

THE GENUS *CHELONOTUS* BERLESE
(ACARINA, CHEYLETIDAE)

BY

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Synopsis.

Chelonotus selenirhynchus Berlese is redescribed from Malaya. It is a normal parasite of squirrels in Malaysia, and has also been taken on a tree shrew (*Tupaia*). *C. oudemansi* and *C. ewingi*, both described from Celebes squirrels by BAKER (1949) are considered to be synonyms.

Berlese's (1893) original description of the monotypic genus *Chelonotus* is brief, and repeated in several places in his book *Acari, Myriapoda et Scorpiones hucusque in Italia reperta*. Mr. H. WOMERSLEY, in whose care is the only copy of this work in Australia, has very kindly sent me copies of these passages, the essence of which (in translation) follows. "In the genus *Chelonotus* alone is the entire dorsum protected by a strongly sclerotized shield as in the uropodids or oribatids. Shields are lacking ventrally, except for the epimera of the legs. The sole species of the genus, *C. selenirhynchus* Trouessart in ms, was collected on *Sciurus lowii* in Borneo." An outline drawing of the dorsal surface of the mite, with the setation omitted, was also given. Trouessart's specimens were later described by OUDEMANS (1906) but again the figures are not entirely satisfactory. Two further species were described from squirrels from the Celebes by BAKER (1949), but these are considered below to be synonyms of Berlese's species.

A good series of this atypical species has recently come to hand from Malaya, and it has therefore been redescribed in full.

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Genus *Chelonotus* Berlese, 1893.

Diagnosis. — Palpal tarsus with one comb-, and two sickle-like setae. Propodosomal and hysterosomal shields contiguous, covering entire dorsum, and encroaching on venter posterolaterally. Type species *C. selenirhynchus* Berlese, 1893 by monotypy.

Acarologia, t. II, fasc. 4, 1960.

Chelonotus selenirhynchus Berlese, 1893.

Description of female. — An especially heavily sclerotized cheyletid mite, with idiosoma 464-548, av. 504 μ long. Body subovate, but broader in anterior half. Dorsum with two contiguous shields. Anterior shield slightly wider posteriorly, with four pairs of setae along its anterolateral margins. Posterior shield subtriangular, but rounded posteriorly, with five pairs of setae along lateral margin. The stronger body setae are weakly barbed. Texture of shields finely and uniformly punctate, except in anterior part of anterodorsal shield, where the punctae

