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**New data on the Afrotropical Xantholinini. 1. New species from South Africa in the Janak collection (Coleoptera, Staphylinidae) 285° contribution to the knowledge of the Staphylinidae**

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**A b s t r a c t :** The following new species are described and figured: *Xanthophius janaki* nov.sp., *Notolinopsis janaki* nov.sp., *N. mbotyianus* nov.sp., *N. mirabilis* nov.sp., *N. khoi* nov.sp., *N. lemniscatus* nov.sp., all from Cape Province, and *N. natalensis* from KwaZulu-Natal.

**K e y w o r d s :** Coleoptera, Staphylinidae, Xantholinini, *Xanthophius*, *Notolinopsis*, new species, South Africa.

**Introduction**

This is the first supplement after the publication of Xantholinini's afrotropical revision (BORDONI 2016). In that volume are treated 425 species, including those occurring in South Africa. Among these South African species are particularly important those included in the genera *Notolinopsis* CASEY, 1906 and *Linosomus* KRAATZ, 1857. The *Notolinopsis* living in the cited region, before the present contribution, are 21.

The study of the type material of the genera *Linosomus*, *Notolinopsis* and *Notolinus* CASEY, 1906 shows that the genus *Notolinus* falls in synonymy of *Linosomus*, which includes the species previously related to *Notolinus*, and that *Notolinopsis* is valid genus that includes the species previously attributed to *Linosomus* (BORDONI 2016).

In the material sent to me in study by Ing. Jiri Janak I found 6 new species of *Notolinopsis* that are described and figured in these pages. This genus is surely the most interesting and characteristic of the South African Xantholinini, living in the litter of the forests, and I think many other species remain to be discovered.

**Acronyms**

- cB..... coll. Bordoni, Florence, Italy
- cJ ..... coll. Janak, Rtyne nad Bilinou, Cekia.

### Taxonomy (in systematic order)

#### *Xanthophius janaki* nov.sp. (Figs 1-3)

**Examined material:** Holotype ♂: RCA: W Cape, Mbotyi campsite env., 31.27S, 29.44E, J. Janak 1-3.XII.2006 (cJ); paratype: same data, 1 ♀ (cB).

**Description:** Length of body 4.7 mm; from anterior margin of head to posterior margin of elytra: 2.4 mm. Body shiny, without micro-sculpture, reddish brown light with darker head and yellowish posterior margin of elytra; antennae and legs yellowish brown. Head sub-rectangular, proportionately large, convex, with sub-rectilinear and sub-parallel sides and largely rounded posterior angles. Eyes medium-sized, visibly protruding. Surface of head with fine, deep, regular punctation. Pronotum dilated forward and narrow posteriad, longer than head, anteriorly as wide as it, with oblique anterior margins, largely rounded anterior angles and sinuate sides. Surface with dorsal series of 8 punctures and lateral series of 5-6 punctures. Elytra sub-rectangular, a little dilated posteriad, as long as pronotum, wider than it, with rounded humeral angles. Surface with very fine, sparse punctation, arranged in some series. Abdomen with fine punctation on the sides.

Tergite and sternite of the male genital segment as in Figs 1-2. Aedeagus (Fig. 3) 0.92 mm long, sub-spherical, with long parameres of peculiar shape; inner sac usually between the parameres, covered with numerous small spinulae, very dense in the middle.

**Etymology:** Patronymic. Dedicated to Jiri Janak which has collected almost all the specimens mentioned in this contribution.

