

## Review of the “metallic group” of species of *Argia* Rambur known from Venezuela, with description of the larva of *Argia jocosa* Hagen in Selys, 1865 (Odonata: Coenagrionidae)

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In Venezuela, the “metallic group” includes three species: *Argia cupraurea* Calvert, *Argia jocosa* Hagen in Selys, and *Argia orichalcea* Hagen in Selys. These are here diagnosed and illustrated, and their distribution in Venezuela is mapped. The larva of *A. jocosa* differs from the few other known larvae of the group in details of the prementum, labial palp and shape of caudal gills.

**Keywords:** Odonata; damselfly; Zygoptera; Coenagrionidae; *Argia*; Venezuela

### Introduction

The genus *Argia* Rambur, 1842, includes about 112 valid species (Garrison et al., 2010), plus two or three dozen of mostly South American species that still await description. At least 13 of these (R.W. Garrison personal communication, January 2012) fall into the “metallic group” of species in which the males show brilliant metallic reflections on top of head, thoracic dorsum and mesepimeron, and dorsally bright red compound eyes. In the females the metallic areas are restricted to parts of the head, mid-dorsal and humeral stripes. Three species of the “metallic group” have been recorded from Venezuela, this country being the type locality of one of them: *Argia orichalcea* Hagen in Selys, 1865. The other two species are *Argia cupraurea* Calvert, 1902, and *Argia jocosa* Hagen in Selys, 1865. However, even though the presence in Venezuela of these two is confirmed in the present study, most records published so far are actually based on misidentified specimens. Venezuelan males of either species do not key out easily in Calvert’s (1901, 1909) keys, because in specimens of *A. cupraurea* abdominal segment 7 is not “black with a basal blue ring” (Calvert, 1901: 71; 1909: 120), but blue with only the apical fifth or less black. Venezuelan males of *A. jocosa* have abdominal segments 3–5 blue for two-thirds or more of their length, and segment 6 is blue in its basal three-fifths, while Calvert (1901: 71; 1909: 120) describes

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segments 3–6 as blue in their “basal half”. As a result of this confusion, all specimens of *A. jocosa* in the Museo del Instituto de Zoología Agrícola “Francisco Fernández Yépez” (MIZA) collection were identified in the past by J. Rácenis and by myself as “*Argia cupraurea*”, while those of true *A. cupraurea* were set apart as belonging to a probably undescribed species. The heretofore only Venezuelan record of *A. jocosa* (De Marmels, 1990) in fact refers to a misidentified *A. orichalcea*. Besides the description by Geijskes (1946) of a probable F-2 larva of *A. orichalcea*, the larvae of the three species are unknown. Here I describe an exuvia of a reared female of *A. jocosa*.

Thanks to correspondence with Rosser Garrison, and some unpublished manuscript notes and figures he kindly furnished me with, the identity and distribution of all three metallic species in Venezuela can finally be presented.

## Material and methods

All male and female specimens of the three metallic species of *Argia* stored at MIZA, as well as published and unpublished records of specimens identified in the past, now housed at other institutions, were examined. Colour illustrations were executed with poster paint (guache) from colour slides of live Venezuelan specimens. The greyish blue violaceous colour of live male *A. orichalcea* was found to be too pinkish in the original painting, and hence was modified with the EXTENDED edition of ADOBE PHOTOSHOP (CS5) for the present illustration. Line drawings were made with the help of a camera lucida coupled to a Wild M-8 stereoscope. Maps were generated with gvSIG 1.11.0 (Asociación gvSIG, 2011). A few distributional records forwarded by R. W. Garrison (RWG) were incorporated. Measurements ( $n = 10$  adults of each sex) are given in millimetres. S1(-n) stands for abdominal segments 1-n.

## Results

### *Argia cupraurea* Calvert, 1902

(Figures 1–10, 13)

Type locality: PANAMA: David

#### *Material examined*

Adults: 82 males, 32 females, all from Venezuela (all in MIZA).

#### *Diagnosis*

*Male* (live colour Figure 1a). Labrum violet metallic, except for narrow orange border. Live specimens with top of head and thoracic dorsum amethyst violet metallic, not coppery red. Small, blue spot near upper end of humeral suture on mesepimeron of male normally present. S7 blue above with narrow black apical band about one-fifth or less the segment’s length. Apical segment of genital ligula with long and narrow median projection, and with paired flagella (Figures 4, 5). In lateral view, each flagellum slender, lacking a membranous, rounded lobe on its ental surface (Figure 4). Cercus in lateral view with ventral border of outer branch almost horizontal, tip of inner branch directed backwards and gently downwards, not markedly arched ventrad (Figure 3).

Measurements: total length 33.5–38; hindwing length 19–20.5.

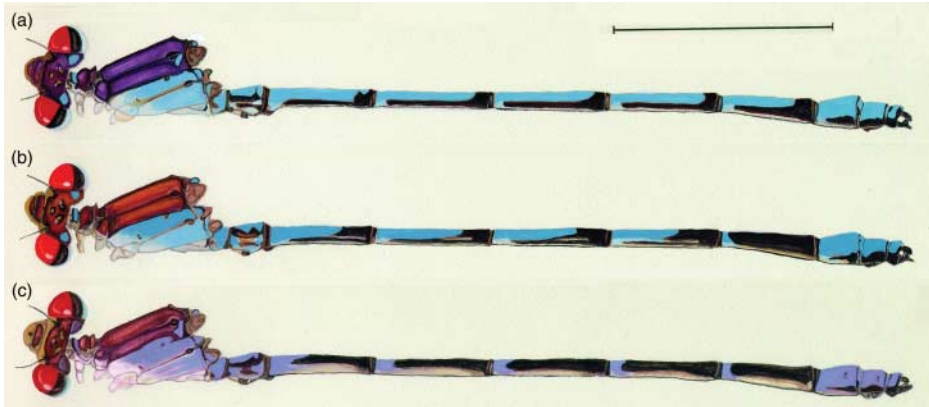


Figure 1. Males of *Argia* (live color) of the “metallic group” of species from Venezuela: (a) *A. cupraurea*, (b) *A. jocosa*, (c) *A. orichalcea* (scale bar = 10 mm).

