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EPIZOIC SYMBIOSIS: A NEW PAPUAN COLYDIID BEETLE WITH EPICUTICULAR GROWTH OF CRYPTOGAMIC PLANTS (Coleoptera: Colydiidae)[1]

By G. Allan Samuelson

Bishop Museum, Honolulu

Abstract: A colydiid beetle of the genus *Dryptops* from New Guinea is described as new. Most of the specimens possess an epicuticular growth of cryptogamic plants. The genus is reported from New Guinea for the first time.

Members of the Synchitine genus *Dryptops* Broun apparently have not been recorded outside of New Zealand in previous literature. However, an Australian species of *Tarphiomimus* is referable to *Dryptops* according to R. D. Pope by personal communication. The material from New Guinea, although taken from widespread localities, represents a single species. Specimens were collected by W. W. Brandt, J. L. Gressitt, T. C. Maa, L. W. Quate, J. and J. H. Sedlacek.

Some of the specimens, noted by Gressitt in fresh condition, were found to possess a greenish clouding of the whitish lichenized cryptogamic plant growth on the dorsum. The greenish color has since faded in the same specimens. The symbiotic relationship is discussed by Gressitt in the following article of this issue.

I am greatly indebted to Mr R. D. Pope of London for his generous assistance in making comparisons with material in the British Museum of Natural History, and for concluding that the new species is very closely allied to *Tarphiomimus saccharatus* (Pascoe). Many thanks are due to Miss Setsuko Nakata for various assistance, and to Mrs Barbara Downs who prepared the illustrations.

Dryptops phytophorus Samuelson, n. sp. Fig. 1a-g.

♂. Body form robust. Body surface, antenna and legs red-fuscous; most surfaces, except antenna and legs, covered with a pale-testaceous to pale fulvous wax-like or vegetative material largely concealing integument. Dorsum subdensely clothed with stout, curved, pale flavescent hairs; pubescence conspicuous on dorsal prominences and lobes of explanate margins; labrum with dense fringe of flavous hairs along anterior margin; frontoclypeus densely clothed with pale; antenna with segments 1-8 submoderately clothed with stout curved setae, 9-11 more densely clothed with finer setae; ventral surfaces and legs with generally finer pubescence than dorsum.

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Head but slightly exceeding anterolateral extremities of prothorax; labrum transverse, anterior margin straight; frontoclypeus little exerted before antennal insertions, breadth subequal to interocular space, anterior margin shallowly concave along middle, surface broadly convex and bearing small tubercles ± as large as their interspaces; interantennal space ± flat medially; supra-antennal extension strongly inclined laterad, anterolateral region of margin obliquely truncate; interocular space 2.6× as broad as vertical diameter of eye, surface with low glandular tubercles mostly larger than anterior ones, and a high conical tubercle near inner margin of eye; gena excavated, 5/8 as deep as eye; vertex

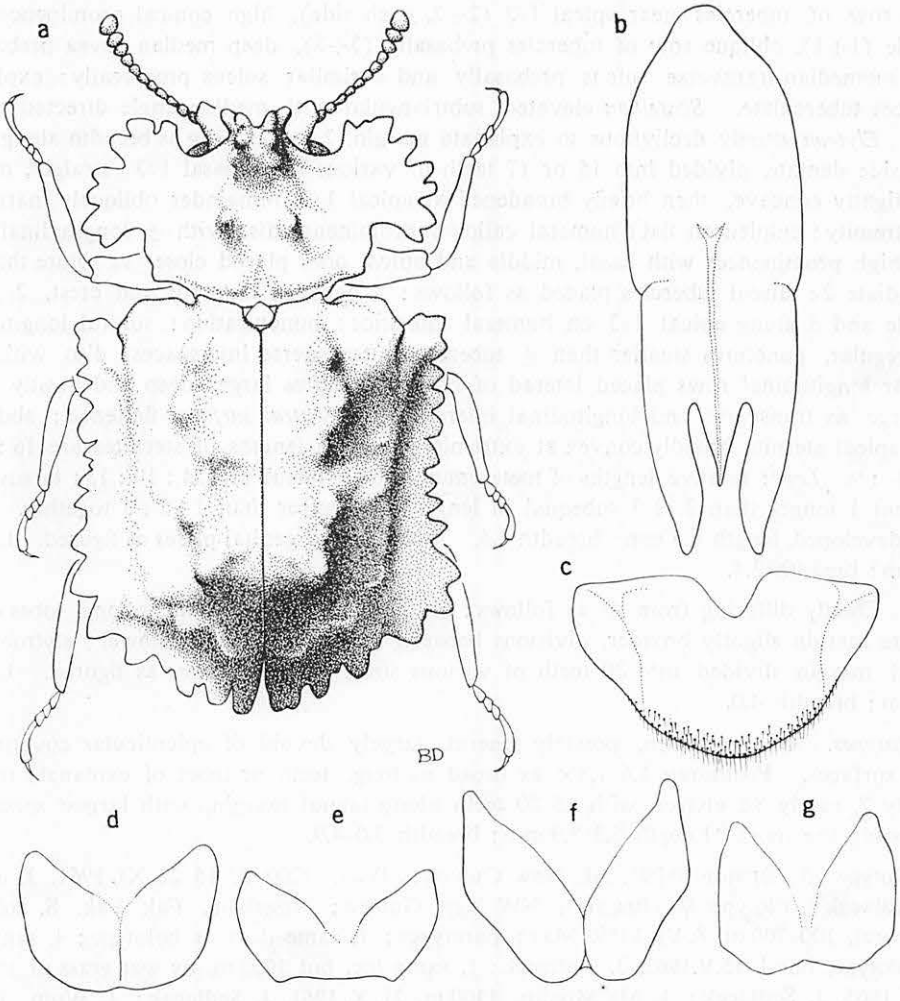

Fig. 1. *Dryptops phytophorus*, n. sp. a, dorsal view; b, aedeagus; c, apical abdominal tergite; d, ♂ tergal genital plate; e, ♂ sternal genital plate; f, ♀ tergal genital plate; g, ♀ sternal genital plate. (a of paratype ♂, b-e of holotype ♂, f-g of allotype ♀; setae omitted on genital plates; figs of different scales).

