

Anas platyrhynchos (Mallard)

Family: Anatidae (Ducks and Geese)

Order: Anseriformes (Waterfowl)

Class: Aves (Birds)

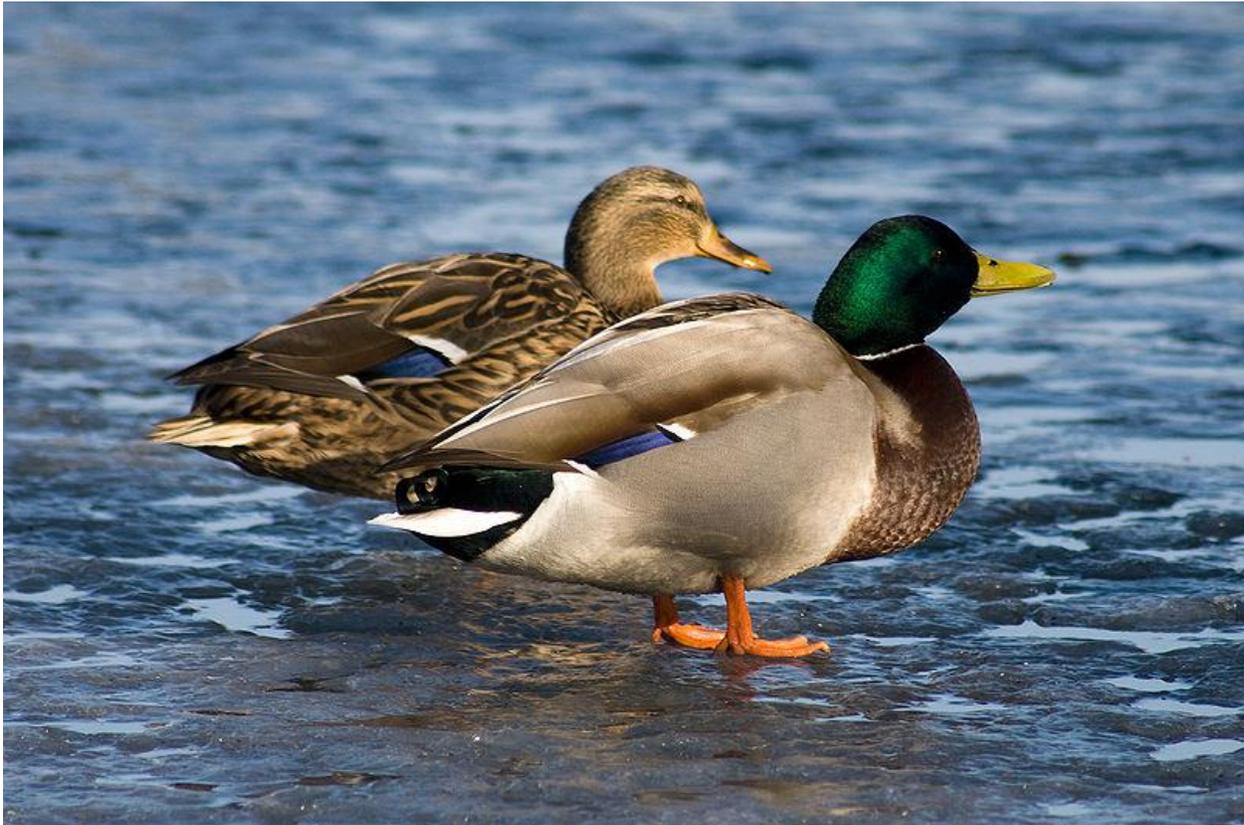


Fig. 1. Mallard, *Anas platyrhynchos*.

[http://commons.wikimedia.org/wiki/File:Mallard_male_female_on_ice.jpg, downloaded 31 October 2014]

TRAITS. The mallard duck is about 50-60cm in length. They have a mid-sized build, with a wing span of 81-89cm and weight of 0.7-1.7kg (Wikipedia, 2014). They possess an oval shaped body that is bilaterally symmetrical and sexual dimorphism exists between males and females. The male is considered to be more colourful (Fig. 1). Males: known as drakes have a distinctive gleaming green head and a flattened, yellow beak. A white banded neck leads to a chocolate brown chest with the rest of its body covered in cream coloured feathers which conceals a radiant purplish bluish speculum (Williams, 2013). Its body is supported by its two strong, orange, webbed feet (also present in females) and its black tail sticks out from behind its feathers. Females: also known as hens are less conspicuously coloured than males. They appear caramel brown with splotched feathers throughout their bodies (Fig. 1). Darker brown streaks run along from the beak, midway to the head and a dull brown beak. Both sexes have dark eyes and a pair of nostrils which sit on either side of its beak which operate to aid in scent and a comb like structure called pecten along the beak.

ECOLOGY. Mallards range throughout the northern hemisphere, in Europe, Asia and North America, the latter migrating south to Mexico and the northern Caribbean in winter. They are a rare visitor to Trinidad and Tobago. Mallards are mainly found in wetlands, in lakes, ponds, rivers, or wherever there is fresh, salt or brackish water, but also inhabit terrestrial grounds such as savannas or grasslands, where vegetation is present. They are omnivorous animals and their feeding ranges from plants, invertebrates such as spiders, snails, and aquatic organisms like fish and shrimp (Williams, 2013). To retrieve food, they partially submerge their heads into the nearly shallow waters with their tails upward in the air where they feed at the water's surface. This action enables them to be seen as dabbling ducks. They rarely dive. The mallards also feed on land where they consume grains such as rice, wheat and rye.

