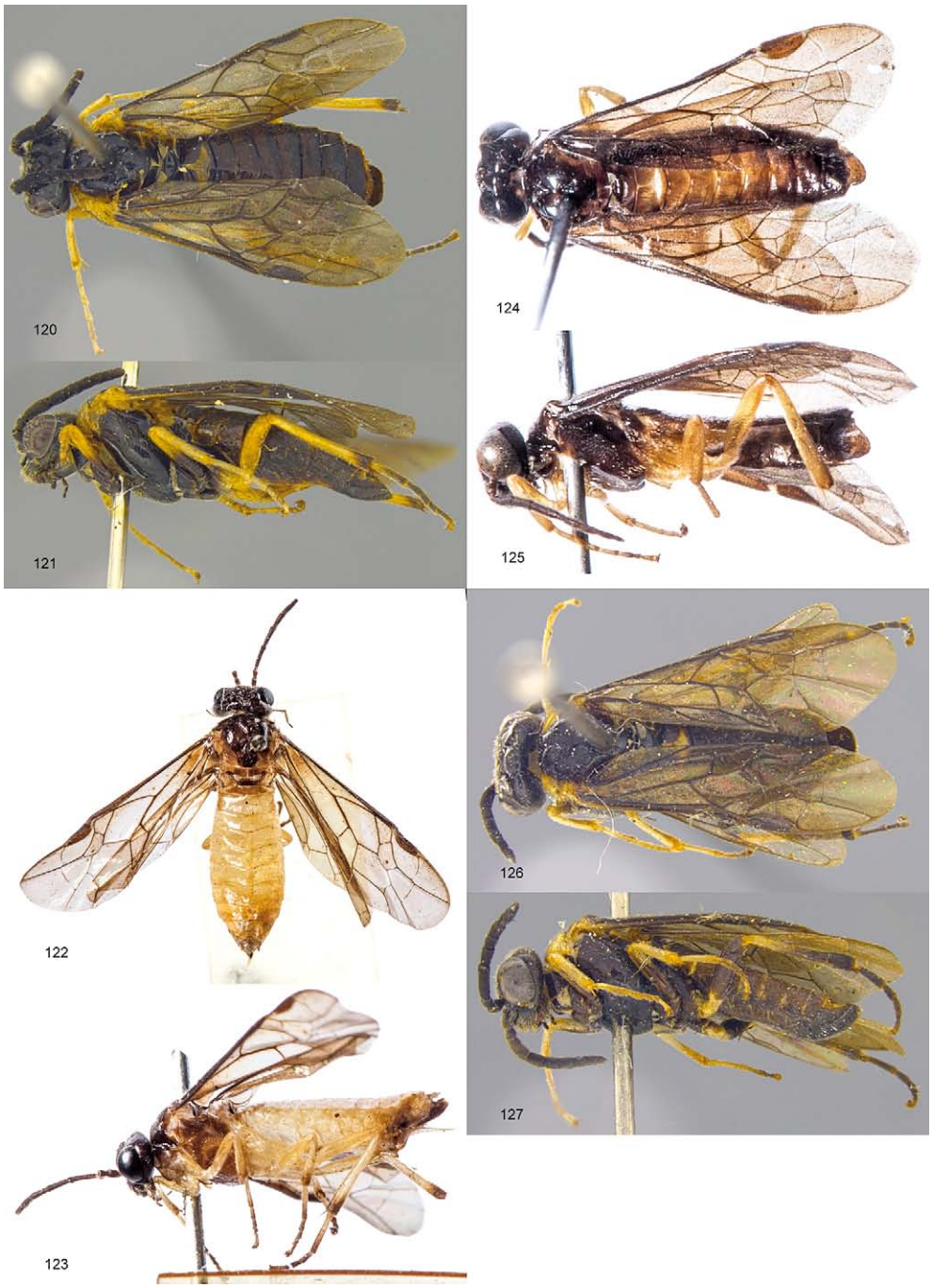


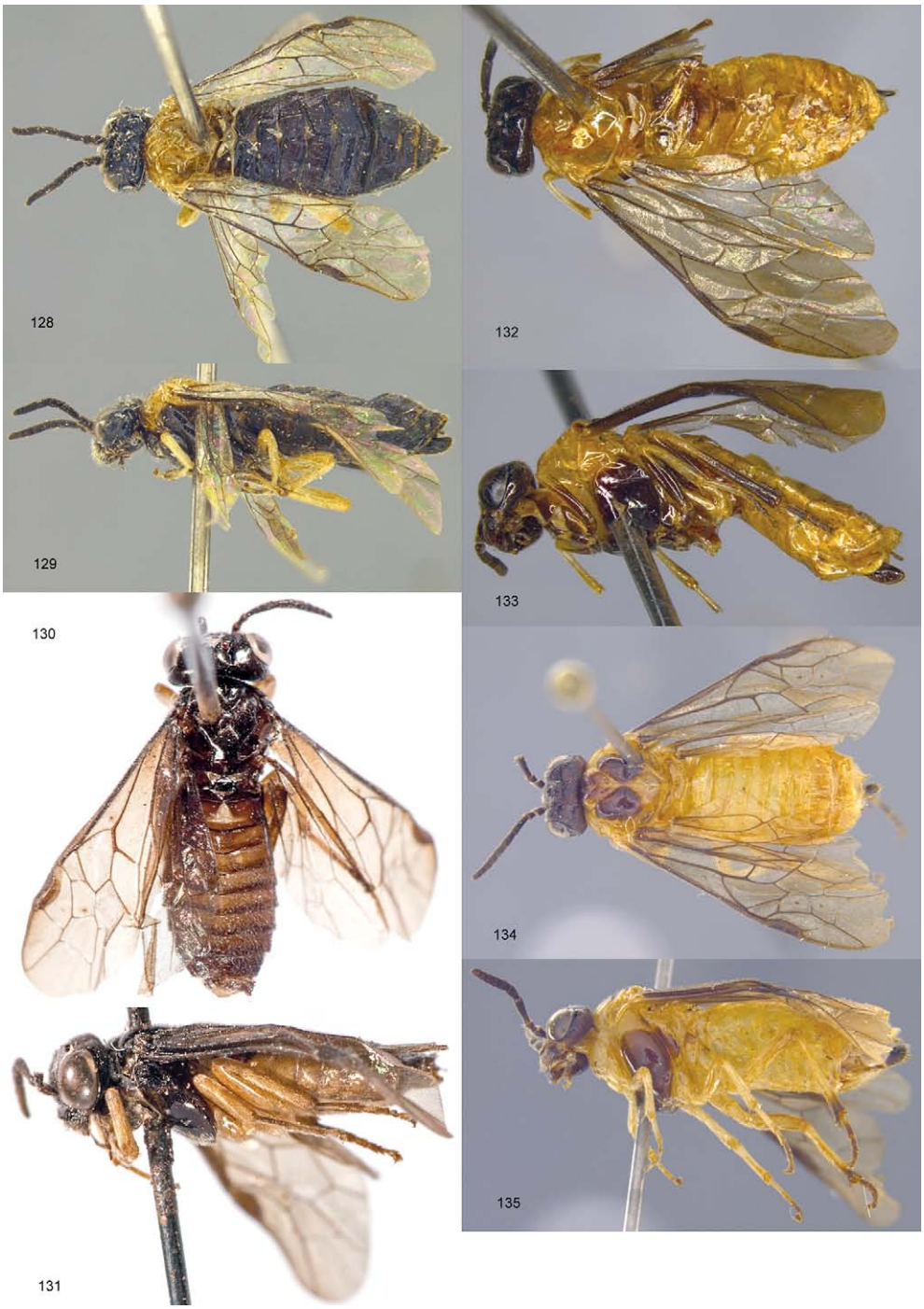
Fig. 103: *D. micans* ♂; ventrolateral (horizontally flipped) (photos: H. Goetz). **Figs 104, 105:** *D. minor* ♂ (HT); dorsal, ventrolateral (photos: A. Liston). **Figs 106, 107:** *D. mocsaryi* ♀; dorsal, lateral (horizontally flipped) (photos: H. Goetz). **Figs 108, 109:** *D. mocsaryi* ♂; dorsal, ventrolateral (horizontally flipped) (photos: H. Goetz). **Figs 110, 111:** *D. montium* ♀; dorsal, lateral (photos: J.-L. Boevé).



