

**INSECTS OF MACQUARIE ISLAND.**  
**ACARINA: TROMBIDIFORMES: EREYNETIDAE**

By **A. Fain**

INSTITUT DE MEDECINE TROPICALE, ANVERS (ANTWERP), BELGIUM

Recently Mr. K. C. Watson<sup>1</sup> sent a series of Ereyнетid mites that he collected on Macquarie Island during 1961<sup>2</sup> for me to study. I wish to express my thanks to Mr. Watson for his kindness in having this interesting material sent to me.

This collection is composed of only two species, both being new. One of these is very common for it has been found in many different places and is represented by numerous specimens. On the contrary, the other is represented by only three specimens.

Genus *Ereynetes* Berlese, 1883

***Ereynetes macquariensis* Fain, n. sp.**

This new species is easily distinguished from the other species of the genus by the structure of the dorsal shield which in most of the specimens is very weakly sclerotized and rather hard to see. This shield is absent in the young, whitish, and not completely sclerotized adults. It appears only in the mature specimens but even in these, it is generally very inconspicuous. The borders of this shield are rather ill-defined and the usual pattern of subcuticular sclerotized lines which is present in the other species of the genus *Ereynetes*, is very indistinct here.

The weakness of the dorsal shield and the simplification of the dorsal chaetotaxy (loss of the posterior pair of setae) bring this species closer to the genus *Riccardoella* than are all the other species of the genus *Ereynetes*.

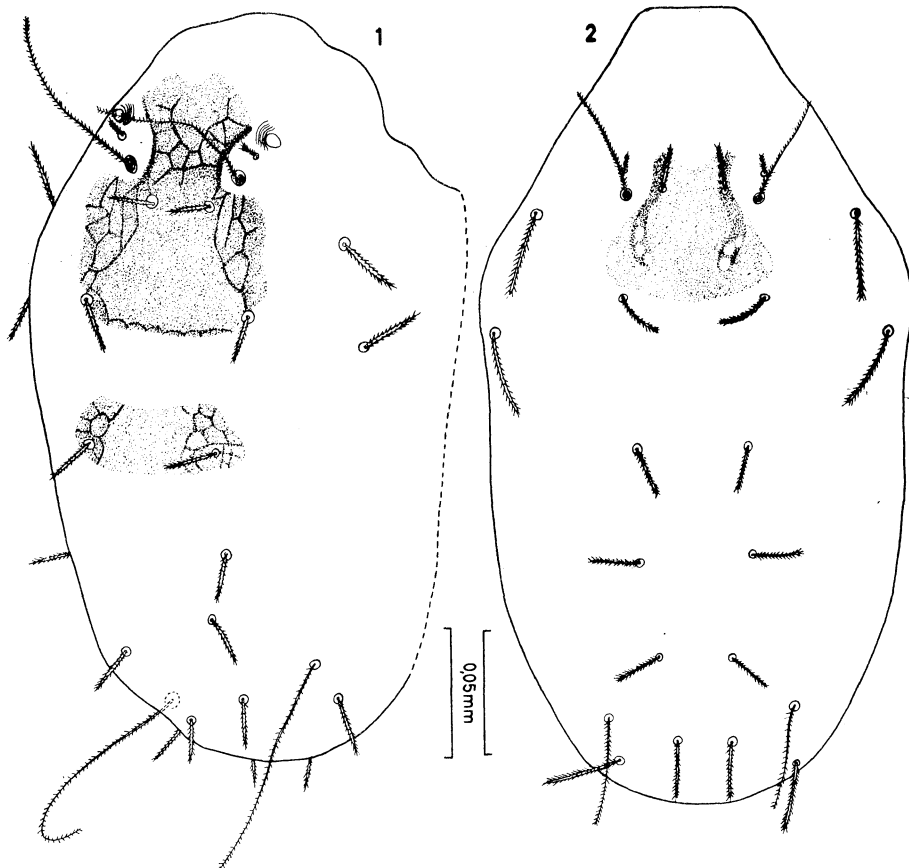
*Male* (holotype) (figs. 2-4, 9-11): Body length, excluding gnathosoma, 330  $\mu$ ; body width 181  $\mu$ . Measurements of 5 paratypes: 316 $\times$ 178  $\mu$ ; 250 $\times$ 140  $\mu$ ; 280 $\times$ 165  $\mu$ ; 310 $\times$ 170  $\mu$ ; 321 $\times$ 180  $\mu$ . Cuticle striate-punctate. Color of the idiosoma whitish; coxae, and other parts of legs, as well as gnathosoma yellowish or orange-yellowish. Several specimens of the collection ( $\sigma\sigma$  and  $\rho\rho$ ) were filled with very small, bluish granules.

