
THE PSORIC MITES PARASITIC ON BATS. XVI.

A NEW SPECIES OF THE GENUS *TEINOCOPTES* RODHAIN FROM THE FRUIT-BAT
PTEROPUS CONSPICILLATUS IN QUEENSLAND (*TEINOCOPTIDAE*, *SARCOPTIFORMES*).

By A. FAIN, Prince Leopold Institute of Tropical Medicine, Antwerp.

(Communicated by Mr. R. Domrow.)

(Five Text-figures.)

[Read 28th September, 1960.]

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A NEW SPECIES OF THE GENUS *TEINOCOPTES* RODHAIN FROM THE FRUIT-BAT *PTEROPUS* *CONSPICILLATUS* IN QUEENSLAND (TEINOCOPTIDAE, SARCOPTIFORMES).

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Synopsis.

Teinocoptes domrowi, n. sp., is described from the spectacled fruit-bat, *Pteropus conspicillatus*, in north Queensland. The other eight members of the family Teinocoptidae are parasites of African pteropodids.

As far as is known, the mites of the family Teinocoptidae Fain are strictly confined to fruit-bats (Pteropodidae), and hitherto all the members of the family (eight species belonging to two genera, *Teinocoptes* Rodhain and *Chirobia* Fain) have been found in Africa. These mites are true parasites, and they live either partly or completely embedded in the skin of their hosts.

LIST OF SPECIES OF THE FAMILY TEINOCOPTIDAE.

I. Genus *Teinocoptes* Rodhain, 1923.

Species.	Locality.	Host.	Sub-order and Family of the Host.
<i>T. epomophori</i> Rodhain, 1923 (genotype).	Belgian Congo.	<i>Epomophorus wahlbergi haldemanni</i> Hallow.	Megachiroptera ; Pteropodidae.
	Belgian Congo.	<i>Epomophorus labiatus minor</i> Dobson.	"
	Ruanda-Urundi.	<i>Epomophorus anurus</i> Heuglin.	"
	Belgian Congo.	<i>Epomops franqueti</i> Tomes.	"
	Belgian Congo.	<i>Micropteropus pusillus</i> Peters.	"
<i>T. rousetti</i> Fain, 1959.	Belgian Congo.	<i>Rousettus leachi</i> Smith.	"
	Ruanda-Urundi.	<i>Rousettus</i> sp.	"
<i>T. astridae</i> Fain, 1959.	Ruanda-Urundi.	<i>Eidolon helvum</i> Kerr.	"
<i>T. eidoloni</i> Fain, 1959.	Ruanda-Urundi.	<i>Eidolon helvum</i> Kerr.	"
<i>T. auricularis</i> Fain, 1959.	Zanzibar.	<i>Epomophorus w. wahlbergi</i> Sundevall.	"
	Belgian Congo.	<i>Micropteropus pusillus</i> Peters.	"
<i>T. domrowi</i> n.sp.	Australia.	<i>Pteropus conspicillatus</i> Gould.	"

II. Genus *Chirobia* Fain, 1959.

<i>Ch. congolensis</i> Fain, 1959 (genotype).	Belgian Congo.	<i>Rousettus leachi</i> Smith.	Megachiroptera Pteropodidae.
<i>Ch. squamata</i> Fain, 1959.	Ruanda-Urundi.	<i>Rousettus</i> sp.	"
<i>Ch. otophaga</i> Fain, 1959.	Belgian Congo.	<i>Rousettus a. angolensis</i> Bocage.	"
	Zanzibar.	<i>Epomophorus w. wahlbergi</i> Sundevall.	"

Recently, Dr. J. L. Harrison, of the Queensland Institute of Medical Research Field Station at Innisfail, collected on *Pteropus conspicillatus* a rather long series of a sarcoptiform mite, which his colleague, Mr. R. Domrow, kindly sent to me for study. These mites belong to the genus *Teinocoptes*, and represent a new species, which I have pleasure in naming in honour of Mr. Domrow.