*Female* (live colour Figure 2a). Labrum with dark, metallic basal stripe (occasionally undeveloped); postclypeus dark metallic, with pale spot basally at each side, and often additional pale spots mediobasally and medioapically; no pale occipital line between postocular spots. I have found no single morphological character to separate females *A. cupraurea* from females *A. jocosa*. All characters examined are variable, but certain expressions are more common in one or the other species, and these character states may, in combination, allow for correct identification (character states in *A. jocosa* are given in brackets): black line connecting dark colour of frons with dark clypeus across pale vertical portion of frons (Figure 6) usually absent, interrupted, or severely constricted (usually well developed); pale band along eye border on rear of head (Figure 7) usually narrow (usually broader). Pronotal hind lobe (Figure 8) usually rising from middle lobe at an almost 90° angle (usually at a more obtuse angle), mesostigmal lobe (Figures 9, 10) usually long and arched mesad (usually short and straight), minute mesal tubercle at mesal posterior border of depression behind mesostigmal lobe, opposite to mesostigmal tubercle (Figure 9) usually absent (usually present). The observed intraspecific variation in character expression of either species seems not to correlate with geography.

Measurements: total length 33.5–35, hindwing length 20.5–23.

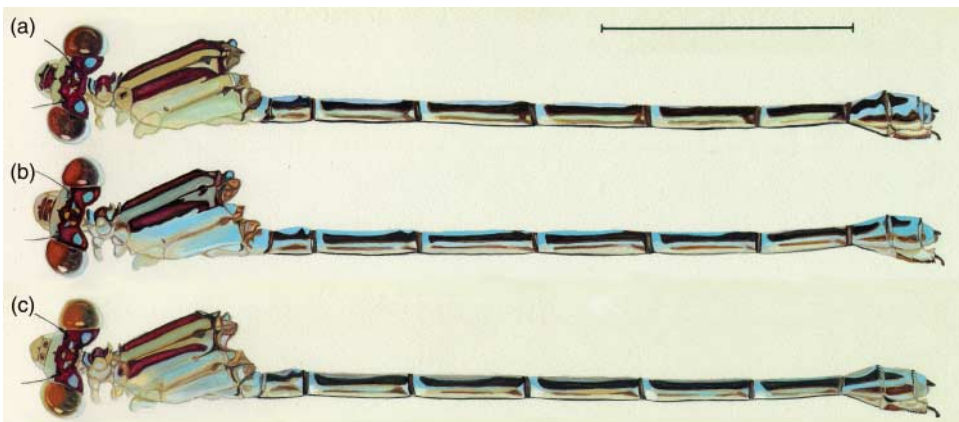


Figure 2. Females of *Argia* (live color) of the “metallic group” of species from Venezuela: (a) *A. cupraurea*, (b) *A. jocosa*, (c) *A. orichalcea* (scale bar = 10 mm).

*Larva.* Undescribed.

*Habitat*

*Argia cupraurea* is a lowland species, which has been found only occasionally at elevations near 1000 m above sea level. It can be observed along fairly exposed, lower courses of flat, slow-flowing rivers with widely varying bottoms. These rivers may be from less than 10 m up to 40 m wide, preferably with smaller affluents nearby. Specimens can be numerous where small streams cross roads, in the neighbourhood of bridges, or where streams flow through cleared areas within forest. *Argia cupraurea* is absent from narrow, heavily forested streams devoid of sufficiently large, exposed, sunny areas.

*Flight season*

Records are from all months of the year.

*Distribution in Venezuela*

*Argia cupraurea* has been found only north of the Orinoco river, between sea level and about 1000 m elevation (Figure 13).

Barinas State: Barinitas (8° 45' N, 70° 25' W), Ticoporo (7° 56' N, 70° 43' W); Carabobo State: Canoabo (10° 18' N, 68° 17' W), Río Alpargatón (10° 33' N, 68° 12' W), San Esteban (10° 25' N, 68° 04' W) (RWG; Calvert, 1902: 85); Falcón State: Las Dos Bocas (11° 18' N, 69° 22' ); Miranda State: Río Santa Cruz (10° 00' N, 66° 26' W) (RWG); Sucre State: Puerto Viejo (10° 43' N, 62° 28' W) (RWG), near Las Piedras (10° 09' N, 63° 47' W) (RWG), Río Santa Isabel (10° 44' N, 62° 39' W) (RWG); Táchira State: Panamericana road, Puente Escalante (8° 30' N, 71° 46' W), Urcá (8° 09' N, 72° 15' W); Vargas State: Naiguatá (10° 36' N, 66° 44' W) (RWG); La Guaira (10° 36' N, 66° 56' W) (Calvert, 1909: 143), San Julián [Caraballeda] (10° 37' N, 66° 51' W) (Calvert, 1909: 143); Yaracuy State: Boquerón (10° 34' N, 68° 49' W) (RWG), Quebrada Parra (10° 07' N, 69° 03' W); Zulia State: El Tukuko (9° 52' N, 72° 50' W).

*Remarks*

*Argia cupraurea* is the least common of the three metallic species. It often occurs syntopically with either *A. jocosa* or *A. orichalcea*, and at several places all three species are found together,

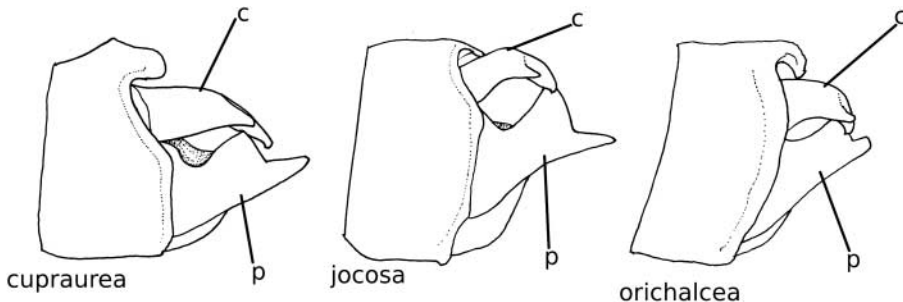


Figure 3. Male caudal appendages, left lateral view (c = cercus, p = paraproct), of *Argia* of the “metallic group” of species from Venezuela (to scale).