*Dorsum*: dorsal shield in most specimens very weakly sclerotized and with only 2 small networks of subcuticular lines situated near its lateral borders. Length of the anterior and posterior sensillae 42-45  $\mu$ . Chaetotaxy: 2-4-4-2-2-2-4; all setae barbed and measure 8 to 30  $\mu$ . *Venter*: *Chaetotaxy*: all setae barbed. Coxae: 3-1-3-2. Body with 2 pairs of

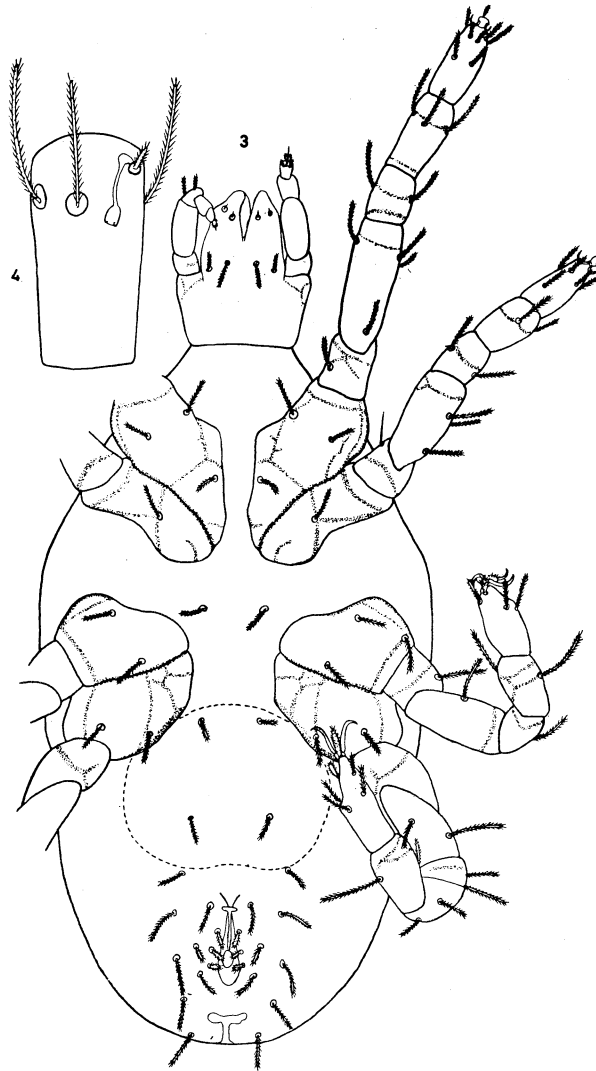
1. Antarctic Division, Dept. of External Affairs.
2. This survey was carried out as part of the Australian National Antarctic Research Expeditions.

posterior intercoxal setae. Genital aperture surrounded by 13 pairs of setae of which 3 pairs are internal; they are very small and closely situated around genital orifice in a small groove or genital vestibule. Ducts of 4 suckers opens in vestibule. On the outside of this groove are 10 pairs of longer setae forming 2 groups. Proximal group (6 pairs) situated on a slightly sclerotized area; consisting of 3 pairs of club-shaped setae ( $10-12\mu$ ) and 3 pairs of longer, more or less cylindrical setae ( $12-16\mu$ ). Outer circle formed by 4 pairs ( $12-19\mu$ ) of cylindrical setae. There are 2 pairs of anal setae. Penis sclerotized with 2 or 3 small dorsal teeth (visible in some paratypes mounted in lateral position). Testis globulous  $78\mu$  in length,  $95\mu$  in width.

*Gnathosoma*:  $88\mu$  long (palps included),  $60\mu$  wide. Palps differ from those of *Ereynetoides malayi* Fain & Nadchatram (1962) only in chaetotaxy. Hypostomal setae as in *E. malayi* but anterior pair of barbed setae situated much closer to posterior one. *Legs*: all setae barbed except those on trochanter II which are nude. Chaetotaxy as in *Ereynetoides malayi*. Femur IV divided in basi and telofemur. The "ereynetal organ" is difficult to



Figs. 1-2. 1, Dorsal view of the ♂ of *Ereynetoides watsoni* n. sp.; 2, same, *Ereynetes macquariensis* n. sp.