**Distribution:** The species is known only from the type locality.

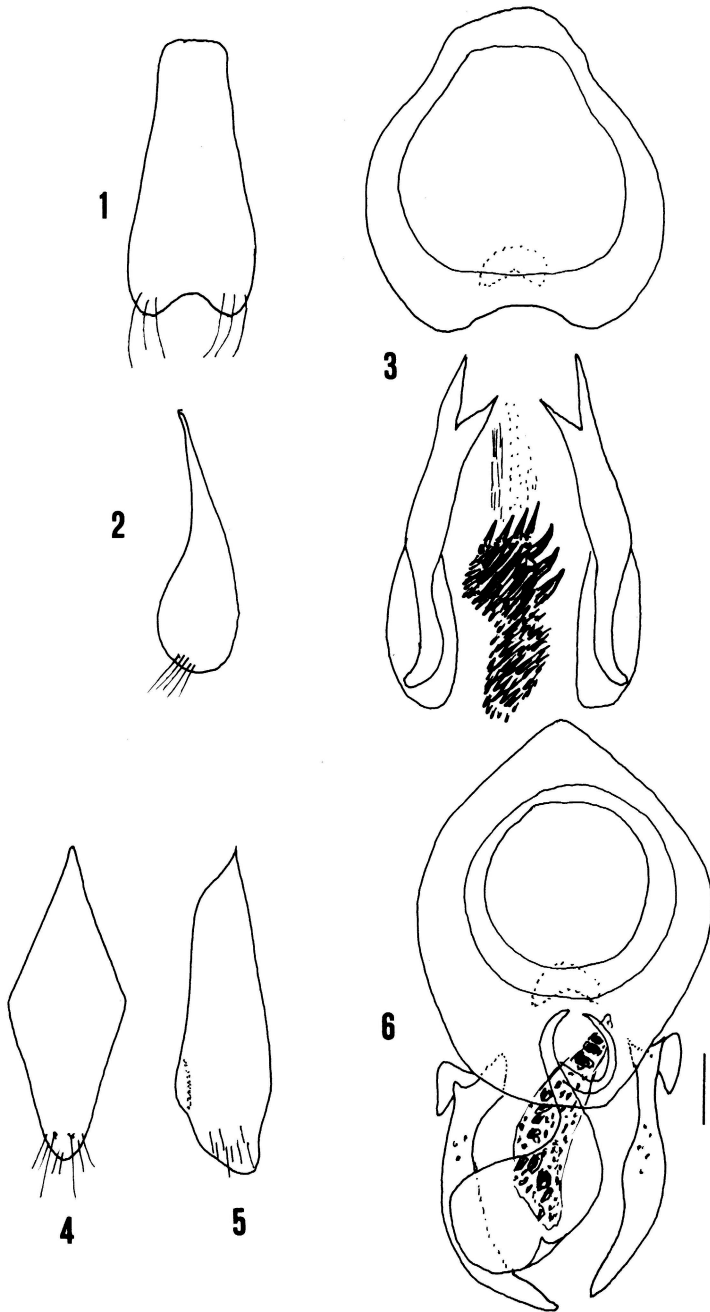
**Remarks:** The species of the genus *Xanthophius* MOTSCHULSKY, 1858 that occurs in the Afrotropical Region are 4; one of these (*X. africanus* BORDONI, 2016) occurs in South Africa (Zululand and Transvaal). The new species differs from this taxon by size, shape of head, punctation and especially by the very different genitalia. The genus is widespread in the Oriental Region (BORDONI 2002) and less frequent in Australia (BORDONI 2005).

**Bionomics:** Stream banks.

#### *Notolinopsis janaki* nov.sp. (Figs 4-6)

**Examined material:** Holotype ♂: RCA: W Cape, Table Mts, Echo Valley, 34.7S, 18.27E, Janak 10.X.2013 (cJ); paratypes: same data, 3 ♂ ♂, 7 ♀ ♀ (cJ), 3 ♂ ♂, 2 ♀ ♀ (cB); W Cape, Kogelberg NR, Oudebos, 34.20S, 19.00E, Janak 11.XII.2009, 1 ♂ (cJ).

