

COLEOPTERA OF SOCOTRA

Beetles (Coleoptera) represent the largest insect order with more than 350.000 known species and is therefore also the largest order in the whole animal kingdom. Their body is well divided into three parts – head, thorax and abdomen and they can easily be distinguished from other insect orders by elytra – the sclerotised (hardened) first pair of wings. Beetles are extremely variable in shape, size and colour of body and they inhabit all terrestrial habitats, so they are the most successful group of animals.

In Socotra Island they are represented with approx. 45 so far known families and more than 300 species. Even in such small area, they show great variability in body size ranging from 0.8mm (*Limnebius dioscoridus* – family Hydraenidae) to 7cm (*Mallodon arabicum* – family Cerambycidae).



Darkling Beetles (Tenebrionidae)

Probably the species richest family on the island with 53 known species (8 genera are endemic – they only occur on this island). Except for genera *Zophosis* and *Socotralia*, most of them are crepuscular and nocturnal (active in the dusk and night respectively). They are adapted to arid and semi-arid conditions and can be found from lowland parts to high mountain altitudes on different habitats and possess various modes of life – e.g. they live in sandy dunes (psammophilous genus *Trachyscelis*), on trees (arboreal genera *Deretus*, *Corticeus*), in detritus (endogean genus *Nanocaecus*) and so on.



The darkling beetles *Zophosis aequalis* (top) and *Mesostena socotranensis*.



The tiger beetles *Myriochila melancholica* (left) and *Calomera aulica* (right).

Tiger Beetles (Cicindelidae)

The family Cicindelidae is represented by three species in three genera. The two species *Myriochila melancholica* and *Calomera aulica* are common in the surrounding of permanent water sites, while the third, still somewhat mysterious, species (*Socotrana labroturrita*) has so far been very rarely observed. Generally, tiger beetles are fast running predators that feed on other invertebrates. They can easily be recognized by relatively slender body, long legs and especially by peculiar large eyes and mandibles. Their larvae live hidden in the ground burrows lurking for the prey.

Ground beetles (Carabidae)

Ground beetles are usually slender beetles with long legs that allow them to be good runners. Great part of the family Carabidae are, as adults or larvae, active predators dwelling soil ground, much less number of species are phytophagous and some of them are omnivores. In most members of this group, males have dilated fore tarsomeres with adhesive hairs underneath which serve as stabilisation feature during copulation. Most species also possess defensive abdominal glands that excrete smelling substances.

Socotra island hosts 50 species of ground beetles.



The ground beetle *Pheropsophus hilaris sobrinus*

Jewel beetles (Buprestidae)

Buprestidae is a group of metallic and often shiny beetles with very short antennae. They can be observed during the day on wood, tree trunks, flowers and leaves of herbaceous and woody plants.

There are 9 known species of jewel beetles on the Island of Socotra.



The jewel beetle *Julodis clouei* is the largest representative of the family Buprestidae on the island.



Long-horned beetles (Cerambycidae)

Large group of herbivorous beetles with around 35.000 species. They have elongate body and possess distinct sexual dimorphism – antennae in males are usually much longer than in females. In Socotra the family is represented by 11 species with largest member (*Mallodon arabicum*) being at the same time the largest beetles living on the island.



The long-horned beetles *Mallodon arabicum* (left) and *Idactus hieroglyphicus* (right).



Weevils (Curculionidae)

The species most numerous beetle family in the world. In adults the head is produced into long or shorter rostrum which bears the elbowed antennae. Weevils are herbivorous beetles which develop primarily in living or dead plant tissues. In Socotra they are represented by several dozens of undescribed species.

Unknown member of the family Curculionidae.



The click beetle *Calais sulcicollis*.



Canuschiza sp. - the cockchafer beetle (family Scarabaeidae).



The predacious diving beetle (family Dytiscidae) *Cybister tripunctatus africanus*

Click beetles (Elateridae)

Worldwide distributed family of beetles in which its members possess a device on the pro- and mesosternum that allows them to flip up into the air with an audible click when laying on their back.

In Socotra island the family comprises 19 species, 18 of them described as new in the year 2012.

Leaf beetles (Chrysomelidae)

Chrysomelidae, one of the largest beetle families with more than 36.000 species. Adult beetles as well as larvae are herbivorous and feed on various plant species. They are usually varicolored and often metallic. The family is represented on the Island of Socotra by 51 species (including Bruchinae).



Colasposoma atrocyaneum (left) and *Colasposoma* sp. (right) are leaf beetles (family Chrysomelidae).