

A NEW GENUS AND TWO NEW SPECIES OF PYROGLYPHINAE
(ACARI, ASTIGMATA, PYROGLYPHIDAE)
FROM SOUTH AMERICAN BIRDS¹

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PYROGLYPHIDAE
NESTS
OF
WOODPECKERS

ABSTRACT : A new genus, *Campephiloptes*, in the subfamily Pyroglyphinae (Pyroglyphidae, Astigmata) and two new species, *Campephiloptes atyeoi* and *C. Paraguayensis*, are described from South American Woodpeckers. It is supposed that the true habitat of these mites is merely the nests of the birds and not the birds themselves.

PYROGLYPHIDAE
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RÉSUMÉ : Un nouveau genre, *Campephiloptes* (sous-famille Pyroglyphinae, famille Pyroglyphidae) et deux nouvelles espèces, *C. atyeoi*, et *C. Paraguayensis*, sont décrits sur des Pics sud-américains. Les auteurs pensent que l'habitat véritable de ces acariens était le nid de ces oiseaux et non les oiseaux eux-mêmes.

The two new species of mites that we study here were kindly forwarded to us by Prof. W. T. ATYEO, University of Georgia, Athens U.S.A. They had been collected from South American Woodpeckers, and only from two species of Woodpeckers, *Campephilus leucopogon* and *C. r. rubricollis*, among a total of 10 species of *Campephilus* representing 101 birds examined.

These mites belong to a new genus of Pyroglyphinae and they are characterized by the strong sclerification of the cuticle.

So far all the species belonging to this subfamily are free-living mites, therefore it seems likely that these new species were also free-living. We think that their presence on the birds was accidental and that their true habitat is more probably the nests of these birds.

Genus *Campephiloptes* gen. nov.

■ DEFINITION : *In both sexes* : Cuticle strongly and uniformly sclerotized without soft areas and with various structures, either thick folds or small rounded or oval pits or depressions. Posterior extremely rounded. Sejugal furrow well formed. Tegmen convex covering the base of the gnathosoma. All the legs ending in a pedunculate sucker. Femora I-II inflated in their apical half. Genu I with only one short and thin solenidion. *Female* : Borders of vulvar lip strongly sclerotized, the posterior lip very large and presenting a cleft in its anterior extremity.

Epigynium in the form of an arc. Epimera I separate. Tarsi I-II ending in a curved apico-dorsal process. *Male* : Adanal suckers well developed surrounded by a sclerotized ring. Epi-

1. These birds and mites were collected in South America with the aid of the Grant National Science Foundation, DEB-7924299, to Prof. W. T. ATYEO, University of Georgia, Athens, U.S.A.

mera I fused in an Y. Tarsus I with 2, tarsus II with 1 curved dorso-apical processes. Tarsus III with 2 apical conical processes. Tarsus IV with 1 smaller apical conical process. All tarsi normally formed. Legs III strongly inflated and much thicker than legs IV. Tarsi IV with 3 normal setae and 2 very small disciform setae.

