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**MITCIGNATHUS SECUNDUS, A PSAMMOFILEOUS HALACARID MITE**  
**(ACARI : HALACARIDAE)**

**BY I. BARTSCH** *

**DESCRIPTION HALACARIDS SOUTH ATLANTIC**  
**ABSTRACT :** A new species of marine mite, *Mictognathus secundus* (subfamily Halacarinae), is described. The species was collected from off Tierra del Fuego, South Atlantic Ocean. The description of *M. werthelloides* is emended.

**DESCRIPTION HALACARIENS ATLANTIQUE SUD**  
**RÉSUMÉ :** Une nouvelle espèce d'acarien marin, *Mictognathus secundus* (Sous-famille des Halacarinae), est décrite. L'espèce a été collectée dans l'Atlantique Sud, Terre de Feu. *M. werthelloides* est redécrit.

Amongst several mites, recovered from the shores of the Palmer Peninsula, Newell (1984) found an unusual form of a halacarid mite and established the genus *Mictognathus*, with *Mictognathus werthelloides* as type species. In material collected at the Palmer Peninsula and off southeastern Argentina and studied by the author *M. werthelloides* and a new species, *M. secundus* were present.

*Mictognathus* Newell, 1984


Dorsal plates (anterior dorsal plate, ocular plate, posterior dorsal plate) and ventral plates (anterior epimeral plate, posterior epimeral plate, genital-anal plate) present. Palps four-segmented, attached lateral to rostrum. Second palpal segment (P-2) with one dorsal seta; P-3 with a minute median seta; P-4 very slender, with a single seta in the basal whorl. Genua shorter than tibiae and tele-mora. Tibiae I-IV each with two stout, usually bipectinate ventral bristles. Tarsus I with three dorsal setae, dorsolateral solenidion and profamulus, a pair of eupathid ventral setae and a pair of doubled ambulacral setae. Tarsus II with three dorsal setae, a dorsomedial solenidion, one ventral seta and a pair of ambulacral setae. All tarsi with two lateral claws and a minute median claw. Deutonymph present.

According to present knowledge, *Mictognathus* has to be placed into the subfamily Halacarinae; it is related to the genus *Arhodeoporus*.

*Mictognathus secundus* sp. nov.  
(Figs. 1-10)

**Material**: One female holotype, deposited in the United States National Museum.

**Collecting data**: Off southern Argentina, 53°32'-53°34' S, 64°57'-64°55' W, 119-124 m, 12 Febr. 1964 (Program USARP ELTANIN cruise 11, station 974).

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Figs. 1-10: *Mictognathus secundus* sp. nov., female.

Female: Idiosoma length 440 \( \mu \text{m} \), width 215 \( \mu \text{m} \). Idiosoma heavily armoured. Proximal portion of anterior dorsal plate raised, with rosette pores; ocular plate with a small, rounded porose areola; posterior dorsal plate with two raised costae, three pores wide, with rosette pores. Plates outside porose areolae foveolate. Anterior dorsal plate with one pair of gland pores, placed adjacent at anterior margin (Fig. 1). Ocular plate with two corneae, darkbrown eye pigment, two gland pores at level and just posterior to second cornea. Ocular plate with an anterior edge protruding between dorsal portion epimeral plate and anterior dorsal plate, and linked with lateral edges of the latter; posterior edge of ocular plate linked with posterior dorsal plate. Posterior of anterior dorsal plate with a pair of gland pores at lateral margin at level of insertion of leg IV. Dorsal setae slender, short. First pair of dorsal setae (ds-1) inserted close to first pair of gland pores, proximal to anterior dorsal plate. Ds-2 arising from anterior edge of ocular plate. Posterior dorsal plate with two pairs of setae, both inserted at medial margin of porose costae. Adanal setae inserted dorsally on the anal plate.

All ventral plates fused (Fig. 2). Dorsal portion of anterior and posterior epimeral plates foveolate, marginal portions with rosette pores, ventral integument with delicate, scattered pores. Anterior epimeral process enlarged. Processes of epimera I fused and forming a collar. Genital foramen in posterior idiosoma. Four pairs of perigenital setae close to genital foramen. Subgenital setae lacking. Ovipositor slightly surpassing genital foramen.

Rostrum slender, triangular; with two pairs of maxillary setae, and at tip of rostrum two pairs of rostral setae (Fig. 3). Gnathosoma base foveolate, ventromarginally with approximately three rosette pores, dorsally with large foveae and large, pointed tectum; marginal articular lamellae flanking base of palps (Fig. 6). Palps four-segmented. Second palpal segment (P-2) with wide and finely pilose dorsal seta (Fig. 4). P-3 with a minute median dent. P-4 longer than P-2, with one seta in the basal whorl.

