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## Revision of *Durbadnus* Pasteels, 1954, with notes on other Afrotropical Blennocampinae and Allantinae (Hymenoptera: Symphyta: Tenthredinidae)

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### ABSTRACT

Three species are included in this revision of the Afrotropical sawfly genus *Durbadnus* Pasteels, 1954: *D. chubbi* (Forsius, 1930), *D. obscuripes* (Forsius, 1931) comb. n. and *D. taegeri* sp. n. A new junior synonym of *D. chubbi* is *Blennocampa bensoni* Forsius, 1931 (syn. n.). The genus *Durbadnus* is restricted to South Africa, with *D. taegeri* being the first recorded member of the Tenthredinidae in the winter-rainfall zone of western South Africa. A key is provided to the five Afrotropical genera of Blennocampinae (*Aethiocampa*, *Distega*, *Durbadnus*, *Tesslinia* and *Trisodontophyes*). *Kivua* Forsius, 1934 is transferred from the Blennocampinae to the Allantinae. New junior synonyms of *Kivua* are *Bicrista* Pasteels, 1949 (syn. n.), *Tumura* Pasteels, 1949 (syn. n.) and *Urocercia* Pasteels, 1949 (syn. n.). The following new combinations result: *Kivua bicolor* comb. n. (*Bicrista bicolor* Pasteels, 1949), *Kivua acuticornis* comb. n. (*Erythrastides acuticornis* Pasteels, 1953), *Kivua afra* comb. n. (*Erythrastides afra* Pasteels, 1953), *Kivua cribrifrons* comb. n. (*Urocercia cribrifrons* Pasteels, 1949), *Kivua pallipes* comb. n. (*Urocercia pallipes* Pasteels, 1949) and *Kivua tenuis* comb. n. (*Urocercia tenuis* Pasteels, 1949). The specific epithet *luteiventris* is preoccupied in *Kivua* by *K. luteiventris* Pasteels, 1949, so that new names are proposed for two further species group taxa transferred here to *Kivua*: *Kivua violae* nom. n. for *Tumura luteiventris* Pasteels, 1949 and *Kivua cara* nom. n. for *Urocercia luteiventris* Pasteels, 1949. *Neacidiphora quadrifoveata* Koch, 1998 is a junior synonym of *Kivua incrassata* Pasteels, 1949 (syn. n.).

**KEY WORDS:** Hymenoptera, Symphyta, Tenthredinidae, Allantinae, Blennocampinae, sawflies, new species, new synonymy, new combinations, new replacement names, Afrotropical, South Africa.

### INTRODUCTION

The arid to semiarid winter-rainfall zone of Namibia and South Africa stretches West of a line from Swakopmund on the Atlantic coast of Namibia to Mossel Bay on the Western Cape coast of South Africa. The northern part of the zone is characterized by the Succulent Karoo Biome and the southern part by the Fynbos Biome with its richer floral diversity. Our very poor knowledge of the Symphyta of the winter-rainfall zone is explained by the restricted diversity of the sawfly fauna, the low abundance of these few taxa, and by the lack of field work so far specifically targeted on this group. Hitherto, 23 species of Argidae (Tenthredinoidea) have been the only indigenous Symphyta known from this area: nine species of *Triarge* Forsius, 1931 (Koch 2006, 2010) and 14 species of *Arge* Schrank, 1802 (Pasteels 1953, 1955, 1963; Koch & Goergen 2010). Additionally, three Tenthredinidae (*Caliroa cerasi* (L., 1758), *Fenusa dohrnii* (Tischbein, 1846) and *Nematus oligospilus* Förster, 1854), as well as the siricid *Sirex noctilio* Fabricius, 1793 are established, introduced species. During recent studies on the sawfly fauna of this area, one previously undescribed and probably endemic species of the family Tenthredinidae (Tenthredinoidea) was discovered. Initially, the new species described below was thought to belong to *Distega* Konow, 1904. Further research showed that it should be placed in *Durbadnus* Pasteels, 1954. A revision of *Durbadnus* became necessary to resolve the identity of the new species, which in turn revealed problems, here briefly outlined,

affecting the characterisation of other Afrotropical genera previously that were placed in the Blennocampinae, as well as the distinction of Allantinae from Blennocampinae in the Afrotropical fauna. Here, a first attempt is made to review and key the Afrotropical genera of Blennocampinae.

#### MATERIAL AND METHODS

The examined material examined is in the following collections (institutional codens used in the text follow Evenhuis (2011)):

- BMNH – The Natural History Museum, London, UK;
- SDEI – Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany;
- DMSA – Natural Science Museum, Durban, South Africa;
- USNM – National Museum of Natural History, Smithsonian Institution, Washington, DC, USA;
- UZMT – Museum Zoologicum, Åbo Academi, Turku, Finland;
- ZMHB – Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.

The terminology of wing venation follows Goulet (1992). Except for *Durbadnus* species, original descriptions are not cited in full. Detailed citations are to be found in Taeger *et al.* (2010).

#### *Morphological abbreviations*

Wing cells: fore wing: 2A – second anal, 1R1 – first radial 1, 1Rs – first radial sector, 2Rs – second radial sector; hind wing: 1A – first anal, M – medial, Rs – radial sector. Wing veins: fore wing: 2A+3A – second and third anal vein, M – media, R – radius, Rs+M – radial sector and media, a – anal crossvein, 1m-cu – mediocubital crossvein, 2r-m – second radiomedial crossvein; hind wing: 1A – first anal vein. Male genitalia: H – harpe, Pp – parapenis. The following abbreviations and measurements are used: OOL – ocellarocular line, POL – posterior ocellar line (postocellar line).

