

**A NEW PSOROPTIDAE (ACARI: ASTIGMATA) FROM
DENDROHYRAX DORSALIS IN ZAIRE**

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----- ABSTRACT—A new genus and species *Hyracoptes emersoni* (Psoroptidae, Psoroptinae) is described from the tree hyrax, *Dendrohyrax dorsalis*, in Zaire. -----

Family PSOROPTIDAE
Subfamily PSOROPTINAE
Genus *Hyracoptes* gen. nov.

DEFINITION—Body elongate, cuticle soft and striated except in some small areas covered by a punctate shield. Absence of retrorse processes on body, legs or gnathosoma. Genu I with 2 solenidia. Female—Body entire and rounded posteriorly. Dorsum with a small propodosomal shield and a very small median shield in the posterior part of the hysteronotum. All epimera free. Epigynium strongly developed and in an inverted-U. Legs long. Tarsi I-II ending in a conical and curved process; tarsi III-IV ending in a strong dorsal conical process. All the legs ending in a pedunculate sucker. Gnathosoma small. Dorsal chaetotaxy complete except setae *vi* and *ve* which are lacking. Male—Dorsum as in the female but there is a large hysteronotal shield. Posterior border of body with two small lobes. Epimera as in female. Aedeagus small, at the level of coxae III. Anus flanked by 2 well-developed suckers. Legs III distinctly larger than legs IV. Tarsi I-II and III ending in a curved conical process. Tarsi IV very small. All tarsi end in a pedunculate sucker; tarsi IV with, in addition, 2 very small suckerlike setae. Tritonymph and protonymph with body striate as in female but without hysteronotal shield and with legs IV slightly smaller than legs III; copulatory lobes absent. Larva similar to protonymph but without leg IV. Measurements in micrometers (μm).

TYPE SPECIES—*Hyracoptes emersoni* g. n., sp. n.

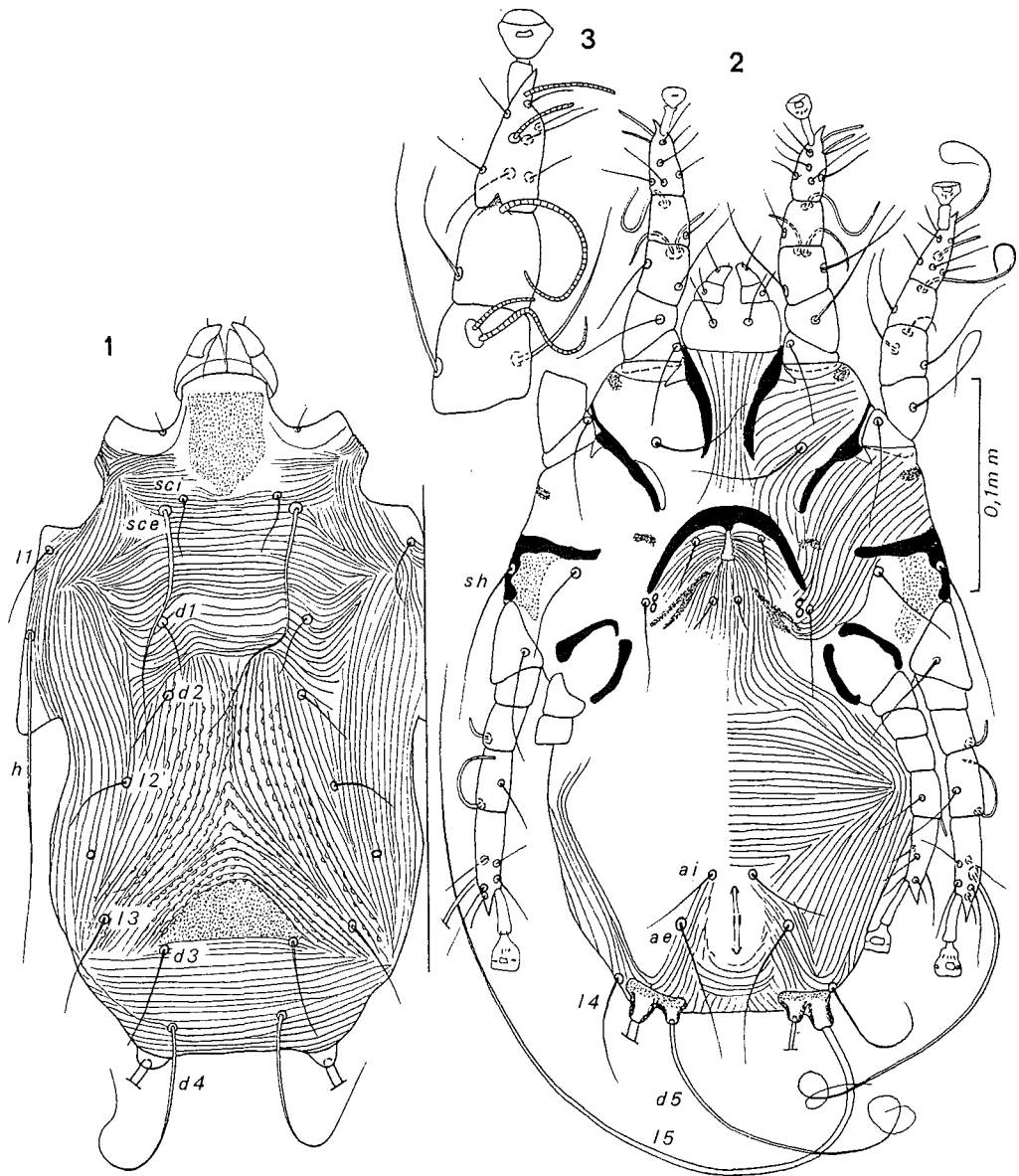
REMARKS ON THE GENUS *HYRACOPTES* —This genus presents certain characters of both Pyroglyphidae (Dermatophagoidinae) and Psoroptidae. We think that it does not belong to the Pyroglyphidae for the following reasons:

