

# A new species of *Prunaspila* Koch (Coleoptera: Tenebrionidae: Adelostomini) from Zimbabwe, with species key of the genus

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## ABSTRACT

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*Prunaspila demeyeri* sp. n. from Zimbabwe is described, compared with its relatives and a photo of habitus is presented. New records for *P. arnoldi* Koch, 1952 and *P. bicostata* Fähræus, 1870 and distributional data and identification key for all species of the genus *Prunaspila* Koch, 1950 are provided.

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## INTRODUCTION

Thanks to the SYNTHESYS program I had the opportunity to examine material of Adelostomini (sensu Bouchard *et al.* 2005) deposited in the Royal Museum for Central Africa in Tervuren. To my surprise, a new species of the genus *Prunaspila* Koch, 1950 was present among assorted, undetermined material of Tenebrionidae.

The genus *Aspila* Fähræus, 1870 was erected for *Aspila bicostata* Fähræus, 1870. In 1876 Haag-Rutenberg added new species *Aspila dohrni* Haag-Rutenberg, 1876 and Gridelli (1939) described *Aspila septentrionalis* Gridelli, 1939. However, Koch (1950) found *Aspila* to be a homonym and created the new genus name *Prunaspila* Koch, 1950. Later Koch (1952) synonymised *Aspila dohrni* with *A. bicostata* and transferred *Aspila septentrionalis* to the genus *Psaryphis* Erichson, 1843. At the same time he described three new species: *Prunaspila arnoldi* Koch, 1952 from Zimbabwe and *P. carinicornis* Koch, 1952 and *P. transvaalensis* Koch, 1952 from the Republic of South Africa. Presently 5 species are known, one of them described here as new.

According to Koch (1950) the members of the genus *Prunaspila* “live in shady places under stones, close to the trunks of big trees, often gregariously. When still alive they are covered with a thick pruinescence of an intensive light blue”. They occur in Southern Africa – Zimbabwe, Botswana, Mosambique, Kingdom of Lesotho and Republic of South Africa.

## MATERIAL AND METHODS

**Type material** Holotype of the newly described species bears one additional printed red label: “Holotypus *Prunaspila demeyeri* sp. nov. det. L. Purchart 2008”.

**Measurements** Lengths and widths are the maximum values of the measured parts. Total length is the distance from the clypeus to the elytral apex with the head in its natural position. Width of the elytra is the combined maximum width of both elytrons.

**Abbreviations** The number of examined specimens is in parentheses, *e.g.*, (1 RFCL) means one specimen in the René Fouqué Collection, Liberec. Remarks are given in brackets.

**Note** Label data are given verbatim for type as well as non-type material.

The material studied is deposited in the following collections:

BMNH – The Natural History Museum, London, United Kingdom (M. Barclay)

HNHM – Hungarian Natural History Museum, Budapest, Hungary (O. Merkl)

LPCB – L. Purchart collection, Brno, Czech Republic

MRAC – The Royal Museum for Central Africa, Tervuren, Belgium (M. DeMeyer)

RFCL – R. Fouqué collection, Liberec, Czech Republic

SMNS – Staatliches Museum für Naturkunde, Stuttgart, Germany (W. Schawaller)

TMSA – Transvaal Museum of Natural History, Pretoria, South Africa (R. Müller)

ZSM – Zoologische Staatssammlung, München, Germany (M. Baehr)

TAXONOMY

Genus *Prunaspila* Koch, 1950

*Prunaspila* Koch, 1950: 67. – Koch 1952: 20-21, 85-87. Type species: *Aspila bicostata* Fåhraeus, 1870.

*Aspila* Fåhraeus, 1870: 251. – Haag-Rutenberg 1872: 404, 1875: 404, 1876: 106; Gebien 1936: 675. (Changed to *Prunaspila* by Koch (1950), because of homonymy) Type species: *Aspila bicostata* Fåhraeus, 1870: 251.

Updated, simplified and modified key created by Koch (1952) for species of the genus *Prunaspila*:

1	(2)	Antennae short, third joint much shorter than the two following joints taken together, about as long as basal joint or the apical one . . . . .	<b><i>P. arnoldi</i> Koch, 1952</b>
2	(1)	Antennae long, third joint longer than the two following joints combined and longer than basal and apical joint.	
3	(6)	Pronotum with raised and sharp median carina.	
4	(5)	Body elongate oval, each elytron with only one dorsal carina. Head covered with somewhat elongate or round and well-separated granules, apical margin of buccal fissure lobes subdentate in the middle. Anterior margin of pronotum with slightly raised and thickened carina which is coalescent with median carina of pronotum, median carina reaching pronotal base (Fig. 3). The latter approximately as broad as the head. The third antennomere shorter than the three following joints taken together . . . . .	<b><i>P. carinicornis</i> Koch, 1952</b>
5	(4)	Body ovoid, each elytron with three carinae. Head with net-like surface, apical margin of buccal fissure lobes almost truncate. Anterior margin of pronotum without carina, median carina of pronotum not reaching the pronotal base, where it is obliterated (Fig. 2). The base of pronotum is narrower than head. Third joint of antennae as long as the following three joints combined . . . . .	<b><i>P. demeyeri</i> sp. n.</b>
6	(3)	Pronotum without median carina.	
7	(8)	Elytra covered with scattered, fine, very long and erect hairs. Apical part of epipleural carina connected with the stridulatory carina by a slightly convex impunctate line. Middle of vertex with sharp and short carina anteriorly . . . . .	<b><i>P. bicostata</i> (Fåhraeus, 1870)</b>
8	(7)	Elytra bare. Without connecting line between epipleural carina and stridulating carina. Vertex without carina . . . . .	<b><i>P. transvaalensis</i> Koch, 1952</b>

***Prunaspila demeyeri* sp. n.**

Figure 1

**Type locality** Zimbabwe, Kariba.

**Type material** *Holotype*: ♀: ZIMBABWE, Kariba, 1965, H. Matthes [Matthes] (MRAC).

**Description** Size of holotype 8.5 x 4.5 mm. Black brown, dull, with tarsi, apical antennomere and lateral portions of pronotum brown. Body strongly convex, ovoid.

Head transverse, 0.91 times shorter than broad, 0.62 times narrower than pronotum. Widest at genae. Shagreened, covered with short whitish setae. Sculptured with net-like surface composed of concave granules which are approximately 2-3 times larger than eye facet. Genae strongly developed. Eyes completely divided by the genal canthus. Ocular keels low, approximately as high (lateral view) as the dorsal portions of eyes are broad in their narrowest point (dorsal view). Pre-ocular groove elongate and deep. Submentum transverse. Buccal fissure lobes

large, with apical margin almost truncate (similar to the genera *Eurychora* Thunberg, 1791, *Lycanthropa* Thomson, 1860 or *Serrichora* Koch, 1952) meeting the infra-epistomal lateral ridge in a right angle. Clypeus nonsymmetrically cut out in the middle and with two indicated small teeth in the right part of the latter. Antennae strongly compressed, 1.31 times longer than width of head, covered sparsely with white setae. Third joint, the longest, as long as the three following joints taken together. The apical joint large, but distinctly shorter than the two previous joints taken together. Proportion of antennomeres see Fig. 1. Supra antennal portion very strongly developed.

Pronotum strongly transverse, anteriorly very strongly emarginated, broadest in posterior third. Lateral portions foliaceous, concave and distinctly bent upwards. Sides with fine denticulation, strongly and somewhat convexly dilated to posterior third, there broadly rounded, thence almost straight and strongly narrowed towards base. The latter very

slightly emarginated and distinctly narrower than head. Disc of pronotum convex, with well developed but not complete sharp midlongitudinal carina. The latter starting from the anterior margin of pronotum, continuously sloping towards the base of pronotum where it is obliterated and therefore not reaching the pronotal base (Fig. 2). Surface of pronotum with small granules on lateral portions and with net-like surface composed of concave granules which are approximately 4-5 times larger than eye facet.

Elytra ovoid, shagreened, glabrous, only apically and laterally with sparse short and several long setae. Broadest in middle, with three longitudinal, strongly developed and relatively high keels on each elytron, running parallel with the lateral outlines of elytra and becoming obsolete in apical part of elytra. First (inner) and third (outer) keels reaching the base of elytra. Entire outer keels denticulate, middle and inner keels becoming denticulate apically. Space between keels irregularly punctate, surface between those punctures sometimes with very small tubercles, little bit smaller than eye facet. Elytral suture slightly raised. Humeral shoulders not developed, base of

elytra therefore very short, approximately as broad as pronotal base. Apex of elytra very steep, almost rectangular with flat disc of elytra (dorsal view). Reflected portions of elytra shagreened and very densely punctured with deep punctures.

Legs shagreened, covered with short yellowish setae. The edges of tibiae with red-brown spine-like setae. Entire ventral side of head sculptured with net-like surface composed of concave granules and shagreened, glabrous. The rest of ventral side shagreened, with small tubercles and wrinkles. Apical carina developed only apically.

**Differential diagnosis** This species is together with *P. carinicornis* easily distinguishable from the other three species by the raised and sharp median carina of pronotum which is absent in the latter. From *P. carinicornis* it is possible to distinguish it as follows: body ovoid, all elytral carinae developed (only one carina on each elytron and body elongate oval in *P. carinicornis*). Head with net-like surface and apical margin of buccal fissure lobes almost truncate (head covered with somewhat elongate or round and well separated granules, and apical margin of buccal fissure lobes subdentate in the middle in *P. carinicornis*).

