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THE NYMPH OF *AUSTRACARUS DENDROHYRACIS*

VERCAMMEN-GRANDJEAN 1957

(ACARINA : LEEUWENHOEKIIDAE) <sup>1</sup>

BY

P. H. VERCAMMEN-GRANDJEAN and S. G. WATKINS <sup>2</sup>.

In 1957 (2), the senior author told the unusual story of how the larvae in the type series of *Austracarus dendrohyracis* were found in 1954 on the dried and tanned skins of "lava rats" = "daman" or *Dendrohyrax arboreus adolphi-frederici* from North Kivu (Virunga volcanic chain). The lava rats had been killed in 1947.

On the 14th of February 1957, the Assistant Director of the Laboratoire médical provincial du Kivu in Bukavu, Dr. P. JANSSEN, returned from a trip to Rugari (Rutshuru, N. Kivu) with a living daman. Several larvae of *A. dendrohyracis* were attached to the skin of the inguinal region.

Twenty-six well engorged specimens were collected and placed in nymphosis cells (1), where they rapidly became akinetic. In March, the following eclosions were obtained :

Dates :	March	8	9	10	11	14	15
Number of eclosions :		2	4	7	2	1	2

i.e., between 21 and 28 days of metamorphosis, with a peak on the 22nd or 23rd days.

*Note on the larva described in 1957 (2).*

A mistake was made in the palpal formula. The correct formula is : (P)-(N)-(P).N.B.G<sub>3</sub>-E.B.B.B.B.(B).(P), and fT = 7 B (Pl. 2).

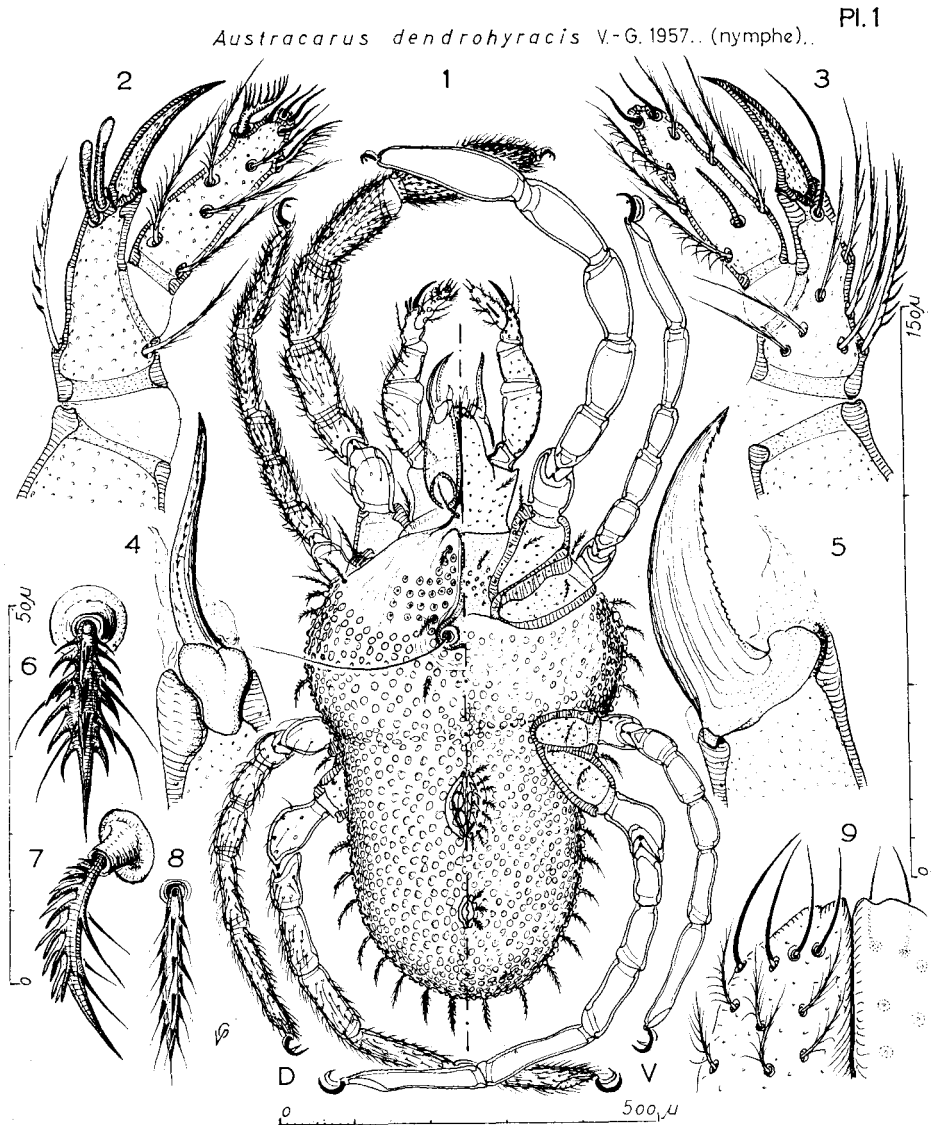
The following additional observations were made on the living larvae. The daman from Rugari was parasitized by a large number of larvae in varying degrees of engorgement. Certain of these were quite recently attached. The ocular pig-

