

AN INTERESTING *ARGIOLESTES* SELYS (ODONATA: ZYGOPTERA: MEGAPODAGRIONIDAE)) FROM THE PHILIPPINES

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A new megapodagrionid species, *Argiolestes realensis* Gapud and Recuenco, is described from Real, Quezon and is the first record of the occurrence of this genus in the Philippines. Its Philippine distribution cannot be accounted for in relation to the New Guinea and Indonesian species. Its dull brownish to dark brownish coloration makes it highly adapted to its habitat, the shaded rainforest floor.

Key words: *Argiolestes*, *A. realensis*, Megapodagrionidae, Odonata

The damselfly family Megapodagrionidae has long been represented in the Philippines by *Rhinagrion philippinum* (Selys), which is known to occur in Mt. Makiling (Needham and Gyger 1939). As early as March 1986, however, a collection trip to the National Botanic Garden in Real, Quezon yielded several males of what appeared to be a different species. They were set aside, together with the many other damselflies collected from the area for future examination. In April of 1987, the first observation of the horizontal wing resting position exhibited by this species, which is characteristic of dragonflies, led the senior author to believe that it belonged to a genus not known to occur in the Philippines. Trips to Mt. Makiling showed that the same wing resting position was exhibited by *Rhinagrion philippinum*. It appears now that this is a family character. After reviewing available literature, the species was tentatively placed under *Argiolestes* Selys.

The bulk of the species of *Argiolestes* occur in New Guinea and its neighboring islands. So far, three species have been described from Indonesia (Tsuda 1986) but which do not occur anywhere near the islands of the Philippines. A total of 16 males and 5 females are now available, all from Real, Quezon.

ARGIOLESTES REALENSIS Gapud and Recuenco, new species Figs. 1-4

Description

Male. Body generally dark brown above, pale brown to testaceous beneath. Head generally dark brown to fuscous, including eyes (Fig. 1), with some brownish to light brown areas as follows: median ocellus and transverse median groove before it, outer sides of lateral ocelli up to antennal bases but not reaching

inner ocular margin, postocular lobe except its anterior margin, frontoclypeal suture, anteclypeus, sometimes anterior margin of postclypeus, and anterior margin of labrum (sometimes its lateral and posterior margins). Head beneath pale brown to testaceous, mandibles dark brown. Antennal segments I and II dark brown, lighter at their apical margins; ant III brownish to light brown; ant IV and V dark brown; ant III equal to ant I and II together.

Pronotum generally dark brown, lighter between anterior and intermediate lobes and on posterolateral areas of intermediate lobes (Fig. 2B). Synthorax (Fig. 2B) with gradations of dark brown to pale brown coloration as follows: mesothoracic triangle and mesepisternum ("humeral" region of synthorax) dark brown, the latter often fuscous and almost shiny and metallic; mesepimeron and metepisternum brownish; metepimeron pale brown to testaceous; humeral and axillary sclerites with brownish and dark brownish markings; mesoscutum, mesopostnotum, metascutum, metascutellum and metapostnotum all brownish, each darkened at posterior margin.

Wings hyaline (Fig. 2A), the pterostigma dark brown. Wing venation typical of the genus, with selected observed vein positioning; arculus opposite or slightly beyond 2nd antenodal vein; radial sector (Rs) arising beyond subnodus (Sn); third median vein (M3) arising opposite subnodus (Sn), 2nd median vein (M2) usually arising after 8th postnodal vein (Pn); postnodals varying from 21/20 to 26/25 on forewing and from 20/19 to 24/22 on hindwing, the number often not the same between right and left pairs of wings; pterostigma (st) acute to acuminate at inner posterior angle and outer anterior angle, the stigma with 2 and 1/2 cells below it; intercalary veins along distal radial and median areas; quadrangle (q) elongate, anterior side more than three times longer than basal side, posterior side slightly longer than anterior side; subquadrangle twice as long as quadrangle; cubito-anal (cu-a or Ac) vein situated proximal to halfway between first and second antenodals (An), closer to first antenodal; 2nd cubital vein (Cu2) arising remotely away from (Ac), merged with marginal vein for the greater part, with two to three rows of cells distally below it.

Legs short, brownish, femora lighter colored than tibiae and tarsi; femoral and tibial setae long proximally, gradually shortening distally.

Abdomen generally brownish to dark brownish, paler on anterior and posterior margins of each segment, except Abd 1, 9 and 10. Genitalia on Abd 2 (Fig. 3) with brownish wall of genital fossa and auricles; exposed penis fuscous, with whitish fleshy tip; penis vesicle brownish, with lateral areas darkened; auricles short, not broadly expanded. Anal appendages brownish (Figs. 4A-B); superior appendages slender, arcuate, touching at their tips, outer sides with small spiny setae; inferior appendages short, moderately stout, slightly arcuate, reaching half the length of superior appendages.