inclined posteriorad, surface unevenly convex. *Antenna* 3/11 as long as body; segment 3 dilated apically, 4-8 thickened to apices, 9-10 ± flattened, last ± flattened, apex subevenly rounded; relative lengths/breadths of segments are: 7+/5 : 4+/4+ : 8/4 : 6/4 : 5+/4 : 5/4 : 4+/4+ : 4+/5 : 5+/7 : 5/8+ : 7/8+. *Prothorax* 1.9× as broad as length along median axis; greatest breadth near middle subequal to basal breadth of elytra; anterior margin broadly produced anterolaterally and strongly elevated dorsomedially as a bicristate process; side broadly explanate along apical 1/2 with margin divided into 7 teeth or lobes of different sizes, deeply emarginate near middle and slightly broadened prebasally by 2 small teeth; median bicristate process abruptly elevated along anterior 1/3, deeply and narrowly sulcate along median axis, each divided into 3 lobes in lateral outline; disc with transverse row of tubercles near apical 1/3 (2+2, each side), high conical prominence near middle (1+1), oblique row of tubercles prebasally (3+3), deep median fovea prebasally, deep submedian-transverse sulcus prebasally and a similar sulcus preapically; explanate surfaces tuberculate. *Scutellum* elevated, subtriangular with median angle directed anteriorad. *Elytron* steeply declivitous to explanate margin, 2.4× as long as breadth along basal 1/3; side dentate, divided into 15 or 17 teeth of various sizes, basal 1/3±straight, middle 1/3 slightly concave, then briefly broadened at apical 1/3, remainder obliquely narrowed to extremity; epipleuron flat; humeral callosity prominent; disc with ± longitudinal crest of 5 high prominences with basal, middle and apical ones placed closer to suture than intermediate 2; discal tubercles placed as follows: 1 between humerus and crest, 2 along middle and 3 along apical 1/3 on humeral interstice; puncturation: sutural longitudinal row regular, punctures smaller than ± tuberculate transverse interspaces, disc with 5 ± regular longitudinal rows placed laterad of crest, punctures large, deep and mostly 2-3× as large as transverse and longitudinal interspaces. *Ventral surfaces* flattened; abdomen with apical sternite broadly convex at extremity; relative lengths of sternites are 16 : 7+ : 7 : 5+ : 9. *Legs*: relative lengths of metafemur, -tibia, -tarsus are 24 : 19 : 13; tarsus with segment 1 longer than 2, 2-3 subequal in length, last longer than 1+2+3 together. *Wing* fully developed, length 6.5 mm; breadth 2.4. *Aedeagus* and genital plates as figured. Length 5.9 mm; breadth 3.4.

♀. Chiefly differing from ♂ as follows: prothorax 1.5× as broad as long, lobes of explanate margin slightly broader, divisions between anterior 3 lobes shallower; elytron with lateral margin divided into 20 teeth of various sizes. *Genital plates* as figured. Length 8.0 mm; breadth 4.0.

Paratypes. One specimen, possibly teneral, largely devoid of epicuticular covering on body surfaces. Prothorax 1.6-1.8× as broad as long, teeth or lobes of explanate margin usually 7, rarely 8; elytron with 15-20 teeth along lateral margin, with largest specimens possessing the most. Length 5.3-8.9 mm; breadth 3.0-4.9.

Holotype ♂ (BISHOP 6810), NE New Guinea: Wau, 1200 m, 15-22.XI.1961, J. and J. H. Sedlacek; allotype ♀ (BISHOP), NW New Guinea: Vogelkop, Fak Fak, S. coast of Bomberai, 100-700 m, 8.VI.1959, Maa; paratypes: 1, same data as holotype; 4, same loc as holotype, but 1-15.V.1962, J. Sedlacek; 1, same loc, but 1250 m, *ex* wet grass nr stream, 3.IX.1965, J. Sedlacek; 1, Mt Missim, 1100 m, 21.X.1961, J. Sedlacek; 1, Wum, Upper Jimmi Vall., 840 m, 17.VII.1955, Gressitt; 2, Torricelli Mts, Sugoitei Vill., 900 m, 6-9.II.1959, Brandt; 1, NW New Guinea: Star Mts, Sibil Vall., 1245 m, under bark, 18.X-8.XI.1961, Quate; 1, SE New Guinea: Owen Stanley Range, Goilala, Bome, 1950 m, 16-31.III.

1958, Brandt.

Differs from *Tarphiomimus saccharatus* (Pascoe) by having supra-antennal extensions of frons obliquely truncate anterolaterally, lobes of pronotal explanate margin more irregular, prebasal notch of pronotal side shallower and less parallel-sided, and larger size.

It should be noted that individuals, although fully winged, may be incapable of flight once they have acquired epicuticular growths. In clad specimens, the elytra have evidently remained closed, as the sutural margins are mostly concealed by undisturbed material. Also, in relaxed specimens, the elytra were opened with some difficulty, and the opposing surfaces of the sutural margins were found to closely interjoin. Yet, the assumption that individuals are capable of flight, at least before becoming clad, might partly account for the fairly wide distribution of the species in New Guinea.