The study of birds

Ornithology is the study of birds. All birds have feathers and beaks and most fly. Their closest living relatives are crocodiles and alligators.

Courtship Displays

There are approximately 9000 living species of bird. There are 23 different orders of bird, including the Galliformes (pheasants, guinea fowl, etc.), Piciformes (woodpeckers, barbets, etc.), and Falconiformes (raptors).

The largest order is the Passeriformes – the songbirds.

Song

Bird song is one of many species' unique characteristics. There are a few species that produce no sound at all such as the storks and pelicans but most birds produce some type of vocal call.

The songbirds (Passeriformes) are notable for their ability to put many notes together to create a song. Sound is created in the syrinx of birds. Songbirds have more muscles controlling the syrinx than other species. Some species are able to mimic the songs of other species.

Calls and song can be used for a variety of purposes including:

- Attracting a mate
- Establishing territory
- Warn off predators
- Co-ordinating flock movements
- Sexual identification
- Species identification
- Offspring identification – some birds use song to specifically identify their own offspring
- Maintain pair bond or stimulate courtship behavior
- Perfection of song – many birds learn song through imitation and practice

Mating Behaviors

Birds have some of the most unusual and beautiful courtship rituals in nature. Many include elaborate dances.

Male birds often have very colorful plumage to help attract females. They display this in a variety of ways including ritualized movements, displays and behaviors.

Some bird species such as the grouse meet only for copulation while others form pair bonds that may last only a few days, throughout the incubation period, or for a lifetime. While some birds provide a lot of parental care others provide very little.

Some species, such as cuckoo birds, will lay their eggs in the nest of other species and let the other mother raise their offspring.

Migration

Many birds live in different environments at different times of the year. They migrate between these locations which may be as far as 4,000-6,000 km in each direction.

The Arctic tern covers 22,000 km round trip each year. Many birds can cover hundreds of kilometers in a single flight. Many of them migrate in flocks.

It is believed that there is a genetic component to migration since some species migrate without the benefit of someone who has made the trip before.

Birds use a variety of different methods to find their way including landmarks, solar cues, star position, and geomagnetic cues. They may even use odors and sounds as a part of their guiding system.