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TWO NEW NEOTROPICAL GENERA OF LESTINAE
(ODONATA)

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For many years I have had in my collection a large lestine labelled *Teresopolis*, Santa Catharina, Brazil. I know nothing of the history of this specimen, and the means by which I obtained it have long since been forgotten and were unfortunately not recorded on the envelope in which the specimen is preserved. At different times this specimen has been studied by Mr. Kennedy and myself and he has attached to it the manuscript name *Superlestes* which is employed in the following paper.

Drawings of the abdominal appendages were sent to Dr. Ris who identified the species as *Lestes exoletus* Selys. The original description is certainly wrong in describing the abdomen as about 36 mm. in length.

In February, 1920, the members of the University of Michigan Venezuelan Expedition found a fine large lestine in the quebrada opposite and across the Rio San Esteban from the old historic Salom home in the village of San Esteban. This proved to belong to a distinct undescribed genus which I have named *Cyptolestes*

from the distinctive large convex cell under the subquadrangle in the hind wing.

Superlestes, new genus

Runs out in Munz's key to *Lestes*. From *Lestes* and *Austrolestes* it is separated at once by the shortening of M_3 which in the front wing reaches the wing margin at about the level of the proximal side of the stigma and in the hind wing proximal to this level. In the other genera M_3 reaches the wing margin in both wings under the stigma or even distal to it. *Superlestes* differs from *Lestes sponsa*, type of the genus, and *Austrolestes* in having Cu_1 and Cu_2 arise from the medio-anal link in very close proximity, Cu_1 curved forward from this point, and the first postquadrangular cell with the anterior and proximal sides about equal, and the distal and posterior sides about equal, in which character *Superlestes* resembles *Lestes virgatus* and *L. viridis*. In *Lestes sponsa* and *Austrolestes* Cu_1 and Cu_2 are more separated at the medio-anal link, Cu_1 is straight, and the first postquadrangular cell has the anterior side longer than the proximal, and the posterior longer than the distal. Other venational characters of *Superlestes* are: M_2 arising in the front wing between the fourth and fifth postnodals, and in the hind wing at or near the fourth; M_{1a} zigzag, arising at the sixth to eighth postnodals in the front wing and at about the sixth in the hind wing; bridge vein of R_s arising from M_{1+2} well distad to the forking of M_{1+2} and M_3 ; three sectors between M_1 and M_2 , two between M_2 and R_s , two between R_s and M_3 , and two between M_3 and M_4 ; 16-17 postnodals in the front wing and 14-16 in the hind wing; stigma covering three cells.

Type: Lestes exoletus Selys.

Superlestes exoletus Selys

Abdomen: male 55; hind wing, male 35.

Male: Rear of head yellow; labium yellow, the end hook shading to black at apex and the movable hook shining black;

labrum, gena, and base of mandible green, the first the brightest; clypeus, frons, and epicranium brown with some indefinite darker to black shadings.

Prothorax light yellowish brown, the middle lobe above with dark or black shadings; posterior border convex.

Thorax above light yellowish or greenish brown, sides clearer and more yellowish, shading below on the coxae to orange; an ill-defined brown band on the upper three-fourths of the mesepisternum, not reaching the upper edge of the sclerite and separated from the middorsal carina by about half the distance it is separated from the humeral suture; middorsal carina narrowly yellow, bordered narrowly with black, which black border surrounds the mesepisternum except the upper part of the humeral suture; metastigma placed in a large black spot which extends across the sclerite; a smaller black spot at the angle of the lower border of the metepimeron, and a larger black spot on either side of the poststernum and anterior to the spot at the angle of the lower border of the metepimeron about one-half the distance from this spot to the metasternum lying between and posterior to the last coxae; in the midline, where the poststernum meets the metasternum, on the anterior end of the metasternum, and, on either side, on the suture just posterior to the last coxae, are black areas; there are also black areas on the pro- and mesosterna; the posterior border of the metepimeron above and below and the extreme posterior border of the poststernum are black edged.

Abdomen: 1 bluish green above, shading to greenish yellow on the sides, the dorsal basal half yellow, posterior border black; 2 similar, but an ill-defined longitudinal dark bar on either side, most distinct posteriorly; 3 bluish green with the black longitudinal areas on either side distinct and more extensive so the green is confined to a basal ring, a longitudinal middorsal bar, narrowed in the apical fifth or sixth, and a wider longitudinal bar on the ventrolateral border below the black; 4-7 similar but the black becoming

more extensive progressively posteriorly so the middorsal green is narrowed on 4 and still more on 5 where it disappears at about three-fourths the segment's length; the green basal ring is present on 5, but not posterior to that segment, and pale color is wanting or ill defined on the inferior lateral areas of each segment posterior to 5; 8-10 bluish gray, each segment bordered posteriorly with black, very narrowly on 8 and 9, wider on 10; a black subbasal spot on either side of 8; the ventral border of 9 black; the lower half of 10 indefinitely dark shaded. Appendages black.

