

# *Parantricola* sg. nov., a New Subgenus of Argasid Ticks (*Ixodoidea*)

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**Abstract.** *Parantricola* sg. nov. is erected for *Antricola marginatus* (Banks, 1910) whose larva and male are described.

*Antricola marginatus* was described by BANKS (1910) from a cave in Guanajay Mountains in Cuba (Prov. Pinar del Rio). It is a species which occurs in bat caves with guano. Its geographical distribution covers Cuba and probably Puerto Rico. Only female and nymph were known until now. They are described in the monograph of COOLEY and KOHLS (1944).

During field expeditions of the Institute of Biology of the Cuban Academy of Sciences and of the Institute of Parasitology of the Czechoslovak Academy of Sciences, a lot of ticks of this species was collected from the bat guano at Cueva de Colón, Punta Caguanes, Jaguajay, Prov. Las Villas, Cuba on 28. IV. 1965, which contained all developmental stages. On the basis of this material a hitherto unknown larva and male are described below.

## Larva

The description is based on 20 unengorged larvae mounted in Swan's medium. The setal nomenclature follows that of KOHLS, SONENSHINE and CLIFFORD (1965). All measurements are in mm.

**Body.** 1.021—1.105 long by 0.447—0.525 wide, including capitulum. Dorsal plate pyriform, 0.390—0.461 long by 0.163—0.192 wide. Dorsum with 14 pairs of setae, 11 dorsolateral pairs and 3 central pairs. Average length of  $DL_1$  and  $DL_2$  0.194 and 0.187, respectively. Venter with 11 pairs of setae, including 3 pairs of postcoxal setae plus 1 PMS (Fig. 1A).

**Capitulum.** Length 0.532—0.575 (measured ventrally, including hypostome), width 0.243—0.270. Two pairs of posthypostomal setae.  $PH_1$  average length 0.006,  $PH_2$  average length 0.091. Distance between setae of  $PH_1$  average 0.034, between setae of  $PH_2$  average 0.102, between setae  $PH_1$  and  $PH_2$  average 0.114. Palpi

0.355—0.398 long by 0.048—0.053 wide. Average length of palpal articles 1—4: 380 0.103; 0.104; 0.111; 0.081, respectively. Number of setae on palpal articles 1—4 is 0, 4, 5 and 9, respectively. Hypostome very acute, its part armed with denticles 0.272—0.292 long by 0.093—0.101 wide. Dentition 3/3 in anterior 4/5 of the part bearing denticles, 2/2 posteriorly (Fig. 1B).

Legs. Tarsus I 0.292—0.325 long by 0.089—0.110 wide. Setal formula: 1 pair A, 1 DM, 5 PC (the 3 internal setae being much shorter than the external ones), 1 PM, 1 pair B, 1 pair AV, 1 pair PMV, 1 pair BV and 1 pair AL. Claws on all tarsi, very large (Fig. 1C).

The chaetotaxy of the larva of *A. marginatus* agrees fully with that of the species *A. coprophilus* (McIntosh, 1935) and *A. mexicanus* Hoffmann, 1959 as

