

## A NEW SPECIES OF CHIGGER (ACARI: TROMBICULIDAE) FROM A SKINK IN WESTERN AUSTRALIA

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### ABSTRACT

*Schoengastia gutekunsti* sp. nov., from the skink *Ctenotus inornatus* (Rosén) in Western Australia is described from the larval stage. This is the first record of *Schoengastia* from Australia.

### INTRODUCTION

Examination of ectoparasites from a skink *Ctenotus inornatus* (Rosén) (Squamata: Lacertilia, Scincidae), taken in the Kimberley district of Western Australia, has revealed a new species of *Schoengastia* Oudemans, 1910. Womersley (1952) assigned many species from Australia to the genus *Schoengastia*, *sensu lato*; however, all of these species have subsequently been assigned to other genera, most notably *Ascoschoengastia* Ewing, 1946, *Guntheria* Womersley, 1939 and *Neoschoengastia* Ewing, 1929. As indicated by Audy (1954), *Schoengastia* is an Old World genus, with no species reported from the New World. Although widely reported from the Asiatic-Pacific region (Womersley, 1952), the species described here represents the first record of *Schoengastia*, *sensu stricto*, from Australia. Collections were made under the direction of Dr F.S. Lukoschus, Katholieke Universiteit, Nijmegen, and Dr J.B. Kethley, Field Museum of Natural History, Chicago. All measurements are in micrometers and are given for the holotype, followed by means and ranges of type series in parentheses. Terminology follows Brennan and Goff (1977).

### SYSTEMATICS

*Schoengastia gutekunsti* sp. nov.  
(Figs 1-6)

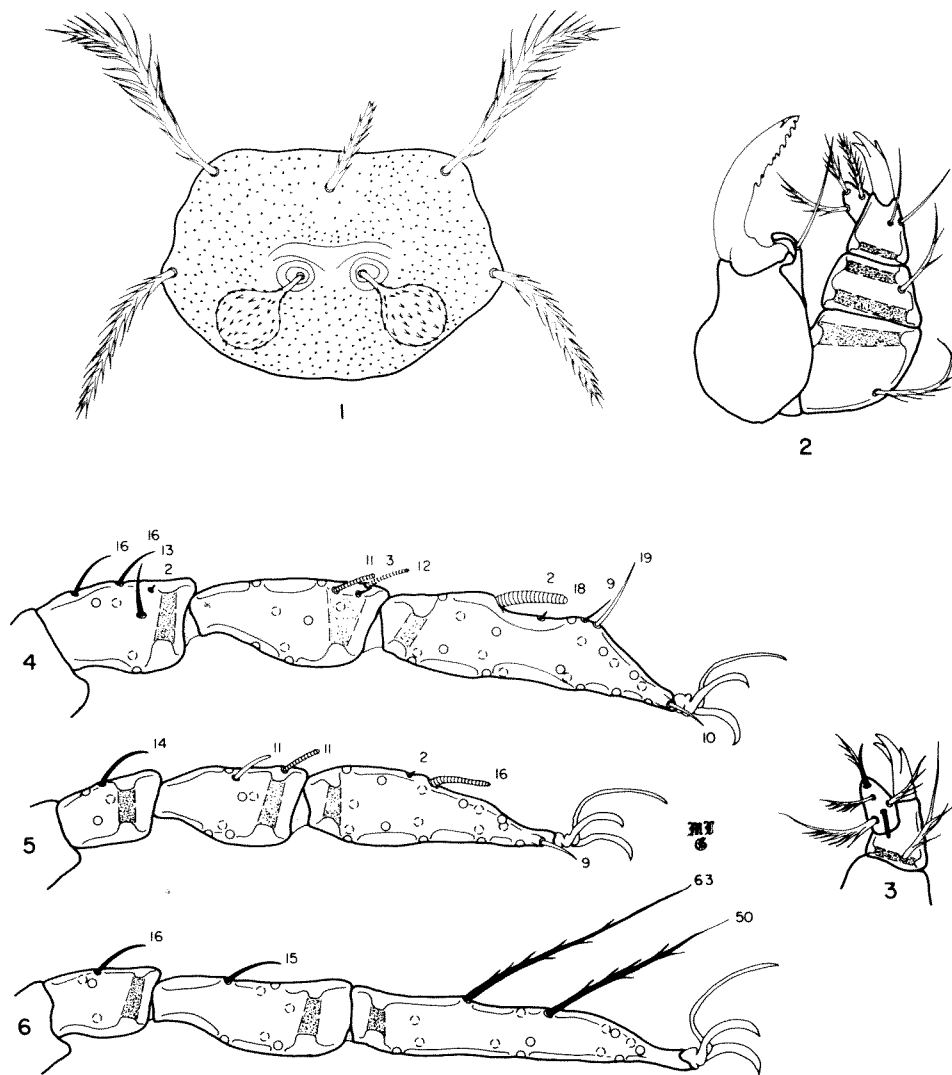
#### Type data

Holotype and 10 paratypes from Mt Hart, Kimberley Division, Western Australia from the skink *Ctenotus inornatus* (131), 10.IX.1976. Holotype

