37. Mallard

The mallard, *Anas platyrhynchos*, is the most common duck in the United States, North America and the Northern Hemisphere. It is among the best known and most widely recognized of all wildlife. The species possesses the largest breeding range of any bird on the continent, nesting across Canada and Alaska south to California, New Mexico, Kansas, Ohio and Virginia. Taxonomists recognize seven races. The mallard may have been the first domesticated bird, and from it have sprung all domestic duck breeds except the barnyard muscovy.

The mallard is known as a "puddle" or "dabbling" duck. It frequents shallow, marshy habitats, where it obtains plant and animal food on and near the water's surface, feeding by dabbling with its bill in the shallows and by hoisting its tail in the air and stretching its neck and head underwater. Like all puddle ducks, the mallard can spring directly into the air when taking off. It does not need to run across the water's surface to build up speed as diving ducks must.

Biology

An adult male mallard is about 24½ inches long and 2¾ pounds. An adult female is about 23 inches long and 2½ pounds. The male, or drake, has a dark green head, narrow white ring around the neck, and dark chestnut breast. Its rump is black with white outer tail feathers. Its underparts are whitish, its sides are gray, and its back is brownish. The female, or hen, has a buff-colored head and a straw-brown body streaked or mottled with many shades of brown. The speculum (a brightly colored patch of feathers on the trailing edge of the wing and close to the body) is violet-blue bordered with white stripes on both edges. The male has a yellow bill and orange-red legs and feet. The female has orange feet and an orange bill with dark spots.

Mallards are among the most vocal of waterfowl. The hen makes a variety of quacks. The drake utters reedy quacking sounds and, during mating season, a sharp single or double-noted whistle. Mallards fly in small groups or in V- or U-shaped flocks, usually with 10 to 20 members, but sometimes with as many as several hundred. The mallard's broad wings and relatively short tail may create the impression that the wings are set farther back than on most ducks. Mallards are swift fliers and excellent swimmers. They may feed and rest in the company of other puddle ducks, including northern pintails and black ducks.

Mallards eat a variety of natural and human-produced foods including: seeds of bulrushes, pondweeds, millet, sedges, smartweed and wild rice; stems, leaves and tubers of many aquatic plants; and acorns. Egg-laying hens and ducklings feed heavily on aquatic invertebrates such as insects, crustaceans and mollusks in addition to plant parts. The mallard's bill has a serrated edge. The duck picks up food in the bill, forces water out through the serrations, and ends up with a mouthful of edibles and grit.

When natural foods are plentiful and available, mallards prefer them, but when ice closes up marshes, lakes and ponds, they head for dry land and corn. Perhaps more than any other duck, however, mallards

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are notorious for feeding in farm fields where they search for grain in the remaining stubble of corn and sorghum fields. Mallards travel up to 25 miles for food. Often, they make two feeding flights per day, one at dawn and the other in the late afternoon.

Mallards mature sexually in their first year. A period of social display begins in mid-fall and continues through winter into spring. Males grunt and whistle, swim, pump their heads, and preen in front of the females. The hens stimulate the courtship with calls and their own stylized body movements. Most pair-forming activities occur on the water, although chase flights in spring are prominent courtship rituals.

Most hens have chosen their future mates by the time mallards arrive on their breeding grounds in the spring. The male selects a home breeding range that he defends against other mallard pairs. The female selects the actual nest site. Mallards primarily nest around freshwater lakes, ponds, marshes and reservoirs across Pennsylvania, but it is not uncommon to find them nesting in agricultural fields and in residential areas.

The hen typically nests within 100 yards of water, on the ground in a depression lined with reeds, grasses and soft down added from her breast. She conceals the nest in tall grass, dead reeds, alfalfa or clover. A few individuals nest in stumps, tree cavities or in the crotches of shrubs and trees.