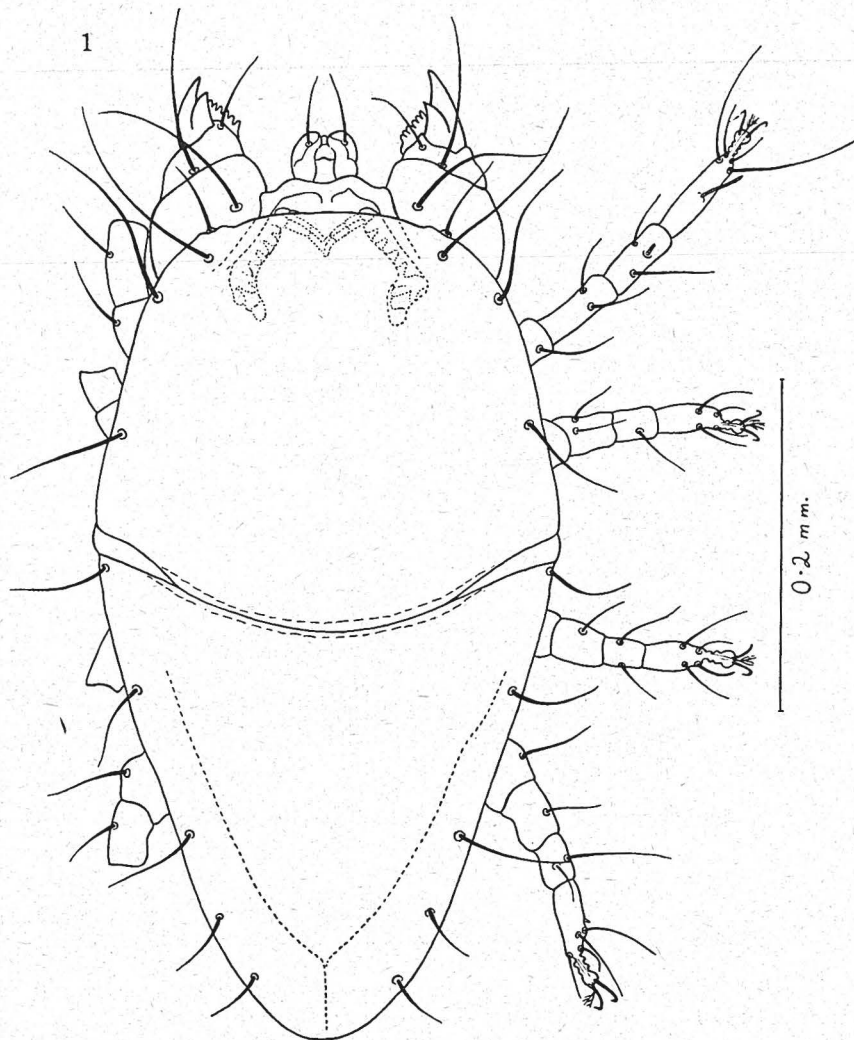


FIG. 1. — *Chelonotus selenirhynchus* Berlese. — Dorsum of female.

Acarologia, t. II, fasc. 4, 1960.

tend to be arranged in transverse lines. With a distinct internal contour line, as figured, but of uncertain origin. *Venter* : With a narrow, longitudinal platelet above coxae II, bearing a single seta. Posterodorsal shield underlapping ventral surface laterally ; with punctae arranged in longitudinal lines. Ventral cuticle

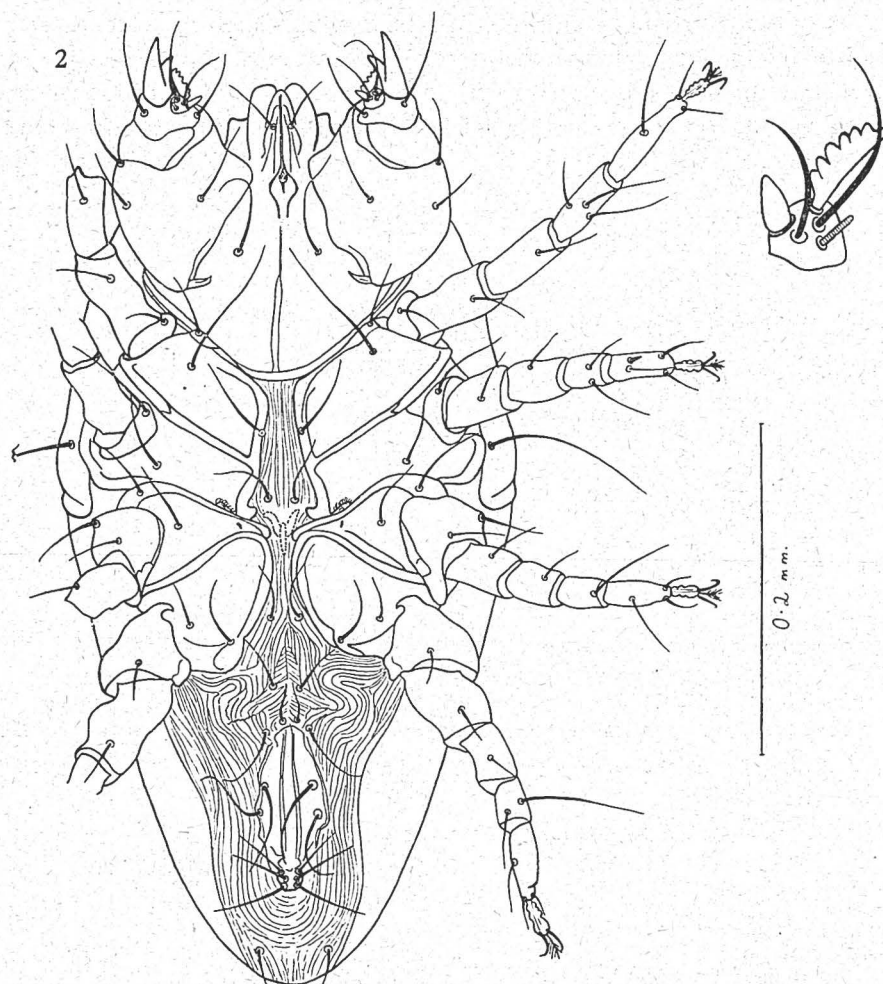


FIG. 2. — *Chelonotus selenirhynchus* Berlese. — Venter of female, with inset showing armature of palpal tarsus.

