

***Palorus ruthmuellerae* sp. n. from Zimbabwe,  
with distributional data of other African species of *Palorus*  
(Coleoptera: Tenebrionidae: Palorini)**

**Roland GRIMM & Wolfgang SCHAWALLER<sup>1</sup>**

**Abstract**

*Palorus ruthmuellerae* sp. n. (Tenebrionidae: Palorini) from Zimbabwe is described and illustrated. This species possesses specific structures on surface of head and pronotum, which are unknown in all other congeners. It was collected under bark of trees in a native forest and seems to have a small distributional area. Distributional data of other African species of *Palorus* are added.

**Introduction**

MATTHEWS (2003a, 2003b) erected the tenebrionid subfamily Palorinae and MATTHEWS & LAWRENCE (2005) downgraded this taxon to tribal rank. This tribe Palorini Matthews, 2003 includes eleven recent genera widespread in the Old World (MATTHEWS 2003b, MASUMOTO & GRIMM 2004). The New World houses only introduced synanthropic taxa. The largest genus *Palorus* MULSANT, 1854 was revised by HALSTEAD (1967a). This revision includes all previous references, several figures, a species key, and distributional data. An additional species from Africa was subsequently described by HALSTEAD (1977) and GRIMM (2016) added a new species from Borneo. Since that time, 39 recent species of *Palorus* were known, 14 (without synanthropic ones) of them living in Africa under bark of trees, and no further species were described. So it is quite surprising, that Ruth MÜLLER (Pretoria) collected recently an additional species new to science in Zimbabwe, which is described in the present paper. This species possesses specific structures on head and pronotum, which are unknown in all other congeners. These derived structures are also not developed in known fossils of Palorini from Eocene Baltic amber (ALEKSEEV & NABOZHENKO 2015, 2017).

The species of *Palorus* are characteristic elements under the bark of trees, and might be indicators for native forests. In contrary, a few species occur in stored products and are distributed worldwide. The biology was summarised by HALSTEAD (1967b). The new species from Zimbabwe was also collected under bark in the relict Miombo forest (together with *P. bobiriensis* HALSTEAD, 1967, *P. ficicola* (WOLLASTON, 1867), and *P. nanus* HALSTEAD, 1967), and seems to have a small distributional area.

**Acronyms of depositories:**

CRG, Collection Dr. Roland GRIMM, Neuenbürg, Germany; SMNS, Staatliches Museum für Naturkunde, Stuttgart, Germany; TMSA, Ditsong National Museum of Natural History, Pretoria, South Africa.

**The species**

***Palorus ruthmuellerae* sp. n. (Fig. 1)**

**Holotype:** (sex not examined), Zimbabwe, Shangani Ranch, Miombo forest, 19.32S/29.12E, 5.XII.2017, locality no. E.-Y. 4002, leg. Ruth Müller, TSMA.

**Paratypes:** Same data as holotype; 1 ex. CRG, 1 ex. SMNS, 1 ex. TSMA.

**Derivatio nominis:** The species is named in honour of Ruth MÜLLER, collection manager at the Ditsong National Museum of Natural History (Pretoria) and collector of the type specimens.

<sup>1</sup> Contributions to Tenebrionidae no. 156. – For no. 155 see: Entomological Review 99, 2019.

**Description:** Brown to ferruginous, elytra somewhat paler than head and pronotum; palpi, antennae and legs testaceous; elongate, subparallel-sided, length 2.23–2.38 mm, width 0.61–0.71 mm.

Head with both epistome and genae with joint bulge, this bulge covers in dorsal view nearly completely the eyes. Frons behind epistome and laterally behind genae deeply excavated; frons in the middle before vertex with two joint v-like longitudinal tubercles. Surface of elevated epistome and genae densely and coarsely punctured, head otherwise with finely, widely set punctures. Antennae as in Fig. 1.