#### TAXONOMY

##### *Distinction between Blennocampinae and Allantinae*

The classification of the Blennocampinae and Allantinae has been treated in many different ways, as reviewed by Lacourt (2003). In the European and North American faunas, Allantinae can be clearly identified by possession a fully developed (closed) and barely medially constricted fore wing anal cell, which in Blennocampinae is basally reduced (open, or petiolate), except in Lycaotini (Goulet 1992), where it is complete but strongly constricted. This distinction breaks down in the Afrotropical fauna, where the development of the fore wing anal cell varies considerably within some genera: particularly *Kivua* (Pasteels 1949b), but very rarely also in *Distega*, especially *D. bevisi* Forsius, 1930 (Fig. 2). The phylogeny and classification of the approximately 112 described genera of Allantinae and 106 genera of Blennocampinae in the world that are currently considered to be valid (Taeger *et al.* 2010), are in great need of intensive study. As already noted by Benson (1938), both subfamilies as presently constituted are probably polyphyletic. For the purposes of the present work, as a purely pragmatic and provisional solution to permit identification, Afrotropical Blennocampinae are distinguished from Allantinae as follows:

- Anal cell of fore wing complete, or if veins 2A+3A are reduced, then combined length of flagellomeres<sub>4-7</sub> less than half as long as remainder of flagellum, flagellomere<sub>4</sub> usually much shorter than flagellomere<sub>3</sub> (maximally 0.6 as long) and ventral surface of all or any of flagellomeres<sub>4-7</sub> with a discrete patch (sometimes concave, or paler than rest of flagellomere) bearing setae shorter than those on remaining surface..... **Allantinae**
- Anal cell of fore wing (3A) incomplete (petiolate, with veins 2A+3A reduced, as in Fig. 6). Combined length of flagellomeres<sub>4-7</sub> more than half as long as remainder of flagellum, flagellomere<sub>4</sub> always at least 0.6 as long as flagellomere<sub>3</sub> and ventral surface of flagellomeres<sub>4-7</sub> not different from rest of surface ..... **Blennocampinae**

The modified underside of the apical flagellomeres and the general pattern of flagellomere length ratios in Afrotropical Allantinae, but not in any Afrotropical Blennocampinae, are characters that are usually considered to characterize the Waldheimiini (e.g. Goulet 1992). The Waldheimiini as currently defined are generally, however, regarded as belonging to the Blennocampinae. The phylogenetic significance of these characters is at present unclear.

#### *Taxonomy of Afrotropical Blennocampinae and some Allantinae*

Abe and Smith (1991) and Taeger *et al.* (2010) listed nine valid genera of Blennocampinae as occurring in the Afrotropical Region: *Aethiocampa* Pasteels, 1949 (type species: *Blennocampa aethiopica* Enslin, 1913), *Bicrista* Pasteels, 1949 (type species: *Bicrista bicolor* Pasteels, 1949), *Distega* Konow, 1904 (type species: *Distega sjoestedti* Konow, 1904), *Durbadnus* Pasteels, 1954 (type species: *Monophadnus chubbi* Forsius, 1930), *Kivua* Forsius, 1934 (type species: *Kivua seydeli* Forsius, 1934), *Tesslinia* Pasteels, 1951 (type species: *Blennocampa afra* Enslin, 1913), *Trisodontophyes* Enslin, 1911 (type species: *Trisodontophyes nigroflava* Enslin, 1911), *Tumura* Pasteels, 1949 (type species: *Tumura luteiventris* Pasteels, 1949) and *Urocerca* Pasteels, 1949 (type species: *Urocerca luteiventris* Pasteels, 1949). The type species of all these genera have been examined, and it was concluded that *Bicrista* (syn. n.), *Tumura* (syn. n.) and *Urocerca* (syn. n.) are junior synonyms of *Kivua*. These taxa had been distinguished from *Kivua* (s. str.) by single character states. *Urocerca* was characterized by the form of the cerci, as described by Pasteels (1949a), suggesting that the species concerned may differ in oviposition habits from other *Kivua* species. *Bicrista* and *Tumura* were erected mainly on the basis of extremes of development of the anal cell in the fore wing. This character is of little significance in the Afrotropical fauna because of its extreme variability. *Kivua* is provisionally removed to the Allantinae (new placement), because the fore wing anal veins 2A+3A are more or less distinctly indicated. In most other characters, *Kivua* is closely similar to *Neacidiphora* Enslin, 1911 (Allantinae), revised by Koch (1998). Eight *Kivua* species were recognized as valid by Taeger *et al.* (2010) and eight are added here through recombination, with two species removed to *Durbadnus*, so that the genus now contains the following 14 species:

*Kivua abdominalis* Pasteels, 1949

*Kivua acuticornis* (Pasteels, 1953) comb. n. (*Erythraspides acuticornis* Pasteels, 1953)

*Kivua afra* (Pasteels, 1953) comb. n. (*Erythraspides afra* Pasteels, 1953)

*Kivua bicolor* (Pasteels, 1949) comb. n. (*Bicrista bicolor* Pasteels, 1949)

*Kivua cara* nom. n. (Etymology: from Latin *cara* (valuable)) for *Urocerca luteiventris* Pasteels, 1949 (Pasteels 1949a: 67–68). The specific epithet *luteiventris* is preoccupied in *Kivua* by *K. luteiventris* Pasteels, 1949 (Pasteels 1949a: 64–65). No synonym is available for this species, so a new name is required for the secondary homonym, provided that *K. cara* is considered to belong to the same genus as *K. luteiventris*.

*Kivua cribrifrons* (Pasteels, 1949) comb. n. (*Urocerca cribrifrons* Pasteels, 1949)

*Kivua incrassata* Pasteels, 1949

*Kivua luteiventris* Pasteels, 1949

*Kivua pallipes* (Pasteels, 1949) comb. n. (*Urocerca pallipes* Pasteels, 1949)

*Kivua punctifrons* Pasteels, 1949

*Kivua seydeli* Forsius, 1934

*Kivua sudanica* (Forsius, 1931)

*Kivua tenuis* (Pasteels, 1949) comb. n. (*Urocerca tenuis* Pasteels, 1949).

*Kivua violae* nom. n. (Etymology: After Viola Richter, assistant in the Hymenoptera Section at the Berlin Museum) for *Tumura luteiventris* Pasteels, 1949 (Pasteels 1949a: 57–58). The specific epithet *luteiventris* is preoccupied in *Kivua* by *K. luteiventris* Pasteels, 1949 (Pasteels 1949a: 64–65). No synonym is available for this species, so a new name is required for the secondary homonym, provided that *K. violae* is considered to belong to the same genus as *K. luteiventris*.