Female. Body uniformly brownish above; labrum pale brown; abdomen becoming darker distally; head and thorax pale brown to testaceous beneath. Abd 8 and 9 enlarged (Figs. 4C-D); sternite 8 and abd 6 and 7 beneath dark brown; style black; outer valve of sternite 9 largely dark brown.

Body length, 48 - 55 mm in males and 46 - 47 mm in females.

Wing length, 33 - 37 mm in males and 33 - 36 mm in females.

Material Examined

Holotype, male, forest floor, National Botanic Garden, Real, Quezon, 26 March 1986, V.P. Gapud; **Allotype**, female, same locality, 8 April 1987, V.P. Gapud; **Paratypes**, 2 males, same locality, 26 March 1986, V.P. Gapud, 7 males, 2 females, same locality, 9 April 1987, V.P. Gapud, 6 males, 2 females, same locality, 14 April 1988, V.P. Gapud; all deposited in the Entomological Museum, Museum of Natural History, U.P. Los Baños.

Etymology:

This species is named after its type-locality, Real, Quezon, which appears to be restricted to that place.

Remarks

The unusual discovery of *Argiolestes* from the Philippines comes as a surprise, considering its center of distribution being New Guinea and its neighbouring islands. The limited access to pertinent literature, particularly of Lieftinck (1956) has made it impossible at this time to understand its affinities with other *Argiolestes* species. This rare find, however, shows that the distribution limits of this New Guinean genus may extend to many other Indonesian islands. Whether the genus occurs in Borneo cannot be ascertained. At the very least, the Philippine occurrence may be viewed as a case of discontinuous distribution.

Almost all the adults were observed on the forest floor of the rainforest reserve, conveniently concealed by their brownish color which blended with the litter and ground floor. Many of them were resting on the leaf surface of plants beneath the palms and low-growing trees. While a few were encountered on the forest undergrowth beside a forested stream, many were found as far as 100 meters away from streams, with individuals practically isolated from each other along the forest floor. It also appears that females are either fewer than males or inhabit more concealed places. Attempts to search for the naiads along suggested areas (Fraser 1956, CSIRO 1991) were unsuccessful.

Trips to many places in Luzon and in Palawan, Leyte, Bukidnon, Davao and South Cotabato in search of *Argiolestes* were not fruitful, which lead us to conclude that *Argiolestes realensis* is endemic to Real, Quezon more specifically at the National Botanic Garden rainforest. How the species got there remains an interesting zoogeographic puzzle.

