

Mitt. Münch. Ent. Ges.	<b>103</b>	85-94	München, 15.10.2013	ISSN 0340-4943
------------------------	------------	-------	---------------------	----------------

## New species and new records of the genus *Tasmanitachoides* ERWIN from Australia

(Insecta, Coleoptera, Carabidae, Trechitae)

**Martin BAEHR**

### Abstract

Two new species of the Australian trechine genus *Tasmanitachoides* ERWIN are described: *T. flindersianus* from the Flinders Range in South Australia and *T. elongatulus* from the border area of north-east Northern Territory and adjacent north-west Queensland. *T. flindersianus* is the first species of *Tasmanitachoides* recorded from South Australia. Additional new records of several species of *Tasmanitachoides* are provided some of which enlarge the recorded range of species, or even of the whole genus. The new species are introduced in the most recent key to the genus.

### Introduction

While sorting recently through the large amount of unidentified Carabidae in the collections of Australian National Insect Collection, Canberra, and South Australian Museum, Adelaide, I found representatives of two additional undescribed species of the trechine genus *Tasmanitachoides* ERWIN, 1972, alongside with a couple of described species, which are recorded in this paper. A single specimen collected years ago by me and so far unidentified, turned out to belong to one of the new species.

The genus *Tasmanitachoides* combines small to very small, elongate, depressed, *Perileptus*-like species which are mainly characterized by two deep frontal furrows on the head, subulate palpi, slightly oblique lateral-apical margin of the protibia, a short recurrent stria on the apex of the elytra, and usually absence or very weak development of a number of elytral striae. The first species were described as members of the genus *Tachys* DEJEAN, 1821 *sensu lato*. DARLINGTON (1962) combined some species in his *hobarti*-group within the genus *Tachys*. ERWIN (1972) described additional species and erected for these and for the species of DARLINGTON's *hobarti*-group of the genus *Tachys* the new genus *Tasmanitachoides*. BAEHR (1990) revised the then recorded species, described again several species, and added some additional species to the genus that previously were included in the genus *Tachys*. Additional species were described later in a couple of papers (BAEHR 2001, 2008a, b, 2009, 2010). At present the genus contains 23 species. These numerous additions, since the revision of the genus, demonstrate that species inventory and distribution of these tiny, hygrophilous beetles are not yet adequately recorded.

Until recently the genus was included in the subtribe Tachyina of the tribe Bembidiini where it had been assigned a position close to the basis of this tribe. This was mainly based on the presence of the subulate palpi which much resemble those of other Bembidiini, and on the slightly excised latero-apical margin of the protibia. The recent discovery of the larva of one species, however, has changed the opinion about the systematic status of the genus, and then it was included in the tribe Trechini where it is believed to be most closely related to the subtribe Perileptina (GREBENNIKOV 2008). However, this placement may not be the final one, because recent surveys using molecular data suggest a position rather at the very base of the supertribe Trechitae (MADDISON, pers. comm.).

Species of the genus *Tasmanitachoides* occur in eastern Australia including Tasmania and in tropical northern Australia, and, as far as their ecological requirements are understood, they occur in gravel and sand of rivers and creeks where they can be washed out from the substrate. However, most specimens, at least in northern Australia, have been sampled at light near watercourses. The southern species tend to occur at

higher altitudes, whereas the tropical species are found in lowland, except some species in North Queensland which apparently live near creeks in montane rain forest. In northern parts of Northern Territory and Western Australia species of *Tasmanitachoides* commonly occur together with certain species of the subgenus *Pyrrhotachys* SLOANE, 1896 of the trechine genus *Perileptus* SCHAUM, 1860. Northern Australian species of *Tasmanitachoides* and *Perileptus* not only are very similar in size, body shape, and colouration but probably their habits are likewise fairly similar.

## Methods

In the taxonomic section standard methods are used. For dissection of the male and female genitalia the specimens were weakened for a night in a jar under moist atmosphere, then cleaned for a short while in hot 10% KOH.

Measurements were taken with an ocular micrometer using a bifocal Leitz stereo microscope which has objectives with extremely high intensity and very high resolution. Body length was measured from apex of labrum to apex of elytra. Lengths, therefore, may slightly differ from those specified by other authors. Length of pronotum was measured from the middle of the apex to the most advanced part of base. Length of elytra was measured from the most advanced part of the humerus to the very apex.

For examination of the fine though taxonomically important microsculpture of the surface up to 160 x magnification was used. For exact definition of the microsculpture two very bright Wild lamps were used that give natural light and can be focussed.

