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THE GENUS *PTERYGOSOMA* REDEFINED,
WITH A DESCRIPTION OF TWO NEW SPECIES FROM EGYPT
(ACARINA : PTERYGOSOMIDAE)

BY

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Résumé

Le genre *Pterygosoma* est redécrit d’après l’examen de plusieurs espèces. Deux espèces nouvelles,* *P. aegyptiaca* et *P. hoogstraali* sont décrites d’Égypte.

Abstract

The genus *Pterygosoma* is redescribed chiefly from examination of several species. Two new species, *P. aegyptiaca* et *P. hoogstraali* are described from Egypt.

The genus *Pterygosoma* was proposed by Peters (1849) for *P. agamae* Peters 1849, from a lizard *Agama mossambica*.

Redescription of genus.


Female : Body much broader than long. Setae as follows : Anterodorsals on or near anterior body margin (sometimes also ventrally) differ in form and number according to species. Two pairs of scapular setae may be present dorsoanteriorly. Genital and probably anal apertures protected by two pronounced folds carrying numerous genital setae differing in form, number and location according to species. Numerous spines may occur between genito-anal folds. Middorsal setae (1 or 2 pairs) more variable in form than others on dorsum. Chelicerae modified

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for parasitic function, movable digit double-toothed laterally, much like those of ticks; fixed digit strongly reduced. Hypostome lingulate, with a longitudinal trough. Pedipalpus 3-segmented (not 5-segmented according to Jack, 1962). Palpal setation differs according to species. Anteriorly projecting pair of peritremes located lateral to pedipalpi. Body venter usually with midventral setae numbering three pairs (sometimes less), form varying according to species. Legs I and II originate from one coxal plate, III and IV from second coxal plate. Coxal plate I with three setae (one basal, 2 distal); coxal plate II with only 2 setae. Tarsi I and II each with a pair of sensory duplex setae \( \omega_1 \) and \( \omega_2 \) dorsally (fig. 9). Seta \( \omega_1 \) anterior to seta \( \omega_2 \) on tarsus I, not so on tarsus II. Tarsi III and IV each lack seta \( \omega_1 \). Claw tenent hair lengths

Figs. 1-2: *Pterygosa* aegyptiaca n. sp., adult ♀.  
1) Dorsum; 2) Venter.
unequal, each inner hair shorter than outer. Leg chaetotaxy varies according to species (see description of *P. aegyptiaca* — figs. 5, 6, 7, 8, 9).

**Male:** Body pyriform, size much smaller than female. Genital field located on dorsum. In life, males more active or faster moving than females.

**Immature stages:** Differ from adults in many ways. However, female nymphs resemble adult females in general features. Larval anterior coxal plate carries one basal seta and a distal seta near insertion of trochanter I, posterior coxal plate with one basal seta. Nymphal coxal setation same as in adult ♀.

*Pterygosoma aegyptiaca* n. sp.

**Female dorsum** fig. 1: Body much broader than long. Peritreme extending anteriorly lateral to pedipalps. Mid-dorsal setae fine, pointed; anterior mid-dorsal (D1) much shorter than posteriors (D2). Two pairs of equally long, fine scapular setae on anterior part of dorsum. Anterior dorsal setae migrated toward center of dorsum (considered sublateral). In 2 patches, each consisting of 9 cylindrical pilose setae laterad to mid-dorsal setae. Peripheral setae in 2 rows, dorsal and ventral, all cylindrical, spatulate. Sub-peripheral setae slightly shorter and more expanded than peripherals. Body length (from anterior apex of idiosoma to posterior margin of genito-anal lobes = 0.45 mm; breadth (across body at widest lateral apices) = 1.00 mm.

**Female venter** fig. 2: There are two pairs of midventral setae; anterior ones are fine, posteriors spatulate. A pair of subperipheral setae located slightly internal to lateral apices. Three pairs of palmar setae and obvious single pair of genital spines at extreme posterior of genito-anal field (fig. 3). Two pair of spatulate setae flank genital field anteriorly.