Pronotum subquadrate, widest in the middle of apical half, length/width ratio = 0.93 (measured in the middle). Disc widely elevated; elevated part antero-laterally slightly sloping; in the posterior three quarters laterally elevated and rimmed, inside of the rimmed part with longitudinal impression; densely punctured, punctures antero-laterally much finer than on the remaining surface; laterally perpendicular sloping; laterally of elevated part in basal half with longitudinal fovea, apically slightly swollen and the lateral border in this portion invisible in dorsal view. Lateral margins subparallel-sided, feebly diverging from base to widest point; apex nearly straight, base arcuate; apical corners protruding, acute; basal corners obtuse.

Elytra subparallel-sided, length/width ratio = 2.08–2.41, interstices flat with a single row of fine punctures.

**Diagnosis:** *Palorus ruthmuellerae* sp. n. has a specific sculpture on surface of head and pronotum, which is unknown in all congeners. In some species, the genae are also elevated, but not together with the epistome. *P. carinicollis* (GEBIEN, 1907) and *P. laesicollis* (FAIRMAIRE, 1893) possess a pair of longitudinal furrow on the pronotum, but no tubercles on the frons. The Oriental species *P. hypophloeoides* BLAIR, 1930 is the only known species with a pair of distinct tubercles on the frons, but the pronotum is without furrows or other modifications.

**Remarks:** The aedeagus of the species of *Palorus* is of simple shape and quite similar between the species (compare figures in HALSTEAD 1967). Therefore we decided not to dissect the sex of the present four tiny type specimens, and avoiding the risk of destruction.

#### *Palorus acutangulus* HALSTEAD, 1967

**Examined specimen:** South Africa, Limpopo, Soutpansberg, 15 km N Makhado, 1400–1500 m, 2.–5.XII.2008, leg. W. Schawaller, 1 ex. SMNS.

**Type locality:** Cameroon, N'Kongsamba.

#### *Palorus baphiae* HALSTEAD, 1967

**Examined specimens:** South Africa, Limpopo, Lekgalameetse NR, 800–1000 m, 27.XI.–1.XII.2008, leg. W. Schawaller, 2 ex. SMNS.

**Type locality:** Ghana, Mpraeso.

#### *Palorus bobiriensis* HALSTEAD, 1967

**Examined specimens:** Zambia, 50–100 km SW Chingole, 3.XI.2002, leg. F. Wachtel, 9 ex. CRG. – Zimbabwe, Shangani Ranch, Miombo forest, 6.XII.2017, leg. R. Müller, 1 ex. SMNS.

**Type locality:** Congo, Elisabethville.

#### *Palorus carinicollis* (GEBIEN, 1907)

**Examined specimens:** South Africa, Limpopo, Makuya NR, 1.–3.II.2017, leg. R. Müller, 1 ex. TMSA. – Namibia, Gobabeb Station, 27.II.1975, leg. S. Endrödy-Younga, 1 ex. SMNS. – Kenya, Kagamega Forest, Udos Camp, 1600 m, 20.XI.2002, leg. D. Bartsch & A. Zahm, 1 ex. SMNS. – Kenya, Kilifi, Watamu, Arabuko Sokoke Forest, 28.II.–14.III.2017, leg. R. Gerstmeier, 1 ex. SMNS. – Malawi, Salima, 5.–6.I.2002, leg. J. Bezděk, 1 ex. SMNS. – Zambia, 50–100 km W Schwezi, 4.XI.2002, leg. F. Wachtel, 1 ex. CRG. – Zambia, 50–100 km SW Chingole, 3.XI.2002, leg. F. Wachtel, 1 ex. CRG. – Tanzania, Utete – Rutiji Kindwitwi, 10.–14.XII.1993, leg. M. Snižek, 6 ex. CRG.

