

# Four new species of the genus *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini) from Papua and Sulawesi

Gerrit Withaar

Meidoornstraat 20, 9501 VZ Stadskanaal, The Netherlands.

E-mail: g.withaar@hetnet.nl

Suara Serangga Papua 7(3): 72 - 81

*Abstract:* Four species, new to science, of the genus *Tmesisternus* Latreille, 1829 are described. Two species, *Tmesisternus wasiorenensis* and *T. mokwamensis*, originate from Papua, Indonesia, two other species, *Tmesisternus glabrum* and *T. sexcostatus* are from Sulawesi, Indonesia.

*Rangkuman:* Empat spesies yang baru untuk ilmu pengetahuan, dari genus *Tmesisternus* Latreille, 1829 dipertelakan. Dua spesies, *Tmesisternus wasiorenensis* dan *T. mokwamensis*, berasal dari Papua, Indonesia, dan kedua lainnya, *T. glabrum* dan *T. sexcostatus* dari Sulawesi, Indonesia.

*Key-words:* Cerambycidae, Laminae, Tmesisternini.

## Introduction

The publication of „Systematics and biogeography of the longicorn beetle tribe Tmesisternini Gressitt 1984 with 99 new species described was a remarkable step in the study of this large genus. After that, more publications followed: Weigel, 2003 (2 new species), 2006 (3 new species), 2008 (2 new species), 2010 (1 new species) and Withaar, 2009 (6 new species), 2011 (4 new species). It is to be expected that more new species will be found after more study. Especially the Indonesian islands form a rich source for more inquiry.

In this case examination in various museum collections was the way to find one new species, collected in Papua, and another one was collected by the author in Papua: Birdshead Peninsula, Mokwam (Arfak Mountains) and two new species were found in the collection of Mr. Jim Cope in Arizona which are originating from Sulawesi.

## Depositories

The abbreviations given below have been used throughout the text.

AWW - Private Collection Andreas Weigel, Wernburg, Germany

- CCS - Private Collection Jim Cope, Sacramento, U.S.A.  
NBC - Naturalis Biodiversity Center, Leiden, The Netherlands  
NBC-ZMAN - as above (in former collection Zoölogisch Museum Amsterdam)  
ZMHB - Museum für Naturkunde der Humboldt Universität, Berlin, Germany.

## Descriptions

### *Tmesisternus wasiorensis* spec. nov.

(Figs 1, 5)

**Material:** Holotype ♂: Indonesia: Papua; Nabire, Geelvink bay, 2-9.vii-1962, NBC-ZMAN. Paratype ♀: Wandammen, Wasior, vii-1928, ZMHB.

### Diagnosis:

This species looks like *T. obsoletus* in the *bruyni* group, but the elytra apex of *T. wasiorensis* is not truncated and has no longitudinal pattern and the groove on the front of the head is straight and not with an elliptical depression like in *T. obsoletus*.

### Description:

**Head:** Pitchy brown, the cheeks, with short grey pubescens and on the dorsal side completely covered with longer yellow pubescens except a small area behind the upper eye lobes and a central deep grooved ridge, with an elliptical depression, from labrum to the base. Lateral ridges not visible.

**Antenna:** Pitchy brown, not complete in both specimens, but judged from the first 9 segments of the paratype it must have been about as long as reaching the apex of the elytra. Completely short grey tomentated and fringed beneath.

**Pronotum:** Pitchy brown, scattered punctated and dorsal side completely covered with scattered yellow pubescens. Widest at base and tapering forward. Sides laterally from base bending inwards to the middle, there forming a ridge with a blunt tubercle at about one third from the top. On a second, lower position, a sharp pointed tubercle visible from above, about one third from base, in a lateral longitudinal area with dark brown pubescens.

