

Revision of *Plumarius* Philippi 1873 (Hymenoptera: Chrysidoidea, Plumariidae) from Argentina north of Patagonia, with description of eighteen new species

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Abstract

Twenty six species of *Plumarius* from Argentina north of Patagonia are revised. Eighteen new species: *Plumarius politus* sp. nov., *P. sarophorus* sp. nov., *P. globulosus* sp. nov., *P. angulatus* sp. nov., *P. noa* sp. nov., *P. divergens* sp. nov., *P. malaris* sp. nov., *P. gracilior* sp. nov., *P. riojanus* sp. nov., *P. exophthalmus* sp. nov., *P. planatus* sp. nov., *P. albinervis* sp. nov., *P. truncatus* sp. nov., *P. mikrommatus* sp. nov., *P. obscurus* sp. nov., *P. gracilis* sp. nov., *P. fidalgoi* sp. nov., and *P. ocellulatus* sp. nov. are described and illustrated. A new record for known species as well as a key to 26 known species in the region is given. A redescription of *P. tumidulus* Papp, 2000, which is the first record of the family Plumariidae from Uruguay, is done.

Key words: *Plumarius*, taxonomy, Neotropical Region

Introduction

The Plumariidae are the basalmost lineage of chrysoid wasps (Carpenter 1986; 1999; Brothers & Carpenter 1993). The males are slender wasps with long legs and large wings with an enormous pterostigma, while the females are apterous, have a flattened body and have short legs with strong spiniform setae. The family is distributed in southern Africa and in South America.

Plumariids in Argentina north of Patagonia are known to occur in the western xeric areas, not in the humid eastern parts of the country. This region of western Argentina is the area with maximal diversity of Plumariidae in the New World. It is characterized by diverse xeric environments, from high altitude grasslands in the Andes, interandean valleys with extremely arid areas with low vegetation cover, extense pedemontane desert scrubs, to xeromorphic woodlands in the east. All five South American genera of Plumariidae occur in this area, and three of them are endemic to the region: *Plumaroides* Brothers 1974, *Mapluroides* Diez, Fidalgo & Roig-Alsina 2007, and *Pluroides* Diez, Roig-Alsina & Fidalgo 2010. The genus *Maplurius* Roig-Alsina 1994 extends its distribution to northern Patagonia (Roig-Alsina 1994), and *Plumarius* Philippi 1873 is distributed from northeastern Brazil, Ecuador, Peru and Paraguay, to the south of Argentina and Chile (Evans 1966; Bradley 1972; Nagy 1973; Brothers 1974; Pentead-Dias & Scatolini 2003; Quintero & Cambra 2010). Although *Plumarius* has a broad distribution in South America, it is in central-western and northwestern Argentina where a high diversity is present. The faunas of *Plumarius* of Chile and of Patagonia are also diverse, but still poorly known. These faunas are distinct, and merit studies of their own.

Plumarius currently includes 19 described species (Nagy 1973; Perez-D'Angello 1974; Papp 2000; Pentead-Dias & Scatolini 2003; Diez *et al.* 2012; 2013), five of which were described from Chile, 13 from Argentina, and one from Brazil. Specimens of *Plumarius* reported from Ecuador, Peru, and Paraguay have not been named. The genus is recorded here for the first time for Uruguay. The purpose of the present contribution is to describe eighteen new species of *Plumarius* from Argentina north of Patagonia, and to present a key to all known species in the area.

Material and methods

The specimens collected are from Argentina, from the following provinces: Salta, Jujuy, Tucumán, Catamarca, La Rioja, San Juan, San Luis, and Mendoza north of latitude 34° S. This latitude marks approximately the northern limit of the Patagonian fauna in western Argentina (Cabrera & Willink 1973; Morrone 2001). All studied specimens are males. Specimens are deposited in: Museo Argentino de Ciencias Naturales “Bernardino Rivadavia”, Buenos Aires, Argentina (MACN), Instituto Argentino de Investigación de Zonas Áridas, Mendoza, Argentina (IADIZA), Instituto Fundación Miguel Lillo, Tucumán, Argentina (IFML), and Museo de La Plata, La Plata, Argentina (MLP).

Terminology follows that of previous contributions (Roig-Alsina 1994; Diez *et al.* 2010, 2012, 2013) and Hymenoptera Anatomy Consortium (2016). Measurements were taken as indicated in Fig. 1. Terms for different parts of the genitalia are indicated on Fig. 8D–E. Abbreviations are: **F** = flagellomere; **OOD** = ocellocular distance, **POL** = postocellar distance; **T** = metasomal tergum.

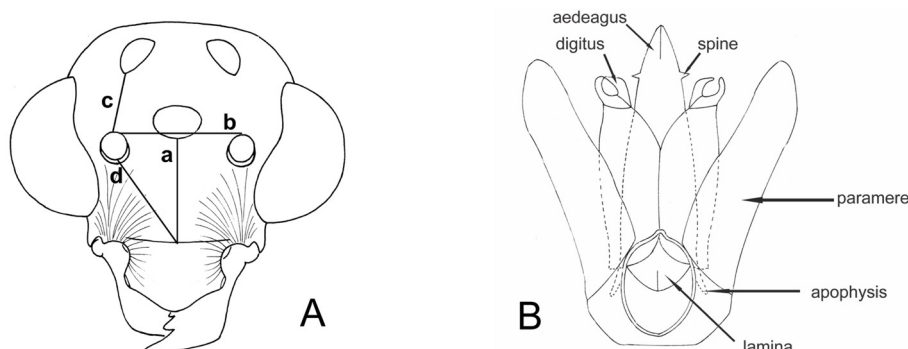


FIGURE 1. *Plumarius* sp., ♂. A, Head, frontal view (a: distance from upper margin of clypeus to lower margin of median ocellus; b: supra-torular line; c: distance from torulus to lateral ocellus; d: distance from torulus to clypeus); B, Genital capsule, ventral view.

Genus *Plumarius* Philippi, 1873

Plumarius Philippi, 1873: 299. Type species: *Plumarius niger* Philippi, 1873, by monotypy.

Konowiella André, 1909: 107. Type species: *Konowiella hirticornis* André, 1909, by monotypy. Synonymized by Bradley 1921: 214.

Diagnosis. Species of *Plumarius* are characterized by the toruli placed high on the face, well above the epistomal suture (1.5 × or more than torulus diameter), F1–F10 with transverse rows of long setae, longer than thickness of flagellomeres, scape with basiventral enlargement, pointed ventral angle of pronotum, expanded anterior portions of propleura, which form dorsally sclerotized tubular neck, dentate claws, and presence of specialized setose areas on ventral surface of metacoxa.

Distribution. Ecuador, Peru, Chile, Argentina, Paraguay, Uruguay, and Brazil.

Key to males of *Plumarius* from Argentina north of Patagonia

1. Lateral ocelli in frontal view reaching or surpassing upper margin of head (Fig. 21A) 2
- Lateral ocelli in frontal view not reaching upper margin of head (Figs 2A–18A) 4
2. Malar area as long as apical width of F1; lower area of genal bridge close to mandibular articulation with carinae (Fig. 21B) (Vertex smooth anteriorly, without punctures) *P. stangei* Diez, Fidalgo & Roig-Alsina
- Malar area 1.3–1.9 × as long as apical width of F1; lower area of genal bridge close to mandibular articulation smooth, without carinae 3
3. Vertex densely punctate anteriorly; metatrochanter with ventral setose area, such area absent on ventral surface of coxa.
- Vertex smooth anteriorly, without punctures; metacoxa and, metatrochanter with ventral setose areas *P. culminatus* Diez, Fidalgo & Roig-Alsina
- Vertex smooth anteriorly, without punctures; metacoxa and, metatrochanter with ventral setose areas *P. willinki* Fidalgo

4.	Radiating striae arising close to anterior mandibular articulation running up to malar area, antennal insertion and supraclypeal area; clypeus with at least few striae laterally; aedeagus with preapical spines (except <i>P. spiniferus</i>)	5
-	Radiating striae absent, a single furrow runs from near anterior mandibular articulation to antennal insertion; clypeus without striae; aedeagus without preapical spines	<i>P. politus</i> sp. nov.
5.	Face in lateral view not bigibbous, either clypeus or supraclypeal area alone strongly convex, or both slightly convex to flat	6
-	Face in lateral view bigibbous, due to convex clypeus and convex supraclypeal area (Fig. 21C)	<i>P. hirticornis</i> André
6.	Metacoxa on under surface with specialized setose area (Fig. 21D)	7
-	Metacoxa on under surface with hairs sparse, similar to those under mid coxa	10
7.	Maxillary palp short, segments 4–6 as long as or shorter than segment three; scape basally swollen or projected	8
-	Maxillary palp long, segments 4–6 1.3–1.6 × as long as segment 3; scape without basal swellings or projections	<i>P. filipalpis</i> Roig-Alsina
8.	Supraclypeal area with step-like protuberance (Fig. 21E); scape basally with ventral compressed, rounded expansion	<i>P. gradifrons</i> Diez
-	Supraclypeal area flat in profile; scape cylindrical or projected into spine	9
9.	Scape with basal spiniform projection (Fig. 21F); marginal cell with anterior margin 2.6 × posterior margin	<i>P. spiniferus</i> Roig-Alsina
-	Scape cylindrical (Fig. 3C); marginal cell with anterior margin 1.8–2.2 × posterior margin	<i>P. sarophorus</i> sp. nov.
10.	T7 with median longitudinal carina (Fig. 4D)	11
-	T7 without median longitudinal carina	12
11.	Clypeus with a globular median prominence (Fig. 4C); marginal cell with anterior margin 2.4 × longer than posterior margin	<i>P. globulosus</i> sp. nov.
-	Clypeus slightly convex to flat; marginal cell with anterior margin 3.2 × longer than posterior margin	<i>P. angulatus</i> sp. nov.
12.	Median ocellus in frontal view crossed by (Figs 1, 4A), or tangent to (Fig. 9A) supra-torular line; genal carina present	13
-	Median ocellus in frontal view above supra-torular line (Fig. 14A); genal carina usually absent	20
13.	Marginal cell with anterior margin 2.5–3.0 × longer than posterior margin	14
-	Marginal cell with anterior margin 1.9–2.4 × longer than posterior margin	16
14.	Area anterior to pronotal lobe smooth; propodeum behind spiracle not swollen	<i>P. noa</i> sp. nov.
-	Area anterior to pronotal lobe with striae; propodeum elevated behind spiracle	15
15.	Malar area short (1.0–1.1 × apical width of F1); outer margins of malar areas in frontal view diverging from margin of eye to margin of mandible (Fig. 7A, arrow); punctures of anterior part of mesoscutum usually not extending beyond notauli; apex of paramere rounded	<i>P. divergens</i> sp. nov.
-	Malar area long (1.3–1.8 × apical width of F1); outer margins of malar areas in frontal view parallel (Fig. 8A); punctures of anterior part of mesoscutum extending beyond notauli on anterior dorsal surface; apex of paramere truncate (Fig. 8D, F)	<i>P. malaris</i> sp. nov.
16.	Median ocellus in frontal view tangent to supra-torular line (Fig. 9A); torulus separated from lateral ocellus by 0.80 × distance to margin of clypeus	<i>P. gracilior</i> sp. nov.
-	Median ocellus in frontal view crossed by supra-torular line (Fig. 10A); torulus separated from lateral ocellus by 0.30–0.40 × distance to margin of clypeus	17
17.	F1 short, approximately as long as distance from upper margin of clypeus to lower margin of median ocellus (1:1.0–1.2) (Fig. 1, a)	18
-	F1 longer than distance from upper margin of clypeus to lower margin of median ocellus (1: 1.3–1.4)	19
18.	Head in frontal view as wide as long; lateral ocelli in frontal view usually above imaginary line tangent to upper margin of eyes (Fig. 10A)	<i>P. riojanus</i> sp. nov.
-	Head in frontal view 1.3 wider than long; lateral ocelli in frontal view crossed by imaginary line tangent to upper margin of eyes (Fig. 11A)	<i>P. exophthalmus</i> sp. nov.
19.	Propodeum swollen behind spiracle; clypeus in profile nearly flat (Fig. 12C)	<i>P. planatus</i> sp. nov.
-	Propodeum not swollen behind spiracle; clypeus in profile more convex (Fig. 13C)	<i>P. albinervis</i> sp. nov.
20.	Scape basally without ventral rounded projection	21
-	Scape basally with ventral rounded projection (Fig. 14C)	<i>P. tumidulus</i> Papp
21.	Apical margin of clypeus pointed (Fig. 16A) or rounded; clypeus 1.3–1.4 × wider than high; protarsomere 1 with two outer lateral spines	22
-	Apical margin of clypeus nearly straight; clypeus transverse (1.6 × wider than high) (Fig. 15A); protarsomere 1 without outer lateral spines	<i>P. truncatus</i> sp. nov.
22.	Marginal cell with anterior margin 2.1 × as long as posterior margin, or longer, apex of cell narrowed	23
-	Marginal cell with anterior margin at most 1.8 × as long as posterior margin, apex of cell obtuse	24
23.	OOD 2.7–3.0 × maximum diameter of lateral ocellus	<i>P. mikrommatius</i> sp. nov.
-	OOD 1.8 × maximum diameter of lateral ocellus	<i>P. obscurus</i> sp. nov.
24.	Torulus closer to lateral ocellus than to clypeus (1.4:2.0–1.2:2.0); marginal cell narrowed in central area, shortest distance between pterostigma and vein 4Rs, 0.28 × length of posterior margin of cell (r-rs) (Fig. 18D)	<i>P. gracilis</i> sp. nov.
-	Torulus nearly as close to lateral ocellus as to clypeus (1.4:1.5); marginal cell wider in central area, shortest distance between pterostigma and vein 4RS, 0.55–0.70 × length of posterior margin of cell	25

25. OOD $1.6\text{--}1.7 \times$ maximum diameter of elipsoid lateral ocellus; lateral striae of clypeus extending on lateral third of clypeus *P. fidalgoi* **sp. nov.**
- OOD $2.3\text{--}2.5 \times$ maximum diameter of lateral ocellus, which is nearly circular; lateral striae of clypeus extending on lateral fourth of clypeus *P. ocellulatus* **sp. nov.**

***Plumarius stangei* Diez, Fidalgo & Roig-Alsina, 2013**

(Fig. 21B)

Plumarius stangei Diez, Fidalgo & Roig-Alsina, 2013: 89–91, figs. 3A–E [holotype, ♂, Argentina, Mendoza, Lavalle, Las Catitas (MACN)].

Examined material. New records: Salta, 2 ♂, Payogasta, 26.II.2015, col Diez, Garlati (MACN, in alcohol). La Rioja, 8 ♂, Pituil, Ruta 40, km 3451–53, 26.XI.2012, col Diez, Fidalgo P. (MACN, in alcohol); 6 ♂, Pituil, Ruta 40, km 3451–53, 14.XII.2012, col Diez, Fidalgo P. (MACN, in alcohol).

Distribution. Argentina (Salta, La Rioja).

***Plumarius culminatus* Diez, Fidalgo & Roig-Alsina, 2013**

Plumarius culminatus Diez, Fidalgo & Roig-Alsina, 2013: 88–89, figs. 2A–F [holotype, ♂, Argentina, Catamarca, Medanitos (MACN)].

Examined material. New records: Salta, 1 ♂, La Paya, 7 km de Cachi, $25^{\circ}11'072''\text{S}$, $66^{\circ}11'455''\text{W}$, 25.II.2015, col Diez, Garlati (MACN, in alcohol); 3 ♂, Buena Vista, km 4368 Ruta 40 ca. San Carlos, 1.XII.2007, col Fidalgo P., Porter (MACN, in alcohol). La Rioja, 1 ♂, Pituil, R 40, km 3451/59, $28^{\circ}32'147''\text{S}$, $67^{\circ}22'123''\text{W}$, 14.XII.2012, col: Diez, Fidalgo P. (MACN, in alcohol). Catamarca, 1 ♂, 5 Km N Palo Blanco, $27^{\circ}19'34.88''\text{S}$, $67^{\circ}45'29.72''\text{W}$, 4.XII.2011, col Diez, Fidalgo P. (MACN, in alcohol); 5 ♂, Palo Blanco; $27^{\circ}24'393''\text{S}$, $67^{\circ}43'333''\text{W}$, 27.I.2015, col Diez, Buck (MACN, in alcohol); 1 ♂, Medanitos, $27^{\circ}32'012''\text{S}$, $67^{\circ}37'332''\text{W}$; 27.I.2015, col Diez, Buck (MACN, in alcohol).

