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A NEW CORDULINE DRAGONFLY, *TETRAGONEURIA*
SEPIA, FROM FLORIDA (ODONATA)

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A specimen of the genus *Tetragoneuria* collected near Greenville, Florida, by Mrs. W. H. Ditzler, a member of the Williamson-Ditzler Expedition of 1932,¹ was examined in the field by Mr. E. B. Williamson, who immediately recognized its distinctness from other known species. Upon his return to the Museum, he requested me to study this specimen and describe it if it should prove to be new. After comparing it with material in the Museum collection and consulting the literature, especially the papers by Muttkowski (1911, 1915) and Davis (1933), and the extensive unpublished notes on *Tetragoneuria* in the Selys' collection at the Brussels Museum made by Dr. F. Ris in 1910, I have come to the conclusion that it represents an undescribed species. Since there is very little possibility of obtaining additional material within the next few years, it seems justifiable to publish a description based on a single male specimen.

¹ Members of the party: the late Mr. E. B. Williamson, Mr. and Mrs. W. H. Ditzler, Misses Laura and Helen Ditzler, Mr. Beryl Buis, Mr. Mark J. Decker, and the author.

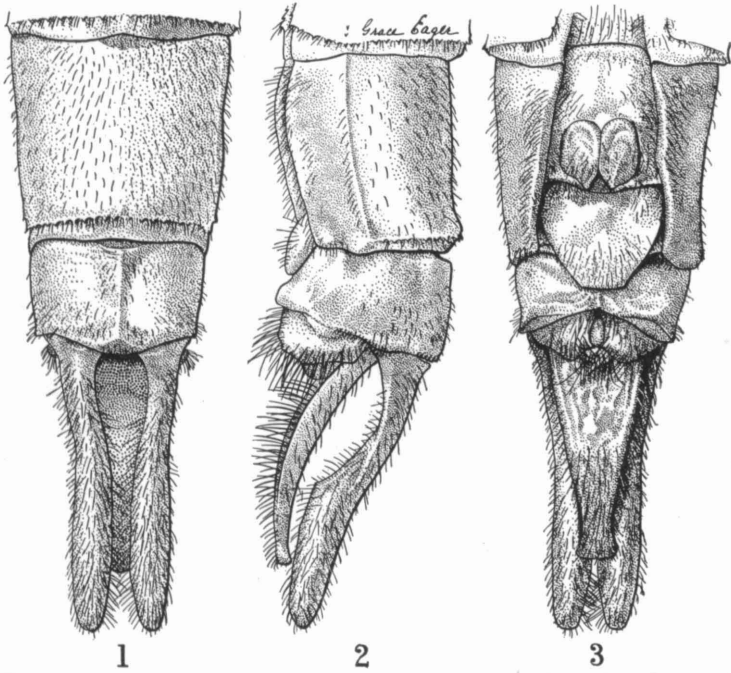
Tetragoneuria sepia, new species

HEAD.—Labium light yellow; labrum golden yellow; clypeus and sides of frons olivaceous; lower part of frons in front golden bronze becoming darker dorsally; upper part of frons with a metallic blue black **T**-spot, the cross piece wide and covering almost the entire width of frons, the stem short; vertex and occiput medium olivaceous brown. Pile of face dark brown. Rear of head black with a submarginal fringe of whitish hairs.

Thorax. Prothorax, brown except for the cream colored margin of the front lobe. Synthorax, dorsally a rich medium brown (Roman *sepia*), laterally olivaceous brown; covered with a fine silky brown pile, giving it a rich and velvety appearance. Dark stripe on humeral, lower half of first and the second lateral sutures, metallic blue black. Metastigma narrowly margined with black, with a bright yellow spot above and below. Intersternum dark brown with lighter lateral and posterior margins. Coxae, front and middle trochanters, and all of front femur except apex, light brown; legs otherwise dark brown. Tibial keel, front and middle legs about three-fifths, hind leg about five-sixths the length of the tibia. Front and hind wings hyaline, the latter with basal brown as follows: on either side of the subcostal vein, posteriorly in subcostal space touching the radius, and extending one-third the distance to first antenodal crossvein; basal fourth of cubital space; median third of anal triangle; margin of the **V**-shaped crossvein on distal side of anal triangle (between A_3 and A_4). Costa of front wings slightly yellowish near base; venation otherwise medium to dark brown. Pterostigma, medium brown. Membranule smoky brown, lighter at base.

