

A new Afrotropical species of the genus *Idiasta* Foerster, 1863 (Hymenoptera: Braconidae: Alysiinae)

Новый афротропический вид рода *Idiasta* Foerster, 1863 (Hymenoptera: Braconidae: Alysiinae)

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The new species *Idiasta vanreenensis* **sp. nov.** is described and illustrated from South Africa. This species is compared with the most similar *I. curtimembrum* Fischer, 2004 from Madagascar.

Описывается и иллюстрируется новый вид *Idiasta vanreenensis* **sp. nov.** из Южной Африки. Данный вид сравнивается с наиболее близким *I. curtimembrum* Fischer, 2004 с Мадагаскара.

Key words: braconids, parasitoid wasps, taxonomy, South Africa, Alysiinae, *Idiasta*, new species

Ключевые слова: бракониды, паразитоиды, таксономия, Южная Африка, Alysiinae, *Idiasta*, новый вид

INTRODUCTION

The braconid genus *Idiasta* Foerster, 1863 is a small and rarely collected Alysiinae taxon widely distributed throughout the Afrotropical, Oriental and Palearctic regions and comprising about 50 species (Yu et al., 2012). Recently Peris-Felipo & Belokobylskij (2016) published the comprehensive key for identification of seven Afrotropical and Madagascar species.

The main diagnostic characters of the genus *Idiasta* belonging to the *Phaenocarpa* genera complex are the first flagellar segment usually shorter or at least not longer than the second segment, and the vein 2-*SR* longer (sometimes distinctly) than the vein 3-*SR* (Wharton, 2002).

In this paper, one additional new species, *Idiasta vanreenensis* **sp. nov.**, from South African Republic is described and illustrated.

MATERIAL AND METHODS

Studied material was selected from the collections of the Natural History Museum (London, UK; BNHM). For the terminology of the morphological features and sculpture as well as for measurements see Peris-Felipo et al. (2014), for wing venation nomenclature see van Achterberg (1993). The material was imaged using Digital Microscope Keyence® VHX-2000 and edited by Adobe Photoshop® imaging system. The types of described species are deposited in BNHM.

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TAXONOMIC PART

Order HYMENOPTERA

Family BRACONIDAE

Subfamily ALYSIINAE

Genus *Idiasta* Foerster, 1863

Diagnosis. Mandible with three teeth; its ventral and diagonal ridges well developed. First flagellar segment of antenna usually shorter than, or at most equal to, second segment. Metanotum usually with high subpointed median tooth. Pterostigma of fore wing broad, discrete, wedge-shaped; vein 2-*SR* longer (sometimes distinctly) than vein 3-*SR*. Hind wing with vein *m-cu* well developed; vein *M+CU* usually equal to or longer than vein 1*M*.

Host. Muscidae (Diptera).

Idiasta vanreenensis Peris-Felipo, sp. nov. (Figs 1, 2)

Holotype. Female, **Republic of South Africa, KwaZulu-Natal Province**, Van Reenen, Drakensberg, 1–22.I.1927 (R.E. Turner leg.) [B.M. 1927–54] (BNHM).

Paratype. 1 male, same label as in holotype, but 23–26.I.1927 [B.M. 1927–62] (BNHM).

Description. *Female* (holotype). Body length 2.4 mm; fore wing length 2.8 mm; hind wing length 2.2 mm.

Head. In dorsal view, 1.7 times as wide as median length, 1.5 times as wide as mesoscutum, smooth, with temple rounded behind eyes; eyes broader than temples. Eye in lateral view 1.3 times as high as wide and 1.5 times as wide as temple medially. POL 1.1 times OD; OOL 3.1 times OD. Face 1.7 times as wide as high, with sparse setae; inner margins of eyes subparallel. Clypeus 2.1 times as wide as high, slightly curved ventrally. Paraclypeal fovea short, not crossing halfway distance between clypeus and eye. Mandible widened towards apex, 1.7 times as long as its maximum width; all mandibular teeth wide; upper tooth weakly longer than lower tooth; middle tooth long, weakly longer than upper tooth, distinctly

pointed towards apex; lower tooth obtuse, subrounded apically. Antenna more than 28-segmented (apical segments missing in holotype), longer than body. Scape 1.5 times as long as pedicel. First flagellar segment 3.5 times as long as its apical width. Second flagellar segment 8.0 times as long as its maximum width, 2.2 times as long as first segment. Third and fourth flagellar segments 5.8 times, middle segments until 26th about 5.0 times as long as their width accordingly.