**Mouthparts:** Long and cylindrical. Terminal shaft of chelicera longer than basic part; fixed digit terminates in sharp pointed process (fig. 4), movable digit double-toothed. Hyposome (fig. 5) long, truncate distally, with tubelike folding along center. Papal segments (fig. 5) distinctly separated; papal segment II carries single, fine dorsal seta, longer than same seta on distal segment III; segment narrows distally, forming fingerlike process with terminal hook-claw. On ventral side of distal segment a pair of basal sensory setae, anterior one much shorter than posterior. Very short solinidion ε, next to anterior sensory seta; internal lateral seta extends beyond tip of pedipalp. Two dorsal setae on distal segment of pedipalp, inner seta much longer than outer, an outer lobe-like process distally. Process carries blunt seta on tip; basally 2 long, pointed setae.

**Legs** figs. 6, 7, 8, 9: Long and cylindrical, first pair slightly longer than others. Legs located on anterior of idiosoma; legs I and II originate from a common coxa I (fig. 6), legs III and IV from common coxa II (fig. 7). Setation for leg segments I, II, III, and IV respectively: coxae: 3—2; trochanters: 1—1—1—0; femura: 3—1—1—1; genua: 3—1—1—1; tibiae: 5—3—3—2; tarsi: 14—9—7—7. All pretarsi (figs. 8, 9) terminate into two claws, each carrying laterally a pair of tenent hairs, inner hair being shorter than outer. A minute fingerlike process located dorsally on distal end of all trochanters. Dorsal seta on femura distinctly plumose. However, most seta on legs are same. Tarsus I setation illustrated (fig. 8, 9).

**Host and locality:** Two females off *Uromastix* sp.; Wadi Abu Shih, Red Sea Governorate, Egypt, U.A.R.; 9 May 1967.

**Holotype:** One ♀, same data as above, will be deposited at Rocky Mountain Laboratory, Montana, U.S.A.

**Paratype:** Another ♀, same data as holotype, retained by author.

**Remarks:** Although this species is related in some features to the *melanum* group of genus *Pterygosoma*, it differs in having only three pairs of palmate genital setae (fig. 3), while in all of the *melanum* group there are four rounded genital setae.

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Pterygosoma hoogstraali n. sp.
figs. 10-13.

Female dorsum fig. 10: Scapular setae, serrate, one pair; inner scapular setae absent. Anterodorsal setae numerous, short, branching; distributed in two or more rows along anterior margin; hind pair obviously long and separating anterodorsal from peripheral setae. Two pairs of sublateral serrate setae, internal to anterodorsals; anterior sublaterals slightly shorter than the posteriors. Two pairs of fine mid-dorsal setae close to posterior sublaterals. Twenty-four
pairs of very long, fine, pointed peripheral setae along posterior margin of body. Two pairs of subperipheral setae, similar in form to peripherals, located slightly inside from the latter. The genito-anal lobes (fig. 11) each carries five long genital setae, cylindrical and spatulate distally; also, single peripheral seta; genital setae shorter than peripherals. Body length 0.60 mm, width 1.00 mm.

Female venter fig. 12: Three fine, pointed pairs of midventral setae form a triangle on both sides of genito-anal lobes; anterior midventrals much shorter and thinner than posteriors. Three pairs of inconspicuous spines on inner edges of genito-anal slit, posterior pair longest.

Mouth parts typical for genus. Dorsal seta on second papal segment shorter and thicker than on third segment. Chelicerae as illustrated (fig. 13). This species is named in honor of Dr. Harry Hoogstraal of NAMRU 3, Cairo, U.A.R.


Holotype: An adult ♀ (top specimen among two more ♀♀ on same slide), same data above, will be deposited at Rocky Mountain Laboratory, Montana, U. S. A.

Paratypes: Three females, same data as holotype. Two will be deposited in the British Museum (Natural History). Third female is retained by author.

Remarks: This species is related to Pterygosoma mutabilis Jack. However, it can be distinguished from the latter by having five pairs of genital setae rather than six pairs as in mutabilis. Also, P. hoogstraali has three pairs of midventral setae, while mutabilis has only two pairs of these setae.

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