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(WAM no. 80-213) in Western Australian Museum (Perth) and paratypes there and in Bishop Museum (Honolulu), Field Museum of Natural History (Chicago), University of Nijmegen and U.S. National Museum of Natural History (chigger collection currently housed at Bishop Museum).



**Figs 1-6:** *Schoengastia gutekunsti* sp. nov. **Fig. 1:** Scutum. **Fig. 2:** Dorsal aspect of right chelicera and palp. **Fig. 3:** Ventral aspect of palpal tibia and tarsus. **Figs 4-6:** Distal three segments of legs I-III showing specialized setae (numbers equal lengths in micrometers) and only bases of branched setae.

## Description of species (larval stage)

**Idiosoma:** 280 x 200 (partially engorged). Eyes 2/2, anterior larger, on ocular plate. One pair of humeral setae, 32-36 long; 34 dorsal body setae, 24-27 long, arranged 8-8-6-6-4-2; two pairs of sternal setae, anterior 27-28 long, posterior 21-25 long; 26-28 preanal setae, 21-23 long, 6-8 postanal setae 23-25 long; total body setae 72-76. **Gnathosoma:** Palpal setal formula B/B/NNB/7BS; palpal claw 3-pronged; galeala N; cheliceral blade (40-42 long) with one ventral and 8-10 dorsal recurved teeth. **Scutum:** Lightly punctate with sinuous anterior margin; posterior margin deeply rounded; AM base slightly posterior to line of AL bases; SB in line with PL bases; AL > PL > AM; sensilla capitate, head with setules; PW/SD 1.27-1.43. Scutal measurements: AW 57 (55, 52-57); PW 80 (75, 69-80); SB 16 (13, 11-16), ASB 30 (28, 25-30); PSB 26 (27, 25-29); AP 27 (25, 24-30); AM 26 (24, 21-27); AL 58 (59, 55-63); PL 49 (47, 42-49), Sens. 27 (26, 24-27) (head 16-17 x 16). **Legs.** All 7-segmented, terminating in a pair of claws and a claw-like empodium. Onychotriches absent. IP 809-839. **Leg I:** 285-292; coxa with one branched seta (1B); trochanter 1B; basifemur 1B; telofemur 5B; genu 4B, three genualae, microgenuala; tibia 8B, two tibialae, microtibiala; tarsus (80 x 21) 20B, tarsala (17-18 long), microtarsala, subterminala, parasubterminala, pretarsala. **Leg II:** 241-253; coxa 1B; trochanter 1B; basifemur 2B; telofemur 4B; genu 3B, genuala; tibia 6B, two tibialae; tarsus (67 x 19) 16B, tarsala (15-16 long), microtarsala, pretarsala. **Leg III:** 283-294; coxa 1B; trochanter 1B; basifemur 2B; telofemur 3B; genu 3B, genuala; tibia 6B, tibiala; tarsus (86 x 16) 13B, two barbed mastitarsalae (50-63 long).

## Remarks

*Schoengastia gutekunsti* is similar to *Schoengastia palmata* Domrow, 1962, and *Schoengastia philipi* Womersley and Kohls, 1947, in having three genualae I and a 3-pronged palpal claw. *Schoengastia gutekunsti* may be separated from *S. philipi* in having somewhat expanded AL scutal setae (unexpanded in *S. philipi*), larger scutal measurements, 34 dorsal body setae (26-30 in *S. philipi*) and two barbed mastitarsalae III (one nude mastitarsala III in *S. philipi*). The expanded palmate AL setae are present in both *S. palmata* and *S. gutekunsti*, although not as marked in *S. gutekunsti* and only the AL setae are involved (AL and PL setae in *S. palmata*). *Schoengastia gutekunsti* further differs from *S. palmata* in having palpotibial setation NNB (NNN in *S. palmata*) and two barbed mastitarsalae III (one barbed mastitarsala III in *S. palmata*).

This species is named in honour of John Gutekunst, Histopathology Laboratory USAH, Ft Ord, California. It corresponds to *Schoengastia* sp. A of Nadchatram *et al.* (1980).

## ACKNOWLEDGEMENT

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