**Scutellum:** Pitchy brown, rounded distally, pointed caudally and completely covered with fine yellow pubescens.

**Elytra:** Pitchy brown, gradually narrowing to the apically spined apex. Completely punctated and covered with very fine grey pubescens except for a postscutellar area. Yellow pubescens pattern as follows: On both sides from the shoulders bending to the epipleura at one third of the elytra from base, a second one originating next to the shoulders bending inwards to the smooth postscutellar

area and from there splitting up in one oblique fascia running to the sides halfway the elytra, the other fascia running along the post scutellar area to the suture, continuing along the suture and post medially bending oblique to the lateral sides at about one fourth from the apex. In the so embraced areas some scattered small yellow dots. At least two fascia are running from the suture and oblique zigzagging at about one eighth from apex to the sides.

**Legs:** Femora pitchy brown, at base red. Tibia and tarsi red brown. All completely covered with fine grey pubescens.

**Ventrally:** Completely covered with whitish pubescens with brown dots, except for a small triangular smooth area on each abdominal segment.

**Size:** length 15 mm; width 4 mm.

**Female:** Somewhat larger and the pattern on the elytra is less pronounced.

**Etymology:** This species is named after the village Wasior where the paratype was found.

### ***Tmesisternus mokwamensis* spec. nov.**

(Figs 2, 6)

**Material:** Holotype ♂: Indonesia: Papua: Birdshead; Arfak mnts. Mokwam, 1400-1800 m 27-7-2007, leg. Withaar, NBC-ZMAN. Paratypes (1 ♂, 1 ♀): ♀, same data as holotype, NBC-ZMAN; ♂, Indonesia: Papua: Birdshead, W. of Ransiki, 1440 m. 3-3-2007, AWW.

### **Diagnosis:**

Most related group for this species is the timorlautensis group especially related to *T. brandti*. But *T. mokwamensis* lacks the yellow tomented dots on front and vertex and the pattern of the pubescens on the elytra is in this species speckled and the groove on front of the head in *T. mokwamensis* has no elliptical depression as in *T. timorlautensis*.

### **Description:**

**Head:** Black, completely covered with scattered grey pubescens except for two ridges in the middle with a deep groove from base to labrum, lateral ridges and a small area behind the upper eye lobe. The two ridges are not touching each other and are on the vertex more flattened. The lateral ridges are starting at the antennal insertions, bending to the middle of the labrum but not reaching it.

**Antenna:** Dark brown, eleven segments, completely covered with grey pubescence. Segment 3 longer than 4.

**Pronotum:** Black, completely covered with scattered grey pubescens and deep punctures except for a longitudinal, in the middle widened, small, smooth area. The slightly excavated

ridges with a large blunt tubercle next to the front. Visible from above, on a lower level, a second pointed tubercle is present. The pronotum at base much smaller than elytra base and caudally tapering. Completely covered with deep punctures. **Scutellum:** Black with grey pubescens. Rounded at base and pointed at front. Elytra: Black, gradually narrowing to the truncated apex with a very fine lateral tubercle.

Completely punctated, in the first half deeper and sometimes in rows. Five weak, smooth, longitudinal costae, including the sutural ones, situated as shown in fig. 1. The elytra completely covered with scattered dark golden pubescence which is speckled with small, golden, more intensively tomented spots, except the mentioned costae. Before the apex two obscure transverse oblique lines from suture to the sides, which are hardly visible.

**Legs:** Femora and tibia with flat contiguous grey pubescens with black spots. At the end of the tibia with stiff yellow hairs. Tarsi red brown, also with grey pubescens.

**Ventrally:** Dark brown, a small smooth central area and lateral sides covered with grey and golden pubescens with small brown spots.

**Size:** length 16 mm; width 5 mm.

**Female:** Similar as male.

**Etymology:** This species is named after the village Mokwam, Arfak Mountains, Papua Barat, Indonesia, where the holotype was found.

**Variation:** The paratype in collection AWW, found in the Birdshhead Peninsula near Ransiki, has a short post humeral golden line, starting at the lateral side behind the shoulder bending to the middle of the elytra to one quarter on each elytron. The oblique lines in front of the apex of the elytra are in this specimen more pronounced.