Mesosoma. In lateral view, 1.4 times as long as high. Mesoscutum (dorsal view) 0.8 times as long as its maximum width, smooth. Notauli complete on horizontal surface of mesoscutum, reaching mesoscutal pit. Mesoscutal pit short and rounded. Prescutellar depression subsquare, smooth, only median carina present. Precoxal sulcus present, wide, crenulate, reaching anterior and posterior margins of mesopleuron. Posterior mesopleural furrow crenulate below. Propodeum almost completely rugose-reticulate, without distinct median longitudinal carina. Propodeal spiracle relatively small.

Wings. Length of fore wing 3.4 times its maximum width. Marginal cell ending at apex of wing, 3.9 times as long as its maximum width. Vein 2-*SR* 1.2 times as long as vein 3-*SR*; vein *SR1* 5.3 times as long as vein 3-*SR*. Vein *m-cu* interstitial. Vein *cu-a* strongly postfurcal. Subdiscal cell closed distally, 3.8 times as long as its maximum width. Vein *CU1a* arising from middle of distal margin of subdiscal cell. Hind wing 4.2 times as long as its maximum width.

Legs. Hind femur 5.6 times as long as its maximum width. Hind tibia weakly widened towards apex, 10.7 times as long as its maximum subapical width, 0.8 times as long as hind tarsus. First segment (basitarsus) of hind tarsus 1.4 times as long as second segment.

Metasoma. First tergite weakly widened towards apex, twice as long as its apical width, striate. Ovipositor 3.0 times as long as first tergite, 1.1 times as long as metasoma, 1.5 times as long as hind femur, 0.4 times as long as fore wing.