**Description:** Length of body 8 mm; from anterior margin of head to posterior margin of elytra: 4.8 mm. Body with head, pronotum and abdomen covered with fine and dense, transverse micro-striation, reddish brown with a little darker head; antennae and legs brown. Head sub-rectangular, with sub-rectilinear and sub-parallel sides and strictly rounded posterior angles. Eyes very small and flat. Surface of head with deep, spaced punctation, apart a wide, median stripe. Pronotum longer than head, visibly dilated forward where it is wider than head, with strictly rounded anterior angles, a little oblique anterior margins and feebly sinuate sides. Surface with a punctation similar to that of the head, apart a median smooth stripe. Elytra a little dilated posteriad, shorter and wider than pronotum, with more or less marked humeral angles. Surface shiny, with numerous



**Figs 1-6:** Tergite and sternite of the male genital segment, aedeagus of *Xanthophius janaki* nov.sp. (1-3) and *Notolinopsis janaki* nov.sp. (4-6) (scale bar: 0.1 mm).

series of deep, not particularly dense punctation (the distance between the punctures is about equal to their diameter). Abdomen with very fine punctation on the sides.

Posterior margin of the sixth visible sternite with an evident, median lobule.

Tergite and sternite of the male genital segment as in Figs 4-5. Aedeagus (Fig. 6) 0.90 mm long, sub-spherical, with robust, asymmetric parameres; median lobule large, folded to the left with the organ in dorsal view; inner sac shaped sausage with narrow apices, covered with small, more or less ovoidal scales.

**E t y m o l o g y :** Patronymic. Dedicated to the friend and colleague Jiri Janak.

**D i s t r i b u t i o n :** The species seems to live in Western Cape region.

**R e m a r k s :** This specie differs from all the congeners by the peculiar structure of the aedeagus. The species of this genus are divided (Bordoni 2016) in two groups, one composed of apterous species with small and flat eyes and paler colouration, living especially in the mountains of Kenia and Congo (*N. crateris* group) and one composed of brown or black species with small but evident eyes, living in South Africa (*N. diligens* group).

**B i o n o m i c s :** Stream banks, leaf and log litter in indigenous forests.

### ***Notolinopsis mbotyanus* nov.sp. (Figs 7-9)**

**E x a m i n e d m a t e r i a l :** Holotype ♂: RCA: W Cape, Mbotyi Forest, 31.27S, 29.44E, Janak 1-3.XII.2006 (cJ); paratypes: same data, 2 ♀ ♀ (cJ), 2 ♀ ♀ (cB).

**D e s c r i p t i o n :** Length of body 9.5 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Body shiny, without micro-sculpture, apart the abdomen, at most with traces of transverse micro-striation on head and pronotum. Clypeus concave. Reddish brown with lighter abdomen; antennae and legs brown light. Head sub-quadrangular, a little narrow forward, with feebly rounded sides and largely rounded posterior angles. Eyes small and a little protruding. Surface of head with few, deep, sparse punctation, almost absent on the sides. Pronotum sub-rectangular, narrow, longer and narrower than head, with oblique anterior margins, rounded anterior angles and sinuate sides. Surface with dorsal series of 7-8 punctures and lateral series of 4 median punctures. Elytra sub-rectangular, not dilated posteriad, long, longer and wider than pronotum, with a little rounded sides and very marked humeral angles. Surface with fine, deep, not particularly dense punctation, arranged in numerous series. Abdomen with fine, dense, transverse micro-striation and fine punctation on the sides.

