

Ecological Planning of Wildlife Habitat

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All photos are obtained from the National Geographies

Ecological Relationship

- It is on how animals interact with their environment.
- Interactions in form of search food, shelter and reproduce.



This Philippine eagle is one of the largest and most endangered eagles in the world. Its long tail helps it skillfully maneuver while hunting for its elusive prey, like flying lemurs or palm civets.

Ecological Relationship

- Habitat selection depends on sufficient supply of food for a population of individuals: (1) interspecific competition, (2) chance for reproduction, and (3) avoiding predation.



Ants communicate and cooperate by using chemicals that can alert others to danger or lead them to a promising food source. They typically eat nectar, seeds, fungus, or insects.

Ecological Relationship

- Habitat selection depends on sufficient supply of food for a population of individuals: **interspecific competition**



A bevy of sandpipers probes for food along a secluded strand of beach

Ecological Relationship

- Habitat selection depends on sufficient supply of food for a population of individuals: **Chance for reproduction**



American avocet pair, nest building in the low light of late evening.

Ecological Relationship

- Habitat selection depends on sufficient supply of food for a population of individuals: **Avoiding predation**



Cavity nesters, such as woodpeckers, have larger clutches of eggs than open-nesting species.



Meaning of Habitat

- It is an area with a combination of resources and environmental condition that provides occupancy by individuals of a given species and allows those individuals to survive and reproduce.
- Habitat selection involves spatial, temporal and ecological scales.



Factors endangering bird population

1. Habitat destruction and fragmentation
2. Overhunting, introduced predators, pesticides

Increasing diversity of species with increasing fragment size, in part because some species are present only on fragments of a certain minimum size or larger.

Habitat Selection

Stages of habitat selection

1. Use general features of the landscape to select broadly from among different environments
2. Respond to subtler habitat characteristics to choose a specific place to live

Class discussion on habitat characteristics of pheasant

Habitat Management

- Conspecific attraction, the tendency for individuals of a species to settle near one another. Cues suggesting the presence of conspecifics can potentially be used to attract individuals to previously unoccupied sites that are managed for the species' benefit.
- It is likely that birds use a variety of cues, both social and structural, to select territories, but if conspecifics are an important aspect of a species' mating strategy, optimal habitat for that species might include both habitat and social needs.

Habitat Management

- Two types of cues could potentially be used to attract birds to a site: **vocalizations** and **models**. To attract nocturnal species, we suggest playing their vocalizations throughout the night because, like diurnal birds, nocturnal species migrate at night.
- Understand basic behaviors of the bird to conserve. From a bird's perspective, there must be a balance between the appropriate **habitat structure** and **nearest-neighbor distance**.

Pheasant Habitat

- Gently sloping ground in lowland dipterocarp rainforest. Its home range is 4-23 ha.
- Foraging for food in the leaf litter searching for seeds, fruits, snails, worms, cicadas and beetles.
- Laying 5-6 large eggs in litter of leaves and 22 days of incubation

