

COURTSHIP AND BREEDING BEHAVIOUR IN BIRDS

CPT-2.1 Biology of Chordates

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- In **Zoology**, **mating** (or mating in British English) is the pairing of either opposite-sex or hermaphroditic organisms, usually for the purposes of sexual reproduction. Some **definitions** limit the term to pairing between animals,

Behaviour

the way in which an animal or person behaves in response to a particular situation or stimulus.

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Mating behaviour

- have lots of different types of **mating behaviour**. These include: monogamy(the habit of having only one mate at a time. "monogamy is rare in most animal groups, but is common among birds"), when two animals mate exclusively with each other (1 partner) polygamy.(a pattern of mating in which an animal has more than one mate.), when animals have multiple different **mating** partners. Polygyny, (when one male mates with multiple females).

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Courtship behaviour

- **Courtship** in animals is the **behaviour** by which different species select their partners for reproduction. Usually, the male starts the **courtship**, and the female chooses to either mate or reject the male based on his "performance". Many animals have mate-selection **courtship** rituals.



A **courtship display** is a set of [display behaviors](#) in which an animal attempts to attract a mate and exhibit their desire to [copulate](#). These behaviors often include ritualized movement ("dances"), vocalizations, mechanical sound production, or displays of beauty, strength, or [agonistic ability](#). **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. The term "agonistic behaviour" was first implemented by J.P Scott and Emil Fredericson in 1951 in their paper "The Causes of Fighting in Mice and Rats" in *Physiological Zoology*.^[1] [Agonistic](#) behaviour is seen in many animal species because resources including food, shelter, and mates are often limited.

COURTSHIP AND BREEDING BEHAVIOUR IN BIRDS

INTRODUCTION:

A courtship is a set of display behaviours in which an animal attempts to attract a mate and exhibit their desire to copulate. These behaviours often include ritualized movement (“dances”), vocalizations, mechanical sound production, or displays of beauty, strength, or agonistic ability.



- **Courtship Behaviour In Birds.** Birds have a number of different types of **courtship behaviours** to attract mates such as songs, display and dances. ... Usually only the male will sing as part of the **courtship** ritual although in some species both **birds** may sing a duet to bond.
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- How do birds find mates?
- This is thought to prove to the **mate** that they can directly feed nestlings. Building: In some species the construction and decoration of nests with pebbles, moss and flowers can also be seen during courtship rituals in order to **attract** the eye of a potential **mate**.

- What kind of courtship Behaviour do birds display?
- Courtship behaviour can help birds distinguish between species to help them choose compatible mates and it can also reduce the **aggression** normally displayed when defending territory. Courtship rituals are also used to show strength and health and their ability to produce offspring.



Definition of Courtship

A courtship is a set of display behaviours in which an animal attempts to attract a mate and exhibit their desire to copulate.

Courtship behaviour:

The term courtship refers to the behavioural interaction that occurs between males and females before, during and just after the act of mating.

The main function of courtship behaviour is to ensure that the two individuals are of the same species. It also involves stereotyped behaviours. Courtship behaviour informs a potential mate that the intention is breeding and not aggression.

Breeding in Birds:

The mating and production of offspring's by animals is known as Breeding.

Birds produce offspring by laying eggs which are fertilized through sexual reproduction. They are usually laid in a nest and incubated by the parents.

The Reproductive anatomy of birds:

Most birds do not have the same reproductive body parts as mammals. Instead, both male and female birds have a cloaca – one opening (also called the vent) that serves as the bodily exit for their digestive, urinary and reproductive systems.

This means that the same opening that excretes feces and urine is where eggs are laid. During the breeding season, the cloaca swells and protrudes slightly outside the body, while during the rest of the year it is much less prominent.

Breeding season in birds:

Breeding season comes around each year; independent of the location, climate and species, mating occurs annually nationwide. Most birds only breed to procreate and expand their species rather than simply for the pleasure of the act. In fact, most male birds are sterile outside of the breeding season.

Signs of the breeding season:

- **Spring:** one can expect to see breeding season happening most often during the spring. This is because the snow is melting and rain is more frequent. For birds, there is an ever-increasing food supply and warmer temperatures, both of which make raising young easier.
- **Blooms:** in the spring, the flowers and plants start popping up in gardens and yards. Migrating birds follow the bloom cycle and evidence of a fresh plant life drives birds northward.
- **Feathers:** the bird's plumage changed which include bright feathers in appearance. They become more territorial of space and food. These are sure signs that the breeding season is right around the corner.
- **Song:** increase in bird songs indicates the breeding season. Most birds will sing in order to attract mates and make themselves more attractive.

