

## CPT 4.2: Animal Behaviour

Topic: Threat display and Territoriality behaviour

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# Agonistic behaviour

- **Agonistic behaviour** is any social behaviour related to fighting. The term has broader meaning than aggressive behaviour because it includes threats, displays, retreats, placation, and conciliation.
- Agonistic behaviour is seen in many animal species because resources including food, shelter, and mates are often limited.

# Display behaviour

- **Display behaviour**, ritualized behaviour by which an animal provides specific information to others, usually members of its own species. Virtually all higher animals use displays to some extent. The best-known displays are visual ones—and some biologists restrict the term display to visual signals or gestures—but many also incorporate sound, smell, or even touch.
- Displays evolve through the ritualization of specific behaviour patterns. Some mating displays evolve from food-giving behaviours; the male bobwhite quail gives a food call and offers a tidbit to his potential mate. In many birds the food-giving behaviour is completely ritualized and proceeds without any exchange of food; domestic cocks, for example, call and peck at bare ground to attract a hen.



<https://pixabay.com/en/cat-laying-paw-animal-114815/>

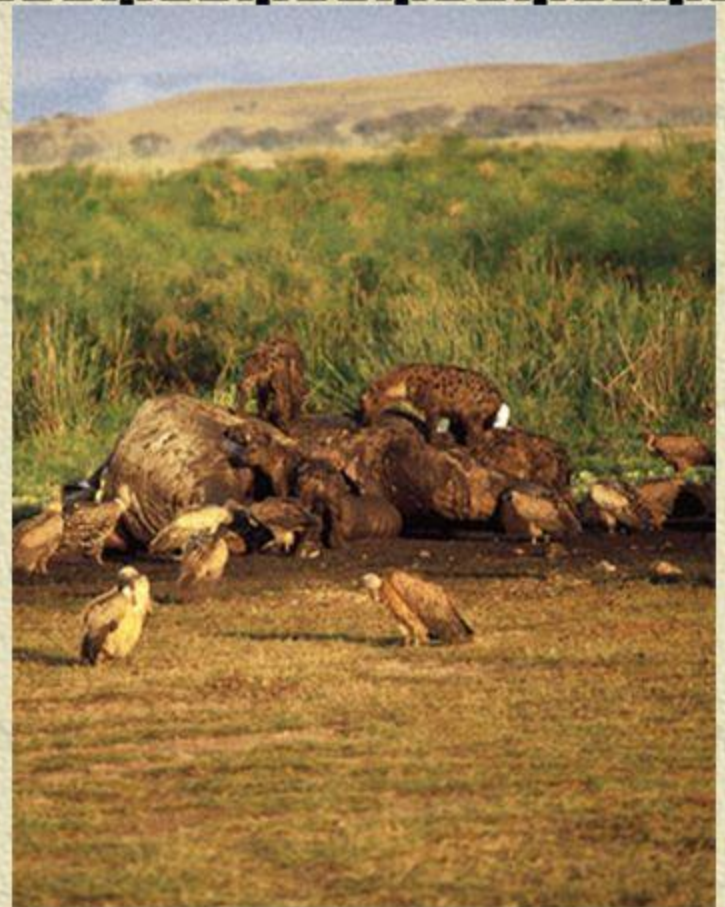
- Territory - a physical space an animal defends
  - Has food, water, shelter, mates
  - Benefits: Reduces conflict, controls population growth, efficient use of resources, improve chance of offspring survival
  - Mark their territory with pheromones

# Territoriality

### 3. Territoriality

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- ✦ Physical space an animal defends against own species
- ✦ May include breeding, feeding, or mating areas or all three
- ✦ Reduces competition so improves survival
- ✦ **Pheromones** may mark boundaries



## Definitions

- **Territorial behaviour** are the methods by which an animal, or group of animals, protects its territory from incursions by others of its species.
- Burt (1943) Territory is the protective part of the home range/area around the home site over which the animal normally travels.
- Hediger (1950, 1961) Area animal lives in and prevents other members of his species from entering.



## Territoriality continued.....

Territorial defense is generally employed only against animals of the same species, because animals of a different species will often inhabit a different **niche** within the same territory.