Coxae yellow, the third pair each with a dark spot on the outer side and a larger black area on the inner side; femora dark with a pale colored stripe through each of the two rows of spines, thus leaving a narrow median ventral stripe and a wide dorsal stripe dark; first and second femora with the dorsal stripe brown, and the third femora with it black; dorsum of tibiae pale, greenish on the first, light yellowish brown on the others; each tibia dark at apex; the first tibiae each with a black longitudinal bar on either side of the narrow pale middorsal line, thus making the dorsal surface largely black; second and third tibiae each with these dark bars greatly reduced to mere basal streaks, thus leaving the dorsal surface largely pale; ventral surface of all the tibiae with a black longitudinal line, wide on the first and narrower on the second and third tibiae; tarsi black or nearly so, the tooth on the tarsal claw variable in the single specimen, equal or subequal to the claw itself.

Venation black, stigma brown; venational characters discussed under the genus.

Described from a single male, from Teresopolis, Santa Catharina, Brazil, in collection E. B. W.

Cyptolestes, new genus

Related to *Archilestes*, from which and from all other lestine genera it is separated at once by the enlarged marginal cell pos-

terior to the subquadrangle in the hind wing. Quadrangle, subquadrangle, and wing petiolation essentially as in *Archilestes*, from which it is separated at once by the retracted nodus (wing base to nodus less than one-third the wing length in *Cyptolestes*, more than one-third in *Archilestes*); by the more distal forking of M_{1+2} and M_3 (distance from arculus to forking about equalling the length of the second antenodal costal space in *Cyptolestes*, much shorter in *Archilestes*); by the greater length of the first postquadrangular cell (anterior side longer than proximal side and posterior side longer than distal side in *Cyptolestes*; anterior and proximal sides about equal, and posterior and distal sides about equal in *Archilestes*); by M_3 ending at the wing margin proximal to the level of the stigma (under the stigma in *Archilestes*); and by the greatly shortened stigma. Other venational characters of *Cyptolestes* are: bridge vein of R_s meeting M_{1+2} adjacent to M_3 or in the fork, or, in one front wing of a female, arising from M_3 near the fork; M_2 arising at slightly before the second postnodal to three-fourths the distance between the second and third postnodals beyond the second in the front wing, and at three-fourths the distance between the first and second postnodals beyond the first postnodal to two-thirds the distance between the second and third postnodals beyond the second postnodal in the hind wing; M_{1a} straightened, not zigzag, arising just before the sixth to the eighth postnodal in the front wing, and just before the sixth to the seventh postnodal in the hind wing; two short sectors between M_{1a} and M_2 , two between M_2 and R_s , two between R_s and M_3 , and only one distinct one between M_3 and M_4 , this one parallel to M_4 ; a more or less distinct sector between this one and M_3 (in *Archilestes* there are at least three more or less distinct sectors between M_3 and the short sector parallel to M_4); Cu_1 and Cu_2 arising from the medio-anal link almost at a point; postnodals front wing 17-19, hind wing 16-18; stigma covering two to three and one-half cells, two and one-half to three usually. In the

general shape of the wing and in the straightening of M_{1a} *Cyptolestes* is very similar to *Megalestes*, from which it is separated at once by the more petioled wing, the shape of the quadrangle, the more proximal forking of M_2 , and the presence of sectors between M_2 and M_3 .

Type: Cyptolestes tuberalatus, new species.

***Cyptolestes tuberalatus*, new species**

Abdomen: male 51-54, female 47.5; hind wing, male 37, female 39.

Male: Rear of head dull yellow; labium light dull yellow, darker anteriorly, the end and movable hooks black, the latter especially shining black (dull pale yellow or flesh, brown tipped in *Archilestes grandis*); gena and mandible black; labrum bright blue, paler above, edged with black below; anteclypeus largely blue, shading out laterally and above into black; postclypeus, frons, epicranium, and antenna black, the epicranium, especially about the eyes, tinged metallic green. The colors of the eyes in life were briefly noted as follows: limited area above blue, then broadly black, yellow below.