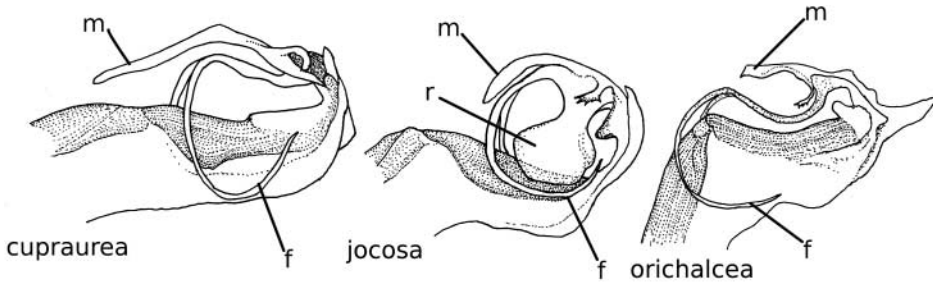


Figure 4. Genital ligula, right lateral view (f = flagellum, m = median lobe, r = membranous rounded lobe), of *Argia* of the “metallic group” of species from Venezuela (to scale).

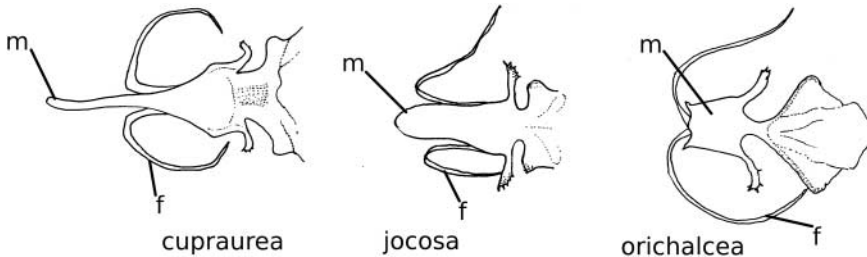


Figure 5. Apical segment of genital ligula, ventral view, of *Argia* of the “metallic group” of species from Venezuela (to scale).

as is the case along the lower course of the Río Alpagatón (Carabobo State), Puente Escalante (Táchira State), and El Tukuko (Zulia State).

***Argia jocosa* Hagen in Selys, 1865**

(Figures 1–12, 14)

Type locality: COLOMBIA: Santa Fe de Bogotá

*Material examined*

Adults: 93 males, 48 females, one ultimate stadium female exuvia (reared), all from Venezuela (all in MIZA).

*Diagnosis*

*Male* (live colour Figure 1b). Labrum coppery red metallic, except free border, broadly (up to half of the width of labrum) orange. Live specimens with top of head and thoracic dorsum bright coppery red, not metallic amethyst violet. Small, blue spot near upper end of humeral suture on mesepimeron normally absent. Abdominal segment 7 black above with narrow blue basal ring, of about one-eighth or less the segment’s length. Apical segment of genital ligula with short, broad median projection, and with paired flagella. In lateral view, each flagellum entally with a large, membranous, rounded lobe at its base (Figure 4). Cercus in lateral view with ventral border of outer branch regularly curved, tip of inner branch directed ventrad (Figure 3).

Measurements: total length 37–43.5, hindwing length 20–24.

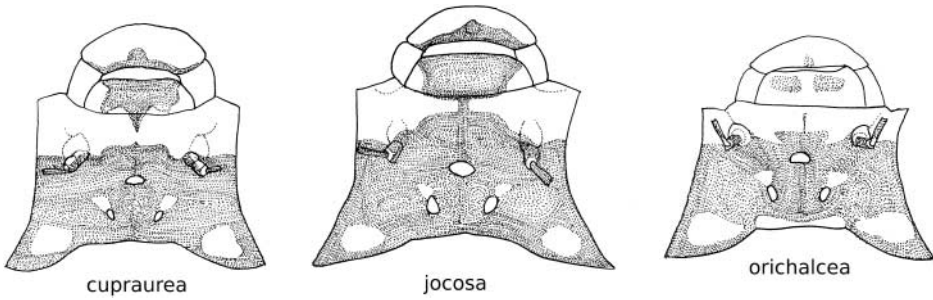


Figure 6. Female colour pattern, top of head, dorsal view, of *Argia* of the “metallic group” of species from Venezuela (to scale).

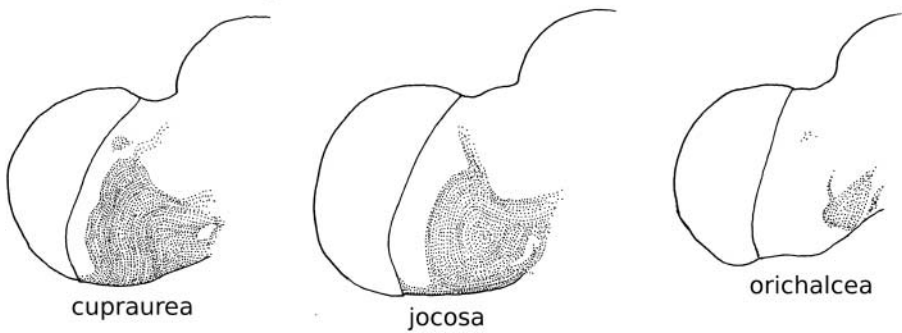


Figure 7. Female colour pattern, rear of head, ventral view, of *Argia* of the “metallic group” of species from Venezuela (to scale).

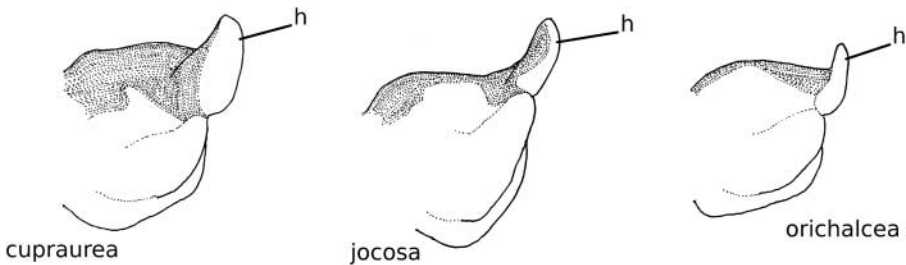


Figure 8. Female prothorax, left lateral view (h = hindlobe) of *Argia* of the “metallic group” of species from Venezuela (to scale).