Types of courtship behaviour in birds:

There are several different courtship rituals birds use for finding a mate. Most species will use one method overwhelmingly but may actually have several methods they use to lesser degrees. The exact type of courtship can vary greatly between different species, and even birds of the same species may have slightly different courtship variation in different regions.

➤ **SINGING**: Singing is one of the most common ways birds attract mates. The song's intricacy or the variety of different songs one bird can produce help advertise its maturity and intelligence, highly desirable characteristics for a healthy mate. Singing can also define the boundaries of one bird's territory, warning off weaker competition. For some species, only one gender (usually males) will sing, while other species may create a duet as part of their bonding ritual.

Ex: Singing wren(picture), **Great Reed Warbler, European Herring gull.**



- **DANCING**: Physical movements, from daring dives to intricate sequences including wing flaps, head dips, bill rubbing, or different steps can be part of a courtship ritual. In many species, the male alone will dance for his female while she observes his actions, while in other species both partners interact with one another. Mistakes in the dance show inexperience, weakness, or hesitancy and would not likely lead to a successful mating.

Ex: Indian peacock.



Thus in peacocks

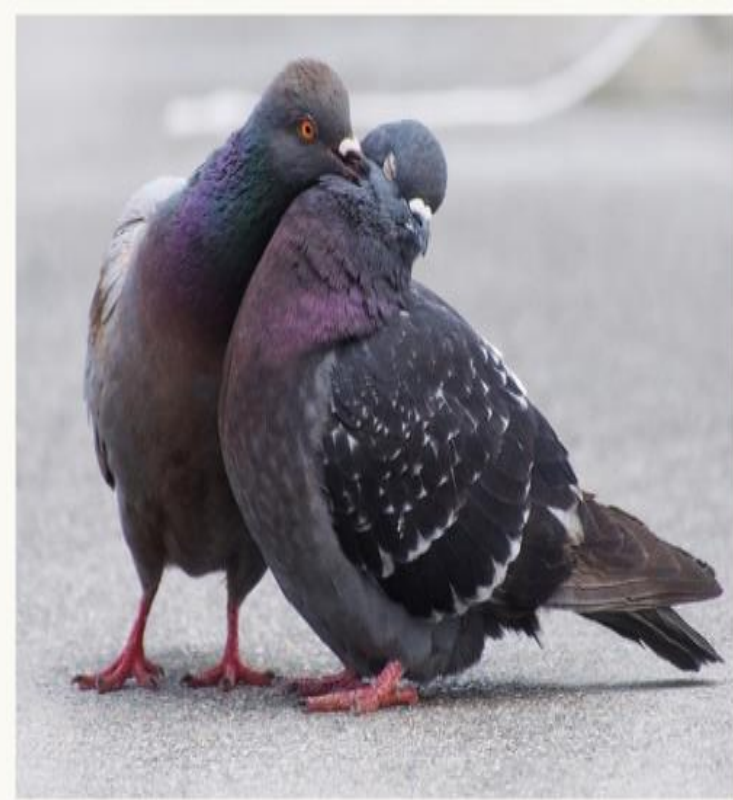
Courtship and **sexual** selection in peacocks is very complex, but it is an area of great interest – one that has resulted in research focusing on the spectacular displays animals use to attract a mate. In male peacocks' courtship displays, discrepancies exist in the parameters that peahens use when **selecting** a mate.

There may be nothing more beautiful than the courtship display of the peacock, the commonly used name for the male peafowl. With its blue-green plumage, this animal is a beautiful bird even when not in display mode, but becomes a work of art as it presents itself to a peahen. Its tail feathers open up to form a long spectacular train spread out like a fan that touches the ground on either side and makes up about 60 percent of the bird's total body length. The train is not actually the true tail, but is made up of tail coverts adorned with a colorful "eye" at the tip. Peacocks gather in groups called "parties," and females seem to choose mates based on their appearance as well as their strutting and vocal abilities.

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➤ **PREENING:** Close contact between male and female birds can be part of the courtship rituals to help diffuse their normal spatial boundaries and aggression. The bird may lightly preen one another, sit with their body touching or otherwise lean on one another to show that they are not intending to harm their partner.

Ex: Pigeon (touching) picture, Avocet birds.



➤ **FEEDING:** Offering food is another common part of courtship for many birds. A male bird may bring a morsel to the female, demonstrating that he is able not only to find food, but also that he can share it and provide for her while she incubates eggs or tends chicks. For some species the male may bring food and leave it nearby for her to eat. In other species he will place a seed or insect directly in her mouth just as he might be expected to do when helping feed hungry nestlings.

Ex: Cardinals (feeds each other).



