

Class Aves - General Characteristics of Order

The Chordata class Aves includes the birds, an extremely distinctive and successful group, with an estimated 9000 species worldwide. Although descended from the dinosaurs, birds have evolved remarkable specializations for flight: a unique "one-way" breathing system, light yet strong hollow bones, a skeleton in which many bones are fused or lost, powerful flight muscles, and -- most importantly -- feathers. TALON = CLAW

Group A

Order Struthioniformes

Swift-running, flightless and gregarious, ground-nesting, feeds on vegetable matter. The ostrich is the world's largest living bird.

Order Rheiformes

Swift-running, flightless ground-nesting birds which feed on vegetation and insects. Ostrich-like with short wings and no tail feathers (rheas)

Order Casuariiformes

Large, flightless, running birds with three toes and rough hair-like feathers.

Order Apterygiformes

Kiwis - Small-eyed, flightless, tailless birds with vestigial wings. They nest in burrows, are mainly small, nocturnal, insectivorous and forest-dwelling.

Order Tinamiformes

Terrestrial, ground-nesting birds that can fly but do so rarely. They have patterned plumage, feed on vegetation, and live in grassland, brush and forest.

Order Sphenisciformes

Penguins - Black and white, flightless aquatic birds. They nest in burrows or on the ground and are good swimmers, living off fish, squid and crustacea. Walk upright or glide on their stomachs. Specially adapted feet feature a highly efficient heat-exchange mechanism to ensure survival in cold climates.

Group B

Order Charadriiformes

Whimbrels, sandpipers, gulls - Diverse order of mostly small to medium-sized shorebirds and seabirds. They generally have long narrow wings which can act as aquatic paddles.

Order Gaviformes

Divers or loons - Black and brown diving birds which breed on inland lakes and next on the ground. They eat fish, insects, etc. and winter on sea coasts. Clumsy on land, their legs are adapted for swimming and diving.

Order Podicipediformes

Large grey and brown short-winged diving birds with partly webbed feet. They eat fish and nest on the water. They inhabit freshwater lakes in the summer and sea coasts in the winter. Some are migratory.

Order Procellariiformes

Albatrosses - Generally long-winged, partly webbed-toed sea birds which feed on fish and nest on isolated islands and cliffs. Secrete oil in self-defense.

Order Pelecaniformes

Pelicans, spoonbills - Diverse order of diving birds, found in marine and freshwater coastal habitats worldwide. They nest on cliffs or in trees, have a diet of mostly fish and are generally web-toed.

Order Ciconiiformes

Herons, storks, flamingoes, spoonbills - Upright, wading birds with specialized bills. Their toes are sometimes webbed and the middle claw is often serrated for preening.

Order Anseriformes

Ducks, geese, swans, mergansers - Marsh-dwelling waders which eat vegetation and nest on the ground.

Group C

Order Piciformes

Woodpeckers, flickers - These birds have two toes pointed backwards and two forwards. Colorful and living in trees, they feed on vegetation and insects, and nest in holes.

Order Falconiformes

Vultures, eagles, hawks - Birds of prey, or raptors. Expert flyers, they have hooked beaks and and talons (really big claws), and are generally large

Order Passeriformes

Around 5200 species, well over half of all birds, belong to the order Passeriformes, the perching birds. The order includes the most familiar garden birds - tits, chickadees, robins, sparrows and cardinals - as well as other species found in virtually all land habitats. No passerine is a true water bird, though the dippers come close. Most are small or medium-sized birds (the largest species are the raven and the Australian lyrebird). The perching feet have four well-developed, separate toes. They are very vocal, singing birds. The male is often more brightly colored than the female. Most are opportunistic feeders, being dependent on high-energy foods such as seeds and insects.

Bills Tell How a Bird Feeds



Red-Tailed Hawk
short, strong bill,
hooked for tearing flesh



Northern Cardinal
heavy, cone-shaped bill
for cracking seeds



Roseate Spoonbill
long, flat bill for
swinging through
water to catch fish



Great Blue Heron
spearlake bill for jabbing
fish, frogs, and shellfish



Northern Flicker
long, chisel-like bill, used
to dig insects out of soft
wood or the ground



Brown Pelican
very long bill with
large throat pouch,
used to scoop up fish



Hooded Merganser
long, narrow bill with
toothlike parts for catching
fish and draining water



Whimbrel
long, down-curved
bill, used to get worms
and crabs out of sand