All legs shorter than idiosoma. Legs flattened, with characteristic wide lamella (Figs 8-10). All telofemora with huge ventrolateral and distinctly smaller ventromedial lamellae. Genua and tibiae with distal lamellae both laterally and medially. Basifemora with ventral lamellae. Trochanters III (Fig. 10) and IV each with a spine-like ventromedial lamella and a triangular dorsal projection. Leg chaetotaxy of leg I to leg IV: trochanter 1-1-1-1; basifemur 2-2-1-?; telofemur 5-5-2-2; genu 4-4-3-3; tibia 5-5-3-4. Dorsomedial setae on telofemora and ventral seta on genua wide, bifurcate. All tibiae with two ventral, bipenticate bristles. Tarsus I with three dorsal setae, the posterior paired ones are thick, eupathid; solenidion and profamulus dosolateral in position (Fig. 7); tip of tarsus I with a pair of single ventral and a pair of doubled eupathidia. Tarsus II with rod-like solenidion dorsomedial in position; the dorsolateral fossary seta distinctly larger than the slender dorsomedial seta (Fig. 5); a small ventral seta and a pair of eupathidia present at tip of tarsus. Tarsi III and IV with four and three dorsal setae respectively. Lateral claws slender, with an accessory process but no claw comb. Median claw unidentate.

Male: Not seen.

Remarks: Mictognathus secundus differs from M. werthelloides on the basis of: anterior dorsal plate with round porose areola; ocular plate with two gland pores; ventral plates fused; dorsal seta on P-2 wide; dorsomedial setae on telofemora wide, bifurcate.

Mictognathus werthelloides Newell, 1984
(Figs. 11-16)

Collecting data: Off South Sandwich Islands, 56°42.3' S, 27°00.4' W, 93-121 m, 30 May 1975 (Program USARP, 575/61); 56°15.6' S, 27°35.0' W, 110-155 m, 03 June 1969 (Program USARP, 575/76). Palmer Peninsula, 64°47' S, 64°04' W, 6 m, 25 January 1969 (Program USARP, AH4-20); 65°13.6' S, 65°14.7' W, 49-58 m, 16 March 1982 (Program USARP, 824/4-1).

The species is described in Newell (1984: 212-215, Figs 589-599), some few amendments have to be added.

Female: Idiosoma length 410-455 \( \mu \text{m} \), width 225-245 \( \mu \text{m} \). Dorsal aspect (Fig. 11) similar to male.
The characteristic form of porose (rosette pores) areolae are: an inverted V on anterior dorsal plate, round area on ocular plate, two longitudinal costae on posterior dorsal plate. Areas outside porose areolae faintly panelled. Anterior dorsal plate with a pair of gland pores at anterolateral edges, ocular plate with one gland pore at lateral margin and posterior dorsal plate with a pair of gland pores within porose costae at level of posterior dorsal setae. Dorsal setae ds-l inserted close together, slightly anterior to level of first pair of gland pores.

Ventral plates with dorsal portion coarsely foveolate,
marginal portions with deep rosette pores, ventral portions with scattered deep pores. Epimeral processes large. Genital foramen in posterior genitoanal plate, with four pairs of perigenital setae, no subgenital setae; ovipositor slightly surpassing genital opening (Fig. 12).

Gnathosoma with ventromarginal base porose, its dorsal flank panelled; tectum pointed. P-2 with a long dorsal seta, P-3 with a minute median dent. Chelicera with denticulate claw (Fig. 14).

Legs shorter than idiosoma, with large lamellae; telofemora with wide ventrolateral but small ventromedial lamellae, genua and tibiae with articular lamellae (Fig. 16). All tibiae with two bipectinate ventral bristles. Tarsus I and tarsus II with solenidion in dorsolateral and dorsomedial position respectively. Dorsolateral seta on tarsus II distinctly larger than both dorsal and dorsomedial setae (Fig. 15). Claws slender, with an accessory tooth but no claw comb. Median claw unidentate.

Male: Idiosoma length 395-446, width 205-255 μm. GA with 42-56 pgs and three pairs of sgs (Fig. 13).

Deutonymph: Idiosoma length 353-382 μm, width 180-216 μm. Dorsal plates separated by coarsely striated integument. Anterior dorsal plate and posterior dorsal plate with opposing margins rounded. Genital plate large, with one (rarely two) pairs of perigenital setae.

Remarks: Mictognathus werthelloides is distinctive on the basis of outline of the porose areolae on dorsal and ventral plates.

Distribution: M. werthelloides is recorded from the Palmer Peninsula and off the South Sandwich Islands, West Antarctica. The record Commonwealth Bay, East Antarctica, may be erroneous.

ECOLOGY

Two species are at present described. Both are heavily armoured, idiosomal plates are contiguous or even fused, the legs have remarkable lamellae. Both species are believed to inhabit coarse sediments; with the heavily armoured, oblong oviform idiosoma, the ability to press the legs tightly against the idiosoma, with the tibiae and tarsi hidden beneath the large lamellae of telo- and basifemora, they certainly are protected against both lesion from grinding sediment particles and dislodgement by turbulences. Similar legs with large lamellae and idiosomal plates fused or contiguous are recorded from several species of the Copidognathus gibbus group.

GEOGRAPHY

The genus Mictognathus is circumpolar in distribution. At present, it is documented from the Palmer Peninsula (Newell, 1984, and present record), the Commonwealth Bay (Womersley, 1937), the South Sandwich Islands and off southern Argentina.

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