

Article

Description of two new species of *Ephuta* (*Ephuseabra*) Casal, 1968 (Hymenoptera: Mutillidae)

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Abstract

The following two new species of *Ephuta* (*Ephuseabra*) Casal, 1968 (Hymenoptera: Mutillidae) are described and illustrated: *E. (E.) aninoi* Cambra and Williams, **sp. nov.** and *E. (E.) mirandai* Cambra and Williams **sp. nov.** A key for species and first distribution records of the subgenus for Bolivia, Colombia, Ecuador, Trinidad and Venezuela are presented.

Additional keywords: Ephutini, Neotropic, Sphaerophthalminae, taxonomy

Resumen

Las siguientes dos especies nuevas de *Ephuta* (*Ephuseabra*) Casal, 1968 (Hymenoptera: Mutillidae) son descritas e ilustradas: *E. (E.) aninoi* Cambra and Williams, **sp. nov.** y *E. (E.) mirandai* Cambra and Williams **sp. nov.** Una clave para especies y los primeros registros de distribución del subgénero para Bolivia, Colombia, Ecuador, Trinidad y Venezuela son presentados.

Palabras clave: Ephutini, Neotrópico, Sphaerophthalminae, taxonomía

Introduction

Ephuta Say, 1836 is a genus widely distributed in the New World with 233 described species (Pagliano et al. 2020); it is the most diverse genus of Mutillidae in the Americas. *E. (Ephuseabra)* Casal, 1968 is a strictly Neotropical subgenus of mutillid wasps of the subfamily Sphaerophthalminae, tribe Ephutini, genus *Ephuta* (Waldren et al. 2023) which includes a single species with two subspecies known from males only: *E. (E.) morra morra* Casal, 1968 and *E. (E.) morra suava* Casal, 1968. Prior to this study, the subgenus *Ephuseabra* was known from Panama, Peru, Brazil, and Argentina (Casal 1968, Quintero and Cambra 1996, Bartholomay 2025). Little is known about their biology; they are of diurnal activity and inhabit mainly humid lowland forests. Añino

et al. (2020) presented seasonal and annual abundance of *Ephuta* wasps in Panama, including *E. (Ephuseabra)*. The hosts of the subgenus *Ephuseabra* are unknown, but Krombein and Norden (1996) suggest that *Ephuta* is obligate cleptoparasite of Pompilidae. Rocha-Filho and Melo (2011) mention *Ephuta chrysodora* (Perty) as a potential parasitoid of the bee *Monoeca haemorrhoidalis* (Smith). Aranda and Gracioli (2016) incorrectly suggested Sphecidae, Crabronidae, and Apidae as hosts of *Ephuta* (Cambra et al. 2017), information that was used by Rochetti and Polidori (2020) in a global quantitative exploration of bee, wasp, and ant hosts of velvet ants. Until now, all the host reports for the genus *Ephuta* are pompilid wasps (Cambra et al. 2017). In this paper we describe two new species of *Ephuta* (*Ephuseabra*) and new distribution records are presented.

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on line Octubre-2025

Materials and Methods

We follow the classification of Waldren et al. (2023), which considers the *Ephuta* genus-group as tribe of Ephutini within the subfamily Sphaerophthalminae. In the section of material examined, the total of specimens examined for each locality and the institution where they are deposited have been placed in parentheses. The following acronyms are used for morphology: T1, T2, T3, etc., for second, third, etc. metasomal terga; S for metasomal sterna.

The following abbreviations are used for the collections in which the material discussed below is deposited:

AMNH- American Museum of Natural History, New York.

CMNH-Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, USA.

CASC-California Academy of Sciences, San Francisco, California, USA.

CSCA- California State Collection of Arthropods, California Department of Food and Agriculture, Sacramento, USA.

EMUS-Entomology Museum, Utah State University, Logan, Utah, USA.

FSCA-Florida State Collection of Arthropods, Gainesville, Florida, USA.

IAvH-Instituto Alexander von Humboldt, Villa de Leyva, Boyacá, Colombia.

MIUP-Museo de Invertebrados G. B. Fairchild, Universidad de Panamá, Panamá.

NHMUK-The Natural History Museum, London, England, UK.

RMNH- Naturalis Biodiversity Center [formerly Rijksmuseum van Natuurlijke Historie], Leiden, Netherlands.

SEMC-Snow Entomological Museum Collection, University of Kansas, Lawrence, Kansas, USA.

UCDC-Bohart Museum of Entomology, University of California, Davis, California, USA.

Results

Ephuta Say (*Ephuseabra*) Casal

Ephuseabra Casal, 1968: 95. Type male: *Ephuta* (*Ephuseabra*) *morra*.

Ephuseabra Casal, 1968: as subgenus of *Ephuta* Say, 1836, new status by Quintero and Cambra (1996).

Diagnosis. Males can be differentiated from other genera in the tribe Ephutini by the strongly convex hypopygium, with a deep mesal notch on the posterior

margin (Figure 1). Other useful morphological characters are: mesoscutellum convex, without median longitudinal keel or projections; tegula without carina; coxae simple, without denticle, tubercle or carina; paramere curved with apex truncate and with few short setae; penis valve without preapical projections on ventral edge. Most of the species have the carinae of median clypeus area delimiting a dorso-ventrally rhomboidal space, with a median short longitudinal keel (Figure 2). Females are unknown.