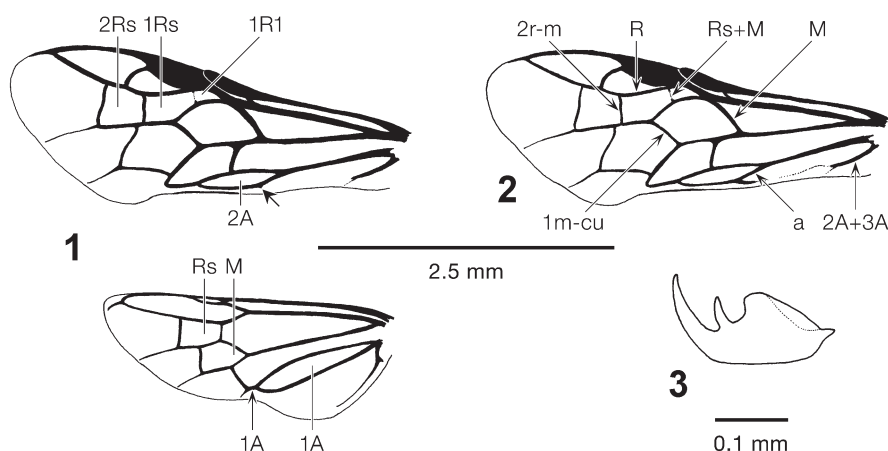
It should also be noted that *Neacidiophora quadrioveata* Koch, 1998 is a synonym of *Kivua incrassata* Pasteels, 1949 (syn. n.), as based on comparison of type specimens. The reason for the misidentification by Koch (1998) is the nearly complete development of 2A+3A in the fore wing of *N. quadrioveata*, which is very faintly indicated in most *Kivua* species, but highly variable. Pasteels (1949b) described intraspecific variability in the anal vein, using *Kivua seydeli* Forsius, 1934 (the type species of *Kivua*) as an example. He noted that similar variability occurred in several other *Kivua* species, including *Urocerca*.

Five Afrotropical genera are retained in the Blennocampinae. *Aethiocampa* is characterized by absence of the crossvein Rs+M and a very long, petiolate anal cell (1A) of the hind wing (Fig. 4). The basal lobe of the apically bifid tarsal claws is enlarged (Fig. 5). The head of the only known species in this genus, *Aethiocampa aethiopica* (Enslin, 1913), especially its frons, is conspicuously transversally microridged and dull. The medial tooth of each mandible is strongly developed (Fig. 25).

*Distega* is the largest genus of Afrotropical Blennocampinae, with 25 species currently recognized as valid (Taeger *et al.* 2010). According to Pasteels (1949a), placement of *Distega* in the Blennocampinae is not necessarily correct, because he sporadically found specimens of different species with variable reduction of the fore wing veins 2A+3A. In fact, apart from a basal stub of 2A+3A (Fig. 1) and in very few cases a very small vestige of these veins at the base of the anal crossvein (Fig. 2; Koch 2000, fig. 34), particularly in *D. bevisi*, these veins are almost completely obliterated (Fig. 1) in all other species. A distinctive apomorphy of *Distega* is the continuous suture that divides the upper and lower halves of the mesepisternum (Fig. 24).

*Durbadnus*, now with three species, is revised below.

*Tesslinia* is currently considered to be monotypic. The genus possesses a distinctive combination of characters: fore wing vein Rs+M is weakly curved near its junction with



Figs 1–3. *Distega* sp.: (1) fore wing with very small vestige (arrow) of veins 2A+3A at the base of the anal crossvein (a) and hind wing; (2) *D. bevisi* Forsius, fore wing; (3) *Distega* sp., tarsal claw.

R (resembling Selandriinae, but none of these has a basally incomplete fore wing anal cell); the anal cell of the hind wing is very short or nearly impetiolate (Fig. 6); the basal lobe of the apically bifid tarsal claws is flattened (Fig. 7); the medial tooth of the rather slender mandible is very small (Fig. 26); and the head is micropunctate and shiny.

*Trisodontophyes* is readily separated from other African Blennocampinae by its tridentate claws (Fig. 9). The genus was revised by Koch (2001). Taeger *et al.* (2010) list 21 extant species as valid.

#### Checklist of Afrotropical Blennocampinae

***Aethiocampa*** Pasteels, 1949

*aethiopica* (Enslin, 1913)

***Distega*** Konow, 1904

*Paradistega* Forsius, 1934

*Codistega* Pasteels, 1949

*Eudistega* Pasteels, 1949

*Pachydistega* Pasteels, 1949

*Distegella* Pasteels, 1951

*abdominalis* Forsius, 1931

*abyssinica* Pasteels, 1955

*basilewskyi* Pasteels, 1955

*bevisi* Forsius, 1930

*braunsi* Enslin, 1911

*brunniventris* Enslin, 1913

*carbonaria* Forsius, 1928

*clypealis* Pasteels, 1955

*coeruleomicans* Pasteels, 1955

*congonensis* (Forsius, 1934)

*formosa* (Pasteels, 1949)

*forsiusi* Blank, Liston & Taeger, 2009

*humeralis* Pasteels, 1955

*maculata* (Forsius, 1934)

*micans* (Forsius, 1934)

*mocsaryi* Enslin, 1913

*montium* Konow, 1907

*nigriceps* (Enderlein, 1920)

*pallidiventris* Forsius, 1927

*paradoxalis* Pasteels, 1954

*rectiserra* (Pasteels, 1949)

*schoutedeni* Pasteels, 1954

*sjoestedti* Konow, 1904

*thoracalis* (Pasteels, 1949)

*velutina* (Pasteels, 1951)

***Durbadnus*** Pasteels, 1954

*chubbi* (Forsius, 1930)

*obscuripes* (Forsius, 1931)