Distribution. Argentina (Salta, Catamarca, La Rioja).

***Plumarius politus* Diez & Roig-Alsina, sp. nov.**

(Figs 2A–D)

Diagnosis. This species is characterized by the lack of the striae on the face present in most species of *Plumarius*. The malar area, the clypeus and the supraclypeal area are smooth, without radiating striae, and a single furrow runs from near the anterior mandibular articulation to the torulus. The aedeagus lacks preapical spines, a character shared with *P. spiniferus* Roig-Alsina, *P. truncatus* **sp. nov.** and *P. ocellulatus* **sp. nov.**

Description. Holotype, ♂. Body length 8.2 mm (paratypes 5.6–6.5 mm). Color. Brown, with head darker.

Head. $1.3 \times$ wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (4.0:3.5). OOD $1.0 \times$ diameter of lateral ocellus; POD $2.1 \times$ OOD. Antennocular distance $1 \times$ diameter of torulus; interantennal distance $2.4 \times$ antennocular distance. Vertex finely reticulated, without striae and moderately punctate between lateral ocelli (punctures separated by $1.5 \times$ puncture diameter). Torulus closer to lateral ocellus than to clypeus (1.3:2.6). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 2A). Genal carina present, weak. Length of area between preoccipital carina and suboral swelling longer than length of suboral swelling (0.9:0.4); this area without a median longitudinal carina; lower area of genal bridge close to mandible articulation without carinae or punctures (Fig. 2B). Malar area subequal to apical width of F1 (0.7:0.8), striate anteriorly. Supraclypeal area without lateral striae; convex in lateral view (Fig. 2C). Epistomal suture evident. Clypeus $1.8 \times$ wider than high, without lateral striae; rounded in lateral view; apex not truncate. Proportion of lengths of segments of maxillary palp, from base to apex: 18:15:23:25:18:17. Scape with basal swelling. F1 $4.2 \times$ as long as its apical width, shorter than scape and pedicel combined (3.4:3.8).

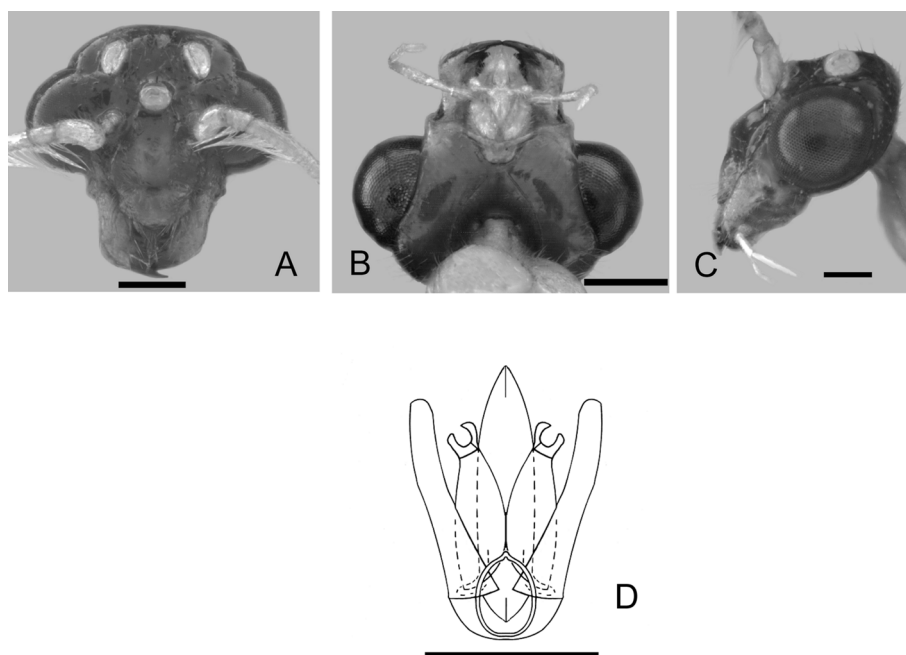


FIGURE 2. *Plumarius politus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, not forming a lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum densely punctate. Propleuron scarcely punctate; mesopleuron densely punctate. Metapostnotum without longitudinal striae. Propodeum transverse, swollen behind spiracle; without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.2 \times$ as long as posterior margin; vein *Rs*3 shorter than length of *Rs*4 (3.0:4.5); vein *M* separated from vein *cu-a* by $0.3 \times$ length of *cu-a*; discal cell rectangular. Hind wing: veins *M* and *cu-a* interstitial. Protarsomere 1 with nine outer lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (3.8:5.3); inner metatibial spur $1.4 \times$ as long as outer spur.

Metasoma. T7 apically rounded. Genitalia as in Fig. 2D, aedeagus without lateral spines.

Examined material. Holotype, ♂: ARGENTINA, La Rioja: Santa Teresita, 12.II.2005, col Fidalgo P., Fidalgo G., Torr  ns (MACN). Paratypes: 4 ♂, same data of holotype (MACN); 1 ♂, Santa Teresita, 12.IV.2005, col Fidalgo P., Fidalgo G., Torr  ns (IADIZA); 1 ♂, Ruta 40, Km 593 ca Chilecito, col Fidalgo P., Fidalgo G., Torr  ns (MACN). Catamarca: 1 ♂, Quir  s, 7.XII.1940, col Nacbet (MLP). Mendoza: 3 ♂, Lavalle, San Francisco, 21.IX.1981; col Carpintero (MACN).

Distribution. Argentina (Catamarca, La Rioja, Mendoza).

Variation. The specimen from Chilecito (La Rioja), has fewer lateral striae on the supraclypeal area and clypeus. The specimen from Catamarca is lighter in coloration.

Etymology. The specific epithet, *politus*, is a Latin adjective referring to the absence of radiating striae on the malar area, the clypeus and the supraclypeal area.

***Plumarius hirticornis* (Andr  , 1909)**

(Fig. 21C)

Konowiella hirticornis Andr  , 1909: 107 [lectotype, ♂ (designated by Diez *et al.* 2012: 638), Argentina, Mendoza, Konow col. (Mus  m Nationale d'Histoire Naturelle, Paris)]; 1913: 3, pl. I, fig. 11; Enderlein, 1914: 198; Bischoff, 1914: 61, 62.

Plumarius hirticornis: Bradley, 1972: 137; Nagy, 1973: 259, 265; Roig-Alsina, 1994: 81; Diez *et al.*, 2012: 534, 538 figs. 3A–C.

Examined material. New records: La Rioja, 12 ♂, Pituil, R 40, km 3451/60, 28  32'147"W, 67  22'123"W,

2.II.2012, col Diez, Fidalgo P. (MACN, in alcohol); 1 ♂, Sta. Teresita, 18.XI.2006, col Fidalgo P. (MACN, in alcohol). Catamarca, 13 ♂, 10 km N Fiambalá, 27°35'22.49"S, 67°37'10.11"W, 16.II.2007, col Diez, Fidalgo P. (MACN, in alcohol); 4 ♂, 10 km N Fiambalá, 16.XI.2007, col Diez, Fidalgo P. (MACN, in alcohol); 4 ♂, Ruta 46, 66 km entre Belen y Andalgalá, 2.XI.2006, col Diez, Fidalgo P. (MACN, in alcohol); 5 ♂, 3 km N Saugil, Ruta 34, 5.XII.2011, col Diez, Fidalgo P. (MACN, in alcohol); 10 ♂, Saugil, 27°33'601"S, 67°37'298"W, 27.I.2015, col Diez, Buck (MACN, in alcohol). San Juan, 2 ♂, Caucete, Ruta 141 km 198, 31°42'55.3"S, 68°08'10.3"W, 19.III.2010, col Diez, Paliza (MACN, in alcohol).

Distribution. Argentina (La Rioja, Catamarca, San Juan)

***Plumarius gradifrons* Diez, 2012**

(Figs 21D–E)

Plumarius gradifrons Diez, in Diez *et al.*, 2012: 542, 544, figs. 7 A–C [holotype, ♂, Argentina, La Rioja, Patquía, (MACN)].

Examined material. New records: Salta, 1 ♂, Payagasta, 25°11'116"S, 66°11'597"W, 26.II.2015, col Diez, Garlati (MACN, in alcohol); 2 ♂, Yacochuya, 23°39'598"S, 65°26'116"W, 16.II.2015, col Diez, Garlati (MACN, in alcohol); 1 ♂, La Paya, 7 km Cachi, 25°11'074"S, 66°11'455"W, 26.II.2015, col Diez, Garlati (MACN, in alcohol); 12 ♂, Buena Vista, km 4368 Ruta 40 ca San Carlos, 7.XII.2007, col, Fidalgo P. (MACN, in alcohol). La Rioja, 30 ♂, Pituil, R 40, km 3451–54, 26.XI.2012, col Diez, Fidalgo P. (MACN, in alcohol); 16 ♂, Pituil, R 40, km 3451–54, 2.XII.2012, col Diez, Fidalgo P. (MACN, in alcohol); 28 ♂, Pituil, R 40, km 3451–54, 14.XII.2012, col Diez, Fidalgo P. (MACN, in alcohol); 3 ♂, entre Aminga y Anillaco, 28°49'375"S, 66°56'426"W, 7.II.2015, col Diez, Garlati (MACN, in alcohol); 7 ♂, Udpinango, 2–9.XII.2011, col Diez (MACN, in alcohol). Catamarca, 1 ♂, 5 Km Norte Palo Blanco, 4.XII.2011, col Diez, Fidalgo P. (MACN, in alcohol); 8 ♂, Ruta 46, 66 km entre Belen y Andalgalá, 2.XI.2006, col Fidalgo P., Porter (MACN, in alcohol). San Juan, 15 ♂, Caucete, Ruta 141 km 197; 31°42'55.3"S, 68°08'10.3"W, 19.III.2010, col Diez, Paliza (MACN, in alcohol).

Distribution. Argentina (Salta, La Rioja, Catamarca, San Juan).

***Plumarius sarophorus* Diez & Roig-Alsina, sp. nov.**

(Figs 3A–D)

Diagnosis. This species is characterized by the presence of a specialized setose area on the under surface of the metacoxa. It is distinguished from the other five species with a setose coxa by the weakly rounded clypeal and supraclypeal areas, the simple scape, the short palpi and the ocelli not reaching the top of the head.

Description. Holotype, ♂. Body length 5.3 mm (paratype 5.1). Color. Brown, with head darker.

Head. 1.2 × wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (7.1:6.2). OOD 1.3 × diameter of lateral ocellus; POD 1.4 × OOD. Antennocular distance 1 × diameter of torulus; interantennal distance 2.2 × antennocular distance. Vertex finely reticulated, without striae or punctures between lateral ocelli. Torulus closer to lateral ocellus than to clypeus (1.5:2.1). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 3A). Genal carina distinct. Length of area between preoccipital carina and suboral swelling subequal to length of suboral swelling (1.2:1.1); this area without median longitudinal carina; lower area of genal bridge close to mandibular articulation with weak carinae (Fig. 3B). Malar area subequal to apical width of F1 (0.7:0.6), striate anteriorly. Supraclypeal area with weak lateral striae; in lateral view weakly rounded (Fig. 3C). Epistomal suture evident. Clypeus 1.4 × wider than high, with weak lateral striae; in lateral view weakly rounded. Proportion of lengths of segments of maxillary palp, from base to apex: 11:0.8:14:15:15:16. Scape without swelling or projection. F1 6.1 × as long as its apical width, longer than scape and pedicel combined (3.7:3.3).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, not forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum scarcely punctate about notaulus. Propleuron and mesopleuron scarcely punctate. Metapostnotum with striae reaching to posterior margin. Propodeum transverse, not swollen behind spiracle; without carina anterior to spiracle. Fore wing: marginal cell

with anterior margin $2.1 \times$ as long as posterior margin; vein *Rs3* longer than length of *Rs4* (3.1:2.6); vein *M* separated from vein *cu-a* by $0.4 \times$ length of *cu-a*; discal cell rectangular. Hind wing: veins *M* and *cu-a* interstitial. Protarsomere 1 with three outer lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (3.6:5.5); inner metatibial spur $1.3 \times$ as long as outer spur.

Metasoma. T7 pointed apically. Genitalia as in Fig. 3D.

Examined material. Holotype, ♂: ARGENTINA, La Rioja: Ruta 141, km 104 ca. de Marayes, 29.I.2006, col Fidalgo P. (MACN). Paratype: 1♂, same data of holotype (MACN).

Distribution. Argentina (La Rioja).

Etymology. The specific epithet, *sarophorus*, is a Latin adjective referring to the presence of a specialized, setose area on the metacoxa.

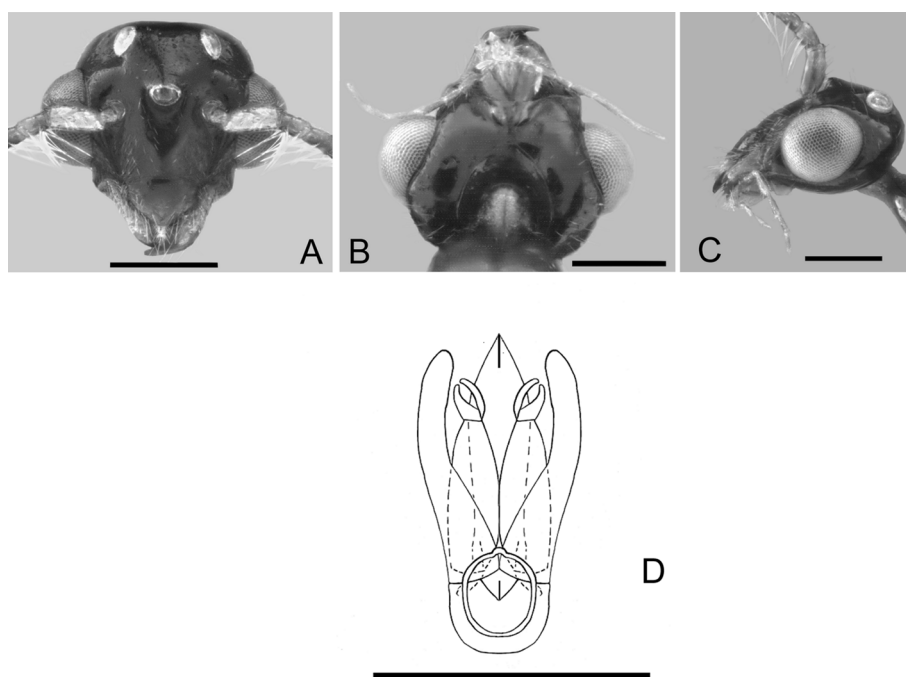


FIGURE 3. *Plumarius sarophorus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius globulosus* Diez & Roig-Alsina, sp. nov.**

(Figs 4A–E)

Diagnosis. This species is distinguished among all other species of *Plumarius* by the globular prominence in the middle of the clypeus and the presence of a median, longitudinal carina on T7.

Description. Holotype, ♂. Body length: 7.9 mm (paratypes 5.9–8.7 mm). Color. Light brown, with following areas darker: spot between ocelli, tegulae, and T7.

Head. $1.2 \times$ as wide as high in frontal view; wider than scutum between tegulae in dorsal view (54:48). OOD $1.1 \times$ diameter of lateral ocellus; POD $1.1 \times$ OOD. Antenocular distance $0.5 \times$ diameter of torulus; interantennal distance $4.4 \times$ antenocular distance. Vertex finely reticulated and moderately punctate between lateral ocelli (punctures separated by $1.5 \times$ puncture diameter). Torulus closer to lateral ocellus than to clypeus (15:20). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 4A). Genal carina absent. Length of area between preoccipital carina and suboral swelling longer than length of suboral swelling (7.0:5.0); this area without a median, longitudinal carina (Fig. 4B); lower area of genal bridge close to mandibular articulation without carinae or punctures. Malar area longer than apical width of F1 (8.0:5.0); without striae. Supraclypeal area with weak lateral striae; weakly rounded in lateral view. Epistomal suture scarcely

evident. Clypeus $1.5 \times$ wider than high, with a globular prominence in the middle and with weak lateral striae; apical margin rounded, not truncate (Fig. 4C). Proportion of lengths of maxillary palp segments from base to apex, 7:7:10:11:8:10. Scape with a basal, rounded, ventral projection. F1 $4.6 \times$ as long as its apical width, equal to scape and pedicel combined (2.8:2.8).

