

A new genus and tribe of cryptodesmoid milliped from Sri Lanka (Polydesmida: Cryptodesmidae)

by

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With 9 figures

ABSTRACT

The new generic and specific names *Singhalocryptus alticola* are proposed for a cryptodesmoid taken near the top of Pidurutalagala, Sri Lanka (Ceylon). Restudy of the types of two cryptodesmoids previously known from this island shows that one is referable also to this genus, as *S. ceylonicus* (Pocock), while the other has already been made type of a genus *Pocodesmus* by Cook in 1896 although the characters of *P. greeni* (Pocock) have been very poorly known to date. The new tribe Pocodesmini is proposed for these two genera, it is a group in the Otodesminae, previously represented on the mainland of southeast Asia in Burma, Assam, Indochina, and on the islands of Sumatra and Japan. In this tribe male specimens have a prominent setiferous process on the front of the head, a character heretofore unknown in the Cryptodesmidae.

So far only two species of the family Cryptodesmidae, in the current concept of that group (HOFFMAN 1974) have been found in Sri Lanka. Both were taken by the British coccidologist E. E. Green, and were described as *Cryptodesmus greeni* and *C. ceylonicus* by Pocock in 1892. So far as I know, neither species has ever been subsequently recorded, and aside from inclusion in lists of *nomina dubia*, have been mentioned only once in the literature. In his brief essay on cryptodesmoids, O. F. COOK (1896) designated one of the Pocock species (*greeni*) as type of the new genus *Pocodesmus*, with the remark "Whether the other Ceylon species is congeneric can hardly be inferred from Mr. Pocock's description." In my 1974 synopsis *Pocodesmus* was admitted in the status of an uncertain genus in the subfamily Otodesminae, largely on the basis of geographical considerations.

During a recent visit to the Museum d'Histoire naturelle de Genève, I had the opportunity to sort through some diplopod material collected in Sri Lanka by Drs. C. Besuchet and I. Löbl, and was pleased to discover an adult male cryptodesmoid ob-

viously related to Pocock's species. Subsequent comparison of this specimen with type material in the British Museum (Natural History) has revealed that it is undescribed, also that *Pocodesmus* is a valid genus containing only *C. greeni* whilst *C. ceylonicus* and the new form constitute a distinct group worthy of separate generic status.

My best thanks are here expressed to my colleagues, Dr. Bernd Hauser and Mr. Keith H. Hyatt, for their part in making the abovementioned material available for study.

Family CRYPTODESMIDAE Karsch

Subfamily OTODESMINAE Cook

Originally proposed as a family to contain the genera *Trichopeltis* and *Otodesmus*, this taxon has been recently (HOFFMAN 1974) ressurected to accomodate nine genera from southeast Asia, these in turn being dispersed through three tribes. This arrangement is by no means perfectly adequate, and further studies may well engender a number of changes in rank and status of these otodesmines. It may be, for instance, more realistic to elevate the tribe Dyakryptini to the rank of subfamily.

Although generally similar to *Otodesmus* and *Kiusiunum*, the two Ceylonese genera differ in several features that might justify their separation into an additional tribe:

POCODESMINI, trib. nov.

Components: *Pocodesmus* Cook, 1896; *Singhalocryptus*, gen. nov.

Diagnosis: Moderate to large sized otodesmines with 20 segments in both sexes; ozopores absent; paranota of moderate width; metaterga with four or five transverse rows of setiferous tubercules. Front of head in males with prominent median bilobed hairy knob; anterior legs and sterna of males not modified in any way; gonopods long and slender, without conspicuous branches or processes, coxae in contact medially, their ventral surface flattened, not excavated to accomodate telopodites; apicomedial coxal projection small and membranous, easily overlooked.

Distribution: This group is so far known only from Sri Lanka (Ceylon).

Key to the genera of Pocodesmini

- Paranota relatively broad, continuing curvature of dorsum, lateral third bent almost ventrad beyond ends of the legs (Fig. 1); tubercules of metaterga sub-similar in size and shape, in four (rarely five) transverse rows; setiferous frontal process of males located between antennae; telopodite of gonopods distinctly broadened apically *Pocodesmus* Cook
- Paranota relatively narrow, nearly horizontal, not curving downward beyond ends of legs (Fig. 5); tubercules of the transverse metatergal series increasing in size up to the third row, those of the fourth abruptly much smaller; setose frontal process of males located below antennal bases; telopodite of gonopods thin and laminate distally *Singhalocryptus*, gen. nov.

