

# A new species of the genus *Phaenocarpa* Foerster from Madagascar (Hymenoptera: Braconidae: Alysiinae)

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A new species of the genus *Phaenocarpa* Foerster (Hymenoptera: Braconidae: Alysiinae) with a short ovipositor, *P. vanbruggeni* spec. nov., from Madagascar is described and illustrated.

## Introduction

The genus *Phaenocarpa* Foerster, 1862 (family Braconidae Nees, 1812; subfamily Alysiinae Leach, 1815) is a cosmopolitan genus with 227 described species (Yu *et al.*, 2007). Among the Braconidae in the collection of Mr R. Hensen (Amsterdam) donated to the National Museum of Natural History, a species with a short ovipositor was found, collected in Madagascar. It belongs in the subgenus *Phaenocarpa* Foerster, 1862, despite its short ovipositor. Only one other species is known from Madagascar: *P. bicolor* Granger, 1949, which differs by having a long ovipositor. The biology of the new species is unknown, but other members of the genus are koinobiont endoparasitoids of larvae of cyclorrhaphous Diptera in many niches. They are known from larvae of Sciomyzidae in Mollusca, Syrphidae under bark or between leaves of marsh plants, Anthomyiidae in roots of vegetables, under bark, in cones of conifers, mining in leaves or in dung, Muscidae and Scathophagidae in dung, Muscidae and Clusiidae in flood refuse, Chloropidae and Scathophagidae in grasses, and Drosophilidae in crops (*e.g.* cotton) and slime (Wharton, 1984; van Achterberg, 1998).

For the recognition of the subfamily Alysiinae, see van Achterberg (1979, 1990, 1993, 1997) and for the terminology used in this paper, see van Achterberg (1988). The holotype of *P. vanbruggeni* is deposited in the National Museum of Natural History, Leiden (RMNH).

## Key to species of the genus *Phaenocarpa* Foerster in Madagascar

1. Apical fifth of antenna of ♀ black, antenna with 3-5 white segments near apical third of antenna and with 37-41 segments; vein 3-SR of fore wing about 1.4 times as long as vein 2-SR; mesosoma and first metasomal tergite reddish-brown; face about 1.6 times wider than high; length of ovipositor sheath about 0.6 times fore wing and total length somewhat shorter than body; first metasomal tergite slightly longer than wide apically ..... *P. bicolor* Granger, 1949
- Apical fifth of antenna of ♀ white, antenna with 10 white segments at apical third of antenna (figs 1, 4) and with about 31 segments; vein 3-SR of fore wing about 2.4

times as long as vein 2-SR (fig. 7); mesosoma and first tergite dark chestnut brown (fig. 10); face as wide as high (fig. 3); length of ovipositor sheath about 0.1 times fore wing and total length much shorter than body or metasoma (figs 1, 9); first tergite about 1.6 times longer than wide apically (fig. 5) ..... *P. vanbruggeni* spec. nov.

### Description

*Phaenocarpa vanbruggeni* spec. nov.  
(figs 1-11)