The descriptions follow the style used in my recent papers about *Tasmanitachoides* (BAEHR 2008a, b, 2009, 2010). The habitus photographs were obtained with a digital camera using ProgRes CapturePro 2.6 and AutoMontage and subsequently were worked with Corel Photo Paint X4.

Label data are exactly noted in all specimens, including all ciphers and abbreviations. A / denotes a new label, two blanks a new line on the same label.

## Abbreviations

ACT	Australian Capital Territory	c.	central
NSW	New South Wales	n.	northern
NT	Northern Territory	ne.	north-eastern
QLD	Queensland	nw.	north-western
SA	South Australia	s.	southern
TAS	Tasmania	se.	south-eastern
VIC	Victoria	>	larger or longer than
WA	Western Australia	<	smaller or shorter than

## Abbreviations of Collections

ANIC	Australian National Insect Collection, Canberra
CBM	Working Collection M. BAEHR (part of Zoologische Staatssammlung, München)
SAMA	South Australian Museum, Adelaide

## Genus *Tasmanitachoides* ERWIN, 1972

ERWIN 1972: 2. – MOORE et al. 1987: 144; BAEHR 1990: 868; 2001: 2; 2008a: 13; 2008b: 121; 2009: 160; 2010: 27.

**Type species:** *Tasmanitachoides hobarti* BLACKBURN, 1901; by original designation.

**Diagnosis.** Genus of Trechitae, presently included in Perileptina, or at least believed to be closely related to Perileptina. Body size small to very small; shape of elytra narrow, elongate, and depressed, to short, laterally and dorsally convex; colouration black, to pale yellow; head large; eyes large and usually sparsely pilose; frons with two conspicuous, more or less parallel frontal furrows; labrum anteriorly excised; clypeus at apex impressed or not; palpi subulate with narrow and elongate apical palpomere, pilose; penultimate palpomere of maxillary palpus globose; antenna of different size, completely pilose; pronotum more or less cordiform, with two lateral setae; elytra commonly not completely striate, though a various number of striae absent;

elytra with three, commonly deeply impressed setiferous punctures at 3<sup>rd</sup> stria; dorsal surface of elytra usually with sparse, extremely short, erect pilosity; microreticulation of dorsal surface fairly distinct, to absent; lower surface largely impilose, but terminal abdominal sternum usually rather densely pilose; in males terminal sternum bisetose, in females quadrisetose; legs rather short and stout; protibia slightly excised at latero-apical surface; in males two basal tarsomeres of protarsus mediad asymmetrically widened and biseriately squamose; male aedeagus compact, with rather large orificium which is slightly moved to the left side; internal sac with two or three coiled or twisted spiniform sclerites running apicad; both left and right parameres trisetose at apex; female gonocoxites very slender and elongate, gonocoxite 2 usually with three apical or subapical nematiform seta, of which one is much longer than the others.

23 species are presently recorded from eastern and northern Australia including Tasmania.

### New records

#### *Tasmanitachoides arnhemensis* ERWIN, 1972

*Tasmanitachoides arnhemensis* ERWIN, 1972: 2. – MOORE et al. 1985: 144; BAEHR 1990: 868.

This species is distributed throughout the tropical north of Australia, but in the west and the centre it also occurs far inland in semiarid areas. Some of the newly recorded specimens were collected in such semiarid, inland areas and they again rather enlarge the recorded range of this widespread species.

**New records** (4 ex). **NT**: 18.37S 137.59E Border Waterhole, Musselbrook Ck, 15km W by S Musselbrook Mining Camp (QLD) 14 May 1995 T. Weir (ANIC); 13.45S 131.34E Butterfly Gorge Nature Pk Douglas River 19 Jul.1994 T. Weir, A. Roach (ANIC); 80 m S. Alice Springs 4/67. C. Watts (SAMA).

**Collecting circumstances.** One specimen was sampled at light. The specimen from Border Waterhole was collected together with specimens of the new species *T. elongatulus* (see below).

#### *Tasmanitachoides bicolor* BAEHR, 1990

*Tasmanitachoides bicolor* BAEHR, 1990: 881.

This species is widely distributed in north-east Queensland and was recorded from Atherton Tableland to Iron Range in mid Cape York Peninsula. The new record considerably extends the range southwards to the area west of Townsville.

**New records** (5 ex). **QLD**: Greenvale 70 km SW 17-26 Jan 96 A. J. Watts (SAMA).

**Collecting circumstances.** All specimens were sampled at light.

#### *Tasmanitachoides fitzroyi* (DARLINGTON, 1962)

*Tachys fitzroyi* DARLINGTON, 1962: 5.

*Tasmanitachoides fitzroyi*, ERWIN 1972: 5; MOORE et al. 1985: 144; BAEHR 1990: 884.