**Type locality:** Gabon, Nkogo (lectotype).

#### *Palorus crampeli* PIC, 1924

**Examined specimens:** Guinea, Kouroussa, 6.IV.1996, leg. U. Lange, 1 ex. SMNS. – South Africa, Krüger NP, Pafuri, 31.I.–13.II.1994, leg. S. Endrödy-Younga, 2 ex. SMNS. – South Africa, KwaZulu-Natal, Tembe Elefant Park, 17.–19.XI.2002, leg. W. Schawaller, 3 ex. SMNS. – South Africa, KwaZulu-Natal, Ndumo Game Reserve, 20.–22.XI.2002, leg. W. Schawaller, 1 ex. SMNS. – South Africa, KwaZulu-Natal, Kosi Bay Reserve, 11.–17.XI.2002, leg. W. Schawaller, 1 ex. SMNS. – NW Botswana, Tsodili Hills, 1000 m, 18.–19.III.2006, leg. W. Schawaller, 2 ex. SMNS. – Botswana,



**Fig. 1.** *Palorus ruthmuellerae* sp. n., dorsal view of holotype.

Maun, Island Safari Lodge, 15.–29.I.1997, leg. M. Snižek, 1 ex. CRG. – Uganda, Kasese, 600 m, 13.–19.XI.1994, leg. M. Snižek, 1 ex. CRG. – Ruanda, Cyangugu, 28.X.–2.XI.1983, leg. H. Mühle, 1 ex. CRG. – Ethiopia, Oromia, Sof Omar, 10.V.2012, leg. F. Wachtel, 2 ex. CRG. – Ethiopia, 8,5 km S Dola-Mena, 1200 m, 14.V.2012, 1 ex. CRG. – Zambia, 30 km NE Livingstone, 6.XI.2002, leg. F. Wachtel, 3 ex. CRG.

**Type locality:** Central African Republic, Fort Crampel (lectotype).

#### *Palorus fusicola* (WOLLASTON, 1867)

**Examined specimens:** Ghana, Northern Region, Nakpanduri, 19.VI.1971, leg. S. Endrödy-Younga, 2 ex. SMNS. – South Africa, Krüger NP, Skukuza, 3.III.1995, leg. S. Endrödy-Younga, 1 ex. SMNS. – Zimbabwe, Shangani Ranch, Miombo forest, 8.XII.2017, leg. R. Müller, 1 ex. TMSA. – NW Botswana, Tsodili Hills, 1000 m, 18.–19.III.2006, leg. W. Schwaller, 5 ex. SMNS. – Zambia, 50–100 km SW Chingole, 3.XI.2002, leg. F. Wachtel, 1 ex. CRG. – Zambia, 30 km W Livingstone, 14.XI.2001, leg. F. Wachtel, 1 ex. CRG. – Botswana, Maun, Island Safari Lodge, 15.–29.I.1997, leg. M. Snižek, 1 ex. CRG. – Namibia, Tsumeb, 9.I.1995, leg. F. Kanther, 1 ex. CRG. – South Africa, Natal, nr. Mtunzini Forest Res., VIII.1985, leg. E. Heiss, 1 ex. CRG.

**Type locality:** Cap Verdes (lectotype).

#### *Palorus marginatus* HALSTEAD, 1967

**Examined specimen:** Ethiopia, coll. R. O. S. Clarke, 1975, det. Halstead 2016, 1 ex. CRG.

**Type locality:** Cameroun, N’Kongsamba.

#### *Palorus nanus* HALSTEAD, 1967

**Examined specimens:** Zimbabwe, Shangani Ranch, Miombo forest, 6.XII.2017, leg. R. Müller, 4 ex. TMSA, 1 ex. SMNS.

**Type locality:** Guinea, Kindia.

## Acknowledgements

We cordially thank Ruth MÜLLER (Pretoria) for the loan of specimens and the possibility to keep duplicates, and Johannes REIBNITZ (Stuttgart) for taking the photograph. The second author takes the chance and would like to thank also Nicholas and Orcilia OPPENHEIMER (Johannesburg), owner of the Shangani Ranch in Zimbabwe (where the type series was collected) for the kind hospitality and support of coleopterological research in some of their properties during different joint travels of the second author with Ruth MÜLLER, and for their various engagements in nature protection and education in general.