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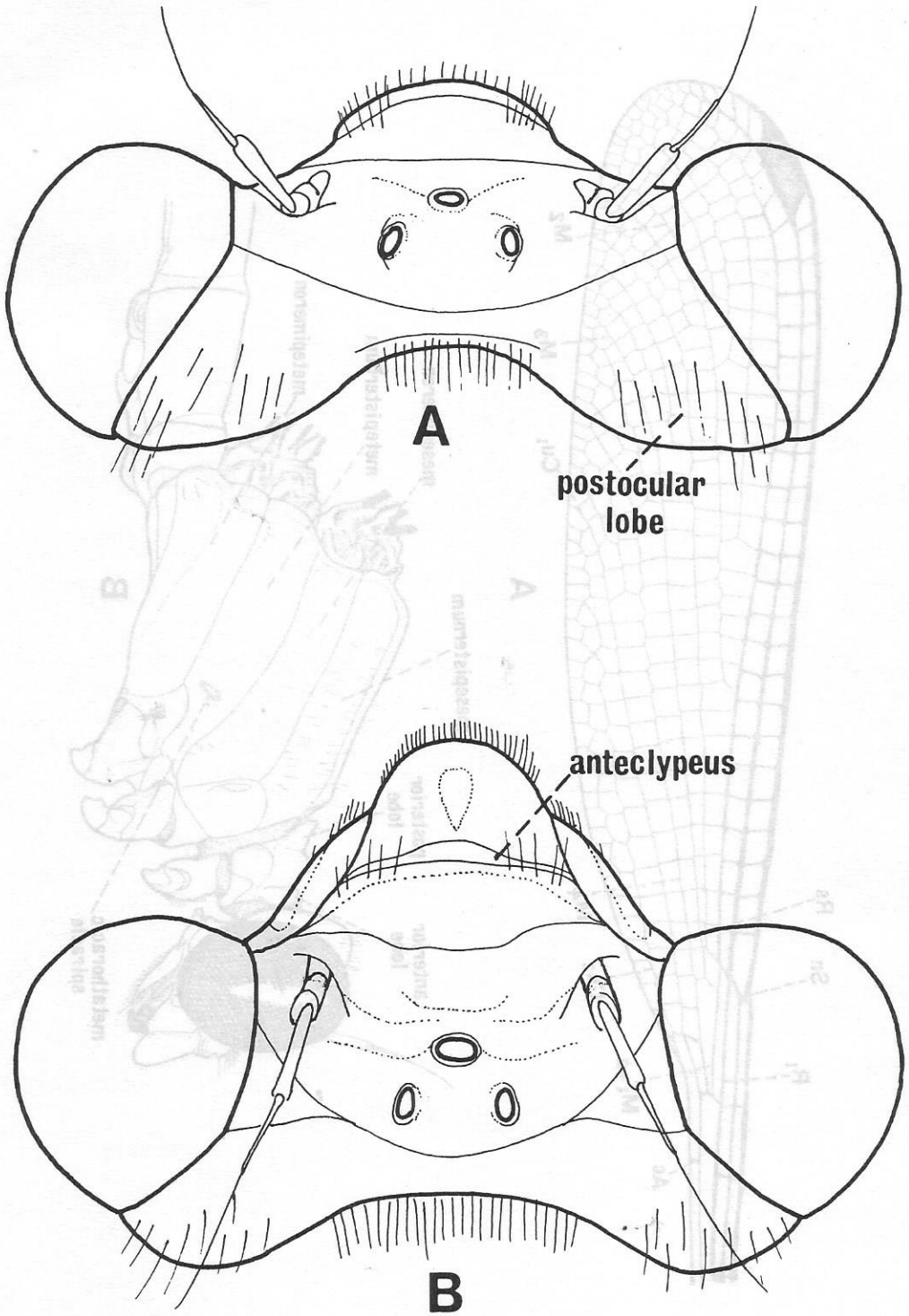


Figure 1. Head of *Argiolestes realensis*. A, dorsal aspect; B, frontal aspect.