Key to species of *Ephuta* (*Ephuseabra*) Casal

1. Carinae of median clypeus area delimiting a dorso-ventrally subpentagonal space, without median longitudinal keel (Figure 3); clypeus and tegula orange-yellow; body with white setae only (Figures 11, 12). Colombia, Venezuela (Figure 24) ... ***E. mirandai* Cambra and Williams, n. sp.**

- Carinae of median clypeus area delimiting a dorso-ventrally rhomboidal space, with a median short longitudinal keel (Figure 2); clypeus and tegula black; body with white, black or golden setae ... 2

2. Body integument totally black; setae of body whitish and black (Figures 4-6). Bolivia, Brazil, Colombia, Ecuador, Panama, Peru, Trinidad, Venezuela (Figure 24) ... ***E. aninoi* Cambra and Williams, n. sp.**

- Body integument black but scape, pedicel, flagellomere one, and legs orange-yellow; setae of body golden and black (Figures 17-19). Argentina, Brazil, Paraguay (Figure 24) ... 3

3. Frons, vertex, pronotum, T3 to T6 covered with dense golden setae (Figures 17, 18) Argentina, Brazil, Paraguay ... ***E. morra morra* Casal**

- Dorsal half of frons, vertex, pronotum, T3 to T6 mostly with dense black setae (Figure 19). Brazil ... ***E. morra suava* Casal**

***Ephuta* (*Ephuseabra*) *aninoi* Cambra and Williams, sp. nov.**

(Figures 1, 2, 4-10, 24 A-C)

Ephuta (*Ephuseabra*) *morra* Casal new subspecies: Quintero and Cambra (1996: 354) (in part).

Ephuta nr. *morra* Casal: Añino et al. (2020: 575).

Diagnosis. Body integument black; setae of body white and black; carinae of median clypeus area delimiting a dorso-ventrally rhomboidal space, terminating in a short median longitudinal keel which connects to two divergent low carinae that reach the anterior margin of clypeus.

Description (male). Body length 10,0 mm.

Head. Transverse in dorsal view, frons, vertex and gena with medium-sized, very close punctures; distance between eye margin and lateral ocellus $2,6 \times$ as long as diameter of ocellus; carinae of median clypeus area delimiting a dorso-ventrally rhomboidal space, terminating in a short median longitudinal keel which connects to two divergent low carinae that reach the anterior margin of clypeus; mandible slender, with a small tooth within near tip; ventral margin smooth, without a process or tooth; scape with two longitudinal carina below; first flagellomere approximately as long as second.

Mesosoma. Dorsum of pronotum with large, contiguous punctures, sides of pronotum closely micropunctate; mesoscutum anterior half with large contiguous punctures, mostly confluent in posterior half; scutellum with medium-sized, very close punctures, evenly convex from anterior to posterior margins, without either posterior face, carinae or projections; tegula with small separated punctures, without a median longitudinal keel, latero-posterior border convex; dorsum and posterior face of propodeum broadly reticulate, not separated by a transverse carina, with median tubercle, lateral area rounded, not angulate or tuberculate; mesopleuron with medium-sized contiguous punctures, evenly convex throughout; metapleuron mostly impunctate; forewing with three submarginal and two discal cells, veins 3rs-m and 2m-cu faintly indicated; coxae without denticle, tubercle or carina.

Metasoma. First segment cylindrical, T1 dorsal face, $0,78 \times$ as long as wide; T1 with large close punctures, T2 mostly convex, slightly flattened baso-mesally, with medium-sized close punctures; T3-T7 with small, close punctures; S1 with a median longitudinal keel; S2 mostly with medium-sized close punctures; S3-S6 with small, sparse punctures; hypopygium strongly convex, with a deep apical mesal notch; paramere curved, with apex truncate, basal half broad, distal half gradually

narrowing toward apex, with few short setae; cuspis broadly flattened in lateral view, with many large setae; penis valve narrow and elongate, dorso-lateral margin without raised projection, without preapical projections on ventral edge, with large setae on apical margins.

Color. Integument black, except reddish mandible apical half, hypopygium variable, ranging from mostly whitish to entirely black, tibial spurs pale whitish; wings subhyaline; body setae entirely whitish and blackish. Typically frons with dense, erect and decumbent, pale white setae; vertex with sparse and erect pale white setae; clypeus with white setae; pronotum with dense erect and decumbent white setae, mesoscutum, tegula and scutellum mostly with black setae; metanotum, propodeum, meso- and metapleuron with erect and decumbent white setae; metasoma with long erect and decumbent white setae; T1 dorsum with dense decumbent white setae; T2 apical margin with transverse dense band of decumbent white setae, other of T2 and T3 to T7, S1 to S7 mostly with sparse semi-erect setae, no concealing integument. Some individuals from western part of range having predominantly black setae on vertex, mesoscutum, mesoscutellum, and T2-7. **Female.** Unknown.

Etymology. Named in honor of Dr. Yostin Jesús Añino Ramos, Universidad de Panamá, for his contribution to taxonomic and ecological knowledge in Hymenoptera.