Abdomen. Ground color, medium yellowish brown; large ventro-lateral areas occupying entire length of segments 2, 3, and basal half of 4, yellow; dorsal patch on 2 and basal half of 3, dark brown; the following areas brownish black: dorsal patches on apical half of 3 and on 4-10 forming a continuous broad stripe except for the light intersegmental membranes of 6-9; dorsum of auricle and small area between it and apical

margin of segment, and ventral margin of 2 and of genital lobe; ventral and apical margins of 3-8; lateral carina of apical two-thirds of 4 and of 5-9; ventrum of 10, and abdominal appendages. Hairs on 1 and dorsum of basal third of 2, light medium brown; on appendages, brownish black; otherwise inconspicuous or wanting.



FIGS. 1-3. *Tetragoneuria sepia*, new species. Dorsal, lateral, and ventral view of abdominal appendages and segments 9 and 10.

Abdomen slightly longer than hind wings, more slender than *T. cynosura*, widest at segment 3, narrowing slightly at segments 5 and 6, widening slightly at 7 and 8, thence narrowing again at 9 and 10. Genital lobes narrower and smaller than in *T. cynosura* or *T. stella*.

Superior appendages about as long as 9 + 10; dorsally (Fig. 1), inner margin convexly curved in basal half, and parallel in apical half except for a slight divergence due to the taper-

ing apices; in profile (Fig. 2), slightly arched dorsally, excavated ventrally at base, with distinct inferior obtuse angle at three-sevenths the length; lateral carina well defined to and slightly beyond inferior angle. Inferior appendage about seven-ninths as long as the superior appendages; apex truncate, two-fifths basal width (Fig. 3); in profile gently curved upward with upper and lower edges subparallel.

Venation. Antenodals, first and second series: front wing, 6 (1 wing) or 7 (1 wing); hind wing, 4 (2 wings). Postnodals: front wing, 5 (2 wings); hind wing, 5 (1 wing) or 6 (1 wing). Substigmatal series in both front and hind wings arising between third and fourth postnodal. Triangle of fore wings with one crossvein. Pterostigma about 4 times as long as broad.

Measurements in millimeters. Length, 43; synthorax, 8; abdomen, 27.5; segment 3, length 4.7, width 3.4; segment 6, length 3.6, width 2.5; pterostigma, 2.3; length of hind femur, 7.5; superior appendages, 2.7; inferior appendages, 2.1.

Holotype ♂, Aucilla River, near Pettis Springs (6 miles west of Greenville), Madison County, Florida, September 7, 1932, Mrs. W. H. Ditzler (Williamson-Ditzler Expedition); in the collection of the Museum of Zoology, University of Michigan.

Affinities. The form of the appendages places *T. sepia* with the *cynosura* group. The greatly reduced basal wing spots and the rich brown color of the whole insect in general immediately set it apart from other members of the group. *T. stella*, another southern species, also has a reduced wing pattern but it is a larger, more slender, and paler insect. The following characters are distinctive: dark brown spot covering almost the entire intersternum; superior appendages about as long as, or slightly shorter than, abdominal segments 9 + 10; inferior appendage relatively longer than in the other species. In profile (Fig. 2) the ventral obtuse angle of the superior appendages is intermediate between *T. cynosura* and *T. stella*, but more posterior than in either.

Bionomics. Due to heavy rains just prior to and during our stay (August 29–September 8) at Pettis Springs, the water

level in swamps adjacent to the Aucilla River was raised to a depth of 3 or 4 feet. These swamps and any isolated ponds which may have existed in normal times were continuous with the river. Because of this rather unusual condition it is impossible to state whether the normal habitat of *T. sepia* is a sluggish stream or a swamp pond.

The single specimen of *Tetragoneuria sepia* was collected about 6:00 P. M. on the east side of the flooded Aucilla River. It was flying 2 or 3 feet above the water and making a 20-30-foot patrol.

The author wishes to express her appreciation to Miss Grace Eager, Museum Artist, for her care and accuracy in making the figures which accompany this paper.

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