*Female* (live colour Figure 2b). Female diagnosed from *A. cupraurea* above. Labrum with dark, metallic basal stripe (which is occasionally undeveloped); postclypeus similar to that described for *A. cupraurea*; black line connecting dark colour of frons with dark clypeus across pale vertical portion of frons (Figure 6) usually present; no pale occipital line between postocular spots. Pale band along eye border on rear of head (Figure 7) usually broader than in *A. cupraurea*. Pronotal hind lobe (Figure 8) usually rising from middle lobe at an obtuse angle (i.e. greater than 90°), mesostigmal lobe (Figures 9, 10) usually short and straight, minute tubercle at mesal posterior border of depression behind mesostigmal lobe opposite to well-developed mesostigmal tubercle (Figure 9) usually present.

Measurements: total length 34–37, hindwing 21–23.5.

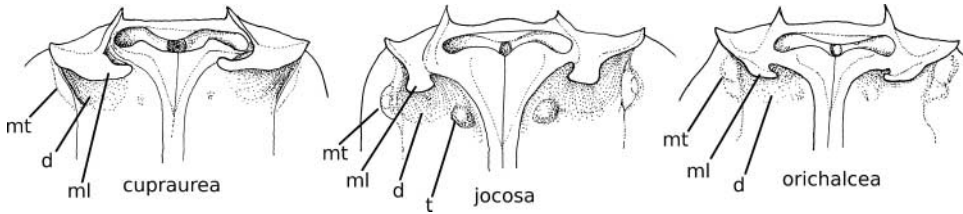


Figure 9. Anterior portion of female mesothorax, dorsal view (d = depression behind mesostigmal lamina, ml = mesostigmal lobe, mt = mesostigmal tubercle, t = mesal tubercle) (to scale).

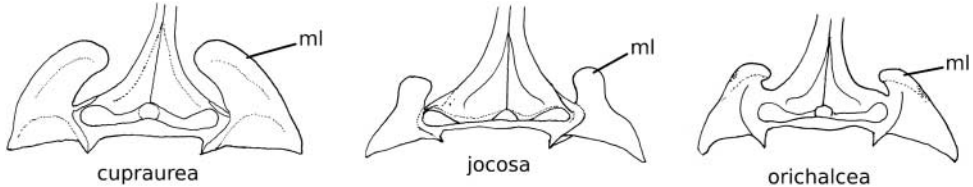


Figure 10. Female mesostigmal lobes (ml), dorsoanterior view (to scale).

*Larva* (Aragua State, La Trilla, Henri Pittier National Park, 20 November 1981). Exuvia pale with only caudal gills (epiprocts and paraprocts) heavily pigmented. Head (Figure 11a) with pale spot in front of each lateral ocellus. Antenna longer than head, slender, devoid of hairs, with seven segments, the second and third darker than the rest (Figure 11b). Occiput concave; postocular lobe behind compound eye shorter than compound eye itself; hind border of postocular lobe with small spiniform setae (Figure 11a). Row of 9–10 spiniform setae also ventrally on head, along internal eye seam; similar number of such setae ventrally on postocular lobes at the level of neck. Prementum reaching to behind first coxa, with strongly convex median lobe (ligula), and with three to four spiniform laterobasal setae on each side (Figure 11c). Labial palp bearing one long seta near base of movable hook (lost on left palp) (Figure 11d). Two teeth of labial palp slender and pointed, much resembling a movable hook.

Hind lobe of pronotum at lateral angle with five to six short spiniform setae. Wing cases extending to end of segment 4 (segments 1–4 being extremely extended in exuvia). Legs pale, femora with two broad, tibiae with three narrow, barely distinguishable, darker bands; all carinae with short spiniform setae, those dorsally longer; few scattered, soft hairs present, more evident on tarsi.

Abdomen pale, apparently with yet paler mediadorsal longitudinal stripe. Segments 5–10 with scattered spiniform setae on dorsum, and with more densely set spiniform setae along lateral and distal margin. Sternum 8 with about 20 scattered spiniform setae medially. Few scattered hairs mediadorsally on segments 5–10, more on segment 9. Outer genital valve armed with three irregular rows of claviform setae (Figure 12a); valves surpassing distal border of segment 10 by less than length of stylus. Median gill (Figure 12b) and lateral gill (Figure 12c) dark but largely translucent near tip and locally along margins, probably moderately inflated in basal half and foliaceous in distal half in live larvae; a few short, soft, pale hairs along dorsal margin and around tip of epiproct.

Measurements: total length (excluding caudal gills) 11.5; head width 3.0; hind femur 4.0; hind tibia 3.5; lateral gill (including apical filament) 5.0; median gill (including short point at tip) 3.5.

#### Remarks

This is the exuvia mentioned in De Marmels (2002: 46) as “*A. cupraurea*”. As noted there, the larva falls in the group with prominent ligula and one palpal seta, proposed by Novelo-Gutiérrez