Material examined (178 specimens). **Holotype male:**

PANAMA: Colón province, Barro Colorado Island, 19/V/2004, D. Windsor (MIUP). **Paratypes:** same as holotype but: 11-18/VII/2001 (1 MIUP), 18-25/IV/2001 (1 MIUP), 25/IV/ -2/V/2001 (1 MIUP), 17-24/I/2001 (1 MIUP), 28/III/ -4/IV/2001 (1 MIUP), 16/V/2001 (1 MIUP), 10-17/X/2001 (1 MIUP), 27/VI/ -4/VII/2001 (2 MIUP), 9-16/I/2002 (1 MIUP), 10-17/IV/2002 (1 MIUP), 24/IV/ -1/V/2002 (1 MIUP), 3-10/IV/2002 (1 MIUP), 17-24/IV/2002 (1 MIUP), 8-16/V/2002, 21-28/V/2002 (3 MIUP), 12-20/VI/2002 (2 MIUP), 27/XI/ -5.xii.2002 (1 MIUP), 5/III/2003 (1 MIUP), 26/III/ -2/IV/2003 (3 MIUP), 16-23/IV/2003 (2 MIUP), 7/V/2003 (1 MIUP), 14/V/2003 (3 MIUP), 14-21/V/2003 (1 MIUP), 4/VI/2003 (1 MIUP), 8/X/2003 (1 MIUP), 5/XI/2003 (1 MIUP), 7-14/I/2004 (1 MIUP), 18-25/II/2004 (2 MIUP), 3-10/III/2004 (1 MIUP), 17-24/III/2004 (1 MIUP), 31/III/ -4/IV/2004 (1 MIUP), 14-21/

IV/2004 (2 MIUP), 21-28/IV/2004 (1 MIUP), 28/IV/-5/V/2004 (1 MIUP), 2/VI/2004 (1 MIUP), 15/IX/2004 (1 MIUP), 22/IX/2004 (3 MIUP), 26/V/2004 (1 MIUP), 24-31/III/2004 (1 MIUP), 5-12/V/2004 (3 MIUP), 2/VI/2004 (1 MIUP), 24/XI/2004 (1 MIUP), 1-8/XII/2004 (1 MIUP), 13/VII/2005 (2 MIUP), 19/V/2004 (1 MIUP), 15/XII/2004 (1 MIUP), 2/II/2005 (1 MIUP), 6/IV/2005 (1 MIUP), 8/VI/2005 (1 MIUP), 19/X/2005 (1 MIUP), 28/XII/2005 (1 MIUP), 2/XI/2005 (1 MIUP), 4/V/2005 (1 MIUP), 11/V/2005 (1 MIUP), 18/V/2005 (1 MIUP), 22/VI/2005 (1 MIUP), 19/IV/2006 (1 MIUP), 5/IV/2006 (1 MIUP), 19/IV/2006 (2 MIUP), 29/III/2006 (1 MIUP), 3/V/2006 (2 MIUP), 14-21/III/2007 (1 MIUP). Colón Province: Gamboa 3/V/2014, Malaise trap, A. Sierra (1 MIUP), Gamboa, 16-23/IV/2016, Malaise trap, Castillo, Moreno (3 MIUP). Darién Province: Serranía Maje, Chucanti, 20-23/IX/2007, Malaise trap, A. Santos, O. López, (3 MIUP); Parque Nacional Darién, Estación Cruce de Mono, 12/II/-4/III/1993, Malaise trap, R. Cambra, J. Coronado (10 MIUP); Parque Nacional Darién, Estación Rancho Frío, Pirre, 17/I/2001, Malaise trap, R. Cambra, A. Santos (1 MIUP). Los Santos Province: El Cortezo, Reserva Forestal La Tronosa, 3-6/V/2006, 300 msnm., Malaise trap, R. Cambra, A. Santos (3 MIUP), Tonosí, Reserva Forestal La Tronosa, 7-9/III/2008, 800 msnm, Malaise trap, R. Cambra (1 MIUP), Cerro Canajagua, 16/II/-9/III/2005, 710 msnm, Malaise trap, P. González (1 MIUP). Guna Yala, Ustupu, Abudi, 6-12/XII/1999, Malaise trap, P. González (1 MIUP). Panama Province: Cerro Azul, 15-27/X/2012, Malaise trap, D. Díaz, M. Riquelme (1 MIUP), Campana, Chica, 6-20/IX/2014, Malaise trap, M. Dimas (1 MIUP). **COLOMBIA:** Cacagualito, May, Acc. No. 1999 (1 CMNH); **PERU:** Cusco, Villa Carmen field station, 12.89497 S, 71.40364 W, 520 msnm, hand collected, D.J. Bennett (1 SEMC); Madre de Dios: CICRA, Los Amigos Biological Station, Malaise trap, 28/I/2014 (1 FSCA); 4/XI/2014, E. Rodríguez (1 FSCA); 12/XII/2014, E. Rodríguez (1 FSCA); various dates and collectors (6 SEMC); Pakitza Biological Station, Manu National Park, 317 msnm, 16/X/2000, R. Brooks (1 SEMC); Reserva Manu, Estación Pakitza, 13/II/-9/III/1992, Malaise trap, R. Cambra, D. Quintero (4 MIUP); Rio Tambopata Reserve, 30 km SW Puerto Maldonado, 390 msnm,