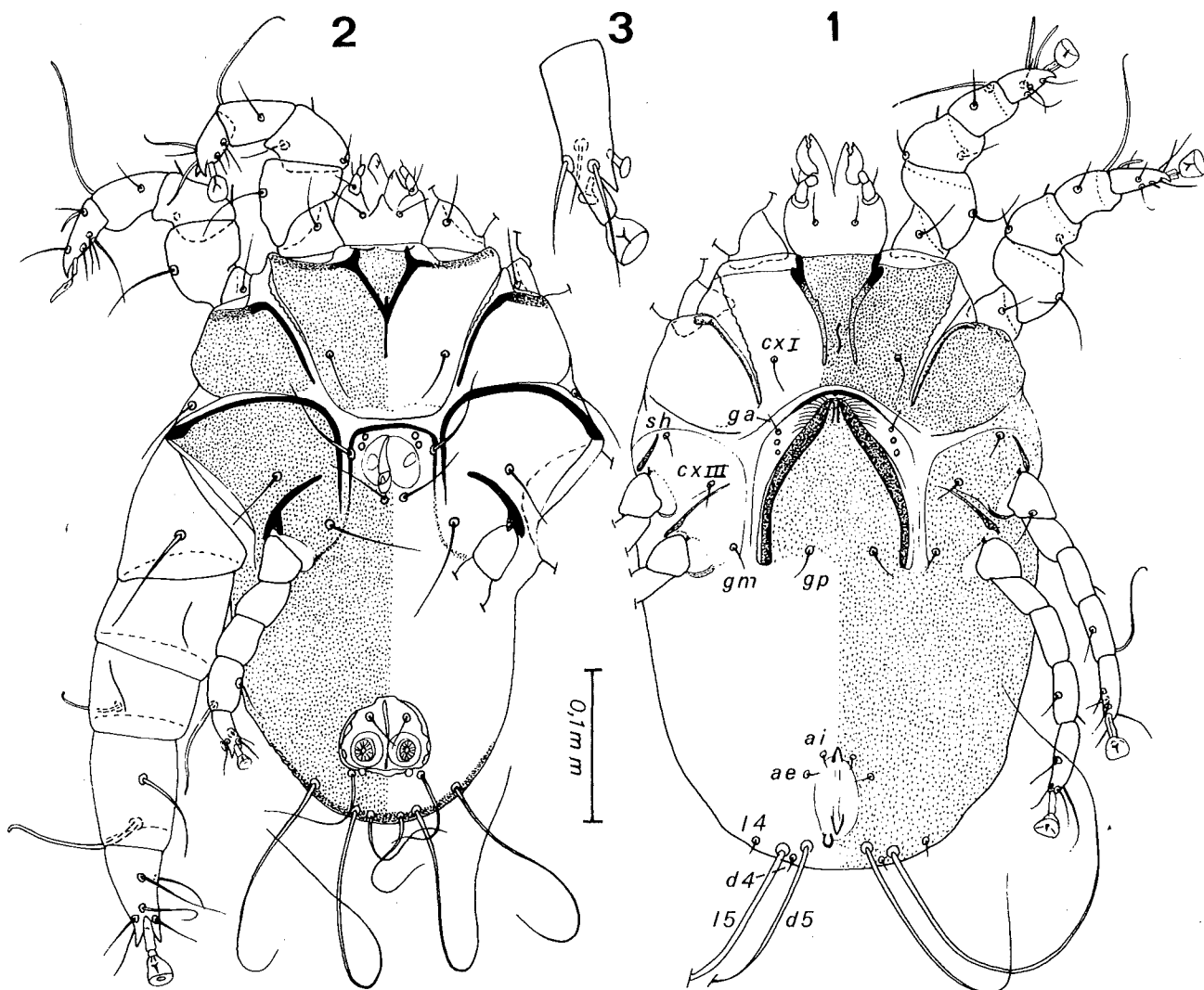
Type species : *Campephiloptes atyeoi* sp. n.

Remark : All the measurements are in μm .

1. *Campephiloptes atyeoi* spec. nov.

This species is named for Prof. W. T. ATYEO, the prominent Acarologist, in recognition for his outstanding work in the group of feather mites.

■ FEMALE (Figs. 1, 5) : Holotype 426 long (idiosoma) and 270 wide. In one paratype 445 \times 280. Cuticle completely sclerotized. Posterior extremity rounded. *Dorsum* : Propodosoma with



FIGS. 1-3 : *Campephiloptes atyeoi* n. sp., 1, female holotype in ventral view ; 2, male allotype in ventral view ; 3, tarsus IV of female ventrally.

several symmetrical folds around the area where the propodonal plate is usually present. A sejugal furrow is visible. Hysteronotum with numerous longitudinal irregular folds except in the anterior part where there are 4 transverse folds. *Venter* : Epimera I poorly sclerotized, hardly visible, not fused in the midline where a very narrow and short longitudinal sclerite is visible. Other epimera free. Epigynium rather well developed but not extending far laterally. Borders of the vulvar lips strongly sclerotized. Posterior lip very large with anterior angle incized. Setae *g m* and *g p* situated on the same transverse line. Anus ventral. Copulatory papilla situated very close to the posterior angle of the anal slit. *Chaetotaxy of idiosoma* : The setae *v i* and *v e* are lacking. Setae *s c e* 200 long, very thick and with apex slightly inflated ; setae *d 5* thinner, 180 long, attenuated apically ; setae *l 5* thick, 310 long, attenuated apically. All the other setae are very thin and short. *Legs* : Anterior legs much thicker than posterior legs. Tarsi I-II with an apico-dorsal curved process (length 6). Tarsi III-IV without apical processes. *Chaetotaxy of legs I-IV* (number of setae) Trochanters 1-1-1-0 ; femora 1-1-0-0 ; genua 2-2-0-0 ; tibiae 1-1-1-1 ; tarsi 8-8-6-5.

