

- Fig. 10. *Sigaretus parvus*.
 Fig. 11. *Bathybembix Wood-Masoni*.
 Fig. 12. *Calliostoma sublaeve*.

PLATE II.

- Fig. 1. *Dentalium mirificum*.
 Figs. 2, 2 a. *Venus juvenilis*.
 Fig. 3. *Tellina parvula*.
 Figs. 4, 4 a. *Abra convexior*.
 Figs. 5, 5 a. *Cuspidaria macrorhynchus*.
 Figs. 6, 6 a. *Cryptodon investigatoris*.
 Figs. 7, 7 a. — *acuticarinatus*.
 Fig. 8. *Nucula donaciformis*.
 Fig. 9. — *bengalensis*.
 Figs. 10, 10 a. *Nuculana fumosa*.
 Figs. 11, 11 a. — *indica*.
 Fig. 12. *Malletia conspicua*.
 Figs. 13, 13 a. *Lima (Limatula) subtilis*.

II.—Some new Species of Odonata of the "Légion" Lestes,
 with Notes. By ROBERT M'LACHLAN, F.R.S.

MOST of the species described in this paper have been in my collection for years, and form a small portion of the undetermined materials in the "légion" that I possess.

ORTHOLESTES, Calvert.

This genus was originally described by Mr. P. P. Calvert (who is doing most excellent work in American Odonata) in the Ent. News, vol. ii. p. 199 (1891), to receive an insect from Jamaica which he termed *O. clara*. In the Proc. Acad. Nat. Sci. Philad. for 1893, pp. 377–383, he amplified the original description for both genus and species, and added a second species from Haiti, which he termed *O. Abbotti*, the two being evidently much allied, and the latter known by only one male.

I have long had many males and four females of an *Ortholestes* from "Samana Bay, S. Domingo." According to the locality these should be *O. Abbotti*, but they agree better with the description of *O. clara*, only the "more apical" tooth of the superior appendages, instead of being "slightly notched," is distinctly bifid (but not deeply so), the upper portion usually slightly longer and distinctly more slender than the lower. Of *O. Abbotti* it is written that "the more apical tooth is transformed into a slender acute curved spine." I think that insects of the same lot from Samana Bay received by

M. de Selys were identified by him with a species from the island of Trinidad standing under a MS. name in his collection. At present I consider my insects as *O. clara*, and hesitate to describe them as a local race until we know more about the possible effects of locality as causing variation in the structure of the appendages in this genus.

I think *Ortholestes* may conveniently head the "légion."

Megalestes major, Selys.

The original locality given for this species was "Inde méridionale." I am not in a position to say this was incorrect; but all the numerous recent examples I have seen have been from *North* India, and, according to special localities, it is probable it is found the whole length of the southern slopes of the Himalayas, and sometimes at great elevations.

Archilestes californica (Selys, MS.), sp. n.

Wings hyaline. Pterostigma ochreous, dilated, 3 millim. long, surmounting $3\frac{1}{2}$ cellules, enclosed in thickened black nervures; 12-13 postnodal nervules in the anterior wings. Neuration black, but the median nervure and the costa externally are yellowish. Nodal sector commencing $1\frac{1}{2}$ cellules after the nodus in the anterior and one cellule after in the posterior.

Head above dark brownish, slightly varied with paler, clothed with sparse cinereous pubescence, with a cuneate blackish spot on either side enclosed in pale lines; labrum olivaceous; mandibles shining black at the tips; labium and back of head whitish yellow. Prothorax blackish, its hind margin regularly curved and narrowly yellowish, and there is a semicircular line of the same colour on either side. Thorax brownish above; on either side of the dorsal crest is a long blackish space completely enclosed in fine yellowish lines; sides pale yellowish, with a large oval isolated black (or bronzy-brownish) median spot, whitish pruinose above the posterior legs; interalar area slightly pruinose. Legs yellowish; a line before the apex of the femora externally (nearly complete on the intermediate), tibiæ above, tarsi, and spines black. Abdomen greyish brown, dark brown above after the sixth segment (there are vague indications that the ninth and tenth may be paler in life), the sutures darker, and there is a fine blackish ventral line.