Pocodesmus

Pocodesmus Cook, 1896, *Brandtia* 4: 23. Type species, *Cryptodesmus greeni* Pocock, 1892, by original designation.

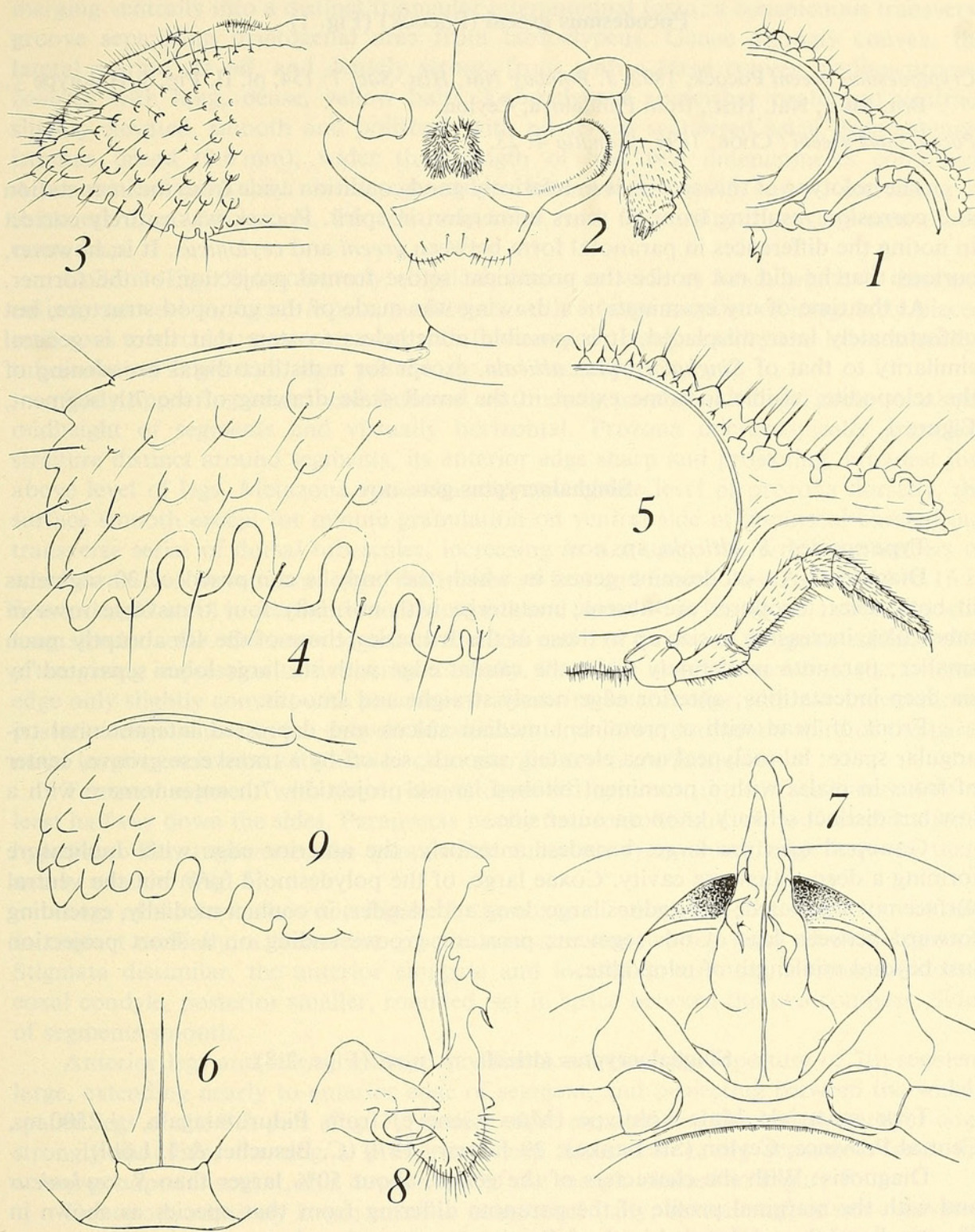


FIG. 1: *Pocodesmus greeni* (Pocock). Right side of 7th segment, posterior aspect. FIGS. 2-8: *Singhalocryptus alticola*, n. sp. — 2: Front of head, most setae omitted. — 3: Left side of collum, dorsal aspect. — 4: Left paranotum of 12th segment, dorsal aspect. — 5: Right side of segment 7, posterior aspect, drawn to same scale as Fig. 1. — 6: Hypoproct and base of paraprocts, ventral aspect. — 7: gonopods and adjacent parts of segment 7, posteroventral aspect. — 8: Left gonopod, mesal aspect. FIG. 9: *Singhalocryptus ceylonicus* (Pocock). Left paranotum of 12th segment, drawn to same scale as Fig. 4.

Pocodesmus greeni (Pocock) (Fig. 1)

Cryptodesmus greeni Pocock, 1892, *J. Bombay Nat. Hist. Soc.* 7: 154, pl. II, Fig. 3. Holotype ♂, Brit. Mus., Nat. Hist., from Pundaloya, Ceylon.

Pocodesmus greeni: COOK, 1896, *Brandtia* 4: 23.

The holotype of this species is in relatively good condition aside from the incrustation and corrosion resulting from 80 years immersion in spirit. Pocock was entirely correct in noting the differences in paranotal form between *greeni* and *ceylonicus*. It is, however, curious that he did not notice the prominent setose frontal projection of the former.

At the time of my examination a drawing was made of the gonopod structure, but unfortunately later misplaced. It is possible nonetheless to state that there is general similarity to that of *Singhalocryptus alticola*, except for a distinct distal broadening of the telopodite, visible to some extent in the small scale drawing of the 7th segment, Figure 1.

Singhalocryptus gen. nov.

Type species: *S. alticola*, sp. nov.