Mesosoma: Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, forming weak lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum moderately punctate. Propleuron and mesopleuron moderately punctate. Metapostnotum with longitudinal striae reaching to posterior margin. Propodeum transverse; swollen behind spiracle; without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.4 \times$ as long as posterior margin; vein *Rs*3 shorter than *Rs*4 (1.7:2.2); vein *M* separated from *cu-a* by $0.7 \times$ length of *cu-a*; discal cell rectangular. Hind wing: vein *cu-a* postfurcal to vein *M*. Protarsomere 1 with fifteen outer lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (3.6:5.3); inner metatibial spur $1.2 \times$ as long as outer spur.

Metasoma. T7 with median, longitudinal carina and concave at both sides of carina; apically with a polished rim (Fig. 4D). Genitalia as in figure 4E.

Examined material. Holotype, ♂: ARGENTINA, La Rioja, 7 km N de Santa Teresita, 18.II.2006, with light, col Fidalgo P., Fidalgo G. (MACN). Paratypes: 15 ♂, same data as holotype (MACN); 3 ♂, same data as holotype (IFML); 3 ♂, same data as holotype (MLP); 1 ♂, Termas de Santa Teresita, 19.II.2005, col Fidalgo P., Fidalgo G., Torr  ns, at light (MACN); 1 ♂, Santa Teresita, 28  35'57"S, 66  33'44"W, 21–22.XII.2009, col Fidalgo P., Torr  ns, YPT, sand dune (MACN); 1 ♂, Termas de Santa Teresita, 18.II.2006, col Fidalgo P., Fidalgo G., at light (IADIZA); 10 ♂, Santa Teresita, 18.XI.2006, col Fidalgo P. (MACN, in alcohol); 1 ♂, 7 km E Anillaco, 17.II.2006, col Fidalgo P., Torr  ns, at light (MACN); 1 ♂, Udpinango, 16.II.2006, col P. Fidalgo P. (MACN); 10 ♂, Pituil, R 40, km 3451–52, 26.XI.2012, col Diez, Fidalgo P. (MACN in alcohol). Catamarca, 1 ♂, Ruta Nacional 45, Km 1280 ca. R  o Colorado, 10.IV.2005, col Fidalgo P. (MACN); 1 ♂, Ruta 46, 66 km entre Bel  n y Andalgal  , 1.II.2006, col Fidalgo P. (MACN in alcohol). San Juan, 2 ♂, Ruta 141, km 173 ca. Caucete, 14.I.2006, col Fidalgo P. (MACN).

Distribution. Argentina (Catamarca, La Rioja, San Juan).

Variation. The specimens from Udpinango and Anillaco (La Rioja) have the protarsomere 1 with seven outer lateral spines and the body color is dark brown. The specimens from San Juan have the protarsomere 1 with five outer lateral spines approximately. Some specimens from Santa Teresita (La Rioja) have the protarsomere 1 with five outer lateral spines, and the median longitudinal carina on T7 is weak.

Etymology. The specific epithet, the Latin adjective *globulosus*, refers to the globular prominence of the clypeus.

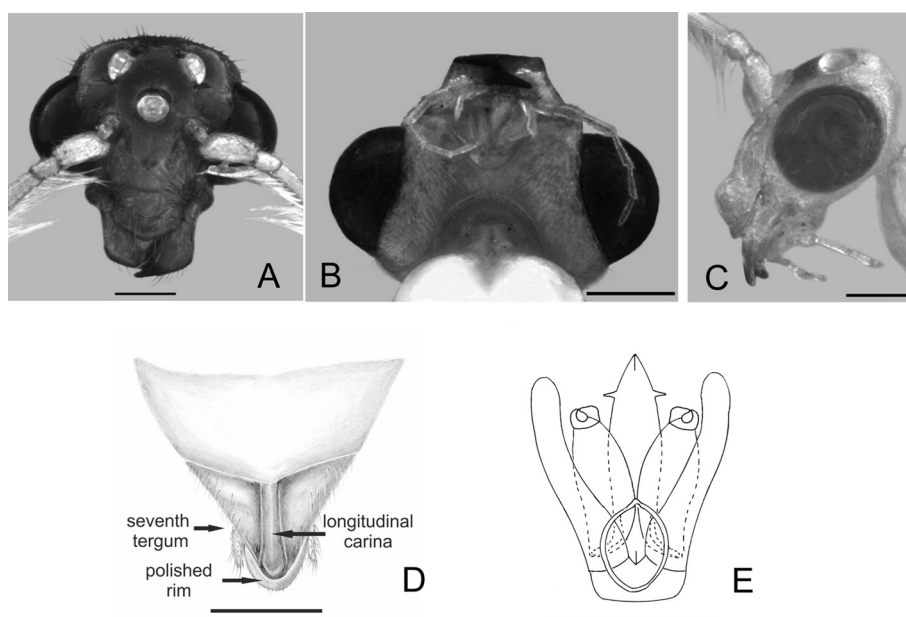


FIGURE 4. *Plumarius globulosus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, T7, longitudinal carina; E, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius angulatus* Diez & Roig-Alsina, sp. nov.**

(Figs 5A–D)

Diagnosis. This species, together with *P. globulosus* sp. nov., are the only two *Plumarius* species with a longitudinal, median carina on T7. It is easily distinguished from *P. globulosus* by the flat clypeus.

Description. Holotype, ♂. Body length 7.9 mm (paratypes 8.9–9.8 mm). Color. Brown, with head (except clypeus) and stigma darker.

Head. 1.1 × wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (5.8:5.5). OOD 1.0 × diameter of lateral ocellus; POD 1.4 × OOD. Antennocular distance 0.6 × diameter of torulus; interantennal distance 3.1 × antennocular distance. Vertex reticulated, without striae but densely punctate between lateral ocelli (punctures separated by 0.5 × puncture diameter). Torulus closer to lateral ocellus than to clypeus (1.2:2.0). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 5A). Genal carina absent. Length of area between preoccipital carina and suboral swelling subequal to suboral swelling (1.0:0.9); this area without a median longitudinal carina; lower area of genal bridge close to mandibular articulation without carinae or punctures (Fig. 5B). Malar area shorter than apical width of F1 (0.6:1.1), striate anteriorly. Supraclypeal area with lateral striae; in lateral view with protuberant (Fig. 5C). Epistomal suture evident. Clypeus 1.3 × wider than high, with weak striae; weakly rounded in lateral view; apex not truncate. Proportion of lengths of segments of maxillary palp, from base to apex: 11:6.0:14:18:14:16. Scape without swelling or projection. F1 4.3 × as long as its apical width, shorter than scape and pedicel combined (4.4:4.8).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, forming weak lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum densely punctate. Propleuron and mesopleuron densely punctate. Metapostnotum with longitudinal striae, reaching to posterior margin. Propodeum transverse, swollen behind spiracle; with carina anterior to spiracle. Fore wing: marginal cell with anterior margin 2.8 × as long as posterior margin; vein *Rs*3 shorter than length of *Rs*4 (2.5:3.0); vein *M* separated from vein *cu-a* by 0.4 × length of *cu-a*; discal cell rectangular. Hind wing: veins *M* and *cu-a* interstitial. Protarsomere 1 with five outer lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (5.8:8.8); inner metatibial spur 1.4 × as long as outer spur.

Metasoma. T7 with median, longitudinal carina. Genitalia as in Fig. 5D.

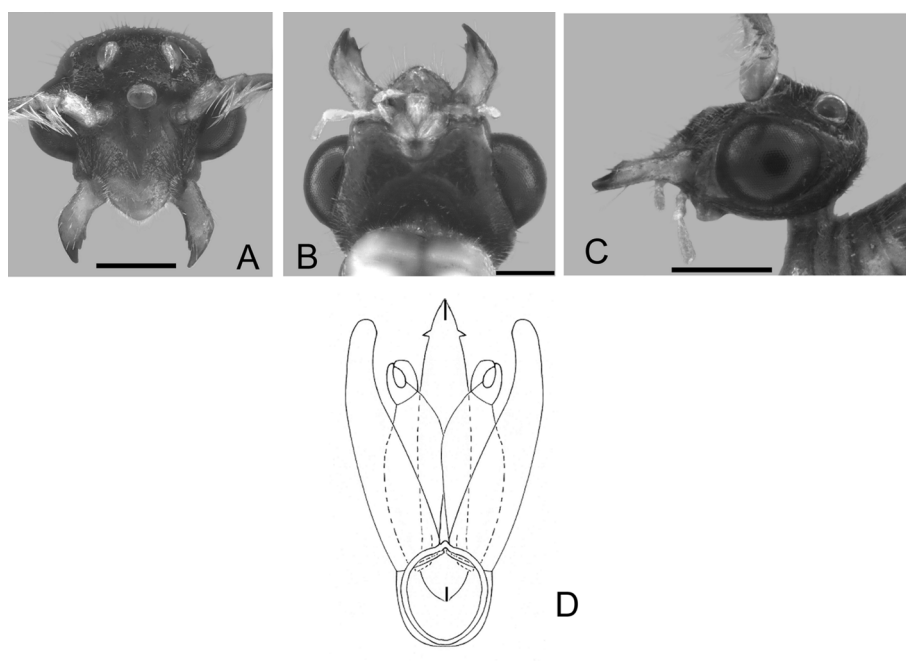


FIGURE 5. *Plumarius angulatus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

Examined material. Holotype, ♂: ARGENTINA, Mendoza, Lavalle, Telteca, 26.III–2.V.1996, col Flores, Roig (IADIZA). Paratypes: 1 ♂, Ñacuñán, 7.X.1996, col Roig S. (IFML); 2 ♂, Santa Rosa, Ñacuñán, I–II.1997, col Debandi (MACN).

Distribution. Argentina (Mendoza).

Etymology. The specific epithet, the Latin adjective *angulatus*, refers to the median, longitudinal carina, on T7.

***Plumarius noa* Diez & Roig-Alsina, sp. nov.**

(Figs 6A–D)

Diagnosis. This species is related to *P. malaris* sp. nov. and *P. divergens* sp. nov. by the long, apically tapering marginal cell of the fore wing, and the anterior ocellus crossed by the supra-torular line. It is distinguished from these two species by the smooth area anterior to the pronotal lobe and by the propodeum behind the spiracle not swollen.

Description. Holotype, ♂. Body length 7.5 mm. (paratypes 6.7–9.3 mm). Color. Brown with head darker.

Head. 1.1 × wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (6.5:5.8). OOD 1.3 × diameter of lateral ocellus; POD 1.3 × OOD. Antennocular distance subequal to diameter of torulus (0.5:0.6); interantennal distance 3.3 × antennocular distance. Vertex weakly reticulate, without striae, scarcely punctate between lateral ocelli (punctures separated by 2.5 × puncture diameter). Torulus closer to lateral ocellus than to clypeus (1.3:2.5). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 6A). Genal carina present, distinct. Length of area between preoccipital carina and suboral swelling subequal to length of suboral swelling (0.6:0.7); this area with a weak median longitudinal carina; lower area of genal bridge close to mandibular articulation with carinae and punctures (Fig. 6B). Malar area subequal to apical width of F1 (0.7:0.6), finely striate anteriorly. Supraclypeal area with lateral striae extending to about upper level of torulus, with a triangular zone, without striae or punctures; weakly rounded in lateral view (Fig. 6C). Epistomal suture evident. Clypeus 1.3 × wider than high; with striae and weakly rounded in lateral view; apex not truncate. Proportion of lengths of segments of maxillary palp, from base to apex: 8:9:13:14:12:11. Scape without swelling or projection. F1 6.3 × as long as its apical width, subequal to scape and pedicel combined (3.8:3.7).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, forming weak lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of mesoscutum moderately punctate about admedian line. Propleuron and mesopleuron scarcely punctate. Metapostnotum with striae reaching to posterior margin. Propodeum transverse, not swollen behind spiracle; with carina anterior to spiracle. Fore wing: marginal cell with anterior margin 2.5 × as long as posterior margin; length of vein *Rs*3 shorter than length of *Rs*4 (2.0:2.3); vein *M* separated from *cu-a* by 0.4 × length of *cu-a*; discal cell rectangular. Hind wing: veins *cu-a* and *M* interstitial. Protarsomere 1 with three outer lateral spines. Metatarsomere 1 1.4 × as long as mesotarsomere 1; inner metatibial spur 1.5 × as long as outer spur.

Metasoma. T7 triangular, with the apex pointing, apically with a polished area. Genitalia as in Fig. 6D.

Examined material. Holotype, ♂: ARGENTINA, Tucumán, entre Amaicha y Santa María, 28.XI.2005, col Fidalgo P., Torrén (MACN). Paratypes: Catamarca, 3 ♂, Los Nacimientos de Abajo, 16–31.IX.1969, col Willink, Terán, Stange (Malaise) (MACN); 1 ♂, Los Nacimientos de Abajo, 16–30.IX.1968, col Willink, Terán, Stange (Malaise) (MACN); 1 ♂, Los Nacimientos de Abajo, 1–15.VI.1969, col Willink, Terán, Stange (Malaise) (MACN); 3 ♂, 6 Km S of Belén, 25.XI.1975, col Stange (IFML). Salta, 1 ♂ Cachi, 275 km Recta Tin Tin, 8.X.1968, col Peña (IADIZA). Jujuy, 1 ♂, Abra Pampa, 3400 mtrs. 5.II.1960, col Golbach (MLP).

Distribution. Argentina. (Salta, Jujuy, Tucumán, Catamarca).

Comments. This species can be confused with *P. albinervis* sp. nov., in particular those specimens of *P. noa* sp. nov. with a rather short anterior margin of the marginal cell. It can be separated by the following characters: *P. noa* has the vertex without striae, the area anterior to the pronotal lobe is smooth, and the face is even coloured; *P. albinervis* has the vertex weakly striate, the area anterior to the pronotal lobe has striae, and the face has a light spot between the median ocellus and the torulli.

Etymology. The specific name is a noun in apposition and is an acronym of the area where the species occurs, "nor-oeste argentino".

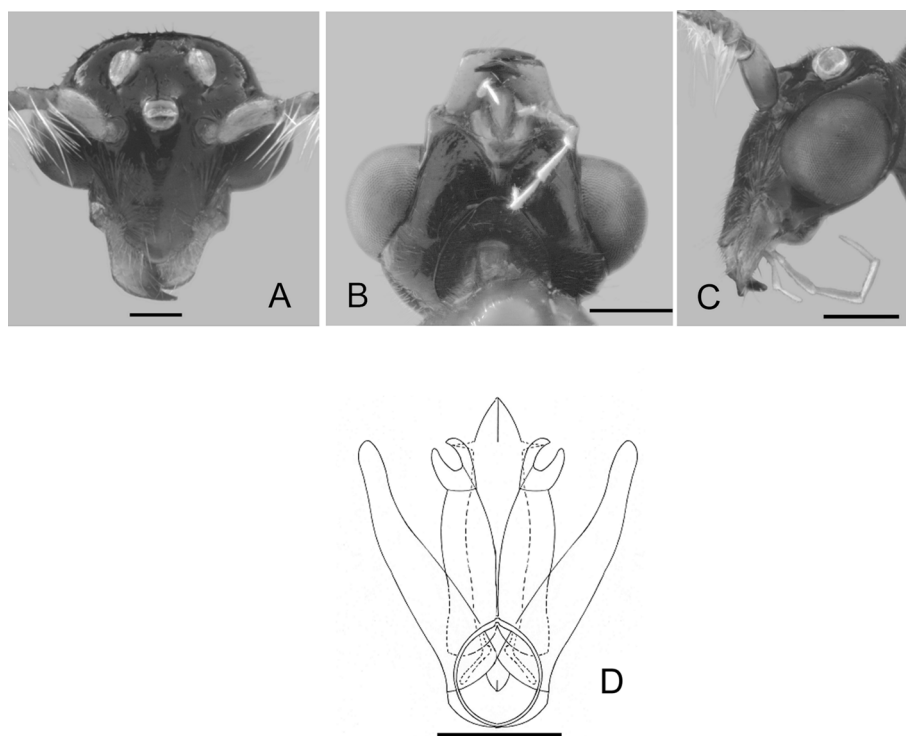


FIGURE 6. *Plumarius noa*, **sp. nov.**, ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius divergens* Diez & Roig-Alsina, sp. nov.**

(Figs 7A–D)

Diagnosis. This species is related to *P. malaris* **sp. nov.** and *P. noa* **sp. nov.** by the long, apically tapering marginal cell of the fore wing, and the anterior ocellus crossed by the supra-torular line. It is distinguished from these two species by the short malar areas, the outer margins of which, in frontal view, diverge apically.