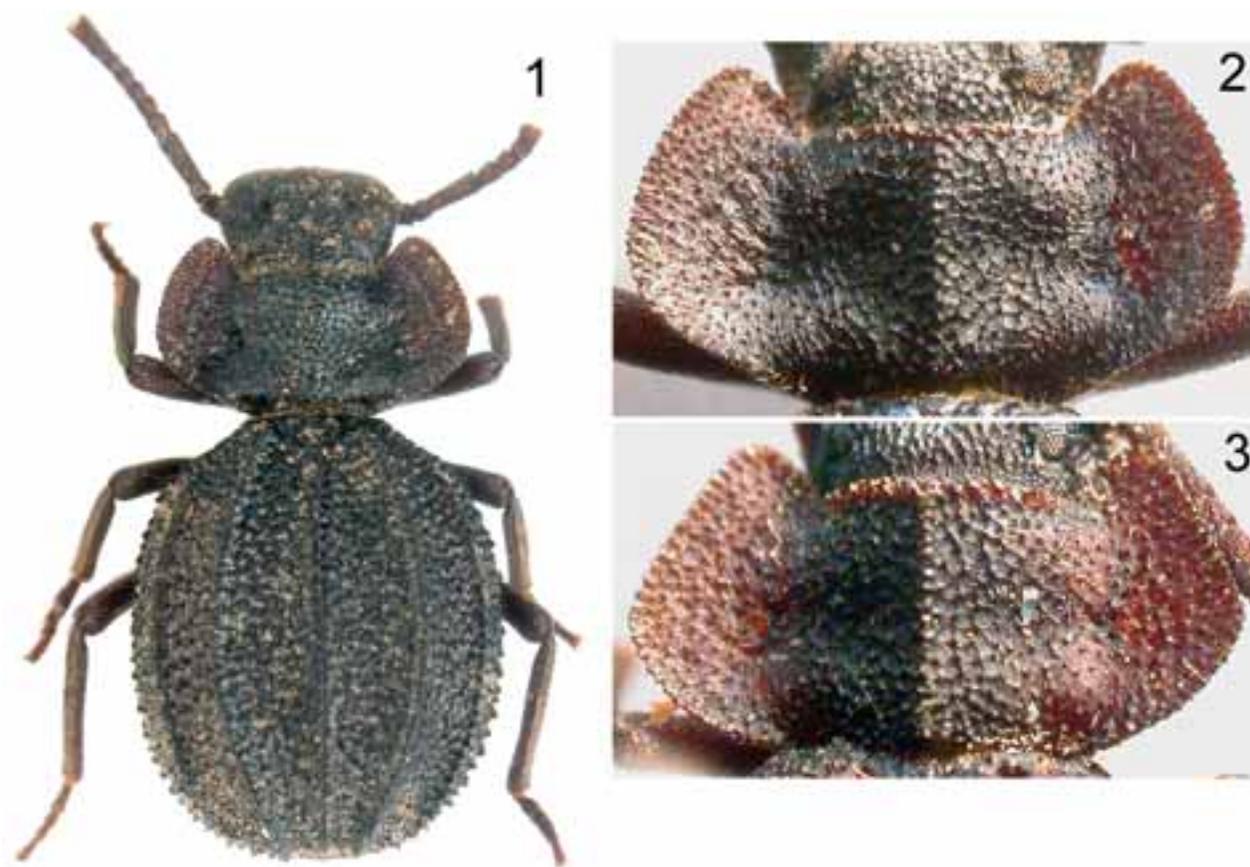


Fig. 1. *Prunaspila demeyeri* sp. n. (holotype) – habitus.  
 Fig. 2. *Prunaspila demeyeri* sp. n. (holotype) – pronotum.  
 Fig. 3. *Prunaspila carinicornis* (paratype) – pronotum.

Anterior margin of pronotum without carina, median carina of pronotum not reaching the pronotal base, where it is obliterated (Fig. 2) and the base of pronotum is narrower than head (in *P. carinicornis* the apical margin with slightly raised and thickened carina which is coalescent with median carina of pronotum (Fig. 3), median carina reaching pronotal base which is as broad as the head). Third joint of antennae as long as the following three joints combined (in *P. carinicornis* the third antennomere a little longer than the following two joints taken together but distinctly shorter than the three following joints combined). **Etymology** Named in honour of Dr. Marc DeMeyer, head of Entomology Department of MRAC, specialist in Diptera.