This species is distributed from mid-eastern Queensland through northern Australia to north-eastern Western Australia north of Great Sandy Desert. The new record is from within the recorded range.

**New records** (1 ex). **QLD**: Ingham 11/4.65 C.W. (SAMA).

**Collecting circumstances.** Not recorded.

#### *Tasmanitachoides katherinei* ERWIN, 1972

*Tasmanitachoides katherinei* ERWIN, 1972: 7. – MOORE et al. 1985: 145; BAEHR, 1990: 879.

This tiny species is distributed from northern New South Wales through north-eastern Queensland, northern parts of Northern Territory to north-eastern Western Australia north of Great Sandy Desert. The new records are from within the recorded range.

**New records** (5 ex). **QLD**: Cairns dist. A. M. Lea / Sp. of *Pyrrhotachys* (SAMA). – **NT**: 13.45S 131.34E Butterfly Gorge Nature Pk Douglas River 19 Jul.1994 T. Weir, A. Roach (ANIC). – **WA**: 16.31S 125.16E CALM Site 25/1 Synnot Ck. 17-20 June 1988 T. A. Weir (ANIC).

**Collecting circumstances.** The specimens from Western Australia were collected “at light open forest”.

***Tasmanitachoides murrumbidgensis* (SLOANE, 1895)**

*Tachys murrumbidgensis* SLOANE, 1895: 407.

*Tasmanitachoides murrumbidgensis*, ERWIN 1972: 5; MOORE et al. 1985: 145; BAEHR 1990: 880.

This species is distributed in eastern and southern New South Wales. The new records are from within the recorded range.

**New records** (10 ex). **NSW:** Braidwood, 19 km NW 35°18'S, 149°45'E 21 December 1991 / Tom Gush Collection (ANIC, CBM); Oberon, 31 km NW 33°30'S, 149°41'E 17 November 1991 / Tom Gush Collection (ANIC).

**Collecting circumstances.** The specimens were collected "in sand/gravel of creek bed" and "from creek bank".

***Tasmanitachoides obliquiceps* (SLOANE, 1903)**

*Tachys obliquiceps* SLOANE, 1903: 581.

*Tasmanitachoides obliquiceps*, BAEHR 1990: 878.

This rare and distinctive species is distributed in eastern Australia from northern New South Wales to northern Queensland. The new record is from within the recorded range of the species.

**New records** (1 ex). **QLD:** Greenvale 70 km SW 22-30 Nov. 95 A. J. Watts (SAMA).

**Collecting circumstances.** The single specimen was collected at light.

***Tasmanitachoides rufescens* BAEHR, 1990**

*Tasmanitachoides rufescens* BAEHR, 1990: 882.

This species is distributed in eastern New South Wales, south to the Australian Capital Territory. The new record from Gayndah extends the range to southern Queensland.

**New records** (7 ex). **NSW:** Wellington 16 km NW 32°28'S, 148°49'E 27 October 1991 / Tom Gush Collection (ANIC); Trangie Macquarie R. J. Armstrong (ANIC); Brooks Creek 17.ix.93 B. P. Moore (ANIC). – **QLD:** Gayndah A. M. Lea / J.8015 *Tachys* Queensland (SAMA).

**Collecting circumstances.** The specimen from Wellington was collected "at edge of river".

**New species**

***Tasmanitachoides flindersianus* sp. n.**

(Figs 1, 2, 4, 6)

**Holotype:** male, "S.A. Eringunda Valley. Flinders Ranges. 6th March, 1973 E. G. Matthews." (SAMA 25-033810). –

**Paratype:** 1 female, "Australia98, SA67 Brachina Gorge 25 km nnw. Wilpena 9.1.1999, M. Baehr" (CBM).

**Etymology.** The name refers to the area where the species has been found, Flinders Range in central South Australia.

**Diagnosis.** Comparatively large, dark reddish species lacking any impression at the anterior margin of the clypeus; elytra almost completely and rather deeply striate, but the 6<sup>th</sup> stria very inconspicuous and the 7<sup>th</sup> stria invisible. In body shape and colouration rather similar to *T. fitzroyi* of northern Australia, but without the distinctly impressed clypeus of that species.

**Description**

Measurements. Length: 2.75-2.8 mm; width: 1.0 mm; ratio width/length of pronotum: 1.28-1.30; ratio width of apex/width of base of pronotum: 1.19-1.21; ratio width of pronotum/width of head: 1.10-1.11; ratio length/width of elytra: 1.69-1.73.

Colour (Fig. 4). More or less dark reddish; elytra very slightly paler, apical margin and lateral margins slightly infuscate. Labrum and mandibles pale reddish, palpi, antenna, and legs reddish. Ventral surface reddish-brown.