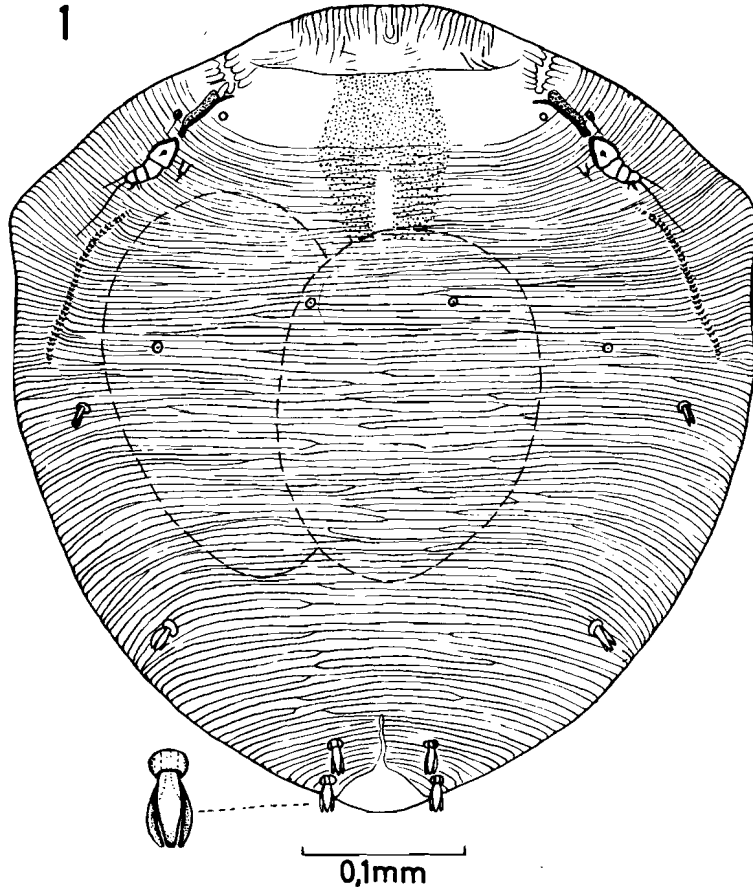
I wish to express my thanks to both these gentlemen for their kindness in having this interesting material sent to me.

* Other papers of this series have been published in various scientific journals.

TEINOCOPTES DOMEOWI, n. sp.

Diagnosis. This new species is nearest to *T. auricularis* Fain in general appearance, but it differs from it in several features such as the characteristic structure of the chaetotaxy, the presence of a chitinous area behind the vulva, and the scaly structure of the larval cuticle.

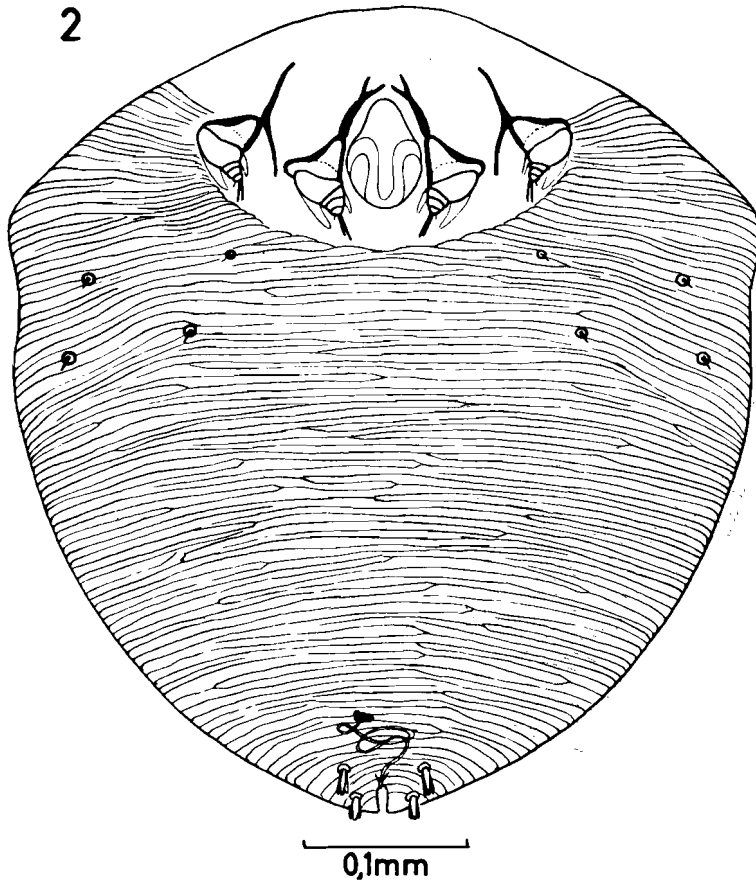
Female (holotype) (Text-figs 1-3). Body broadly conical or bell-shaped as in *Teinocoptes auricularis*, with an anterior flattened base bearing the legs, the mouth parts and the genital aperture, and a posterior rounded portion, on the summit of which