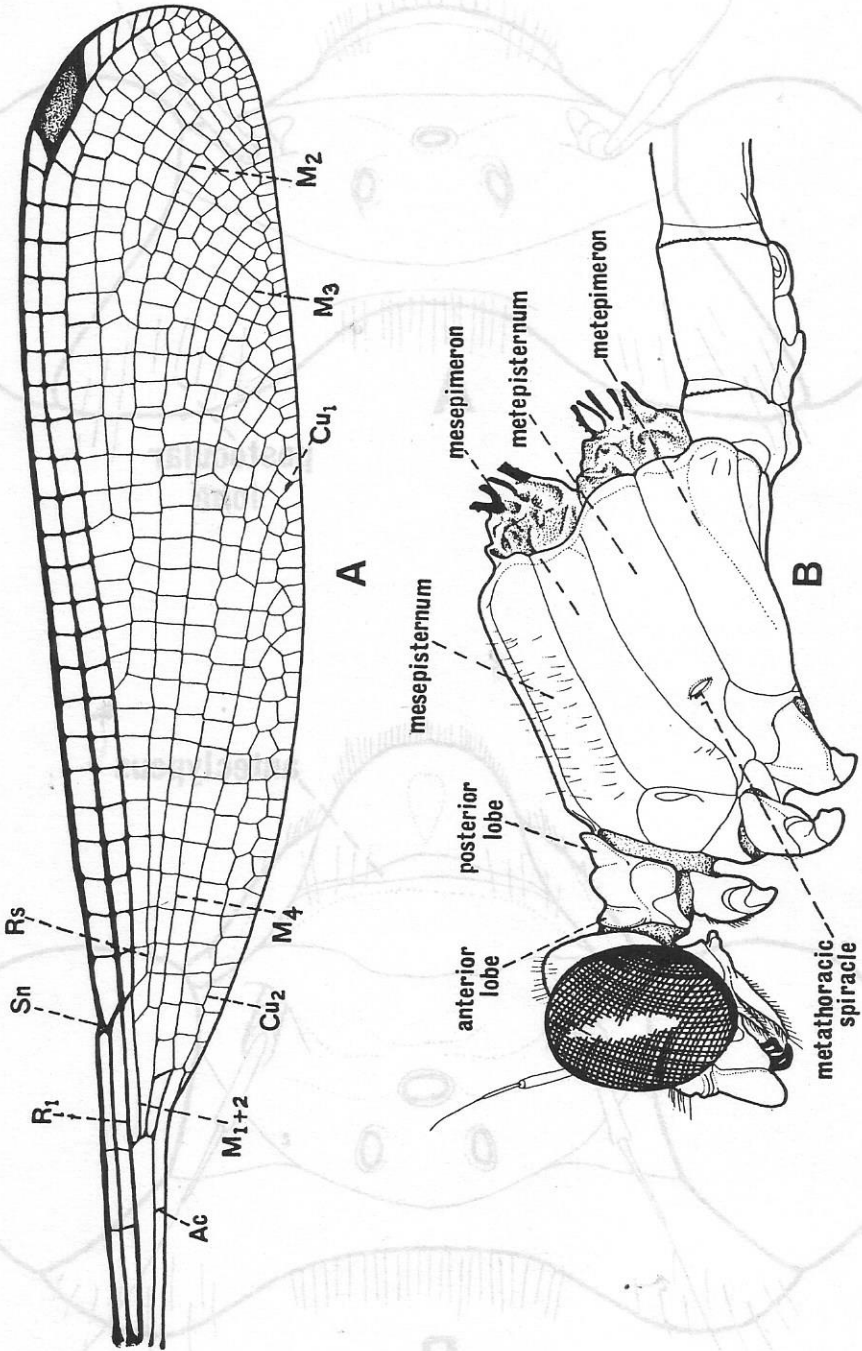


Figure 2. *Argiolestes realensis*. A, right forewing; B, head, thorax and base of abdomen, left lateral aspect.

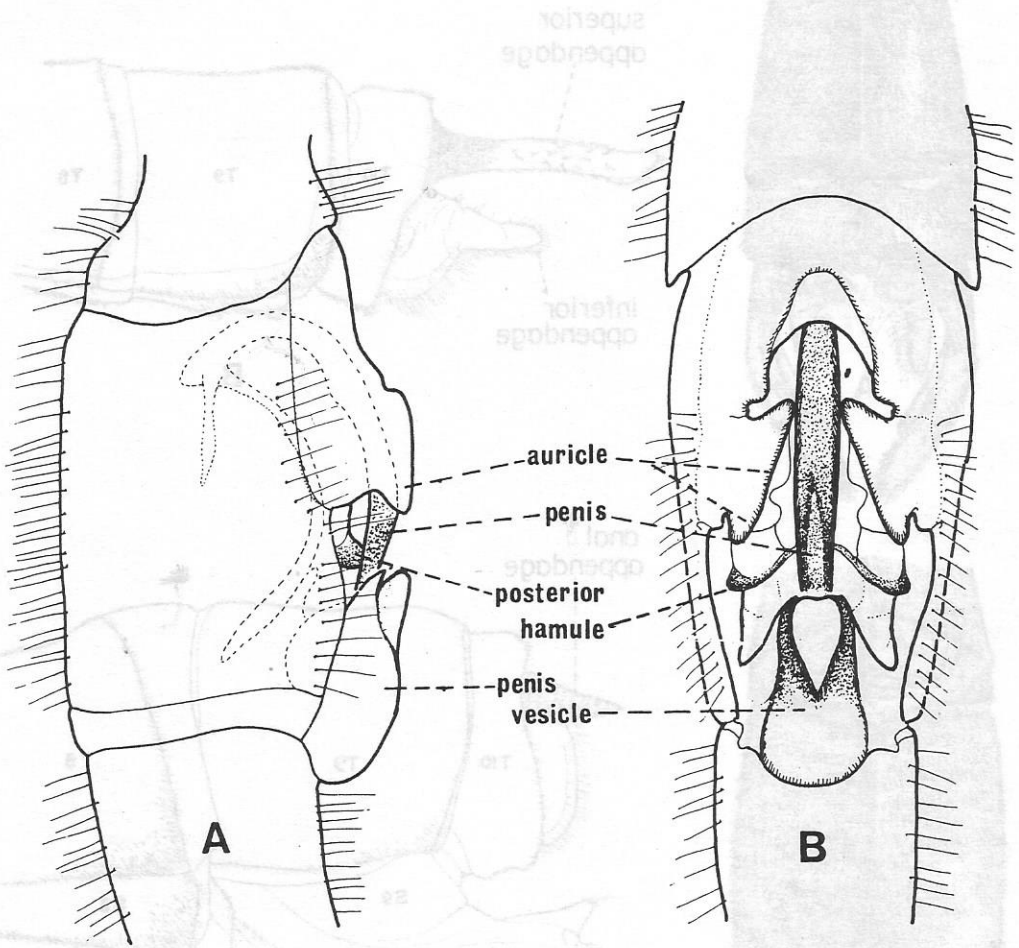


Figure 3. *Argiolestes realensis*, male genitalia. A, right lateral aspect; B, ventral aspect.

