SPIXIANA	20	2	131–135	München, 01. Juli 1997	ISSN 0341-8391

A new species of *Trichotichnus* Morawitz from northern Australia

(Insecta, Coleoptera, Carabidae, Harpalinae)

Martin Baehr

Baehr, M. 1997: A new species of *Trichotichnus* Morawitz from northern Australia (Insecta, Coleoptera, Carabidae, Harpalinae). – Spixiana **20/2:** 131-135

Trichotichnus maculipennis, spec. nov. is described from northern Queensland, Australia, and compared with the *Trichotichnus*-species recorded from Australia. A revised key to all Australian species is presented.

Two name replacements are introduced: The genus name *Mooreana* Baehr, 1987 (Carabidae, Lebiinae) that is a junior homonyme of *Mooreana* Evans, 1926, is changed to *Barrymooreana*, nom. nov.; and the species name *Perileptus convexicollis* Baehr, 1987 that is a junior homonyme of *Perileptus convexicollis* Mateu, 1983 is changed to *Perileptus cylindricollis*, nom. nov.

Dr. Martin Baehr, Zoologische Staatssammlung, Münchhausenstr. 21, D-81247 München, Germany.

Introduction

Within a sample of Australian Carabid beetles, collected by A. Walford-Huggins and sent for examination by Dr. R. L. Davidson (Pittsburgh), there was a small series of a conspicuous *Trichotichnus*, identified as *T. brandti* Darlington, but certainly representing another, undescribed species.

Although being rather speciose in New Guinea (Darlington 1968), the genus *Trichotichnus* was unknown from Australia until about 15 years ago, when I published the first record from Australia (Baehr 1985) and described another – new – species from northeastern Queensland (Baehr 1983). In the meantime two additional species were described from Australia (Baehr 1990), but thus far all records are from North Queensland, within the area from Windsor Tableland in the north through Atherton Tableland down to the vicinity of Tully. The new species to be described below has been collected in the same area, namely the vicinity of Cairns.

Measurements

Measurements were taken using a stereo microscope with an ocular micrometer. Length has been measured from apex of labrum to apex of elytra. Lengths, therefore, may slightly differ from those of other authors. Length of pronotum was measured from middle of apex to base, width of apex between the most advanced points of the apex.

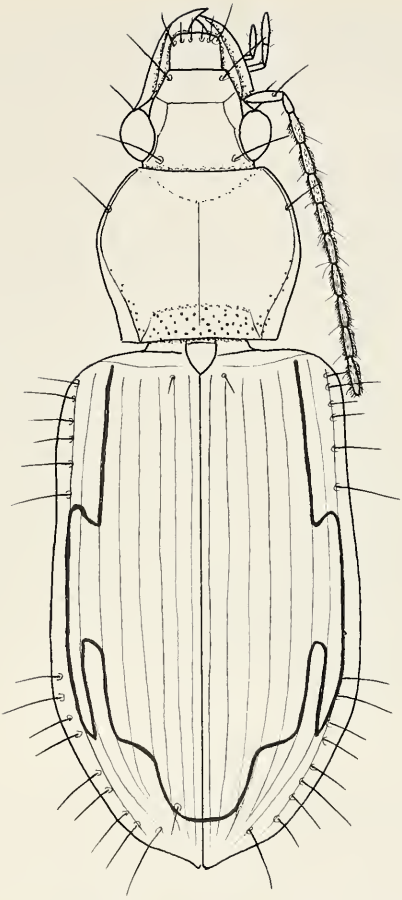


Fig. 1. *Trichotichnus maculipennis*, spec. nov. Habitus. Length: 7.2 mm.

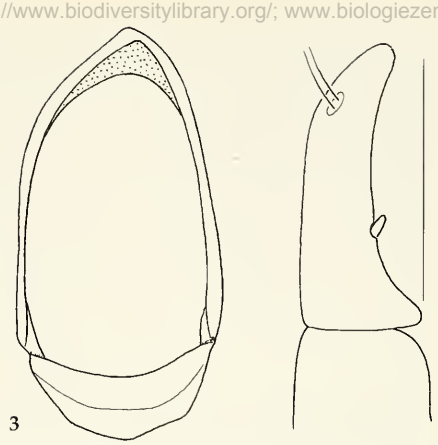
Trichotichnus maculipennis, spec. nov.
Figs 1-3

Types. Holotype: ♂, Cairns: N. Qld/ Kamerunga at M.V.L/ 17: July: 1972 A. & M. Walford-Huggins 6368/Walford-Huggins Collection Carnegie Museum Accession 35338/ *Trichotichnus brandti* Darl. (Series det. by A. Walford-Huggins) (Carnegie Museum, Pittsburgh). – Paratypes: 2♂♂, 1♀, same data (Carnegie Museum, Pittsburgh, working collection of author).

Diagnosis. Species of subgenus *Bellogenus* Clarke according to the character states used by Noonan (1985). Distinguished from all other Australian and New Guinean species by the light colour, the peculiar elytral pattern and the narrow, markedly cordiform pronotum with very sharp, rectangular basal angles.