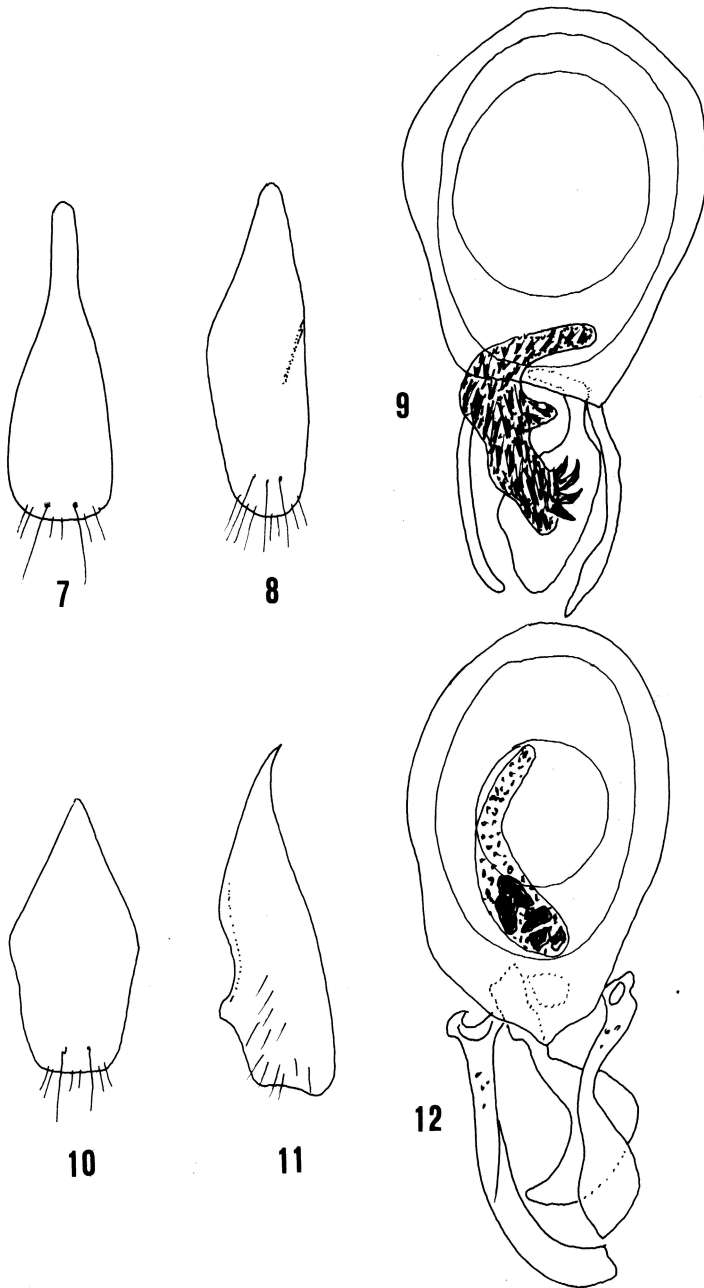
Tergite and sternite of the male genital segment as in Figs 7-8. Aedeagus (Fig. 9) 1.4 mm long, sub-spherical, with asymmetric, long and very narrow parameres; median lobule of peculiar shape, very large; inner sac half-moon shaped, covered with very dense spinulae so much to appear as a dark mass from which some bigger, distal spines emerge.

**E t y m o l o g y :** The specific epithet refers to the type locality.

**D i s t r i b u t i o n :** The species is known only from the type locality.

**R e m a r k s :** The aedeagus of this species vaguely resemblint to that of *N. reticulatus* BORDONI, 2016 from Cape Province but the species differs by size, micro-sculpture (polygonal on head in *N. reticulatus*), color and peculiar structure of the male genitalia.

**B i o n o m i c s :** Indigenous forest, litter.



**Figs 7-12:** Tergite and sternite of the male genital segment, aedeagus of *Notolinopsis mbotyianus* nov.sp. (7-9) and *Notolinopsis mirabilis* nov.sp. (10-12) (scale bar: 0.1 mm).

***Notolinopsis mirabilis* nov.sp. (Figs 10-12)**

**Examined material:** Holotype ♂: RCA: W Cape, Piketberg, M. Klich 26.X.2008 (cJ); paratype: same data, 1 ♂ (cB); W Cape, Bot river, bridge on Hwy N2 pr. Botrivier, 34.14S, 19.12E, Janak 10.XII.2009, 1 ♂ (cJ).