Description. Holotype, ♂. Body length 12.2 mm (paratypes 9.0–11.4 mm). Color. Brown, head darker and following areas clearer: antennae, apex of clypeus, malar area and legs.

Head. 1.1 × wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (6.2:5.5). OOD 1.4 × diameter of lateral ocellus; POD 1.2 × OOD. Antennocular distance 0.7 × diameter of torulus; interantennal distance 5.1 × antennocular distance. Vertex weakly reticulate, weakly striate, moderately punctate between lateral ocelli (punctures separated by 1 × puncture diameter). Torulus closer to lateral ocellus than to clypeus (1.5:3.2). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 7A). Genal carina present, distinct. Length of area between preoccipital carina and suboral swelling shorter than suboral swelling (0.7:1.2); this area with a median, longitudinal carina; lower area of genal bridge close to mandibular articulation with weak carinae and punctate (Fig. 7B). Lengths of malar area and apical width of F1 equal (0.9:0.9); malar area anteriorly striate. Supraclypeal area with lateral striae, densely punctate, slightly rounded in lateral view (Fig. 7C). Epistomal suture, evident. Clypeus 1.3 × wider than high, with lateral striae and basally densely punctate; in lateral view slightly rounded and apically not truncate. Proportion of lengths of segments of maxillary palp, from base to apex: 20:20:24:25:25:22. Scape without swelling or projection. F1 5.8 × as long as its apical width, longer than scape and pedicel combined (5.8:5.1).

Mesosoma. Area anterior to pronotal lobe with striae; pronotal lateral carina distinct, forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum moderately punctate. Propleuron scarcely punctate and mesopleuron moderately punctate. Metapostnotum with striae reaching posterior margin. Propodeum transverse, swollen behind spiracle; with carina anterior to spiracle. Fore wing: marginal cell with anterior margin 2.5 × as long as posterior margin; lengths of vein *Rs*3 shorter than lengths of *Rs*4 (2.7:2.9); vein *M*

separated from *cu-a* by $0.2 \times$ length of *cu-a*; discal cell rectangular. Hind wing: *M* and *cu-a* interstitial. Protarsomere 1 with three outer lateral spines. Metatarsomere 1 $1.3 \times$ as long as mesotarsomere 1; inner metatibial spur $1.3 \times$ as long as outer spur.

Metasoma. T7 triangular; apically with a polished area. Genitalia as in Fig. 7D.

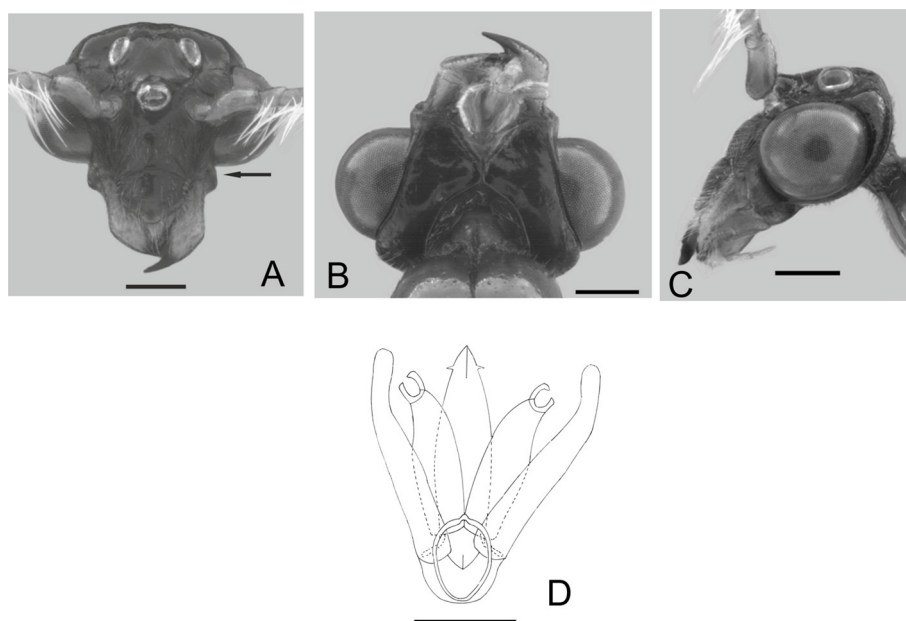


FIGURE 7. *Plumarius divergens* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

Examined material. Holotype, ♂. ARGENTINA, La Rioja, Anguiñan, Chilecito, 16–30.IV.1969, col Willink, Terán, Stange (Malaise) (IFML). Paratypes: 8 ♂, Anguiñan, Chilecito, 16–31.IV.1969, col Willink, Terán, Stange (Malaise) (IFML); 3 ♂, Chilecito, 1.III.1969, col Stange, Willink, Terán (IFML); 1 ♂, Ruta 40, km 543 ca. Chilecito, 7.IV.2005, col Fidalgo P., Fidalgo G., Torrén (MACN); 2 ♂, 5 km S Udpinango, 3.XII.2005, col Fidalgo P., Fidalgo G. (IADIZA); 1 ♂, Udpinango, 21.X.2009, col Diez (YPT) (MLP). Catamarca, 1 ♂, Los Nacimientos de Abajo, 1–15.VI.1969, col Stange, Willink, Terán (IFML); 1 ♂, Los Nacimientos de Abajo, 1–15.X.1968, col Stange, Willink, Terán (IFML); 4 ♂, Los Nacimientos de Abajo, 16–31.X.1968, col Stange, Willink, Terán (IFML); 4 ♂, ca. Saujil (Fiambalá), 23.XI.2005, col Porter, Fidalgo P., Diez (MACN); 1 ♂, 10 km N Fiambalá, 16.II.2007, col Fidalgo P., Diez (MACN); 1 ♂, Ruta 46, 12 km W Andalgalá, 28.III.2005, col Fidalgo P., Torrén (MACN); 1 ♂, Medanitos, 9.IV.2005, col Fidalgo P. (MACN); 1 ♂, La Ciénaga de Belén, 21.XI.1967, col Stange (IFML); 1 ♂, Hualfin, Los Nacimientos aguas termales, 21.IX.1953, col Pierotti (IFML); 1 ♂, Santa María, 11.XII.1965, col Stange (IFML). Tucumán, 2 ♂, Amaicha, 27.XI.1965, col Stange (IFML). San Juan, 3 ♂, Ruta 40, 20 km S Huaco, 18.V.1998, col Roig (MACN). Mendoza, 1 ♂, Lavalle, Telteca, 15.II–25.III. 1996, col Flores, Roig (IADIZA).

Distribution. Argentina (Tucumán, Catamarca, La Rioja, San Juan, Mendoza).

Etymology. The specific epithet, *divergens*, refers to the apically diverging outer margins of the malar areas in frontal view.

Plumarius malaris Diez & Roig-Alsina, sp. nov. (Figs 8A–F)

Diagnosis. This species is related to *P. divergens* sp. nov. and *P. noa* sp. nov. by the long, apically tapering marginal cell of the fore wing, and the anterior ocellus crossed by the supra-torular line. It is distinguished from these two species by the straight, long malar areas, longer than the apical width of F1, and the swollen propodeum behind the spiracle.

Description. Holotype, ♂. Body length 11.5 mm (paratypes 9.8–12.7 mm). Color. Dark brown, with head and mesosoma darker.

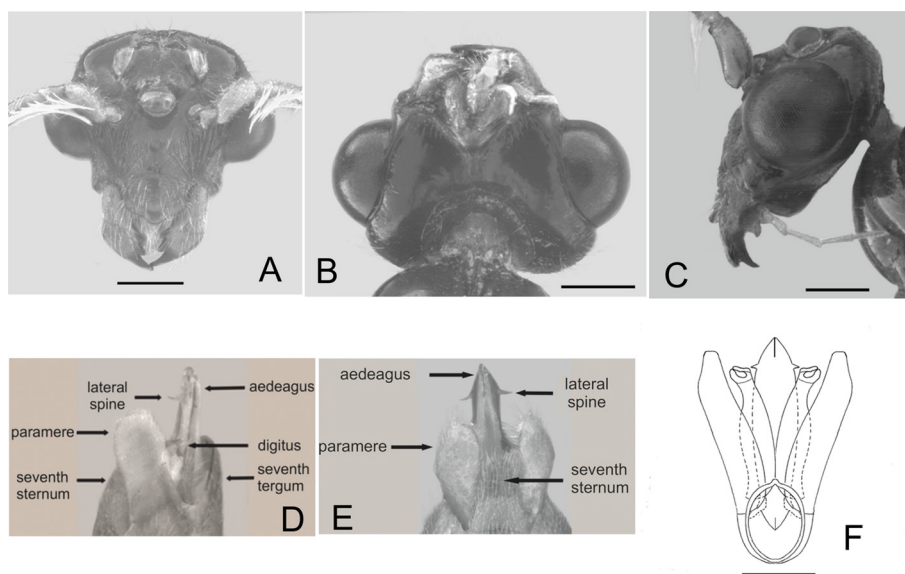


FIGURE 8. *Plumarius malaris*, sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, lateral view; E–F, Genital capsule, ventral view. Scale bars = 0.5 mm.

Head. $1.2 \times$ wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (5.9:5.4). OOD $1.0 \times$ diameter of lateral ocellus; POD $1.4 \times$ OOD. Antennocular distance $0.6 \times$ diameter of torulus; interantennal distance $3.7 \times$ antennocular distance. Vertex reticulated, without striae and moderately punctate between lateral ocelli (punctures separated by $1.5 \times$ puncture diameter). Torulus closer to lateral ocellus than to clypeus (8.0:16). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 8A). Genal carina present, distinct. Length of area between preoccipital carina and suboral swelling subequal to length of suboral swelling (0.9:1.0); this area with a median longitudinal carina; lower area of genal bridge close to mandibular articulation with weak carinae and without punctures (Fig. 8B). Malar area longer than apical width of F1 (0.6:0.4), striate anteriorly. Supraclypeal area punctate on frontal area; with lateral striae; weakly rounded in lateral view (Fig. 8C). Epistomal suture evident. Clypeus $1.4 \times$ wider than high, middle basal region punctate, with lateral striae joining medially; apex pointed, not truncate. Proportion of lengths of segments of maxillary palp, from base to apex: 7:7:9:11:8:10. Scape without swelling or projection. F1 $5.5 \times$ as long as its apical width, subequal to scape and pedicel combined (2.6:2.5).

Mesosoma. Area anterior to pronotal lobe with striae; pronotal lateral carina distinct, forming a weak lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum densely punctate. Propleuron scarcely punctate; mesopleuron densely punctate. Metapostnotum with weak longitudinal striae, reaching to posterior margin. Propodeum transverse, swollen behind spiracle; with carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.8 \times$ as long as posterior margin; vein *Rs*3 shorter than length of *Rs*4 (3.5:3.9); vein *M* separated from vein *cu-a* by $0.3 \times$ length of *cu-a*; discal cell rectangular. Hind wing: veins *M* and *cu-a* interstitial. Protarsomere 1 with four outer lateral spines, approximately. Length of mesotarsomere 1 longer than metatarsomere 1 (4.2:3.9); inner metatibial spur $1.5 \times$ as long as outer spur.

Metasoma. T7 triangular, densely punctate, with apex rounded. Genitalia as in Figs 8 D–F, with paramere truncated apically.

Examined material. Holotype, ♂: ARGENTINA, Catamarca, Campo El Arenal, 14.I.1981, col Roig-Alsina (MACN). Paratypes: 13 ♂, same data of holotype (MACN); 1 ♂, Los Nacimientos de Abajo, 1–15.X.1968, col Willink, Terán, Stange (Malaise) (IFML); 1 ♂, Los Nacimientos de Abajo, 16–31.X.1968, col Willink, Terán, Stange (Malaise) (IFML); 1 ♂, ca. Saujil (Fiambalá), 23.XI.2005, col Porter, Fidalgo P., Diez (MACN). La Rioja, 1 ♂, Patquia, col Breyer (MACN); 1 ♂, Guayapa, Patquia, 14.X.1954, col Haywará (IFML); 1 ♂, Guayapa, Patquia, 18.X.1954, col Haywará (IFML); 1 ♂, 2 km S Pinchas, 10.X.2005, Fidalgo P., Fidalgo G. (MACN). Mendoza, 9 ♂, Ñacuñán, XII.1979, col Roig (MACN); 4 ♂, Sta. Rosa Ñacuñán, 10.X.1996, col Debandi (IADIZA); 8 ♂, Ñacuñán, 7.X.1996, col Roig S. (IADIZA); 3 ♂, Ñacuñán, I–II.1997, col Debandi (IADIZA); 2 ♂, San Rafael, 6

km N Punta del Agua, 14.XII.1998, col Flores, Roig (MACN); 1 ♂, 8 km S Malargue, 17.I.2006, Col Fidalgo P. (MLP). *Tucumán*, 4 ♂, entre Amaicha y Sta. María, 28.XI.2005, col Torrén, Fidalgo P. (MACN).

Distribution. Argentina (Tucumán, Catamarca, La Rioja, Mendoza).

Variation. Specimens from Ñacuñán (XII.1979) have the clypeus with lateral striae not joining on the middle basal region, which is weakly punctated; these specimens have the coloration lighter.

Etymology. The specific epithet, *malaris* is Latin, refers to the large malar area of this species.

***Plumarius gracilior* Diez & Roig-Alsina, sp. nov.**

(Figs 9A–D)

Diagnosis. This species is characterized by the modetate ocelli, being the anterior ocellus tangent to the supra-torular line; in other species the ocellus is either crossed by the supra-torular line or it is located above such line.

Description. Holotype, ♂. Body length 5.1 mm. (paratype 7.2 mm.). Color. Body brown light.

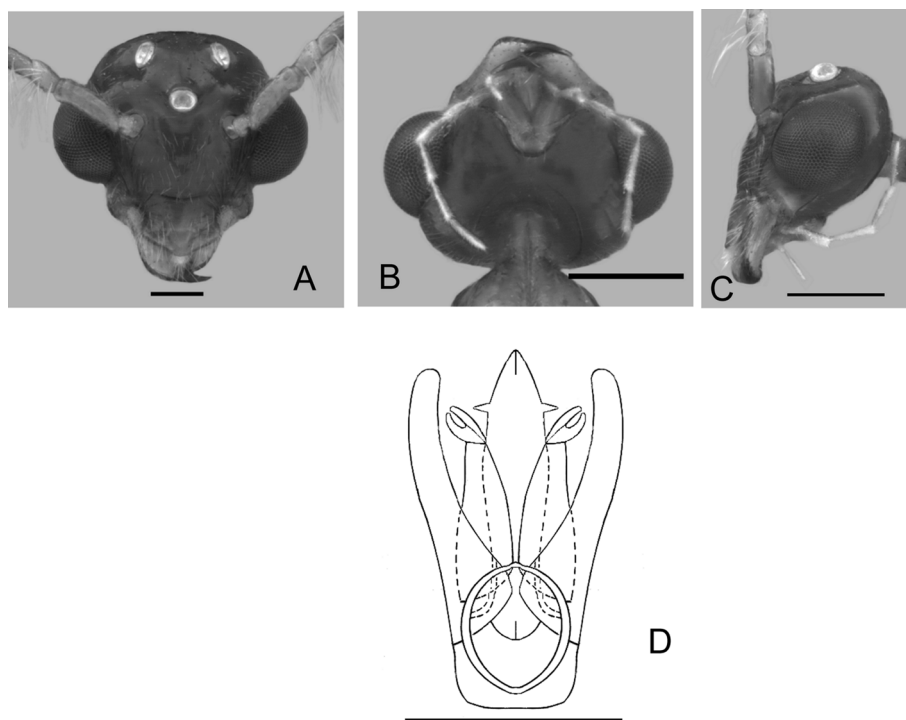


FIGURE 9. *Plumarius gracilior* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

Head. $1.1 \times$ wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (4.8:4.4). OOD $2 \times$ diameter of lateral ocellus; POD $1.0 \times$ OOD. Antennocular distance $0.5 \times$ diameter of torulus; interantennal distance $5.2 \times$ antennocular distance. Vertex smooth, without striae or punctures between lateral ocelli. Torulus at almost same distance to lateral ocellus as to basal margin of clypeus (8.0:10.0). Lateral ocelli in frontal view below upper margin of head. Median ocellus tangent to supra-torular line (Fig. 9A). Genal carina present, distinct. Length of area between preoccipital carina and suboral swelling longer than suboral swelling (1.3:0.7); this area without median, longitudinal carina; lower area of genal bridge close to mandibular articulation without carinae or punctures (Fig. 9B). Lengths of malar area and apical width of F1 equal (0.6:0.6); malar area anteriorly striate. Supraclypeal area with weak lateral striae, scarcely punctate in lateral view (Fig. 9C). Epistomal suture evident. Clypeus $1.3 \times$ wider than high, with lateral striae and scarcely punctate; apically truncate. Proportion of lengths of segments of maxillary palp, from base to apex: 10:11:17:22:20:21. Scape without projection or swelling. F1 $6.7 \times$ as long as its apical width, longer than scape and pedicel combined (2.7:1.7).

