

**A new species of *Laius* Guérin-Méneville, 1830
(Coleoptera: Malachiidae) from Zanzibar**

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Abstract. A new species of *Laius* Guérin-Méneville, 1830, viz. *L. novaki* sp. nov. from Unguja Island (Zanzibar Archipelago, Tanzania), is described, illustrated and compared with other taxa inhabiting the shores of the Western Indian Ocean.

INTRODUCTION

The genus *Laius* Guérin-Méneville, 1830 was erected by monotypy and rediagnosed by Evers (1994). Species of *Laius* are supralittoral shore beetles (Jäch 1998). They are known from East Africa to south-eastern Asia, Australia and some islands in the western Pacific (Champion 1921; Constantin 2015; Liu et al. 2015; Plonski & Puchner 2014; Wittmer 1999; Yoshitomi 2008, 2010, 2014; Yoshitomi et al. 2015; Yoshitomi & Lee 2010).

The species inhabiting the shores of the Western Indian Ocean have been taxonomically revised by Constantin (2015). Here, we add another taxon to the list and describe a species from Unguja Island (henceforth just called Zanzibar) as new to science. The material reported below represents the first record of a true *Laius* for Zanzibar.

Note, that *Collops velutinus* Gerstaeker, 1873, which was described from Zanzibar, is now placed in the genus *Hadrocnemus* Kraatz, 1895 (Mayor 2003), and that *L. velutinus* sensu Champion (1921) is *L. mozambicus* Constantin, 2015.

MATERIAL AND METHODS

Nine male vouchers were available for the present study; they are dry preserved and housed in the following collections:

IPVC private collection of Isidor Plonski, Vienna, Austria.

JHAC Private Entomological Laboratory and Collection, Jiří Háva, Únětice u Prahy, Prague west, Czech Republic;

NMW collection of the Natural History Museum, Vienna, Austria.

VNPC private collection of Vladimír Novák, Praha, Czech Republic.

Label data are cited verbatim, a slash (/) separates lines on a label. The types have been provided with one red printed label each: “HOLOTYPUS [or PARATYPUS respectively] / *Laius / novaki* sp. nov. / det. I. Plonski 2020”.

Softening of the holotype and dissection of its terminalia follows the procedure described in Plonski & Puchner (2014).

Terminology of endophallic sclerites follows Yoshitomi (2014).

The following optical tools were used during the description process: a Bresser Researcher ICD binocular was used for observation and making descriptive statements at 40× and 80× magnification during the pandemic; dissections were made under an Olympus SMZ 10 stereo-microscope; and measurements of body parts was made with help of a Nikon SMZ 1500 stereo-microscope equipped with an ocular micrometer at 22.5× and 45× magnification. Furthermore, line drawings of terminalia were made by hand with help of an Olympus BX 40 microscope equipped with a camera lucida; and the digital photographs were made with a Leica micro system (Leica DFC490 camera; Leica Z16 APO optic carrier; video objective 0.63×; main objective 1.0×/ WD 97 mm; ocular 10×/23B), stacked with Zerene Stacker v1.04, and edited with GIMP v2.10.

The following abbreviations are used for biometry:

AL	aedeagal length
AM	arithmetic mean
EL	elytral length
EW	elytral width
GL	length of gonoporal piece
HL	head capsule length
HT	holotype
HW	head capsule width
IOW	inter ocular width
LL	length of ligula
LW	width of ligula
PL	pronotal length
PW	pronotal width
TL	total length

RESULTS

Laius novaki sp. nov.

(Figs. 1-4)

Type locality. Minor cliff at height of the southernmost bungalows of the Royal Zanzibar Beach resort (from 5°44'17.6"S, 39°17'20.5"E to 5°44'18.4"S, 39°17'20.8"E); Nungwi ward, Kaskazini A district, Unguja North region, Tanzania.

Type material. Holotype (♂) labelled: "TANZANIA, Zanzibar Isl. / West coast, 1 km S of / NUNGWI, 29.12.2019- / 10.01.2020; V. Novák lgt.", (NMW). Paratypes: (8 ♂♂): same data as holotype, (1 IPVC; 1 JHAC; 6 VNPC).

Description. Males (Fig. 1): Coloration: body (incl. mouthparts) black, except elytra with a dark slate blue hue; scape, pedicel and antennomere III orange red; antennomere IV, front tarsomeres I-V, mid- and hind tarsomeres IV-V dark orange red with black parts (in holotype and 5 paratypes) or totally black (in 3 paratypes); sometimes antennal sockets distally and excavation on protibial flexor side with a dark orange part, and margins of clypeus brightened to dark orange.

Pubescence: body covered with short grey setae, except on the cheeks between antennal sockets and compound eyes; in addition intermingled with dark longer setae on pronotum.