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2. Respectively, Research Parasitologist and Laboratory Technician, The George Williams Hooper Foundation, University of California Medical Center, San Francisco 22, California U.S.A.

ment was of a burgundy color, the leg segments were slightly ochraceous, and the idiosoma was pale straw-colored.

*Systematics.* In accordance with Wharton and Fuller 1952 (3), *dendrohyracis* was placed in the subgenus *Acomatacarus* (*Austracarus*). We no longer consider



this a valid position, for a classification based on the presence or absence of a scutal nasus is unrealistic. To the contrary, much more importance should be attached to the aspect of the cheliceral blade. In *Whartonia*, *Hannemania*, and *Xenacarus* as well as *Austracarus*, the cheliceral blades are long, strong, and heavily provided

with hooks, and we consider these genera to constitute a homogenous group. *Leeuwenhoekia*, *Odontacarus*, and *Acomatacarus*\* form a second group, and *Chatia* a third in which *Shunsennia* is a subgenus.

*Austracarus dendrohyracis* V.-G., 1957.

A. — *Description of Nymph.*

1) Measurements : means, in micra, of 10 specimens.

ASL	PSL	CTL	SB	S	T	PL	OL	IL	PW
160	48	228	38	246	60	300	420	720	410
OW	CW	PH	OH	CH	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	P <sub>4</sub>	Ip
300	320	350	275	300	870	630	560	780	2840

2) *Crista metopica* (figs. 1 & 10) : Characteristic unwrinkled tectum, form ogival with 2 barbed tectal hairs, T = 60 μ ; the sensilla bases are very large and the epistracal layer forms hemispheres above them ; sensillae (240-250 μ) nude and flagelliform ; paracristal zone with 34 to 40 finely barbed thick setae (32-36 μ) on each side.

3) *Hypostome* (figs. 1 & 9) : With 4 strong nude setae on each side of the apical lip.

4) *Chelicerae* (figs. 1, 4 & 5) : Very elongate, cheliceral blade 85 μ long, with numerous serrations on the dorsal edge ; seen from the edge, the blade is slightly sigmoid ; chelobase 130 μ long, 50 μ wide.

5) *Palpi* (figs. 1, 2 & 3) : Femur with 26 to 30 slender, finely barbed setae ; genu with 16 to 20 setae similar to those of the femur ; tibia with 9 barbed setae, the dorsal ones of which are comb-like ; palpal claw simple, with a small ventro-basal tooth ; 2 dorso-external paraglyphic spines and one dorso-internal paraglyphic nude seta ; tarsus rather long and slender, with the usual latero-internal solenidion, 11 finely barbed slender setae, 2 subapical thick pectinate or comb-like setae and 6 nude, short subterminalae ; fTn = 13B.6S.

6) *Legs* (fig. 1) : Relative lengths : P<sub>1</sub> > P<sub>4</sub> > P<sub>2</sub> > P<sub>3</sub>.

All legs 7 segmented, each article covered by numerous barbed setae 26 to 30 μ long, as shown in fig. 8 ; tarsus, tibia, genu, and telofemur with additional nude setae of differing shapes, lengths, and thicknesses (solenidia, eupathidia and famuli) ; length and width of tarsus 1 : TL = 190 μ, TW = 60 μ ; the two claws of tarsus 1 are smaller and weaker than those of the other legs ; tibia 1 length : 140 μ.

7) *Body* (fig. 1) : Acorn-shaped, covered by peculiar barbed hairs (figs. 6 & 7) which are about 30 μ long, the posterior or pygidial hairs longer (50 μ) ; sternal area not well defined, covered with about 2 dozen barbed setae.

\* Here considered a valid entity on chaetotactic evidence.

Genital aperture consisting of 4 falciform sclerites, the two external ones with 8 barbed setae each, the internal ones with 3 nude setae each ; 2 pairs of internal discs of equal diameters present.