**Description:** Length of body 7 mm; from anterior margin of head to posterior margin of elytra: 3.6 mm. Surface of head with polygonal micro-reticulation. Body black with pronotum and elytra reddish brown; antennae brown black with reddish 2nd article. Eyes small and protruding. Surface of head matt by the dense and fine polygonal micro-reticulation, with deep, sparse punctation, finer on the sides. Pronotum robust, feebly dilated forward, longer and a little narrower than head, with oblique anterior margins, rounded anterior angles and sinuate sides. Surface with fine, dense, transverse micro-striation, dorsal series of 5-6 punctures and lateral series of 4-5 punctures; other punctures near the anterior angles; all the punctures superficial. Elytra sub-rectangular, a little dilated posteriad, with slightly rounded humeral angles. Surface with numerous series of very fine and dense punctation. Abdomen with fine and dense, transverse micro-striation and fine punctation.

Tergite and sternite of the male genital segment as in Figs 10-11. Aedeagus (Fig. 12) 1.25 mm long, sub-ovoid, with asymmetric, long, robust parameres of peculiar shape; median lobule arched and long; inner sac arched, covered with small proximal, round scales, large and irregular in the distal portion.

**Etymology:** The specific epithet is the Latin *mirabilis*-e (admirable).

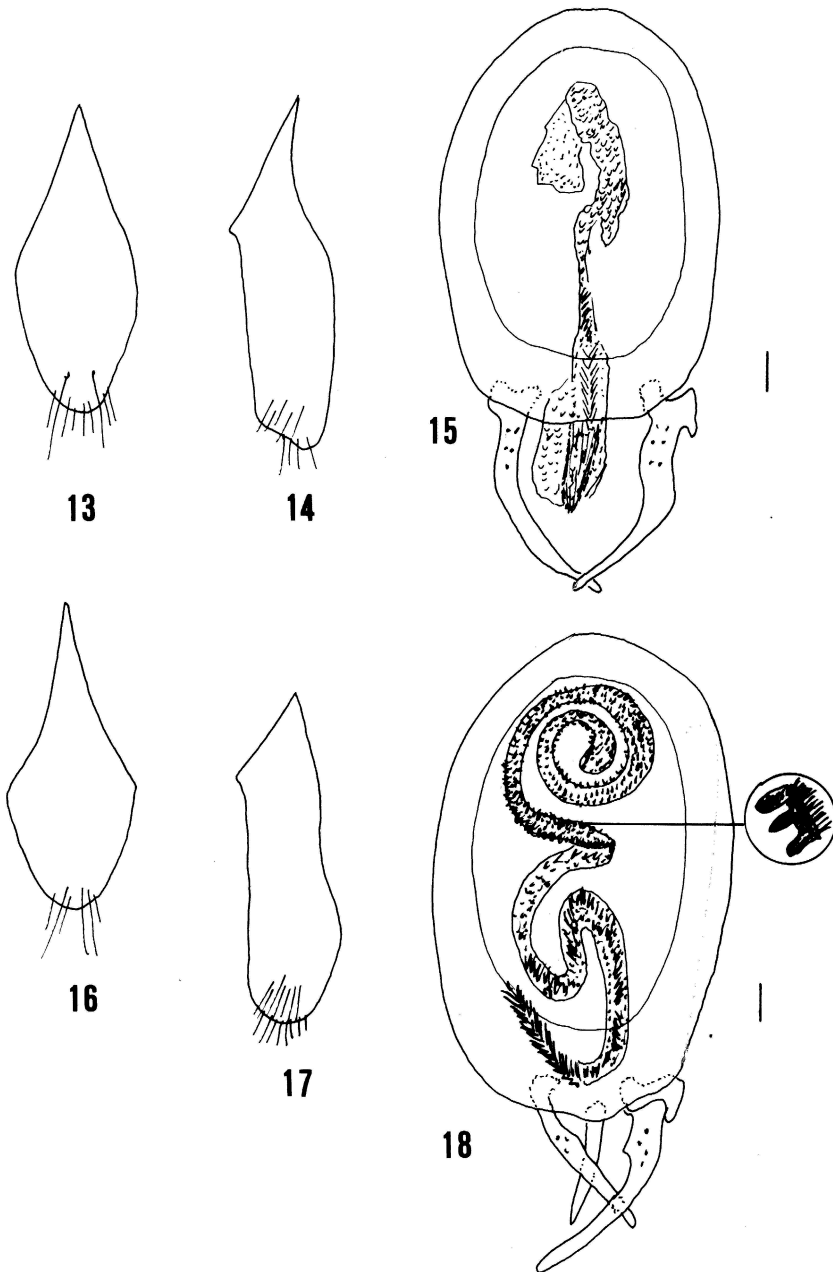
**Distribution:** The species is known only from the type localities.