Head capsule: narrower than pronotum; vertex with a median, short impression; frons laterally rapidly dropping off towards cheeks next to anterior margin of compound eyes; epistoma faintly indicated; antennal sockets slightly elevated; surface structure finely and densely punctate with shiny interstices, except between antennal sockets and compound eyes, where the cheeks are composed of a shiny, impressed part next to the antennal sockets with wrinkles, and of a shiny part of the genae below.

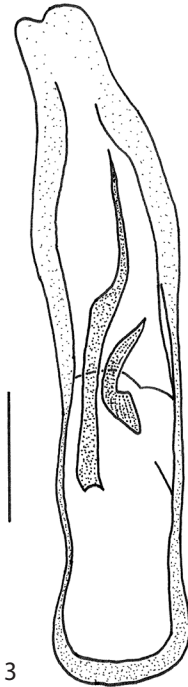
Antennae: scapes elongate, clavate, proximal halves conical, distal halves subrectangularly broadened with an triangular shallow excavation on outer sides; pedicels globular, sunken into the scapes for one third to half their diameter; antennomeres III (Fig. 2) with main part resting on a stalk as long as one pedicel; main part transverse, subelliptical, concave on dorsal side, with a faint impression basally next to the stalk, and an incision next to it at inner side margin with a membranous apodeme attached to it; antennomeres IV-X moniliform, each segment balanced in length and width; antennomere XI as broad as and a bit longer than preceding segments, and egg-shaped.

Pronotum: broader than long, broadest near anterolateral angles; angles evenly rounded; apex arcuate, sides strongly arcuate, base subarcuate; disc with surface structure as on head's vertex.

Elytra: oblong, broadest subapically; sides parallel and conically expanding postlaterally; apex broadly arcuate; elytral tips; surface structure as on pronotum in basal quarter of length and becoming more indistinct towards apex.

Legs: stout; profemur subapically with a small and shallow excavation on flexor side; protibiae strongly thickened basally, with a basal excavation on flexor side.

Terminalia: Pygidium transverse, half as long as broad, caudal margin slightly concave. Median lobus (Fig. 3) elongate, subparallel, with apex longer than broad and concave at



Figs. 1-4. *Laius novaki* sp. nov., holotype: 1- habitus; 2- basal antennomeres of right antenna; 3- median lobus, ventral, spinous area omitted; 4- type locality.

apex; Gonoporal piece incurved, apical two quarters more slender than base; ligula strongly incurved in half.

Measurements: TL (n = 8): 3.56-4.19 mm (HT: 3.75 mm; AM: 3.84 mm); AL (n = 8): 1.56-1.84 mm (HT: 1.84 mm; AM: 1.70 mm); HL (n = 9): 0.94-1.09 mm (HT: 1.00 mm; AM: 0.97 mm); HW (n = 9): 0.94-1.13 mm (HT: 1.06 mm; AM: 1.05 mm); IOW (n = 9): 0.63-0.75 mm (HT: 0.75 mm; AM: 0.71 mm); PL (n = 9): 0.75-0.84 mm (HT: 0.84 mm; AM: 0.80 mm); PW (n = 9): 1.09-1.25 mm (HT: 1.19 mm; AM: 1.18 mm); EL (n = 9): 2.28-2.63 mm (HT: 2.56 mm; AM: 2.47 mm); EW (n = 9): 1.56-1.84 mm (HT: 1.72 mm; AM: 1.71 mm); AL (n = 1): 1.04 mm (HT); GL (n = 1): 0.52 mm (HT); LL (n = 1): 0.18 mm (HT); LW (n = 1): 0.06 mm (HT).

Females: unknown.

Diagnosis. The new taxon belongs, as the other species inhabiting the shores of the Western Indian Ocean, to the species group with long gonoporal piece and short, incurved ligula (“group 3” sensu Yoshitomi 2014). Eidonomically, it is most comparable to *L. parnaudeaui* Constantin, 2015, which has been described from Mayotte Island (Comoros Archipelago). *Laius novaki* sp. nov. differs from *L. parnaudeaui* in the shape of antennomeres III, which are lacking the antepical dimple and are more transverse and constricted on the outer sides, and in the shape of the aedeagus – especially length of the median lobus.

Distribution. So far, only known from the type locality.

Collecting circumstances. The beetles flew around eight o’clock in the morning on the sea shore only at the overgrown cliff (Fig. 4) lining the sandy edge of the sea (V. Novák, pers. comm.).

Etymology. The species epithet is patronymic. The new taxon is named after the collector of the type series Vladimír Novák (Praha, Czech Republic), who is an expert for comb-clawed beetles (Coleoptera: Tenebrionidae: Alleculinae).

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