➤ **BUILDING:** Some birds attract a mate by showing off their architectural skills. Constructing nests before the female arrives is a way for males to claim territory and show the suitable nesting areas they can defend. They may also decorate the nest with pebbles, moss, flowers or even litter. To make it more eye catching. The female may then choose the nest she prefers, or she may still build her own after mating with her chosen male.

Ex: Baya Weaver bird, Bower birds, Great Blue Heron (picture).



SOME EXAMPLES OF BIRDS SHOWING COURTSHIP BEHAVIOUR:

➤ AVOCET:

In avocets (Long-Legged shore birds of Genus *Recurvirostra*) having webbed feet and slender up-curved bill, male and female both preen their feathers in a hasty fashion during courtship. After preening when the female adopts a characteristic flattened posture indicating her readiness for the mating only, then the male mounts and copulates.

COURTSHIP IN AVOCET



➤ EUROPEAN HERRING GULL:

The display of herring gull (*Harus argentatus*) is also quite interesting. Both male and female bob their heads upward littering a soft melodious call with each bob. After a series of such mutual head tossing the male takes the initiative in copulation and suddenly mounts mates.

COURTSHIP IN EUROPEAN HERRING GULL



➤ GREAT – CRESTED GREBE:

Pair bonding and display of ritualized – courtship dances in the Great – crested grebe (*Podiceps cristatus*) are unique in an animal kingdom. It was well studied by Julian Huxley (1914).

The courtship ceremony includes a series of behaviours such as head shaking ceremony; dive and eat display; mutual greeting and eat displays; and penguin dance. In penguin dance both birds dive and reappear with bunches of weeds (i.e., nest material) in their bills. They swim towards one another and then spring upright and move together shaking their heads from side to side, with crest and neck ruff raised. The nest material is held firmly in the bill. Huxley has coined the term ritualization for pre-coital displays of Great – crested grebe.

COURTSHIP IN GREAT – CRESTED GREBE



➤ INDIAN PEACOCK:

Indian Peacock (*Pavo cristatus*) is a polygynous bird. During breeding seasons, cock forms a drove of 4 to 5 peahens. The courtship behaviour of peacock spread its beautiful tail whenever a peahen approaches but as she comes near him he taken an about turn showing her his rear portion. If peahen is ready for mating, she would run swiftly around the tail to be able to see him from front again. The peacock responds by rustling his tail feather. Then he will turn around again and this courtship game will be repeated several times. At last the peahen will lie down in front of him giving signals for mating.

COURTSHIP IN INDIAN PEACOCK



➤ BAYA WEAVER BIRD:

The male Baya weaver bird (*Ploceus philippinus*) builds several nests one after another, each of which is a swinging retort – shaped structure with a long vertical entrance tube, compactly woven out of strips of paddy leaf and rough edged grasses, suspended in clusters from twigs of a babul or a palm tree usually over a stream or tank. Blobs of mud, collected when wet, are stuck inside the dome of nest near the egg – chamber. In a breeding season, to attract females for mating purpose, male Baya birds (up to 10 to 50) make whistle like mating calls in chorus, accompanied by flapping of wings in unison while weaving their nests in a colony. In this case, incubation and all feeding of the chicks are done by the female alone.

COURTSHIP IB BAYA WEAVER



➤ **BOWER BIRDS:**

Bower birds are famous for their complex courtship behaviour of building an elaborate structure known as Bower, to attract mates. They will use variety of objects such as shells, flowers, feathers. Stones, berries and even discarded rubbish such as coins and pieces of glass. The male stands squarely on his territory (Bower) making a whirring noise, arches his tail in fan – like manner and stiffens his wings, at the same time keeping his neck low and erect. His plumage glistens magnificently while eyes bulge and become rose red. The dusky female utters convulsively a few guttural sounds. After a female bower bird is copulated, she leaves to lay eggs and incubate them until they hatch. Her partner stays at the Bower, working slavishly on its improvement and decoration. . A few males with especially well decorated Bower will copulate with more than one female (the record is 33).

COURTSHIP IN BOWER BIRDS



CONCLUSION

The ultimate purpose of courtship is to attract a receptive mate, but there are several other purposes behind the Courtship behaviour of different bird species.

The intricate moves of a mating dance and the charming songs used to woo partners can help distinguish species so birds are sure to choose genetically compatible mates. Different Courtship behaviours also reduce territorial aggression, letting two birds relax together to form a pair bond.

Depending on the behaviour, how birds react in Courtship can also display strength, health, intelligence and mating desirability. This allows different birds to choose the best partners and ensure viable, healthy offspring.

THANK YOU