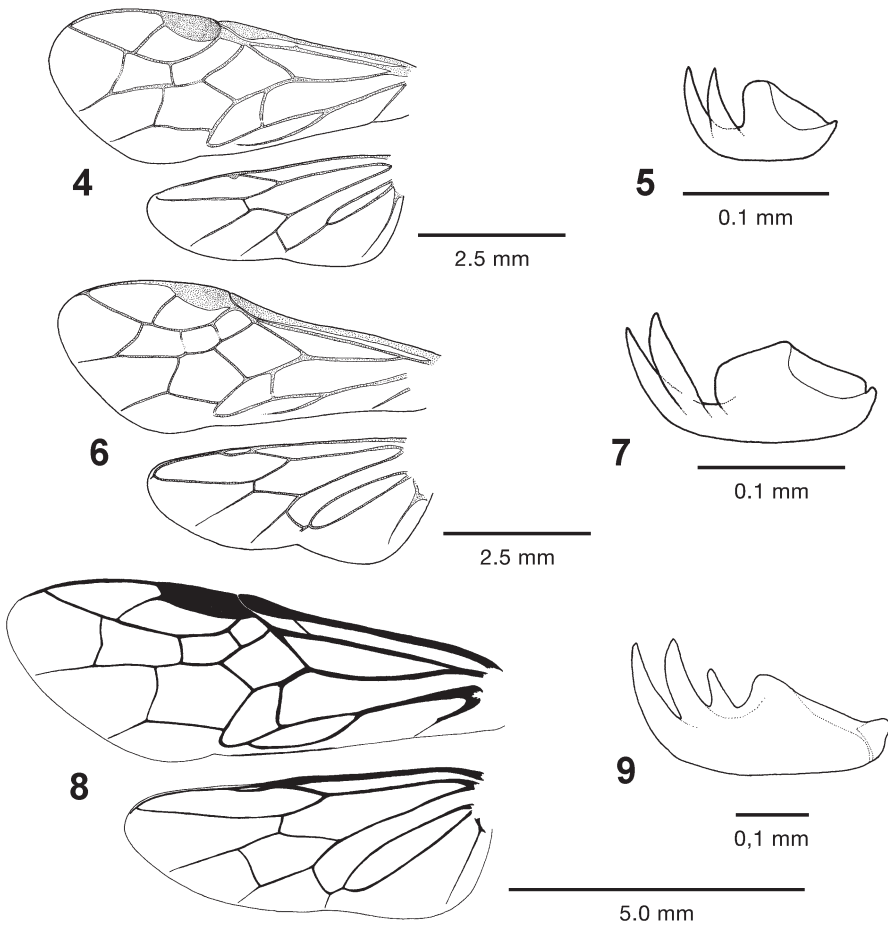
*taegeri* sp. n.



*Tesslinia* Pasteels, 1951  
*afra* (Enslin, 1913)

*Trisodontophyes* Enslin, 1911  
*aethiopica* Koch, 2001  
*angustata* Enslin, 1913  
*antennata* Koch, 2001  
*ater* (Konow, 1907)  
*diversa* Koch, 2001  
*funnebris* Pasteels, 1949  
*inaequalis* Koch, 2001  
*malaisei* (Forsius, 1932)  
*montana* Koch, 2001

*nigroflava* Enslin, 1911  
*robertibuyssoni* (Schulz, 1906)  
*robusta* Forsius, 1930  
*schoutedeni* Forsius, 1934  
*semisplendens* Koch, 2001  
*serrula* Koch, 2001  
*singularis* Koch, 2001  
*splendens* Koch, 2001  
*tibialis* Enslin, 1913  
*triplicata* Forsius, 1934  
*tristis* Forsius, 1934  
*ugandae* Koch, 2001



Figs 4–9. (4, 5) *Aethiocampa aethiopica* (Enslin): (4) fore and hind wing, (5) tarsal claw; (6, 7) *Tesslinia afra* (Enslin): (6) fore and hind wing, (7) tarsal claw; (8, 9) *Trisodontophyes* sp.: (8) fore and hind wing, (9) tarsal claw.

## Key to genera of Afrotropical Blennocampinae

- 1 Hind wing with cell M (Fig. 8) or both Rs and M (Fig. 1) present ..... 2
  - Hind wing with cells Rs and M absent ..... 3
- 2 Hind wing only with M (Fig. 8); tarsal claws tridentate, with large basal lobe (Fig. 9); mesepisternum without transverse groove or suture ..... **Trisodontophyes**
  - Hind wing with both Rs and M both (Fig. 1); tarsal claws with one subapical tooth and enlarged basal lobe (Fig. 3); upper half of mesepisternum separated from lower by a transverse groove or suture (Fig. 24) ..... **Distega**
- 3 Fore wing with crossvein Rs+M absent, 1R1 and 1Rs are fused, thus there are only two cells (Fig. 4); anal cell of hind wing as long as anal vein 1A (Fig. 4) ..... **Aethiocampa**
  - Fore wing with crossvein Rs+M present, 1R1, 1Rs and 2Rs are present, thus there are three cells (Figs 6, 10, 20); anal cell of hind wing with conspicuously shorter petiole (Figs 6, 10, 20) ..... 4
- 4 Tarsal claws with conspicuously flattened basal lobe, about half as high as inner subapical tooth (Fig. 7); anal vein 2A of fore wing gradually obliterated apically, so anal cell (2A) open below; anal cell of hind wing very short, nearly impetiolate (Fig. 6) ..... **Tesslinia**
  - Tarsal claws with enlarged basal lobe, nearly equal in height to inner subapical tooth (Fig. 16); anal vein 2A of fore wing completely developed, anal cell closed; anal cell of hind wing petiolate, about equal to width of anal cell (Figs 10, 20) ..... **Durbadnus**

Genus *Durbadnus* Pasteels, 1954

*Durbadnus*: Pasteels 1954: 503. Type species: *Monophadnus chubbi* Forsius, 1930, by orig. des.

## Redescription:

Length 6.0–8.0 mm. Head and abdomen black, thorax black with orange-yellow markings. Antenna filiform, 9-segmented and longer than maximum head width, flagellomere, conspicuously longer than flagellomere<sub>2</sub> or flagellomere<sub>3</sub>. Head sparsely micro-punctate, shiny, without strongly developed structures. Occipital carina absent. Supra-antennal crest moderately developed. Frontal area indistinctly limited. Malar space absent. Clypeus subtruncate, very slightly enlarged medially. Each mandible with strongly developed, double-shouldered, subapical tooth (Fig. 27). Tarsal claws cleft apically, with inner tooth somewhat shorter, and large basal lobe (Fig. 16). Epicnemium absent. In fore wing, M slightly curved and parallel to 1m–cu (Figs 10, 20); cells 1Rs and 2Rs subequal in length (Fig. 20) or 2Rs is as long as 1R1 and 1Rs united (Fig. 10); stub of 2A+3A nearly straight or furcate at apex. Hind wing without closed cells Rs and M, anal cell 2A present and about equal to width of short petiolate anal cell 1A (Figs 10, 20). Tergum<sub>1</sub> with more or less wide, deep medial excision.

Remarks: Pasteels (1949a) recognized that *M. chubbi* Forsius, 1930 is atypical for *Monophadnus*, because as described by Forsius (1930), the tarsal claws are cleft apically and lobed basally, whilst *Monophadnus* Hartig, 1837 has simple claws, without basal lobe and subapical tooth. Pasteels (1954) described *Durbadnus* after he had seen a male of *D. chubbi* collected by Marley in 1945. However, he perpetuated a mistake made by



Forsius (1930): “Hind wings with one closed middle cell”. Actually, in *Durbadnus* the hind wing does not have a closed middle cell, i.e. cells RS and M are missing.