Description

Measurements. Length: 6.8-7.3 mm; width: 2.7-2.9 mm. Ratios: Width/length of pronotum: 1.21-1.22; width of base/width of apex of pronotum: 1.24-1.26; width of pronotum/width of head: 1.39-1.42; length/width of elytra: 1.56-1.60; width of elytra/width of pronotum: 1.47-1.50.



Figs 2, 3. *Trichotichnus maculipennis*, spec. nov. ♂ and ♀ genitalia. **2.** Genital ring, adeagus, and parameres. Scale: 0.5 mm. **3.** Stylomere 2 and apex of stylomere 1. Scale: 0.2 mm.

Colour. More or less dark reddish brown, head reddish, considerably lighter than pronotum and elytra, lateral margin of pronotum narrowly yellowish, lateral and apical margins of elytra from 7th interval yellow, though 7th and 8th intervals in middle dark, the dark colour widely interrupting the light margin, on 8th interval the dark colour narrowly prolonged backwards. The yellow marginal colour at apex extended to 4th and 5th intervals. Pronotal and elytral epipleurae yellow, lower surface piceous, though abdominal sterna with indistinct lighter spots that become more extended und more distinct towards apex. Terminal sternum almost wholly yellow. Mouthparts, antennae, and legs completely yellowish.

Head. Moderately large, with very large, rather protruding eyes. Orbits very short. Eyes separated from buccal fissure by c. 1/10 of eye diameter. Clypeal suture deep. Clypeo-orbital sulcus distinct, elongate, almost attaining eye, weakly prolonged medially of eye very close to eye. Clypeus with one seta each side, labrum 6-setose. Mandible moderately elongate. Both terminal palpomeres of both palpi sparsely setose. Labium with elongate, unidentate tooth. Antenna elongate, surpassing base of pronotum by 2-3 antennomeres, median antennomeres almost 3× as long as wide. Frons in middle with small punctiform impression. Surface without puncturation, without microreticulation, highly glossy.

Pronotum. Considerably wider than head, c. 1.2× as wide as long, markedly cordiform, widest shortly behind position of lateral seta. Apex almost straight, anterior angles rounded, not projecting. Lateral borders in anterior two thirds convex, posteriorly concave, near basal angles straight, almost parallel. Basal angles sharp, rectangular. Base almost straight, laterally feebly oblique. Medin line distinct though shallow, anterior transverse sulcus very shallow, v-shaped, posterior sulcus likewise very shallow. Lateral channel anteriorly rather narrow, slightly widened towards basal angles, lateral margin distinct, base unbordered. Basal grooves deep, linear, elongate, separated from marginal channel by a wide, impunctate space. Base including basal grooves densely and coarsely punctate. Lateral marginal seta situated slightly in front of middle, basal marginal seta absent. Surface impunctate, without microreticulation, highly glossy.

Elytra. Elongate, rather convex, slightly widened in posterior half, lateral borders barely sinuate in front of apex. Humeri completely rounded, apex at suture with a minute denticle. Striae deep, complete, impunctate, intervals rather convex. Setiferous puncture of 3rd interval, when present, situated in middle between 2nd and 3rd stria, far down the apical declivity. Marginal series consisting of 6 setiferous punctures behind humerus and (7-)8 apical setiferous punctures in two groups of 4, separated from humeral group by a very wide, impunctate space. Microreticulation superficial and very fine, consisting of dense, transverse lines mixed with very wide meshes. Surface impunctate, rather glossy, though not iridescent. Wings fully developed.

Lower surface. Completely impunctate and impilose. Metepisternum rather elongate, c. 1.3× as long as wide. ♂ with 2, ♀ with 4 ambulatory setae at apex of terminal sternite.

Legs. Elongate. Anterior tibia barely widened at apex. In ♂ 1st-4th tarsomeres of anterior and median tarsi widened and squamose beneath. 1st tarsomere of metatarsus rather elongate, slightly shorter that 2nd and 3rd tarsomeres together.

♂ genitalia (Fig. 2). Genital ring large, c. ⅓ longer than aedeagus, rather wide, slightly asymmetric, with short, rounded apex and rather short, wide base. Aedeagus moderately elongate, rather stout, straight, lower surface straight. Apex rather short and stout, triangular, slightly directed to left. Orificium very elongate, occupying almost the complete upper surface of the aedeagus. Internal sac markedly symmetric, with two narrow sclerites near orificium, the anterior one being about w-shaped, the posterior one semicircular, the connecting bar in both sclerites situated at the lower surface of aedeagus. Parameres rather small, left much larger than right, for shape see fig. 2

♀ genitalia (Fig. 3). Stylomere 2 elongate, straight, with short, feebly curved apex. One tiny ventral ensiform seta situated close to base of stylomere, dorsal ensiform seta absent, 2 nematiform setae raising from a groove at apical fourth of stylomere. Apex of stylomere 1 without any setae.

