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Nomenclatural Act

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A new species of *Heimbra* Cameron, 1909 (Hymenoptera: Eurytomidae) from Eastern Uruguay

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Abstract. A new species of *Heimbra* Cameron, 1909 (Hymenoptera: Eurytomidae) from eastern Uruguay, is described and illustrated. The species is diagnosed and differentiated from its congeners by the following combination of characters: mesopleuron contiguously punctate, appearing dull along the posterior margin; male tergite 7 lacking a transverse groove; and the mesoscutellum orange-brown laterally with a dorsal, longitudinal dark band. The description is based on four male specimens collected with Malaise traps in the municipality of Castillos, Departamento de Rocha, Uruguay. A revised key to the species of *Heimbra*, incorporating the newly described species, is provided. This discovery increases the number of known *Heimbra* species to nine and represents the second species of this genus recorded for Uruguay.

Keywords: Chalcidoidea, Heimbrinae, Neotropical Region.

Eurytomidae (Hymenoptera: Chalcidoidea) comprises approximately 1,500 described species distributed across about 80 genera (UCD Community 2023). This group occurring in all zoogeographical regions and display a wide diversity of life history strategies: the larvae are predominantly endophytic, developing as seed feeders (phytophagous), gall inducers, or parasitoids of phytophagous insects (Lotfalizadeh et al. 2007). Stage & Snelling (1986), recognizes three subfamilies: Eurytominae, Rileyinae, and Heimbrinae. The mesoscutellum that extends posteriorly and the partially fused, dorsally flattened gastral segments in both sexes are distinguishing characteristics that set Heimbrinae apart from other eurytomids (Stage & Snelling 1986).

There are eight valid Neotropical species currently included in *Heimbra* Cameron, 1909: *Heimbra acuticollis* Cameron, 1909, *Heimbra bicolor* Subba Rao, 1978, *Heimbra nigra* Subba Rao, 1978, *Heimbra opaca* (Ashmead, 1894), *Heimbra pallida* Stage & Snelling, 1986, *Heimbra parallela* Stage & Snelling, 1986, *Heimbra dioneae* Perioto, Lara & Tavares, 2025 and *Heimbra pulchra* Perioto, Lara & Tavares, 2025 (Stage & Snelling 1986; UCD Community 2023; Perioto et al. 2025) among which only *H. opaca* extends its range into the arid and semi-arid regions of the western United States (Stage & Snelling 1986). *Heimbra nigra* is the only species of this genus that has been documented to occur in Uruguay (Stage & Snelling 1986; De Santis 1989; Perioto et al. 2025).

Almost nothing is known about the biology and hosts of *Heimbra*. Gates et al. (2025) reported that label data of *H. bicolor* deposited at Smithsonian National Museum of Natural History indicate that these wasps emerged from branches of *Sida* sp. (Malvaceae) infested by Buprestidae and Curculionidae (Coleoptera).

In this study, a new species of *Heimbra* from Eastern Uruguay is described and illustrated. Additionally, an identification key for the known species of *Heimbra* is provided.

The examined material is deposited at the Coleção Entomológica do Laboratório de Sistemática e Bioecologia de Predadores e Parasitoides of the Instituto Biológico, Ribeirão Preto, São Paulo, Brazil (N.W. Perioto, curator).

The four male specimens of *Heimbra isabelae*, **sp. nov.** Perioto & Lara studied were obtained with the use of Malaise traps active for two years, near the municipality of Castillos, Departamento de Rocha, Uruguay, in an integrated system of livestock production with winter-summer agriculture (34°02'33.7"S, 53°50'02.7"W), as described in Castiglioni et al. (2017) and Fernandes et al. (2019).

Observations were made with a Leica S APO stereomicroscope with a built-in 4-point white led. Images were taken using a Leica MC170 HD digital camera attached to a Leica M205C APO stereomicroscope. Measurements were taken using the "Distance Line Tool" in the Leica Application Suite software (LAS version 4.12.0) with illumination provided by a Leica LED5000 HDI dome illumination apparatus. Obtained images were focus-stacked using Helicon Focus (version 5.3) software and the final illustrations were generated using Adobe Photoshop (version 11.0) software.

The specimens studied were identified using the keys provided by Stage & Snelling (1986) and Perioto et al. (2025). To facilitate comparisons with other described *Heimbra* species, the format of the description of new species follows the framework established by Stage & Snelling (1986).

