

SHORT COMMUNICATIONS

***AESHNA RUFIPES* RIS IN VENEZUELA, WITH A DESCRIPTION
OF THE MALE (ANISOPTERA: AESHNIDAE)**

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The hitherto unknown male of *A. rufipes* is described and compared with 4 females and with the original description of the type. Figures of the male genitalia and anal appendages are provided along with some notes on behaviour and habitat, based on observations made in Venezuela in 1979.

INTRODUCTION AND MATERIAL EXAMINED

RIS' (1918) description of *Aeshna rufipes* was based on a female from Colombia (Sosomuco, 800 m, March 1911). Another female from Perú (La Merced, Chanchamayo) was compared with this one by CALVERT (1956; with fig.).

I have four females and a male in hand, all from Venezuela. The five specimens were caught in the Costal Cordillera. They are now part of the collection of the late J. Rácenis, deposited in the Department of Entomology, Faculty of Agronomy, Universidad Central de Venezuela, Maracay, Aragua. The data are as follows: ♀ No. 1137, Quebrada Avila, D.F., 15-VIII-1952, Roze leg. (head missing); — ♀ No. 4095, Rancho Grande (1100 m), Aragua, 2-XI-1957, Rácenis leg.; — ♀ No. 10401, Quebrada Tocomé, Avila, Miranda, 21-XII-1964, Laitet & Naranjo leg.; — ♀ No. 13690, Quebrada Pasaquire, Avila (1000 m), Miranda, 3-IX-1979, De Marmels leg.; — ♂ No. 13691, ditto, 19-VIII-1979, De Marmels leg.

HABITAT AND HABITS

The species is probably also distributed in other side chains of the Venezuelan Andes, at about 1000 m above sea level. The male and female No. 13690 were found in a small stony creek that runs through a steep gorge covered with gallery forest. *Aeshna rufipes* is not uncommon here. Throughout 1979, but especially during July to October, I saw females flying along the water course looking for shady places to oviposit. They seemed to prefer dead branches and rotten trunks lying in the water or nearby, although once I saw a female ovipositing into earth and moss on the steep slope some 2 m above the water. Males could be seen only twice during the whole of 1979, despite more than 50 excursions carried out. The first one was seen early in July flying at a shaded pond-like extension of the Pasaquire creek. A month later I finally took the second male (the one here described), at the same spot. No other specimen has been seen there since. I always visited the creek between 10 a.m. and 2 or 3 p.m. Already RIS (1918) wrote on *A. rufipes* as "wahrscheinlich ein Schatten- oder Dämmerungstier". It is not impossible that the females oviposit in the daytime in order to avoid molestations by the supposedly crepuscular males.

However inconspicuous the rusty head and thorax and the dark brown to blackish abdomen may seem, the species shows up enough against the natural background to make it easily recognizable, especially when flying through a sunny spot in its otherwise mostly shaded habitat. Some autochthonous odonate species (out of a total of ca. 30), inhabiting the same part of the creek are: *Archilestes grandis* (Ramb.), *Megapodagrion venale* (Sel.), *Argia oculata* (Sel.), *Progomphus abbreviatus* Belle, *Aeshna cornigera* Brauer, *Libellula herculea* Karsch, *Cannaphila vibex* (Hag.), *Brechmorhoga rapax* (Calv.), and *Dythemis multipunctata* Kirby.

DESCRIPTION OF THE MALE, WITH REMARKS ON THE FEMALES

The coloration of the male resembles exactly that of the females, and is in accordance with the description given by RIS (1918). "Grünliche Nuancen", however, could not be observed. When alive, the eyes in both sexes are rusty, becoming orange red toward the occiput. With the exception of the eye color, the species does not show any post-mortem changes in body coloration. The male, like the females, lacks any body markings as well as a "T" spot.

The length of the male abdomen seems to me "normal", whereas the abdomen of the females in comparison is looking stout and shorter. However, measurements show only slight differences in body length between

Table 1
Venational features and body size of the *Aeshna rufipes* specimens examined