12°50' S, 69°20' W, 20-29/X/1982, R. Wilkerson (2 FSCA); Tingo Maria, Monson Valley, 23/XII/1954, E.I. Schlinger, E.S. Ross (1 CASC). **TRINIDAD:** Maracas Valley Ridge Top, 2-9/X/1996, Malaise trap, Hook, Star, Angelo (1 MIUP); nr. Mt. St. Benedict, 5-15/XII/1996, Malaise trap, A.W. Hook (2 MIUP); Northern Range nr. Mt. St. Benedict, 2/VIII/1996, A.W. Hook (1 MIUP); above Mt. St. Benedict, 26/XII-12/I/1997, Malaise trap, A.W. Hook (1 MIUP); San Fernando, IV-V/1997, R. Sommeier, B. Aartsen (2 RMNH); St. George: 19 km N Arina, Lalaja Trace, 8-24/VI/1993, S. & J. Peck (1 FSCA); Simla, near Arima, 25/XI/-3/XII/1977, Mason (1 FSCA). **VENEZUELA:** Miranda, Guatopo, Fila Guerrillera, 1/V/1970, F. Kaletta (1 MIUP); Zulua: Tucuco, 26/IV/1981, H.K. Townes (7 EMUS). **BRAZIL:** Acre, Rio Branco, Parque Zoobotanico, 7-23/VII/1998, Malaise trap, E.F. Morato (1 MIUP); 12-19/VIII/1998 (1 MIUP); Mato Grosso: Sinop, 12°31' S, 55°37' W, X/1976, M. Alvarenga (2 EMUS); Vila Vera, 12°30' S, 50°30' W, X/1973, M. Alvarenga (3 EMUS); Para: Belem, Mocambo Forest, 2/VII/1981, G.B. Fairchild (1 FSCA); Jacareacanga, XII/1968, M. Alvarenga (3 EMUS); Maraba, X/1974, J.F. Reinert (1 FSCA); Tucuru, I/1979, M. Alvarenga (2 EMUS); Roraima, Rio Uraricoera, Ilha de Maraca, Malaise trap, 21-30/XI/1987, J.A. Rafael (1 MIUP); Para, Belem, Utinga, 1-16/XII/1966, Malaise trap, S.J. De Oliveira (1 MIUP); Amazonas, Manaus, Reserva Ducke, 2-4/X/1991, J. Vidal (1 MIUP), 4/IX/1990 (1 MIUP), 22-26/XI/1966, Malaise trap (1 MIUP); Rondonia, Vilhena, XI/1973, M. Alvarenga (1 EMUS); **BOLIVIA:** Alto Beni: Palos Blancos, I/1976, Peña (1 AMNH); Chapae, Cristal Mayo, II/1971, Fritz, Martínez (1, AMNH); Cochabamba, Villa Tunari, 16°54' S, 65°22' W, 15/III/2001, H. Heider (1 EMUS); S. Rio Incua, I/1976, Peña (1 AMNH); Santa Cruz: Buena Vista, 8-26/VII/1973, C. Porter, L. Stange, E. Demarest (1 FSCA); Potrerillos del Guenda Reserva Natural, 40 km W Santa Cruz de la Sierra, 370 msnm, 4/X/2007, Wappes, Morris (2 UCDC). **COLOMBIA:** Magdalena, Parque Nacional Natural Tayrona, Pueblito, 11°20' N, 74°2' W, 20 msnm, 29/V/-13/VI/2001, Malaise trap, R. Henríquez (1 IAvH); Meta, Parque Nacional Natural Sierra de la Macarena, Caño Curia, 3°21' N, 72°38' W, 150 msnm, 31/VIII/-12/X/2003, Malaise trap, W. Villaba (2 IAvH).

Non-type material. COLOMBIA: Putomayo, Villa Garzon, 400-600 msnm, 20/VI/1993, M. Cooper (1 NHMUK); **ECUADOR:** Morona-Santiago, Cordillera de Cutucu, 6 km E Macas, 1100 msnm, 18-25/V/1987, M. Cooper (4 NHMUK); **PERU:** Madre de Dios: CICRA, Los Amigos Biological Station, Malaise trap, 4/XI/2014, E. Rodríguez (1 FSCA).

Distribution: Panama, Colombia, Ecuador, Venezuela, Trinidad, Peru, Bolivia, Brazil (Acre, Amazonas, Pará, Roraima). First record of the subgenus for Colombia, Ecuador, Venezuela, Trinidad and Bolivia.

Remarks. This is a widespread and common species ranging from Panama South to Bolivia and Brazil. The specimens here treated as non-type material are found in tropical forests at the western extent of the known distribution of this species. These specimens have extensive black setae, particularly noticeable on T3-7. In structural features, they seem to be identical to typical *E. (Ephuseabra) aninoi* males, so we consider them to members of the same species. Extreme intraspecific variation in setal color is recognized in many velvet ants (*e.g.* Williams et al. 2011), but has not been recorded often in *Ephuta* males. We refrain from treating them as paratypes in case future analyses, particularly if they involve structurally distinct females, reveal them to belong to another new species.

***Ephuta (Ephuseabra) mirandai* Cambra and Williams, sp. nov.**

(Figures 3, 11-16, 24 A-C)

Diagnosis. Carinae of median clypeus area delimiting a dorso-ventrally subpentagonal space, without median longitudinal keel; clypeus and tegula orange-yellow; body only with white setae.

Description (male). Body length 6,5 mm.

Head. Transverse in dorsal view, frons, vertex and gena with medium-sized, very close punctures; distance between eye margin and lateral ocellus $2,7 \times$ as long as diameter of ocellus; carinae of median clypeus area delimiting a dorso-ventrally subpentagonal space, which connects to two divergent low carinae that reach the anterior margin of clypeus; mandible slender, with a small tooth within near tip; ventral margin smooth, without a process or tooth; scape with two longitudinal carina below; first flagellomere approximately as long as second. **Mesosoma.** Dorsum of pronotum with large, contiguous punctures, sides of pronotum closely micropunctate; mesoscutum anterior half with large contiguous punctures, mostly confluent in posterior half; scutellum with medium-sized, very close punctures, evenly convex from anterior to posterior margins, without either posterior face, carinae or projections; tegula with small separated punctures, without a median longitudinal keel,