Head (Fig. 6). Large, but slightly narrower than the pronotum. Anterior margin of clypeus not impressed. Mandibles short. Eye large, laterally fairly protruded, inconspicuously pilose, orbit very short. Clypeus bisetose, labrum six-setose. Penultimate palpomere of maxillary palpus globose, terminal palpomere very small. Antenna short, surpassing base of pronotum by about one antennomere, antennomeres decreasing in length towards apex, but even 9<sup>th</sup> and 10<sup>th</sup> antennomeres slightly longer than wide. Scapus sparsely setose, the following antennomeres more densely setose. Frontal furrows deep, rather parallel but posteriorly slightly outturned, slightly surpassing middle of eye. Surface very glossy, with scattered, rather fine punctures, microreticulation absent in middle, in the holotype present on the neck, there consisting of large, but superficial, slightly transverse meshes, in the paratype completely absent. Pilosity absent.

Pronotum (Fig. 6). Wide, much wider than long, slightly wider than the head, but considerably narrower than the elytra, markedly cordiform, widest at anterior fourth. Lateral margin convex, sinuate just in front of the rectangular or even slightly produced basal angle. Base considerably narrower than apex. Dorsal surface gently convex. Apex straight, anterior angle barely produced, base in middle produced, laterally deeply excised. Apex and base not margined, lateral margin narrow, lateral channel very narrow. Median line barely indicated. No anterior transverse sulcus visible, transverse basal sulcus deeply impressed, laterally coarsely punctate, in middle with a large and deep puncture. Disk glossy, with rather sparse and moderately fine punctures, without microreticulation. Anterior marginal seta situated at apical fourth, posterior seta at basal angle.

Elytra (Fig. 4). Moderately narrow and elongate, laterally very little convex, widest slightly behind middle, surface depressed. Five median striae rather deeply impressed, almost complete except 3<sup>rd</sup> and 4<sup>th</sup> striae which are reduced basad of their fusion at the anterior discal puncture. 6<sup>th</sup> stria extremely inconspicuous. 5<sup>th</sup> stria near humerus more deeply impressed and there bent outwards to meet the humerus which therefore is slightly dentate. 3<sup>rd</sup> and 4<sup>th</sup> striae united at anterior discal puncture, less distinctly united at the median puncture. Recurrent stria very short. Striae more or less distinctly punctate, but slightly irregular at bottom, therefore median intervals slightly notched at their the lateral margins. Four median intervals very slightly raised. Discal pores almost foveiform, situated at lateral margin of 3<sup>rd</sup> stria. Discal setae elongate when present. Umbilical punctures reduced to four behind humerus, two in middle, and one each outside and inside the deeply impressed submarginal sulcus that forms the apical part of 7<sup>th</sup> stria, punctures rather foveiform. Margin behind humerus faintly serrate and extremely inconspicuously pilose, posteriad apparently impilose. Surface very glossy, intervals with an irregular row of moderately fine punctures, with sparse, extremely short, erect pilosity which is even barely visible at very high magnification (> 100 x) and from laterally, microreticulation absent.

Ventral surface. Metepisternum elongate, c. 2 x as long as wide at anterior margin. Prosternum and abdomen with sparse, short pilosity which is slightly more conspicuous at the terminal abdominal sternum. Abdominal sternum VII in the male bisetose, in the female quadrisetose.

Legs. Anterior tibia distinctly oblique at outer edge. Two basal tarsomeres of male protarsus asymmetrically widened and biserially squamose.

Male genitalia (Fig. 2). Genital ring narrow, narrowed to apex, slightly asymmetric. Aedeagus moderately elongate, lower surface in middle fairly convex, apex short (in genus), slightly curved down, fairly acute. Internal sac in apical half with two twisted sclerotized rods and with some folds. Both parameres triangular and with three elongate apical setae.

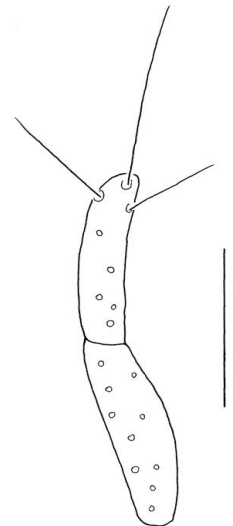
Female gonocoxite (Fig. 1). Both gonocoxites very slender and elongate. Gonocoxite 1 almost straight, asetose at apical margin. Gonocoxite 2 straight, with a very elongate seta right at the apex, and one slightly shorter nematiform seta each at the internal and external margins near the apex.

Variation. Very little variation noted.

