

*Order 5—Columbae*—(Columba, a dove)—Rather straight weak beak, thinnest in the middle; nostrils in a soft, fleshy membrane; strong, pointed wings. This includes the pigeons, which, like the vultures, differ from the rest of the Insectores in having the hind toe raised.

*Order 6—Gallinae*—(Gallus, a cock)—Short bent beak; nostril long opening under a membrane, which is bare in some and feathered in others, like barn fowl; head with more or less bare skin (except the quails); stout legs; hind toe small and high up; short, round wings. Includes barn fowl, turkeys, grouse, partridges and quails.

*Order 7—Grallatores*—(Gralla, a stilt)—Nearly all are long-legged, long-necked birds, with the leg bare above the middle joint. This order includes the plovers, herons and cranes—three groups so different that Prof. Jordan has, with good shew of reason, made three separate orders of them. The herons, unlike the rest of this sub-class, have hind toe large and on a level with the front ones. Though so various, you may refer to this order any bird which has the tibia bare, yet is not fully web-footed.

*Order 8—Lamellerostres*—(Lamella, a thin plate; rostrum, a bill)—Web-footed birds which have the bill set with plates that look like teeth. This includes flamingoes, swans, geese and ducks.

*Order 9—Steganopodes*—(Steganos, webbed; pous, foot)—Birds having webs not only between the front toes, but between the inner toe and the back one—the most webbed of all. Large birds with long bills ended in a hook, as pelicans and cormorants.

*Order 10—Longipennes*—(Longus, long; penna, wing)—Web footed birds having the legs about the centre of the body; hind toe very small and raised; long bill; very long and pointed

wings. Nearly all are white or light-hued birds. Includes gulls and terns.

*Order 11—Pygopodes*—(Puge, rump; pous, foot)—Feet at the very end of the body; either webbed or with great lobed membranes to each toe; when lobed the leg is like a knife blade; very short wings; generally long neck and bill. Includes the divers and grebes.

It is not expected that the student will set to work to commit this to memory, but will refer to this number as occasion shall require, and so be able to determine for himself the order to which his specimen belongs.

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## WINTER NOTES ON ORNITHOLOGY.

By Prof. C. B. WILSON.

### II.

The second group of Passerine birds is known as the (*b*) "*Clamatores*," or Clamorers, whose consanguinity is chiefly indicated by a harsh voice. This group embraces but a single family, the Tyrannidæ, or Tyrant Fly-catcher, such as the Canadian Fly-catcher, the Phoebe-bird and the King-bird. Though but a single family yet the group is strictly a New World one, and the bird fauna of America has one of its chief features in the number and variety of its Tyrannidæ. Their distinguishing characteristics are ten long feathers (primaries) in each wing, and the fact that the shanks of the legs (tarsi) are completely covered by a series of large scales. Other species are just as truly "fly catching," and resemble the Tyrannidæ in many other respects, but they have only nine primaries, and lack the scales on the front of the tarsus.

None of the Fly-catchers are winter residents, but one, the Pewee or