In the course of this revision, the holotypes of three species described by Forsius (1931) (*Blennocampa bensoni*, *B. obscuripes* and *B. sudanica*) were examined, because they had been described as having a colour pattern similar to *Durbadnus*. It was found that *B. bensoni* and *B. obscuripes* belong to *Durbadnus*, whereas *B. sudanica* was confirmed as belonging to *Kivua* Forsius, 1934, where it was placed by Pasteels (1949a).

*Durbadnus* species have so far only been found in South Africa, whereas species of the morphologically similar genera *Tesslinia* Pasteels, 1951 and *Aethiocampa* Pasteels, 1949 have an Equatorial distribution. The larvae and host plants of *Durbadnus* are unknown.

### *Durbadnus chubbi* (Forsius, 1930)

Figs 10–15, 28, 29

*Monophadnus chubbi*: Forsius 1930: 73–75, ♀♂. Type locality: South Africa, KwaZulu-Natal, Durban.

*Durbadnus chubbi*: Pasteels 1954: 503.

*Blennocampa bensoni* Forsius, 1931: 27–28, ♀♂. Type locality: South Africa, Eastern Cape, Port St Johns.

#### Syn. n.

*Kivua bensoni*: Pasteels 1949a: 60.

#### Redescription:

##### *Female.*

Head black; labrum light brown, apical half of mandible reddish brown. Thorax black; pronotum, tegula, lateral lobes of mesoscutum except for a large black medial spot, lateral margin of medial lobe of mesoscutum, postspiracular sclerite, dorsal half of mesopleuron, and anepimeron orange. Legs blackish; tibiae and tarsi whitish, only at extreme apices of tibiae and tarsomeres, somewhat darker. Wings subhyaline; costa, subcosta and base of venation blackish, stigma and rest of venation light brown. Abdomen black.

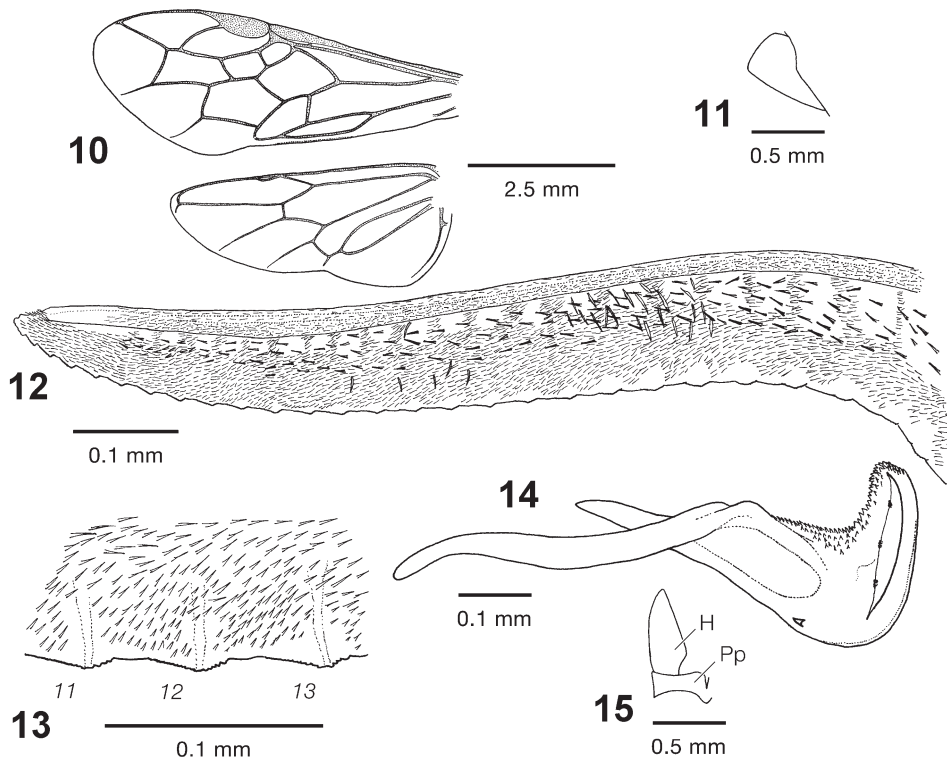
Head narrowed behind eyes. (Antenna as long as head and thorax together; *vide* Forsius 1931 for *Blennocampa bensoni*. Flagella of *Monophadnus chubbi* holotype missing; *vide* Forsius 1930.) POL:OOL = 1.0:0.8. Postocellar area: width:length = 1.0:0.7, lateral furrows slightly divergent posteriorly and convex; a longitudinal medial furrow shallowly developed, especially at the anterior margin. Supra-antennal grooves large and deep, no furrow developed towards torulus. Interantennal area with very small medial groove. Eyes converge downwards, lower interocular distance as long as eye length. Supraclypeal furrow deep.

Head more or less micropunctate, shiny; pubescence on head pale, somewhat shorter than the diameter of lateral ocellus. Thorax sparsely micropunctate, shiny; pubescence pale, shorter than that on head. In fore wing, cell 2Rs as long as 1R1 and 1Rs united; stub of 2A+3A more or less straight at apex (Fig. 10).

Tergum<sub>1</sub> with moderately wide but deep medial excision. Terga transversally microridged, dull. Sawsheath in lateral view pointed at apex (Fig. 11), in dorsal view very narrow towards apex.

Lancet as in Fig. 12, with scattered, conspicuous longer setae at centre towards base; with approx. 27 serrulae; serrulae at centre very flat, truncate apically, with about 8–11 very small posterior denticles and 3 anterior denticles (Fig. 13).

Length 6.7–7.3 mm.



Figs 10–15. *Durbadnus chubbi* (Forsius): (10) fore and hind wing, (11) sawsheath (lateral aspect), (12) lancet (lateral aspect), (13) serrulae 11–13, (14) penis valve (left, lateral aspect), (15) parapenis and harpe (left, ventral aspect).

### Male.

Colouration similar to that of female. Mesoscutum completely black, only lateral margin of lateral lobe orange. Fore femur dirty white, mid and hind femora dirty white at apices.

Head conspicuously narrowed behind eyes. Antenna 1.3 times as long as maximum width of head; flagellomere<sub>1</sub> 0.9 times as long as flagellomeres<sub>2+3</sub> combined. POL:OOL = 1.0:0.6–0.8. Other features as for female. Penis valve as in Fig. 14; parapenis and harpe as in Fig. 15.

