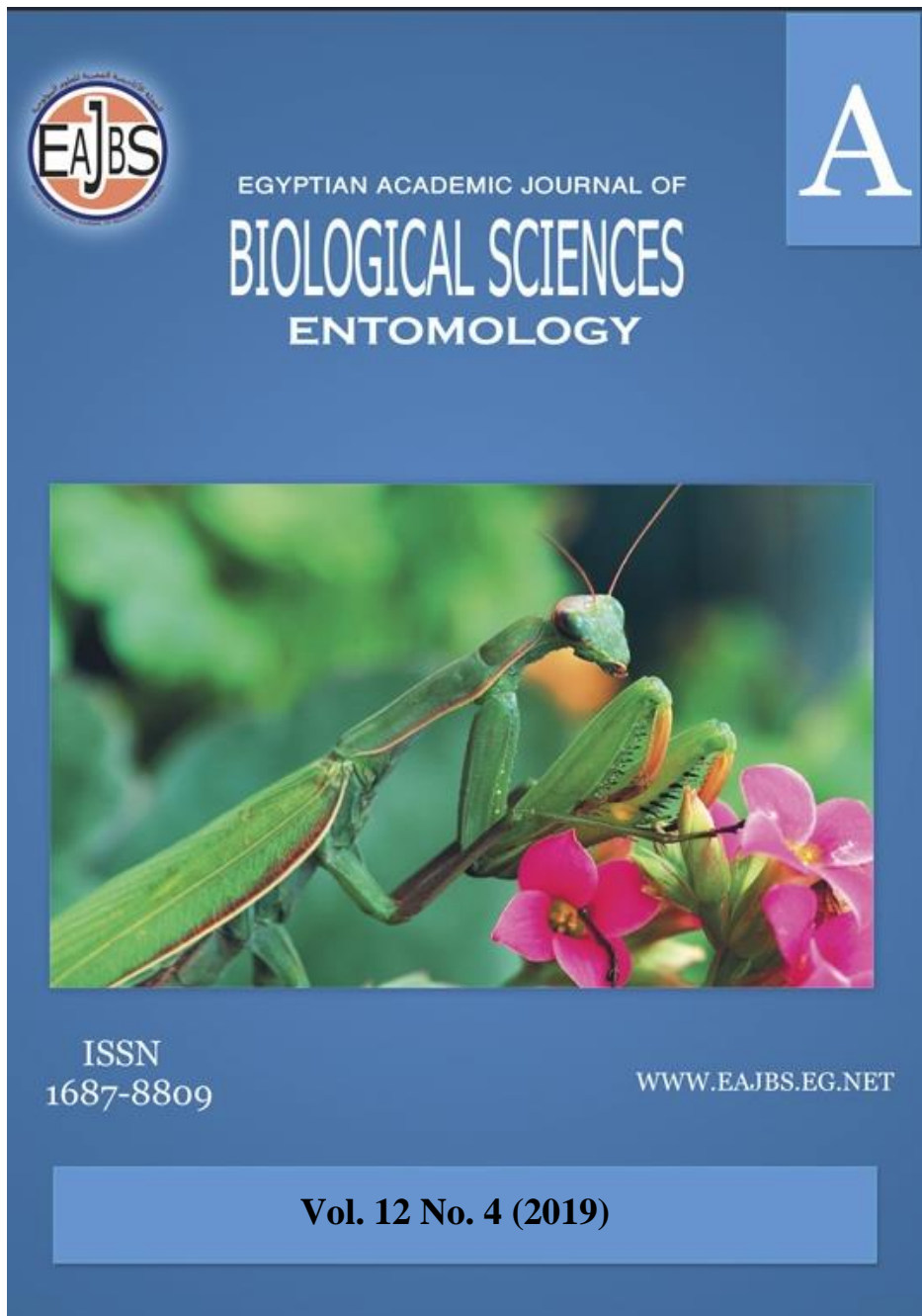
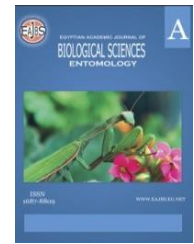


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**Taxonomic key of SubFamily Meligethinae  
(Order Coleoptera: Family Nitidulidae) in Egypt**

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**ARTICLE INFO**

**Article History**

Received:6/5/2019

Accepted:8/6/2019

**Keywords:**

Taxonomic key,  
Nitidulidae,  
Meligethinae, Egypt.