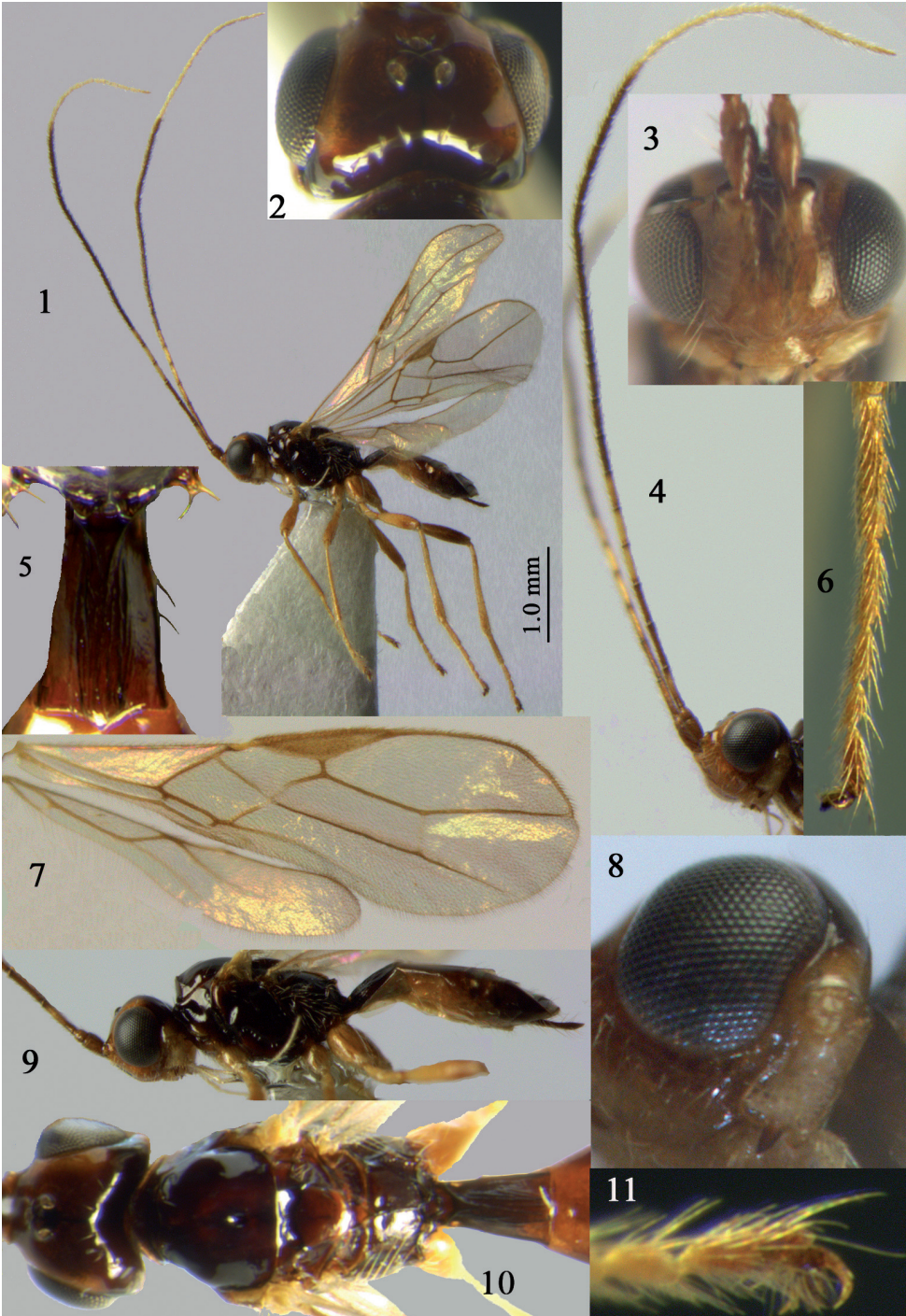
Material.— Holotype, ♀ (RMNH), **Madagascar**, Tanatare, Périnet, 48°16'E 18°56'S, 950 m, 10.v.1984, R. Hensen, RMNH'90".

Holotype, ♀, length of body 2.7 mm, of fore wing 2.9 mm.

Head.— Robust (fig. 2), width of head 1.6 times its lateral length; antenna 1.9 times as long as fore wing, rather long bristly setose but basally less bristly, with 31 segments, third segment as long as fourth segment, length of third, fourth and penultimate segments 6.5, 6.5 and 3.7 times their width, respectively (figs 1, 4); length of maxillary palp 1.5 times height of head; eye in dorsal view 5.4 times as long as temple (fig. 2); temples behind eyes subparallel dorsally (fig. 2), ventrally 0.3 times as wide as minimum width of eye (fig. 9); eye in lateral view 1.35 times higher than wide; frons convex, but distinctly depressed in front of anterior ocellus; vertex rather flat and glabrous dorsally (fig. 9); medial groove of vertex obsolescent; OOL : diameter of ocellus : POL = 9:4:5; face as high as wide, rather evenly convex, without crenulate depressions, with some long setae and smooth; clypeus medium-sized, rather flat, slightly convex laterally and smooth, medio-ventrally truncate (fig. 3); length of malar space 0.1 times basal width of mandible; mandible subparallel-sided and smooth, lateral teeth large and lobe-shaped and middle tooth narrow, acute and somewhat longer than lateral teeth, with a complete narrow ventral lamella and medial length of mandible 1.6 times its maximum width (fig. 8).