Mesosoma. Area anterior to pronotal lobe finely striate; pronotal lateral carina distinct and forming a weak lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum scarcely punctate.

Propleuron and mesopleuron without punctures. Metapostnotum with striae not reaching to posterior margin. Propodeum transverse, swollen behind spiracle; with carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.3 \times$ as long as posterior margin; vein *Rs3* longer than vein *Rs4* (2.9:2.1); veins *M* separated from *cu-a* by $0.2 \times$ length of *cu-a*; discal cell rectangular. Hind wing: vein *cu-a* prefurcal to vein *M*. Protarsomere 1 with two outer lateral spines; metatarsomere 1 $1.4 \times$ as long as mesotarsomere 1; inner metatibial spur $1.4 \times$ as long as outer spur.

Metasoma. T7 triangular, pointed apically, with polished apical margin. Genitalia as in Fig. 9D.

Examined material. Holotype, ♂, ARGENTINA, Catamarca, 1 ♂, 6 km N Belén, 1240 m, col Willink, Terán, Stange (IFML). Paratype: 1 ♂, same data of holotype, (IFML).

Distribution. Argentina (Catamarca).

Etymology. The name of the species refers to its very slender habitus.

***Plumarius riojanus* Diez & Roig-Alsina, sp. nov.**

(Figs 10A–D)

Diagnosis. This species falls in a group with the ocellus crossed by the supra-torular line and the marginal cell shorter than in *P. malaris* sp. nov. and related species. It is related by the short F1 to *P. exophthalmus* sp. nov., from which it differs by the lateral ocelli in frontal view usually above an imaginary line tangent to the upper margin of the eyes.

Description. Holotype, ♂. Body length 9.5 mm (paratypes 8.4–9.4 mm). Color. Dark brown, head darker (except clypeus and scape).

Head. $1.0 \times$ wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (7.9:7.5). OOD $1.3 \times$ diameter of lateral ocellus; POD $1.0 \times$ OOD. Antennocular distance $0.5 \times$ diameter of torulus; interantennal distance $4.1 \times$ antennocular distance. Vertex reticulated, without striae, moderately punctate between lateral ocelli (punctures separated by $1.5 \times$ punctate diameter). Torulus closer to lateral ocellus than to clypeus (1.0:1.9). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 10A). Genal carina weak. Lengths of area between preoccipital carina and suboral swelling subequal (0.8:0.9); this area without carina; lower area of genal bridge close to mandible articulation with weak carinae and without punctures (Fig. 10B). Malar area longer than apical width of F1 (1.0:0.5); striate anteriorly. Supraclypeal area with lateral striae; slightly rounded in lateral view (Fig. 10C). Epistomal suture evident. Clypeus $1.3 \times$ wider than high, with lateral striae; apically truncate. Proportion of length of segments of maxillary palp, from base to apex: 7:7:10:11:9:10. Scape without swelling or projection. F1 $4.1 \times$ as long as its apical width, equal to scape and pedicel combined (3.1:3.1).

Mesosoma. Area anterior to pronotal lobe weakly striate; pronotal lateral carina distinct, not forming a lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum moderately punctate about admedian line. Propleuron without punctures and mesopleuron scarcely punctate. Metapostnotum with weak striae reaching to posterior margin. Propodeum transverse, swollen behind spiracle; with carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.2 \times$ as long as posterior margin; lengths of veins *Rs3* and *Rs4* subequal (1.3:1.4); veins *M* separated from *cu-a* by $0.3 \times$ length of *cu-a*; discal cell rectangular. Hind wing: *M* and *cu-a* interstitial. Protarsomere 1 without outer lateral spines. Metatarsomere 1 $1.5 \times$ as long as mesotarsomere 1; inner metatibial spur $1.4 \times$ as long as outer spur.

Metasoma. T7 triangular; apically without a polished area. Genitalia as in Fig. 10D.

Examined material. Holotype, ♂, ARGENTINA, La Rioja, Ruta 40 km 593 ca. Chilecito, 7.IV.2005, col Fidalgo P., Fidalgo G., Torrén (MACN). Paratypes: 16 ♂ same data as holotype (MACN); 2 ♂, Termas de Sta. Teresita, 19.II.2005, col Fidalgo P., Fidalgo G., Torrén (MACN); 2 ♂, Termas de Sta. Teresita, 12.II.2005, col Fidalgo P., Fidalgo G., Torrén (MACN); 1 ♂, Termas de Sta. Teresita, 5.I.2005, col Fidalgo P., Fidalgo, G., Torrén (MLP); 1 ♂, S de Udpinango, III.2005, Fidalgo, P. Fidalgo, G., Torrén (IADIZA). Catamarca, 1 ♂, 12 km Belén S/ Ruta 46, 20.XII.2005, col Fidalgo P., Diez (MACN); 1 ♂, ca. Amaicha del Valle, km 122, Ruta 307, 2.XI.2005, col Fidalgo P., Porter (MACN). Tucumán, 3 ♂, entre Amaicha y Sta. María, 28.XI.2005, col Fidalgo P., Torrén (MACN). Salta, 2 ♂, Cachi, 22.I.1966, col Stange (IFML); 2 ♂, Molinos 10 km. S of Rumibola, 15.II.1969, col Barrera, Paganini (IFML).

Distribution. Argentina, (Salta, Tucumán, Catamarca, La Rioja).

Variation. The specimens from Los Molinos have the protarsomere 1 with one outer lateral spine.

Etymology. The name of the species refers to the collection site of the holotype.

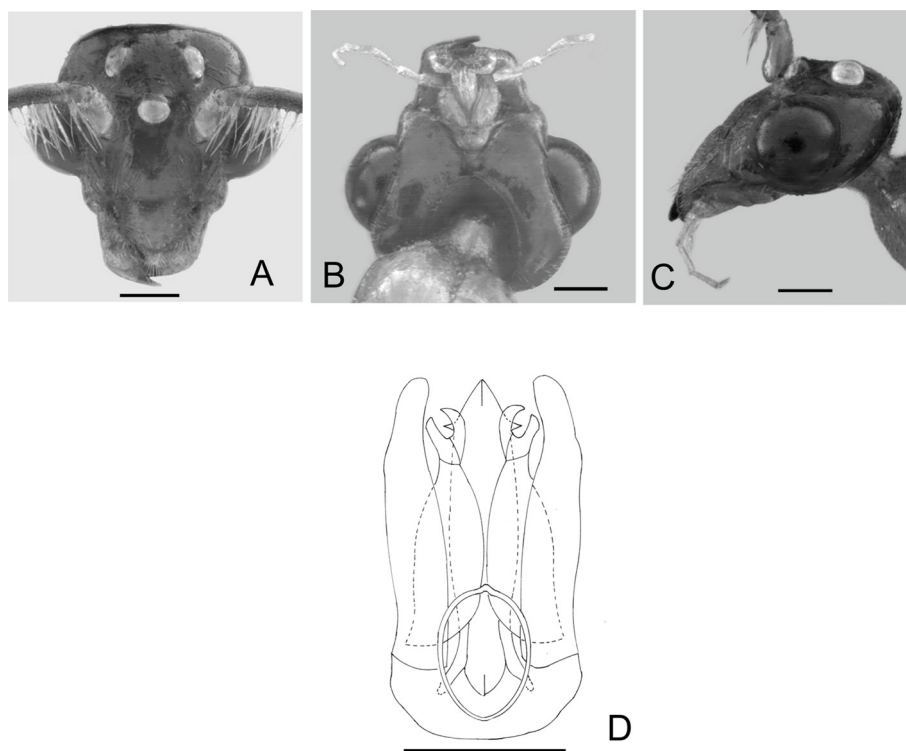


FIGURE 10. *Plumarius riojanus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius exophthalmus* Diez & Roig-Alsina, sp. nov.**

(Figs 11A–D)

Diagnosis. This species is characterized by the transverse head with prominent ocelli, the lateral ones in frontal view crossed by an imaginary line tangent to the upper margin of the eyes. The supraclypeal area in lateral view is rounded, and F1 approximately as long as distance between upper margin of clypeus and lower margin of median ocellus.

Description. Holotype, ♂. Body length 10.1 mm (paratypes 6.4–7.8 mm). Color. Body brown, with a darker spot between ocelli.

Head. 1.3 × wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (5.5:5.0). OOD 1.2 × diameter of lateral ocellus; POD 0.8 × OOD. Antennocular distance 0.6 × diameter of torulus; interantennal distance 4.6 × antennocular distance. Vertex weakly reticulated, without striae, moderately punctate between lateral ocelli (punctures separated by 1 × puncture diameter). Torulus closer to lateral ocellus than to clypeus (1.3:3.0). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supratocular line (Fig. 11A). Genal carina present, distinct. Length of area between preoccipital carina and suboral swelling subequal to suboral swelling (1.6:1.4); this area without carinae; lower area of genal bridge close to mandibular articulation with weak carinae and without punctures (Fig. 11B). Lengths of malar area and apical width of F1 equal (0.7:0.7); malar area anteriorly striate. Supraclypeal area with lateral striae and densely punctate (Fig. 11C). Epistomal suture evident. Clypeus 1.2 × wider than high, densely punctate; with lateral striae and apically pointed. Proportion of lengths of segments of maxillary palp, from base to apex: 14:13:29:24:22:17. Scape without swelling or projection. F1 4.1 × as long as its apical width, subequal to scape and pedicel combined (2.9:2.8).

Mesosoma. Area anterior to pronotal lobe weakly striate; pronotal lateral carina distinct, forming a lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum moderately punctate. Propleuron and mesopleuron scarcely punctate. Metapostnotum with striae reaching posterior margin. Propodeum

transverse, swollen behind spiracle; without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.3 \times$ as long as posterior margin; vein *Rs*3 shorter than vein *Rs*4 (3.2:4.3); vein *M* separated from *cu-a* by $0.2 \times$ length of *cu-a*; discal cell rectangular. Hind wing: *M* and *cu-a* interstitial. Protarsomere 1 with four outer lateral spines; metatarsomere 1 $1.3 \times$ as long as mesotarsomere 1; inner metatibial spur $1.6 \times$ as long as outer spur.

Metasoma. T7 triangular, apically pointed and with a polished apical margin. Genitalia as in Fig. 11D.

Examined material. Holotype, ♂. ARGENTINA, La Rioja, 1 ♂, Chilecito, 1.III.1969, col Willink, Terán, Stange (IFML). Paratypes: 1 ♂, same data of holotype (IFML); 2 ♂, Chilecito, Anguiñan, 1–15.II.1969, col Willink, Terán, Stange (IFML); 1 ♂, Ruta 40, km 593, ca. Chilecito, 7.IV.2005, Fidalgo P., Torrén (MACN). Catamarca, 1 ♂, Belén 10 km E, Ruta 46, 3.XI.2005, col Fidalgo P., Porter (MACN).

Distribution. Argentina (La Rioja, Catamarca).

Etymology. The specific epithet from the Greek, *exophthalmos*, refers to the prominent ocelli.

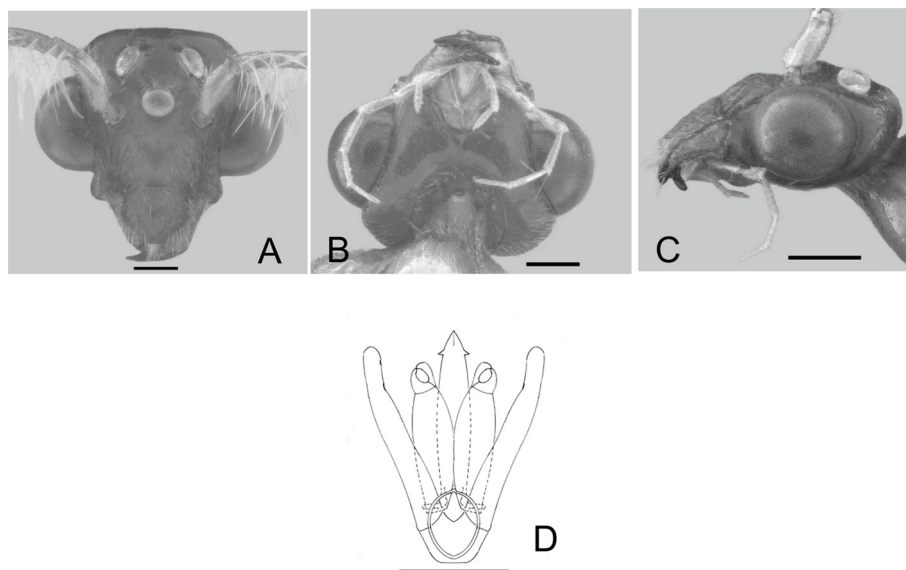


FIGURE 11. *Plumarius exophthalmus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius planatus* Diez & Roig-Alsina, sp. nov.**

(Figs 12A–D)

Diagnosis. This species falls in a group with the ocellus crossed by the supra-torular line and the marginal cell shorter than in *P. malaris* sp. nov. and related species. It is related by the long F1 to *P. albinervis* sp. nov. from which it differs by the propodeum swollen behind the spiracle and the flat clypeus.

Description. Holotype, ♂. Body length 9.9 mm (paratypes 8.0–9.7 mm). Color. Brown with head darker.

Head. $1.2 \times$ wider than high in frontal view; wider in dorsal view than width of scutum between tegulae (6.9:6.6). OOD $1.3 \times$ diameter of lateral ocellus; POD $1.2 \times$ OOD. Antennocular distance $0.7 \times$ diameter of torulus; interantennal distance $3.3 \times$ antennocular distance. Vertex weakly reticulated, weakly striate, moderately punctate between of lateral ocelli (punctures separated by $1.5 \times$ puncture diameter). Torulus closer to lateral ocellus than to clypeus (1.0:2.2). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 12A). Genal carina present, distinct. Lengths of area between preoccipital carina and suboral swelling subequal (0.9:1.0); this area without median, longitudinal carina; lower area of genal bridge close to mandible articulation without carinae or punctures (Fig. 12B). Malar area longer than apical width of F1 (1.3:0.7); striate anteriorly. Supraclypeal area with lateral striae extending to about upper level of torulus, rounded in lateral view (Fig. 12C). Epistomal suture evident. Clypeus $1.4 \times$ wider than high, basal area punctate with lateral striae joining medially; apically not truncate. Proportional length of segments of maxillary palp, from base to apex: 8:9:15:18:13:14. Scape without swelling or projection. F1 $4.8 \times$ as long as apical width, subequal to scape and pedicel combined (2.4:2.3).