Figs. 3-4. ♂ of *Ereynetes macquariensis* n. sp.: 3, ventral view; 4, tibia I.

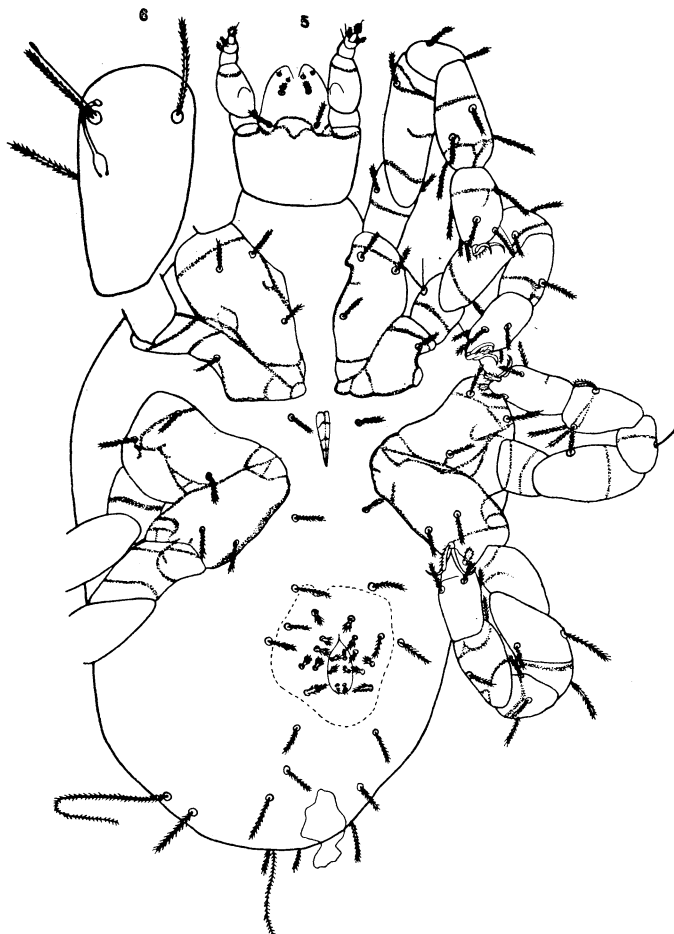
study in the type (see Fain, 1962). In the paratypes the internal pocket is conical in dorso-ventral view and more or less flattened in lateral position. External receptor unlike that of *Ereynetoides hydrophilus* Cooreman. It consists of a very shortly-barbed and slightly club-shaped seta measuring 7-8  $\mu$ . This specialized seta is not situated on the same basis as a normal hair but on a distinct basis, and at a certain distance of any other seta.

*Female* (allotype) (figs. 7, 8, 12): Body length (excluding gnathosoma) 345  $\mu$ ; body width 190  $\mu$ . Dimensions of 5 paratypes: 302  $\mu$  × 160  $\mu$  (containing an egg of 144  $\mu$  × 88  $\mu$ ); 325  $\mu$  × 181  $\mu$ ; 338  $\mu$  × 182  $\mu$ ; 307  $\mu$  × 190  $\mu$  (containing an egg of 133 × 74  $\mu$ ); 270  $\mu$  × 170  $\mu$  (weakly sclerotized). Cuticle and color as in ♂.

Dorsum as in the ♂. Venter as in the ♂ except for genital area. Genital slit in form of an inverted T,  $54\ \mu$  long, surrounded by 10 pairs of setae; 5 internal and paramedian and 5 external. 2 pairs of pear-shaped suckers situated deeply on each side of genital vestibule. More medially and close to vaginal orifice is a pair of small drop-shaped and very refringent organs which are probably additional suckers. They are attached on wall of vulva by a narrow and sclerotized canal. These organs lacking in ♂. We have not observed them in the ♂♂ and in the ♀♀ of *Ereynetoides malayi* and *Riccardoella limacum*. Gnathosoma and legs as in ♂.