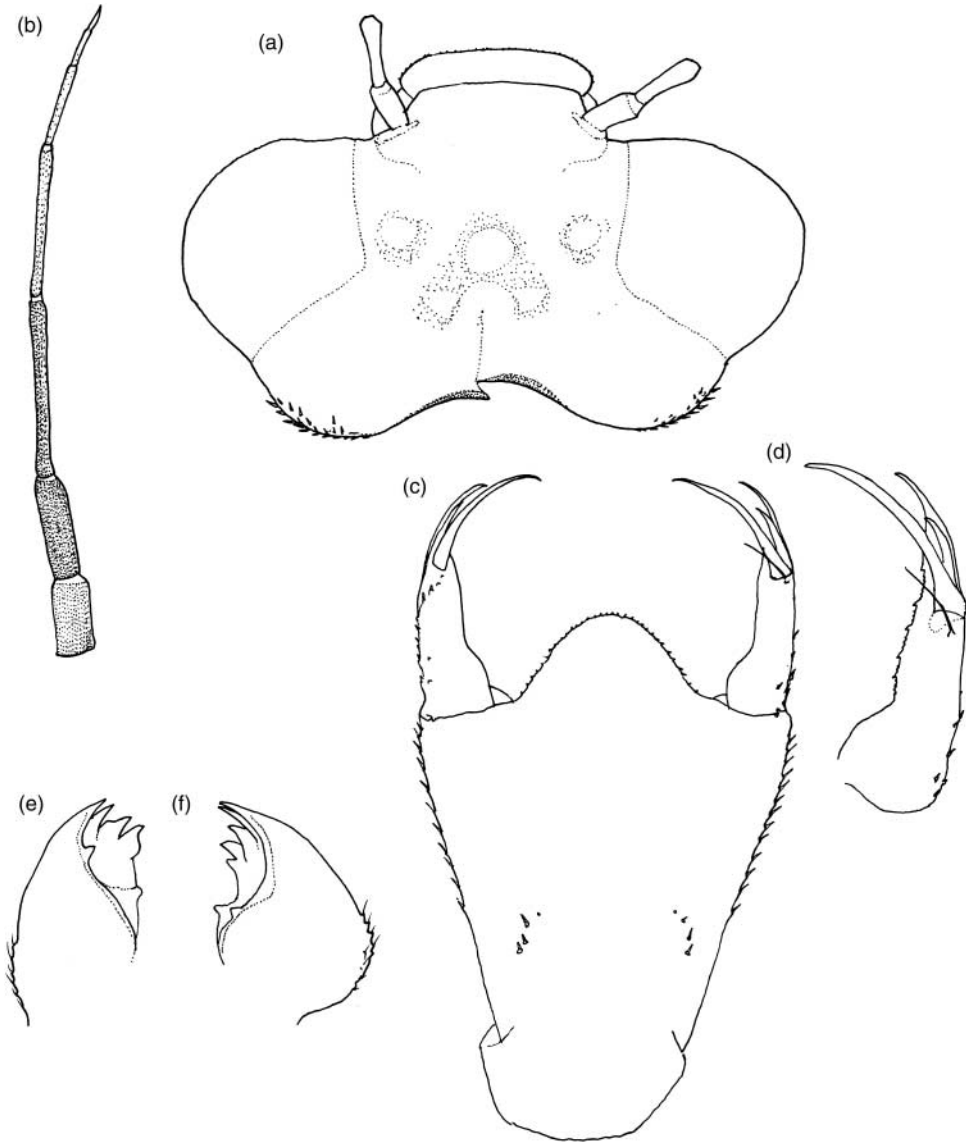


Figure 11. Ultimate stadium exuvia of female *Argia jocosa* from Venezuela (figures are not to scale): (a) head, dorsal view; (b) right antenna; (c) prementum, dorsal view; (d) right labial palp, dorsal view; (e) right mandible, ventral view; (f) left mandible, ventral view.

(1992). Besides the early instar and possibly misidentified larva of *A. orichalcea* described by Geijskes (1946) (see Novelo-Gutiérrez, 1992: 55), the larva of *A. oenea* Hagen in Selys, 1865 and *A. joergenseni* Ris, 1913 are the only preimaginal stages known of the “metallic group” (Novelo-Gutiérrez, 1992; von Ellenrieder, 2007; respectively). Neither species occurs in Venezuela. The larva of *A. jocosa* differs from that of *A. oenea* in the smaller number of laterobasal setae dorsally on prementum, fewer claviform setae on outer valve of gonapophyses and shorter apical filament of the caudal gills. In comparison with the larva of *A. joergenseni*, that of *A. jocosa* has fewer laterobasal setae on prementum, a much longer palpal seta, and differently shaped (and coloured) caudal gills, but large series of last-instar larvae may show some of these characters being variable.



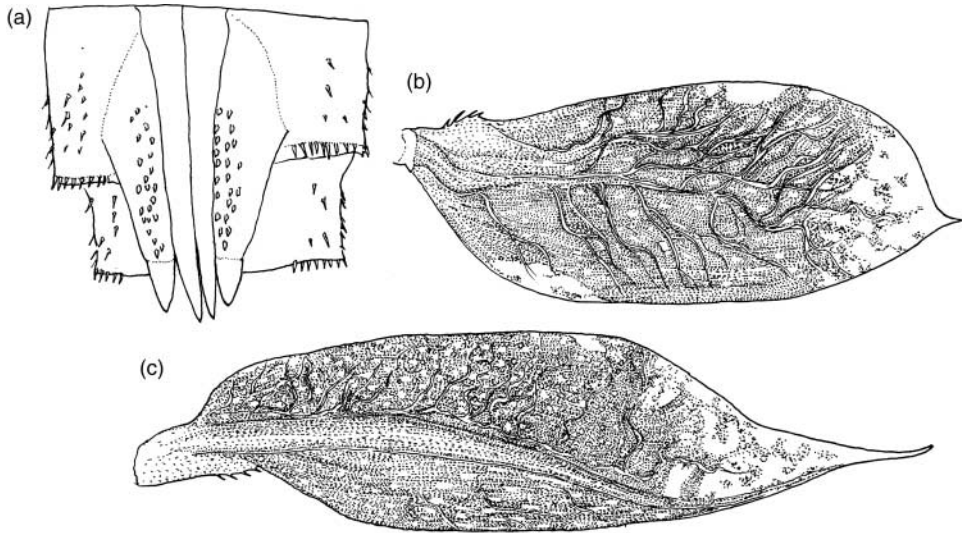


Figure 12. Ultimate stadium exuvia of female *Argia jocosa* from Venezuela (only figures b and c are to scale): (a) gonapophyses, ventral view; (b) median gill, left lateral view; (c) right lateral gill, left lateral (inner) view (hairs omitted).

### Habitat

*Argia jocosa* appears to have habitat requirements similar to those of *A. cupraurea*, with which it often co-occurs.

### Flight season

Records are from all months of the year.

### Distribution in Venezuela

All records of *Argia jocosa* are from north of the Orinoco river, between sea level and 1500 m elevation (Figure 14).