Solenidiotaxy : Tarsi 2-1-0-0 ; tibiae 1-1-1-1 ; genua 1-1-1-0. The two solenidia of tarsus I are subapical and close to each other, as in all the other species of Pyroglyphidae.

■ **MALE** (Figs. 2-4) : Allotype 390 long (idiosoma), 292 wide. Posterior extremity rounded. *Dorsum* : Cuticle completely sclerotized, without long folds both with numerous small rounded or elongate depressions. *Venter* : Epimera I fused in a Y. Epimera II free. Epimera III very long and curved inside. Epimera IV much shorter and free. Anus ventral, flanked by 2 large suckers and surrounded by a sclerotized ring open anteriorly. Aedeagus relatively small surrounded anteriorly and laterally by an inverted U-shaped sclerite. *Chaetotaxy of idiosoma* : As in the female except that *h* is very strong and 200-250 long and that *l 2*, *l 3* and *l 4* are much longer and stronger. *Legs* : Legs II as in the female but tar-

sus I with two dorso-apical curved processes. Legs III very strongly inflated and much larger than legs IV. Tarsus III ending in two strong apical conical, slightly divergent processes. Tarsus IV ending in only one smaller apical conical process.

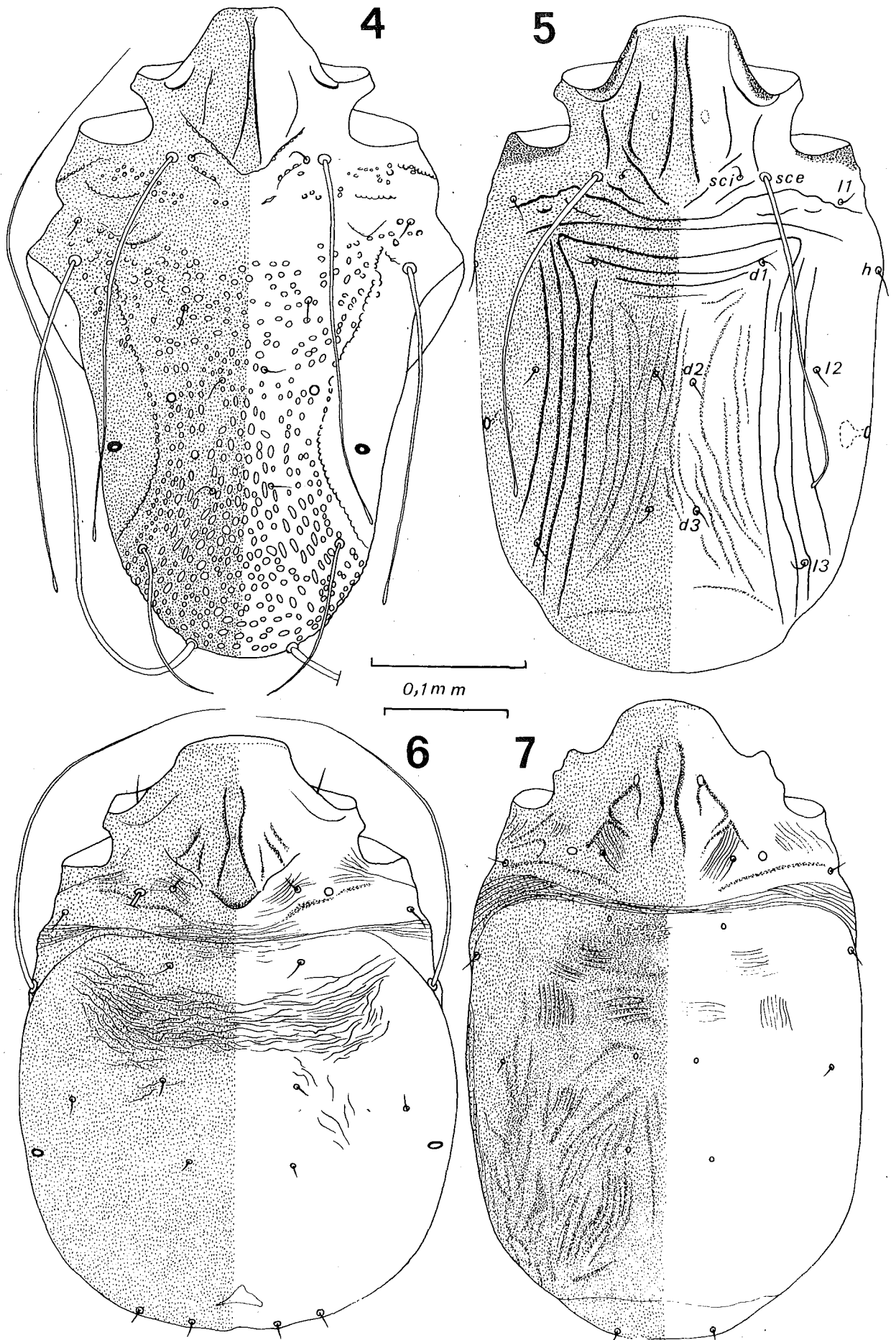
■ **HOST AND LOCALITY** : *On Campephilus r. rubricollis*, from Suapure, Bolivar, Venezuela, 20 March 1899 (n° UGA 9471 ; AMNH 488517), (holotype and 4 paratypes female, allotype and 1 paratype male, 1 nymph paratype). Holotype in American Museum of Natural History, New York, U.S.A.