The collection contains several tritonymphs. They are very poorly sclerotized, one of which measures (gnathosoma excluded)  $235\ \mu \times 157\ \mu$ . Ventral surface of opisthosoma as in the tritonymph of *Ereynetoides malayi* with 8 small bare discs surrounded by 8 pairs of barbeled setae. Short, very narrow longitudinal line visible in posterior 1/2 of this area.

*Locality*: Macquarie Island, in many different places (see below). 186 specimens (93



Figs. 5-6. ♂ of *Ereynetoides watsoni* n. sp.: 5, ventral view; 6, tibia I.

♀ ♀, 89 ♂ ♂, 4 tritonymphs), collected by K. C. Watson.

*Types*: Holotype ♂, allotype ♀ and paratypes in the Austral. Nat. Ins. Coll., Canberra, Australia. Paratypes author's collection.

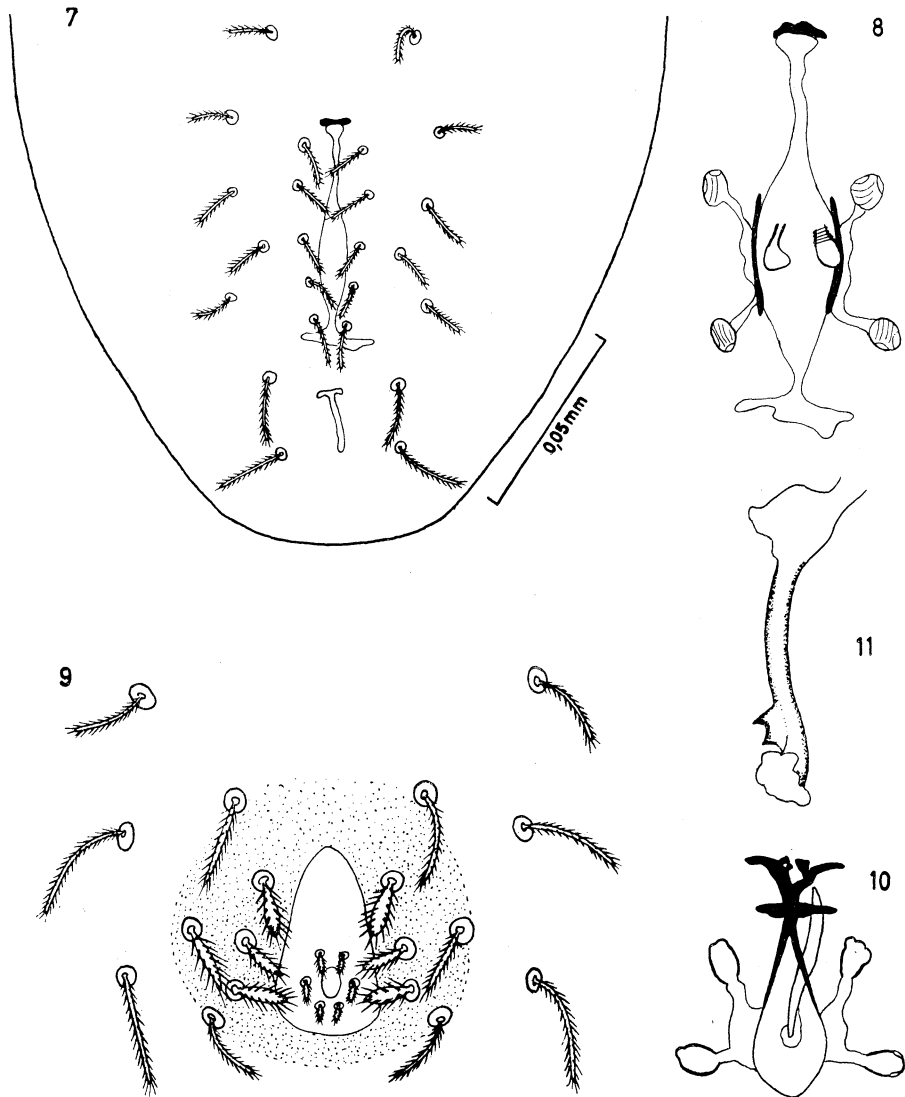
List of places where *Ereynetes macquariensis* has been collected.