Anzoátegui State: Sirena Arriba, Puerto La Cruz (10° 10' N, 64° 40' W); Aragua State: Cumboto (10° 24' N, 67° 47' W), La Trilla (10° 24' N, 67° 46' W), La Victoria (10° 14' N, 67° 19' W), Pie del Cerro (10° 20' N, 67° 19' W), Pozo del Diablo (10° 17' N, 67° 36' W), Río Limón (10° 19' N, 67° 39' W); Barinas State: Barinitas (8° 45' N, 70° 25' W), Carabobo State: Aguas Calientes, Mariara (10° 19' N, 67° 41' W), Bejuma (10° 10'39" N, 68° 15'24" W) (RWG), Borburata (10° 27' N, 67° 58' W), Canoabo (10° 18' N, 68° 17' W), Caserío Silva (10° 09'30" N, 68° 10'59" W) (RWG), Palmichal (10° 16' N, 68° 15' W), San Esteban (10° 25' N, 68° 04' W), Yuma (10° 06' N, 67° 42' W); Falcón State: Cueva Zumbador (10° 51'20" N, 68° 36'50" W), Pueblo Nuevo de La Sierra (11° 13' N, 69° 32' W); Guárico State: Hacienda La Elvira (9° 52' N, 66° 25' W), La Colonia (10° 01' N, 66° 24' W); Miranda State: Bachiller, 17 km SW of Cúpira (10° 07' N, 65° 48' W), Guarenas (10° 28' N, 66° 37' W), Guatire (10° 29' N, 66° 33' W), Quebrada Las Palmas (10° 33' N, 66° 55' W), Santa Teresa (10° 14' N, 66° 40' W); Monagas State: Caripe (10° 10' N, 63° 30' W), Guácharo (10° 12'39" N, 63° 10'33" W), Guanaguana (10° 04' N, 63° 35' W), Mundo Nuevo, San Antonio de Cocollar (10° 06' N, 63° 41' W), Río Areo (9° 58'44" N, 63° 54'08" W); Sucre State: Las Trincheras, Cumanacoa (10° 12' N, 63° 53' W), Macuro, Paria (10° 40' N, 61° 56' W), Marigüitar (10° 23' N, 63° 53' W), Río Santa Isabel, Paria (10° 43' N, 62° 38' W); Táchira

State: La Blanca, vía Colón (8° 04' N, 72° 15' W), La Uracá (8° 09' N, 72° 15' W), Loma de Pío, San Cristóbal (7° 45' N, 72° 12' W), Panamericana road, Puente Escalante (8° 30' N, 71° 46' W), Río Frío (7° 40' N, 72° 16' W); Trujillo State: La Gira (9° 18' N, 70° 47' W); Vargas State: Chichiriviche (10° 32' N, 67° 14' W), Naiguatá (10° 37' N, 66° 43' W); Río Oritapo (10° 37' N, 66° 29' W); Yaracuy State: Aroa (10° 26' 19" N, 68° 53' 03" W) (RWG), Nirgua (10° 09' 18" N, 68° 33' 47" W) (RWG), Quebrada Parra (10° 07' N, 69° 03' W); Zulia State: Kunana (10° 03' 06" N, 72° 37' 59" W), El Tukuko (9° 52' N, 72° 50' W).

*Remark*

Common.

***Argia orichalcea Hagen in Selys, 1865***

(Figures 1–10, 15)

Type locality: VENEZUELA

*Material examined*

Adults: 86 males, 33 females.

*Diagnosis*

*Male* (live colour Figure 1c). Labrum pale orange, with only mediobasal pit dark. Live specimens with top of head and thoracic dorsum dark coppery red. Small, violaceous spot near upper end of humeral suture sometimes present and confluent or not with pale portion of mesepimeron. Pale lateral parts of thorax grey blue violaceous, often partially pruinose near venter; abdominal segments 3–7 mostly dark dorsally with grey blue violaceous basal ring, on segment 3 triangularly expanded dorsomedially for a short distance; segments 8–10 grey blue violaceous dorsally. Apical segment of genital ligula with short, almost square median projection (Figures 4, 5), with apical border undulated or fairly straight, usually bearing at each lateral angle a small point. Common stem of flagella strongly arched away from median lobe and again back towards it (Figure 4); flagella more sclerotized than in preceding two species, and lacking membranous lobes on ental surface. Cercus in lateral view (Figure 3) similar to that of *A. jocosus*, but inferior branch of paraproct in lateral view normally rather short and broadly rounded.

Measurements: total length 33–39.5, hindwing length 19–22.

*Female* (live colour Figure 2c). Labrum entirely pale, beige, with only mediobasal pit usually dark; postclypeus variable, either pale with two dark spots (Figure 6), or dark coppery with pale area at each lateral angle, and occasionally with additional pale spots mediobasally, as in *A. cupraurea*; black line connecting dark colour of frons with clypeus across pale vertical portion or frons (Figure 6) usually absent or incomplete; pale occipital stripe between postocular spots present or absent; rear of head with pale band of variable width along eye border, or with larger parts pale (Figure 7). Pronotal hind lobe (Figure 8) rising from middle lobe usually at a 90° angle; mesostigmal lobe short (Figures 9, 10); minute tubercle at mesal posterior border of depression behind mesostigmal lobe opposite to mesostigmal tubercle (Figure 9) usually absent.

