

# GRASSHOPPERS AND CRICKETS OF SOCOTRA

## Grasshoppers and Crickets

Grasshoppers and Crickets ORTHOPTERA are an Order of land living Insects. Worldwide there exist over 25.000 species. Sizes vary from some mm to many cm. The three main characteristics of ORTHOPTERA are:

- Enlarged hind legs with which they can jump;
- Four wings, with the front pair leathery, to protect the hind pair with which to fly;
- In most cases a specialized organ, with which to make sounds.

## Two main groups: long and short antennae

ORTHOPTERA can be divided into two main groups:

- Long-horned grasshoppers: crickets and bush crickets with long, thread-like antennae. Females have an elongated and blade-like ovipositor for egg laying.
- Short-horned grasshoppers, of which the 'true grasshoppers' are the best known members; Species of that group have short antennae. The females lack an elongated ovipositor.



Two examples of long-horned grasshoppers: on the left the recently described endemic cave-cricket *Socotraxis kleukersi*, on the right the endemic bush-cricket *Pachysmopoda abbreviata*.

## Habitats

Grasshoppers and Crickets inhabit all sorts of habitats. They occur from tropical rainforests to deserts and from plains to mountain peaks. Most species are herbivorous, some catch other insects.

They take a very important position in an ecosystems food chain, since they are the main diet of many vertebrate and invertebrate animals. Reptiles, amphibians, mammals and birds cannot survive without them!

## Fifty species on Socotra

On Socotra there are approximately 50 species of Orthoptera. The island has a very high degree of endemism. More than half of them can be found nowhere else on earth, except on Socotra. And of the 38 known genera of Socotra, 8 are endemic. The total number of species known on Socotra will rise slightly in the near future. Some species found during recent studies in 2009 and 2010 have not been identified yet and are certainly new for the island.



Two examples of short-horned grasshoppers. Left: the endemic *Dioscoridus depressus*. Right: *Pyrgomorpha conica*.

## Endemics

Highland thickets with a well vegetated undergrowth are the prime habitat of the most interesting species of Orthoptera. The endemics *Socotrella monstrosa*, *Ermia variabilis*, *Phaulotypus granti*, *Ph. socotranus*, *Phaneroptila insularis*, *Xenephias socotranus* and *Dioscoridus depressus* are all more or less confined to it.

## Protection

Grasshoppers and crickets on Socotra depend highly on the original vegetation, so they have to compete more and more with the everywhere present goats.

To protect the very special Orthoptera fauna of Socotra with its many endemics, parts of the island, especially the highlands and Dixam, should be kept safe against overgrazing.



Some specialities of the highlands.

Gravel plains and bare stone are the domain of ground-dwelling species that each have their own wing colours. Red, blue and yellow colours occur, with or without black bars. One endemic species has entire black wings. With the wings closed, all these species look very much the same!



The endemic *Physemophorus socotranus* has a small white knob on its back, which is just visible on this photo. This species can be found in open scrub.