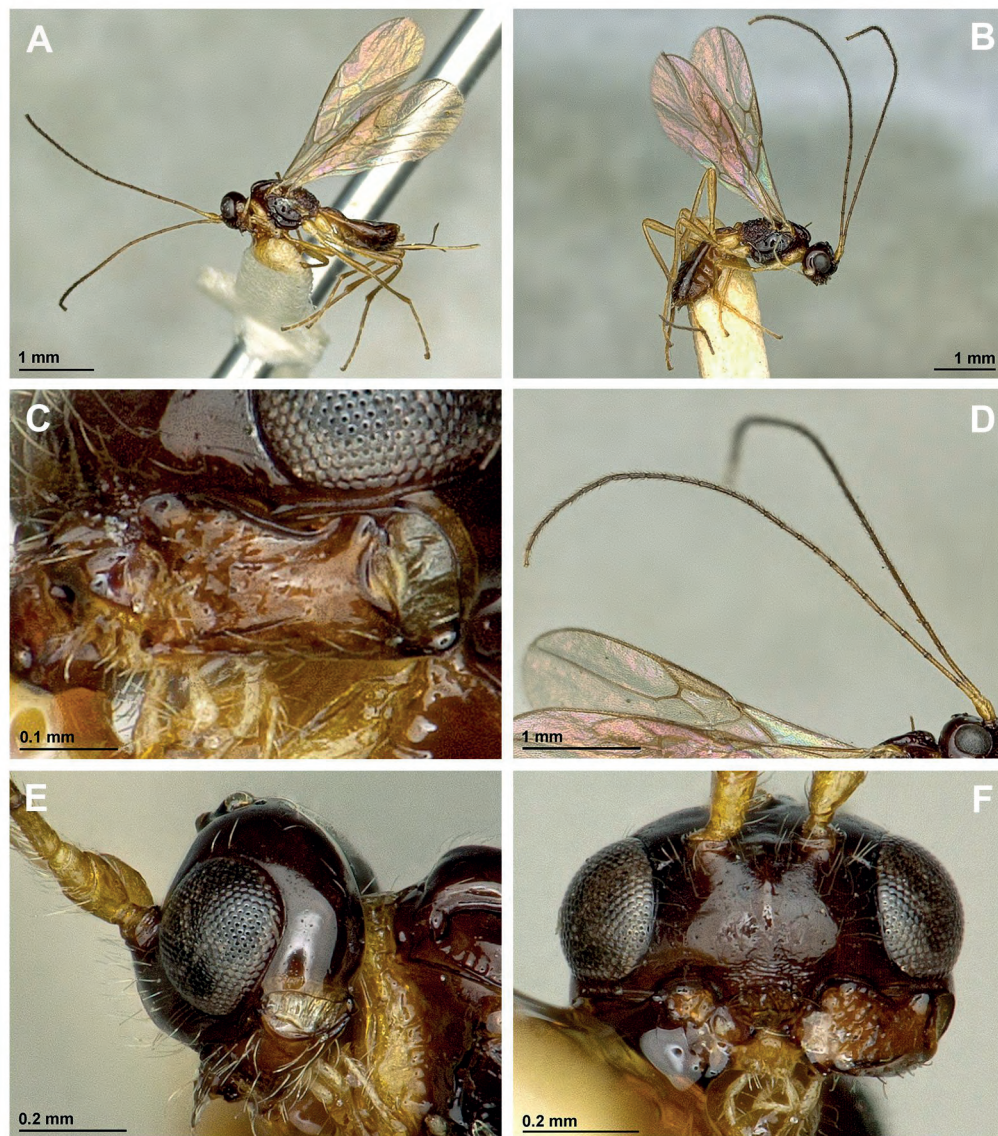


Fig. 1. *Idiasta vanreenensis* sp. nov. (A, C–F, female, holotype; B, male, paratype). A, B, habitus, lateral view; C, mandible; D, antenna; E, head, lateral view; F, head, front view.

Colour. Head, mesosoma and mandible dark brown. Propleuron, legs and metasoma brown. Scape, pedicel and ovipositor yellow. Flagellar segments mainly brown but 22th to 28th segments white. Wings hyaline; pterostigma brown.

Male. Body length 3.1 mm; fore wing length 3.5 mm; hind wing length 2.5 mm. Mandible 1.9 times as long as its maximum width. Antenna more than 30-segmented

(apical segments missing). First flagellar segment 3.0 times as long as its apical width. Vein 2-SR 1.7 times as long as vein 3-SR; vein SR1 5.7 times as long as vein 3-SR. Otherwise similar to female.

Etymology. Named after Van Reenen, the type locality of new species.

Comparative diagnosis. According to the key by Peris-Felipo & Belokobylskij (2016) for Afrotropical *Idiasta* species, this