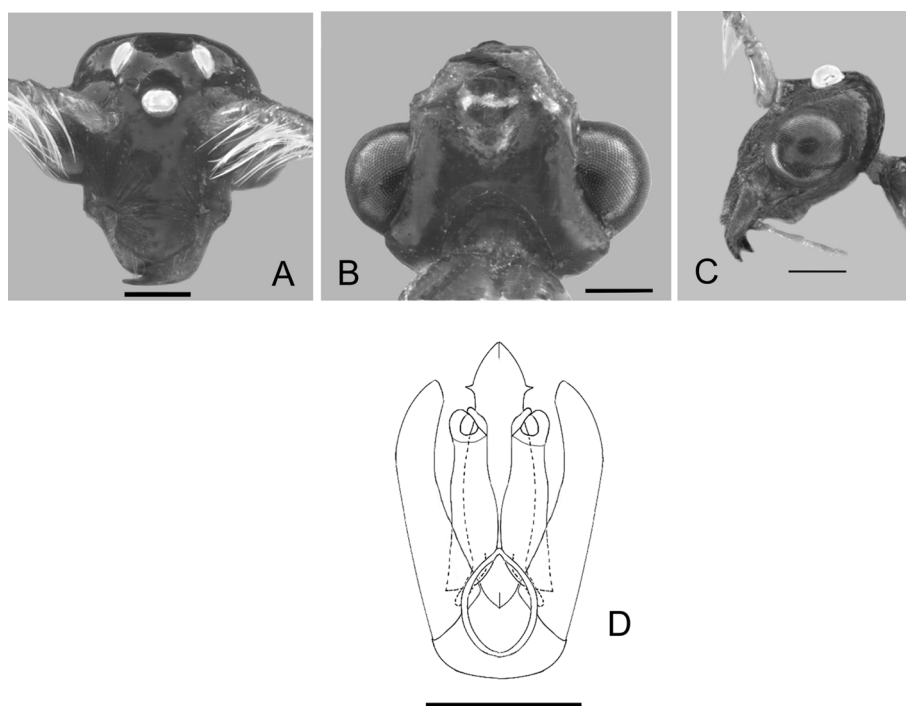


FIGURE 12. *Plumarius planatus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

Mesosoma. Area anterior to pronotal lobe with weak striae; pronotal lateral carina distinct, forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior area of scutum scarcely punctate around the notauli. Propleuron and mesopleuron scarcely punctate. Metapostnotum with fine striae reaching to posterior margin. Propodeum transverse, swollen behind spiracle; without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2 \times$ as long as posterior margin; length of vein *Rs*3 longer than length of *Rs*4 (2.2:1.9); vein *M* separated from *cu-a* by $0.3 \times$ length of *cu-a*; discal cell rectangular. Hind wing: veins *M* and *cu-a* interstitial. Protarsomere 1 with three outer lateral spines. Metatarsomere 1 $1.9 \times$ as long as mesotarsomere 1; inner metatibial spur $1.5 \times$ as long as outer spur.

Metasoma. T7 triangular; apically with a small polished area. Genitalia as in Fig. 12D.

Examined material. Holotype, ♂. ARGENTINA, Mendoza, 10 km N de Uspallata, 14.II.1966, col Willink, Stange (IFML). The following are paratypes: 2 ♂, same data of holotype, (IFML); 6 ♂, Uspallata, 10 km w.r. Chile, 16.II.1966, col Stange, Willink (IFML). San Juan, 2 ♂, Camino Paso Agua Negra 2600 m a.s.l., 28.I.1992, col Roig-Alsina (MACN).

Distribution. Argentina (Mendoza, San Juan).

Etymology. The specific epithet refers to the flat clypeus of the species.

***Plumarius albinervis* Diez & Roig-Alsina, sp. nov.**

(Figs 13A–D)

Diagnosis. This species falls in a group with the ocellus crossed by the supra-torular line and the marginal cell shorter than in *P. malaris* sp. nov. and related species. It is related by the long F1 to *P. planatus* sp. nov., from which it differs by the propodeum not swollen behind the spiracle and the moderately convex clypeus.

Description. Holotype, ♂. Body length 10.2 mm (paratypes 7.4–10.5 mm). Color. Dark brown with following lighter areas: antennae, apex of clypeus, spot between median ocellus and toruli, legs, and metasoma.

Head. $1.1 \times$ as wide as high in frontal view; narrower in dorsal view than width of scutum between tegulae (5.0:5.4). OOD $1.2 \times$ diameter of lateral ocellus; POD $1.1 \times$ OOD. Antennocular distance $1.2 \times$ diameter of torulus; interantennal distance $2.3 \times$ antennocular distance. Vertex finely reticulated, with weak striae and scarcely punctate

between lateral ocelli (punctures separated by $2.5 \times$ puncture diameter). Torulus closer to lateral ocellus than to clypeus ($0.7:1.4$). Lateral ocelli in frontal view below upper margin of head. Median ocellus crossed by supra-torular line (Fig. 13A). Genal carina present, distinct. Length of area between preoccipital carina and suboral swelling longer than suboral swelling ($1.0:0.7$); this area with a weak median, longitudinal carina; lower area of genal bridge close to mandibular articulation without carinae or punctures (Fig. 13B). Malar area longer than apical width of F1 ($1.2:0.7$), striate anteriorly. Supraclypeal area with strong lateral striae, which extend to about upper level of torulus, with convex aspect in lateral view; moderately punctate (Fig. 13C). Epistomal suture evident. Clypeus $1.2 \times$ wider than high, basal region scarcely punctate, with lateral striae joining on the middle; not truncate. Proportion of lengths of segments of maxillary palp, from base to apex: $9:14:18:21:20:19$. Scape without swelling or projection. F1 $6.2 \times$ as long as its apical width, longer than scape and pedicel combined ($4.4:3.7$).

Mesosoma. Area anterior to pronotal lobe with striae; pronotal lateral carina distinct, forming a lower pocket. Notaulus marked, as long as admedian line. Anterior surface of scutum moderately punctate. Propleuron and mesopleuron scarcely punctate. Metapostnotum with fine striae reaching posterior margin. Propodeum transverse, not swollen behind spiracle; without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.4 \times$ as long as posterior margin; length of vein *Rs*3 shorter than length of *Rs*4 ($3.9:4.5$); vein *M* separated from *cu-a* by $0.3 \times$ length of *cu-a*; discal cell rectangular. Hind wing: vein *cu-a* prefurcal to vein *M*. Protarsomere 1 with four outer lateral spines. Metataromere 1 $1.3 \times$ as long as mesotarsomere 1; inner metatibial spur $1.4 \times$ as long as outer spur.

Metasoma. T7 triangular, apically pointed, with a polished area. Genitalia as in Fig. 13D.

Examined material. Holotype, ♂: ARGENTINA, Salta, Yacochuya (Cafayate), 1950 m, 16–31.VII.1969, col Willink, Terán, Stange (Malaise) (MACN). Paratypes: 2 ♂, same data of holotype (MACN); 2 ♂, Yacochuya (Cafayate), 1950 m, 1–15.IX.1969, col Willink, Terán, Stange (IFML); 4 ♂, Cachi, 14.II.1969, col Barrera-Paganini (IFML); 2 ♂, Tacuil, 7.XII.1968, col Willink, Stange (IFML). Jujuy, 2 ♂, Abra Pampa, 3400 m, 5.II.1960, col Golbach (IFML). Tucumán, 1 ♂, entre Amaicha y Sta. María, 28.XI.2005, col Torrén, Fidalgo P. (MACN). Catamarca, 1 ♂, Los Nacimientos de Abajo, 16–20.II.1969, col Willink, Terán, Stange (Malaise) (IFML); 1 ♂, 6 km N Belén, 1240 m, 1–15.VI.1969, col Willink, Terán, Stange (Malaise) (IFML). San Juan, 2 ♂, Camino Paso de Agua Negra, 2600 m, 22.I.1982, col Roig (MACN).

Distribution. Argentina (Salta, Jujuy, San Juan, Tucumán, Catamarca).

Etymology. The specific epithet refers to the coloration of the wing venation, which in many specimens is whitish.

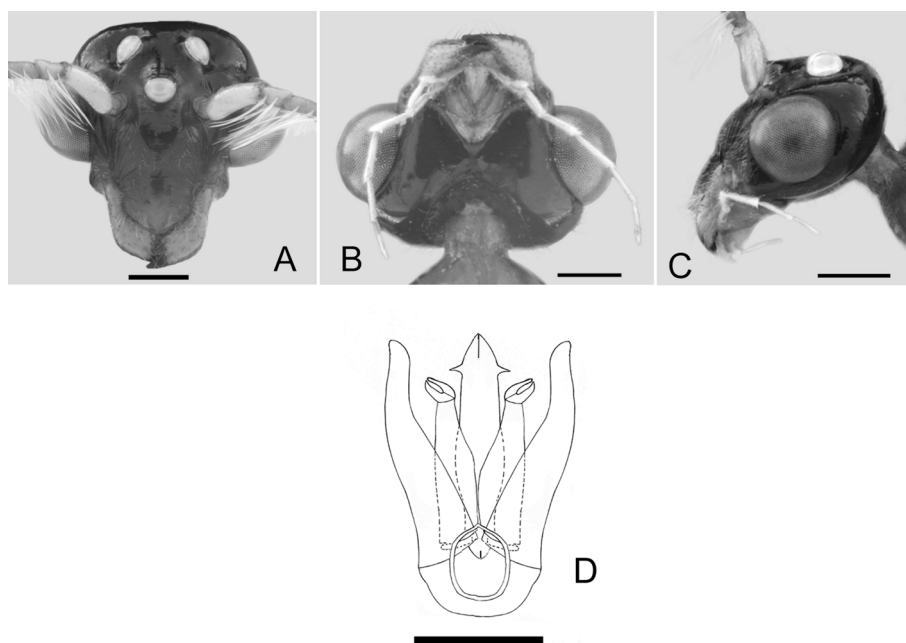


FIGURE 13. *Plumarius albinervis* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius tumidulus* Papp, 2000**

(Figs 14A–D)

Plumarius tumidulus Papp, 2000: 157–160, figs 1–8 [holotype, ♂, Argentina, Tucumán (Hungarian Natural History Museum)].

Diagnosis. This species is characterized by the scape basally with a ventral, rounded projection, and its moderate ocelli, the anterior one above the supra-torular line.

Redescription. Body length 5.7–7.5 mm. Color. Light brown, head darker.

Head. Wider in dorsal view than width of scutum between tegulae; vertex with weak sculpture, reticulated, moderately punctate. Torulus closer to lateral ocellus than to clypeus. Lateral ocelli in frontal view below upper margin of head. Median ocellus above supra-torular line (Fig. 14A). Genal carina weak, distinct. Length of area between preoccipital carina and suboral swelling subequal to length of suboral swelling (0.7:0.8); without median, longitudinal carina; low area of genal bridge close to mandibular articulation without carinae or punctures (Fig. 14B). Malar area subequal to apical width of F1, with striae anteriorly. Supraclypeal area with lateral striae; flattened in lateral view. Epistomal suture evident. Clypeus $1.3 \times$ wider than high, with lateral striae; apical margin rounded; weakly rounded in lateral view (Fig. 14C). Scape basally with ventral, rounded projection. F1 $4.6 \times$ as long as its apical width, shorter than scape and pedicel combined (2.1:2.3).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum without punctures. Propleuron and mesopleuron densely punctate. Metapostnotum with striae reaching posterior margin. Propodeum transverse; swollen behind spiracle, without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $3.9 \times$ as long as posterior margin; veins *Rs*3 shorter than *Rs*4 (1.7:2.0); discal cell rectangular. Protarsomere 1 with five lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (4.0:5.8); inner metatibial spur $0.1 \times$ as long as outer spur.

Metasoma. T7 triangular. Genitalia as in Fig. 14D.

Examined material. ARGENTINA, Tucumán, 7 ♂, Depto. Burruyacu, Chilcas, 10–25.XI.1979, col R. Golbach (IFML); 16 ♂, Las Cejas, 11 Km O, 26.V.1968, col Stange (Malaise) (IFML, MACN). Entre Ríos, 1 ♂ (Univ. Cornell). Santiago del Estero, 1 ♂, Termas de Río Hondo, Ruta 9, km 1194, 11.I.2015, col Diez, Garlati (MACN in alcohol). URUGUAY, 1 ♂, Canelones, Atlántida, 7.II.1969, col Stange (IFML).

Distribution. Argentina (Tucumán, Santiago del Estero, Entre Ríos), Uruguay (new record) (Canelones).

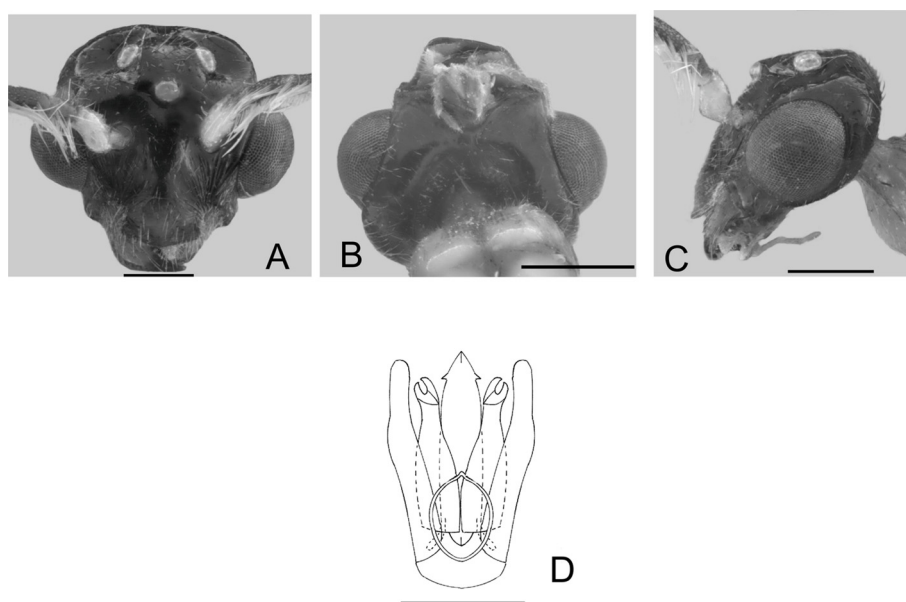


FIGURE 14. *Plumarius tumidulus* Papp, ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius truncatus* Diez & Roig-Alsina, sp. nov.**

(Figs 15A–D)

Diagnosis. This species is distinguished by its truncate, transverse clypeus ($1.6 \times$ wider than high), with the apical margin nearly straight.

Description. Holotype, ♂. Body length: 4.4 mm (paratypes 3.4–4.5 mm). Color. Light brown, with head darker, except light brown clypeus and mandible.

Head. $1.3 \times$ as wide as high in frontal view; wider in dorsal view than width of scutum between tegulae (6.4:5.7). OOD $1.2 \times$ diameter of lateral ocellus; POD $1.2 \times$ OOD. Antenocular distance $0.6 \times$ diameter of torulus; interantennal distance $2.6 \times$ antenocular distance. Vertex reticulated, without punctures between lateral ocelli. Torulus closer to lateral ocellus than to clypeus (1.1:1.6). Lateral ocelli in frontal view below upper margin of head. Median ocellus above supra-torular line (Fig. 15A). Genal carina absent. Length of area between preoccipital carina and suboral swelling sub equal to length of suboral swelling (0.4:0.5); this area with median, longitudinal carina; lower area of genal bridge close to mandibular articulation with carinae (Fig. 15B). Malar area subequal to apical width of F1 (0.6:0.5); weakly striae anteriorly. Supraclypeal area with weak lateral striae. Epistomal suture evident. Clypeus $1.6 \times$ wider than high, with weak lateral striae; apical margin almost straight (Fig. 15A); clypeus slightly rounded in lateral view (Fig. 15C). Proportion of lengths of segments of maxillary palp, from base to apex: 7:7:14:12:9:12. Scape without swelling or projection. F1 $7.8 \times$ as long as its apical width subequal to scape and pedicel combined (3.7:3.5).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina weak, not forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum scarcely punctate around admedian line. Propleuron and mesopleuron without punctures. Metapostnotum without striae reaching posterior margin. Propodeum transverse, not swollen behind spiracle. Fore wing: marginal cell with anterior margin $2.3 \times$ as long as posterior margin; vein *Rs*3 longer than *Rs*4 (3.9:2.9); vein *M* separated from *cu-a* by $0.2 \times$ length of *cu-a*; discal cell rectangular. Hind wing: veins *cu-a* and *M* interstitial. Protarsomere 1 without outer lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (3.0:4.8); inner metatibial spur $3.7 \times$ as long as outer spur.

