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Entomol. Mitt. zool. Mus. Hamburg	13 (160): 95-100	Hamburg, 15. September 1999 ISSN 0044-5223

Some remarks about *Ananteris festae* Borelli, 1899 and description of a new species of *Ananteris* Thorell from Ecuador (Scorpiones, Buthidae)

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(With 14 figures)

Abstract

New considerations regarding the taxonomic position of *Ananteris festae* Borelli, 1899 are proposed and a new species of *Ananteris* (Scorpiones, Buthidae) is described from the coastal region of Ecuador. This is the third species of *Ananteris* known from that country. The total number of species in the genus is now raised to 21.

Introduction

When the genus *Ananteris* was revised (Lourenço 1982), the species *Ananteris festae* Borelli 1899, from Rio Peripá in the Province of Pechincha, Ecuador, was clearly defined as valid as it differed from the other known species, in particular by its trichobothrial pattern, the absence of spinoid granules in the internal face of the tibia and a very small number of pectinal teeth. Since the genus was revised, the number of new species has increased continuously. At present it contains 20 known species (see Lourenço 1993, 1994, 1997). In most cases, however, the species have remained rare.

The description of *Ananteris festae* was based on an immature female which remained the only known specimen until 1982. During preparation for the revision of *Ananteris* in 1982, the existence of two other specimens was indicated by E. A. Maury of the Natural History Museum, Buenos Aires, but they were not examined by me. Some years later, I examined a few specimens of *Ananteris* from Ecuador, the latter deposited in the Field Museum of Natural History, Chicago, and concluded that, despite minor differences, they belonged definitely to the species *A. festae* (see Lourenço 1988). These specimens had also been collected from the Province of Pechincha, but at different altitudes. The type specimen of *A. festae* came from a site in the Andes probably at an altitude of about 3000 m, but the other specimens were collected further west, from altitudes ranging between 300 and 700 m.

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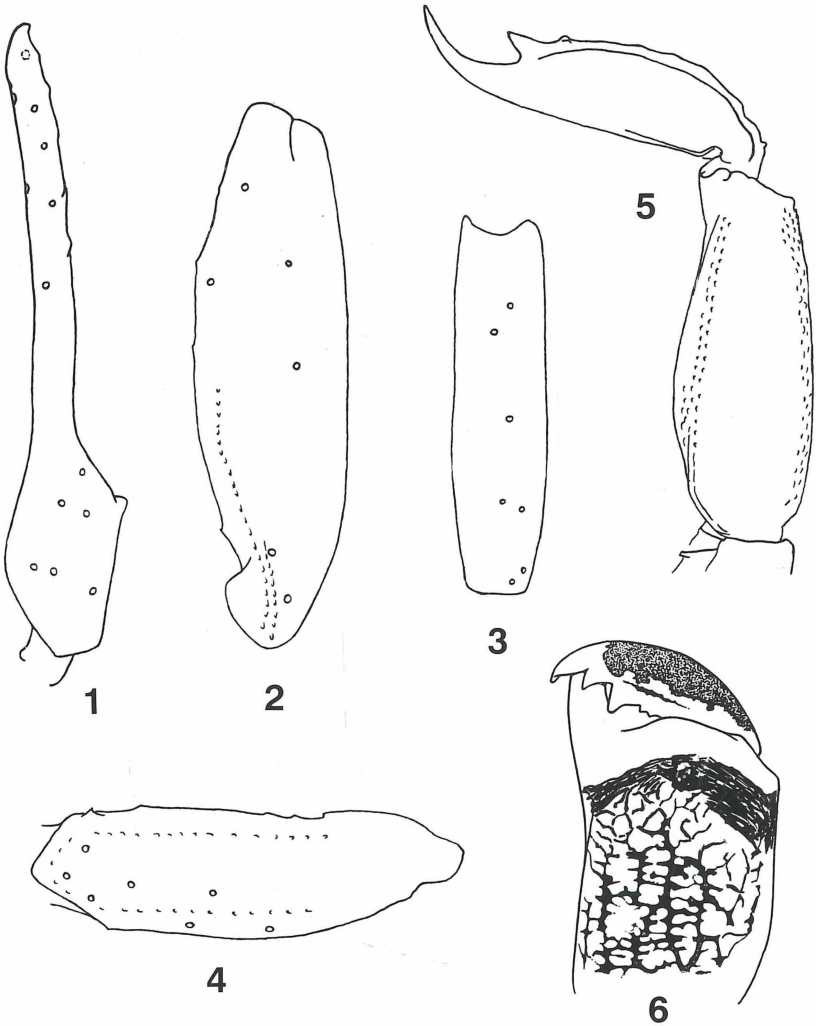