Collecting Nr.	Date	Place	Biotope	Number of specimens
M/61/Z/3	19.I.61	Plateau	Herbfield soil	1
M/61/Z/11	26.I.61	Langdon Point	Stilbocarpa litter	1
M/61/Z/16	23.II.61	Aerial Cove	Green alga and soil on coastal rocks	1
M/61/Z/29	2.III.61	Nuggets Point	Green alga, coastal rocks	7
M/61/Z/31	2.III.61	Nuggets Point	Colobanthus muscoides	3
M/61/Z/33	3.III.61	North Head	Poa hamiltoni soil	1
M/61/Z/38	3.III.61	North Head	Cotula plumosa and soil	1
M/61/Z/62	22.III.61	Eagle Cave	Lichens inside cave	3
M/61/Z/76	8.V.61	Aerial Cove	Colobanthus muscoides	2
M/61/Z/78	8.V.61	Catch-me Point	Green alga on rocks	1
M/61/Z/80	9.V.61	North Head	Green alga on rocks	2
M/61/Z/90	24.V.61	Plateau	Feldmark moss and soil	2
M/61/Z/100	9.VI.61	Scoble Lake	Stilbocarpa and soil	7
M/61/Z/106	26.VI.61	Plateau	Stilbocarpa litter and soil	2
M/61/Z/109	27.VI.61	North Head	Poa hamiltoni	20
M/61/Z/133	2.VIII.61	Camp Hill	Soil, 3 feet down	1
M/61/Z/134	2.VIII.61	Camp Hill	Soil, 5 feet down	1
M/61/Z/146	7.VIII.61	Brothers Point	Cave scrapings	1
M/61/Z/154	17.VIII.61	Isthmus	Puccinellia & green alga	9
M/61/Z/157	23.VIII.61	Sub-plateau	Stilbocarpa litter	2
M/61/Z/162	26.VIII.61	North Head	Green alga on rookery rocks	15
M/61/Z/165	26.VIII.61	Aerial Cove	Colobanthus muscoides	6
M/61/Z/178	18.IX.61	Garden Cove	Green alga on rocks	21
M/61/Z/179	18.IX.61	Garden Cove	Green alga on rocks	6
M/61/Z/182	26.IX.61	North Head	Cave rookery debris	1
M/61/Z/183	26.IX.61	North Head	Cave ceiling scrapings	1
M/61/Z/194	6.X.61	North Head	Cave rookery debris	1
M/61/Z/202	16.X.61	North Head	Poa hamiltoni	5
M/61/Z/204	27.X.61	Mt. Hamilton	Azorella, mosses, soil	1
M/61/Z/214	13.XI.61	Langdon Point	Stilbocarpa litter	1
M/61/Z/218	25.XI.61	Plateau	Azorella, mosses, soil	5
M/61/Z/226	29.XI.61	Wireless Hill	Moss on exposed rock-face	4
M/61/Z/236	1.XII.61	Camp Hill Point	Green alga on rocks	2
M/61/Z/237	1.XII.61	Garden Cove	Green alga on rocks	36
M/61/Z/238	3.XII.61	Plateau	Herbfield plants	1

Genus *Ereynetoides* Fain and Nadchatram, 1962

*Ereynetoides watsoni* Fain, n. sp.

This species is distinguished from all the other species of the genus (See Baker, 1945) by the particular structure of the dorsal sclerotization which consists of two separate areas, an anterior large area with a characteristic pattern and a much smaller posterior with



Figs. 7-11. *Ereynetes macquariensis* n. sp. ♀ : 7, genito-anal area ; 8, structure of the internal genital vestibule. ♂ : 9, genital area slightly expanded ; 10, structure of the deeper genital vestibule after removal of the internal setae (holotype) ; 11, penis in lateral view (paratype).

only a very faint network pattern. *Ereynetes potator* Vitzthum 1931 (See Sig Thor, 1933) described from S. Sumatra, also has two dorsal shields and seems close to our species, however it differs from the latter by the different shape and structure of these shields, the larger body size, and the absence of the eyes, etc.

*Male* (holotype) (figs. 1, 5-6) : Body length, excluding gnathosoma, 290  $\mu$ . Body width

190  $\mu$ . Paratype 305  $\mu \times 170 \mu$ . Cuticle of all the animal finely striate-punctate. Color: soft parts of body whitish or slightly yellowish; dorsal shield, legs and mouth-parts orange-yellowish.