2. *Campephiloptes paraguayensis* spec. nov.

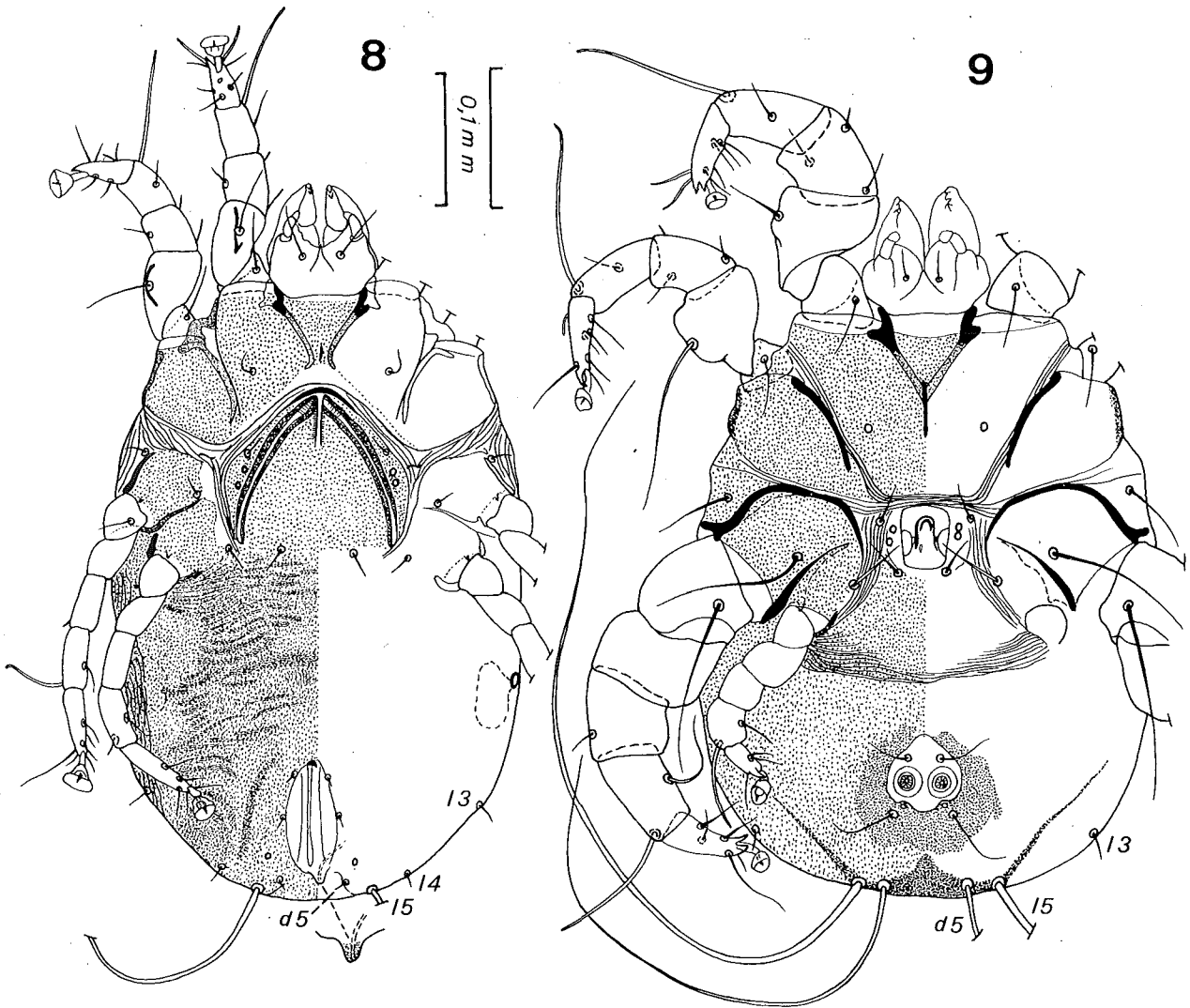
This new species differs from *C. atyeoi*, in both sexes by the larger size of the body, in the female by the presence of a much deeper cleft in the anterior extremity of the posterior vulvar lip, by the absence of folds on dorsum. The male is distinguished from that of *C. atyeoi* by the complete absence of rounded or elongate depression on the dorsum, the more ventral position of the anus, the absence of fusion of epimera II in the midline, the broader shape of hysterosoma.