Figs 1-6. *Ananteris mariaelenae* sp. n., holotype (♀): **1-4**, trichobothrial pattern: **1** - chela, external view; **2**, **3** - tibia, dorsal and external view; **4** - femur, dorsal aspect; **5** - metasomal segment V and telson, lateral view; **6** - chelicera.

The present study of a single specimen of *Ananteris* collected in the Province of Manabi, shows it to be closely related to *A. festae*. Again, there are no spinoid granules on the internal face of the tibia and a small number of pectinial teeth, but it differs in its trichobothrial pattern. This could suggest that at least part of the material, previously determined as *A. festae* and deposited in the Field Museum, Chicago may have been misidentified. On a recent visit to the Field Museum, I was not able to locate

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the specimens determined by me in 1988. Once these have been located, their identification need to be checked to confirm whether they do belong to *A. festae* or to the new species described below.

Ananteris mariaelenae sp. n.
(Figs 1 - 6)

TYPE MATERIAL. H o l o t y p e female. Ecuador, Manabi Province, 75-80 km NE of Chone, 90 km W of Santo Domingo, 280 m a.s.l., 22 February 1993, leg. W. R. Lourenço. Deposited in the Zoologisches Museum Hamburg (ZMH Reg. No. A89/99).

ETYMOLOGY. Patronym in honor of Dr. Maria Elena de Lima Perez Garcia of the Federal University of Minas Gerais, Brazil.

D e s c r i p t i o n (based on female holotype). The morphometric measurements are presented below.

C o l o r a t i o n. Basically brownish-yellow, symmetrically marbled with dark reddish brown, producing an overall spotted appearence. Prosoma: carapace yellowish and heavily spotted; eyes surrounded with black pigment. Mesosoma: yellowish-brown with confluent brown stripes. Metasoma: segments I to V yellowish, with numerous longitudinal brown spots; segments IV and V darker than the others. Vesicle yellowish without spots, only some reddish zones over the keels. Venter yellow with spots only on the coxapophysis. Chelicerae yellowish with variegated spots over their entire surface; fingers reddish-brown. Pedipalps: dark brown with a few spots on the femur and tibia; chelae yellowish; fingers brownish. Legs brownish with fuscous spots.

M o r p h o l o g y. Carapace feebly granular; anterior margin with a slight median concavity. Anterior median superciliary and posterior median keels very feeble. All furrows moderate to feeble. Median ocular tubercle distinctly anterior to the center; median eyes separated by one ocular diameter. Three pairs of lateral eyes. Sternum subtriangular to pentagonal. Mesosoma: tergites moderately granular. Median keel moderate in all tergites. Tergite VII pentacarinate. Venter: genital operculum divided longitudinally. Pectines: pectinal tooth count 12-13; basal middle lamellae of the pectines not dilated; absence of fulcra. Sternites almost smooth with moderate elongate stigmata; VII without keels. Metasoma: segments I with 10 keels, crenulate. Segments I to IV with 8 keels, crenulate. Intercarinal spaces moderately granular. Segment V with 5 keels. Telson moderately granular with one ventral keel and with a fairly short and moderately curved aculeus; subaculear tooth strong and spinoid. Chelicerial dentition characteristic of the family Buthidae (Vachon 1963); fixed finger with two basal teeth; ventral aspect of both finger and manus with dense, long setae. Pedipalps: femur pentacarinate; tibia and chelae with a few keels but moderately crenulate; internal face of tibia without spinoid granules; all faces moderately to feebly granular. Movable fingers with 7 oblique rows of granules ; only one accessory granule present at the base of each row. Trichobothriotaxy: orthobothriotaxy *A-β* (Vachon 1973, 1975). Legs: tarsus with very numerous fine median setae ventrally. Tibial spurs strongly developed on legs III and IV.