SOCIAL ORGANIZATION. They are sociable birds and can be found in mixed groups or groups which only contain males. There are only territorial and isolated during the breeding season. They form large flocks known as sords (Wikipedia, 2014). During migration, mallards assemble in large numbers as they travel from north to south during the winter to escape the low temperatures and food shortage. When observing a flock, in many cases, the ducks tip up and down as they feed as their wings are flapped and outstretched. Being in a group, some display a low head position, which is associated with the dabbling, resting or sleeping. Some ducks, however, remain upright to be vigilant of the surroundings. In addition, they form groups when moulting. Moulting is the process of replacing worn feathers. Moulting occurs after the breeding season and ducks lose most to all of their feathers. They prefer to moult in groups, especially the males while the females prefer to moult in secluded area. Moulting is dangerous and they cannot fly since there is the development of new wings.

FORAGING BEHAVIOUR. Lakes, land and fields are where the mallard searches for food (Baldassare and Bollen, 1984). The ducks can display perching habits and at both dawn and dusk they take off for soaring for a good distance (Jorde et al., 1983; Thomas, 1982). Weather parameters can also affect behavior of the duck as drops in temperature and the increased search for food lingers as these cold ducks resort to an area of protection (Jorde et al., 1983). Soaring in ducks may persist depending on the condition of the day which can sometimes result in dense fog or storms (Bossenmaier and Marshall, 1958). During the winter, dabbling ducks subsist on grains. They feed on the whole water column as in the summer but are in search for seeds that are in residues in masses of water. In the winter season, the birds are confined to one area for foraging which can be determined by the level of water that is either shallow or deep while in the summer, birds forage on animal prey in the entire column (Thomas, 1982). Mallards feed on submerged food while swimming. Feeding terrestrially can become main foraging behaviour of these ducks in association with potato fields and harvested cereal during the winter and breeding season (Baldssere and Bollen, 1984). During the winter, 20% of the foraging mallards were feeding on dry land in some wintering sites. Feeding is interrupted in mallards as they drink water as part of their feeding (Duke, 1986).

COMMUNICATION. Aerial communication is a type that is limited to short, ritualized flights which occur near the water's surface and vocalizations include contact calls to aid in flock uniformity as these fliers set out on long distances. Auditory communication is another type in which female ducks produce a quack and male ducks produce a low grunt whistle. The call range is limited. The calls can be used in a variety of situations as in danger or contentment in addition to flight for migration. The frequency and intensity of a call determines the meaning of a call

(Ehrlich, 1988). The frequency or speed of a duck's call is associated with the action carried out by the bird. The faster the duck's motion, the faster is the call. The calling of a duck in the air is associated with downbeat of its wing stroke as there is contraction of chest muscles and exhalation. The social contact calling from hens keeps her family together and alerts other ducks of her presence. In addition, two or three days before hatching occurs, the embryo moves its head into the air spaces of the egg and vocalization begins. When ducklings are born, the female mallard gives a diminished call of about six to eight quacks in a row to ducklings.

SEXUAL BEHAVIOUR. Mallard pairs are generally seasonally monogamous but paired males may seek other females than their mates. The pairs form long before spring breeding season. The pairing can occur in fall but the courtship can be observed throughout winter. The females are oviparous since when laying eggs, their offspring are born outside their body. The laying of eggs occur late July to September with possibility of nesting again in October to early November. In a suitable nest site, a hen would lay about one egg per day up to a total of 6-15 eggs. After laying of the final egg, the incubation period begins for about 25-28 days.

Mating calls of drakes contain 2-4 notes; "raeb-raeb-raeb-raeb". This occurs when a male passes a hen in the air during the spring mating flights. It can occur when they are resting on land as well (Ehrlich 1988). When swimming in the presence of females, males can be seen shaking their heads and tails which are known as the head shake display and tail shake respectively. Sometimes, their necks may be arched and they may whistle, lower and jerk their bills to meet their breasts as water is flicked towards a favoured mate. This is known as a water flick (Ehrlich, 1988). In the females, hens release an agonistic call which can provoke a male to attack other males. It is like a threat call. This can be a way to assess the male as she observes his performance for a potential mate. Swimming with an outstretched neck with her head above the water is a display of nod swimming. As the pairs are formed, there is the elevation of wings from both sexes which reveals the speculum (coloured wing bar). Before copulation occurs, the male and female come into contact with one another as they float face to face and their heads bump up and down (Ehrlich, 1988).

JUVENILE BEHAVIOUR. The nests are situated away from water on the ground undercover. Up to 15 pale green eggs are laid. The egg shells contain tiny pores which allow respiratory gases to enter or escape. The young when hatched are yellow and black or brown in colour, and depart from the nest and trail behind their mother to feed (Williams, 2013). Ducklings stay in a nest for about ten hours while dry and they get accustomed to the use of their legs. The female leads her ducklings to the water (Fig. 2). The ducklings cannot survive without their mother since it takes at least 50-60 days in order for them to become independent. There is development of the ducklings' wings which would enable them for flight within a few months.

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Author: Tamara Cooper

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Fig. 2. Female mallard and her ducklings.

[<http://www.discover-southern-ontario.com/mallard.html>, downloaded 10 November 2014]