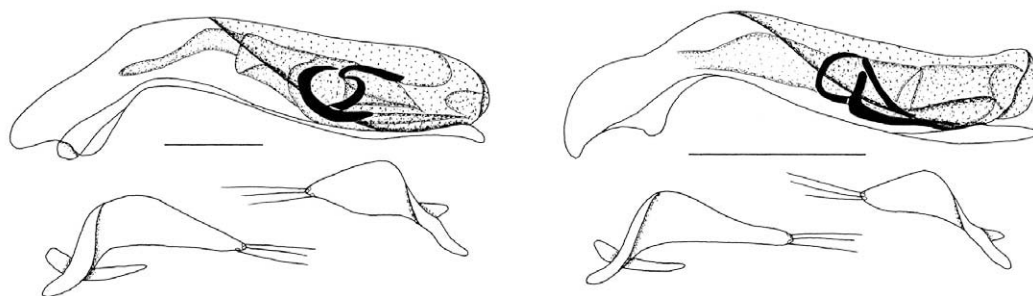
**Distribution.** Flinders Range, central South Australia.

**Biology.** Largely unrecorded; the paratype was collected at light in Brachina Gorge close to the creek that flows through the gorge.

**Relationships.** Although in body shape and colouration rather similar to the northern *T. firtzroyi* DARLINGTON, probably not closely related to that species, nor to anyone of the Australian *Tasmanitachoides*.



**Fig. 1.** *Tasmanitachoides flindersianus* sp. n. Gonocoxites 1 and 2. Scale bar: 0.1 mm.



**Figs 2, 3.** Male genitalia: aedeagus, left side, parameres. Scale bar: 0.1 mm.  
**2** (left): *Tasmanitachoides flindersianus* sp. n. **3** (right): *Tasmanitachoides elongatulus* sp. n.

### *Tasmanitachoides elongatulus* sp. n.

(Figs 3, 5, 7)

**Holotype:** male, "18.37S 137.59E GPS Border Waterhole, Musselbrook Ck 15km W by S Musselbrook Mining Camp(QLD)NT 14 May 1995 T. Weir / at light" (ANIC). – **Paratype:** 1 male, same data (CBM).

**Etymology.** The name refers to the narrow and elongate elytra and the very small body size of this species.

**Diagnosis.** Small, light coloured species bearing a very weak, barely perceptible impression at the anterior margin of the clypeus; pronotum laterally with elongate sinuation; elytra narrow and elongate, parallel-sided, distinctly though superficially striate, but the 6<sup>th</sup> and 7<sup>th</sup> striae very inconspicuous. In body shape and colouration rather similar to *T. katherinei* ERWIN, *T. gerdi* BAEHR, and *T. comes* BAEHR of northern Australia, but with faintly impressed clypeus and with longer and more parallel-sided elytra.

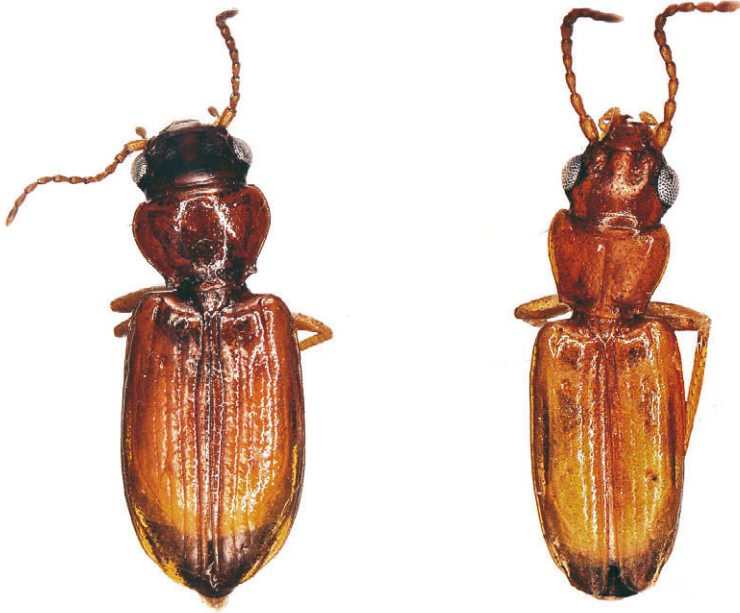
#### **Description**

**Measurements.** Length: 1.68-1.75 mm; width: 0.53-0.55 mm; ratio width/length of pronotum: 1.24-1.26; ratio width of apex/width of base of pronotum: 1.18-1.24; ratio width of pronotum/width of head: 1.0-1.01; ratio length/width of elytra: 1.81-1.82.