Length 5.3–6.0 mm.

Type material examined:

*Monophadnus chubbi*. Holotype (Figs 28, 29): ♀: “Holotype” [red]; “Durban [29°51'S 31°01'E], Natal, 18.X.1920, C. N. Barker, 2578”; “*Monophadnus chubbi* n. sp. ♀, Holotype, R. Forsius det.”; “Holotype, *Monophadnus chubbi* Forsius ♀, teste: F. Koch, 2011” [red]; “*Durbadnus chubbi* (Forsius) ♀, det.: F. Koch, 2011” (DMSA). Condition: Antennae missing except for left antennomeres<sub>1+2</sub>; legs and wings partly damaged. Paratype: 1♂ same data as holotype (DMSA).

*Blennocampa bensoni*. Holotype: ♀ “Type, H. T.” [red circle]; “S. Africa, R. E. Turner, Brit. Mus., 1923–510”; “Port St. Johns [31°38'S 29°32'E], Pondoland [= Eastern Cape], IX.1923”; “B. M. Type, Hym., 1.379”; “*Blennocampa bensoni* n. sp. ♀, holotypus, R. Forsius”; “Holotypus, *Blennocampa bensoni* Forsius ♀, teste: F. Koch, 2011” [red]; “*Durbadnus bensoni* (Forsius) ♀, det.: F. Koch, 2011” (BMNH). Condition: Flagella and left rear tarsus missing. Paratype: SOUTH AFRICA: KwaZulu-Natal: 1♂ Eshowe [28°53'S 31°28'E], 1–22. iv.1926 (UZMT). Condition: Thorax ventrally damaged by pin; two left apical flagellomeres missing.

Other material examined: SOUTH AFRICA: KwaZulu-Natal: 1♂ Umbilo [29°52'00"S 30°58'42"E], 14.x.1945, Marley (DMSA).

Distribution: South Africa (Fig. 34).

Remarks: The type material of *M. chubbi* was examined and compared with that of *B. bensoni*. It was not possible to find any significant differences between these specimens, and therefore they are considered to be conspecific.

Variability in *D. chubbi* occurs in the shape of the medial furrow of the postocellar area. This is distinctly developed in the female holotype of *M. chubbi*, weaker in the female holotype of *B. bensoni*, and absent in all males examined.

*Durbadnus chubbi* differs from other *Durbadnus* species in the large cell 2Rs of the fore wing, which is as long as cells 1R1 and 1Rs united (Fig. 10). In *D. taegeri* (Fig. 20) and *D. obscuripes*, 1Rs and 2Rs are about equal in their lower length; in *D. chubbi*, 1R1 is conspicuously shorter. Additionally, in the fore wing, the stub of 2A+3A of *D. chubbi* is more or less straight at the apex, whereas in *D. taegeri* and *D. obscuripes* it is apically furcate (Fig. 20).

*Durbadnus obscuripes* (Forsius, 1931), **comb. n.**

Figs 16–19, 30, 31

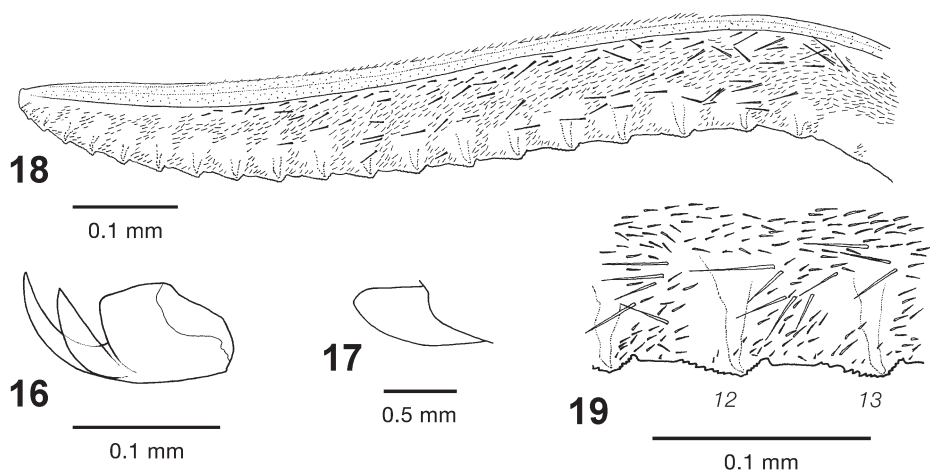
*Blennocampa obscuripes*: Forsius 1931: 28–30, ♀. Type locality: South Africa, Eastern Cape, Umtata.

*Kivua obscuripes*: Pasteels 1949a: 60.

Redescription:

*Female*.

Head black; apical half of mandible reddish brown. Thorax black; pronotum, tegula, lateral lobes of mesoscutum except for a large black medial spot, medial lobe of mesoscutum at extreme angle, and postspiracular sclerite orange. Legs black; apical half of fore femur and fore tibia yellow. Wings uniformly slightly infusate; stigma, costa, subcosta, and rest of venation blackish. Abdomen black.



Figs 16–19. *Durbadnus obscuripes* (Forsius): (16) tarsal claws, (17) sawsheath (lateral aspect), (18) lancet (lateral aspect), (19) serrulae 12–13.

Head very slightly narrowed behind eyes. Antenna 1.3 times as long as maximum head width; flagellomere<sub>1</sub> 0.7 times as long as flagellomeres<sub>2/3</sub> combined. POL:OOL = 1.0:0.7. Postocellar area: width:length = 1.0:0.5–0.6 (0.6 HT), lateral furrows convex. Supra-antennal grooves large and deep, with conspicuous furrow towards lateral margin of torulus. Interantennal area with shallow, transverse oval groove and two small lateral grooves, longitudinal furrow interrupts front margin of frontal area medially and ends at front ocellus. Eyes converge downwards, lower interocular distance 1.1 times as long as eye length. Supraclypeal furrow deep.

Head very sparsely micropunctate, shiny; pubescence on head brown, somewhat shorter than diameter of lateral ocellus. Thorax nearly impunctate, shiny; pubescence yellow, shorter than that on head. In fore wing, cells 1Rs and 2Rs subequal in length; stub of 2A+3A furcate (Fig. 20).

Tergum<sub>1</sub> with wide and deep medial excision. Terga<sub>1/2</sub> smooth and shiny, following terga sparsely micropunctate, shiny. Sawsheath in lateral view roundly pointed at apex (Fig. 17), in dorsal view very narrow towards apex.