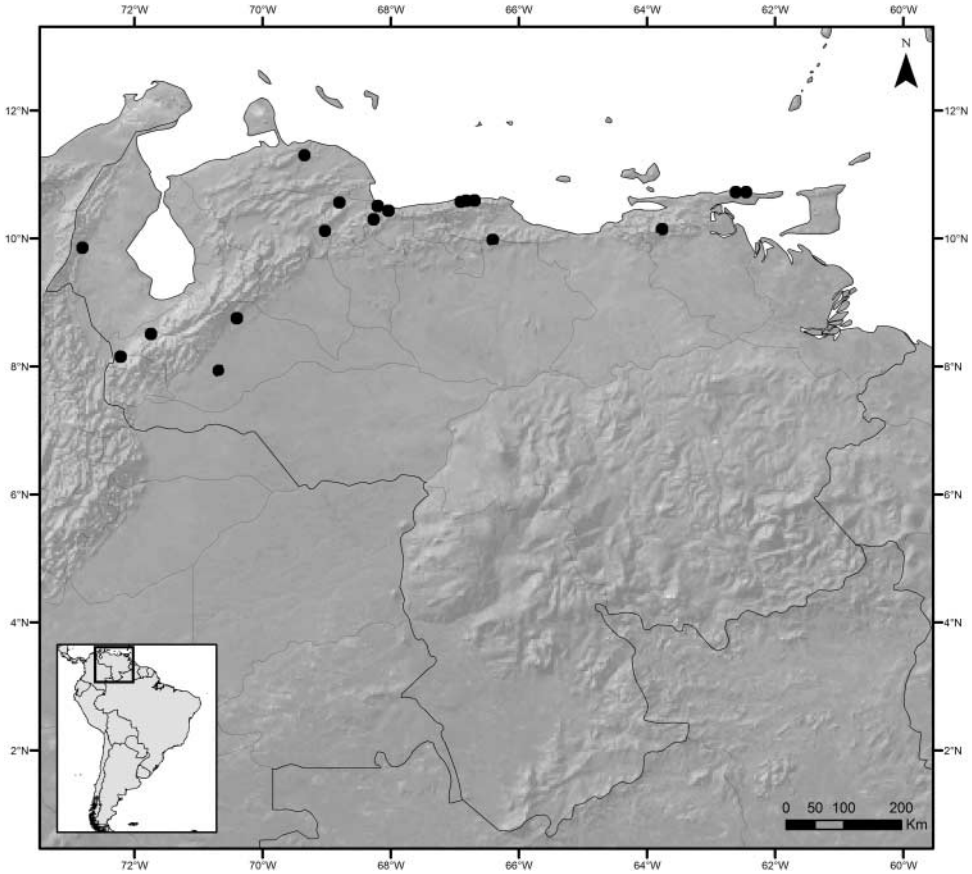


Figure 13. Distribution in Venezuela of *Argia cupraurea*.

Dark mesepimeral stripe usually either unconnected to humeral suture or broadly separated from it in basal half of mesepimeron, sometimes narrowly (Figure 2).

Measurements: total length 33.5–37, hindwing length 20–23.

*Larva.* A “probable third-ultimate female” larva from the island of Tobago was described by Geijskes (1946).

*Habitat*

*Argia orichalcea* lives in similar habitats to the two preceding species, with each of which it often co-occurs. However, this species has also been found at narrower, rocky streams, wherever these are not completely shaded.

*Flight season*

Records are from all months of the year.

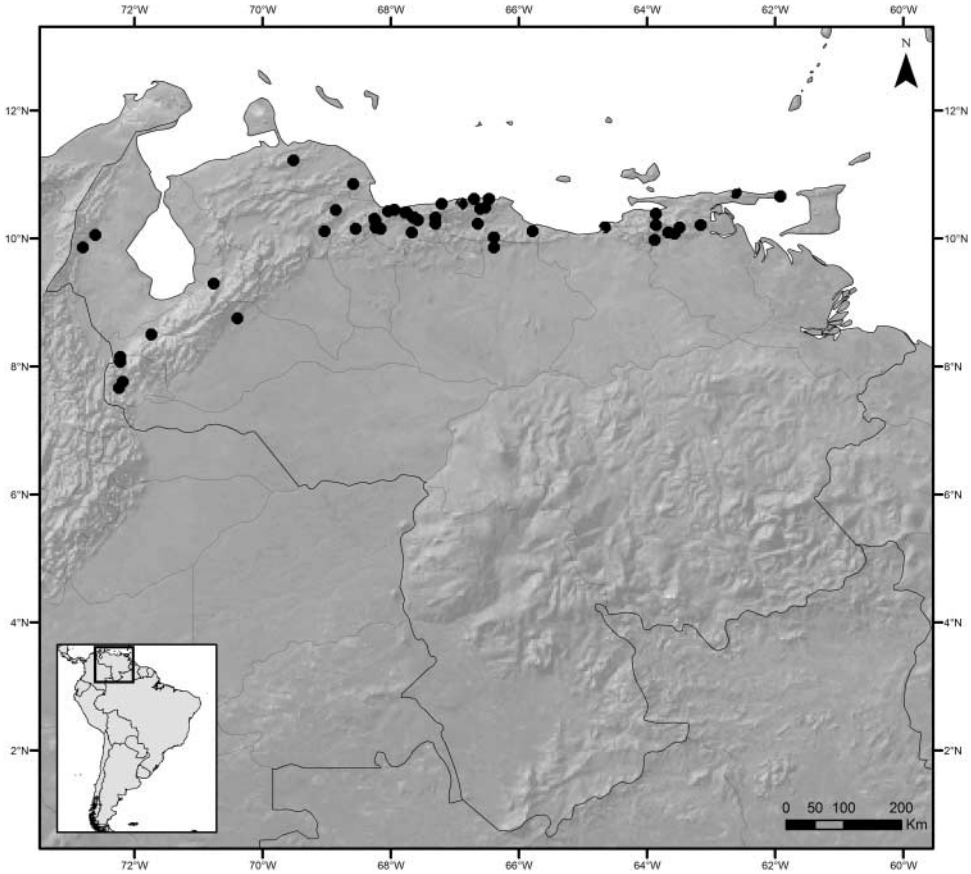


Figure 14. Distribution in Venezuela of *Argia jocosa*.

*Distribution in Venezuela*

The range of *A. orichalcea* reaches deeply into the southern llanos (plains), and crosses the Orinoco river to just south of its bank. This species occurs from sea level to 1000 m elevation (Figure 15).