**Colour** (Fig. 5). Head and pronotum dirty yellow to pale reddish; elytra yellow. Mouth parts, antenna, and legs pale yellow. Ventral surface pale reddish, lateral parts of abdomen slightly lighter.

**Head** (Fig. 7). Large, about as wide as the pronotum. Anterior margin of clypeus very faintly, barely perceptibly impressed. Mandibles short. Eye large, laterally fairly protruded, inconspicuously pilose, orbit very short. Clypeus bisetose, labrum six-setose. Penultimate palpomere of maxillary palpus globose, terminal palpomere very small. Antenna short, surpassing base of pronotum by about one antennomere, antennomeres decreasing in length towards apex, but even 9<sup>th</sup> and 10<sup>th</sup> antennomeres slightly longer than wide. Scapus sparsely setose, the following antennomeres more densely setose. Frontal furrows deep, parallel but posteriad slightly outturned, attaining middle of eye. Surface very glossy, with scattered, coarse punctures, microreticulation almost absent in middle, present though still superficial on neck, there consisting of large, slightly transverse meshes. pilosity virtually not visible.

**Pronotum** (Fig. 7). Moderately wide, wider than long, considerably narrower than the elytra, markedly cordiform, widest at anterior fifth. Lateral margins anteriorly convex, in basal third faintly sinuate, pronotum considerably narrowed to base. Dorsal surface rather depressed. Apex almost straight, anterior angle barely produced, base in middle much produced, laterally deeply excised. Basal angle rectangular, acute, even extremely slightly produced laterad. Apex and base not margined, lateral margin extremely narrow, no lateral channel developed. Median line barely indicated. No anterior transverse sulcus visible, basal transverse sulcus deeply impressed, laterally coarsely punctate, in middle with a large and deep puncture. Disk glossy, with sparse, very coarse punctures, here and there with extremely superficial traces of irregularly transverse microreticulation that is only recognizable at very high magnification. Anterior marginal seta situated at apical fifth, posterior seta at basal angle.



**Figs 4, 5.** Habitus (body length in brackets).

**4** (left): *Tasmanitachoides flindersianus* sp. n. (2.8 mm). **5** (right): *Tasmanitachoides elongatulus* sp. n. (1.75 mm).



**Figs 6, 7.** Head and pronotum.

**6** (left): *Tasmanitachoides flindersianus* sp. n., **7** (right): *T. elongatulus* sp. n.

Elytra (Fig. 5). Narrow and elongate, lateral margins parallel-sided, widest slightly in front of middle, surface depressed. Four median striae perceptibly impressed, but 4<sup>th</sup> stria reduced basad of the anterior discal puncture. Lateral striae increasingly indistinct and much interrupted. 5<sup>th</sup> stria impressed only near humerus and there bent outwards to meet the humerus which therefore is slightly dentate, 5<sup>th</sup> stria becoming indistinct shortly behind humerus. 3<sup>rd</sup> and 4<sup>th</sup> striae united at anterior and median setiferous punctures. Recurrent stria very short. Median striae not distinctly punctate, but slightly irregular at bottom, therefore median intervals slightly notched at their lateral margins. Three median intervals very slightly raised. Discal pores large,

almost foveiform, situated at lateral margin of 3<sup>rd</sup> stria. Discal setae elongate when still present. Umbilical punctures reduced to four behind humerus, two in middle, and one each outside and inside the deeply impressed submarginal sulcus that forms the apical part of 7<sup>th</sup> stria, punctures rather foveiform. Margin of elytra sparsely and very shortly pilose. Surface very glossy, intervals with an irregular row of rather coarse punctures, with sparse, extremely short, erect pilosity which is only visible at very high magnification (> 100 x) and from laterally, microreticulation not perceptible.

Ventral surface. Metepisternum elongate, c. 2.2 x as long as wide at anterior margin. Prosternum and abdomen with sparse, fairly elongate pilosity. Male abdominal sternum VII bisetose.

Legs. Anterior tibia very slightly oblique at outer edge. Two basal tarsomeres of male protarsus asymmetrically widened and biseriately squamose.

Male genitalia (Fig. 3). Genital ring narrow, narrowed to apex, slightly asymmetric. Aedeagus rather elongate, lower surface slightly convex throughout, apex moderately short (in genus), fairly acute. Internal sac in apical half with three slightly curved sclerotized rods and with some folds. Both parameres triangular and with three elongate apical setae.

Female genitalia. Unknown.

Variation. Very little variation noted.

**Distribution.** North-eastern Northern Territory, immediately at the Queensland border. Known only from the type locality.