## Zusammenfassung

*Palorus ruthmuellerae* sp. n. (Tenebrionidae: Palorini) wird aus Zimbabwe beschrieben und abgebildet. Die Art zeichnet sich durch die Oberflächenstruktur des Kopfes und des Halsschildes aus und unterscheidet sich darin von allen anderen Arten der Gattung. Sie wurde unter Baumrinde in einen ursprünglichen Wald gesammelt und scheint ein nur kleines Verbreitungsgebiet zu haben. Verbreitungsangaben anderer afrikanischer *Palorus*-Arten werden beigefügt.

## References

- ALEKSEEV, V. I. & M. NABOZHENKO 2015: A new fossil tenebrionid beetle of the tribe Palorini from Eocene Baltic amber. – The Coleopterists Bulletin **14**: 127-130.
- ALEKSEEV, V. I. & M. NABOZHENKO 2017: *Palorus platycyloides* sp. n., the second fossil representative of the tribe Palorini (Coleoptera: Tenebrionidae) from Baltic amber. – Acta Zoologica Bulgarica **69**: 167-170.
- GRIMM, R. 2016: New and little known species of Tenebrionidae (Coleoptera) from Borneo (6). – Stuttgarter Beiträge zur Naturkunde A, Neue Serie **9**: 185-190.
- HALSTEAD, D. G. H. 1967a: Revision of the genus *Palorus* (sens.lat.) (Coleoptera: Tenebrionidae). – Bulletin of the British Museum (Natural History) Entomology **19**: 59-148.
- HALSTEAD, D. G. H. 1967b: Biological studies on species of *Palorus* and *Coelopalorus* with comparative notes on *Tribolium* and *Latheticus* (Coleoptera: Tenebrionidae). – Journal of Stored Products Research **2**: 273-313.
- HALSTEAD, D. G. H. 1977: Further records of *Palorus* and description of a new species from Ghana and Zaire (Coleoptera, Tenebrionidae). – Annales historico-naturales Musei Nationalis Hungarici **69**: 145-147.
- MASUMOTO, K. & R. GRIMM 2004: A new genus and a species of the Palorinae (Coleoptera: Tenebrionidae) from Japan. – Entomological Review of Japan **59**: 127-130.
- MATTHEWS, E. G. 2003a: The *Palorus* Group – a new subfamily of Tenebrionidae (Insecta, Coleoptera). – Spixiana **26**: 49-50.
- MATTHEWS, E. G. 2003b: *Uломотипус* BROUN a member of the new subfamily Palorinae, with remarks on *Aphthora* BATES and *Demtrius* BROUN (Coleoptera, Tenebrionidae). – New Zealand Entomologist **26**: 7-14.
- MATTHEWS, E. G. & J. E. LAWRENCE 2005: New taxa, new synonymy and new generic records for Australian Tenebrionidae (Coleoptera). – Annales Zoologici **55**: 531-547.

## Addresses of the authors

Dr. Roland GRIMM  
Unterer Sägerweg 74  
75305 Neuenbürg  
Germany  
grimm.tenebrio@t-online.de

Dr. Wolfgang SCHAWALLER  
Staatliches Museum für Naturkunde  
Rosenstein 1  
70191 Stuttgart, Germany  
schawaller.ehrenamt@smns-bw.de

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

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

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

Jahr/Year: 2019

Band/Volume: [109](#)

Autor(en)/Author(s): Grimm Roland, Schawaller Wolfgang

Artikel/Article: [Palorus ruthmuellerae sp. n. from Zimbabwe, with distributional data of other African species of Palorus \(Coleoptera: Tenebrionidae: Palorini\) 55-58](#)