Text-fig. 1. *Teinocoptes domrowi*, n. sp., ♀, posteroventral view.

is located the anus. Length of idiosoma 510μ in the holotype, $450-540\mu$ in five paratypes. Width at the level of the anterior border of the body 465μ in the holotype, $420-480\mu$ in five paratypes. Cuticle completely striated, except in a small area behind the vulva, where it is finely verrucose. Dorsally the cuticle bears in the anterior third or fourth of the body four pairs of very small, short spines disposed in two transverse rows. Ventrally, at the same level as the dorsal spines, there are four small spines lying in a row, and laterally and slightly behind, two short but strong trifid hairs. The posterior third of the body bears laterally one pair of short, expanded trifid hairs. The anus is terminal, surrounded by eight expanded trifid hairs having the same shape as the posterolateral hairs, but slightly larger. The bursa copulatrix opens on a small papilla located on the dorsal side of the anus. It has a sinuous course, making six loops in

holotype (four to five in paratypes), and ends in a vesicular pouch located 30–60 μ from the external papilla. Legs and mouth-parts as in *T. auricularis*; legs IV are vestigial, and represented only by a very short, slightly chitinized, and conical cuticular process bearing a short cylindrical, probably sensorial hair. The holotype contains two non-embryonated eggs measuring 240 \times 162 μ and 220 \times 175 μ . Some paratypes contain three eggs, of which one usually contains a fully developed larva. Size of the eggs in paratypes 220–270 μ in length, and 150–180 μ in width.



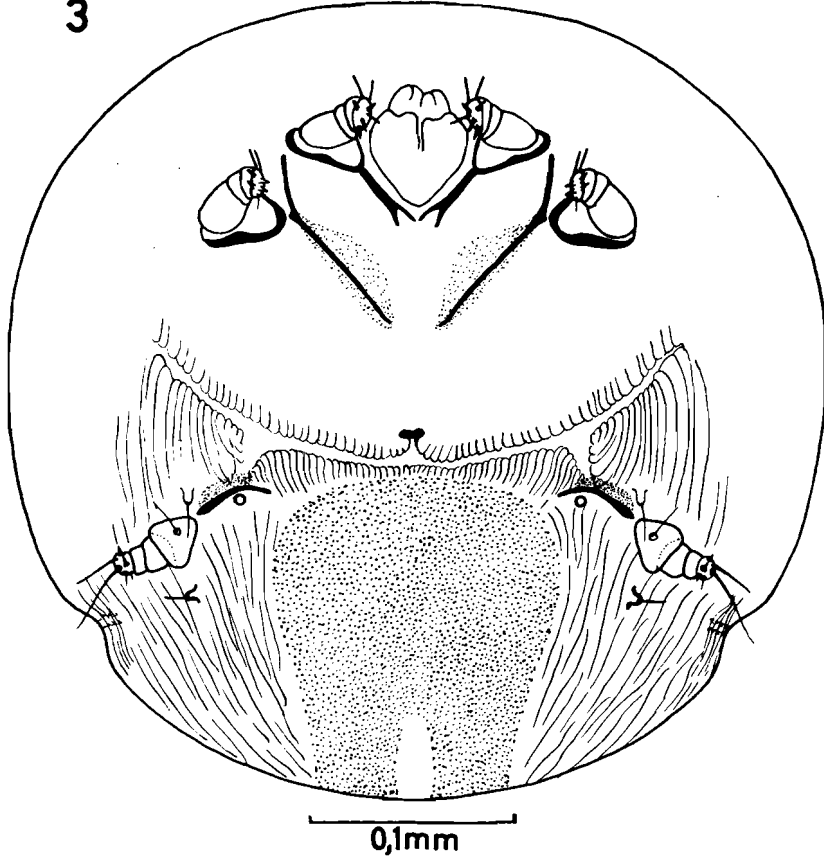
Text-fig. 2. *Teinocoptes domrowi*, n. sp., ♀, anterodorsal view.