**ABSTRACT**

The gathered information elucidated that subfamily Meligethinae is represented in Egypt by 10 species in nine genera. This study was planned to identify and to determine the recent taxonomic status of this group of meligethins species in Egypt. An illustrated key was given for all Meligethinae genera and species.

**INTRODUCTION**

Several recent reviews of Nitidulidae biology are available (Jelinek et al., 2010; Cline, 2005; Audisio et al., 2000; Audisio, 1993). Overall, nitidulid beetles show a various habitats feeding on flowers, sap, fruits, fungi, decaying and fermenting plant tissues or dead animal tissues. Nitidulids may be collected using a variety of directed (sweeping and beating vegetation/inflorescences, sifting leaf litter, searching under bark and various fungal substrates, as well as in nests of social Hymenoptera) and passive techniques (flight intercept traps, pitfall traps, malaise traps, and mercury vapor or black lights at night). Large numbers of nitidulids can typically be found in palm inflorescences (e.g., *Mytrops* and related genera); baited fruit or molasses traps (*Carpophilus*, *Colopterus*, *Brachypeplus*, *Amphicrossus*, *Lobiopa*, and *Cryptarcha*), and sifting leaf litter (*Stelidota*).

Nitidulidae is represented in Egypt by four subfamilies (Carpophilinae, Cryptarchinae, Meligethinae and Nitidulinae) according to Jelinek J. and Audisio P. (2007).

**MATERIALS AND METHODS**

The present taxonomic study started by examination of the Egyptian Reference Insect Collections for materials regarded as nitidulid beetles. These collections are: Collection of Ministry of Agriculture, Plant Protection Research Institute (MAC); Collection of Egyptian Entomological Society (EESC); Collection of Faculty of Science, Cairo University (CUC), Alfieri Collection, Faculty of Agriculture, Al-Azhar University (ALC) and Collection of Faculty of Science, Ain Shams University (ASUC). A recent taxonomic position is provided following Audisio *et al.* (2009).

## RESULTS AND DISCUSSION

### Subfamily Meligethinae C. G. Thomson, 1859.

Meligethinae, commonly known as pollen beetles are one of the most and largest subfamily found in family Nitidulidae belonging to the superfamily Cucujoidea and suborder Polyphaga.

Meligethinae is differentiated by: mostly black, metallic blue or green species. Middle and hind tibiae with a simple or single outer margin, more or less sharp outer (dorsal) edge and no more than pygidium exposed behind elytra.

Subfamily Meligethinae includes 10 species from nine genera according to recent researches.

