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A NEW SPECIES OF CHAULIACIA Oudemans FROM TEXAS
(ANALGESOIDEA, PTEROLICHIDAE)

BY

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The genus Chauliacia erected by Oudemans (1905) for Pterolichus securiger Robin has been placed as a synonym of the genus Eustathia by Dubinin in his 1956 publication treating the family Pterolichidae. Dubinin recognized three species for the genus Eustathia: E. securiger (Robin), E. varians (Trt.), and E. cultrifera (Robin). Of these, E. securiger and E. varians were at one time considered to be in the genus Chauliacia. Dubinin considered the position of the female genital arch between the epimeres of legs II as sufficient to combine Chauliacia and Eustathia. Gaud and Mouchet (1959) did not accept Dubinin's uniting of Chauliacia and Eustathia and stated that though the single character proposed by Dubinin, i.e., the position of the genital arch, separated Chauliacia and Eustathia from the other genera in the family Pterolichidae, this single character was not sufficient to join these two genera. In their key to the genera of the family Pterolichidae these two genera were separated by the structure of the epimeres of legs I. The genus Chauliacia has the epimeres ending freely whereas those of the genus Eustathia are fused.

If the opinion of Gaud and Mouchet is to be followed an explanation of the epimeres of the females of Eustathia varians varians (Trt.) as figured by Dubinin (1956) must be made. In this figure the epimeres are shown to be fused in the female and ending freely in the male. The treatment of E. varians varians by Gaud and Mouchet (1959) was to place it in the genus Chauliacia which is characterized in their key as having the epimeres ending freely. The material upon which this paper is based will key to the genus Chauliacia due to the structure of the epimeres of legs I. The writer feels that the new species here in described has characters that relates it to E. cultrifera, i.e., the terminal paired seta, the small accessory seta of these terminal pair, the position of the genital arch which is located between the epimeres of legs II, the structure of the male penis, and the genital suckers. However, it has its closest relative C. varians varians (E. varians

variants of Dubinin) due to the structure of the dorsal plates, and the fact that C. varians has been taken from a host of the genus Chaetura.

Until a complete study of these two genera can be made the author has elected to place the new mite taken from Chaetura pelagica in the genus Chauliacia along with C. varians and C. securiger as proposed by GAUD and MOUCHET (1959).

Fig. 1. — Chauliacia tricapitosa, n. sp., dorsal view of the female. a: three-pronged type seta.
The material upon which this description is based consists of specimens taken from Chaetura pelagica at Waco, Texas, June 25, 1961. The host was collected by Burruss and Shirley McDaniel at the circle junction of highways 6, 77, and 81 in Waco, Texas.

Chauliacia triapitoseta, n. sp.

Female. — Body egg-shaped, without a line separating the propodosomal and hysterosomal regions. Legs arising from margin of body, with well-developed propodosomal and hysterosomal shields. These shields marking the two regions. The propodosomal region anterior to external scapular setae (se) and internal scapular setae (sci) without unusual dorsal setae characteristic of dorsum. Propodosomal shield beset with small raised areas that appear as holes. With a small hair-like single external vertical setae (ve). The external setae (se) large, extending beyond the body margin, the internal scapular setae (sci) similar to the external scapular setae in size but shorter in length, not extending beyond the body margin and sword-like in structure. The dorsum posterior to the scapular setae beset with many unusually shaped setae (Fig. 1) arising from the propodosomal and hysterosomal shields. These setae range between the large three-pronged types (Fig. 1 a) to the smaller single-pronged types. The humeral setae (hi) large and of the same structure as the scapular setae. The humeral setae located at the anterior margin of the hysterosomal shield (hi1), long and blade-like. The two sub-humeral setae (se1, se2) located anteriorly to legs III on the marginal shield that extends to the ventral region of the body. Sub-humeral setae I (se1) shorter than sub-humeral setae II (se2), both reaching beyond the body margin, with se2 extending at least to the coxa of legs IV and se1 not extending past the coxa of legs III. The dorsal setae scattered unevenly over the propodosomal and hysterosomal shields not placed in rows and of two types (Fig. 1). The external sacrais long, four in number situated in two pairs with their bases protruding beyond the margin of the body. Two smaller accessory setae, one located between each pair of external sacrais and the other placed next to the more anterior member of the paired external sacrais. The posterior end with a small island-like projection arising from the dorsum (Fig. 1).

Ventrally the chelicerae are scissor-shaped. The rostrum contains a pair of setae and a pair of pseudostigma organs. The apodemes of legs I ending freely. The genital arch in the shape of an inverted U with the upper portion situated between the apodemes of legs II. Genitalia an inverted V, but with the point being blunted (Fig. 2). Two small pairs of genital suckers located at the end of the genital arch and next to the genital opening. A pair of small setae located between the apodemes of legs II. A small setae situated between the apodemes of legs III and IV; one pair of anal setae. Anus a long slit and bounded by the two anal setae. Anal region extending from the posterior margin of the body (Fig. 2). A lateral scleritized plate located between legs IV and the anal setae,
this plate extends to the ventral region and is perforated in the same manner as the dorsal propodosomal shield. All legs bearing caruncles of the type characteristic of the family Pterolichidae. Legs I and II of the same shape and size as legs III and IV, all containing five segments. Fourth segment of each leg rounded and expanded dorsally.
Male. — Similar to female, with same three pronged-shaped setae on both propodosomal and hysterosomal shields, these also absent from anterior region of propodosomal shield as in female. Propodosomal shield beset with small raised areas, these absent on hysterosomal shield as in female. Cheirotaxiae of the dorsum same as in female, with only a single hair-like external vertical setae (ve). External scapular setae and humeral setae identical to those found on the female.

Fig. 3. — Chauliacia tricapitoseta, n. sp., dorsal view of the male. a: three-pronged type seta.
both in structure and location. A pair of posterior lateral setae (lp) located posterior to the coxa of legs IV. The posterior region of the body produced into two small lobes that bear the external sacrals and the smaller accessory setae. These setae placed on each side of the external sacrals. The lobes scleritized and separated from the scleritized hysterosomal shield. Two membranous lobes that contain the anal suckers extending from the posterior section of body.

Fig. 4. — Chauliacia tricapitoseta, n. sp., ventral view of the male.
Ventrally the chelicerae are scissor-shaped. The rostrum contains a pair of setae and a pair of pseudostigma organs. The apodemes of legs I the same as described in the female (Fig. 4). A pair of small setae located between the apodemes of legs II. A small pair of setae between the apodemes of legs II and III. Another pair just below the apodemes of legs IV. The male genitalia is situated between the extension of the lateral plate located posterior to legs IV. Two anterior postanal setae. The anus a long slit forming a Y-like structure. At the end of the Y-shaped anus are two anal suckers on a membranous area between the anal lobes. All legs bearing caruncles similar to those of the female, each containing five distinct segments and all of the same size and shape.

This species is described from the female holotype and a male allotype along with an undetermined number of paratypes from Waco, Texas.

The holotype and allotype are deposited in the United States National Museum (USNM no. 2814), Washington, D. C. along with three female and three male paratypes. Paratypes have also been deposited at the Laboratoire d’Acarologie, Paris, France; the Natal Museum, Pietermaritzburg, South Africa; the Institute of Acarology, University of Maryland, College Park U.S.A.; and the author’s personal collection.

Chauliacia tricapitoseta, n. sp. may be separated from all other members of the genus Chauliacia by the unusual structure of the dorsal setae (Fig. 1 and 3), by the size of the genital arch of the female which extends beyond the apodemes of legs II, and shape of the propodosomal and hysterosomal shields.

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