Metasoma. T7 triangular. Genitalia as in Fig. 15D, aedeagus without lateral spines



FIGURE 15. *Plumarius truncatus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

Examined material. Holotype, ♂. ARGENTINA, San Luis, 1 ♂, 20 km. N. Juan Jorba, 8.XI.1982, col Roig-Alsina (MACN). Paratypes: 6 ♂, same data of holotype (MACN, IFML). Salta, 1 ♂, Yacochuya (Cafayate), 16–30.IX.1968, col Willink, Terán, Stange (IFML). La Rioja, 2 ♂, Guayapa, Patquia, 14.X.1954, col Hayward (MACN). Catamarca, 6 ♂, Ruta 46 66 km entre Belén y Andalgala, 1.II.2006, col Fidalgo P. (MACN in alcohol).

Distribution. Argentina (Salta, Catamarca, La Rioja, San Luis).

Variation. The specimen from Salta has a darker body.

Etymology. The specific epithet, the Latin adjective *truncatus*, refers to the nearly straight apical margin of the clypeus.

***Plumarius mikrommatus* Diez & Roig-Alsina, sp. nov.**

(Figs 16A–D)

Diagnosis. This species falls in a group with the anterior ocellus above the supra-torular line and the marginal cell with the anterior margin long and a narrowed apex. It is related to *P. obscurus* sp. nov., from which it differs by the size of the ocelli, very small and with an OOD $2.7\text{--}3.0 \times$ their diameter.

Description. Holotype, ♂. Body length 5.4 mm. (paratypes 4.1–7.5 mm). Color. Dark brown, almost black, with following parts lighter: scape and pedicel, apical area of F1, apex of clypeus, mandibles, legs and metasoma.

Head. $1.0 \times$ wider than long in frontal view; width in dorsal view subequal to width of scutum between tegulae (2.2:2.5). OOD $3 \times$ diameter of lateral ocellus; POD $5 \times$ OOD. Antennocular distance $1.1 \times$ diameter of torulus; interantennal distance $2.6 \times$ antennocular distance. Vertex smooth. Torulus closer to lateral ocellus than to clypeus (1.2:2.0). Lateral ocellus, in frontal view below upper margin of head. Median ocellus above supra-torular line (Fig. 16A). Genal carina present, distinct. Length of area between occipital carina and suboral swelling subequal to length of swelling (1.2:1.1); without median, longitudinal carina; low area of genal bridge close to mandibular articulation without carinae or punctures (Fig. 16B). Malar area longer than apical width of F1 (1.2:0.8), striate anteriorly. Supraclypeal area with lateral striae; convex in lateral view (Fig. 16C). Epistomal suture distinct. Clypeus $1.3 \times$ wider than long, with lateral striae, rounded in lateral view; apically not truncate. Proportion of segments of maxillary palp from base to apex: 10:12:14:15:13:10. Scape without swelling or projection. F1 $5.6 \times$ longer than its apical width, subequal to scape and pedicel combined (4.5:4.3).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, not forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum scarcely punctate. Propleuron and mesopleuron without punctures. Metapostnotum with longitudinal striae, not reaching posterior margin in the central area. Propodeum transverse; swollen behind spiracle, without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.4 \times$ longer than posterior margin; vein *Rs*3 longer than *Rs*4 (3.9:1.6); vein *M* separated from *cu-a* by $2.7 \times$ length *cu-a*; medial cell rectangular. Protarsomere 1 with two outer lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (3.9:5.7); inner metatibial spur $1.6 \times$ as long as outer spur.

Metasoma. T7 triangular, apically pointed. Genitalia as in Fig. 16D.

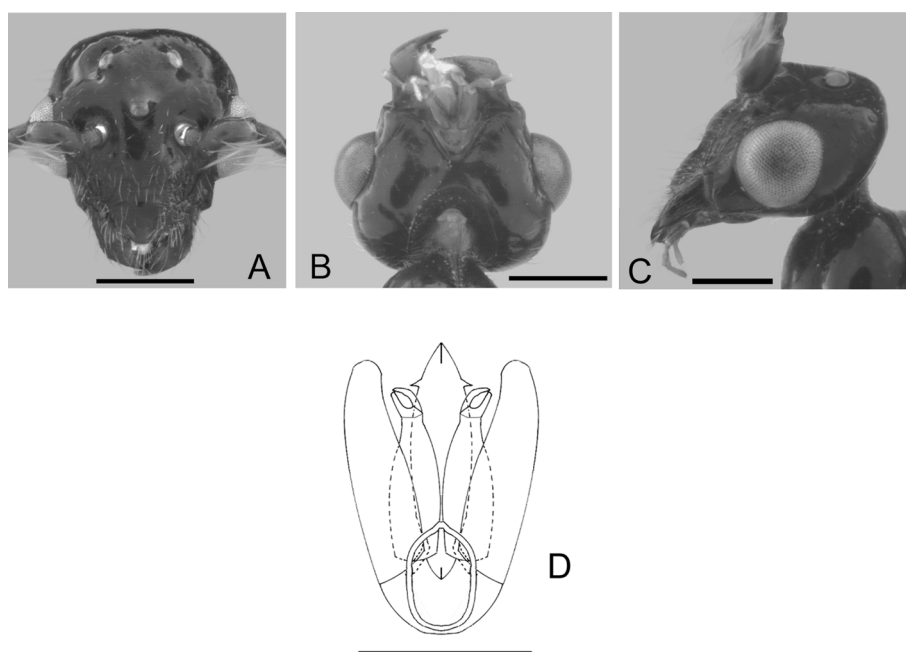


FIGURE 16. *Plumarius mikrommatus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

Examined material. Holotype, ♂: ARGENTINA, Salta, 1 ♂, Iruya, 23.IX.2009, col. Fidalgo P. (MACN). The following are paratypes: 13 ♂, same data of holotype (6 ♂ MACN, 4 ♂ IFML, 3 ♂ MLP). Jujuy, 1 ♂, Hornillos, 17.I.2011, col. Diez, Garlati (MACN); 3 ♂, Hornillos, 23°39'43"S, 65°26'32"W, 24.II.2015, col. Diez, Garlati (MACN in alcohol).

Distribucion. Argentina (Salta, Jujuy).

Etymology. The specific epithet, from the Greek, *mikros*: small and *omma*: eye, refers to the small ocelli.

***Plumarius obscurus* Diez & Roig-Alsina, sp. nov.**

(Figs 17A–D)

Diagnosis. This species is related to *P. mikrommatus* sp. nov. by the apically narrowed marginal cell. It differs by the larger ocelli, which are separated from the eye by an OOD $1.8 \times$ their maximum diameter.

Description. Holotype, ♂. Total length 4.9 mm (paratypes 5.4–6.8 mm). Color. Dark brown, with lighter antenna, legs and metasoma.

Head. $1.1 \times$ wider than high in frontal view; in dorsal view width subequal than width of scutum between tegulae (4.9:5.0). OOD $1.6 \times$ diameter of lateral ocellus; POD $1.4 \times$ OOD. Antennocular distance $1.0 \times$ diameter of torulus; interantennal distance $2.8 \times$ antennocular distance. Vertex finely reticulated, scarcely punctate between lateral ocelli. Torulus closer to lateral ocellus than to clypeus (2.8:4.2). Lateral ocelli in frontal view below upper margin of head. Median ocellus above supra-torular line (Fig. 17A). Genal carina present, distinct. Length of area between preoccipital carina and suboral swelling shorter than length of suboral swelling (1.0:2.1); this area without a median longitudinal carina; lower area of genal bridge close to mandibular articulation with carinae, without punctures (Fig. 17B). Malar area longer than apical width of F1 (1.0:0.6), weakly striate anteriorly. Supraclypeal area with lateral striae; rounded in lateral view (Fig. 17C). Epistomal suture evident. Clypeus $1.4 \times$ wider than high, with lateral striae; rounded in lateral view; not truncate. Proportion of lengths of segments of maxillary palp, from base to apex: 8:7:14:16:11:11. Scape without swelling or projection. F1 $6.0 \times$ as long as its apical width, subequal to scape and pedicel combined (3.6:3.4).

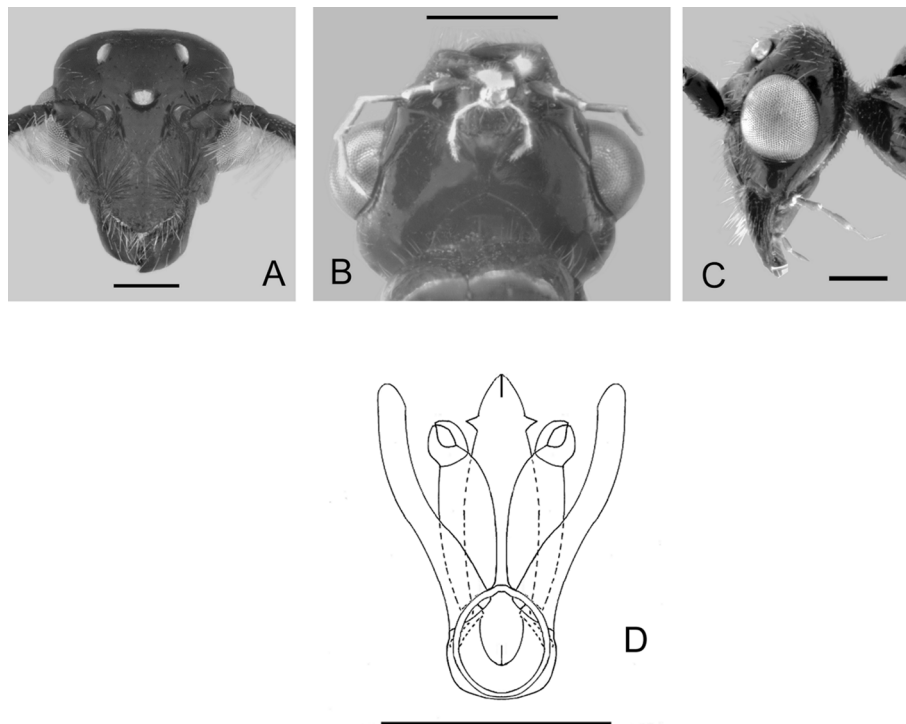


FIGURE 17. *Plumarius obscurus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum densely punctate. Propleuron moderately punctate, mesopleuron scarcely punctate. Metapostnotum with striae reaching posterior margin. Propodeum transverse, swollen behind spiracle, without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.7 \times$ as long as posterior margin; length of vein *Rs3* subequal to *Rs4* (1.9:1.8); vein *M* separated from vein *cu-a* by $0.3 \times$ length of *cu-a*; discal cell rectangular. Hind wing: veins *M* and *cu-a* interstitial. Protarsomere 1 with one outer lateral spine. Length of mesotarsomere 1 shorter than metatarsomere 1 (2.3:3.2); inner metatibial spur $3.1 \times$ as long as outer spur.

Metasoma. T7 apically rounded. Genitalia as in Fig. 17D.

Examined material. Holotype, ♂: ARGENTINA, Jujuy, 1 ♂, Hornillos, Ruta 9 km 1762, 5–7.III.2010, col. Fidalgo P. (MACN). Paratypes: 1 ♂ same data of holotype (IFML); 1 ♂, Hornillos, 17.I.2011, col. Diez, Garlati (MACN); 4 ♂, Hornillos, 24.II.2015, col. Diez, Garlati (3 males MACN in alcohol, 1 ♂ IFML).

Distribution. Argentina (Jujuy).

Etymology. The specific epithet, *obscurus*, from the Latin, refers to the dark color of the body.

***Plumarius gracilis* Diez & Roig-Alsina, sp. nov.**

(Figs 18A–E)

Diagnosis. This species falls in a group with the anterior ocellus above the supra-torular line and the marginal cell with the anterior margin short and the apex not narrowed. It is related to *P. fidalgoi* sp. nov. and *P. ocellulatus* sp. nov. but differs by the torulus closer to the lateral ocellus than to the clypeus. It is characterized by the short, medially narrowed marginal cell of the fore wing.

Description. Holotype, ♂. Body length: 5.9 mm (paratypes 3.0–6.5 mm). Color. Light brown, head darker (except clypeus and mandible).

Head. $1.1 \times$ as wide as high, in frontal view; narrower in dorsal view than width of scutum between tegulae (3.5:3.8). OOD $1.5 \times$ diameter of lateral ocellus; POD $1.4 \times$ OOD. Antennocular distance $0.5 \times$ diameter of torulus; interantennal distance $4.7 \times$ antennocular distance. Vertex reticulated, scarcely punctate between lateral ocelli (punctures separated by $2.5 \times$ puncture diameter). Torulus closer to lateral ocellus than to clypeus (1.4:2.0). Lateral ocelli in frontal view below upper margin of head. Median ocellus above supra-torular line, (Fig. 18A). Genal carina absent. Length of area between preoccipital carina and suboral swelling shorter than length of suboral swelling (0.5:0.7); without median, longitudinal carina; low area of genal bridge close to mandibular articulation without carinae or punctures (Fig. 18B). Malar area equal than apical width of F1 (0.6:0.6); striate anteriorly. Supraclypeal area with weak lateral striae; weakly rounded in lateral view. Epistomal suture evident. Clypeus $1.4 \times$ wider than high, with weak lateral striae; weakly rounded in lateral view (Fig. 18C). Proportion of lengths of maxillary palp, from base to apex: 8:7:12:15:14:14. Scape without swelling or projection. F1 $4.0 \times$ as long as its apical width, shorter than scape and pedicel combined (2.1:2.4).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum scarcely punctate. Propleuron scarcely punctate, and mesopleuron without punctures. Metapostnotum with weak striae reaching posterior margin. Propodeum transverse; swollen behind spiracle, without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2.4 \times$ as long as posterior margin, medially narrower (Fig. 18D); vein *Rs3* subequal than *Rs4* (3.0:3.1); vein *M* separated from *cu-a* by $3.5 \times$ length of *cu-a*; discal cell rectangular. Protarsomere 1 with two lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (2.3:3.5); inner metatibial spur $2.5 \times$ as long as outer spur.

Metasoma. T7 triangular. Genitalia as in Fig. 18E.

Examined material. Holotype, ♂. ARGENTINA, La Rioja, 1 ♂, Anguiñan (Chilecito), 16–30.VI.1969, col. Willink, Terán, Stange (Malaise) (IFML). Paratype: Catamarca, 1 ♂, 6 km N de Belén, 1240 m, 1–15.VI.1969, col. Willink, Terán, Stange (malaise) (MACN).

Distribution. Argentina (La Rioja, Catamarca).

Etymology. The specific name refers to the slender habitus of the species.

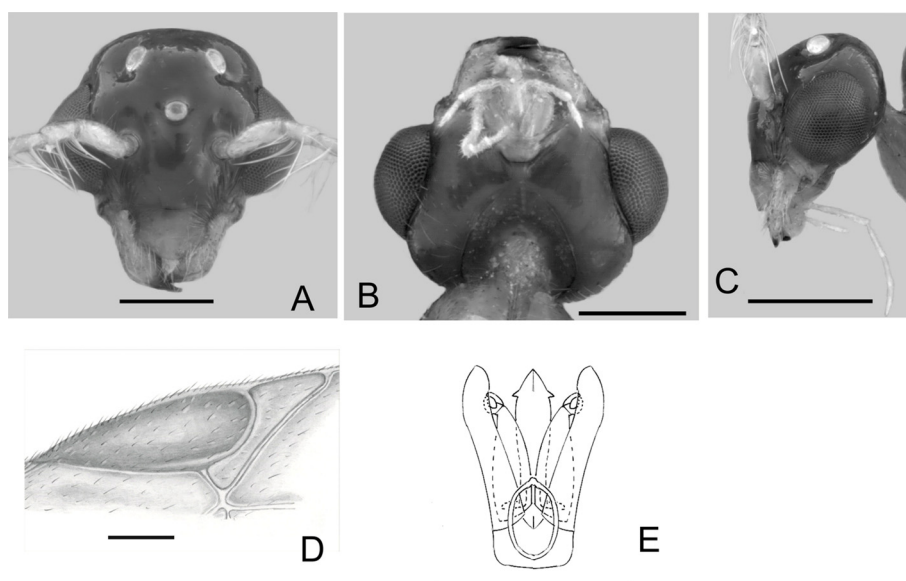


FIGURE 18. *Plumarius gracilis* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Fore wing, marginal cell; E, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius fidalgoi* Diez & Roig-Alsina, sp. nov.**

(Figs 19A–D)

Diagnosis. This species falls in a group with the anterior ocellus above the supra-torular line and the marginal cell with the anterior margin short and the apex not narrowed. It is characterized by the torulus at nearly equal distance from the lateral ocellus and the clypeus and by the moderate ocelli, the lateral ones ellipsoidal and separated from eye by $1.6\text{--}1.7 \times$ their maximum diameter.