**Remarks:** The aedeagus of this species is similar to that of *N. fallax* (SACHSE, 1852) of Cape Province from which the new species differs by size, color, micro-sculpture of head (transverse in *N. capensis*) and different male genitalia.

***Notolinopsis khei* nov.sp. (Figs 13-15)**

**Examined material:** Holotype ♂: RCA: W Cape, Piketberg, M. Klich 26.X.2008 (cJ); paratype: same data, 1 ♀ (cB).

**Description:** Length of body 9.8 mm; from anterior margin of head to posterior margin of elytra: 5.5 mm. Body robust, reddish brown with darker head and red pronotum; antennae and legs reddish brown. Head and pronotum massive, eyes large and a little protruding. Head sub-quadrangular, narrow forward, with feebly rounded sides and largely rounded posterior angles. Surface with slightly traces of transverse micro-striation, almost shine, with wide, superficial, sparse punctation, smaller and denser on the sides. Pronotum broad, very dilated forward, longer and wider than head, with a little oblique anterior margins, strictly rounded anterior angles and very sinuate sides. Surface with fine, transverse micro-striation on the middle, two series of wide and superficial punctures and with smaller lateral, irregular punctation. Elytra large, sub-quadrangular, not dilated posteriad, shorter than pronotum and as wide as it, with feebly rounded humeral angles. Surface with more or less polygonal micro-reticulation between a fine, deep, very dense punctation. Abdomen with traces of fine, transverse micro-striation and very fine, dense punctation on the anterior portion of the segments.



**Figs 13-18:** Tergite and sternite of the male genital segment, aedeagus of *Notolinopsis khoi* nov.sp. (13-15) and *Notolinopsis lemniscatus* nov.sp. (16-18) (scale bar: 0.1 mm).

Tergite and sternite of the male genital segment as in Figs 13-14. Aedeagus (Fig. 15) 1.7 mm long, sub-ovoid, with asymmetric, robust parameres; inner sac tape-like, long and narrow, folded on its self, covered with fine spinulae and scales.

**E t y m o l o g y :** The specific epithet refers to the indigenous tribe, as a noun in apposition.

**D i s t r i b u t i o n :** The species is known only from the type locality.

**R e m a r k s :** The aedeagus of this species is related to that of *N. twello* BORDONI, 2016 from Transvaal from which the new species differs for size (body of *N. twello* 5.5 mm long), color, punctuation and for the male genitalia.

***Notolinopsis lemniscatus* nov.sp. (Figs 16-18)**

**E x a m i n e d m a t e r i a l :** Holotype ♂: RCA: E Cape, Hogsback, 970-1300 m, 32.35S, 26.56-57E, Janak 5-7.XII.2006 (cJ); paratype: same data, 1♂ (cB).

**D e s c r i p t i o n :** Length of body 9.5 mm; from anterior margin of head to posterior margin of elytra: 5 mm. Body shiny, without micro-sculpture, apart the abdomen, reddish brown; antennae and legs brown. Head sub-ovoid, very narrow forward, with rounded sides and largely rounded posterior angles. Eyes small and almost flat. Surface of head with sparse, deep punctation, especially on the sides, finer and almost absent on the extensive central portion. Pronotum massive, dilated forward, very longer and wider than head, with oblique anterior margins, largely rounded anterior angles and sinuate sides. Surface with dorsal series of 6-7 deep, spaced punctures and sparse, fine lateral punctation. Elytra sub-rectangular, dilated posteriad, shorter and narrower than pronotum, with rounded humeral angles. Surface with numerous series of deep, dense punctures. Abdomen with fine, dense, transverse micro-striation and fine punctation on the sides.