Variation. Setiferous puncture of 3rd elytral interval variable, mostly absent, present unilaterally in a single specimen only. Otherwise, apart from less contrasting colouration in two specimens due to immaturity, little variation noted.

Distribution. Northeastern Queensland. Known only from type locality.

Collecting circumtances. Unknown.

Relationships. According to the subgeneric concept of Noonan (1985) the new species belongs to the subgenus *Bellogenus* Clarke. Of this subgenus a number of species occur in New Guinea. However, the peculiar colour pattern and the cordiform pronotum distinguish *T. maculipennis* from all New Guinean species (see Darlington 1968). In Australia thus far no species of the mentioned subgenus was recorded. The new species is, therefore, once more evidence for various independent colonizations of northeastern Australia by *Trichotichnus*-species of different subgenera. Probably, all these colonizations took their way via New Guinea, though, except for the presumably very recently immigrated *T. straneoi* Louwerens (Baehr 1985), all Australian species are taxonomically well separated from their possible New Guinean ancestors.

Updated key to the Australian species of *Trichotichnus* Morawitz

1. Prothorax wide with markedly convex sides; head only ⅔ as wide as prothorax; surface of elytra strongly iridescent ..... *straneoi* (Louwerens)
– Prothorax less wide, sides posteriorly about straight or even sinuate; head almost ¾ as wide as prothorax; elytra not or but slightly iridescent ..... 2.
2. Elytra distinctly bordered with yellow ..... 3.
– Elytra unicolorous ..... 4.
3. Lateral yellow border of elytra not interrupted at 8th interval, apical yellow border not serrate; pronotum wide, ratio width/length c. 1.5, sides basally convex, lateral parts of base clearly oblique, basal angles obtuse ..... *storeyi* Baehr
– Lateral yellow border of elytra interrupted at 8th interval, apical yellow border serrate; pronotum narrow, ratio width/length c. 1.2, sides basally straight, lateral parts of base almost straight, basal angles rectangular ..... *maculipennis*, spec. nov.
4. Larger species, length >9 mm; abdominal sternites with large, yellow lateral spots; femora conspicuously lighter than tibiae; pronotum widest in front of middle, sides basally straight ..... *demarzi* Baehr
– Smaller species, length c. 7.5 mm; abdominal sternites without yellow spots; femora not conspicuously lighter than tibiae; pronotum widest at middle, sides basally sinuate ..... *tolgae* Baehr

Name replacements

At this place, I want to introduce two replacement names for names given by me that recently turned out as preoccupied names.

Dr. Y. Bousquet, Ottawa, recently informed me kindly that the genus name *Mooreana* Baehr (Baehr 1987a), used for the lebiine species *M. quadrimaculata* Baehr, is a junior homonyme of *Mooreana* Evans, 1926. It is herewith replaced by *Barrymooreana*, nom. nov.

Mr. W. Lorenz, Tutzing, while finishing his catalogue of available carabid names, also informed me recently that the species name *Perileptus convexicollis* Baehr, 1987 (Baehr 1987b) is a junior homonyme of *Perileptus (Parablemus) convexicollis* Mateu, 1983 that was unknown to me when revising the Australian *Perileptus*. The species name is herewith changed to *Perileptus cylindricollis*, nom. nov.

Acknowledgements

My best thanks are due to Dr. R. L. Davidson (Pittsburgh) for kindly submitting the species for identification, and to Dr. Y. Bousquet (Ottawa) and Mr. W. Lorenz (Tutzing) for the nomenclatorial informations mentioned above.

References

Baehr, M. 1983. *Trichotichnus demarzi* sp. nov., eine weitere *Trichotichnus*-Art neu für Australien (Insecta, Coleoptera, Carabidae). – Spixiana **6**: 109-112

– – 1985. *Trichotichnus* Morawitz, a genus new to Australia (Coleoptera: Carabidae: Harpalinae). – Aust. Ent. Mag. **12**: 21-22

– – 1987a. Revision of the Australian Dromiine ground beetles, formerly placed in the genus *Microlestes* SCHMIDT-GÖBEL (Coleoptera, Carabidae, Lebiinae). – Ent. Arb. Mus. Frey **35/36**: 21-65

– – 1987b. The Australian Species of the CarabidGenus *Perileptus* (Coleoptera: Carabidae: Trechinae). – Invertebr. Taxon. **1**: 1-16

– – 1990. Two new species of *Trichotichnus* Morawitz from North Queensland (Coleoptera: Carabidae: Harpalinae). – Mem. Queensl. Mus. **28**: 383-388

Darlington, P. J. Jr. 1968. The carabid beetles of New Guinea III. Harpalinae continued. Perigonini to Pseudomorphini. – Bull. Mus. comp. Zool. **137**: 1-253

Noonan, G. R. 1985. Classification and names of the Selenophori group (Coleoptera: Carabidae: Harpalini) and of nine genera and subgenera placed in incertae sedia within Harpalina. – Milwaukee Publ. Mus. Contr. Biol. Geol. **64**: 1-92