

# GROUND BEETLES AND TIGER BEETLES OF SOCOTRA

## Ground Beetles and Tiger Beetles

Ground Beetles (Carabidae) and Tiger Beetles (Cicindelidae) are families within the order of Beetles COLEOPTERA. Most are small to medium sized (2-20 mm), more or less elongate and flat. They distinguish from other beetle families, like Darkling Beetles (Tenebrionidae) and Long-horn Beetles (Cerambycidae), by having the first abdominal segment divided, 5 tarsi (toes) and thread-like antennae with 11 segments. With some experience they are easily recognized by their general appearance. Worldwide there are more than 35.000 species of Ground and Tiger Beetles known.



The Tiger Beetle *Cicindela melancholicus* is one of the most common and widespread species. It occurs everywhere with fresh water.

## Habitats

Ground Beetles live in various habitats, but almost always on or in the ground. Most of them are hunters and walk very fast to catch prey. Some are good diggers. Others feed on seeds of grasses and can climb easily in plants. Most Ground Beetles are active during the night. In day-time they hide underneath stones, debris, under or in rotten trees or between plant roots. Many of them can fly.

Tiger Beetles live especially in places with little and low vegetation, with much exposure to the sun, like stony places, banks of rivers and other sandy places. They are day-active and, like little tigers, ferocious with fearsome fangs and are often striped. They can run very fast.

**Right:** Big Bombardier beetle *Pheropsophus africanus* which can defend itself by spraying two chemical substances out of his abdomen, that when coming together, explode and burn. This species prefers humid habitats.



## More than 45 species on Socotra

Until very recently only 25 species were known from Socotra. Since 2010 the number of known species has risen to about 45. Every year of research several species are found new for the island, and it is to be expected that this number will continue to increase in the near future. There are some promising habitats that have not yet been investigated thoroughly, like the many caves on Socotra, dark and humid ravines and stems of trees. The more interesting species, found last years, were also observed in very special habitats, like high mountain areas, near streams and in coastal mangroves.



**Left:** A small digging Ground Beetle *Dyschirius auriculatus* lives in sands along streams.



**Right:** A halophilous Ground Beetle *Syrdenus grayi* is found in mangrove habitats at Nét.

## Endemism

Probably because of the ability to fly in most species, the number of endemic Ground and Tiger Beetles on Socotra is low.

*Socotrana labroturita*, a flightless Tiger Beetle active in twilight, is up to now the only known endemic species.

Because there are some promising habitats that are not investigated thoroughly, the number of known endemics will rise most probably in the near future.



Cave habitats on Socotra will, after thorough future examination, most probably reveal some new Ground Beetle species.

## Protection

Most Ground Beetles need some, or much humidity and coolness. Vegetation can provide that. Overgrazing results in desiccation and warming of the surface of the ground and the humus layer, but also of the fissures and clefts in the bedrock, thus destroying life conditions necessary for Ground Beetles and many other insects.