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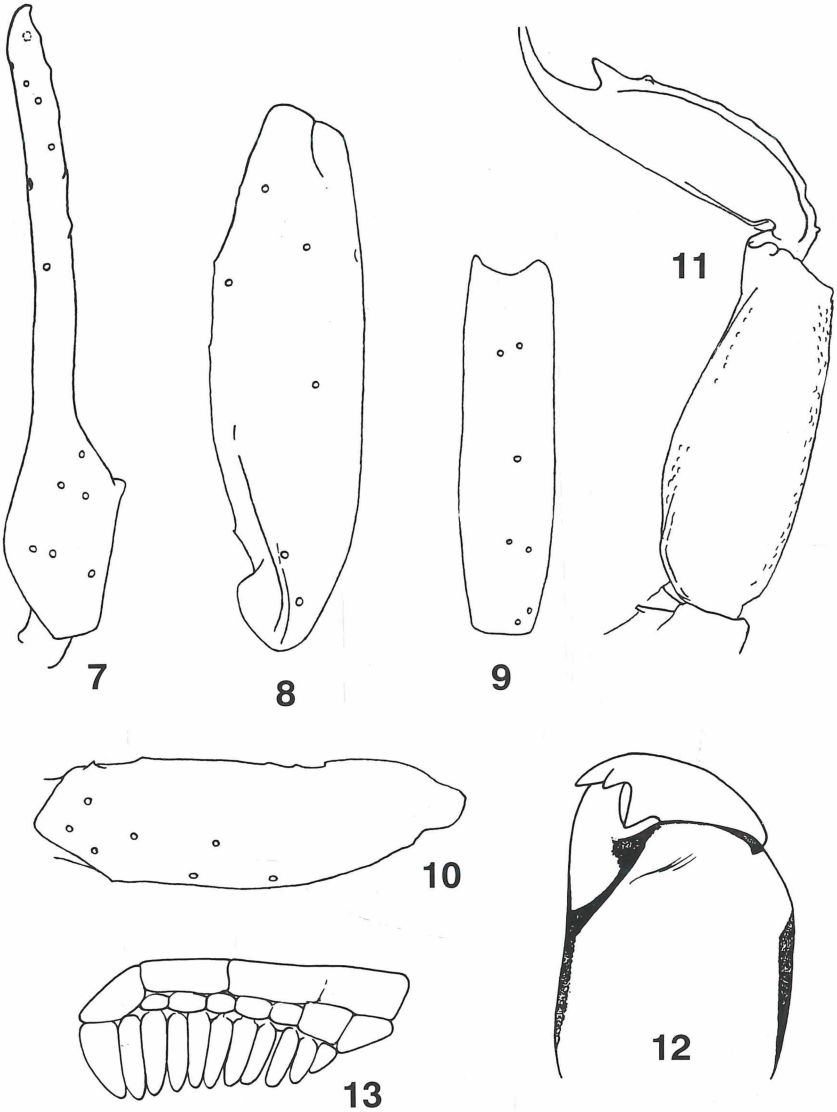

Figs 7-13. *Ananteris festae* Borelli, holotype (♀). **7-10**, trichobothrial pattern: **7** - chela, external view; **8**, **9** - tibia, dorsal and external view; **10** - femur, dorsal view; **11** - metasomal segment V and telson, lateral aspect; **12** - chelicera; **13** - pecten.