The consistency of anatomical data with the Hymenoptera Anatomy Ontology Portal (Yoder et al. 2010; Seltmann et al. 2012) was determined using the tool available through the Hymenoptera Glossary (HAO 2019).

Figures from Stage & Snelling (1986) and Perioto et al. (2025) are cited with a lower-case *f* (i.e., fig. 21).

The acronym RO refers to Uruguayan Department of Rocha, while the following refer to Brazilian states and federal district: DF, Federal District; ES, Espírito Santo; GO, Goiás; MG, Minas Gerais; PR, Paraná; RN, Rio Grande do Norte; SP, São Paulo, and SC, Santa Catarina.

Abbreviations are as follows: OOL = ocellar-ocular distance; POL = postocellar distance; T*n*, tergite (*n* = number of the tergite).

Information on specimen labels is given *ad litteram*.

Key to species of *Heimbra*
(adapted from Stage & Snelling 1986 and Perioto et al. 2025).

1. Mesopleuron contiguously punctate, appearing dull along posterior margin (see figs. 3–4 *in* Stage & Snelling 1986)..... 2

1'. Mesopleuron smooth and shine along posterior margin (see figs. 5–6 *in* Stage & Snelling 1986)..... 6

2(1). T7 (male) without transverse groove (Figs. 9–10); body primarily black, with orange-brown coloration on posterior margin of pronotum (Fig. 5), mesoscutellum laterally (Figs. 5, 7) and T7..... *Heimbra isabelae*, sp. nov. Perioto & Lara. Distribution: Uruguay (RO).

2'. Tergum T6+7 (T7, male) with transverse groove (see figs. 10, 12 *in* Stage & Snelling 1986)..... 3

3. Mesoscutellum at most 1.5× as long as wide, dorsally with a conspicuous and acute tubercle..... 4

3'. Mesoscutellum at least 1.8× as long as wide, dorsally without a conspicuous tubercle 5

4. Umbilicate foveae on head and mesosoma with bottom smooth and shiny (see fig. 4 *in* Stage & Snelling 1986); body primarily black, pronotum orange to reddish orange ..... *Heimbra bicolor* Subba Rao, 1978. Distribution: Brazil (RN, DF, MG, ES, SP, SC), Argentina, Mexico, Paraguay.

4'. Umbilicate foveae on head and mesosoma with bottom punctate (see fig. 3 *in* Stage & Snelling 1986); body black or very dark reddish-brown .... *Heimbra opaca* (Ashmead, 1894). Distribution: Brazil (GO, DF), Mexico, USA (central and west regions).

5. Mesoscutellum 1.8× the length of mesoscutum, orangish-brown with apex truncated in dorsal view, in profile dorsal margin concave on posterior half and ventral margin straight on apical two-third (see figs. 1d–e *in* Perioto et al. 2025) .... *Heimbra dioneae* Perioto, Lara & Tavares, 2025. Distribution: Brazil (MG).

5'. Mesoscutellum 3.1× the length of mesoscutum, black on basal quarter and brown on apical three-quarter, apex acuminate in dorsal view, in profile dorsal margin convex on apical three-quarter, posterior projection down curved (see figs. 2a–b *in* Perioto et al. 2025) ..... *Heimbra pulchra* Perioto, Lara & Tavares, 2025. Distribution: Brazil (ES).

6. Marginal vein at least 1.5× as long as stigmal vein; tergum 6+7, in lateral view, with dorsal margin distinctly posterior to ventral margin (see figs. 7–8 *in* Stage & Snelling 1986) 7

6'. Marginal vein only slightly longer than stigmal vein; tergum 6+7, in lateral view, with dorsal margin not distinctly posterior to ventral margin (see fig. 9 *in* Stage & Snelling 1986) 8

7. Integument primarily black; mesoscutellum width about 0.65× its length with dorsal prominence weak and lacking acute projections in lateral view .... *Heimbra nigra* Subba Rao, 1978. Distribution: Argentina, Uruguay.

7'. Integument primarily orangish brown; mesoscutellum width slightly greater than 0.7× its length with dorsal prominence weakly developed and three distinct acuities in lateral view..... ..... *Heimbra pallida* Stage & Snelling, 1986. Distribution: Argentina.

8. Integument largely ferruginous, marked with black on face, mesosomal dorsum, and side of T2+3; mesepimeron and propodeum largely black; mesoscutellum about 0.7× longer than wide, moderately to strongly depressed in profile (see fig. 22 *in* Stage & Snelling 1986)... ..... *Heimbra acuticollis* Cameron, 1909. Distribution: Argentina.