### ***Tmesisternus glabrum spec. nov.***

(Figs 3, 7)

**Material:** Holotype ♀: Indonesia: Sulawesi; Pulu Pulu, 11-10-1996, NCB. Paratypes (4 ♀♀): 1 ♀ with same data as HT, NCB; 1 ♀, Indonesia: Sulawesi; Pulu Pulu, 13-10-1996, CCS; 1 ♀, idem, but 4-1997, CCS; 1 ♀, idem, but 12-11-2000, CCS.

### **Diagnosis:**

Judged from the shape of the pronotum this species belongs to the *venatus* group which occurs on the same island group Flores, Djampea and Kalidupa. However, those species are completely covered with pubescens, while *T. glabrum* is completely smooth.

### **Description:**

**Head:** Glossy, red brown with a very fine black lined groove in the middle, on vertex in a deep groove, black eyes. A raised lumpy area starts from each antennal

insertion, oblique, bending to the front and there reuniting at the labrum. Very scattered some large punctures. Only scarce with white pubescens under the lower eye lobe.

**Antenna:** Glossy, red brown, eleven segments not reaching the elytral apex. Very delicate punctated. With fine white pubescens, except for the first three and a half segments.

**Pronotum:** Glossy, red brown, broader than the head and a little smaller than the elytra. The lateral ridge is serrated with about ten teeth, rounded at the front apex and at the basal apex a blunt tubercle. A sharper pointed tubercle is placed in a white tomented area on a lower level laterally under the pronotum ridge, not visible from above. The front boarder is fringed with fine, short, stiff, white hairs. Shape of the pronotum at the front a little narrower than at base. In the middle (one third of the complete pronotum) a wide smooth longitudinal area bordered by narrow, with white pubescens, depressions, followed by a small raised, punctated area and at least the broader lateral sides covered with diffuse transverse striations.

**Scutellum:** Glossy, red brown, the apical sides rounded and the front side straight. The lateral sides with white pubescens.

**Elytra:** Glossy, red brown, parallel sided, tapering in the last third of the elytra and rounded apically. Diffuse fine punctated except for the shoulders and elytra base, a postscutellar area, sutural ridges and a flat ridge on the last half of the elytra next to the sutur. Only with white pubescens on two small lines along both sides of the sutural ridges, starting behind the smooth postscutellar area to the apex, and the sides including epipleura.

**Legs:** Dark brown to chestnut brown, knees black. Covered with fine grey pubescens and half the tibia and tarsi with stiff yellow hairs.

**Ventrally:** Chestnut brown, a smooth middle area and laterally covered with brown spotted white pubescens.

**Size:** length 21 mm; width 6 mm.

**Male:** Until now unknown.

**Etymology:** "*glabrum*" is a Latin adjective in apposition, meaning glabrous, according to the very glabrous habitus.

### ***Tmesisternus sexcostatus spec. nov.***

(Figs 4, 8)

**Material:** **Holotype** ♂: Indonesia: Sulawesi; Pulu Pulu 29-1-1996, NBC-ZMAN. Paratype (1 ♂), Indonesia, Sulawesi; Pulu Pulu, 13-10-1997, CCS.

**Diagnosis:**

*T. sexcostatus* is similar to *T. costatus* also from Sulawesi, but *T. costatus* has three costae on each elytron while *T. sexcostatus* has six such costae and *T. costatus* has the depressed areas on the elytra not tomented.

**Description:**

**Head:** Glabrous, coloured chestnut red with black eyes. A weak black lined groove in the middle of front and vertex. In the centre of the front a depression with some deeper punctures. A lumpy area from antennal insertions oblique to the middle of the front. In front of the antennal insertions an area with very fine punctures and also on the vertex fine punctures.

**Antenna:** Glabrous and red, eleven segments, as long as about three quarters of the elytra. With very fine grey pubescens and some stiff bristles on the ventral side.

**Pronotum:** Red colored, more than twice as broad as long and a little broader than elytra base. Laterally rounded, serrated with about 25 small teeth and tapering to the front. A wide depressed central area, almost glabrous, with much small depressions and punctures. From that central depression to the lateral sides delicate granulated, some times transverse striated.