Figure 4. *Argiolestes realensis*, abdominal apex. A, male, showing anal ap-
pendages, dorsal aspect; B, male, same, right lateral aspect; C,
female, dorsal aspect; D, female, right lateral aspect.

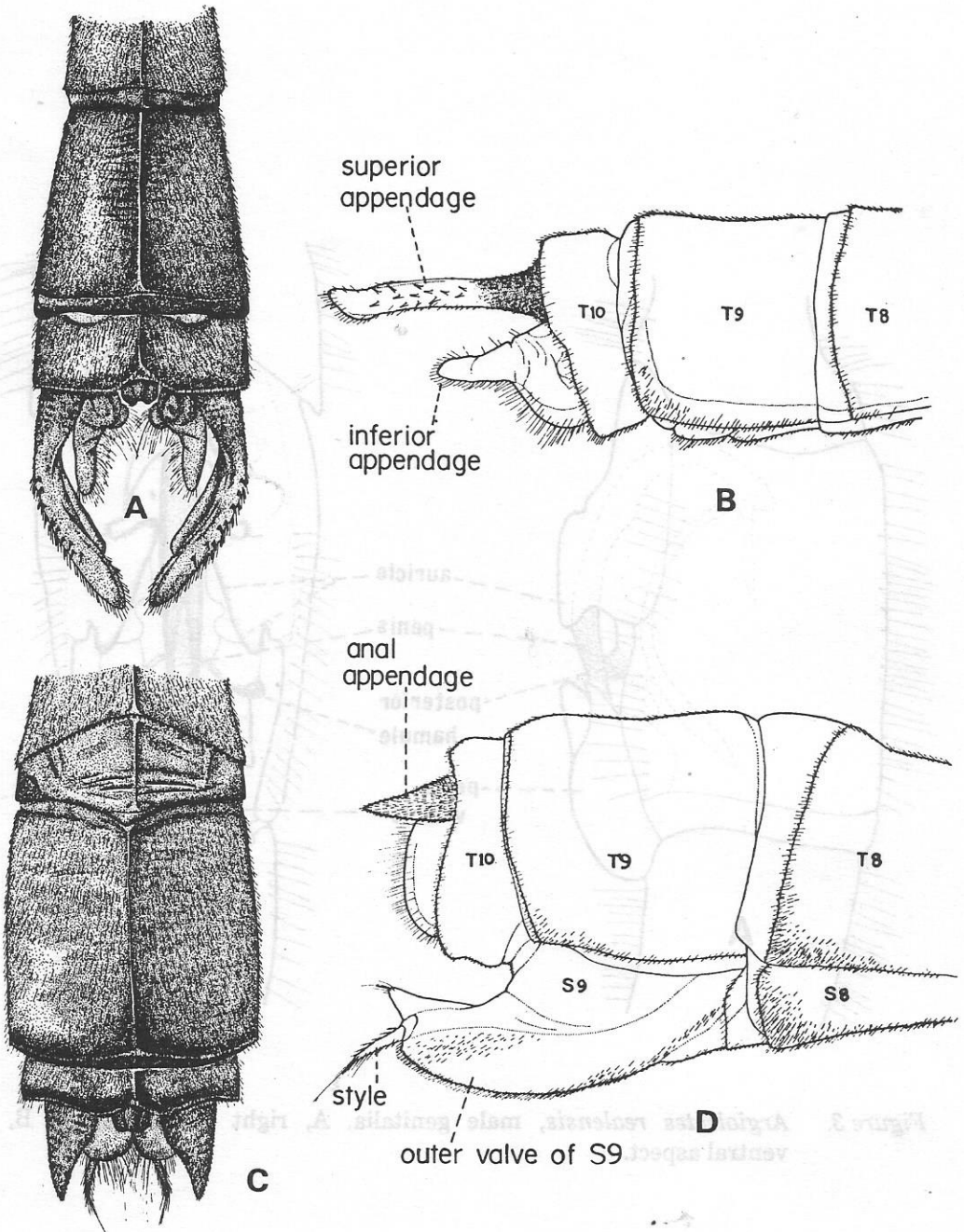


Figure 4. *Argiolestes realensis*, abdominal apex. A, male, showing anal appendages, dorsal aspect; B, male, same, right lateral aspect; C, female, dorsal aspect; D, female, right lateral aspect.