Nymph. The single nymph is 360 μ long and 300 μ wide. It is morphologically similar to the female, but there is no vulvar slit nor bursa copulatrix, and the lateral and perianal hairs are much smaller.

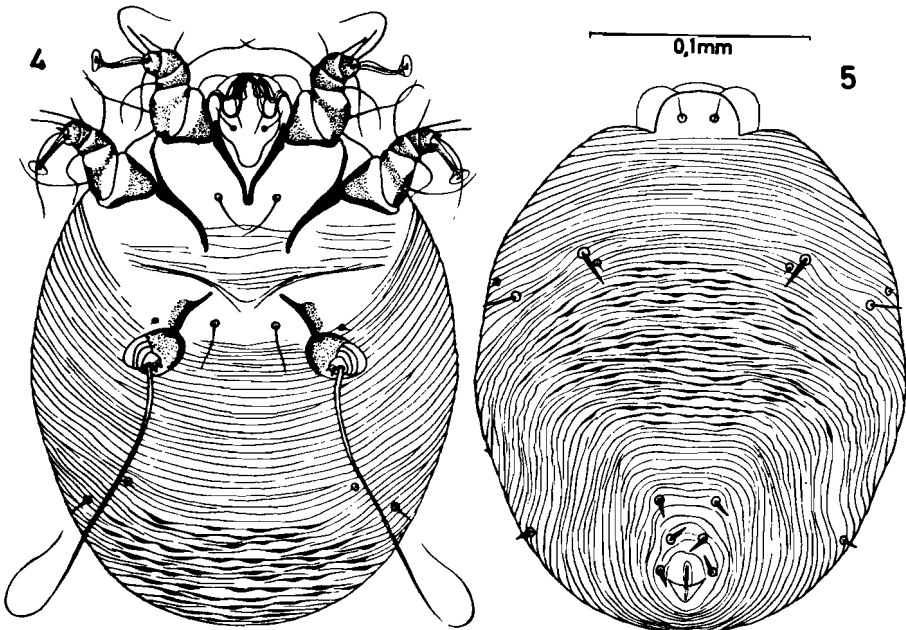
Larva (Text-figs 4–5). The length of three free larvae ranges from 225 to 230 μ , the width from 180 to 200 μ . General characteristics as in the other species of *Teinocoptes*. The larva of *T. domrowi* differs from all the other larvae of this genus by the scaly aspect of the cuticle of the opisthosoma. The anal area bears three pairs of lanceolate hairs much thinner than those of the adult female.

Localization of the Parasites. Dr. Harrison has noted that "all the mites were found attached to the extreme posterior margin of the interdigital flying membrane", and I have received from Mr. Domrow several pieces of the patagial skin, on which many specimens were still attached. All these mites were embedded, with the anterior third or fourth of the body in a cornified crateriform pouch formed by the host.

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Text-fig. 3. *Teinocoptes domrowi*, n. sp., ♀, anteroventral view.



Text-figs 4-5. *Teinocoptes domrowi*, n. sp., Larva. 4, ventral view; 5, dorsal view.

Host. The spectacled fruit-bat, *Pteropus conspicillatus* Gould (Pteropodidae), Mundoo, near Innisfail, north Queensland, 29.vi.1959, J. L. Harrison coll.

Types. This mite is described from 24 specimens, comprising the type female and 23 paratypes (four larvae, one nymph, 18 females). The holotype female and paratype females, nymph and larvae, are in the Queensland Museum, Brisbane; paratypes are also in the South Australian Museum, Adelaide; United States National Museum, Washington; South African Institute for Medical Research, Johannesburg; Museum d'Histoire Naturelle, Paris; British Museum (Natural History), London; Musée de Tervuren; Institut Royal des Sciences Naturelles de Belgique, Brussels; and in the collection of the author.

Mr. Domrow has a further fifteen specimens from three bats of the same species, which I have not seen.

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