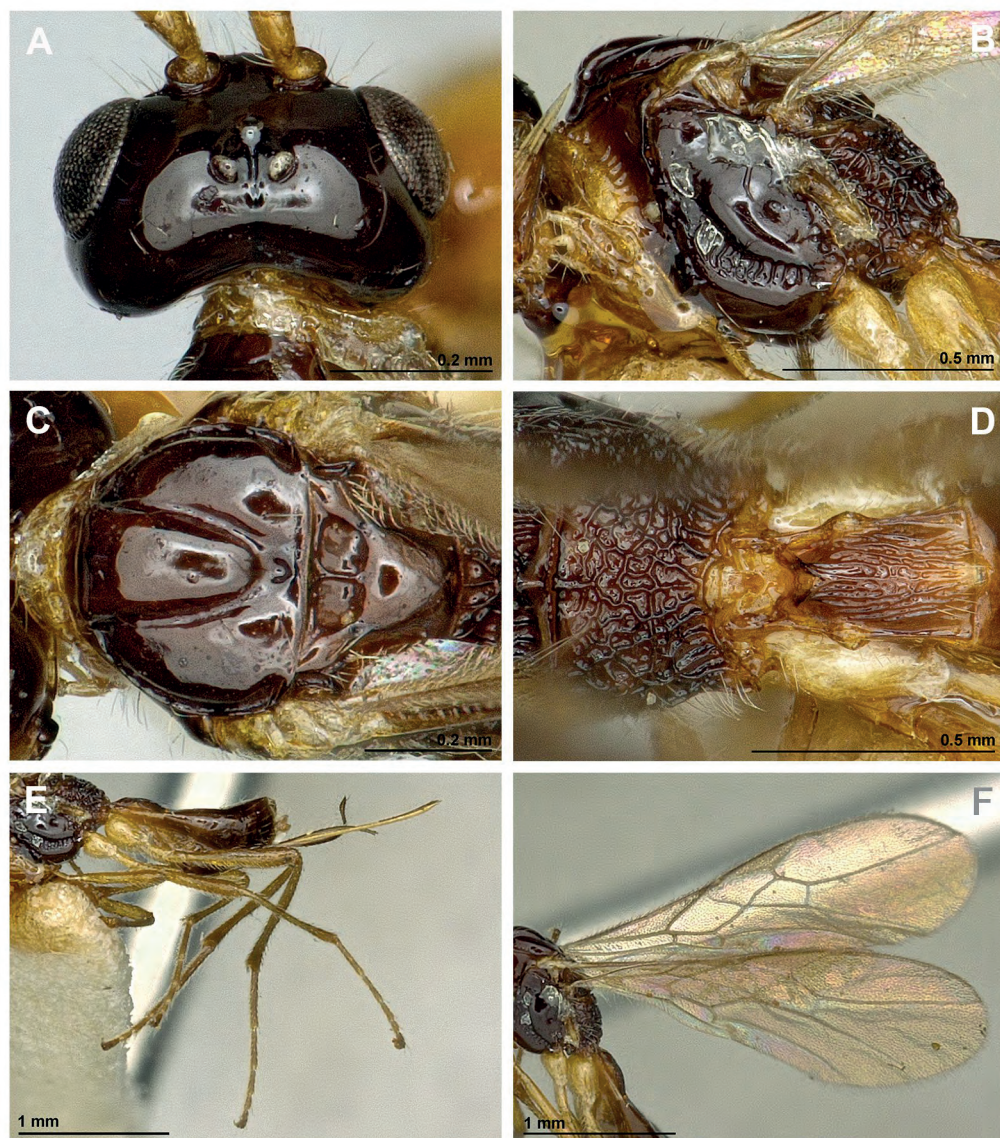


Fig. 2. *Idiasta vanreenensis* sp. nov. (female, holotype). **A**, head, dorsal view; **B**, mesosoma, lateral view; **C**, mesonotum, dorsal view; **D**, propodeum and first metasomal tergite, dorsal view; **E**, hind leg, metasoma and ovipositor; **F**, fore and hind wings.

new species is similar to *I. curtimembrum* Fischer, 2004, but differs from it in having the mandible 1.7 times as long as its maximum width (1.3 times in *I. curtimembrum*), notauli complete over entire horizontal surface of mesoscutum and reaching mesoscutal pit (extended only over 2/3 of mesoscutum and not reaching mesoscutal pit in *I. curtimembrum*), mesoscutal pit short and

rounded (long and oblong in *I. curtimembrum*), middle flagellar segments 5.0 times as long as their maximum width (4.0 times in *I. curtimembrum*), and hind femur 5.6 times as long as its maximum width (6.0 times in *I. curtimembrum*).

In the key by Peris-Felipo & Belokobylskij (2016), *Idiasta vanreenensis* sp. nov. can be accommodated as follows:

- 4(2). First metasomal tergite 1.9–2.0 times as long as its apical width. Eye in lateral view about 1.5 times as wide as temple medially. Vein *SR1* 4.3–5.0 times as long as vein *3-SR*.
..... 4a
- First metasomal tergite 1.0–1.1 times as long as its apical width. Eye in lateral view 0.8–1.2 times as wide as temple medially. Vein *SR1* 1.9–3.3 times as long as vein *3-SR*. 5
- 4a(4). Mandible 1.3 times as long as its maximum width. Notauli present over 2/3 of horizontal surface of mesoscutum and not reaching mesoscutal pit. Mesoscutal pit long and oblong. Middle flagellar segments 4.0 times as long as their maximum width. Hind femur 6.0 times as long as its maximum width. Body length 1.9 mm. Madagascar
..... *I. curtimembrum* (male)
- Mandible 1.7 times as long as its maximum width. Notauli present over entire horizontal surface of mesoscutum and reaching mesoscutal pit. Mesoscutal pit short and rounded. Middle flagellar segments about 5.0 times as long as their maximum width. Hind femur 5.6 times as long as its maximum width. Body length 2.4–3.1 mm. South Africa
.. *I. vanreenense* sp. nov. (female and male)

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REFERENCES

- Achterberg C. van. 1993. Illustrated key to the subfamilies of the Braconidae (Hymenoptera: Ichneumonoidea). *Zoologische Verhandlungen*, **283**: 1–189.
- Peris-Felipo F.J., Belokobylskij S.A. & Jiménez-Peydró R. 2014. Revision of the Western Palaearctic species of the genus *Dinotrema* Foerster, 1862 (Hymenoptera, Braconidae, Alysiinae). *Zootaxa*, **3885**(1): 1–483. doi: 10.11646/zootaxa.3885.1.1
- Peris-Felipo F.J. & Belokobylskij S.A. 2016. New South African species of the genus *Idiast* Foerster, 1862 (Hymenoptera: Braconidae: Alysiinae), with a key to the Afrotropical and Malagasy taxa. *Zootaxa*, **4150**(5): 566–570. doi.org/10.11646/zootaxa.4150.5.3
- Wharton R.A. 2002. Revision of the Australian Alysiini (Hymenoptera: Braconidae). *Invertebrate Systematics*, **16**(1): 7–105. doi: 10.1071/T01012
- Yu D.S., Achterberg C. van & Horstman K. 2012. *Taxapad 2012, Ichneumonoidea 2011* [database on flash-drive]. Ottawa, Ontario, Canada.

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