♂. Tenth segment with an elevated dorsal carina, the margin with a deep triangular excision. Superior appendages forcipate, black, the apices touching but not suddenly

incurved; longer than the tenth segment; on the median portion externally are 6-7 small teeth; internally near the base is a very strong acute triangular tooth, after which the margin presents two dilatations, with a strong constriction after the second, the apex again dilated. Inferior appendages yellowish, scarcely one third the length of the superior, triangular, inner edges nearly touching at the base, then divergently oblique, the outer edge straight; the tips rounded, with yellowish hairs.

♀ unknown.

Length of abdomen (cum append.) 37 millim.; expanse of wings 62 millim.; length of posterior wing 30 millim.

Hab. California (*Henry Edwards*). One adult male.

I received this example from Mr. Edwards many years ago; it bears his printed locality label "California," without more precise indication. M. de Selys, to whom it was submitted, labelled it with the name I have adopted, but it has never been described.

The species should be placed in *Archilestes*, according to the *ensemble* of structural characters; but in the practical absence of bronzy or metallic colour of the body it diverges widely from the typical *A. grandis*, Rbr., and also from the majority of species of the "légion" *Lestes*.

OROLESTES, gen. nov.

Wings for the greater part opaque blackish in the male, petiolated up to the first postcostal basal nervule, which latter is placed nearer the level of the second than of the first antenodal nervule. Nodal sector commencing $8\frac{1}{2}$ cellules after the nodus in the anterior wings ($7-7\frac{1}{2}$ after in the posterior); ultra-nodal sector commencing 3-4 cellules after the nodal. None of the sectors distinctly broken (angulose), excepting the inferior of the triangle at its apex (the ultra-nodal and short sectors very slightly broken); one supplementary sector (and the rudiment of another) interposed between the nodal sector and the median. Pterostigma very large, dilated, more than four times as long as broad, surmounting 5-6 cellules. Quadrilateral broad, the lower side quite twice the length of the inner, the outer angle somewhat acute.

Abdomen slender. Spines of legs moderate.

Hab. North India.

Differs from all the other genera of the "légion" by the coloured wings (of the male, at any rate) and structurally by the very large pterostigma and the distant point of departure of the nodal sector.

Orolestes Selysi, sp. n.

Wings hyaline only at the base and apex, the rest of the wing occupied by a very broad brownish-black band, with steel-blue reflexions, commencing in an oblique manner (and extended along the costal margin) before the nodus, and ending in a straight manner (but the edge slightly irregular) about one cellule before the pterostigma (in this dark portion the centre of each of the cellules is occupied by a small rounded paler spot, and the margins of the nervules are seen to be also very narrowly paler, more conspicuous when viewed by transmitted light); in the pale apical portion of the wing the dark band is margined by lacteous in an irregular manner, the lacteous portion appearing as if forming a very pale brownish cloud in certain lights. Pterostigma $3\frac{1}{2}$ millim. long, dark brown, enclosed in very strong black nervules. 21-24 postnodal nervules in the anterior wings. Neuration black.

Head black above, the ocelli testaceous; labrum and a large spot on either side of it olivaceous green; labium and back of head yellowish white. Prothorax olivaceous green, darker in the centre, its hind margin raised and regularly curved. Thorax above bronzy green, not metallic, somewhat paler (yellowish?) on either side of the dorsal crest; sides of thorax pale olivaceous green (probably yellowish in immature examples), the darker green of the upper surface continued in an irregular manner below the humeral suture, and above the median suture are traces of the same colour. The olivaceous colour of the sides of the thorax is continued broadly on the sides of the first and second abdominal segments, and narrowly along the sides of the third to fifth and part of sixth segments; abdomen above with a large spot occupying most of the first segment bronzy green, and the second segment wholly of this colour; from the third to tenth bronzy black, but there is a long bluish space on the third and fourth, which are black only at base and apex. Legs black; the femora brownish or yellowish beneath.

♂. Posterior margin of the seventh to ninth segments above with fine denticulations; posterior margin of tenth slightly notched in the middle. Superior appendages black, quite one half longer than the tenth segment, slender, forcipate, the tips regularly incurved, finely denticulate externally in the apical half; internally there is a basal tooth, but near the base the usual dilatation (which is very slight) commences in an obtuse manner and ends below the apex in a large triangular, broad, acute tooth; the extreme apices con-

tiguous, subobtuse. Inferior appendages scarcely one fourth the length of the superior; viewed from beneath they are broad and triangular, with straight and contiguous inner edges, the basal half black, the apical yellowish.