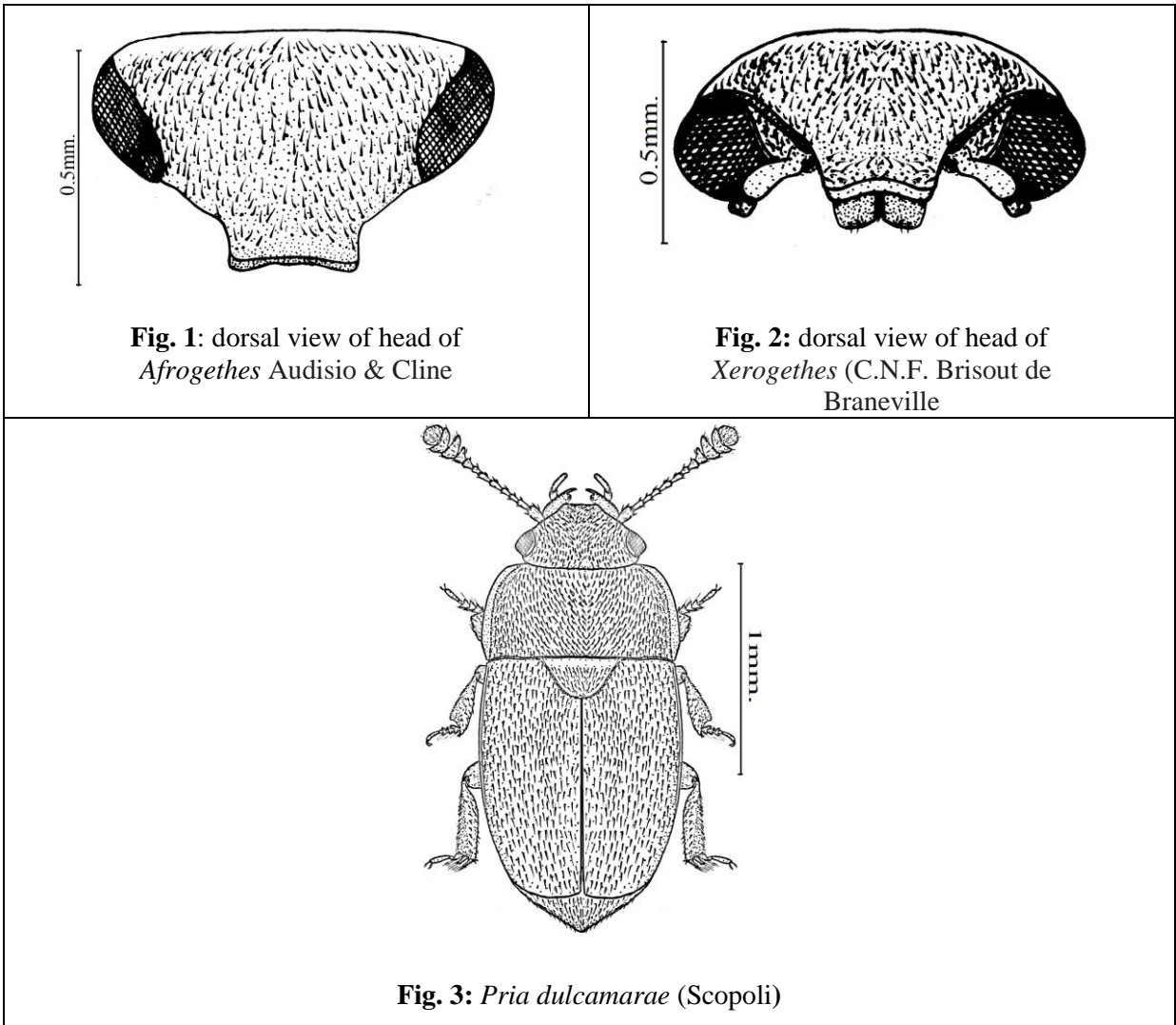
### Key to genera and species of subfamily Meligethinae