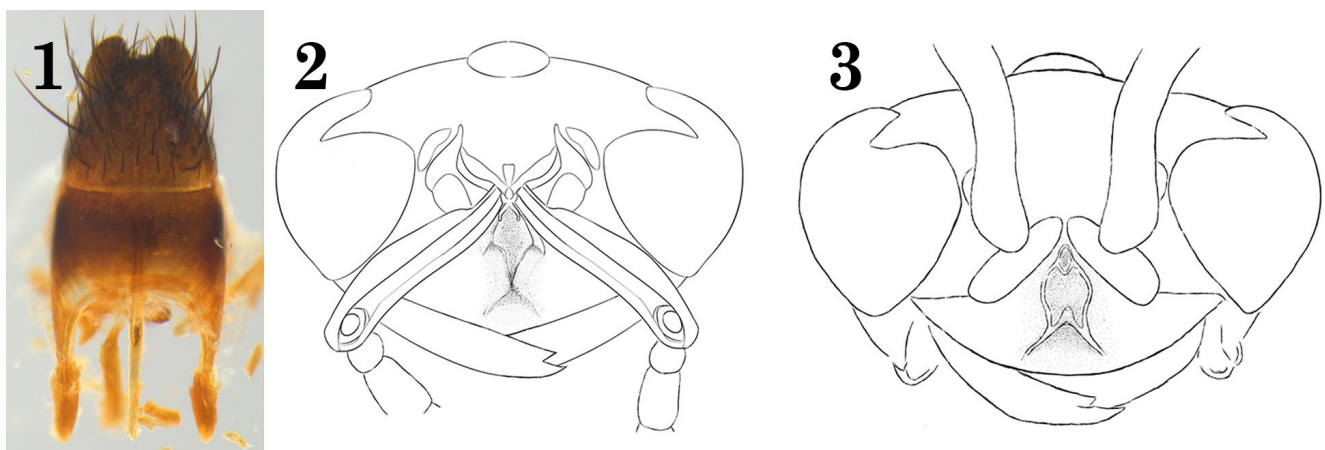


Figure 1-3. *Ephuta (Ephuseabra)* males. 1. *Ephuta (Ephuseabra) aninoi*, sp. nov., hypopygium. 2. *Ephuta (Ephuseabra) aninoi*, sp. nov., face. 3. *Ephuta (Ephuseabra) mirandai*, sp. nov., face.

latero-posterior border convex; dorsum and posterior face of propodeum broadly reticulate, not separated by a transverse carina, with median tubercle, lateral area rounded, not angulate or tuberculate; mesopleuron with medium-sized contiguous punctures, evenly convex throughout; metapleuron mostly impunctate; forewing with three submarginal and two discal cells, veins 3rs-m and 2m-cu faintly indicated; coxae without denticle, tubercle or carina.

Metasoma. First segment cylindrical, T1 dorsal face, $0,72 \times$ as long as wide; T1 with large close punctures, T2 evenly convex throughout, not at all flattened, with medium-sized close punctures; T3-T7 with small, close punctures; S1 with a median longitudinal keel; S2 mostly with medium-sized close punctures; S3-S6 with small, sparse punctures; S7 mainly with small, close punctures; hypopygium strongly convex, with a deep apical mesal notch; paramere curved, with apex truncate, basal half broad, distal half gradually narrowing toward apex, with few short setae; cuspis broadly flattened in lateral view, with many large setae; penis valve narrow and elongate, dorso-lateral margin with obliquely raised and rounded pre-apical projection, without preapical projections on ventral edge, with large setae on apical margins.

Color. Integument black, except mandible, clypeus, antenna, legs and tegula orange-yellow, S7 dark red, tibial spurs pale whitish; wings subhyaline, body only with white setae, clypeus and frons with dense, erect and decumbent setae; vertex with sparse setae; pronotum with dense erect and decumbent setae, mesonotum and tegula with sparse setae; metanotum, propodeum, meso and metapleuron with erect and decumbent setae; T1 with long erect and decumbent setae; T2 to T7 and S1 to S7 with sparse setae, except T2 apical margin with transverse dense band of decumbent setae.

FEMALE. Unknown.

Etymology. Named in honor of Dr. Roberto Julio Miranda, Instituto Conmemorativo Gorgas de Estudios de la Salud, Panamá, for his contributions to the knowledge of arachnids and insects of medical importance in Panama.

Material examined (3 specimens). **Holotype male:** Venezuela: Aragua, El Limón, 480 msnm, 8/III/1973, Malaise trap, C.J. Rosales (MIUP). **Paratypes:** Aragua, El Limón, 450 msnm, 17/VI/1972, Malaise trap, C.J. Rosales (1 MIUP). Colombia, Magdalena, Parque

Nacional Natural Tayrona, Palangana, $11^{\circ}20' N$, $74^{\circ}2' W$, 20 msnm, 15-30/XI/2001, Malaise trap, R. Henríquez, M.2750 (1 IAvH).

Distribution. Colombia, Venezuela.

Remarks. This is a rare species that has unique clypeal morphology (Figure 3) within the subgenus *E. (Ephuseabra)*. In other *E. (Ephuseabra)*, the lower vertical clypeal carinae are fused into a single mesal ridge below the clypeal pit (Figure 2), but these carinae remain separated in *E. mirandai*, causing their clypeus to resemble other species and subgenera of *Ephuta*. The hypopygial and genitalic morphology, however, closely resemble other members of this subgenus.

Ephuta (Ephuseabra) mirandai resembles the widespread *E. carinata* Schuster, 1945 in coloration, which shares its general clypeal structure with other *E. (Ephuseabra)* males, but not with *E. (Ephuseabra) mirandai*. Unlike all the *E. (Ephuseabra)* males, however, *E. carinata* has a flat hypopygium with its posterior margin only weakly emarginate mesally.

