

ORDER II.—LONG-WINGED SWIMMERS (twenty species).

This order includes one skua, three jaegers, eight gulls, one kittiwake and seven terns.

ORDER III.—TUBE-NOSED SWIMMERS (seven species).



TOTO-PALMATE FOOT.

This includes one fulmar, three shearwaters and three petrels.

The next order is characterized by a kind of foot called *toti-palmate*. It differs from the webbed feet of all other birds by having its *four* toes connected by the web. We

might call them the toti-palmate swimmers, or

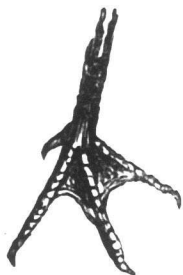
ORDER IV.—FULL WEB-TOED SWIMMERS (seven species).

It includes one tropic bird, one gannet, two cormorants, two pelicans and one man-o'-war bird.

Our next order includes our wild ducks and geese; and they are distinguished specially from other birds by having the inside edges of their bills furnished with transverse *lamels* or plates, which form a kind of fringe or strainer by means of which they sift the mud in which they generally seek their food. These lamels are on a larger scale in the mouth of the whale, in one species of which two hundred plates of "whalebone" lamels have been found on each side of the mouth, some of the largest being eight, ten or even fourteen feet in length. The fringed sheets of whalebone in the mouth of the whale appear also to have a similar origin and to serve a similar purpose to those of the birds in this order. It is a very curious point of relationship between such different classes of animals.

ORDER V.—LAMEL-BILLED SWIMMERS (thirty-five species).

It includes three mergansers, one mallard, eight ducks, one gadwall, one widgeon, one balpate, three teal, one shoveller, one pintail, one redhead, one canvasback, two golden eyes, one bufflehead, one old squaw, two eiders and three scoters (all wild ducks, thirty-one species), two geese, one brant and one swan.



SEMI-PALMATE FOOT.

The next three orders may be called *waders*. The *semi-palmate* foot is common among them, although by no means characteristic. Birds cannot be classed naturally according to their feet alone, any more than by their mouths. A number of points may have to be considered, and often there are cases where the jury disagree, and no wonder. Here, however, we have a semi-palmate foot, just to compare it with the cleft palmates.

ORDER VI.—KNIFE-BILLED WADERS (nine species).

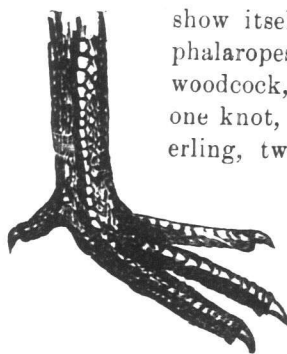
These are sometimes called *stalkers* from their habit of stalking stealthily about. The order includes one ibis, two bitterns, five herons and one egret.

ORDER VII.—LONG-TOED WADERS (six species).

Sometimes called *skulkers* from their timid habit. They pick up their food from off the surface of the ground and frequent marshy places. The order includes here two rails, one sora, two gallinules and one coot.

ORDER VIII.—SLENDER-BILLED WADERS (thirty-six species).

Called *stampers* from a common habit of stamping the soft mud in which they generally feel for their food in order to make their small prey show itself. The order includes two phalaropes, one avocet, one stilt, one woodcock, one snipe, one dowitcher, one knot, twelve sandpipers, one sand-erling, two godwits, two yellow-legs, one willet, one ruff, three curlews, four plovers, one killdeer and one turnstone.



RASORIAL FOOT.

Here is a sketch of a *rasorial* foot—one adapted for walking and scratching the earth to discover food.

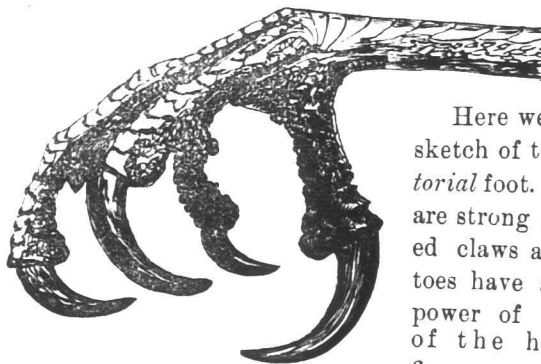
It is well represented in the following order:

ORDER IX.—TERRESTRIAL SCRATCHERS (two species).

Adapted for living on the ground. Includes the Canada grouse (spruce partridge) and Canada ruffed grouse (birch partridge).

ORDER X.—ARBOREAL SCRATCHERS (two species).

Adapted for tree life. The passenger pigeon and mourning dove (both rare).



RAPTORIAL FOOT.

Here we give a sketch of the *raptorial* foot. There are strong recurved claws and the toes have all the power of motion of the human fingers making it a perfect clutching apparatus.

ORDER XI.—BIRDS OF PREY (twenty-seven species).

The order includes two vultures (in New Brunswick accidental), ten hawks, one goshawk, two eagles, one gyrfalcon, one osprey and ten owls.