1. Solenidions $\omega 1$ and $\omega 3$ of leg I not close together but distinctly separate.
2. Male with posterior extremity bilobate and without distinct sclerotized frame around anal area.
3. Legs I-II relatively shorter.
4. Dorsoapical curved process well developed on tarsi III-IV of female and on tarsi III in male.
5. Tarsus IV in male strongly reduced.

Genus *Hyracoptes* is closer to the Psoroptidae which contains until now 10 subfamilies. By the absence of both *vi* setae and of retrorse fixation processes on legs and body and the normal shape of the opisthogaster in the female, this genus is most close to the Psoroptinae which contains the most evolved genera of the family.

The 8 genera of the subfamily Psoroptinae may be divided into two groups according to the development of the epigynium of the female. In two genera the epigynium is thick and forms a strong arc in front of the vulva, while in the six other genera the epigynium is either strongly reduced and represented by two small lateral sclerites or completely absent.

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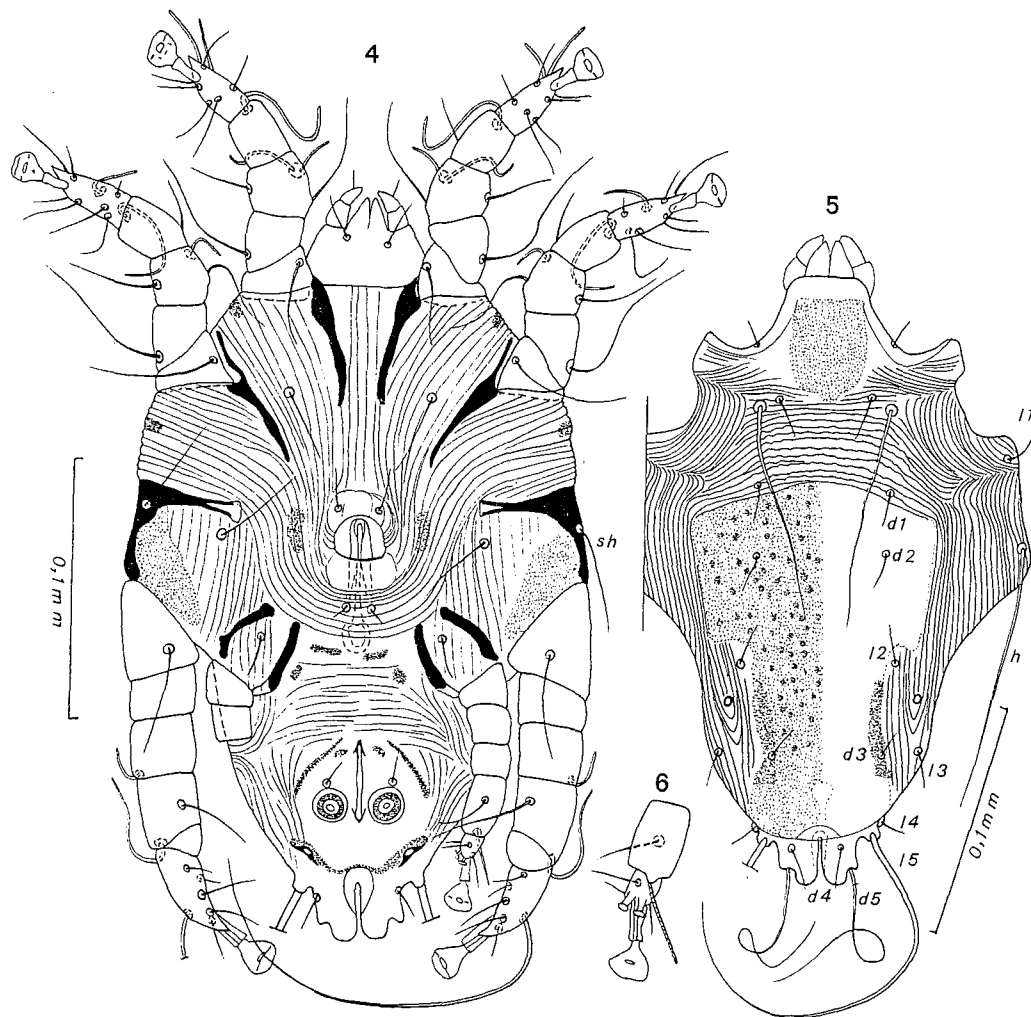
Figs. 1-3: *Hyracoptes emersoni* sp. n. (Female)—1, dorsum; 2, venter; 3, leg I dorsally.