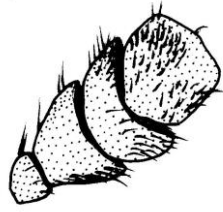
- 1 Circum-ocular furrows (occipital sulci) on dorsal side of head absent (Fig. 1) .....2
- Circum-ocular furrows (occipital sulci) on dorsal side of head present (Fig. 2) .....5
- 2 Yellowish or yellowish-brown dorsal body surface; dorsal punctures on discal portion of pronotum usually smaller than eye facet, shallowly impressed and sparse. .... *Pria dulcamarae* (Scopoli)(Figs.3-7)
- Variable dorsal body surface (brown, blackish, reddish, or blackish with orange spots on elytra, or metallic green or blue); dorsal punctures on discal portion of pronotum as large as or larger than eye facets, usually moderately deeply impressed and densely distributed ..... 3
- 3 Pronotal and elytral sides widely flattened, the fore tibiae without prolonged teeth .....*Brassicogethes aeneus* (Fabricius). (Figs. 8-11).
- Pronotal and elytral sides narrowly flattened, the fore tibiae with prolonged teeth ..... *Afrogethes* .....4
- 4 Outer edge of front tibiae with a larger more prominent tooth at the basal third separated by small teeth from a group of larger teeth at the apex, and often pectinate (Fig. 12)..... *Afrogethes yemenensis* (Easton)
- Outer edge of front tibiae with dense, sharp sawteeth, gradually longer toward the apex (Figs. 13- 17)..... *Afrogethes planiusculus* (Heer)
- 5 Pubescence short and fine.....  
..... *Xerogethes rotundicollis* (C. N. F. Brisout de Barneville,1863)
- Pubescence long and fine .....6
- 6 Caudal marginal lines of metacoxal cavities nearly simple, usually subparallel and more or less narrowly contiguous to posterior margin of metacoxal cavities, with shallow arched impression of outer 'axillary' line; 'axillary' space on first abdominal ventrite large .....*Lamiogethes serripes* (Gyllenhal)(Fig. 18)
- Caudal marginal lines of metacoxal cavities simple or variable but comprising moderately deep arched impression of outer 'axillary' line, and the 'axillary' space on first abdominal ventrite reduced.....7
- 7 Lateral margin of meso and metatibiae bearing a single and usually even row of large and robust pegs ..... 8
- Meso- and metatibiae with lateral margin bearing a single and moderately even row of relatively small robust spurs ..... 9

- 8 scutellum regularly punctured in most of exposed portion (Fig. 19); prosternal antennal furrows of anterior margin of prosternum strongly raised but short; protibiae with a series of small, even, short and rounded teeth on lateral margin. .... *Astylogethes subrugosus* (Gyllenhal)(Fig. 21)
- scutellum regularly punctured on posterior half of exposed portion (Fig. 20); prosternal antennal furrows on anterior margin of prosternum strongly raised and relatively long; protibiae with a series of variable, even or uneven, large or small, sharp or blunt teeth on lateral margin.....  
 .....*Stachygethes ruficornis* (Marsham)(Fig.22)
- 9 Large, long, and deeply impressed arched impressions on basal portion of last visible abdominal ventrite, (Fig. 23&25) .....*Fabogethes nigrescens* (Stephens)
- Relatively small, short, but deeply impressed arched impressions on basal portion of last visible abdominal ventrite, (Fig. 24&26).....*Thymogethes lugubris* (Sturm)

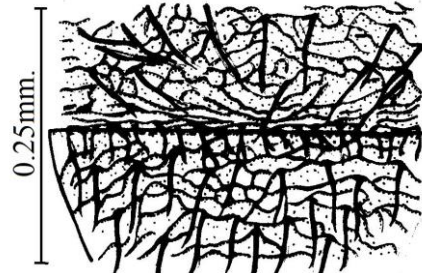
**Acknowledgement**

Many thanks offered to Late Prof. Dr. *Ashraf M. A. El-Torkey*, Plant Protection Research Institute, Agriculture research Center, for the good cooperation and treatment; “For me all the respect and appreciation”. We express sincere thanks to the curators of the mentioned reference collections.

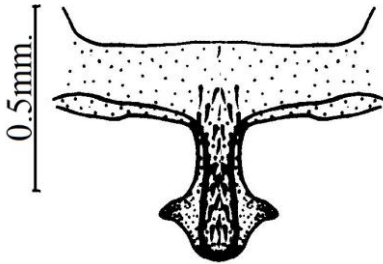




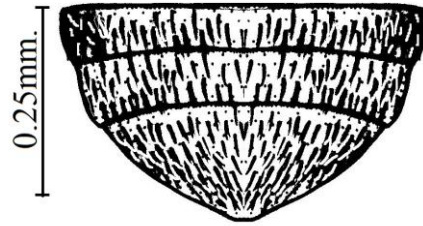
**Fig. 4:** Female antennal club of *Pria dulcamarae*