Lancet (Fig. 18) has very long setae, especially at basal half; with approx. 18–19 serrulae; serrulae at centre flatly prominent, with about 7 or 8 irregular posterior denticles and 4 or 5 irregular anterior denticles (Fig. 19).

Length 6.7–8.0 mm.

*Male.* Unknown.

Holotype (examined): ♀ “Type, H. T.” [red circle]; “S. Africa, R. E. Turner, Brit. Mus., 1923-189”; “Umtata [31°35'S 28°47'E], Transkei [= Eastern Cape], 18.II-18.III.923”; “B. M. Type, Hym., 1.378”; “*Blennocampa obscuripes* n. sp. ♀, R. Forsius”; “Holotypus, *Blennocampa obscuripes* Forsius ♀, teste: F. Koch, 2011” [red]; “*Durbadnus obscuripes* (Forsius) ♀, det.: F. Koch, 2011” (BMNH). Condition: Right fore wing damaged.

Paratype (examined): 1 ♀ same data as holotype (UZMT). Condition: Fair.

Distribution: South Africa (Fig. 34).

Remarks. The colour pattern of *D. obscuripes* is very similar to that of *D. taegeri*. However, the latter species differs in having yellowish fore tibiae and because of the smaller black medial spot on the lateral lobes of mesoscutum. In *D. taegeri*, flagellomere<sub>1</sub> is as long as flagellomeres<sub>2/3</sub> combined, whereas in *D. obscuripes*, flagellomere<sub>1</sub> is conspicuously shorter. In particular, *D. obscuripes* is distinguished by the shape of serrulae, which are flatter than in *D. taegeri*. Furthermore, the lancet of *D. obscuripes*, especially at its base, bears very large sensilla. In the paratype, these sensilla are also present, but somewhat fewer in number. It is possible that they break off during oviposition.

### ***Durbadnus taegeri* sp. n.**

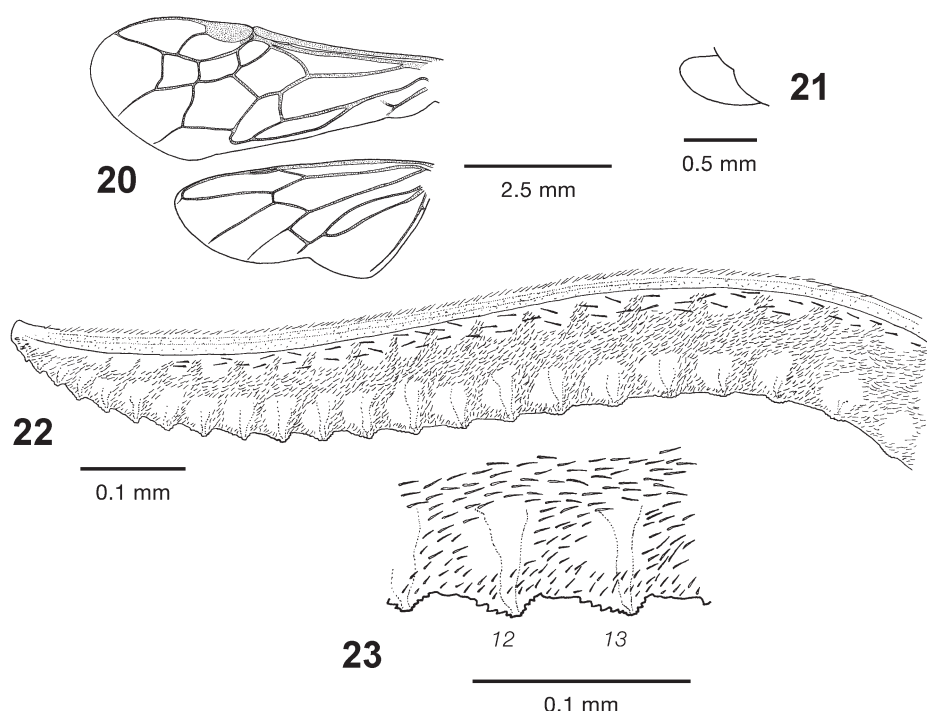
Figures 20–23, 27, 32, 33

Etymology: The new species is named after our colleague and specialist on Symphyta, Dr Andreas Taeger, curator of Hymenoptera and Lepidoptera at the Senckenberg Deutsches Entomologisches Institut, Münchenberg.

Description:

*Female.*

Head black; apical half of mandible reddish brown. Thorax black; pronotum, tegula, lateral half of lateral lobe of mesoscutum, medial lobe of mesoscutum at extreme angle,



Figs 20–23. *Durbadnus taegeri* sp. n.: (20) fore and hind wing, (21) sawsheath (lateral aspect), (22) lancet (lateral aspect), (23) serrulae 12–13.

and postspiracular sclerite orange-yellow. Legs black; anterior surface of apical half and apex of posterior surface of fore femur yellow, fore tibia and fore basitarsomere at base dirty whitish. Wings uniformly slightly infusate; stigma, costa, subcosta and rest of venation blackish. Abdomen black.

Head very slightly narrowed behind eyes. Antenna 1.4 times as long as maximum head width; flagellomere<sub>1</sub> as long as flagellomeres<sub>2/3</sub> combined. POL:OOL = 1.0:0.7. Post-ocellar area: width:length = 1.0:0.7, lateral furrows slightly convex. Supra-antennal grooves large and deep, with conspicuous furrow at lateral margin of torulus. Inter-antennal area with rounded groove and small longitudinal furrow medially, ending at front margin of frontal area. Eyes converge downwards, lower interocular distance 1.1 times the length of the eye. Supraclypeal furrow deep.

Head sparsely micropunctate, shiny; pubescence on head brown, longer than diameter of lateral ocellus. Thorax more densely punctate, shiny; pubescence yellow, shorter than that on head. In fore wing, cells 1Rs and 2Rs subequal in length; stub of 2A+3A furcate (Fig. 20).

Tergum<sub>1</sub> with wide and deep medial excision. Terga<sub>1/2</sub> smooth and shiny, following terga transversally microridged and micropunctate, shiny. Sawsheath in lateral view narrowly rounded at apex (Fig. 21), in dorsal view narrowed toward apex.

Lancet as in Fig. 22, having about 23 serrulae; serrulae at centre moderately prominent, with about 4 or 5 irregular posterior denticles and 3 or 4 irregular anterior denticles (Fig. 23).



Length 6.7 mm.

