

Short scientific noteSubmitted: September 20th, 2019 - Accepted: October 15th, 2019 - Published: November 15th, 2019**Description of the female of *Xiphodontus endroedyi* Bartolozzi, 2005 (Coleoptera: Lucanidae)**Luca BARTOLOZZI^{1,*}, Renzo PERISSINOTTO², Lynette CLENNELL³¹ Museum of Natural History, Zoological Section "La Specola", University of Florence - Via Romana 17, I-50125 Firenze, Italy
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Abstract

The female of *Xiphodontus endroedyi* Bartolozzi, 2005 is described for the first time. The new locality record for this species shows that it actually has a wide distribution range across the Cape Floral Region, in the Fynbos Biome. Both larvae and adults were found boring into dead wood at the base of senescent trunks of a variety of Proteaceae species, including the alien invasive *Hakea sericea*.

Key words: Lucanidae, *Xiphodontus*, female, South Africa, distribution.

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Introduction

The South African Lucanidae have been investigated by several authors. Among others we can quote: Péringuey 1902, 1908; Barnard 1929, 1932a, 1932b; Brinck 1956; Endrödy-Younga 1988, 1993; Scholtz & Endrödy-Younga 1994; Bartolozzi 1995; Mizukami & Kawai 1997; Bartolozzi & Werner 2004; Bartolozzi 2005. The number of Lucanidae listed for South Africa to date consists of 29 species belonging to five genera. Thanks to the extensive research conducted in the field in recent years, it has been possible to collect for the first time the female of the recently described species *Xiphodontus endroedyi* Bartolozzi, 2005. This species was previously known only from its holotype male; the female is hereby described with notes on its biology and distribution.

***Xiphodontus endroedyi* Bartolozzi, 2005 (Fig. 1)**

Xiphodontus endroedyi Bartolozzi, 2005: 349.

Description of female. Dimensions: body length, 8.4-9.9 mm; maximum width (at elytra), 3.5-3.9 mm. Body elongate, convex, black and mostly matt, with some shiny areas on pronotum.

Head transverse, about twice as long as wide; anterior angles obtuse, rounded; frons slightly concave; canthi large and prominent, with straight antero-lateral margin directed outwards at an angle of about 45° with the frons, posterior

margin rounded. The canthus divides the eye along about 9/10 of its length in dorsal view, the dorsal ocular part much smaller than the ventral one. Clypeus small, slightly convex, bearing some long erect golden setae. Head surface totally covered by large, regular punctuations. Mandibles shorter than the head, laterally compressed, directed obliquely inwards, pointed apically; sharply carinated dorsally, carina slightly more elevated and large basally; inner margin basally with a flat, sharp small process. Mentum subrectangular, strongly punctuated.

Prothorax strongly convex, covered by large punctuations, with two small tubercles anteriorly followed by a slightly larger medial one; two irregular shiny areas laterally and posteriorly on disc (Fig. 1). Anterior margin slightly convex, anterior angles directed forwards, lateral margins regularly curved, posterior angles absent, posterior margin almost straight.

Scutellum semicircular, with a few scattered punctuations.

Elytra about twice as long as pronotum; base concave, slightly wider than the base of pronotum; humeral angles acute; sides subparallel in the proximal half, then regularly rounded as far as the apex. Surface strongly punctuate and matt, except for traces of costae, indicated by shiny longitudinal irregular stripes.

Protibiae slightly curved inwards with a strong apical fork and 4-5 teeth on the outer margin, apical spine very strong; meso- and metatibiae straight, with a distinct, acute, medial tooth, and 2-3 smaller spines; tarsi slender.



Fig. 1 – *Xiphodontus endroedyi* Bartolozzi, 2005, female from Republic of South Africa, E Cape, Joubertina (scale bar: 1 mm) (photo by Saulo Bambi).

Abdomen closely and regularly punctate ventrally, but punctuations less marked than those on the upper surface.

Material. Republic of South Africa: 3 ♂♂, 2 ♀♀, Eastern Cape Province, Joubertina, 14 Feb 2016, R.B.T. Smith, R. Perissinotto & L. Clennell (Langkloof Landscape Project TM5348).