***Ephuta (Ephuseabra) morra morra* Casal, 1968**

(Figures 17, 18, 20-23, 24 B, C)

Holotype: Male, Brazil, Distrito Federal, Floresta de Tijuca, III/1963 (C.A. C. Seabra). Paratype: R.[epública] A.[rgentina]: Misiones, Puerto Bemberg, 29/I/1945 (Hayward, Willink y Golbach). AMNH, N.Y.

Material examined (16 specimens). ARGENTINA, Misiones, Loreto, I/2001, P. Fidalgo (1 CSCA); BRAZIL: Río de Janeiro, Conceicao Macabu, I/1978, M. Alvarenga (1 EMUS); Bahia, Nova Conquista, XII/1969, F.M. Oliveira (1 EMUS); Espirito Santo, Linhares, X/1972, M. Alvarenga (1 CMNH); Mato Grosso do Sul, Itaum, III/1974, M. Alvarenga (2 EMUS); Minas Gerais: 19-26/X/1999, R.P. Martins, (1 MIUP); 26/X/ -2/XI/1999, R.P. Martins, (1 MIUP); Belo Horizonte, MG (Zoológico fora), 19/X/1999, J.C.R. Fontenele, (1 MIUP); Rio de Janeiro, Represa Rio Grande, Guanabara: X/1967, M. Alvarenga (1 EMUS); XII/1967, M. Alvarenga (2 EMUS); III/1969, M. Alvarenga (1 EMUS); São Paulo, P. Grande, I/1945, M. Carrera, (1 MIUP). PARAGUAY: Paraguari, La Colmena, Caattymi, 185 msnm, $25^{\circ}55' S$, $56^{\circ} 47' W$, 27-31/I/2005, Malaise trap in forest, B. Garcete (1 MIUP); Canindeyú, Reserva Natural del Bosque Mbaracayú, Jejuí-mí, Malaise trap, bosque bajo inundado, 24-28/V/1996, A.C.F. Costa (1 MIUP).

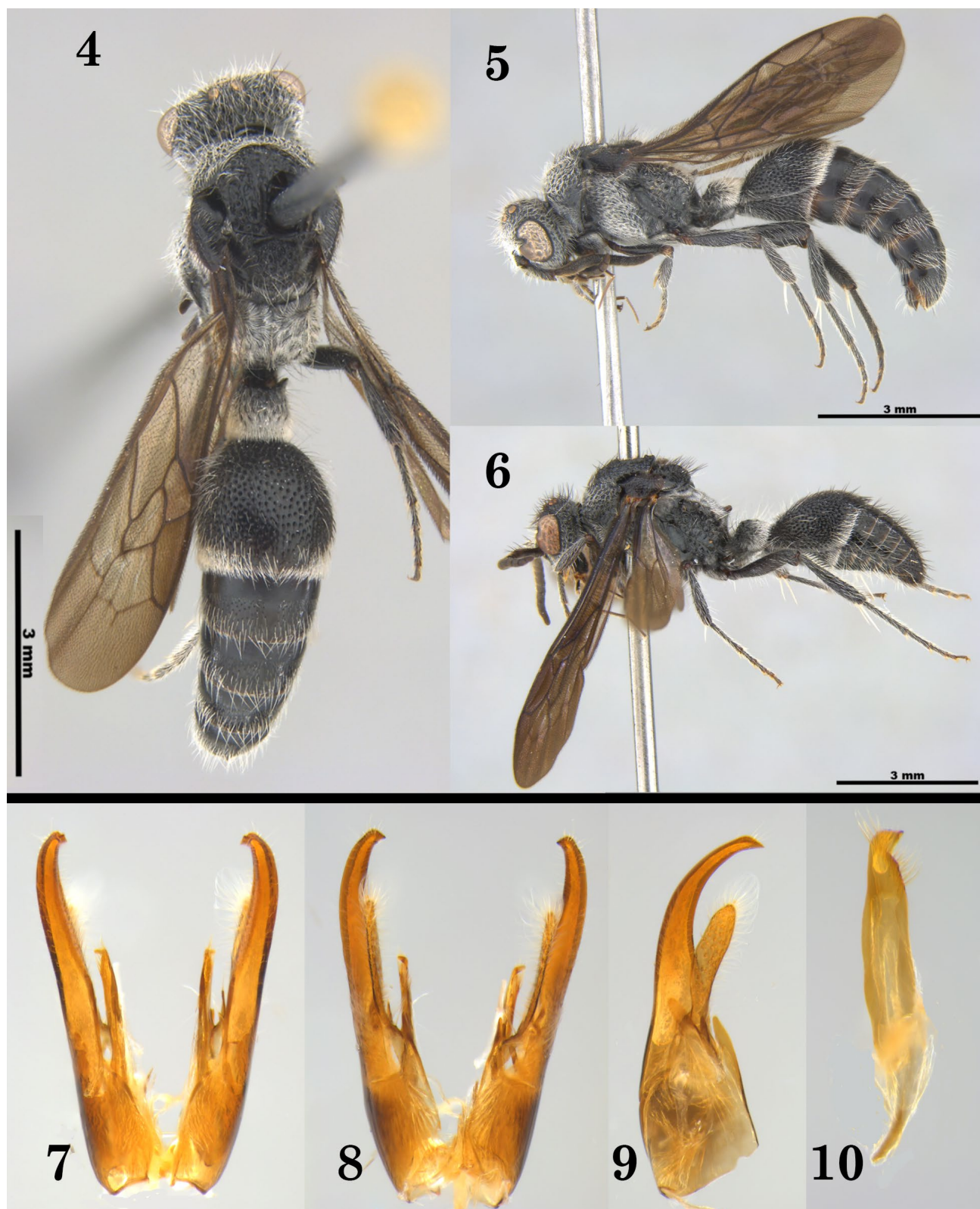


Figure 4-10. *Ephuta (Ephuseabra) aninoi*, **sp. nov.**, male. 4, 5, 7-10. Paratype from Colombia. 6. Non-paratype dark from Peru. 4. Dorsal habitus. 5, 6. Lateral habitus. 7. Genitalia, dorsal view. 8. Genitalia, ventral view. 9. Genitalia with penis valve removed, sagittal view. 10. Penis valve, lateral view.

