THE IDENTITY OF STAUROPHLEBIA GIGANTULA MARTIN (ODONATA, AESHNIDAE)

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The large species of the genus *Staurophlebia* are confined to the neotropics and some to the Amazon-basin in particular. One of these species, *Staurophlebia gigantula,* was described as new by Martin (1909) after three males and two females present in the De Selys Longchamps collection and probably collected by H. W. Bates in the Amazonas district. With a photograph of the right wing pair of a male, a drawing of the male appendices in dorsal and lateral view and a figure in colour of a male specimen, the species seemed well fixed.

It was the second species of *Staurophlebia* described, and for 50 years it was known from its types only. During my first expedition into the interior of Surinam in 1939, I found near the Brazilian border a species of *Staurophlebia* not belonging to the common *S. reticulata* (Burm.). At first it was thought to be *S. gigantula,* but later it proved to be a new species, which was then, under the name *S. wayana,* described by me as new in my revision of the genus (Geijskes, 1959).

On 10 March 1957 Dr. J. Racenis of Caracas collected in San Juan de Manapiare, Amazonas, Venezuela, a male specimen of a *Staurophlebia,* which he sent me for comparison with my *S. wayana.* A careful examination showed that this species was not the same as mine, differing in the yellow occipital triangle, the shorter second segment of the antenna and in some peculiarities of the appendices. It could be *S. gigantula,* had the appendix inferior been shorter.

Within the series of six species of the genus, *S. gigantula* is characterized by the short male appendix inferior, which, measured from the figure of the appendices given in the original description, reaches only $^1/_3$ of the length of the appendices superiores, instead of $^2/_3$ as in all the other species of *Staurophlebia.* But in the original description Martin (1909) said of the appendix inferior in relation to the appendices superiores: "l'inférieur de moitié moins long, triangulaire, très pointu au bout". Furthermore, *S. gigantula* is the smallest species of the genus measuring in total 75 to 76 mm against 80 to 96 mm in the other species. It belongs in the group with

the occipital triangle on top of the head yellow or partly yellow, and not pitch black.

When revising the genus *Staurophlebia,* I was not able to study the types of *S. gigantula* in the collection of De Selys Longchamps in the Institut Royal des Sciences Naturelles de Belgique in Brussels. This was done one year later on 5 September 1960. I found there three males and one female (Martin mentioned three males and two females), all labelled "typus". The specimens give an impression of being small and slender and one of the males is juvenile. To my surprise I found that in two of the males the appendix inferior is normally developed to a length of $^2/_3$ that of the appendices superiores. In the third male, however, the appendix inferior was dislocated and partly retracted in the abdomen; the visible part of the appendix was bent to the right side, reaching to the outside of the right appendix superior. When seen in profile from the left side, the appendix inferior is foreshortened and indeed looks much shorter than normal. It became evident that figure 217 of the male appendices in Martin's (1909) description was unfortunately made after this specimen. Mr. Menger, who made the otherwise excellent drawings, had corrected the oblique position of the appendix inferior with the result that its total length became too small. The reason why this specimen was selected for figuring could be the advantageous position of the appendices superiores.

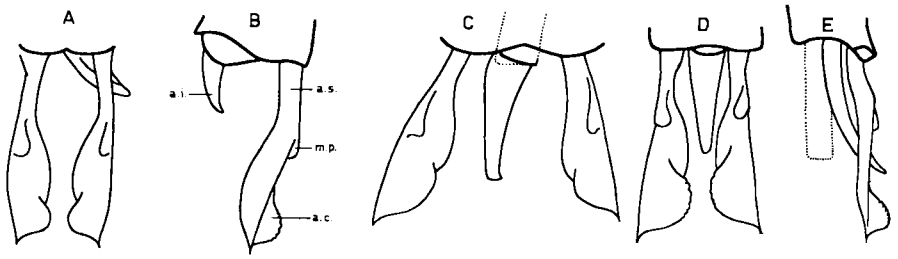

Fig. 1. *Staurophlebia gigantula* Martin, male appendices. A, B, hololectotype; C-E, paralectotypes. A, C, D, in dorsal view; B, E, lateral view. Dotted lines indicate the inserted pieces of straw. a.i., appendix inferior; a.s., appendix superior; m.p., middorsal process; a.c., apical crest.

In the other two male types the appendix inferior reaches to the level of the appendices superiores just between the dorsal process and the apical crest. In one of the specimens this appendix is somewhat extruded by a piece of fine straw, put in to strengthen the abdomen. The third male has a piece of straw, visible at the end of the abdomen to about halfway under the appendices.

The following additional peculiarities could be observed of the type specimens. The occipital triangle at the upper hind margin of the head is yellow with a wide black stripe along the eye margins in front. The back of the head is black without paler spots. The face is pale yellow, the frons is marked with a fine black cross-line in front, the T-spot on the top has a fine stem connected with a wide black base line in front of the antennae. The antennae are short and black. In one of the males, probably a juvenile specimen, the stem of the T-spot on the top of the frons is not visible, as is the base line before the antennae.

The yellow-green synthorax has two short brown antehumeral stripes and a dark brown stripe on each side of the mid-dorsal carina.

The wings are hyaline, the membrane is light grey; the triangle has 7 cells in the front wing and 6 cells in the hind wing. In the juvenile male specimen the right hind wing has 3 rows of cells between the anal loop and the hind margin of the wing, in the left hind wing there are only two rows of cells.

The third abdominal segment is constricted; the ventral carina along the genital fossa of the second segment is beset with 15 or 16 small black spines. The auriculae are armed with 3 large dents.

In spite of the fact that the appendix inferior of the figured male specimen is not in its normal position, this specimen is now selected the holo-lectotype of the species *Staurophlebia gigantula* Martin.

The only female type specimen has the black T-spot of the frons weakly developed, the occipital triangle is black as is the back of the head. The appendices superiores are lanceolate like those of the female of *S. reticulata,* but are shorter, the top is rounded. The specimen is damaged by a piece of straw which was pressed through the abdomen, whereas furthermore the tips of the right wing pair are partly broken off.

Summarizing we can state that the study of the type specimens of *Staurophlebia gigantula* Martin in the collection of De Selys Longchamps in the Brussels Museum has shown that the species is characterized by its small size and slender appearance, by the partly yellow occipital triangle (at least in the males), by a row of 15 or 16 small black spines at the ventral carina along the genital fossa and by its male appendices of which the appendix inferior reaches $^2/_3$ the length of the appendices superiores, as normal in the other species of this genus. The figures of the male appendices given in the original description of Martin are misleading as far as concerns the length of the appendix inferior, which is figured in an abnormal position caused by the strengthening of the abdomen with a piece of straw.

The above mentioned specimen collected by Dr. Racenis in Venezuela

proved to belong indeed to *S. gigantula,* so that the species has been rediscovered after about 50 years.

References

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