♀ unknown.

Length of abdomen (cum append.) 57 millim.; expanse of wings 73–79 millim.; length of posterior wing 36–39 millim.

Hab. Darjiling.

I have long had an old and mutilated male; more recently I received a fresh and perfect male.

The presence of median dark bands on the wings of *Agrionina* is very rare, and is probably seen in a less intensified degree only in some species of *Chlorolestes* and *Disparoneura*. It should be remarked that the dark portion of the wings shows a few irregular spots where the pigment has not developed, such as occurs so frequently in *Calopteryx maculata*, Beauv., &c.

I dedicate this fine insect to a venerable and venerated naturalist and friend, who has devoted more than sixty years of a long life to the study of the Odonata.

Lestes albicauda (Selys, MS.), sp. n.

Wings hyaline. Pterostigma brown, narrowly paler on the costal edge (giving the appearance of an indistinct paler longitudinal line at that part), about twice as long as broad, surmounting nearly two cellules; 11–14 postnodal nervules in the anterior wings; external angle of the quadrilateral considerably acute.

Head bronzy green above; ocelli testaceous; labrum whitish and fringed with hairs of the same colour; labium and back of head whitish yellow. Prothorax dusky yellowish or smoky. Thorax dusky whitish yellow, above with a bronzy-green band on each side of the dorsal crest, very irregular externally, there being a median projection followed by a broad excision towards the base, this band followed beneath by a smoky band; there is usually a black spot on the humeral suture above the base of the anterior wings; a short black line under the base of these wings, another at the base of the median suture; pectus with a black median longitudinal line and at least two black spots anteriorly and posteriorly. Legs whitish yellow; a black line on the femora and tibiæ (posterior femora excepted) above; tarsi blackish except at the base; spines black, very long. Abdomen very slender, bronzy blackish above, varied with whitish yellow as follows:—First segment whitish yellow, with two large con-

tiguous or united blackish spots on the posterior half; second whitish yellow at the anterior margin and on an anterior triangular space, and again on each side towards the posterior end; third to sixth with a whitish-yellow narrow anterior annulation, and a broader one before the posterior end; *tenth segment and appendices conspicuously whitish in both sexes*; on the sides the abdomen is almost wholly whitish yellow, shading into smoky, but the posterior ends of segments 3 to 7 are broadly of the dark colour of the upper surface.

♂. Posterior margin of tenth segment with a broad semi-circular excision, furnished with numerous minute black teeth. Superior appendages of the length of the tenth segment, geniculate in the middle; the outer edge (beyond the geniculation) with 3 to 4 small but conspicuous black teeth; internally the basal portion is dilated, and forms an obtuse angle before the constriction at the geniculation; the apical portion again gradually dilated, and with a long acute tooth before the obtuse apex, which latter is darker in colour. Inferior appendages very short, in the form of two contiguous broadly triangular plates fringed with whitish hairs.

♀. Posterior margin of the tenth segment with a broad shallow excision with black denticulations; appendages shorter than the tenth segment, in the form of acute styles; the ventral laminae broad, strongly denticulated beneath, the appendages filiform and upcurved.

Length of abdomen, ♂ (cum append.) 32–34 millim., ♀ 29 millim.; expanse of wings, ♂ 34–39 millim., ♀ 40 millim.; length of posterior wing, ♂ 19–21 millim., ♀ 20 millim.

Hab. Aru Islands and New Guinea. Two males and one female from the Wallace collection; formerly examined by M. de Selys, and labelled by him with the name I have adopted.

Probably allied to the Australian group of species.

Lestes tridens, sp. n.

Wings hyaline. Pterostigma smoky brown, rather more than twice as long as broad, surmounting two cellules; 9–10 postnodal cellules in the anterior wings.