Figs 112, 113: *D. namibiensis* ♀ (HT); dorsal, ventrolateral (photos: A. Liston). **Figs 114, 115:** *D. namibiensis* ♂ (PT); dorsal, ventrolateral (photos: A. Liston). **Figs 116, 117:** *D. natalensis* ♀ (HT); dorsal, lateral (photos: A. Liston). **Figs 118, 119:** *D. nigeriae*, dorsal; female, male (photos: G. Goergen).



Figs 120, 121: *D. nigra* ♂ (HT); dorsal, lateral (photos: A. Liston). **Figs 122, 123:** *D. nigriceps* ♀ (HT *D. ugandana*); dorsal, lateral (photos: C. Radke). **Figs 124, 125:** *D. nigriceps* ♂ (HT *D. luteipes*); dorsal, lateral (photos: C. Radke). **Figs 126, 127:** *D. nyalaensis* ♂ (HT); dorsal, lateral (photos: A. Liston).



Figs 128, 129: *D. orientalis* ♀ (HT); dorsal, lateral (photos: A. Liston). **Figs 130, 131:** *D. paradoxalis* ♂ (HT); dorsal, lateral (photos: H. Goetz). **Figs 132, 133:** *D. pectoralis* ♀ (HT); dorsal, ventrolateral (photos: A. Liston). **Figs 134, 135:** *D. pectoraloides* ♀ (HT); dorsal, ventrolateral (photos: A. Liston).

Figs 136, 137: *D. rectiserra* ♀ (HT); dorsal, lateral (photos: H. Goetz). **Figs 138, 139:** *D. schoutedeni* ♀ (HT); dorsal, lateral (photos: H. Goetz). **Figs 140, 141:** *D. similis* ♀ (HT); dorsal, lateral (photos: A. Liston). **Figs 142, 143:** *D. sjoestedti* ♀ (LT); dorsal, lateral (photos: M. Pluta). **Figs 144, 145:** *D. sjoestedti* ♂ (PLT); dorsal, ventrolateral (photos: M. Pluta).

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Zusammenfassung

Die für die Afrotropische Region endemische Blattwespengattung *Distega* wird revidiert. Ein illustrierter Bestimmungsschlüssel wird präsentiert, ebenso Verbreitungskarten für alle Arten. 37 Arten werden als valid anerkannt, einschließlich der 18 Arten, die hier als neu für die Wissenschaft beschrieben werden: *D. abnormis* **sp. nov.**, *D. athiensis* **sp. nov.**, *D. bevisioides* **sp. nov.**, *D. brevicornis* **sp. nov.**, *D. chembaensis* **sp. nov.**, *D. costalis* **sp. nov.**, *D. ellisrasensis* **sp. nov.**, *D. kenyensis* **sp. nov.**, *D. limpopoensis* **sp. nov.**, *D. meridiana* **sp. nov.**, *D. minor* **sp. nov.**, *D. namibiensis* **sp. nov.**, *D. natalensis* **sp. nov.**, *D. nigra* **sp. nov.**, *D. nyalaensis* **sp. nov.**, *D. orientalis* **sp. nov.**, *D. pectoraloides* **sp. nov.** und *D. similis* **sp. nov.**

Die anderen 19 Arten werden wiederbeschrieben. Neue Synonyme sind [valider Artname dahinter in eckigen Klammern]: *Distega coeruleomicans* PASTEELS, 1955 [*D. carbonaria* FORSIUS, 1928], *Xenapates affinis* FORSIUS, 1934 [*D. micans* (FORSIUS, 1934)], *Pachydistega thoracalis* PASTEELS, 1949 [*D. nigeriae* FORSIUS, 1927], *D. bequaerti* FORSIUS, 1928, *D. fumipennis* PASTEELS, 1949, *D. inaequalis* PASTEELS, 1953, *D. luteipes* PASTEELS, 1949, *Xenapates bequaerti* var. *maculata* FORSIUS, 1934, *D. occipitalis* PASTEELS, 1949, *D. pallidiventris* FORSIUS, 1927, *D. ugandana* FORSIUS, 1928, *Distegella velutina* PASTEELS, 1951 [*Distega nigriceps* (ENDERLEIN, 1920)]. Lectotypen werden festgelegt für: *Distega mocsaryi* ENSLIN, 1913, und *D. sjoestedti* KONOW, 1904. Die larvalen Wirtspflanzen sind nur von einer Art bekannt, es sind diverse Mitglieder der Ordnungen Poales und Commelinales.

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