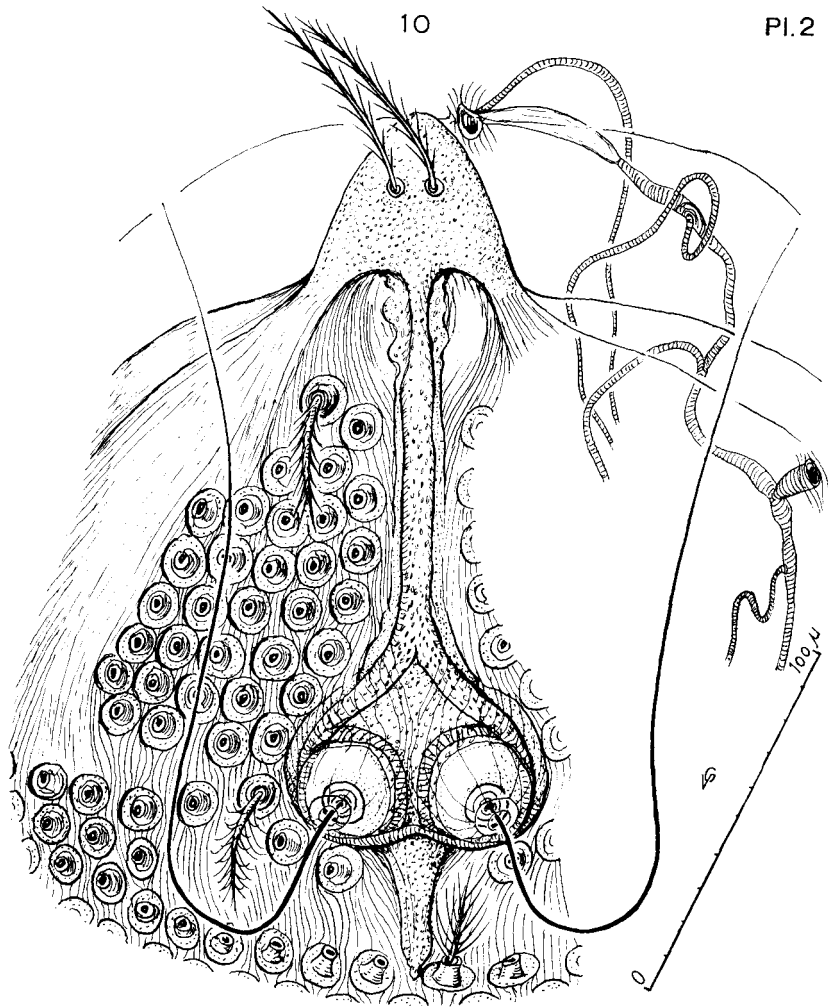
Uropore delimited by 2 falciform sclerites, each with 3 barbed hairs.

8) *Stigmata and tracheae* (fig. 10) : Two pairs of stigmata present, both belonging to the same tracheal network.

B. — *Host and parasitope*.

*Dendrohyrax arboreus adolphi-frederici* ; skin of venter, flanks and inguinal region.

*Austracarus dendrohyracis* V.-G. 1957, (nymph) ..



C. — *Locality and date.*

Kisenyi and Rugari (Rutshuru) (Virunga Region), N. Kivu, Rep. Congo. 1947 and 14 Feb. 1957.

One larval specimen of *A. dendrohyracis* was found 13 July 1957 on the ear-flap of a squirrel (*Sciurus* sp.) captured in Luchiga-Lemera (near Lake Kivu).

D. — *Type material.*

Nymphal type and 1 paratype in the Musée d'Afrique Centrale, Tervuren (Belgium), one paratype in the U.S. National Museum, Washington, D.C., and 14 paratypes in the author's collection.

*Abbreviations :*

ASL ; PSL = distances from tectal seta base to sensilla base line ; from this line to the posterior sclerite.

CTL = total length of the crista-metopica (from anterior edge of tectal denticulate fringe to the pointed end of the posterior sclerite).

SB ; S = distance between the two sensilla bases ; total length of the sensilla.

T = length of the tectal or epistomal single barbed hair.

PL, OL, IL = lengths of the propodosoma, opisthosoma, and of the entire idiosoma.

PW, OW, CW ; PH, OH, CH = largest width and height of the propodosoma, opisthosoma, and of the constriction.

P<sub>1</sub>, P<sub>2</sub>, P<sub>3</sub>, P<sub>4</sub> & I<sub>p</sub> = lengths of the four legs (coxae included, claws excluded) and leg index (sum of the 4 leg lengths).

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