Diagnosis: An otodesmine genus in which the body is composed of 20 segments in both sexes; ozopores are absent; metaterga with normally four transverse rows of tubercles, increasing in size up to those of the 3rd series, those of the 4th abruptly much smaller; paranota moderately wide, the caudal edge with six large lobes separated by six deep indentations; anterior edge nearly straight and smooth.

Front of head with a prominent median sulcus and depressed interantennal triangular space; labroclypeal area elevated, smooth, set off by a transverse groove, center of frons in males with a prominent bilobed lanose projection. 7th antennomere with a low but distinct sensory knob on outer side.

Gonopod aperture large, broadest anteriorly, the anterior edge with duplicature forming a deep transverse cavity. Coxae large, of the polydesmoid form but the ventral surface not excavated; telopodites large, long and slender, in contact medially, extending forward between legs of 6th segment; prostatic groove ending on a short projection just beyond midlength of telopodite.

Singhalocryptus alticola sp. nov. (Figs. 2-8)

Type material: Male holotype (Mus. Geneve) from Pidurutalagala, ± 2500 m., Central Province, Ceylon (Sri Lanka); 29 January 1970 (C. Besuchet & I. Löbl).

Diagnosis: With the characters of the genus; about 50% larger than *S. ceylonicus* and with the marginal profile of the paranota differing from that species as shown in Figures 4 and 9, and detailed in the following account of *ceylonicus*.

Holotype: Adult male, 14.0 mm in length, 3.9 mm in greatest width, W/L ratio, 27.8%. General coloration dorsally light grayish-brown, middle of metaterga more yellowish-brown; prozona with a bluish cast; undersides of paranota gray; antennae bright reddish-pink except 6th article which is nearly white, sensory cones crimson red. Sternal regions yellowish-white, coxae more yellow, remaining podomeres reddish-brown except apical fourth of tarsi where the red color changes into brown, then nearly white.

