Anoxia Laporte de Castelnau, 1833

Taxonomy

Sub family: Melolonthinae / Tribe: Melolonthini / Genus: *Anoxia*

Distinguishing Features

Large cylindrical beetles, body length 18-35mm. Body colouration light to dark brown, or reddish brown. Legs often darker. Elytra of some species with white scales arranged in longitudonal bands that can be rubbed off relatively easily. Clypeus large and prominent, with apex subquadrate and sometimes very slightly emarginate, covered in scale-like setae. Labrum located under the clypeus, clearly separated and deeply incised medially, commonly with medially directed setae on each lobe. Antennae with 10 segments. Males with a 5 segmented, elongated club. Females with a shorter 4-5 segmented club. Scales and setae can be present on the pronotum that lacks a membraneous anterior margin. Male foretibia unidentate, females tridentate. Mesometasternal process absent. Metasternum setose. Tarsal claws with a basal tooth.

Related and Similar Species

There are around 40 species within the genus *Anoxia*. The two main pest species are *Anoxia* (*Protanoxia*) *orientalis* and *Anoxia pilosa*. Both can be readily separated from each other through their body colouration and scales (*A. orientalis* are generally lighter brown to reddish brown, and with elytral scales in rows, *A. pilosa* are darker brown and lacks elytral scales.
The genus is placed within the tribe Melolonthini which share the following features: Abdominal sternites at least partially fused, sutural lines present between sternites, even when fused. Meso and metatibia with 2 spurs. Tarsal claws usually equal. Antennae 9 or 10 segmented (rarely 8), Antennal lamellae 3-7 segmented. Labrum located below clypeus, distinct. 5th Abdominal sternite and propygidium separated by a suture. Protibia with apical spurs.
In the key, the genus is similar to *Melolontha* and *Polyphylla*. Among other differing features, the males can be separated through the number of antennal club segments (*Anoxia*: 5, *Melolontha*: 7, *Polyphylla*: 7) that are enlarged, and the foretibia (*Anoxia*: unidentate, *Melolontha*: tridentate, *Polyphylla* bidentate).

Biological Data

Both pest species larvae preferably develop in salty, sandy soil. *A. orientalis* has a 3-4 year lifecycle. Mature larvae form the primary pest stage, which cause damage to the root systems of young fruit trees and grape vines. *A. pilosa* is a pest of pine trees, the larvae damaging the roots of young pine plantations and adults feeding and often skeletonising their leaves.

Distribution

Anoxia are primarily western Palearctic in origin. *A. orientalis* is widespread from Hungary to Sicily and through Greece to Ukraine, while *A. pilosa* is distributed from Northern Italy through to Poland and Ukraine.
The genus is absent from Australia.


Anoxia pilosa lateral view
Photographer:
Pia Scanlon


Anoxia pilosa dorsal male genitalia
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Pia Scanlon


Anoxia pilosa lateral male genitalia
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Anoxia pilosa ventral view
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Anoxia pilosa clypeus
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Anoxia pilosa dorsal view
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Anoxia pilosa head front
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Anoxia orientalis lateral view
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Anoxia orientalis dorsal male genitalia
Photographer:
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Anoxia orientalis lateral male genitalia
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Anoxia orientalis clypeus
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Anoxia orientalis head front
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