**Scutellum:** Chestnut red, depressed in the middle, rounded distally and straight on the front. With yellow pubescens on the sides.

**Elytra:** Chestnut red, five times as long as the pronotum, gradually tapering to the rounded apex. Shoulders with one big granule. Six wide glabrous costae including the sutural one, none reaching the apex and between them depressed rows of golden pubescens. Entirely covered with scattered punctures.

**Legs:** Chestnut red. Femora glabrous and very fine punctated with some stiff hairs. Tibia, with stiff yellow hairs on the end, and tarsi completely with stiff yellow hairs.

**Ventrally:** Chestnut brown, in the middle a glabrous area and lateral sides with golden pubescens.

**Size:** length 26 mm; width 8 mm.

**Female:** Until now unknown.

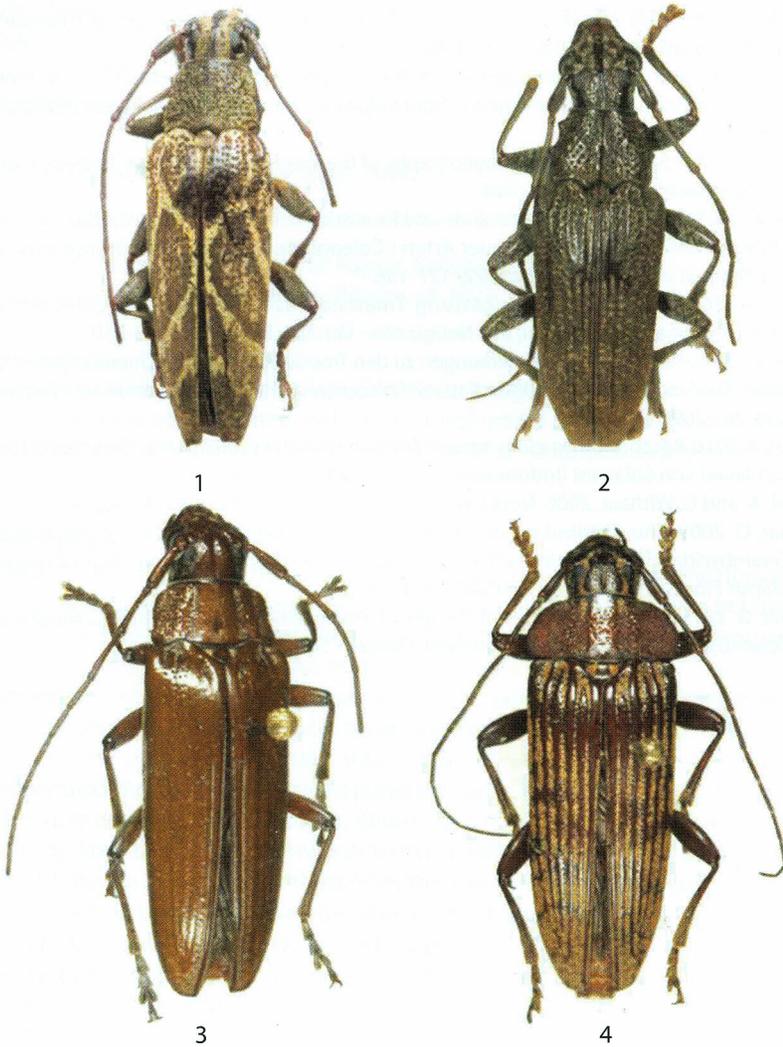
**Etymology:** *Tmesisternus sexcostatus* is named after the six costae on each elytron.