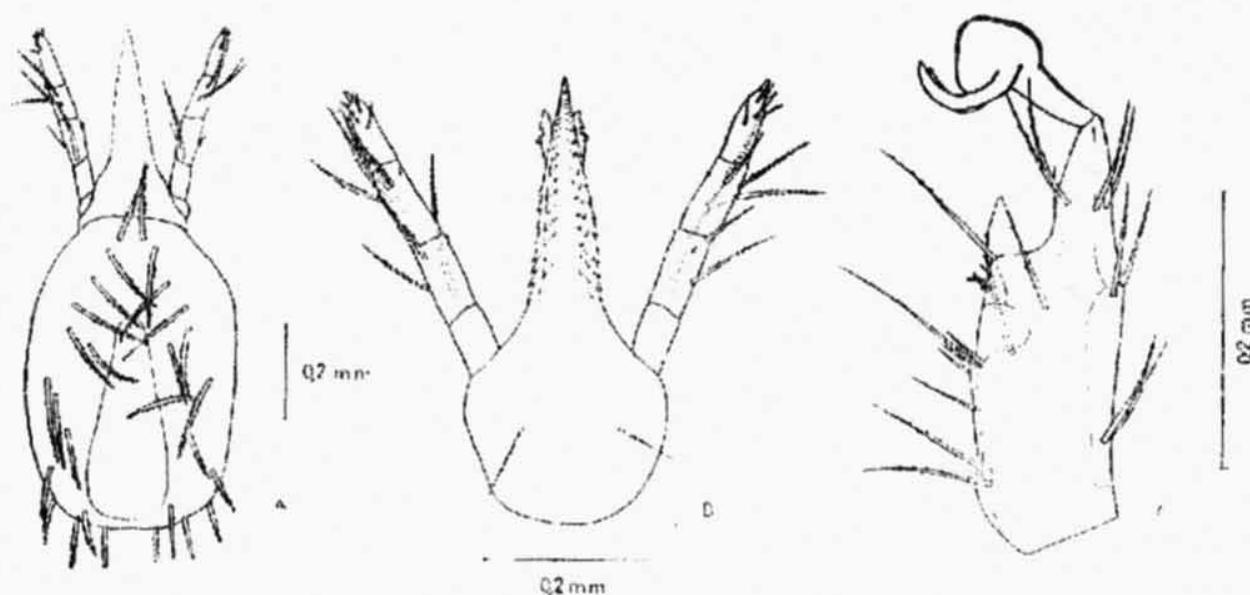


Fig. 1. *Antricola marginatus*, larva. A—body, dorsally. B—capitulum, ventrally. (the very small PH<sub>1</sub> setae are omitted). C—tarsus I.

shown in the paper of KOHLS, SONENSHINE and CLIFFORD (1965). It must be emphasized that the anterolateral setae are postponed apically so that they lie at the level between DM and PC. The same position has the median pair of ventral setae so that they may be named PMV rather than MV.

The main difference between the three species mentioned is in the presence of strongly developed claws on all tarsi of *A. marginatus* and in the large size of the body and setae in comparison with other two species. It differs also in the form of hypostome and in very small PH<sub>1</sub> setae in relation to PH<sub>2</sub> setae.

### Nymph

The last stage nymphs differ from the adults, as already mentioned by COOLEY and KOHLS (1944), in the absence of genital opening and in having the marginal tubercles longer. But their size exceeds in some specimens that of the adults

381 (Fig. 2). The largest nymphs measure as much as 9.4 by 5.2. The smallest nymphs observed, probably of the first stage, measure 2.1 by 1.3.

Three cases of abnormalities were found. A specimen with 3 legs on the left side (ectromelia), another specimen with 3 legs on the right side and with a third left leg underdeveloped (ectromelia with atrophy) and a specimen with the third left leg underdeveloped (atrophy).

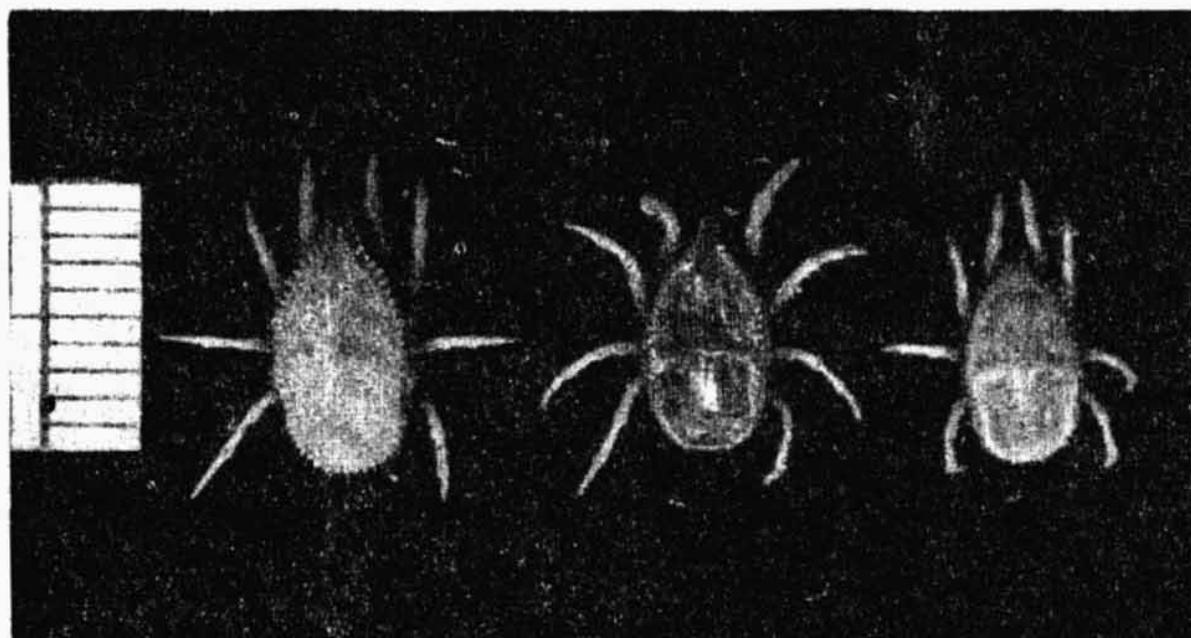


Fig. 2. *Antricola marginatus*. From left to right: last stage nymph, female and male. Photo Wanner).