8'. Integument entirely blackish, except dusky ferruginous on some appendages; mesoscutellum about 0.6× longer than wide, not at all depressed in profile (see fig. 25 *in* Stage & Snelling 1986)..... *Heimbra parallela* Stage & Snelling, 1986. Distribution: Brazil (GO, MG, SP, PR), Argentina.

Heimbra isabelae, sp. nov.

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Figs 1–10

DIAGNOSIS. *Heimbra isabelae*, **sp. nov.** can be distinguished from other known species in the genus by the following combination of characters: mesopleuron densely punctate, with dull appearance along posterior margin; T7 of the male without transverse groove; mesoscutellum orange brown laterally, with a dorsal, median dark band running along its length.

TYPE MATERIAL. Holotype male: "Uruguay, Rocha, Castillos, 34°02'34"S / 53°50'02.7"W, area pastoreo vacuno y agricultura estival, arm. Malaise, 26.II.2015, E. Castiglioni e eq., cols." (LRRP # 26614). Paratypes: same data except 11.II.2015, 1 male (LRRP # 26610); 12.III.2015, 1 male (LRRP # 26619); 27.III.215, 1 male (LRRP # 26624). The holotype is in good condition.

DISTRIBUTION. Presently known only from the Eastern Uruguay.

ETYMOLOGY. The specific epithet, *isabelae*, is a patronymic in honor of Isabela Rosa Lara, daughter of the second author.

HOLOTYPE MALE. Length 4.3 mm. Body primarily black except: brown on antenna (apically orangish-brown) and mesocoxa; light brown on trocanter, femur, tibia and tarsus; orangish-brown on scape basally, mandible (black on tip), stripe on posterior margin of pronotum (interrupted medially), tegula, mesoscutellum laterally and T7 (Figs. 1–2). Setation silvery-white. Fore wing hyaline, slightly infumated below marginal and postmarginal veins; veins and setation brown.

Head (Figs. 3–4) 0.7× as high as wide, with large deep, closely spaced foveae over entire surface except on clypeus and antennal scrobe; foveae with bottom smooth and shine, each bearing a silvery-white setae that are 0.7–1.0× diameter of foveae, interstices between punctures finely granulate (Fig. 4); POL:OOL = 2.0; scape length 3.6× maximum width at base; relative dorsal length of pedicel and first three flagellar segments: 7.0:6.3:6.0:5.5; antennal scrobe finely granulate with few fine striae dorsally, 1.4× as high as maximum distance between lateral carinae near antennal sockets and 1.0× eye length; interantennal prominence 0.4× length of antennal scrobe; marginal carinae of antennal scrobe diverging ventrally (Fig. 4); inner eye margins almost parallel; clypeus glabrous, pointed medially.

Dorsum of pronotum, mesoscutum, and axilla with sculpture similar to the head (Fig. 5), and setae 1.3–1.7× diameter of foveae; foveae larger on mesoscutum posteriorly and axilla; lateral carina of pronotal collar oblique to posterior margin; mesoscutellum width about 0.7× its length (Figs. 5, 7) with larger, areolate sculpture, and setae 0.9–1.4× diameter of foveae; dorsal prominence of mesoscutellum conspicuous, acute in lateral view and posterior projection truncate in dorsal view; mesopleuron with interstice contiguously punctured along posterior margin (Fig. 6); propodeum coarsely sculptured, with large and irregularly foveae, laterally areolate. Fore wing longitudinally folded, marginal vein 1.1× length of stigmal vein, postmarginal vein 2.0× length of marginal vein (Fig. 8).