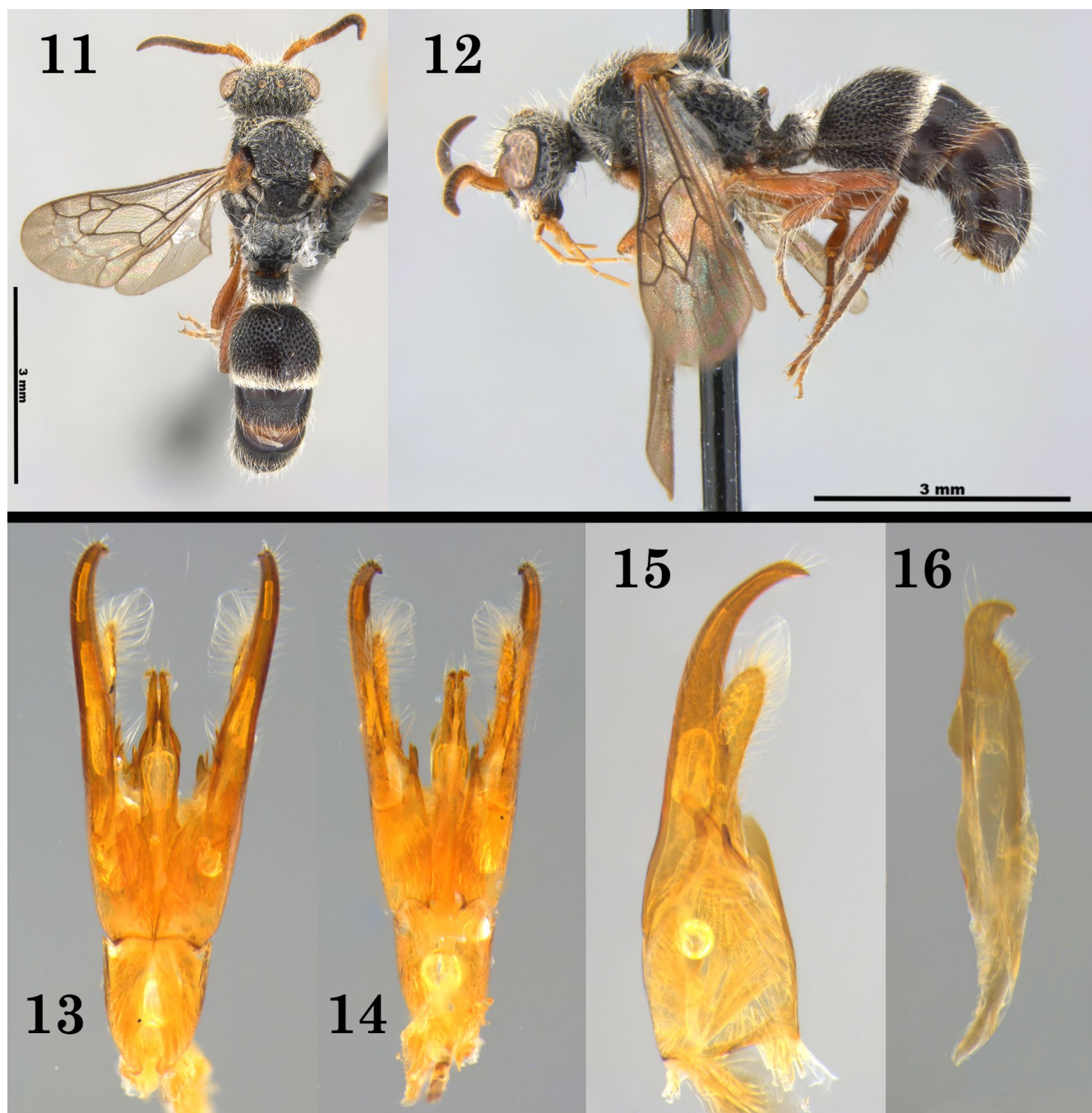


Figure 11-16. *Ephuta* (*Ephuseabra*) *mirandai*, **sp. nov.**, male, paratype from Colombia. 11. Dorsal Habitus. 12. Lateral Habitus. 13. Genitalia, dorsal view. 14. Genitalia, ventral view. 15. Genitalia with penis valve removed, sagittal view. 16. Penis valve, lateral view.



Figure 17-23. *Ephuta* (*Ephuseabra*) *morra* Casal, 1968, males. 17-18. *Ephuta morra morra*. 17. Dorsal habitus; 18. Lateral habitus. 19. *Ephuta morra suava* Casal, 1968, lateral habitus. 20-23. *Ephuta morra morra*, Genitalia. 20. Dorsal view; 21. Ventral view; 22. Genitalia with penis valve removed, sagittal view; 23. Penis valve, lateral view.

