



ETNA'S CAVES FAUNA - DESCRIPTION AND CONSIDERATIONS

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Abstract

The author briefly illustrates the characteristics of the volcanic caves and the cavern dwelling animals living in them; the fauna of the caves of Mt Etna are then discussed.

From this investigation it emerges that in the caves that have been so far explored the fauna present are the following: 59 species of animals of which only two have so far been found exclusively in volcanic caves; these are, however, of little speleological interest, in fact, one, *Araeoncus sicanus*, from the "Marrano" cave is almost certainly a troglonex; the other, the dipteran *Limosina ventruosella* (Fig. 1), seems to be more interesting as it is a troglophil.

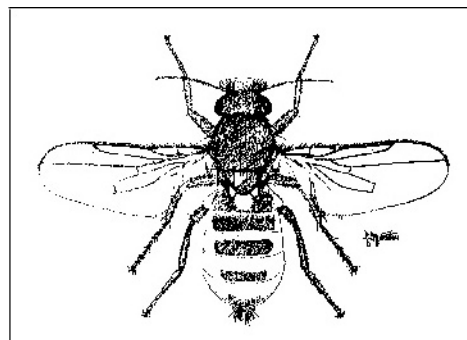


Fig. 1 - *Limosina ventruosella*

In fact, to date the presence of paleoendemisms or neoendemisms have not been noted, though their existence cannot be ruled out as of the hundreds of known caves only a few have been studied for their fauna. The species that have been found are distributed in the following animal groups: 2 species of Oligochaeta, 7 Gasteropoda, 12 Isopoda Oniscidea, 1 Diplopoda, 3 Chilopoda, 1 Pseudoscorpiones, 10 Araneae, 2 Opiliones, 10 Collembola, 1 Orthoptera, 2 Coleoptera, 2 Diptera, and 6 Chiroptera.

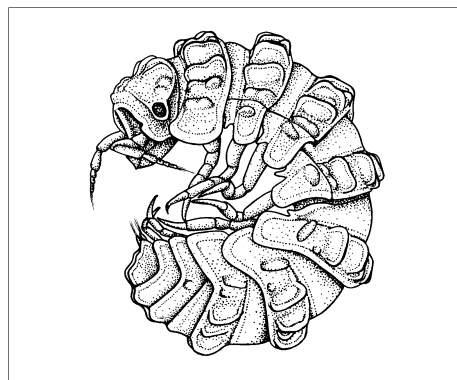


Fig. 2 - *Buddelundiella cataractae* (Verh.)

None of the above is troglobites while many are troglophiles. Among the Isopoda Oniscidea the following are of particular interest: *Trichoniscus matulicii* (Verh.), which is notable for its geographic distribution, that is of the transadriatic type; this species is known in southern-central Italy, southern Dalmazia and the island of Corfù; its passage to Sicily could be linked to one of the Calabrian-Sicilian connections of the Quaternary; *Haplophthalmus avolensis* (Vandel), a species that to date has been found only in the Iblean region; *Buddelundiella cataractae* (Verh.) (Fig. 2), this species is interesting as in Sicily it is known only in the "Nuovalucello I" cave, where it is abundant while it has never been found in or outside any other karsic cave; Sicily is the southern border of the area for this species, its distribution is of the south-

European type with a paleo-European origin. The common troglophiles are *Chaetophiloscia cellaria* (Doll.) and *Porcellio dilatatus* (Brandt).

Only one species of Pseudoscorpiones is known for these caves, *Chthonius ischnocheles ruffoi* (Cap.), that is perhaps a troglophil. Spiders are well represented with 10 species: *Paraleptoneta spinimana* (Simon) appears interesting as it is the only Leptonetidae known in Sicily; *Porrhomma egeria* (Simon), genus and species that is known in Sicily only in volcanic caves; *Lepthyphantes carusoi* (Brignoli) and *Araeoncus sicanus* (Brignoli) both endemic in Sicily; the latter species is only known in volcanic caves. The Opiliones are only represented by one troglophilic species, *Dicranolasma soerenseni* (Thorell). The Coleoptera are present with two troglophiles species, the Carabidae *Laemostenus (Pristonycus) algerinus* (Gory), and the Staphilinidae *Quedius ragusai* (Gory). There are two species of Diptera present, both are troglophiles: *Limosina ventruosella* (Venturi) that has not been found in other caves, and *Psicoda minuta* (Banks), this species is



known in Italy only in one lava cave in Sicily. There are various bats present in these caves with six troglophilic species, one of which, *Myotis myotis* (Borkhausen), forms large colonies in the “Immacolatella” cave (Fig. 3) where large quantities of guano have accumulated; this species often lives together with other species.

In one lava cave, called “Grotta dei Ladri”, of which little is known including its exact location, a Coleoptera of the interesting troglophilic genus *Duvalius* is said to have been found, though this needs to be confirmed.

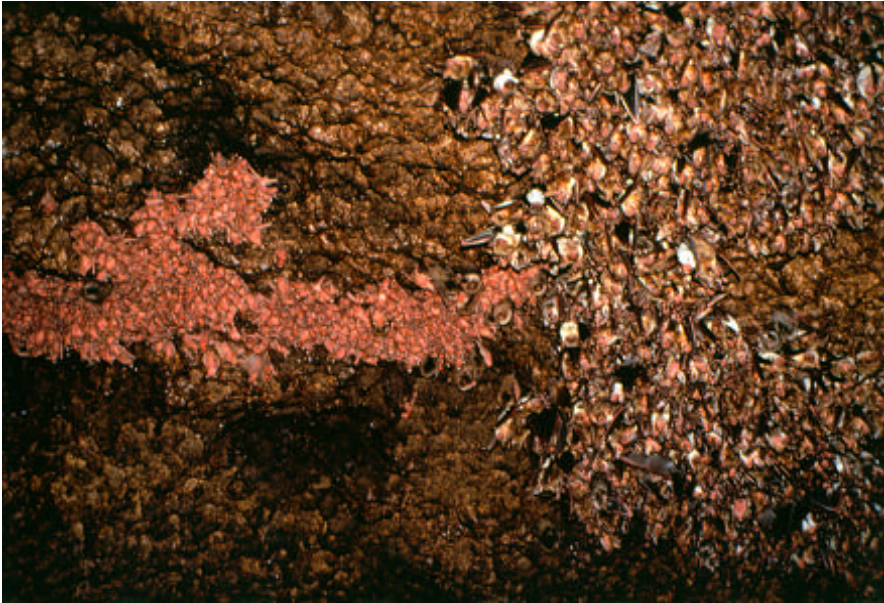


Fig. 3 – A colony of bats in the “Immacolatella” cave.

As can be seen from the above mentioned data there is no species of these volcanic caves of Mt Etna that is really troglotic, it is neither possible to affirm that the fauna of these caves is original, though, as stated, there are still many caves to be explored, above all the oldest ones, where more specialised fauna could be present as in the lava-flow caves on the Hawaiian islands where interesting troglotic species have been found (Howarth, 1972).

Moreover, troglotic species have been found in volcanic caves in the USA and Japan. As studies on Etnean vulcanospeleology are still few, the only existing works are by Caruso, 1974 and Caruso et al. 1978 who take into consideration only a small number of caves, a more extensive study can only be wished for.