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The Language of Chameleons: how the animals, which cannot talk and do not hear, communicate

The Horns

PETR NEČAS,
with illustrations of ANASTASIIA SHIRIAEVA and photos of PETR NEČAS

Corresponding author: petr.necas@me.com

Note: this text is an example from the book dealing exactly with this topic, this is just a sample

HORNS

USE YOUR HORNS FOR SPECIES RECOGNITION, THEN AS WEAPONS!

The horns are bony structures on the heads of some chameleon species, specifically and mainly developed in males. Females usually don't have horns or their horns are in reduced form. Male's horns divide into the true horns, which have a bony base and are covered with one thin layer of keratin, which represents one extremely enlarged cranial scale, and the false horns, which are covered with enlarged plate-like or spiky scales. The primary function of horns serves to a process called character displacement, with which, thanks to different head ornamentation (including horns), the males can demonstrate their belonging or not-belonging to the same species as the female, that is the subject of interest. The secondary function of horns is that they serve as "weapons" in combats of two rival males, who form territories, which they protect and try to be the only male in (or at least in it's visible part). Once two males with horns meet, they tend to start a fight using the horns to attempt to push the weaker male from the branch to fall down and escape the territory. As a rule, they don't harm each other. It is more a ritual fight. Bigger horns allow more leverage power and are therefore be considered stronger and better, so bigger horned males are usually more successful in defending their territory and consequently in mating the females that are approached by them. Tertiary, they can be used as "weapons" to threaten predators too.



Trioceros jacksonii xantholophus, male, Chogoria, Kenya
Photo PETR NEČAS

Two Jackson's Three-Horned Chameleon (*Trioceros jacksonii*) are about to fight on a branch.

Bigger Horns: "Hey, you! Please consider not fighting with me. Look, how big my horns are, you have no chance to win the fight! I will kick you down from the branch and you will fall and hurt yourself."

Smaller Horns: (Exposing his side to the bigger one) "Let me try! My horns are shorter but I'm younger and maybe more powerful than you! So let's compete and see who will be the winner."

Bigger Horns: (The BH approaches the small one and hooks his horns into the horns of the smaller male.) "Ok, let's fight! I will show you how powerful I am!"

Smaller Horns: (hiding below the branch) "Hey, ok. I can see that I have no chance. Please, let me go!"



The Horns, Drawing ANASTASIIA SHIRIAEVA