Head (Fig. 2) somewhat flattened in front; epicranial groove prominently impressed, merging ventrally into a distinct triangular interantennal fossa; a conspicuous transverse groove separating frontogenal area from labroclypeus. Genae strongly convex, the lateral margin set off, and densely setose; frons with a large convex median process covered with long, dense, yellow hairs. Labroclypeus somewhat prolonged ventrad, slightly elevated, smooth and polished, with numerous scattered setae. Interantennal isthmus broad (0.6 mm), wider than length of first two antennomeres combined. Antennae conspicuously clavate, geniculate between articles 3 and 4, increasing in thickness up to 6th article, 7th relatively large, with a prominent sensory area on its outer face.

Collum (Fig. 3) transversely elliptical, about as wide as head, which it does not entirely conceal in dorsal aspect, surface set with a large number of irregularly placed setiferous tubercles; posterior edge with three or four small notches and lobes laterally; tuberculation in general larger posteriorly and laterally.

Body appearing broad and flattened, and nearly parallel-sided, paranota set about midheight of segments and virtually horizontal. Prozona microscopically granular; stricture distinct around segments, its anterior edge sharp and projecting, broadest just above level of legs. Metazona somewhat elevated above level of prozona dorsally, the surface smooth except for minute granulation on ventral side of paranotal bases. Four transverse series of dorsal tubercles, increasing in size up to the 3rd, the members of which are up to three times larger than those of first and fourth rows; about 14 to 16 in first series, 12 to 14 in second, 10 to 12 in third, and about 30 in fourth; all tubercles with long slender setae. On some segments the 2nd and 3rd series are irregular middorsally, often giving impression of five series medially. Paranota mostly transverse, the anterior edge only slightly convex, with prominent raised rim, lateral edge with five indentations, posterior edge with six, the deepest of which extends inward almost a third of the paranotal length, each lobe with a wide clear margin and a median seta.

Terminal segment with short, blunt, decurved epiproct, the surface tuberculate at least halfway down the sides. Paraprocts nearly flat, smooth, and without modifications; hypoproct flat, transverse, the paramedian tubercles prominent, edge between them nearly straight (Fig. 6).

Legs of the form shown in Figure 5, the coxae of postgonopodal segments virtually in contact medially, a transverse groove separates the two leg pairs of each segment. Stigmata dissimilar, the anterior elongate and located in stricture in front of dorsal coxal condyle, posterior smaller, rounded, set in space between the two condyles. Sides of segments smooth.

Anterior legs and sterna without modifications. Gonopod aperture of 7th segment large, extending nearly to anterior edge of segment, and projecting between the widely spaced legs of the 8th pair (Fig. 7); lateral edges elevated and thickened, anterior edge strongly modified, forming a prominent deep transverse cavity separated from the actual gonopodal socket, this duplicature of the margin shaded in Figure 7.

Gonopods relatively large; coxae in contact medially, ventral surface not excavated nor projecting downward; telopodites long and slender, medially appressed, apically broadened, femoral region with irregular thin projection subtending the short blunt solenomerite; prostatic groove visible beyond prefemur. Median projecting lobe of coxae very thin, membranous, and easily overlooked because of its transparency, shown more prominent in Figure 8 than in actuality.

Remarks: The specific name alludes to the discovery of this species near the summit of the highest peak of Ceylon. Field notes of the collectors state "Tamisages a la limite supérieure de la forêt, juste au-dessous du sommet."

Singhalocryptus ceylonicus (Pocock), comb. n. (Fig. 9)

Cryptodesmus ceylonicus Pocock, 1892, *J. Bombay Nat. Hist. Soc.* 7: 153, pl. II, figs. 2, 2c. Syntype ♀♀, Brit. Mus. (Nat. Hist.) from Pundaloya, Ceylon. Lectotype here designated, Reg. No. 1890.10.20.35; lectoparatype, Reg. No. 1890.10.20.36.

Although manifestly related to *S. alticola*, this species can be distinguished by the smaller body size and different appearance of the paranotal profiles, as shown in Figures 4 and 9, drawn to same scale. In particular may be noted the more strongly convex anterior margin in *ceylonicus*, and more numerous anterolateral marginal notches, as well as the occurrence of seven posterior marginal lobes instead of six as in *alticola*. In a family in which females are usually larger than males, the size differential between these two species is especially significant. The male of *ceylonicus* will be probably found to be only half the size of *alticola*. In other respects, particularly the form of the metatergal tuberculation, the two species are so similar there can be no doubt that they are congeneric.

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