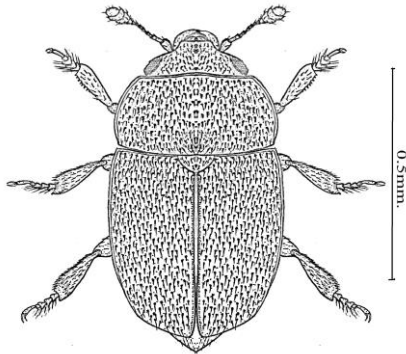
**Fig. 5:** Anterior portion of scutellum and microsetae on middle posterior margin of pronotum of *Pria dulcamarae*



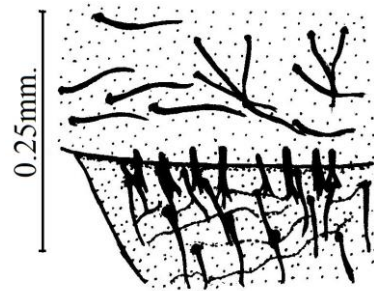
**Fig. 6:** Prosternal process of *Pria dulcamarae*



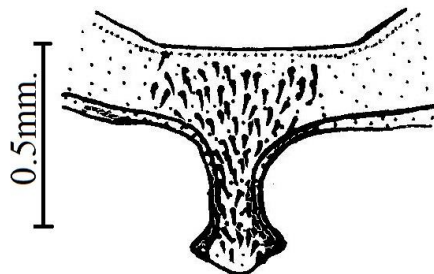
**Fig. 7:** last ventral visible abdominal ventrite of *Pria dulcamarae*



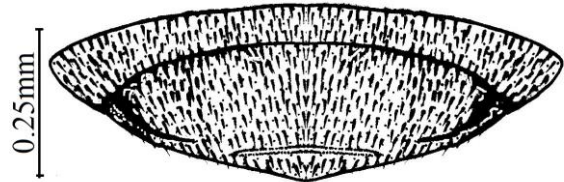
**Fig 8:** *Brassicogethes aeneus* (Fabricius).



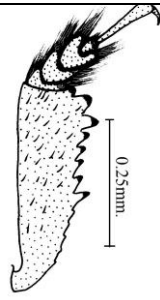
**Fig. 9:** Scutellum and microsetae on pronotum of *Brassicogethes aeneus*



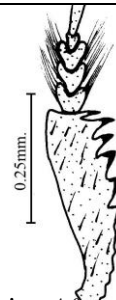
**Fig. 10:** Prosternal process of *Brassicogethes aeneus*



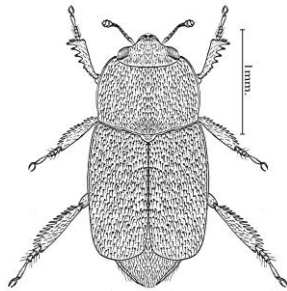
**Fig. 11:** last visible abdominal ventrite *Brassicogethes aeneus*



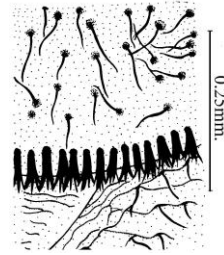
**Fig. 12:** front tibiae *Afrogethes yemenesis*



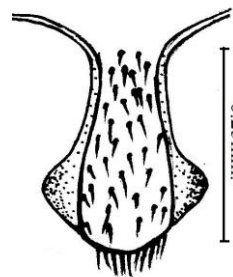
**Fig. 13:** front tibiae *Afrogethes planiusculus*



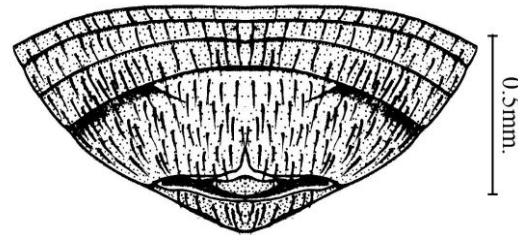
**Fig. 14:** *Afrogethes planiusculus* (Heer)