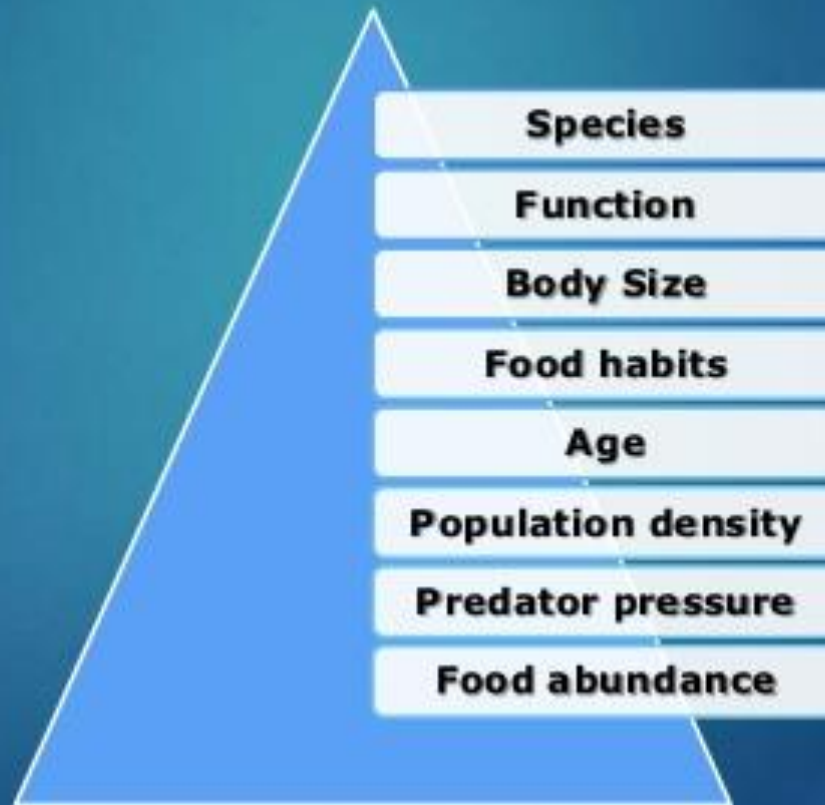


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## Territory - Structure

Size affected by:



## Classification of Territories

Mating  
territory

Breeding  
territory

Feeding  
territory

Multipurpose  
territory

## Mating Territory

- Mating territories are places of mating and loving of the partner.



## Breeding Territory

- The breeding territory is relatively small. It usually contains only a nesting or mating site.
- This type of territory is most characteristic of colonially nesting species that cluster nests at limited safe sites, such as in lekking or chorusing species where the males aggregate to attract females



## Multi- purpose Territory

This type of territory is generally the largest as it includes aspects of both breeding and feeding territories



## Feeding Territory

The feeding territory tends to be larger than the breeding territory because it must contain sufficient food to support the owner of the territory and any mate or offspring that may also be residing there.



## Advertising of territories

**Visual**



# Visual displays

- Threat displays usually make the animal look larger and more aggressive.
- Examples: Cats arch their back and their hair stands on end. Dogs look straight at opponent and bares their teeth.



## Advertising of territories



**Acoustic**

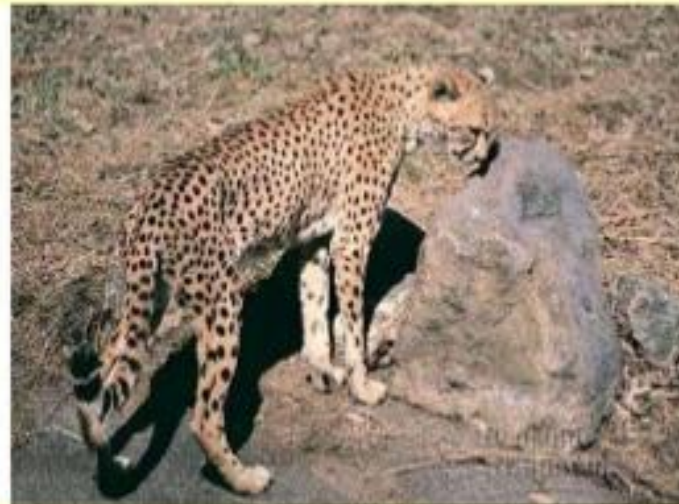


## Advertising of territories

### Chemical pheromones



- Drawbacks are that territoriality uses a great deal of an individual's energy.
  - In addition, an individual might be defending a territory and die or miss a reproductive opportunity.
- Spraying behavior is where an individual marks its territory.



# Threat display

- A **threat display** is anything that an animal does to scare away other animals.
- A behavioral response in animals usually as a result of a threat to their territory. The display involves intimidating the offending organism using a threatening posture or an aggressive display of marking toward off other organisms.
- Threat behavior is meant to cause the opponent to back down and leave.
- Many animals have threat display that make them look bigger.



**A cat making threat display by hissing and its hair stand up**



**Male gelada Baboon giving a threat display**

- It is a type of animal behaviour in which aggressive postures are adopted or intimidating markings revealed. Such displays are common in fish and birds involved in defence of **TERRITORY**, and often result in the retreat of the threatened animals, so avoiding direct conflict.



### Young great horned owl

When protecting young or defending itself, an owl may assume a threat or defensive posture, with feathers ruffled to increase apparent size. The head may be lowered, and wings spread out and pointing down. Some species quite aggressive when nesting and have been known to attack humans.



### A dog will bare its teeth and growl.

- It may be displayed as intent to avoid the further escalation of conflict, as a method to displace another individual or group, or with the intent cause physical or emotional harm to another individual.
- It displays such as a hard stare, growling, barking, snarling, lunging, snapping and/or biting.



### Cotton mouth snake shows classic threat display

- A snake will coil up, raise its head, and move back forth to point itself at any big animal that and approaches it.
- When threatened , the cotton mouth will gape its mouth wide , flatten its body on occasion ,emit a strange odour to discourage predators.

## Some example of Threat display,



A blue jay threat display



southern-elephant-seal-threat-  
display-george-holton



**Eastern Screen Owl**



**American Aligator threat  
display**