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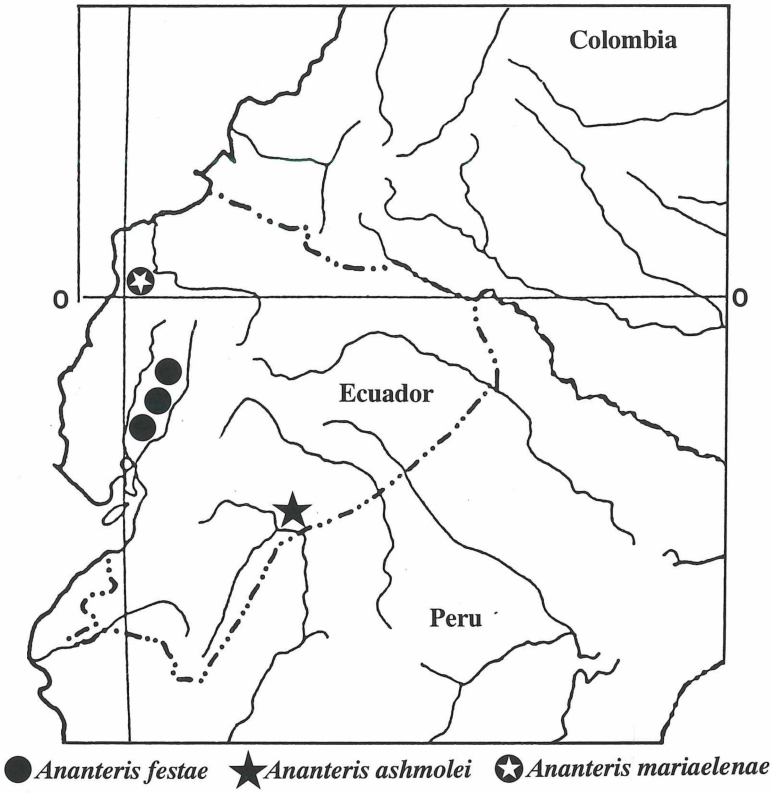

Fig. 14. Localities of *Ananteris* species in Ecuador.

M e a s u r e m e n t s (in mm): Carapace: length 2.2, anterior width 1.5, posterior width 2.3; metasomal segment I: length 1.1, width 1.4; metasomal segment V: length 3.1, width 1.2, depth 1.2; vesicle: width 1.0, depth 0.8; pedipalp: femur length 2.1, femur width 0.5, tibia length 2.6, tibia width 0.8, chelae length 3.2, chelae width 0.5, chelae depth 0.6; movable finger: length 2.4.

Interspecific comparisons

The new species is closely related to *Ananteris festae*, since both species share in common the absence of spinoid granules on the internal face of the tibia. These granules are present in all other known species of the genus. The two species under discussion can, however, readily be identified by their different trichobothrial patterns. In particular, trichobothria *et*, *est* and *esb* of the fixed finger of the chelae are all distal to *db* in *A. festae*, whereas in the new species only *et* and *est* are distal to *db*, *esb* being basal (see Figs 1-4 and 7-10). Moreover, both species live at different altitudes (see Fig. 14).

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Acknowledgements

I am very grateful to Prof. John L. Cloudsley-Thompson, London, for reviewing the manuscript.

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Zeitschrift/Journal: Entomologische Mitteilungen aus dem Zoologischen Museum Hamburg

Jahr/Year: 1999

Band/Volume: 13

Autor(en)/Author(s): Lourenco Wilson R.

Artikel/Article: Some remarks about Ananteris festae Borelli, 1899 and description of a new species of Ananteris Thorell from Ecuador (Scorpiones, Buthidae) 95-100