■ **FEMALE** (Figs. 7, 8) : Holotype 495 long (idiosoma) and 305 wide. *Dorsum* : as in *C. atyeoi* except that there are no longitudinal folds but only shorth and irregular thick striations. *Venter* : Epimera, epigynium and vulva as in *C. atyeoi* except that the cleft in the anterior extremity of the posterior lip is longer (one third of the total length of the lip for one tenth of this length in *C. atyeoi*). *Legs* as in *C. atyeoi* except that femora I-II bear ventrally two short (femur I) or one longer crest (femur II). Other characters as in *C. atyeoi*.

■ **MALE** (Figs. 6, 9) : Allotype 460 long (idiosoma) and 334 wide. Sejugal furrow well developed. *Dorsum* : Absence of rounded or elongate cuticular pits. Propodonotum with a few folds. Anterior part of hysteronotum with numerous tranverse irregular narrow folds, posterior



FIGS. 4-7 : *Campephilocoptes atyeoi* n. sp., 4, Male allotype in dorsal view ; 5, female holotype, in dorsal view.
C. paraguayensis n. sp., 6, male allotype in dorsal view ; 7, female holotype in dorsal view.



FIGS. 8-9 : *Campephiloptes paraguayensis* n. sp., 8, female holotype in ventral view ; 9, male allotype in ventral view.

part of hysteronotum without folds. *Venter* : as in *C. atyeoi* except for following characters : Epimera II short ; ansence of a sclerite in an inverted U in front of aedaegus, anus more anterior, perianal sclerotized ring attenuated anteriorly, setae 12, 13 and 14 are very small. Other characters as in *C. atyeoi*.

■ **HOST AND LOCALITY** : On *Campephilus leucopogon*, Gran Chaco, Paraguay, 30 May 1970 (n° UGA 9469 ; AMNH 803214), (holotype and 8 paratypes female, allotype and 2 paratypes male, 3 paratypes nymphs). Holotype in Ameri-

can Museum of Natural History, New York, U.S.A.

Remarks on the genus Campephiloptes

The subfamily Pyroglyphinae contains until now 4 genera. In 3 of these genera, *Pyroglyphus* Cunliffe, 1955, *Euroglyphus* Fain, 1965 and *Bonttiella* Fain, 1965, all the tarsi (except tarsi III of male) are devoid of dorso-apical processes, while in our genus these processes are well developed on

tarsi I-II in both sexes and on tarsi III-IV in the male.

Moreover, *Campephiloptes* is distinguished from *Pyroglyphus* by the presence of adanal suckers in the male and from *Euroglyphus* by the structure of the cuticle which is completely sclerotized while in *Euroglyphus* a large part of it bears normal striations.

From *Bontiella* it differs, in addition, by the absence of « air-sacs » at the base of legs II, the absence of chitinous membranes on legs I-II, the inflation of genu and femur I-II, the enormous inflation and the lateral position of legs III in male, the fusion of epimera I in male.

This new genus is the most close to *Weelawadjia* Fain and Lowry, 1974 however in this genus in both sexes the body presents large areas with soft cuticle normally striated, in the female the tarsi I-II bear a vestigial apical process and a preapical ventral spine, the tarsi III-IV bear 2 apicolateral

spines and in the male tarsus III bears a vestigial apical process and a strong apical spine and tarsus IV is devoid of apical process.

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