*Dorsum*: a pair of small lens-like eyes present in front and a little outside of the pre-sensillar setae. There are 2 dorsal shields, anterior shield large, extends posteriorly a little beyond the 2nd row of postsensillar setae; it is well sclerotized and shows a well-defined network of subcuticular lines. Posterior shield less sclerotized, and shows a small network laterally, wider than long, and much smaller than the first. Sensillae very slender, anterior pair measures 75  $\mu$ , posterior pair 80 to 85  $\mu$ . Dorsal chaetotaxy, excluding the sensillae: 2-4-4-2-2-2-4-2. All these setae barbed and slightly spindle-shaped; the 1st pair short (9  $\mu$ ), situated in front of the anterior pair of sensillae; the other pairs are longer (the posterior pair measures 12  $\mu$ , the other from 18 to 30  $\mu$ ). Venter with a small network of subcuticular sclerotized lines present in the midline, between anterior and posterior groups of coxae. Soft cuticle with 2 pairs of barbed setae at level of posterior coxae. Genital region with 13 pairs of barbed setae distributed in 2 main groups; external group with 10 pairs and internal one with 3 pairs. External setae may be divided in a distal group of 5 longer pairs (9 to 15  $\mu$ ) and a proximal group of 5 shorter pairs (7-12  $\mu$ ). Cuticle bearing the latter slightly but distinctly sclerotized. Internal setae lie in a small oval (21  $\mu \times 10 \mu$ ) slightly depressed area (genital vestibule); very short and very closely surround small genital aperture. 2 pairs of genital suckers open in the vestibule.

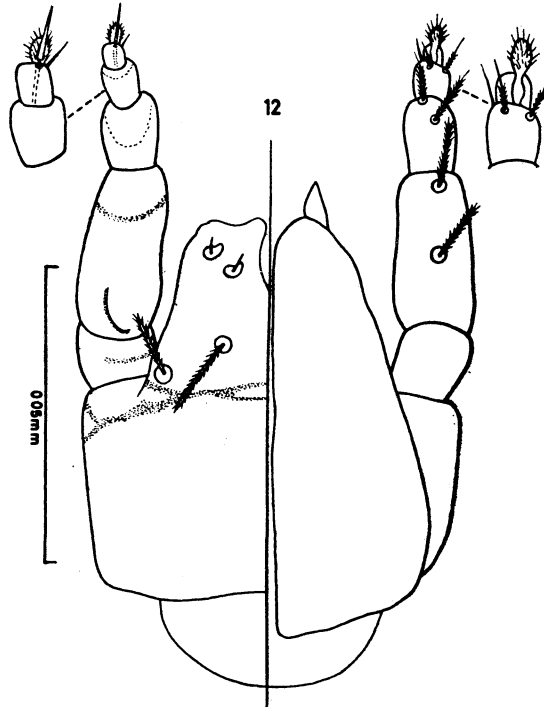


Fig. 12. *Ereynetes macquariensis* n. sp., gnathosoma of the ♀ (ventral and dorsal view).

Penis well sclerotized with anteriorly bifurcate armature. Testis irregularly shaped, wider ( $66 \mu$ ) than long ( $61 \mu$ ). Anus ventral with 2 pairs of barbed anal setae ( $15 \mu$  and  $18 \mu$ ). Gnathosoma and legs fairly well sclerotized with subcuticular sclerotized lines forming a small network at some places. Gnathosoma long (from the base to distal extremity of the hypostome) of  $65 \mu$ , wide of  $55 \mu$ ; hypostome with 2 pairs of posterior barbed and 2 pairs of anterior nude setae placed as in *Ereynetoides malayi* Fain and Nadchatram; palps 5-segmented. Legs with chaetotaxy, claws, pulvilli and solenidia as in *E. malayi*; "ereynetal organ" as in that species but internal sac regularly ovoid-shaped. Femur IV divided in telo- and basi-femur.

*Female*: only 1 young and very weakly sclerotized specimen. Genital aspect as in the ♂ but the shields are not yet sclerotized. Genital area in too bad condition for study.

*Locality*: Holotype (♂), and 1 paratype (♂), Macquarie Island, Handspike Point, in *Stilbocarpa* litter, (M/61/Z/101), 9. VI. 1961, K. C. Watson, ♀, Langdon Point, also in *Stilbocarpa* litter, (M/61/Z/214), 13. XI. 1961, K. C. Watson.

*Type*: Holotype and ♀ specimen in the Austral. Nat. Ins. Coll., Canberra, Australia; paratype (♂) in author's collection.

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