Prothorax brown, below shading out to pale dull yellow; the anterior border black-edged; middle lobe with two or three metallic green areas on each side above; posterior lobe black above with green reflections, posterior border convex.

Thorax brown, mesepisternum and mesepimeron each with a large metallic green area which covers most of each sclerite but does not reach any sutures; mesepimeron below darker or black anteriorly and dull yellow posteriorly, this yellow sometimes extended above as a yellow stripe on the first lateral suture as in the female; suture between metepisternum and metepimeron black; ventral edge of metepimeron with anterior half yellow and posterior half black; sternum dull pale yellow, anterior half with an ill-defined central area and one on either side brown or

black; in older individuals the sternum is largely dark brown or black with the edge and a small central area yellowish; in all of the specimens the metathorax and the ventral surfaces of the entire thorax and the coxae are largely covered with a dense white pruinescence.

Abdomen brown to black, overlaid with metallic green, with a slight bluish cast, which disappears posteriorly; 1 brown, more or less black above, especially posteriorly, with the posterior border and a large posterior lateral area black; 2-7 with dorsum and sides brilliant metallic green, most brilliant on the basal segments and fading out posteriorly; 8-10 black, 8 slightly less metallic than 7, 10 more or less white pruinose above, especially basally or in the middle. Superior appendages black, apex elevated above the level of the dorsum of the abdomen; inferiors wanting, that is, no longer than the immediately adjacent parts.

Coxae yellowish, black below externally; legs black, femora with a postero-ventral yellowish stripe which does not reach the apex; tibiae narrowly lined dull yellow dorsally; spines on legs as usual, the four or five basal spines of the anterior row of the first femora short, flattened, feather-shaped, like the distal spines of the anterior row of the first tibiae, but shorter. Tooth on tarsal claw distinctly shorter than the claw itself.

Venation and stigma black; venational characters discussed under the genus.

Female: Differs from the male as follows: gena and mandible bluish or greenish yellow; labrum dull blue; anteclypeus brown with a bluish or leaden central area; epicranium with little if any metallic green reflection.

Prothorax dark brown or black with some very restricted paler shadings; sides slightly paler with ill-defined yellowish areas and the lower border dull yellow.

Thorax with a yellow stripe on the first lateral suture, duller and narrower above, wider and paler below; the yellow anterior

half of the ventral border of the metepimeron is produced above as an ill-defined yellow bar across the sclerite, but the posterior half of the ventral border remains dark as in the male.

Abdomen similar to the male, the metallic green possibly with less bluish cast; 10 not pruinose; genital valves black with a single row of teeth on the ventral border, styles curved, roughly tuberculate with numerous white hairs, similar to the styles in *Archilestes*; abdominal appendages black, acute, about as long as the tenth segment.

Legs and wings as in the male, but the stigma brown rather than black.

San Esteban, Carabobo, Venezuela, February 4, 6, and 8, 1920; three males and two females, one of the latter very teneral, J. H. and E. B. Williamson and W. H. Ditzler, collectors; type male, February 6, and allotype female, February 8, in collection E. B. W.

Across the Rio San Esteban from the old Salom home is a small quebrada which passes from the forest to flow for a short distance through grassy or cultivated fields to meet the river. It is the first hill tributary of the San Esteban above the mouth of the latter. In the forest this quebrada consists of a succession of pools connected by small rivulets of water flowing through jumbled rock masses or over vertical faces. The surroundings are somber, relieved by the frequent great pink blossoms of the *Rosas de Montañas*, and the stream is destitute of aquatic vegetation. On February 6, J. H. W. worked this quebrada from its mouth to its source without finding any *Hetaerinas*, which were so common on quebradas farther up the Rio San Esteban, where we also took *Megapodagrion* and *Cora cyane*, neither of which were seen on this quebrada. A short distance above the mouth of the quebrada is a tributary from the left which, followed back into the forest, is of the same general character as the main stream. On these two small streams we took the few specimens captured of

Cyptolestes tuberalatus and we saw it nowhere else. In life it hung up in the bushes over or near the water, and on the wing and at rest resembled *Archilestes grandis*, which occurred rarely on the same quebrada. All seen were captured. Patrolling the same streams, but more difficult by far to capture, were occasional individuals of the beautiful and majestic *Gynacantha membranalis*.

PLATE I

(Wing photographs by C. H. Kennedy.)

FIG. 1.—*Cyptolestes tuberalatus*, female, San Estaban, Carabobo, Venezuela, February 6, 1920.