**Biology.** Largely unrecorded; both specimens sampled at light.

**Relationships.** According to body size and shape related to the three species of the *T. katherinei* lineage, namely *T. katherinei* ERWIN, 1972, *T. gerdi* BAEHR, 2010, and *T. comes* BAEHR, 2010, but probably most closely related to *T. comes*.

### Recognition

For identification of both new species couplet 19. in the key in BAEHR (2010) is easily reached. This couplet must be changed as following:

19. Body elongate, depressed, size very small, 1.5-1.7 mm; colour testaceous to pale reddish. n.NT, n.WA, n.QLD, ne.NSW . . . . . 20.
- Body more convex, size larger, 1.7-2.6 mm; colour dark reddish to black, or reddish with distinctly paler elytra . . . . . 22.

For identification of *T. flindersianus* follow on to couplet 25. which must be changed as following:

25. Elytral stria 5 distinct even in apical half; pronotum and elytra more depressed. TAS, SA, e.VIC, ne.NSW . . . . . 26.
- Elytral stria 5 abruptly ended behind basal third; pronotum and elytra markedly convex. ne.QLD. . . . . *hackeri* BAEHR, 2008
26. Elytral striae well impressed throughout . . . . . 27.
- Elytral striae, especially striae 3 and 4, superficial. e.VIC, s.NSW. . . . . *wattsensis* (BLACKBURN, 1901)
27. Colour uniformly dark piceous to almost black; antenna completely dark. TAS . . . . . *hobarti* (BLACKBURN, 1901)
- Colour reddish or piceous, disk of elytra lighter; at least the basal antennomeres reddish . . . . . 28.



28. Body size larger, length >2.75 mm; colour generally paler, head and pronotum reddish, elytra pale reddish to dirty yellow (Fig. 4); pronotum with deeper prebasal sinuosity, basal angles rectangular and acute (Fig. 6); aedeagus with two curved sclerites in the internal sac (Fig. 2). c. SA . . . . . *flindersianus* sp. n.
- Body size smaller, length <2.6 mm; colour generally darker, head and pronotum more or less dark piceous, elytra reddish; pronotum with shallower prebasal sinuosity, basal angles not rectangular (c. 100°) and less acute (see fig. 2 in BAEHR 1990); aedeagus unknown. ne.NSW . . . . . *leai* (SLOANE, 1896)

For identification of *T. elongatulus* follow on to couplet 20. which must be changed as following:

20. Whole dorsal surface with distinct isodiametric microreticulation; elytra generally shorter, ratio length/width of elytra <1.65. n.NT, n.WA, n.QLD, ne.NSW . . . . . *katherinei* ERWIN, 1972
- Dorsal surface at most with indistinct, superficial microreticulation, in particular elytra barely microreticulate; elytra generally longer, ratio length/width >1.70. n.WA, n.QLD . . . . . 21.
21. Frontal furrows attaining but the anterior third of the eyes, ended abruptly; pronotum wider, ratio width/length 1.33, barely sinuate in front of the basal angle, with wider base compared with apex, ratio width of apex/width of base 1.10; aedeagus with two sclerotized rods in the internal sac (see fig. 6 in BAEHR 2010). ne.QLD . . . . . *gerdi* BAEHR, 2010
- Frontal furrows attaining mid-level of the eyes, ended less abruptly (Fig.7); pronotum narrower, ratio width/length <1.26, slightly but perceptibly sinuate in front of basal angles, with narrower base compared with apex, ratio width of apex/width of base >1.18 (Fig. 7); aedeagus either with three sclerotized rods in the internal sac (Fig. 3), or unknown. nw. QLD/ne NT, ne.WA . . . . . 21a.
- 21a. Colour darker, head and pronotum dark reddish to reddish-piceous, elytra reddish (see fig. 4 in BAEHR 2010); elytra shorter, ratio length/width 1.76, 2<sup>nd</sup> and 3<sup>rd</sup> striae less impressed than 1<sup>st</sup> and 4<sup>th</sup> striae; aedeagus unknown. ne. WA . . . . . *comes* BAEHR, 2010
- Colour paler, head and pronotum pale reddish, elytra pale yellow (Fig. 5); elytra longer, ratio length/width >1.81, 2<sup>nd</sup> and 3<sup>rd</sup> striae as deeply impressed as 1<sup>st</sup> and 4<sup>th</sup> striae; aedeagus as in fig. 3. nw. QLD/ne NT . . . . . *elongatulus* sp. n.