**Acknowledgments**

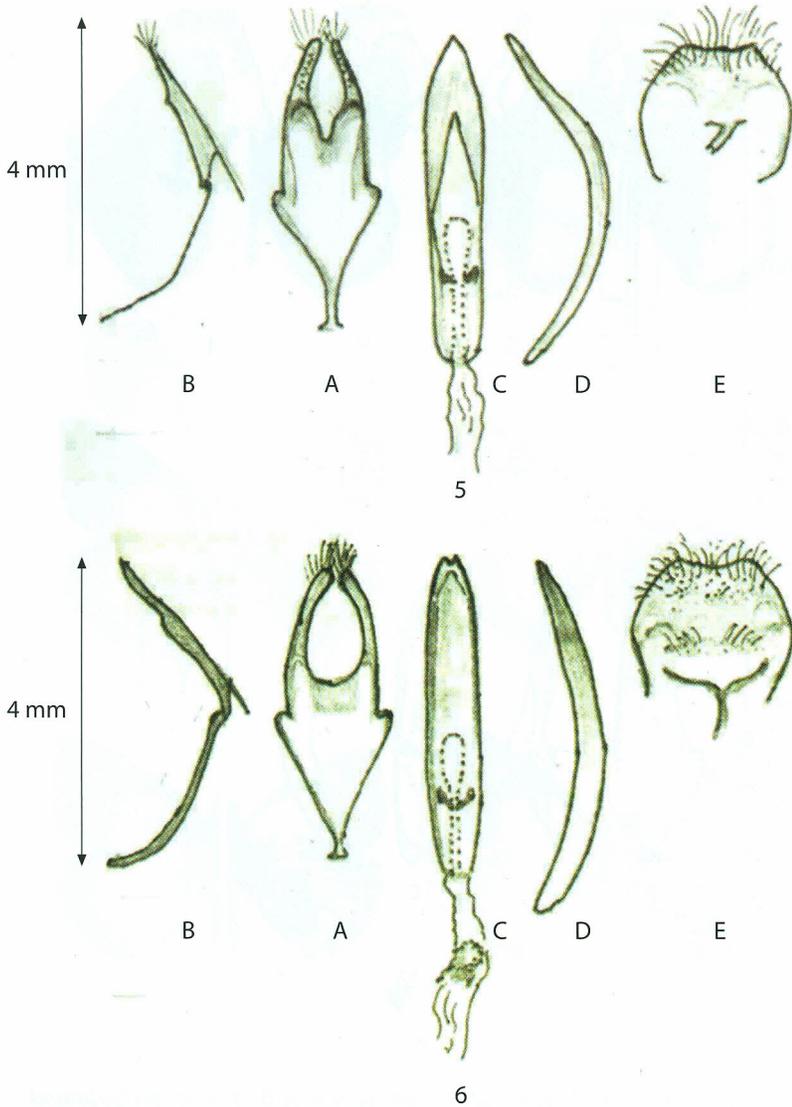
For the opportunity to visit the museums and study the collections I want to thank Mr Ben Brugge NBC-ZMAN in Leiden and Mr J. Frisch from ZMHB in Berlin. For corrections in my paper I will thank Mr Rob de Vos from NBC and Mr Henk van Mastrigt from KEP.