Eggs, from 6 to 15 but usually 8 to 12, are laid one per day. Shells are smooth and the color varies from light greenish, grayish buff or sometimes nearly white. A hen occasionally will lay eggs in the nests of other ducks. Only the hen participates in incubation. The male deserts his mate at this time. The hen begins incubating when the last egg is laid, so that all eggs hatch at about the same time. Incubation takes 23 to 29 days.

Within about 12 hours of their hatching, the hen leads her young to water. Mallards normally raise one brood per year, but if a skunk, crow, raccoon, opossum or other predator destroys the first clutch, a hen may try again. Re-nesting attempts average fewer eggs (six to eight). Nests are also lost to plowing, hay field mowing and flooding. In addition to the predators mentioned above, snakes, foxes, largemouth bass, muskellunge and snapping turtles take ducklings. The young can fly after 7 to 8 weeks.

After the drakes leave their mates (May to June), they fly to more secluded areas where they undergo their annual eclipse molt. This replacing of feathers demands considerable energy, and the birds seek out areas rich in high-protein foods. Like other waterfowl, a complete, simultaneous wing molt leaves them temporarily

flightless. At this time they are in a drab “eclipse” plumage, which resembles the female’s coloration and provides protection against predators. Hens undergo a similar molt after their ducklings mature. The wing feathers grow back in two to three weeks.

In fall and winter, mallards fly south when ice and snow cover their feeding and resting areas. Among puddle ducks, the mallard and the closely-related black duck are among the latest fall migrants, often remaining as far north as open water prevails. The mallard is one of the earliest ducks to return north in the spring. In Pennsylvania, mallards are common migrants in late February, March and early April.

Typically, the maximum life span of the mallard in the wild is seven to nine years, although rare individuals have been documented living more than 25 years. More than half die before they reach two years of age. Mortality sources include predation, accidents, hunting, and diseases such as botulism, fowl cholera, duck virus enteritis, aspergillosis and others.

Habitat

Mallard breeding habitat combines shallow-water foraging sites and thick vegetation for nesting. The species prefers open country to woodlands. Ponds, edges of freshwater lakes, sloughs, reservoirs, beaver ponds and marshes are ideal. Mallards often use man-made nesting structures placed over water. They winter on marshes, bottomland swamps, lakes, and open waters of rivers and bays. They feed in these places and croplands.

Most waterfowl species such as American black ducks move away from areas frequented by humans, and consequently have been driven from suitable habitat by expanding towns and cities, rural development and vacation homes. Mallards and Canada geese, less wary of humans, are occupying much of this altered habitat.

Population

In North America, the densest population of mallards is in the northern prairies of the Great Plains (Montana, North Dakota and the Canadian provinces of Saskatchewan, Alberta and Manitoba), with nearly half of the continent's mallards breeding there. Mallards winter throughout most of the United States, with heavy concentrations in Mississippi Flyway states of Arkansas, Missouri, Tennessee and Illinois. In the Atlantic Flyway they concentrate in the Chesapeake Bay region. They also winter in parts of Canada, Alaska, Mexico and Central America.

Compared to most species of wildlife, the mallard population has fared relatively well through the changes humans have made to the environment over the past century. Waste grain left by mechanical harvesting equipment provides important winter food, and the construction of many ponds and reservoirs has created a good interspersion of water and suitable land habitat. Mallards, more adaptive than other wild ducks, quickly exploit these chances, even in suburban areas.

In the Northeast U.S., the mallard was considered a rare migrant at the turn of the 20th century. Today it is the region's most common duck. In 1969, hunters for the first time bagged more mallards than black ducks in the Atlantic Flyway, a trend that continues today. The black duck, *Anas rubripes*, is a close relative of the mallard, and the two species hybridize readily.

Mallards annually comprise 50 percent of Pennsylvania's duck harvest. Banding studies have indicated nearly 80 percent of mallards harvested in the commonwealth during hunting seasons are present in the state during the summer. The remaining birds come mainly from Ontario, New York and Quebec.