

XXIV TWO NEW SCORPIONS FROM
SOUTHERN INDIA

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Plate XXI.

The scorpions which form the subject of this note were exhibited at the meeting of the Indian Science Congress held at Madras in January, 1915, but have not been described till now.

Lychas albimanus, n. sp.

Plate XXI, figs. 1, 2.

Habitat.—Three specimens found under logs, at an elevation of about 1,500 feet in the Teak Forests, Cochin State, by Dr. F. H. Gravely and Mr. B. Sundara Raj, M.A., in September, 1914. The following description has been drawn up from only one of these specimens, an apparently adult female.

Colour black with brownish mottlings, the last three terga with yellowish spots and mottlings. Tail paler especially towards its distal end, the vesicle yellowish. Chela black with the exception of the band which is white (becoming yellow in spirit); the fingers black. Legs pale brownish, with the femora and patellae black.

Carapace finely granular, the granules being most strongly developed towards the anterior margin.

Terga finely granular, with a single median keel on each, which, however, is poorly developed on the last tergum and the latter carries two well-developed lateral keels in addition.

Sterna smooth, except the last which is faintly granular and carries two indistinct keels on either side of the middle line.

Tail about five times as long as the carapace, faintly granular; keels well-developed, granular; vesicle faintly granular below; spine beneath the aculeus triangular, pointed, and placed at the end of a median granulated ridge which traverses the undersurface of the vesicle.

Chelae practically smooth, but with granular crests on the humerus and brachium; hand smooth, about the same width as the brachium; digits in contact, not sinuate, the movable one slightly longer than the carapace; outer series of teeth on the movable finger 6, inner series 5.

Legs faintly granular ; the tibial spurs much longer than the neighbouring hairs.

Pectinal teeth 21.

Measurements.—♀ Total length 41 mm., carapace 4.5 mm., tail 21 mm., underhand 3 mm., movable finger 5 mm., width of hand 2 mm.

Type-specimen : No. $\frac{2420}{17}$ in the collection of the Zoological Survey of India.

This species, which is chiefly characterised by its white hand and the pronounced granulation of the anterior portion of the carapace, appears to be related to *L. tricarinatus*, Simon, and *L. hendersoni*, Pocock. From the former it is distinguished by the fact that all its terga except the last have only a single carina ; in the latter species the colouration is entirely different, the hand and fingers both being yellow.

Palamnaeus tristis, n. sp.

Plate XXI, figs. 3, 4.

Habitat.—Tirupati Hills, North Arcot District, two males.

Venkatagiri Hills, Nellore District, two females and one young male.

This species was discovered in September, 1904 by my former pupil and assistant at the Madras Christian College, Mr. S. K. Sundara Charlu, M.A., who made a large collection of scorpions from the Eastern Ghats and other parts of the Madras Presidency. The specimens recorded above were found at elevations of between 2,000 and 3,000 feet, inhabiting short burrows, the entrance to which were, as is usually the case in the species of *Palamnaeus*, covered by a large stone. Mr. Sundara Charlu informed me that in some cases the burrow also afforded shelter to a small frog—*Callula variegata*, Stol.

Colour greenish-black, the legs sometimes paler than the rest of the body ; vesicle reddish-yellow.

Carapace on the whole smooth and polished, slightly granular towards the sides.

Terga smooth and polished, slightly granular towards the sides.

Sterna smooth and polished, the last one without a crest.

Tail about three times as long as the carapace ; all the segments polished, particularly above, and slightly granulated ; keels of the first three segments smooth, of the fourth and fifth segments slightly denticulate.

Vesicle wider than high, about as wide as the fifth segment, with four tuberculate crests below ; a well-defined groove on each lateral surface.

Chelae with the humerus and brachium both slightly longer than the carapace ; humerus coarsely granular above and at the base below, with the anterior margin rather strongly denticulate ; brachium strongly ridged above and very slightly granulated ;

hand with the outer portion of its upper surface vertical and crested, the upper crest or finger-keel forming the outer border of the hand as seen from above and stopping opposite the articulation of the mobile finger; hand covered above with large smooth tubercles of varying size and shape, which are specially aggregated to form three well-defined hand ridges in addition to the finger-keel, *viz.* an inner and an outer ridge continued on to the immobile finger where the tubercles disappear, and a third intermediate shorter ridge which stops short of the immobile finger; the three ridges all commence at the posterior margin of the hand; in addition to the keel of the underhand, which is smooth, there are three slightly tuberculate ridges on the undersurface of the hand, and this surface is rather coarsely tuberculate towards the inner margin; the fingers are faintly granular particularly below.

Legs practically smooth.

Pectinal teeth 17-18.

Measurements.—♂ Total length 116 mm., carapace 19 mm., tail 60 mm., humerus 21 mm., brachium 21.5 mm., underhand 18.5 mm., movable finger 21 mm., width of hand 13 mm.

Type-specimen: No. $\frac{2422}{17}$ in the collection of the Zoological Survey of India.

The above description is taken from an adult male. In the female the hand is much broader, more finely granulated, and the three ridges on the upper surface of the hand are much fainter. The length of the tail as compared with that of the carapace is practically the same in both sexes.

This species resembles *P. gravimanus*, Pocock, in the presence of longitudinal ridges or crests on the upper surface of the hand, but in other respects is very different. It appears to be most nearly related to *P. fulvipes*, Koch, and *P. wroughtoni*, Pocock, which both have the outer portion of the upper surface of the hand defined above by a distinct ridge. I had the opportunity some years ago of comparing specimens of the species just described with the types of *P. wroughtoni* from Belgaum, Bombay Presidency, preserved in the British Museum. This last species, which is of smaller size, has a much wider hand and the crest on the outer border of this joint is not so well-defined. The part external to this crest is flatter and more vertical in the new species, which is also characterised by the well-marked longitudinal ridges on the upper surface of its hand; the underhand is granular in the new species, while it is smooth in *P. wroughtoni*.