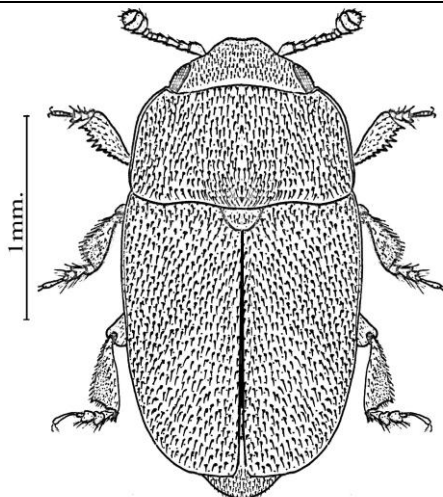
**Fig. 15:** microsetae on middle posterior margin of pronotum *Afrogethes planiusculus*



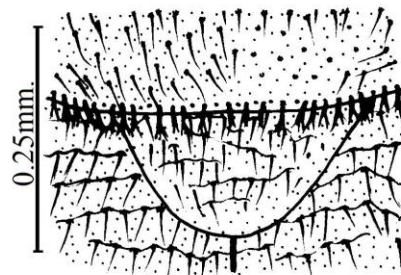
**Fig. 16:** prosternum *Afrogethes planiusculus*



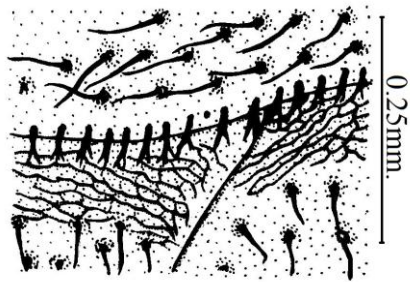
**Fig. 17:** Exposed portion of last visible abdominal ventrite of *Afrogethes planiusculus*.



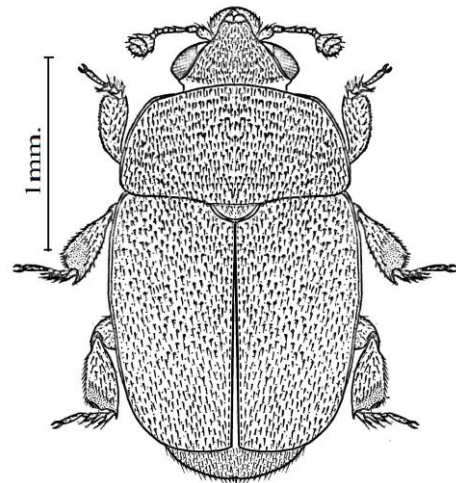
**Fig. 18:** *Lamiogethes serripes* (Gyllenhal)



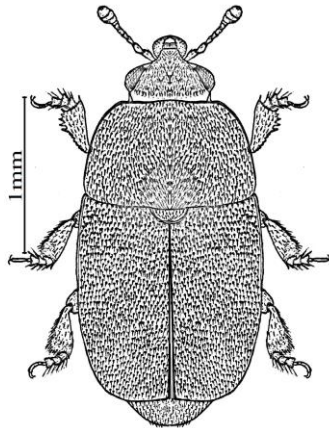
**Fig. 19:** Scutellum and microsetae on middle of posterior margin of pronotum *Astylogasis subrugosus*



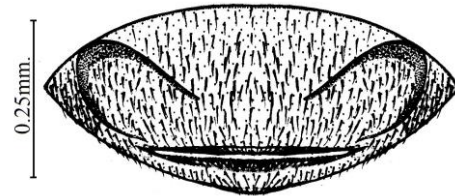
**Fig. 20:** Scutellum and microsetae on middle of posterior margin of pronotum *Stachygethes ruficornis*



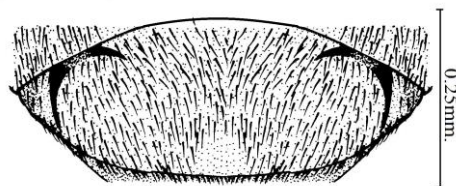
**Fig.21:** *Astylogethes subrugosus* (Gyllenhal).