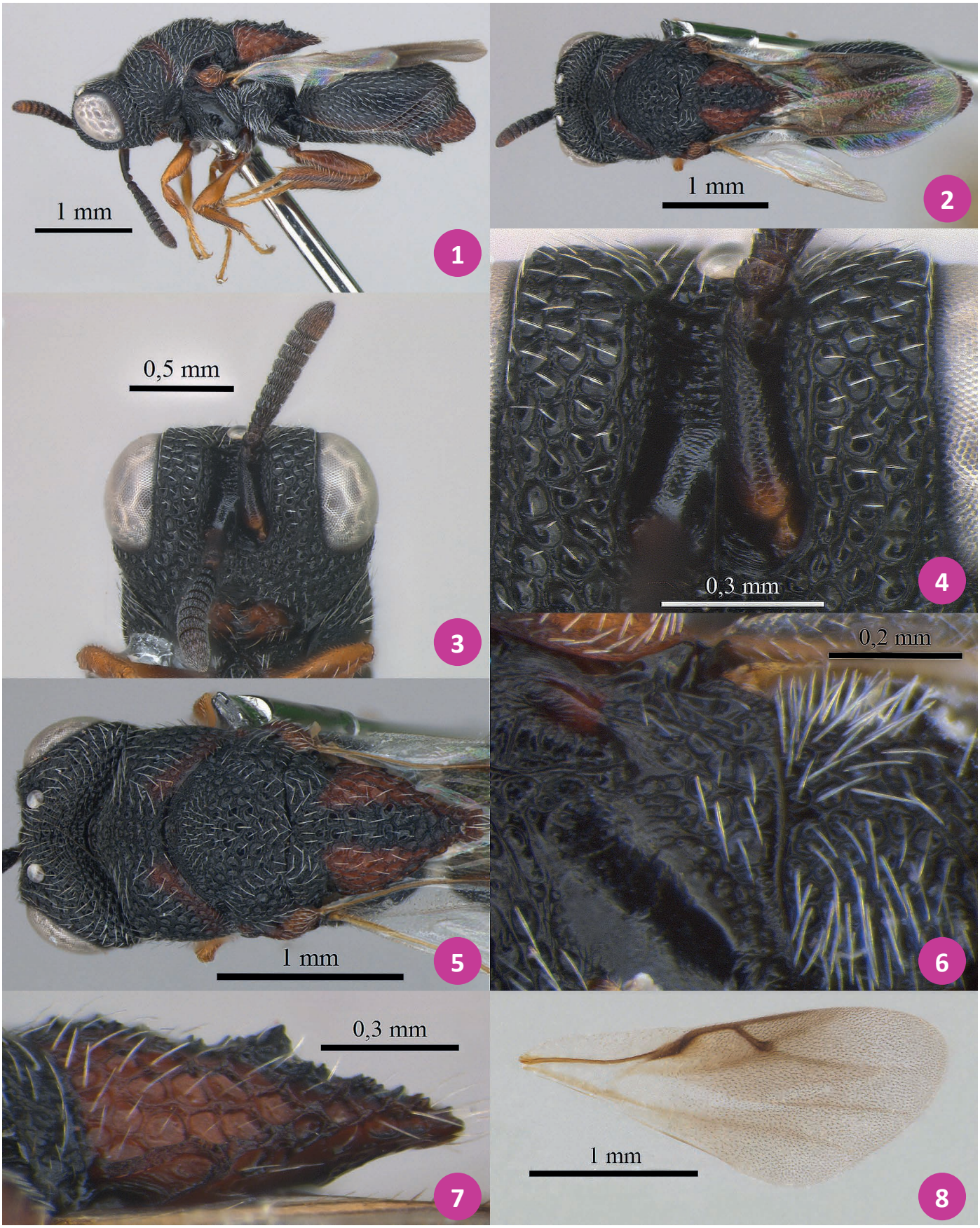
Gaster (Figs. 9–10) 2.0× longer as high; gastral terga with spaced umbilicate foveae and reticulate interstice, foveae larger on dorsum of T2+3 basally; T7 without transverse groove.

VARIATION. Body length 3.9–4.3 mm. In some specimens the stripe on posterior margin of pronotum is almost indistinct, tegula brown and the orangish-brown area on mesoscutellum variable in size. Setae of head 0.7–1.2× diameter of puncture; POL:OOL = 2.0–2.4; scape length 3.0–3.7× maximum width at base; relative dorsal length of pedicel and first three flagellar segments: 7.0:5.1–6.3:5.4–6.4:5.5–6.2; antennal scrobe 0.9–1.0× as high as eye length; interantennal prominence 0.4–0.5× the length of antennal scrobe. Setae on dorsum of pronotum and mesoscutum 0.9–1.7× diameter of foveae; mesoscutellum 1.4–1.6× longer than wide, with dorsal setae 0.8–1.4× diameter of foveae. Marginal vein of fore wing 0.9–1.2× the length of stigmal vein, postmarginal vein 1.9–2.1× the length of marginal vein. Gaster 2.0–2.2× longer as high.