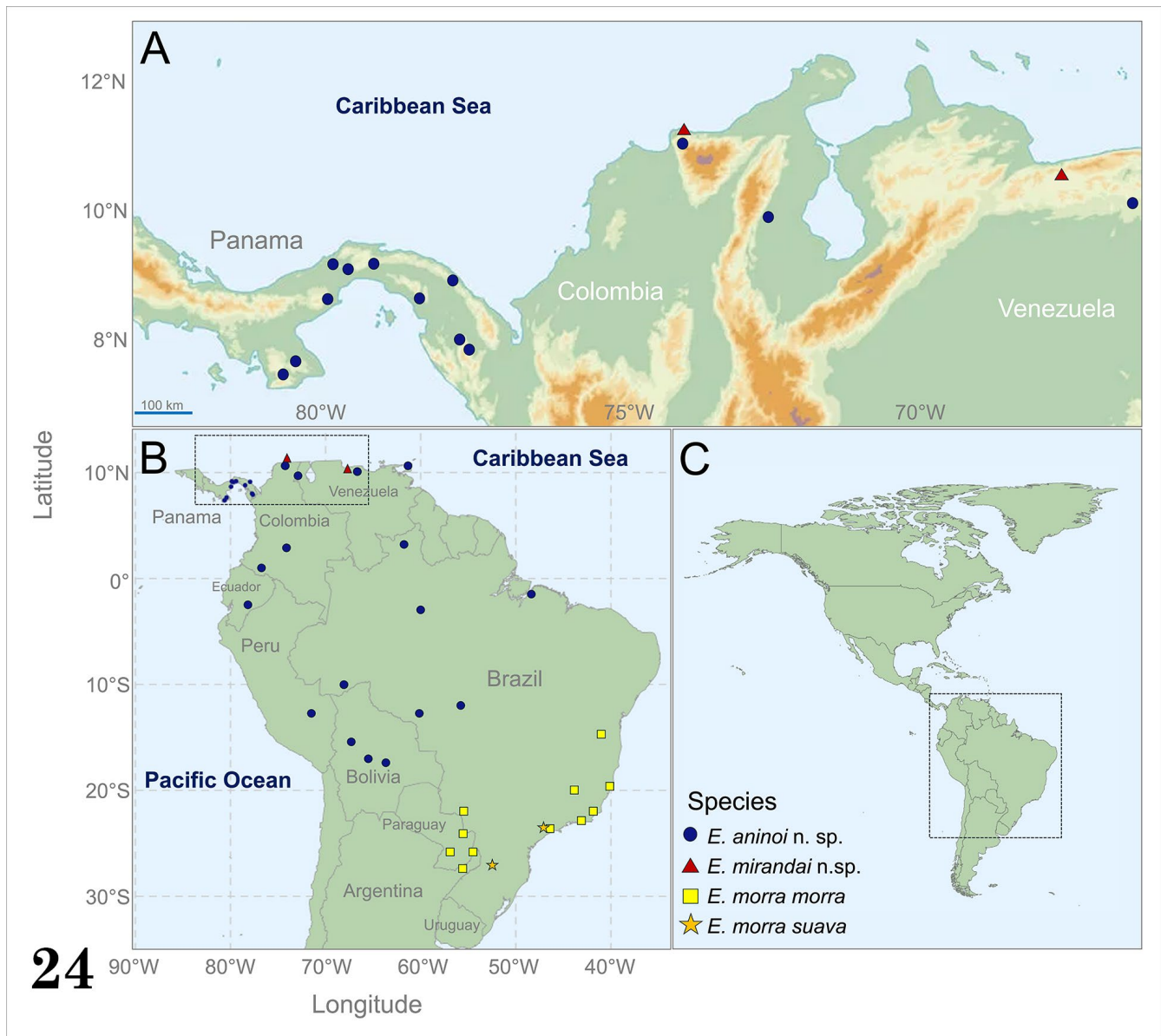


Figure 24. Distribution map of *Ephuta* (*Ephuseabra*) species. A. Panama, Colombia, Venezuela. B. South America. C. American Continents.

Distribution. Brazil, Argentina, Paraguay. First record of the subgenus for Paraguay.

Remarks. This species can be locally abundant in the Atlantic forests of Brazil and surrounding countries. The bright orange legs and extensive golden setae are also seen in some other *Ephuta* species and unrelated velvet ants from different lineages in the area (RAC, KAW, pers. obs.).

***Ephuta* (*Ephuseabra*) *morra suava* Casal, 1968**

(Figure 19, 24 B, C)

Holotype: Male, Brazil, S. Paulo, Barueri, 18/V/1955 (K. Lenko). Paratype: Brazil, Sta. Catharina, Nova Teutonia, V/1954. (Biezanko)

Material examined. BRAZIL, Santa Catarina, Nova Teutonia, V/1954, Biezanko coll. (1 paratype, AMNH).

Distribution. Brazil.

Remarks. This is an apparently rare color variant of *E. (Ephuseabra) morra* known from only two specimens from Brazil. The paratype is pictured here, but we were unable to extract and examine the genitalia. Further studies on this wasp could reveal it as a distinct separate species or confirm its synonymy under *E. (Ephuseabra) morra*, especially if larger series revealed intermediate forms. Without strong evidence in either direction, we retain the subspecies status given by Casal (1968).

Discussion

The subgenus *Ephuta* (*Ephuseabra*) was not given a formal description by Casal (1968), but it was adequately diagnosed in his key. Until recently, the combination of clypeal and hypopygial morphology was used to recognize the subgenus. After the discovery of *E. mirandai*, **sp. nov.**, and its comparison to *Ephuta carinata* (see remarks for *E. mirandai* above), we find that the hypopygium morphology (Figure 1) is the sole autapomorphy for this subgenus.

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