Anzoátegui State: Bergantín (64° 20' N, 10° 02' W); Aragua State: Chuao (10° 30' N, 67° 31' W), Cumboto (10° 24' N, 67° 47' W), El Limón (10° 15' N, 67° 36' W), Guacamaya (10° 02'59" N, 67° 39'26" W), La Trilla (10° 24' N, 67° 46' W), Ocumare de La Costa (10° 27' N, 67° 46' W), Puerto Colombia (10° 30'01" N, 67° 36'26" W)(RWG), Tiara (10° 08' N, 67° 06' W); Barinas State: Puente Parangula, 8 km SE Barinitas (8° 43'05" N, 70° 21'09" W)(RWG); Bolívar State: Puente Yocoima, 2.19 km N Upata (8° 02'54" N, 62° 24'23" W)(RWG); Carabobo State: Bejuma (10° 10'39" N, 68° 15'24" W)(RWG), Río Alpargatón (10° 33' N, 68° 12' W); Cojedes State: El Pao (9° 38' N, 68° 06' W), Tinaquillo (9° 55' N, 68° 18' W); Falcón State: Capadare (11° 08' N, 68° 35' W), Mirimire (11° 10' N, 68° 40' W); Guárico State: Espino (8° 34' N, 66° 01' W); Miranda State: Caucagua (10° 17' N, 66° 22' W), Charallave (10° 15' N, 66° 51' W), Guatire (10° 29' N, 66° 33' W), Petare (10° 29' N, 66° 48' W); Monagas State: Caripito (10° 07' N, 63° 06' W), Guanaguana (10° 04' N, 63° 35' W), Nueva Esparta State: Cerro Matasiete (11° 03'34" N, 63° 50'32" W), Fuentidueño (11° 01' N, 63° 55'30" W), La Asunción (11° 02' N, 63° 52' W), La Sierra (11° 00'50" N, 63° 52' W), Salamanca (11° 03' N, 63° 51'30" W); Portuguesa State: Guanare (9° 04' N, 69° 44' W); Sucre State: Don Pedro (10° 43' N, 61° 55' W), Macuro, Paria (10° 40' N, 61° 56' W), Puerto Viejo, Paria (10° 43'08" N, 62° 28'44" W)(RWG), Río Las Piedras de Cocollar

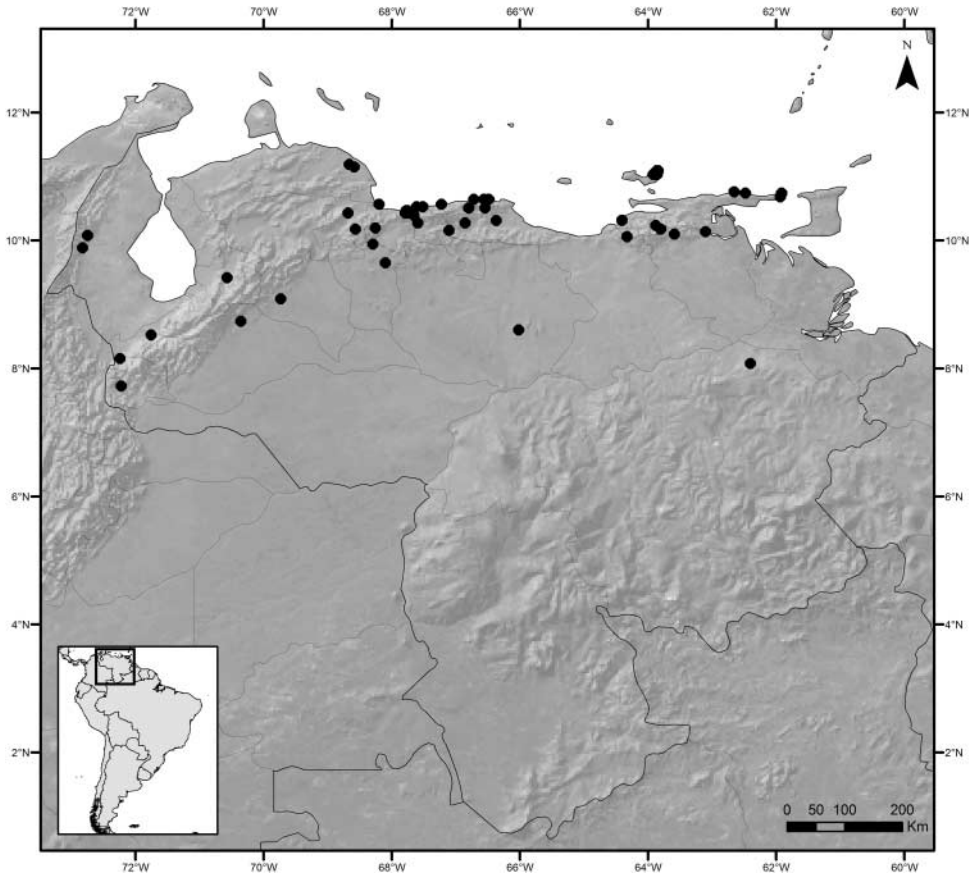


Figure 15. Distribution in Venezuela of *Argia orichalcea*.

(10° 09'37" N, 63° 47'37" W)(RWG), San Fernando, Cumanacoa (10° 12' N, 63° 53' W), Santa Fe (10° 17' N, 64° 24' W), Santa Isabel, Paria (10° 44'17" N, 62° 38'57" W)(RWG); Táchira State: Panamericana road, Puente Escalante (8° 30' N, 71° 46' W), road from Rubio to El Corozo (7° 42' N, 72° 14' W), Táchira [San Félix] (8° 07'04" N, 72° 15'19" W)(RWG); Trujillo State: Motatán (9° 24' N, 70° 35' W); Vargas State: Chichiriviche (10° 32' N, 67° 14' W), Los Caracas (10° 37' N, 66° 34' W), Naiguatá (10° 37' N, 66° 43' W), Oritapo (10° 37' N, 66° 29' W); Yaracuy State: Albarico (10° 23'56" N, 68° 41'44" W), Nirgua (10° 09'18" N, 68° 33'47" W)(RWG); Zulia State: Medellín (10° 03' N, 72° 45' W), El Tukuko (9° 52' N, 72° 50' W).

### Remarks

Common. Hagen's description (Hagen *in* Selys-Longchamps, 1865) is based on specimens caught by Karl Ferdinand Appun, who collected mainly in the mountains inland from San Esteban and Puerto Cabello, on the Caribbean coast (Carabobo State).

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