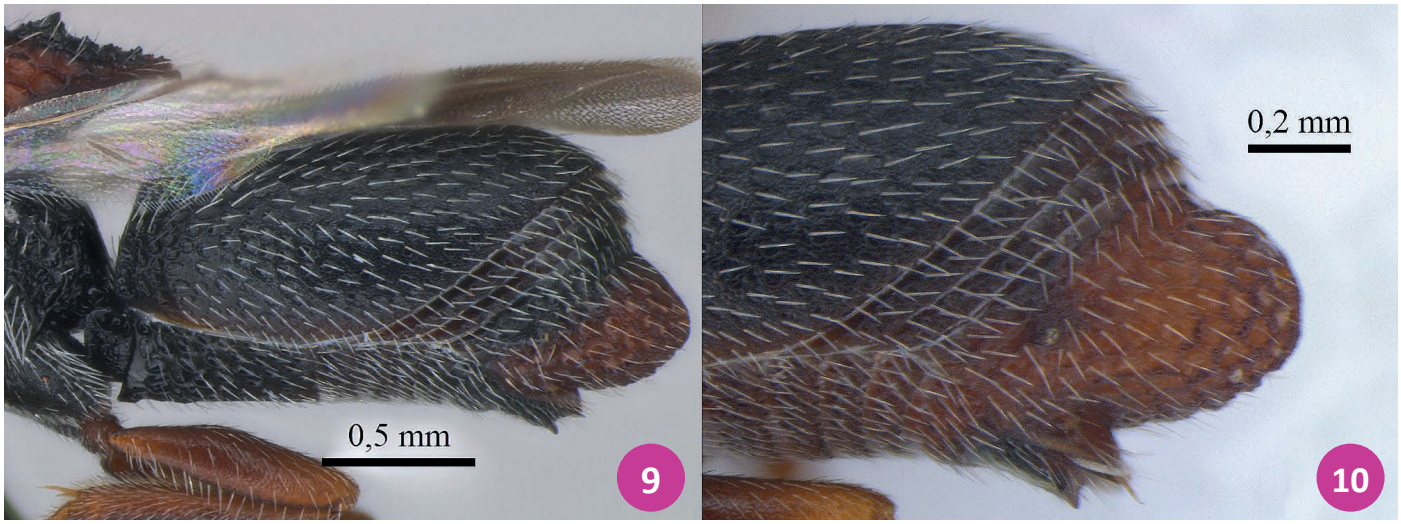
FEMALE. Unkown.

BIOLOGY. Unkown.

REMARKS. *Heimbra isabelae*, **sp. nov.** groups with *H. bicolor*, *H. opaca*, *H. dioneae* and *H. pulchra* for presenting mesopleuron contiguously punctate, appearing dull along posterior margin. Males of *Heimbra isabelae*, **sp. nov.** may be distinguished from the four later species by presenting T7 without transverse groove.



Figures 1-8. *Heimbra isabelae*, **sp. nov.** Perioto & Lara, holotype male. 1. Habitus lateral; 2. Habitus dorsal; 3. Head, anterior view; 4. Upper face, anterior view; 5. Head and mesosoma, dorsal view; 6. Mesopleura, lateral view; 7. Mesoscutellum, lateral view; 8. Fore wing (not from holotype).



Figures 9-10. *Heimbra isabelae*, **sp. nov.** Perioto & Lara, holotype male. 9. Metasoma, lateral view; 10. Apex of metasoma, lateral view.

Taxonomic Authorities

Heimbra Cameron, 1909 *in* Cameron (1909). *Heimbra acuticollis* Cameron, 1909 *in* Cameron (1909). *Heimbra bicolor* Subba Rao, 1978 *in* Subba Rao (1978). *Heimbra nigra* Subba Rao, 1978 *in* Subba Rao (1978). *Heimbra opaca* (Ashmead, 1894) *in* Ashmead (1894). *Heimbra pallida* Stage & Snelling, 1986 *in* Stage & Snelling (1986). *Heimbra parallela* Stage & Snelling, 1986 *in* Stage & Snelling (1986). *Heimbra dioneae* Perioto, Lara & Tavares, 2025 *in* Perioto et al. (2025). *Heimbra pulchra* Perioto, Lara & Tavares, 2025 *in* Perioto et al. (2025).

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Authors' Contributions

NWP: Conceptualization, Investigation, Methodology, Writing – original draft, review & editing; RIRL: Investigation, Writing – original draft, review & editing.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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