### Male

The description is based on 10 ♂♂.

**Body.** Length 7.2—8.3, width 4.1—4.7. Shape in dorsal view suboval, widest about in the middle, tapering to the anterior point which is bent ventrally, broadly rounded posteriorly. Dorsal surface with some depressions. Margin with a continuous row of large tubercles which are present especially in the anterior part of the body, each with a tuft of long hairs. In the posterior part, they diminish in size and in some specimens the caudal part bears only tufts of hairs. The number of tufts on the periphery varies between 56 and 70.

**Tubercles.** Over the dorsal surface numerous small tubercles, each with one to six hairs. They are present also ventrally but anteriorly to the capitulum, between coxae and in the walls above legs they are very faint or absent. These parts bear single hairs.

**Discs.** Present dorsally as faint depressions in symmetrical areas which lack tubercles, absent on the venter.

**Legs.** Long and large, with numerous long barbed hairs. A very small protuberance with short hairs before Haller's organ on tarsus I, tarsi II—IV without protuberances and spurs. Claws very large. Length of tarsus I 0.91—1.05, metatarsus

Hood, camerostome and cheeks. Absent.

Capitulum. Large, surface smooth and shining, with numerous long barbed hairs. Palpi of moderate length, articles 2—4 free.

Hypostome. Short, broad and rounded apically, scoop-like.

Chelicerae. Large, with well developed digits.

Folds. Coxal and supracoaxal fold present.

Grooves. Transverse postanal groove present, short, deep. All others absent.

Spiracle. A globular protuberance, free on all sides except at the smaller attached end.

Genital opening. Placed between coxae I, a little anterior as in the female.

Anus. Large, in an elliptical frame.

Both sexes are similar — the males being a little smaller — but they may be readily distinguished by the form of the genital opening (Fig. 3).

One case of abnormality was found. It is a male with the third left leg underdeveloped.

## Female

The female of this species is described in details and figured by COOLEY and KOHLS (1944). Some remarks concerning the variability of some morphological characters may be added to this description on the basis of our material (20 ♀♀ examined).

The females are very large. The length of our specimens varies between 7.6—9.0 (average 8.5), the width between 3.8—5.0 (average 4.35). The tubercles at the margin are well developed in the anterior part of the body. In the posterior part—similarly as in the male—they diminish in size and in many specimens only tufts of hairs are present caudally. The number of these peripheral tufts is different, from 58 to 70. The legs are long. Length of tarsus I 1.11—1.42 (average 1.24), metatarsus I 1.07—1.39 (average 1.23). Length of tarsus IV 1.78—2.08 (average 1.94), metatarsus IV 1.44—1.82 (average 1.65).

*Antricola marginatus* differs in some morphological features from other members of the genus *Antricola* which may deserve a subgeneric rank. I propose therefore for this species a new subgenus.

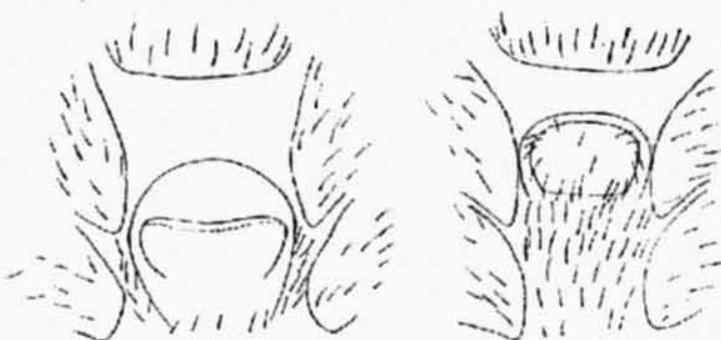


Fig. 3. *Antricola marginatus*. The genital opening of the female (left) and of the male (right).

Type-species: *Antricola marginatus* (Banks, 1910).

Diagnosis. External morphology as in *Antricola* s. str. (dorsal walls flattened and marginated, below the dorsum the body convex and deep, integument semi-translucent, the surface smooth, shining and with tubercles, discs absent on the venter, hypostome convex ventrally, concave dorsally and lacking effective denticles, chelicerae large, eyes absent) but the larvae are very large and provided with claws on all tarsi, both sexes are similar. In *Antricola* s. str. the larvae are small and without claws, the sexes are dissimilar.

The subgenus *Antricola* s. str. includes two species: *A. coprophilus* (McIntosh, 1935) and *A. mexicanus* Hoffmann, 1959, the subgenus *Parantricola* only *A. marginatus* (Banks, 1910).

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