Mesosoma.— Length of mesosoma 1.5 times its height; pronope round, medium-sized; side of pronotum smooth except for a few indistinct crenulae medio-anteriorly and posteriorly; mesoscutum without lateral carina in front of tegulae (fig. 9); epicnemial area smooth except for a few ventral crenulae; precoxal sulcus narrow, with distinct short crenulae, anteriorly and posteriorly small part absent; remainder of mesopleuron smooth and glabrous; pleural sulcus smooth or nearly so; episternal scrobe small, round and deep, connected by a furrow to pleural sulcus; metapleuron smooth except for an oblique ventral carina, with long setae; notauli only anteriorly slightly impressed on disc, smooth and narrow and in between with shallow longitudinal depression; mesoscutum glabrous and strongly shiny, medially and rather far from posterior margin of mesoscutum with a deep round depression (fig. 10); scutellar sulcus

Figs 1-11, *Phaenocarpa vanbruggeni* spec. nov., ♀, holotype. 1, Habitus, lateral aspect; 2, head, dorsal aspect; 3, head, anterior aspect; 4, antenna; 5, first metasomal tergite, dorsal aspect; 6, hind tarsus; 7, wings; 8, mandible; 9, body, lateral aspect; 10, head and mesosoma, dorsal aspect; 11, outer hind claw, lateral aspect. ►



deep, with one longitudinal carina and lateral part 1.4 times wider than its maximum length; scutellum rather flat, medially somewhat protruding into scutellar sulcus, wide (fig. 10); metanotum acutely protruding dorsally; surface of propodeum moderately areolate, its median carina medium-sized, its medial areola strongly narrowed ventrally; propodeum with four lamelliform tubercles subposteriorly because of protruding costulae (figs 5, 9, 10).

Wings (fig. 7). —  $r:3\text{-SR:SR1} = 5:39:65$ ; 1-SR+M and SR1 straight; 2-SR slightly curved;  $r$  0.45 times width of pterostigma; cu-a postfurcal, short and straight;  $1\text{-CU1}:2\text{-CU1} = 2:25$ ; 3-CU1 horizontal and longer than CU1b;  $2\text{-SR}:3\text{-SR}:r\text{-m} = 22:39:16$ ; m-cu interstitial, nearly straight and slightly converging to 1-M posteriorly; first subdiscal cell 5 times as long as wide; M+CU1 largely unsclerotised. Hind wing:  $M+CU:1\text{-M}:1r\text{-m} = 10:19:7$ ; m-cu absent.

Legs. — Hind coxa smooth, without ventro-basal tubercle; tarsal claws moderately slender, about as long as arolium (fig. 11); length of femur, tibia and basitarsus of hind leg 4.6, 11.8 and 7.0 times their width, respectively; length of hind tibial spurs 0.25 and 0.30 times its basitarsus; apical appendage of first-fourth hind tarsal segments glabrous and rather short (fig. 6).

Metasoma. — Length of first tergite 1.6 times its apical width, its surface laterally smooth, medially distinctly longitudinally striate, its dorsal carinae united at level of spiracles, medially convex (fig. 5); laterope medium-sized; dorsope rather large (fig. 10); setose part of ovipositor sheath 0.14 times as long as fore wing, flattened and setose basally and 0.4 times as long as hind tibia.

Colour. — Dark chestnut brown (figs 1, 2, 10); 4 basal segments of antenna brown (but third segment partly yellowish), 5<sup>th</sup>-7<sup>th</sup> or -8<sup>th</sup> segments ivory, 9<sup>th</sup>-21<sup>st</sup> segments dark brown and 22<sup>nd</sup>-31<sup>st</sup> segments white (fig. 4); face, frons and vertex laterally, temple near base of mandible, pronotum ventrally, propleuron, telotarsi, hind coxa, most of femora, apex of tibiae and metasoma ventrally yellowish-brown; clypeus, mandible, propleuron, tegulae, remainder of legs and palpi pale yellowish; metasoma dorsally (except first tergite) rather dark brown; pterostigma and veins brown; wing membrane slightly infusate.

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