Tergite and sternite of the male genital segment as in Figs 16-17. Aedeagus (Fig. 18) 2 mm, sub-ovoid, with short, asymmetric parameres; median lobule short and narrow; inner sac tape-like, narrow and very long, to concentric turns in the proximal portion, covered with different spinulae and scales on the different portions.

**E t y m o l o g y :** The specific epithet is the Latin *lemniscatus- a- um* (ribbon-like), in relation to the shape of inner sac of the aedeagus.

**D i s t r i b u t i o n :** The species is known only from the type locality.

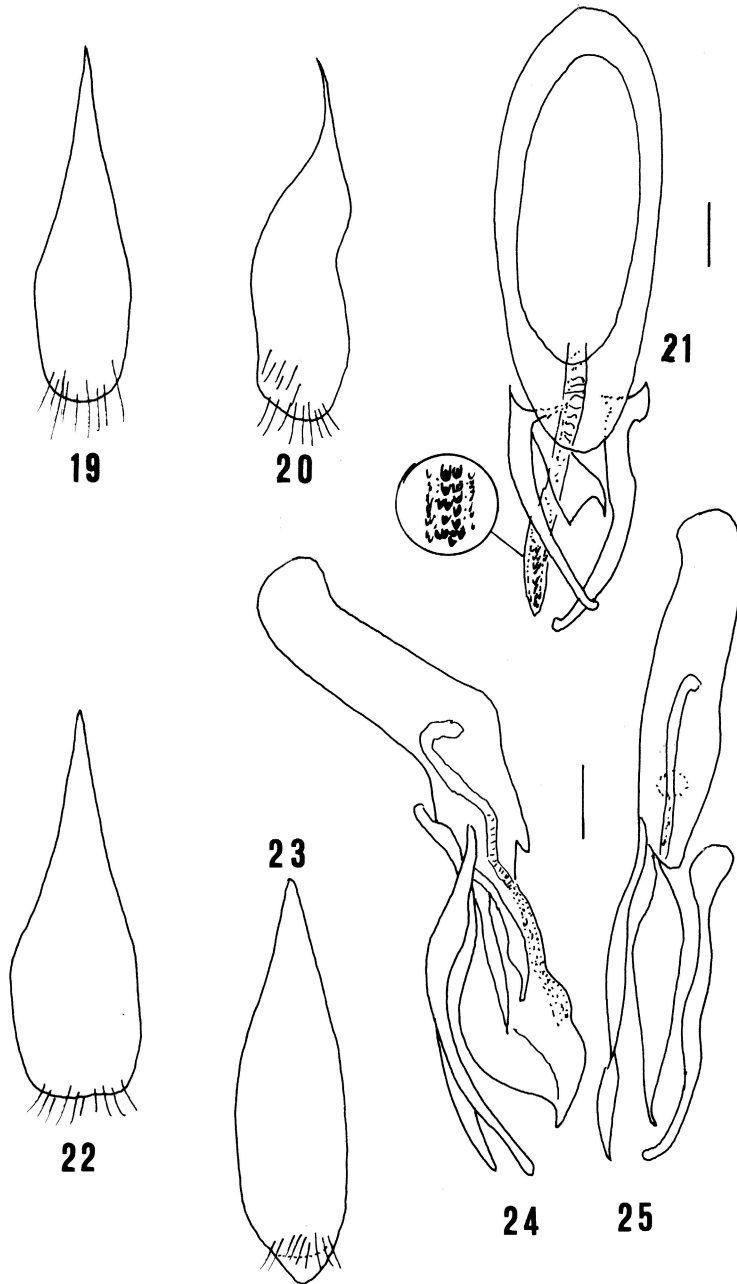
**R e m a r k s :** The aedeagus of this species is related to that of *N. oosthuizeni* BORDONI, 2016 from Cape Province, from which the new species differs for size, color, punctuation and male genitalia.