**Fig. 22:** *Stachygethes ruficornis* (Marsham)



**Fig.23.** exposed portion of last visible abdominal ventrite of *Fabogethes nigrescens* (Stephens)



**Fig.24:** exposed portion of last visible abdominal ventrite of *Thymogethes lugubris* Audisio & Cline

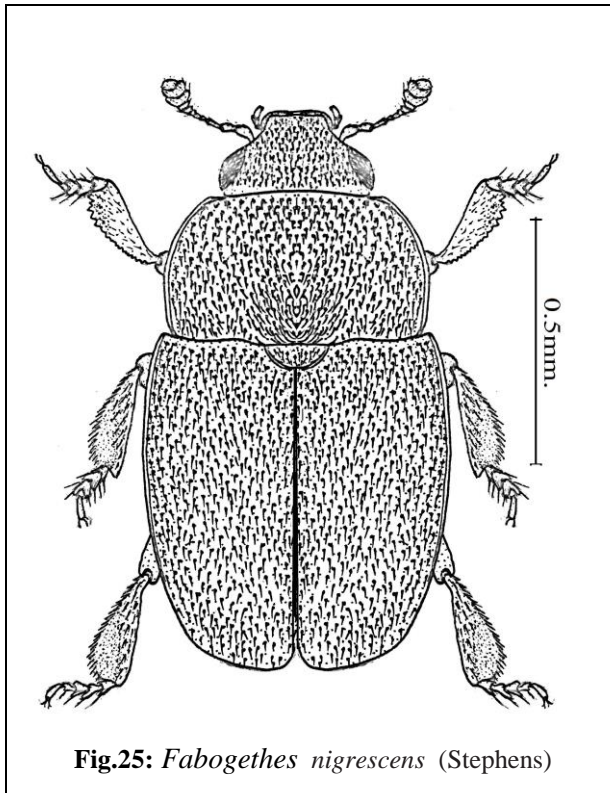


Fig.25: *Fabogethes nigrescens* (Stephens)

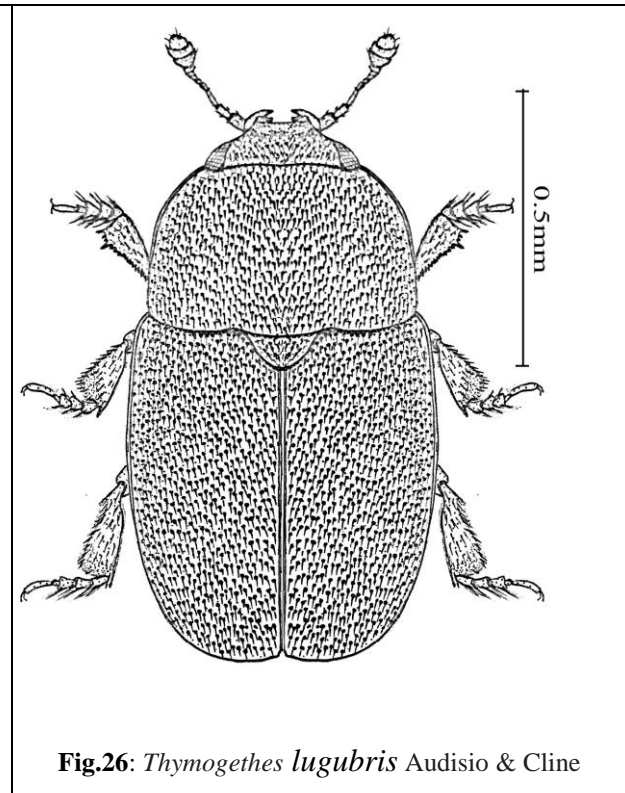


Fig.26: *Thymogethes lugubris* Audisio & Cline

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