Head dark brown above; labrum olivaceous; labium pale yellowish; back of head blackish near the eyes, but yellowish more internally. Prothorax dusky testaceous, darker at the sides and there somewhat pruinose. Thorax ochreous; a rather broad black band on either side of the dorsal crest, its edge irregular externally, and there showing two broad

excisions, the lower of which is filled in by a bright pale yellow oblong space; posteriorly the bands are bordered with brown beneath; on the sides there are rudiments of post-humeral blackish bands, with three black spots in the median area, two others on the margin of the pectoral area, and, again, others and a fine black longitudinal line on the pectus itself. Legs yellow; on the femora externally are two black lines, fine, separated by the pale ground; tibiæ black externally; tarsi and spines black. Abdomen bronzy black above, shading into dark brown towards the apex (the ninth and tenth segments probably whitish pruinose in life); sutures of the third to seventh segments with a yellowish ring; first segment yellowish at its base, and the second with a yellow excision on either side in its middle; sides and beneath yellowish, with a blackish ring at the sutures.

♂. Tenth segment with a semicircular excision on its posterior edge, furnished with minute black denticulations. Superior appendages pale yellow, black at base and apex, longer than the tenth segment, the apices regularly incurved; externally there are three or four fine black teeth on the apical portion; internally are *three nearly equidistant strong teeth*, the basal broad and very acute, its lower edge black, the second also acute but rather less strong, the third (forming the apex of the dilated inner portion) obtuse; beyond this is a slight constriction before the cylindrical apical portion, which is obtuse at the tip. Inferior appendages short, scarcely reaching to the basal tooth of the superior if viewed from above, distant, conical, and black, furnished with a tuft of hairs at the tip directed inwardly; viewed from beneath these appendages are broad at the base, the edge excised, so that the two appendages appear as if separated by a broad semicircular space.

♀ unknown.

Length of abdomen (cum append.) $31\frac{1}{2}$ millim.; expanse of wings 42 millim.; length of posterior wing 20 millim.

Hab. Delagoa Bay. One male.

Perhaps allied to *L. pallida*, Rbr., but it can scarcely be the undescribed male of that species. Possibly allied to the eastern *L. præmorsa*, Selys, by the laciniate dorsal bands of the thorax.

Lestes simulatrix, sp. n.

Wings hyaline. Pterostigma smoky brown, not more than twice as long as broad, surmounting two cellules. Ten postnodal nervules in the anterior wings.

Head black above, but with broad ochreous anterior margin; narrow orbital margins of the same colour, and varied with ochreous about the ocelli (or the colour might be taken as ochreous, with a very broad transverse black band); clypeus broadly margined with black; labrum dark brown; labium and back of head pale yellow. Prothorax yellow, with two median blackish lines and a brown band above the insertion of the legs; posterior margin elevated and blackish in the middle. Thorax ochreous; above with a bronzy-black (or bronzy-green) band on either side of the dorsal crest; its external edge at first straight, then very deeply excised in the middle (a golden-yellow oblong spot in the excision), so that its breadth is reduced to a fine line, afterwards dilated posteriorly in a triangular manner, the rounded apex of the dilatation not touching the mesothoracic suture; below these bands are vestiges of a like-coloured posthumeral band, reduced to two isolated spots (the inferior of which is oblique) connected by a brown line; still more inferiorly are four or five black spots on the median and metathoracic areas, which, and also the pectus, are whitish pruinose. Legs pale yellow; femora with two fine black lines; tibiæ black externally, tarsi and spines black. Abdomen very slender, above dark bronzy green, changing to bronzy brown after the third segment; posterior half of the ninth segment and the whole of the tenth yellowish (probably pruinose in life), with black edges; on the first segment are two dark green spots, divided by a yellow median line; second with a median line, an excision on either side, and the suture yellow; third to fifth yellowish at the anterior suture; sides and beneath yellow, with black spots on the first and second segments, and a blackish ring (complete ventrally) at the end of segments 1 to 5.

♂. There are minute black teeth on the posterior margin of the ninth segment above; tenth segment with a broad triangular median excision, with small black teeth on the edge of it. Superior appendages slightly longer than the tenth segment, black, strong, the apices regularly but somewhat suddenly incurved (not geniculate); externally with four or five rather strong denticulations on the apical portion; on the internal edge there is a very strong triangular black tooth, rather distant from the base, after which the edge is straight for some distance, and also there is a smaller acute tooth, followed immediately by a large subquadrate blunt tooth before the commencement of the short slender inturned apical portion of the appendage. Inferior appendages about half the length of the superior; viewed from above they are dilated at the base, incurved, gradually becoming more

slender towards the black apex; viewed from beneath they approximate at the base and then gradually diverge, the apices slightly incurved.