The first group is formed of two genera (*Trouessalges* Fonseca and *Echimyalges* Fain) parasitic on South American mammals. The second group is formed of six cosmopolitan or African genera.

Strangely enough the new genus *Hyracoptes* belongs to the first group which contains South American genera.

The genus *Hyracoptes* differs from *Trouessalges* in the female by the normal size of the posterior legs, the presence of suckers on these legs and the absence of very long setae on these legs and on the body, in the male by the presence of suckers on legs III-IV.

It is most close to *Echimyalges* from which it may be distinguished in the female by more posterior situation of the epigynum, the presence of strong apical processes on tarsi III-IV, poor development of the hysteronotal plate, presence of setae *d* 1, and presence of two well developed solenidia on genu I.



Figs. 4-6: *Hyracoptes emersoni* sp. n. (Male)—4, venter; 5, dorsum; 6, tarsus and tibia IV, dorsally.

Hyracoptes emersoni spec. nov.

This new species is named for Dr. K. C. Emerson who sent us these mites for identification.

FEMALE (Figs. 1-3)—Holotype 338 long (idiosoma) and 210 wide. Total length including gnathosoma 359. Idiosoma in two paratypes 336 x 216; 333 x 212. Posterior border of body almost straight. Dorsum—Propodonal plate 58 long and 45 wide. There is another small triangular punctate plate on the posterior third of hysteronotum.

The rest of the cuticle is soft and striated; laterally the striations are mostly longitudinal and simple, in the middle area the striations are sinuous and partly scaly. Venter—Cuticle striated and not scaly. All epimera are free. Vulva situated between coxae II and III. Epigynium very strong and long. Anus ventral. Copulatory orifice not observed. Chaetotaxy of idiosoma—Setae *sc e* 130; *sc i* 30; *d 1* to *d 3* 30-40; *d 4* 110; *d 5* 180; *l 1* 45; *l 2* and *l 3* 30-45; *l 4* 60-70; *l 5* 300; *h* 150; *sh* 60; *a e* 60. Legs—Length of tarsi I-IV including the apical process (in a paratype) 39-39-57-42. Tarsi I-II end into a strong conical slightly curved process. A similar process but not curved is present on tarsi III-IV. Gnathosoma and chelicerae small. Tarsi I-IV with 7-7-6-5 setae.

MALE (Figs. 4-6)—Allotype 252 long (idiosoma) and 165 wide. Posterior extremity divided in two small membranous, rounded lobes. Dorsum—Propodonotal plate as in female. Hysteronotal plate very wide (maximum 100) and long (138); its postero-lateral regions bear at each side a longitudinal sclerotized band. Venter—All the epimera free. Aedeagus at the level of coxa III, narrow and much longer than wide. Anus ventral, flanked by 2 well-developed suckers. Setae *sc e*, *h*, *l 5* strong and very long (100-220). Legs I and II as in female. Legs III stronger and longer than legs IV and ending in a strong curved apical process. Tarsi III with a long preapical seta (150 long).

TRITONYMPH—Idiosoma 290 long, 170 wide. It resembles the female except that the setae are smaller and that the genital organs are lacking and replaced by 2 pairs of very small genital orifices. The 3 pairs of genital setae (*g a*, *g m* and *g p*) are present. There is no hysteronotal plate.

PROTONYMPH—Idiosoma 189 long and 126 wide. Resembles the tritonymph except that the chaetotaxy is more reduced and that there is only one pair of genital orifice and one pair of genital setae.

LARVA—In a non inflated specimen the idiosoma is 150 long and 90 wide. Resembling the protonymph but with only three pairs of legs, a more reduced chaetotaxy and the absence of genital pore and setae.

HOST AND LOCALITY—All our specimens (holotype and 15 paratype females, allotype and 20 paratype males, 20 nymphs and 3 larvae paratypes) were collected from *Dendrohyrax dorsalis* (Fraser, 1854), Tandala, Gemena, Zaire, 21 July 1979.

Holotype and allotype in U. S. National Museum, Washington. Paratypes in the Musée royal de l' Afrique Centrale, Tervuren; in the British Museum, London; and in the collection of the authors and of Dr. K. C. Emerson.

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