*Male*. Unknown.

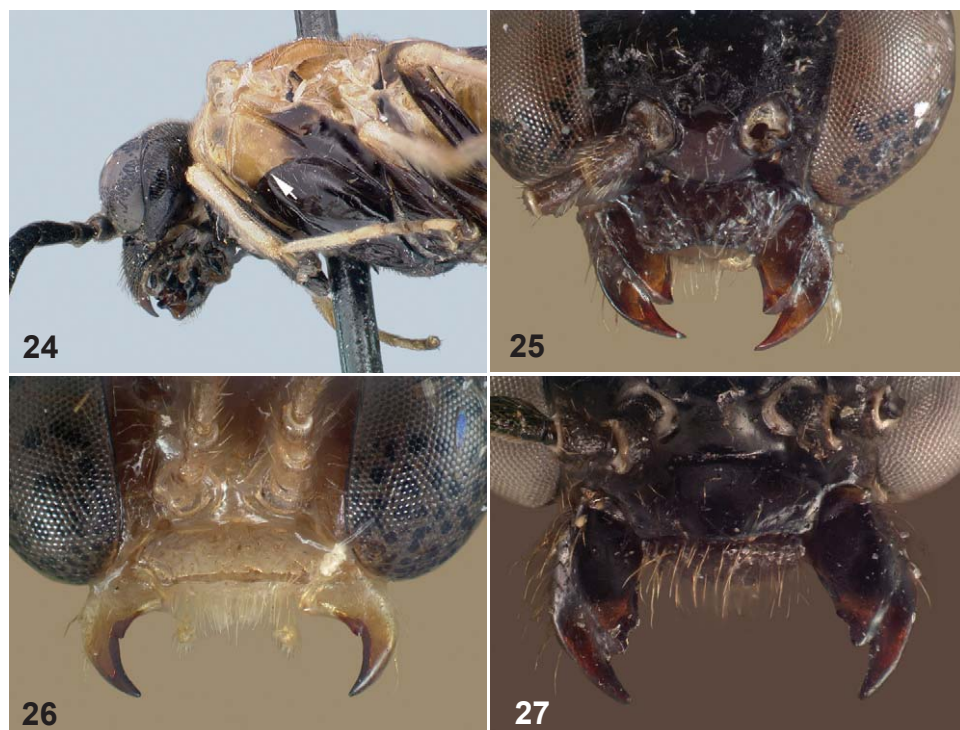
Holotype: ♀ “Republic of South Africa: Cape Prov. [Western Cape], Citrusdal, 1 km N Hexrevier [Heksrivier, 32°26'00"S 18°57'40"E], 6.X.1994, shrubs at riverside, M. Söderlund”; “Holotypus, *Durbadnus taegeri* ♀ sp. n., det.: F. Koch, 2011” [red] (USNM). Condition: Good.

Distribution: South Africa (Fig. 34).

Remark: *Durbadnus taegeri* is the first recorded member of the Tenthredinidae in the winter-rainfall zone of western South Africa.

#### Key to species of *Durbadnus*

- 1 Cell 2Rs in fore wing as long as cells 1R1 and 1Rs united (Fig. 10); stub of veins 2A+3A nearly straight ..... **chubbi**
- Cells 2Rs and 1Rs subequal in length (Fig. 20); stub of 2A+3A furcate apically ....2
- 2 Flagellomere<sub>1</sub> conspicuously shorter than flagellomeres<sub>2+3</sub> combined. Only small black spot on inner lateral lobe of mesonotum. Serrulae of lancet flatter (Figs 18, 19) ..... **obscuripes**
- Flagellomere<sub>1</sub> as long as flagellomeres<sub>2+3</sub> combined. Approximately half of inner lateral lobe of mesonotum black. Serrulae of lancet higher (Figs 22, 23) ..... **taegeri** sp. n.



Figs 24–27. (24) *Distega bevisi* (Forsius), female, mesepisternum with suture (arrowed); (25–27) mandibles: (25) *Aethiocampa aethiopica*, (26) *Tesslinia afra* (Enslin), (27) *Durbadnus taegeri* sp. n.





Figs 28–33. Habitus, dorsal (28, 30, 32) and lateral (29, 31, 33) aspects: (28, 29) *Durbadnus chubbi* (Forsius), (30, 31) *Durbadnus obscuripes* (Forsius), (32, 33) *Durbadnus taegeri* sp. n.

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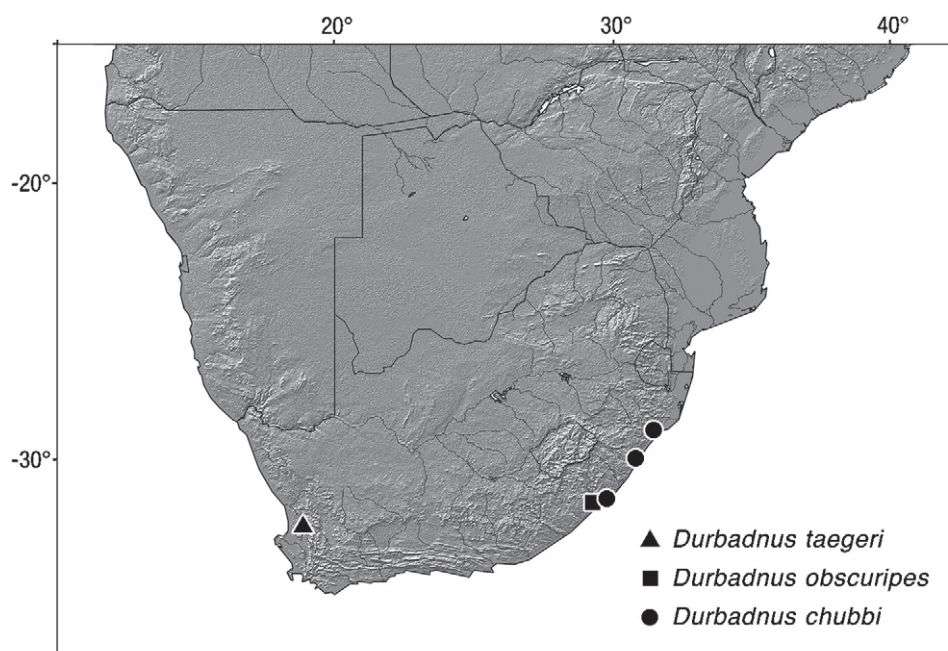


Fig. 34. Distribution of *Durbadnus* species.

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