♀ unknown.

Length of abdomen (cum append.) 33 millim.; expanse of wings 40 millim.; length of posterior wing 19 millim.

Hab. Madagascar. One male.

Having some resemblance to the preceding species in the form of the dark bands of the thorax above and pale ground-colour, but differing very much in the structure of the appendages.

Lestes unicolor, sp. n.

Wings hyaline or with a very slight smoky-yellowish tinge. Pterostigma dark brown (more ochreous in the female), between strong black nervures, three times as long as broad, surmounting two cellules; 11-13 postnodal nervules. Neuration black.

Nearly the whole upperside of the body brown, the sides and beneath paler, more yellowish (in some examples are faint indications of darker humeral lines); a small isolated elongate black spot on either side of the pectus close to the pectoral area; a slender darker annulation just before the apex of segments 2 to 7 above, extending to the sides; some black marks on the first abdominal segment beneath, and the ventral suture narrowly black. Legs yellow; a blackish line (partly double) on the intermediate and anterior femora and tibiæ; spines (those on the tibiæ very long) black; tips of tarsal joints and claws black.

♂. Hinder margin of ninth segment with minute black denticulations; a slight carina on the dorsal surface of the tenth segment, not reaching the base, followed by a triangular excision of the margin, the edge of which bears black denticulations. Superior appendages stout, longer than the tenth segment, yellow, the short, blunt, inturned apical portion black, the outer edge with 4-5 small black denticulations just before the inturned portion; inner edge with a strong black triangular tooth near the base at the commencement of a rather broad flattened dilatation, the edge of which is straight, ending in an angle scarcely produced into a (second) tooth, with minute serrations, and closely followed by another slight projection just before the constriction. Inferior appendages, viewed from above, extending to the basal tooth of the superior, distant, cylindrical, blackish, and furnished with black hairs on the tips; viewed from beneath, the basal

portions are pale and nearly contiguous, each ending in a black cylindrical process.

♀. Tenth segment above with a slight broad excision in the middle of its posterior margin. Appendages yellow, conical, acute, shorter than the tenth segment. Ventral valvules having the lower edge microscopically denticulate, from between them arises a straight blackish process; their appendages filiform, black, curved downward.

Length of abdomen (cum append.), ♂ 33 millim., ♀ 36 millim.; expanse of wings, ♂ 42–44 millim., ♀ 46–48 millim.; length of posterior wing, ♂ 21 millim., ♀ 22–23 millim.

Hab. Tamatave, Madagascar. Two males and two females.

In coloration this considerably resembles the Asiatic *L. umbrina*, Selys. No doubt it is allied to *L. icterica*, Gerst., from Mombas on the Zanzibar mainland, which was based on a single mutilated example; but, according to the description, the latter cannot be identical, it being smaller, paler, with longer pterostigma, the longitudinal nervures yellow, no black lines on the legs, &c.

III.—*On a Collection of Reptiles and Batrachians from Ferguson Island, D'Entrecasteaux Group, British New Guinea.* By G. A. BOULENGER, F.R.S.

A LARGE collection of Reptiles and Batrachians was made on Ferguson Island by Mr. A. S. Meek, from which a series has been selected for the British Museum. A list is given of the species represented in the collection, five of which prove to be undescribed.

REPTILES.

1. *Gymnodactylus pelagicus*, Gir.
2. — *lousiadensis*, De Vis.
3. *Gehyra mutilata*, Wiegman.
4. *Gecko vittatus*, Houtt.
5. *Gonyocephalus dilophus*, D. & B.
6. — *papuensis*, Macleay.
7. *Varanus indicus*, Daud.
8. — *kordensis*, Meyer.
9. *Tiliqua gigas*, Schn.



McLachlan, Robert. 1895. "Some new species of Odonata of the 'Légion' Lestes, with notes." *The Annals and magazine of natural history; zoology, botany, and geology* 16, 19–28.

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