## References

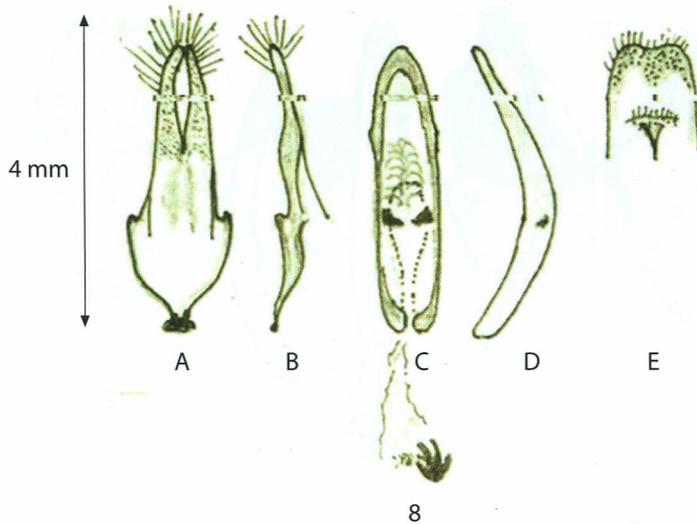
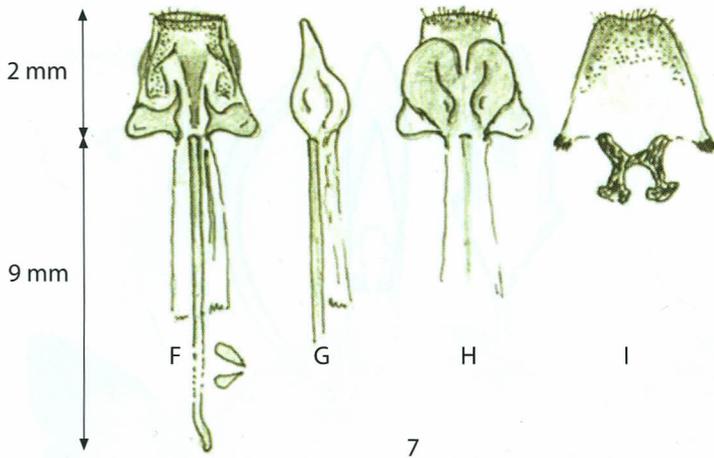
- Breuning, S. von. 1945. Études sur les lamiaires. Quartorzième tribu: Tmesisternini Thomson-Novit. Entoml. 15-16. Suppl. 3: 537-608.
- Breuning 1945 and *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini) with the description of a new genus from Sulawesi - Journal of the Zool. Soc. Wallacea 2: 67-71.
- Gressitt, J.L. 1984. Systematics and Biogeography of the longicorn beetle tribe Tmesisternini. Pacific Insects Monogr. 41: 1-260.
- Weigel, A. 2003. Zur Taxonomie, Synonymie und Faunistik der Gattung *Tmesisternus* Latreille 1829 mit beschreibung zwei neuer Arten ( Coleoptera: Cerambycidae, Tmesisternini) aus Neuguinea - Ver. Nat. Erfurt (22):127-136.
- Weigel, A. 2006. Neue Arten der gattung *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini) aus Neuguinea - Ver. Nat. Erfurt (25): 223-230.
- Weigel, A. 2008. Taxonomische Bemerkungen zu den Tmesisternini mit Beschreibungen zwei neuer Taxa von der Insel Biak (West Papua) (Coleoptera: Cerambycidae, Lamiinae) - Vernate (27): 263-269.
- Weigel, A. 2010 Beschreibung einer neuen *Tmesisternus*-Art (Coleoptera: Cerambycidae, Lamiinae) von Sulawesi (Indonesien) - Vernate (29): 201-204.
- Weigel, A. and G. Withaar. 2006. Notes on taxonomy of the genera *Tmesisternopsis*.
- Withaar, G. 2009. The distribution of the genus *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini) with the description of six new species from the Indonesian Islands Flores and Sulawesi - SUGAPA 3 (3): 14-27.
- Withaar, G. 2011. Four new species of the genus *Tmesisternus* Latreille, 1829 (Coleoptera: Cerambycidae, Tmesisternini) from New Guinea - SUGAPA 6 (1): 1-10.



**Figs 1-4.** Holotypes *Tmesisternus*: 1. *T. wasiorensis*; 2. *T. mokwamensis*; 3. *T. glabrum*; 4. *T. sexcostatus*.



**Fig. 5-6.** Male genitalia: 5. *T. wasiorenensis*; 6. *T. mokwamensis* (A= ventral side paramere; B= lateral side of that paramere; C= ventral side of aedeagus; D= lateral side of that aedeagus; E= 8e tergite ventral).



**Fig. 7.** Female genitalia of *T. glabrum* (F= 8e sternite with ovipositor; G= lateral side of that sternite; H= dorsal side of that sternite; I= ventral side 8e tergite);  
**Fig. 8.** Male genitalia of *T. sexcostatus* (A= ventral side paramere; B= lateral side of that paramere; C= ventral side of aedeagus; D= lateral side of that aedeagus; E= 8e tergite ventral).