Description. Holotype, ♂. Body length: 5.1 mm (paratypes 3.3–7.1 mm). Color. Light brown, with head darker.

Head. $1.2 \times$ as wide as high in frontal view; wider in dorsal view than width of scutum between tegulae (7.5:6.7). OOD $1.3 \times$ diameter of lateral ocellus; POD $1.2 \times$ OOD. Antennocular distance $0.6 \times$ diameter of torulus; interantennal distance $2.6 \times$ antennocular distance. Vertex weakly reticulated, without punctures between lateral ocelli. Torulus nearly as close to lateral ocellus as to clypeus (1.4:1.5). Lateral ocelli in frontal view below upper margin of head. Median ocellus above supra-torular line (Fig. 19A). Genal carina present. Length of area between preoccipital carina and suboral swelling shorter than length of suboral swelling (0.6:1.3); without median, longitudinal carina; low area of genal bridge close to mandibular articulation without carinae or punctures (Fig. 19B). Malar area equal than apical width of F1 (0.7:0.7); striate anteriorly. Supraclypeal area with weak lateral striae; weakly convex in lateral view. Epistomal suture evident. Clypeus $1.4 \times$ wider than high, with weak lateral striae; weakly rounded in lateral view (Fig. 19C). Proportion of lengths of maxillary palp, from base to apex: 9:8:12:15:11:12. Scape without swelling or projection. F1 $4.4 \times$ as long as its apical width, shorter than scape and pedicel combined (3.1:4.2).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, forming lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum without punctures. Propleuron and mesopleuron without punctures. Metapostnotum without striae reaching posterior margin. Propodeum transverse; swollen behind spiracle, without carina anterior to spiracle. Fore wing: marginal cell with anterior margin $2 \times$ as long as posterior margin; length of vein *Rs3* subequal than *Rs4* (1.5:1.7); vein *M* separated from *cu-a* by $0.2 \times$ length of *cu-a*; discal cell rectangular. Hind wing: vein *cu-a* postfurcal to vein *M*. Protarsomere 1 with two outer lateral spines. Length of mesotarsomere 1 shorter than metatarsomere 1 (3.3:4.5); inner metatibial spur $1.6 \times$ as long as outer spur.

Metasoma. T7 pointed with a polish area. Genitalia as in Fig. 19D.

Examined material. Holotype, ♂. ARGENTINA, San Juan, 1 ♂, 35 km N. Marayes, 14.XI.1982, col Roig-Alsina (MACN). Paratypes: 11 ♂, same data of holotype (MACN). Mendoza, 5 ♂, Lavalley, El Retamo, 11.XII.1979, col Roig-Alsina (MACN). La Rioja, 1 ♂, 20 km N, 24.IX.1968, col Peña (IFML); 5 ♂, Ruta 40, km 593 ca. Chilecito, 7.IV.2005, col Fidalgo P., Fidalgo G., Torrén (MACN); 4 ♂, Ruta 141, km 104 ca. Marayes, 29.I.2006, col Fidalgo P. (MACN); 1 ♂, Patquia (MACN); 1 ♂, Famatina, 23.XI. 1975, col Stange (IFML). Tucumán, 2 ♂, entre Amaicha y Santa María, 28.XI.2005, col Fidalgo P., Torrén (MACN). Catamarca, 1 ♂, ca. Amaicha del Valle, Ruta 307 km 122, 2.XI.2005, col Fidalgo, Porter (MACN).

Distribution. Argentina (Tucumán, Catamarca, La Rioja, San Juan, Mendoza).

Etymology. The species is named after Dr. Patricio Fidalgo, who collected numerous plumariids in Argentina.

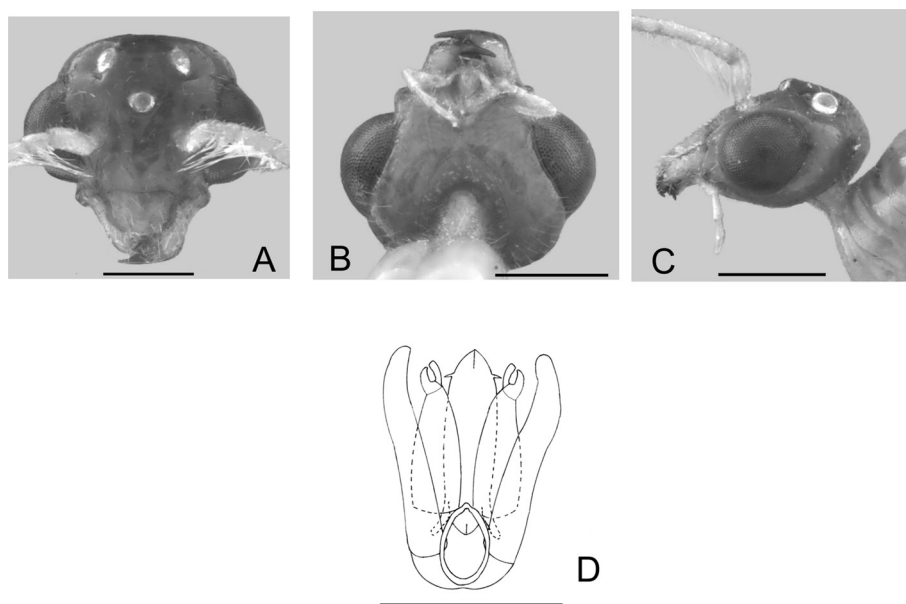


FIGURE 19. *Plumarius fidalgoi* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

***Plumarius ocellulatus* Diez & Roig-Alsina, sp. nov.**

(Figs 20A–D)

Diagnosis. This species falls in a group with the anterior ocellus above the supra-torular line and the marginal cell with the anterior margin short and the apex not narrowed. It is related to *P. fidalgoi* by the torulus at nearly equal distance from the lateral ocellus and the clypeus. It differs from this species by the extremely small ocelli, the lateral ones being nearly circular and separated from eye by $2.3\text{--}2.5 \times$ their maximum diameter and the aedeagus without lateral spines.

Description. Holotype, ♂. Body length 4.9 mm (paratypes 3.6–4.2 mm). Color. Dark brown, with cleared mandible, antennae and legs.

Head. 1.1x wider than high in frontal view; in dorsal view width is subequal than width of scutum between tegulae (5.6:5.7). OOD $2.5 \times$ diameter of lateral ocellus; POD $1.0 \times$ OOD. Antennocular distance $0.8 \times$ diameter of torulus; interantennal distance $3.6 \times$ antennocular distance. Vertex finely reticulated, without punctures between lateral ocelli. Torulus nearly as close to lateral ocellus as to clypeus (1.4:1.5). Lateral ocelli in frontal view below upper margin of head. Median ocellus above supra-torular line (Fig. 20A). Genal carina present, weak. Length of area between preoccipital carina and suboral swelling shorter than length of suboral swelling (1.2:1.6); this area without a median longitudinal carina; lower area of genal bridge close to mandibular articulation without carinae or punctures (Fig. 20B). Malar area subequal than apical width of F1 (0.6:0.7), weakly striate anteriorly. Supraclypeal area with weak lateral striae; convex in lateral view (Fig. 20C). Epistomal suture evident. Clypeus $1.3 \times$ wider than high, with weak lateral striae; rounded in lateral view; not truncate. Proportion of lengths of segments of maxillary

palp, from base to apex: 10:9:14:16:15:11. Scape without swelling or projection. F1 $5.2 \times$ as long as its apical width, subequal to scape and pedicel combined (3.0:2.9).

Mesosoma. Area anterior to pronotal lobe smooth; pronotal lateral carina distinct, forming a lower pocket. Notaulus weakly marked, as long as admedian line. Anterior surface of scutum scarcely punctate. Propleuron and mesopleuron scarcely punctate. Metapostnotum with striae reaching posterior margin. Propodeum transverse, not swollen behind spiracle, with carina anterior to spiracle. Fore wing: marginal cell with anterior margin $1.2 \times$ as long as posterior margin; vein *Rs*3 longer than length *Rs*4 (2.2:1.6); vein *M* separated from vein *cu-a* by $0.5 \times$ length of *cu-a*; discal cell rectangular. Hind wing: vein *cu-a* postfurcal to vein *M*. Protarsomere 1 with one outer lateral spine. Length of mesotarsomere 1 shorter than metatarsomere 1 (2.6:3.6); inner metatibial spur $1.4 \times$ as long as outer spur.

Metasoma. T7 apically rounded. Genitalia as in Fig. 20D, aedeagus without lateral spines.

Examined material. Holotype, ♂. ARGENTINA, Catamarca, 1 ♂, ca. Amaicha del Valle, Ruta 307, km 122, 2.XI.2005, col Fidalgo P., Porter (MACN). Paratypes: 6 ♂, same data of holotype, (MACN). Tucumán, 1 ♂, Amaicha, 27.XI.1965, col Stange (IFML); 1 ♂, entre Amaicha y Sta. María, 28.XI.2005, col Fidalgo P., Torrén (IFML).

Distribution. Argentina (Catamarca, Tucumán).

Etymology. The species name, diminutive of Latin *ocellus*, refers to the small ocelli of the species.

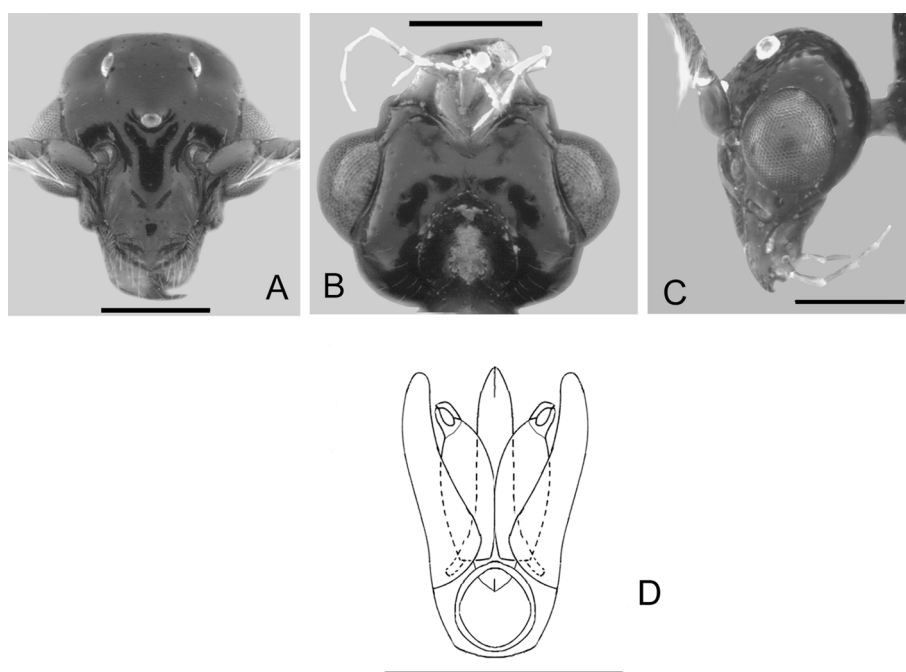


FIGURE 20. *Plumarius ocellulatus* sp. nov., ♂. A, Head, frontal view; B, Head, ventral view; C, Head, lateral view; D, Genital capsule, ventral view. Scale bars = 0.5 mm.

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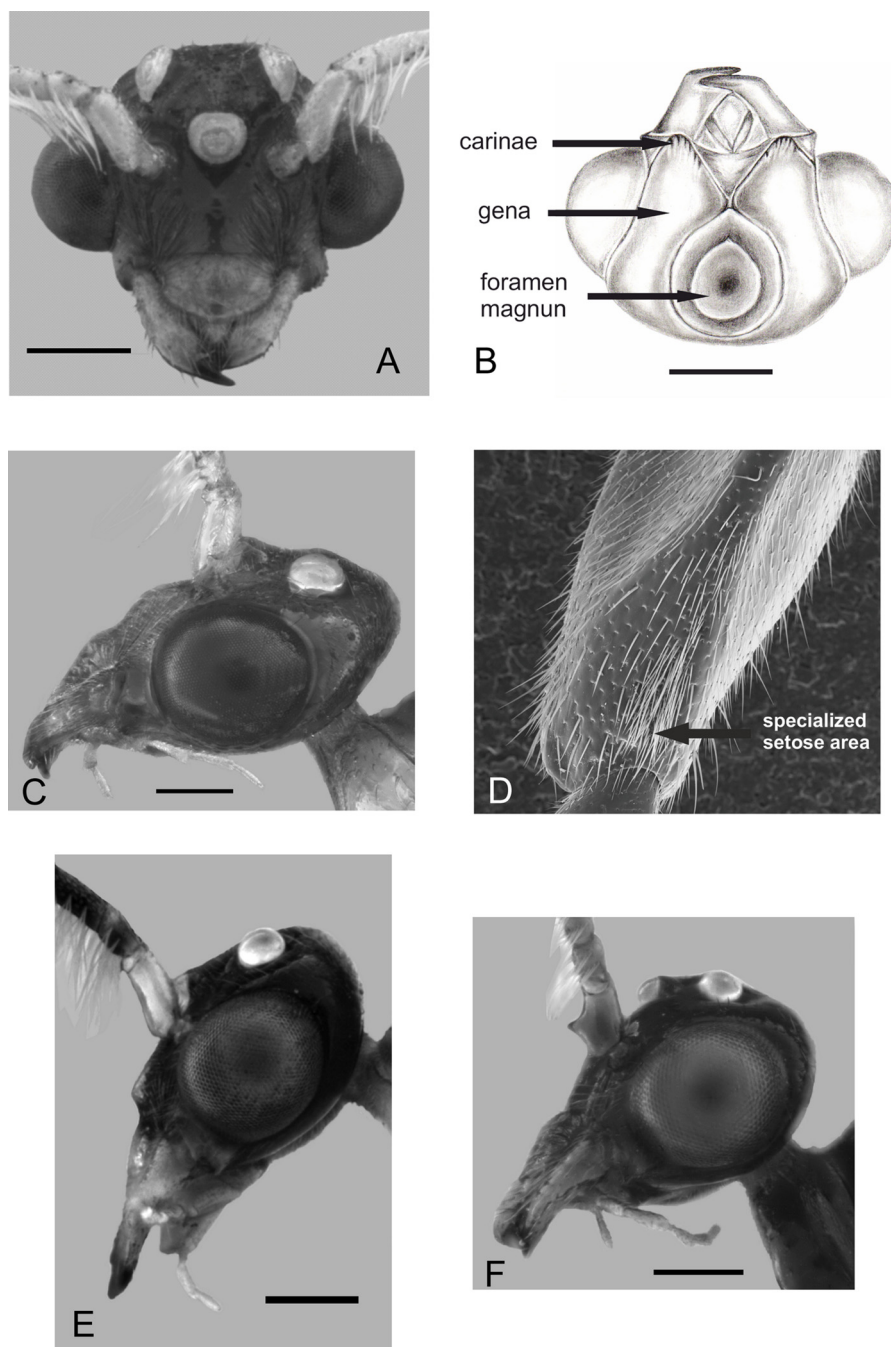


FIGURE 21. A, *Plumarius ocellatus*, Head, frontal view. B, *P. stangei*, Head, ventral view. C, *P. hirticornis*, Head, lateral view. D; *P. gradifrons*, setose area on metacoxa, ventral view. E, *P. gradifrons*, Head, lateral view. F, *P. spiniferus*, Head, lateral view. Scale bars = 0.5 mm.

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