### Remarks

The two new species described in the present paper, as well as those described and recorded in some recent publications, demonstrate the still restricted knowledge that we possess about species inventory and distribution of these tiny beetles which are characteristic inhabitants of the banks of a great variety of watercourses in eastern and northern Australia. Not only additional collecting efforts, but even revision of material already present in collections, can bring to light additional species. Unfortunately most specimens in collections have been sampled at light and thus, their exact habitats commonly are doubtful. This is unfortunate, because knowledge of the larvae of additional species from different species groups would be welcome for further examination of the relationships of the genus and for the final decision of the genus' position within or at the base of the carabid supertribe Trechitae.

The new species belong to two different species-groups within the genus: *T. flindersianus* belongs to a group of mostly southerly distributed, comparatively large species which are characterized by the complete absence of an impression at the apical margin of the clypeus. *T. elongatulus* belongs to a group of tiny, elongate, depressed, light coloured species which are characteristic for watercourses throughout northern tropical Australia. Within their groups both species fill a gap in the distribution of their respective groups: *T. elongatulus* at the border of northern inland Northern Territory and Queensland, and *T. flindersianus* in

central South Australia. *T. flindersianus* also is the first species of *Tasmanitachoides* recorded from South Australia, and its occurrence in the semiarid Flinders Range is untypical for its group, because the other species usually inhabit montane environments in rather wet south-eastern Australia and in Tasmania.

Three of the four specimens of both new species, and most of those already described species of which sampling records are available, were sampled at light; hence their actual habits remain unknown. However, the paratype specimen of *T. flindersianus* was sampled in a gorge which at the sampling locality bears a small river or large creek with a bank that is composed of sand intermixed with pebbles of various sizes. Such habitats may be typical for most species of *Tasmanitachoides*, and a photo of such habitat was figured in a recent paper on a species from New South Wales (BAEHR 2008b).

## References

- BAEHR, M. 1990: Revision of the Australian ground-beetle Genus *Tasmanitachoides* ERWIN (Insecta: Coleoptera: Carabidae: Bembidiinae), with special regard to the tropical species. – Invertebrate Taxonomy **4**: 867-894.
- BAEHR, M. 2001: *Tasmanitachoides* ERWIN *glabellus* n. sp. from North Queensland, Australia with a note on *Tasmanitachoides lutus* (DARLINGTON) (Insecta, Coleoptera, Carabidae, Bembidiinae). – Animal Biodiversity and Conservation **24**:1-7.
- BAEHR, M. 2008a: Two new species of the genus *Tasmanitachoides* ERWIN from North Queensland, Australia (Insecta, Coleoptera, Carabidae, Bembidiinae). – Annals of the Carnegie Museum **77**: 13-19.
- BAEHR, M. 2008b: A new species of the tachyine genus *Tasmanitachoides* ERWIN from northern New South Wales, Australia (Coleoptera, Carabidae, Bembidiinae, Tachyini). – Mitteilungen der Münchner Entomologischen Gesellschaft **98**: 121-126.
- BAEHR, M. 2009: A new species of the tachyine genus *Tasmanitachoides* ERWIN from the Kimberley Division, Western Australia (Insecta, Coleoptera, Carabidae, Bembidiinae, Tachyini). – Records of the Western Australian Museum **25**: 159-164.
- BAEHR, M. 2010: Two new species of the genus *Tasmanitachoides* ERWIN, 1972 from northern Australia (Coleoptera, Carabidae, Trechitae). – Entomologische Blätter **106**: 25-39.
- DARLINGTON, P. J. Jr. 1962: Australian Carabid beetles XI. Some *Tachys*. – Psyche, Cambridge **69**: 117-128.
- ERWIN, T. L. 1972: Two new genera of Bembidiine Carabid beetles from Australia and South America with notes on their phylogenetic and zoogeographic significance (Coleoptera). – Breviora of the Museum of Comparative Zoology **383**:1-19.
- GREBENNIKOV, V. V. 2008: *Tasmanitachoides* belongs to Trechini (Coleoptera: Carabidae): discovery of the larva, its phylogenetic implications and revised key to Trechitae genera. – Invertebrate Systematics **22**: 479-488.
- MOORE, B. P., T. A. WEIR & J. E. PYKE 1987: Rhysodidae and Carabidae. In: Zoological Catalogue of Australia **4**: 17-320. – Australian Government Publishing Service, Canberra.

### Address of author:

Dr. Martin BAEHR  
 Zoologische Staatssammlung  
 Münchhausenstr. 21  
 D-81247 München  
 Germany  
 martin.baehr@zsm.mwn.de

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Mitteilungen der Münchner Entomologischen Gesellschaft](#)

Jahr/Year: 2013

Band/Volume: [103](#)

Autor(en)/Author(s): Baehr Martin

Artikel/Article: [New species and new records of the genus \*Tasmanitachoides\* ERWIN from Australia \(Insecta, Coleoptera, Carabidae, Trechitae\) 85-94](#)