Feature	♂	♀	♀	♀	♀
T-cells	$\frac{5}{4} \mid \frac{5}{4}$	$\frac{5}{4} \mid \frac{4}{4}$	$\frac{5}{5} \mid \frac{5}{5}$	$\frac{4}{4} \mid \frac{4}{4}$	$\frac{5}{4} \mid \frac{5}{4}$
Hypertrigonal cells	$\frac{5}{3} \mid \frac{4}{3}$	$\frac{4}{3} \mid \frac{4}{3}$	$\frac{5}{4} \mid \frac{5}{4}$	$\frac{4}{3} \mid \frac{4}{3}$	$\frac{5}{4} \mid \frac{5}{4}$
Antenodals	$\frac{20}{13} \mid \frac{19}{12}$	$\frac{20}{14} \mid \frac{20}{13}$	$\frac{20}{13} \mid \frac{21}{14}$	$\frac{19}{12} \mid \frac{18}{11}$	$\frac{21}{14} \mid \frac{21}{15}$
Second reinforced An	$\frac{7}{7} \mid \frac{7}{7}$	$\frac{8}{7} \mid \frac{9}{7}$	$\frac{9}{7} \mid \frac{9}{8}$	$\frac{8}{7} \mid \frac{7}{6}$	$\frac{9}{8} \mid \frac{9}{8}$
Pterostigma Fw/Hw (mm)	2.8/2.6	3.0/2.8	3.0/3.0	3.0/3.0	3.0/2.8
Postnodals	$\frac{14}{14} \mid \frac{12}{14}$	$\frac{15}{16} \mid \frac{12}{17}$	$\frac{13}{16} \mid \frac{13}{17}$	$\frac{10}{13} \mid \frac{10}{13}$	$\frac{14}{16} \mid \frac{13}{15}$
Cu cross-veins	$\frac{6}{6} \mid \frac{6}{6}$	$\frac{7}{6} \mid \frac{8}{6}$	$\frac{8}{6} \mid \frac{8}{6}$	$\frac{6}{6} \mid \frac{6}{6}$	$\frac{8}{6} \mid \frac{7}{6}$
Double cells between Cu 1 and 1A (Hw)	3/5	5/4	3/5	1.5/2	3.5/3
Abdomen (without app.) / Hw (without root) (cm)	5.1/5.0	4.8/5.2	4.9/5.2	4.8/5.1	4.9/5.3
Superior app. (mm)	6.4	2	2	1.9	1.8

the two sexes (Tab. I). The male abdominal segment 3 is somewhat constricted. The auricles on segment 2 have two teeth each. The laminar spines of the genitalia are long and extend to beyond the hamular fold. The margins of the genital cavity have on their distal angle 5 to 7 small denticles each. The proximal half of segment 10 is provided dorsally with a very little prominent crest. The anal superior appendages are rusty, bordered with dark brown, and bear definite dorsal carinae. They are coated on their inner side with long dark hair tufts. They have a rounded apex and no spines at all. Length of superior appendages is 2.5 times the length of segment 10. The rusty inferior appendage is less than half the length of the superiors and

bears a small upcurved final hook. Segments 5 to 9 are provided in both sexes with incomplete supplementary longitudinal carinae, on segment 5 somewhat less clearly visible.

Wings are hyaline with slightly darkened apices in the male and in all but one female (No. 4095), which has brownish obscured wings beyond the nodus. The anal triangle is 3-celled. The membrana is rusty greyish and reaches to far beyond the origin of the cross vein in the anal triangle. It is, therefore, longer than half of the proximal side of the anal triangle, although getting continuously narrower. The pterostigma in the male is slightly shorter than in the females, and blackish, the females' is rusty. The male's wing venation is quite similar to that of the four Venezuelan females and the one described by Ris.

Subtriangle and proximal cell of triangle are both subdivided into two cells in all specimens. The male has on his right hindwing not one but two rows of cells between M4+5 and MA after junction of the costal branch of MA with M4+5. In the left hindwing there is only one row. The females have few or no doubled cells between M4+5 and MA in hindwing, and coincide roughly with Ris' specimen with only one cell-row until close to wing margin.

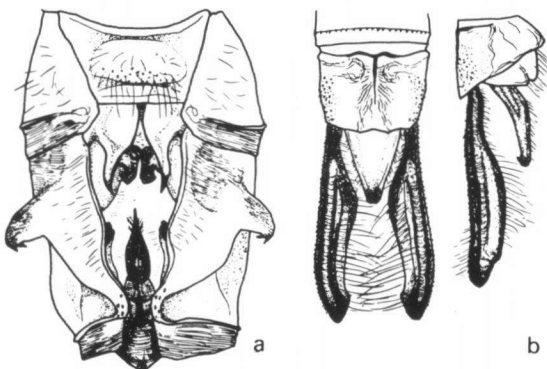


Fig. 1. *Aeshna rufipes* Ris, male: (a) second abdominal segment, with secondary genitalia, ventral view; — (b) anal appendages, dorsal and right lateral views.

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