striate. With a pair of setae between coxae I, II and IV, and an internal upsilon-shaped sclerotization between coxae III. Genitoanal coverlets with two pairs of subequal setae ; preceded anteriorly by three pairs of setae, of which the central pair is the smallest, and followed by a distinct tubercle, bearing six radiating setae. Two further setae are present posteriorly. *Legs* six-segmented, with coxae immobile, and arranged in four groups of two, coxae I & II and III & IV being

fused, but not touching medially. This is clear only in compressed specimens, and the coxae normally appear as figured, i. e. apparently in two groups of four, and separated only medially. Coxal setal formula 2.1.2.2. Leg setation in general undistinguished. All tarsi with about four small, stiff setae immediately before pretarsus, and with two long setae dorsodistally. Tarsus I and tibia I with striate rod dorsally; tarsus II with striate rod ventrally; tarsus IV with minute spinule dorsally. All tarsi with beaded pretarsus, two claws, and rayed pulvillus. *Gnathosoma* massive, and sunken somewhat beneath anterodorsal shield. Fused pedipalpal coxae with two simple setae. Femur with one seta dorsally, and three ventrally. Genu with two setae dorsally. Tibia with two setae ventrally; tibial claw strong, bifurcate, with stronger prong ventrally. Tarsus obscured dorsally by tibia; with two simple setae, a striate rod, a blunt spine, and a comb-like seta with about six blunt teeth laterally, and one distally. The legs and gnathosoma are also uniformly punctate, except that the punctae on the dorsal surface of the palpal femur are arranged in a linear pattern as on the front of the anterodorsal shield. Rostrum with two setae both dorsally and ventrally. Peritremes M-shaped, as figured, the internal tracheae commencing at the medial juncture of the M.

Male : If the sexual characters of the males of this genus are the same as in other cheyletid genera, I have not seen this sex.

Notes. — The appearance in mounted material depends on the degree of flattening involved. The gnathosomal outlines further vary with the degree of protrusion from beneath the anterodorsal shield. The coxae, although actually in four groups of two, normally appear to be in two groups of four, while the posterior margin of the body, normally acute, may seem to be rounded. Apart from these differences, which are artificial, and due only to distortion, I can see no structural characters to subdivide these specimens. I therefore believe the following two species, of which I have examined the types in the United States National Museum, to be synonyms of Berlese's species — *Chelonotus oudemansi* Baker, 1949, from *Callosciurus tenuis* from the Celebes, and *Chelonotus ewingi* Baker, 1949, from *C. prevostii*, also from the Celebes. Both these species are based on single specimens, the former on a relatively undistorted, and the latter on a considerably flattened specimen.

Material examined. — Apart from the two specimens listed above from Celebes squirrels, I have seen the following 53 specimens from Malayan squirrels — 25 from "large squirrel" B2194, 17 miles N. Kuala Lumpur, Pahang Road, 22-XII-1948, R. TRAUB and B. INSOLL coll.; one from *Callosciurus tenuis* 8148, 16 miles N Kuala Lumpur, Pahang Road, 5-VII-1948, R. TRAUB coll.; six from *C. tenuis* 8183, Brinchong Hill 5500', Cameron Highlands, 18-VII-1948, R. TRAUB and B. INSOLL coll.; twelve from *C. tenuis* 8227, 16 miles N Kuala Lumpur, Pahang Road, 27-VII-1948, R. TRAUB coll.; nine from *Lariscus insignis* 8228, same loca-

lity, date, and collector as 8227. Also five from a tree shrew, *Tupaia glis* B2509, 16 miles N Kuala Lumpur, 14-II-1949, B. INSOLL and L. FRICK coll.

Distribution. — Common on squirrels in Malaya, Borneo, and the Celebes. Also recorded from a Malayan tree shrew.

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