Remarks. The genus *Xiphodontus* Westwood, 1838 is endemic to the Ethiopian Region. In their catalogue of the Lucanidae from Africa and Madagascar, Bartolozzi & Werner (2004) listed two species: *X. antilope* Westwood, 1838 from South Africa and *X. bicolor* (Boileau 1909) from Kenya and Tanzania; one year later *X. endroedyi*, from southern Western Cape, became the third described species in the genus (Bartolozzi 2005).

Until today the species was known only for the type locality: Republic of South Africa, SW Cape, Struisbaai. Our new record broadens the known distribution range by about 400 km eastwards towards the interior of the Eastern Cape. This suggests that the species may be regarded as a Fynbos endemic, possibly occurring throughout the southern Cape part of the Cape Floral Kingdom, a well-known centre of exceptional biodiversity and high endemism (cf. Mucina & Rutherford 2006).

The male holotype specimen described in Bartolozzi (2005), was reportedly found under a stone at Struisbaai, in the Cape Agulhas area of the southern Cape. In the light of the observations reported here below, it is almost certain that this was a fortuitous occurrence, as clearly this

species like its congeners is typically saproxylic. In the Joubertina area of the Eastern Cape, both larvae and adults were in fact observed at the base of dead or senescent trees and shrubs of a variety of Proteaceae species, including *Protea* spp., *Leocadendron* spp., *Leucospermum* spp. and even the Australian invasive species *Hakea sericea*. All specimens were invariably boring into dead and decaying wood (RP & LC, pers. obs.).

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References

- Barnard K.H. 1929. A study of the genus *Colophon* Gray (Coleoptera). Transactions of the Royal Society of South Africa, 18 (3): 163–182.
- Barnard K.H. 1932a. The rediscovery of *Colophon thunbergi* Westw. with description of further new species of the genus. Stylops, 1: 169–174.
- Barnard K.H. 1932b. The *Colophon*. Journal of the Mountain Club of South Africa, 34: 19–22.
- Bartolozzi L. 1995. Description of a new species of *Colophon* from South Africa (Coleoptera, Lucanidae). Fragmenta entomologica, 26(2): 333–340.
- Bartolozzi L. 2005. Description of two new stag beetle species from South Africa (Coleoptera: Lucanidae). African Entomology, 13(2): 347–352.
- Bartolozzi L., Werner K. 2004. Illustrated catalogue of the Lucanidae from Africa and Madagascar. Taita Publishers, Hradec Kralove, Czech Republic, 192 pp.
- Brinck P. 1956. Coleoptera: Lucanidae. South African Animal Life, 8(3): 304–335.
- Endrödy-Younga S. 1988. Evidence for the low-altitude origin of the Cape Mountain biome derived from the systematic revision of the genus *Colophon* Gray (Col. Lucanidae). Annals of the South African Museum, 96(6): 359–434.
- Endrödy-Younga S. 1993. The Southern African lucanid genus *Oonotus* Parry with descriptions of a new subgenus and three new species (Coleoptera-Scarabaeoidea). Annals of the Transvaal Museum, 36(5): 31–40.
- Mizukami T., Kawai S. 1997. Nature of the South Africa and ecological note on the genus *Colophon* Gray (Coleoptera, Lucanidae). Gekkan-Mushi Supplement, 2: 1–80.
- Mucina L., Rutherford M.C. 2006. The Vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19, South African National Biodiversity Institute, Pretoria, 807 pp.
- Péringuey L. 1902. Descriptive catalogue of the Coleoptera of South Africa (Lucanidae and Scarabaeidae). Transactions of the South African Philosophical Society, 12(1901-1902), 920 pp.
- Péringuey L. 1908. Catalogue of the Coleoptera of South Africa (Lucanidae, Passalidae, Scarabaeidae). Additions and corrections. Family Lucanidae (pp. 547-548). Transactions of the South African Philosophical Society, 13(1904-1908), 752 pp.
- Scholtz C.H., Endrödy-Younga S. 1994. Systematic position of *Colophon* Gray (Coleoptera: Lucanidae), based on larval characters. African Entomology, 2(1): 13–20.