FIG. 2.—*Archilestes grandis*, female, Pasadena, California.

FIG. 3.—*Superlestes exoletus*, Brazil.

FIG. 4.—*Lestes sponsa*, male, Glanborough, Ireland.

FIG. 5.—*Austrolestes cingulatus*, Bacchus Marsh, Australia.

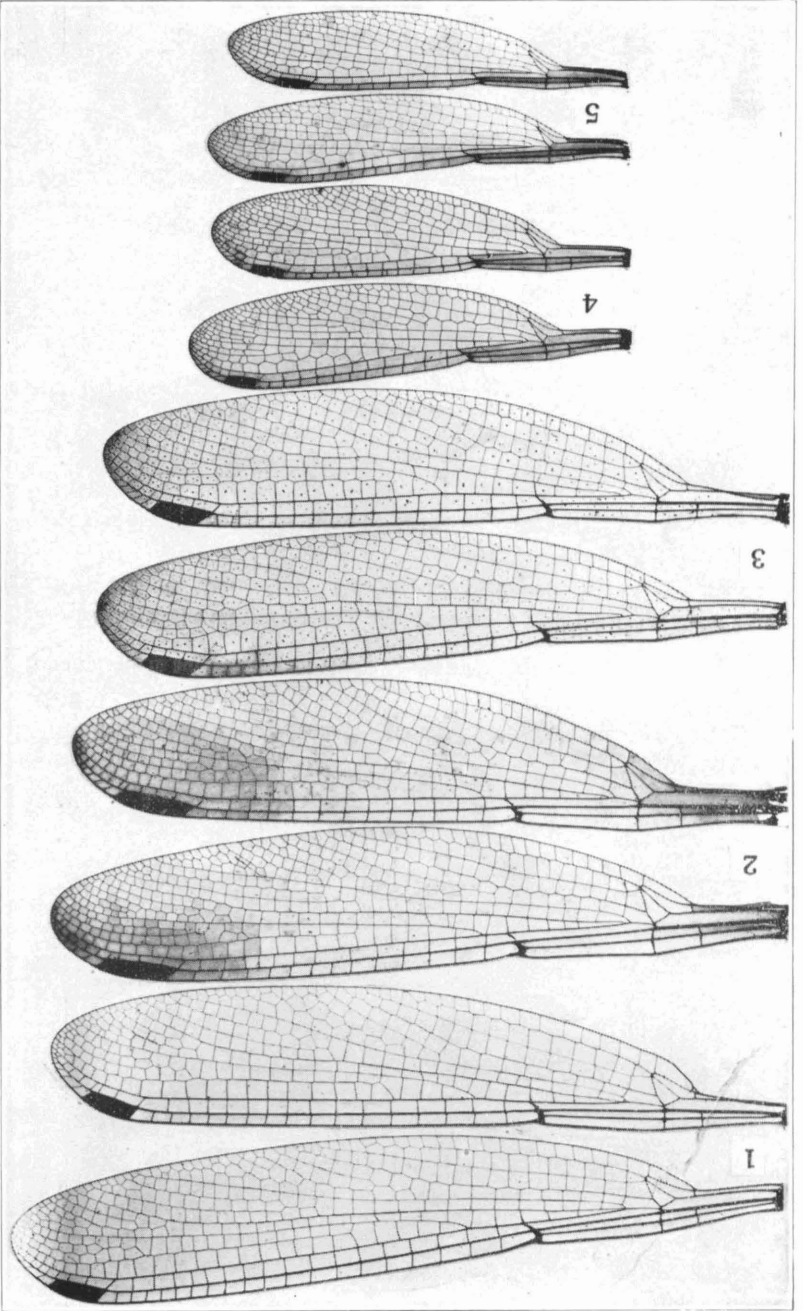


PLATE I

NEW NEOTROPICAL LESTINAE

PLATE II

(Figures 6 and 7, wing photographs by C. H. Kennedy.)

FIG. 6.—*Lestes virgatus*, male, Kilimandjaro, Africa.

FIG. 7.—*Lestes viridis*, male, Perli Kan.

FIGS. 8 and 9.—Abdominal appendages of *Superlestes exoletus*. The right superior appendage is broken off. Fig. 8, left superior and inferior appendages in supero-internal view; Fig. 9, lateral view.

FIGS. 10 and 11.—Abdominal appendages of *Cyptolestes tuberalatus*, type male. Fig. 10, lateral view; Fig. 11, supero-internal view of left superior appendage and supero-external view of right superior appendage.