**Remarks** It is not very clear whether the locality “Kariba” means the town in Mashonaland West Province, Zimbabwe, located in the Zambezi Valley near the Zambian border or the Lake Kariba, a large water reservoir situated on the border of Zimbabwe and Zambia, or the Kariba District, a constituency of Zimbabwe. However, when searching for some information about collector of this species H. Matthes, it was found, that he is a famous author who contributed to knowledge of fishes in the Lake Kariba and rivers in its surrounding. The locality is likely to be in that vicinity. Anyway, I assume that the country of collection was Zimbabwe.

#### *Prunaspila arnoldi* Koch, 1952

*Prunaspila arnoldi* Koch, 1952: 85 (with photo of habitus).

**Type locality** Zimbabwe, Penkridge.

**Type material examined** *Paratypes*: 2: ZIMBABWE, Birchenough Bridge, I.1936, G. v. Son (2 TMSA).

**Additional material examined** ZIMBABWE: 1: Melsetter, VII.1960, 1700 m, (savane boisée), N. Leleup (1 MRAC); MOZAMBIQUE: 4: Gorongoza Park, 17.-20.XII.1972, Cl. Besnard (4 MRAC); 13: Sofala Province, 30 km S Cala, 21.-23.XII.2005, P. Schüle (11 SMNS, 2 LPCB).

**Distribution** Zimbabwe, Mozambique (new record).

#### *Prunaspila bicostata* Fåhraeus, 1870

*Aspila bicostata* Fåhraeus, 1870: 252 – Gebien 1936: 675.

*Aspila bicostata* [sic]: Haag-Rutenberg 1872: 404, 1875: 404 (misspelling).

*Prunaspila bicostata*: Koch 1950: 67 – Koch 1952: 86 (with photo of habitus).

*Aspila dohrni* Haag, 1876: 106 – Gebien 1936: 675 (synonymised by Koch 1952: 86).

**Type locality** Eastern Cape (Caffraria), Republic of South Africa.

**Type material examined** *Aspila dohrni*: *Holotype*: MOZAMBIQUE, Nagurth, Dohrn [lgt.] (ZSM).

**Additional material examined** SOUTH AFRICA: 7: [without further locality data], Holub (7 BMNH); 3: Kaffraria [Eastern Cape], Holub (3 HNHM); 3: Transvaal, Rustenburg, I.1950, Breuning (3 MRAC); 2: Zoutpansberg district, Futie, 30.VII.1949, C. Koch & van Son (2 HNHM); BOTSWANA: 1: Bakgatla, 6.VII.1970, cow dung, [collector unknown] (1 BMNH); KINGDOM OF LESOTHO: Maseru env., 2.X.2000, F. Černý (1 RFCL); ZIMBABWE: 1: [without further locality data, collector unknown] (1 HNHM); MOZAMBIQUE?: 6: Zambezi [without further locality data, collector unknown] (6 HNHM).

**Distribution** Republic of South Africa (Limpopo, Northern Cape, Eastern Cape, Gauteng), Mozambique, Zimbabwe, Botswana (new record), Kingdom of Lesotho (new record).

**Remarks** The specimen from Lesotho seems to me to be somewhat different from the holotype of *Aspila dohrni* and further examined material of the *Prunaspila bicostata* with more roundish and shorter elytra and more denticulate and coarser carinae of the latter. However, I cannot find any further distinctive distinguishing characters. As Koch (1952) noted, the shape of body is very variable in this species, therefore I retain the mentioned specimen as *P. bicostata*.

#### *Prunaspila carinicornis* Koch, 1952

*Prunaspila carinicornis* Koch, 1952: 83-85 (with photo of habitus).

**Type locality** Republic of South Africa, Limpopo, North-East Zoutpansberg district.

**Type material examined** *Paratypes*: SOUTH AFRICA: 2: Northern Transvaal [Limpopo], North-East Zoutpansberg district, VII.-VIII.1916, H.G. Breyer (1 MRAC, No. 1033; 1 HNHM, No. 1028).

**Distribution** Republic of South Africa (Limpopo).

#### *Prunaspila transvaalensis* Koch, 1952

*Prunaspila transvaalensis* Koch, 1952: 87 (with photo of habitus).

**Type locality** Republic of South Africa, Limpopo, Grootdraai, Oliphants River (Kruger National Park).

**Type material examined** *Paratypes*: SOUTH AFRICA: 3: Grootdraai, Olifants River, X.1927, H. Lang (2 BMNH, 1 MRAC); 3: Nhlanganini River,

Kruger National Park, IX.1932, H. Lang (1 ZSMC, 2 HNHM).

**Additional material examined** SOUTH AFRICA: 3: Lydenburg District, 1896, P.A. Krantz (3 BMNH); 4: Transvaal, Tunnel Strijdom, près Ohrigstad, 5.VIII.1968, [collector unknown] (2 MRAC, 2 HNHM).

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