***Notolinopsis natalensis* nov.sp. (Figs 19-21)**

**E x a m i n e d m a t e r i a l :** Holotype ♂: RCA: KwaZulu-Natal, Howich, Gilboa Mt, 1650-1700 m, 29.17S, 30.17E, Janak 29.XI.2009 (cJ); paratypes: same data, 2♂♂ (cJ), 2♂♂ (cB).

**D e s c r i p t i o n :** Length of body 6.8 mm; from anterior margin of head to posterior margin of elytra: 3 mm. Body apterous, reddish brown light with amaranth head and pronotum. Head long, sub-rectangular, a little narrow forward, with slightly rounded sides and largely rounded posterior angles. Eyes very small and flat. Surface of head with very fine, dense, polygonal micro-reticulation and broad, deep, sparse punctation





**Figs 19-25:** Tergite and sternite of the male genital segment, aedeagus of *Notolinopsis natalensis* nov.sp. (19-21) and *Linosomus socius* (FAUVEL) with the aedeagus in lateral and dorsal view (22-25) (scale bar: 0.1 mm).

Pronotum dilated forward and narrow posteriad, longer than head, as wide as it, with oblique anterior margins, largely rounded anterior angles and feebly sinuate sides. Surface with fine, dense, transverse micro-striation, dorsal series of 8-9 punctures and lateral series of 4-5 irregular punctures. Elytra short, shorter and narrower than pronotum, sub-rectangular, with sub-rectilinear and sub-parallel sides, almost obsolete humeral angles, visibly imprinted at the height of the very large and smooth scutellum. Surface with traces of polygonal micro-reticulation and numerous series of fine, dense punctures. Abdomen with fine, dense, transverse micro-striation and fine, not sparse punctation.

Tergite and sternite of the male genital segment as in Figs 19-20. Aedeagus (Fig. 21) 0.96 mm long, ovoid elongate, membranous, long and narrow, with robust, asymmetric parameres; median lobule of peculiar shape; inner sac tape-like, narrow, rectilinear, covered with fine scales.

**E t y m o l o g y :** The specific epithet refers to Natal.

**D i s t r i b u t i o n :** The species is known only from the type locality.

**R e m a r k s :** The aedeagus of this species is similar to that of *N. reticulatus* BORDONI, 2016 from Cape Province from which the new species differs for small size (body of *N. reticulatus* 11 mm long), punctation and male genitalia.

**B i o n o m i c s :** Indigenous forest, litter.

### ***Linosomus socius* (FAUVEL, 1877) (Figs 22-25)**

**E x a m i n e d m a t e r i a l :** RCA, W Cape, Grootvaderbosch NR, 300-400 m, 33.59S, 20.49E, Janak 8.XII.2009, 2♂♂, 2♀♀ (cJ), 1♂ (cB); KwaZulu-Natal, Cathedral Peak NR, Tainbow Gorge, 28° 57.60'S, 29° 13.61'E, 1480 m, Janak 19-20.XI.2006, 3♂♂ (cJ); same data, Impendle, Nhlosame farm, 29.35S, 29.58E, J. Kotze 30.III-19.IX.1994, 12♂♂, 6♀♀ (cJ), 3♂♂, 3♀♀ (cB).

**D i s t r i b u t i o n :** Zimbabwe, South Africa (BORDONI 2016), Australia (BORDONI 2005), New Zealand (BORDONI 2005a: introduced).

**R e m a r k s :** This is a very widespread species in South Africa, very variable in size, color and punctation. I propose detailed figures of the male genitalia (Figs 22-25).

## **Acknowledgements**

I wish to thank my friend and colleague Jiri Janak for giving me the opportunity to study very interesting material.

## **Zusammenfassung**

Sechs neue Arten aus der Familie der Staphylinidae, allesamt aus der Republik Südafrika, werden beschrieben und grafisch dargestellt: *Xanthophilus janaki* nov.sp., *Notolinopsis janaki* nov.sp., *N. mbotyanus* nov.sp., *N. mirabilis* nov.sp., *N. khoi* nov.sp., *N. lemniscatus* nov.sp. und *N. natalensis*.

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