

T. Very good. These tufts are called ruffs. In our specimen they are very strongly erected, as are the other feathers of the bird, as it is mounted in the position it takes when making that distant, thunder-like noise called drumming. It also has a crest of feathers on its head.

S. What are the best English names for them?

T. For the first, *Canadian Ruffed Grouse*.

S. There are other kinds of Ruffed Grouse, then?

T. O yes. That is why it is named *Canadian*. And the so-called "Spruce Partridge" may be called simply *Canada Grouse*.

S. What are the scientific names, so that we may know them?

T. The Canadian Ruffed Grouse is *Bonasa Umbellus Togata*. The generic name, from the Latin *bonatus*, a "bison," because the "drumming" of the males were supposed to resemble the distant bellowing of the bison. The specific name, from the Latin *umbella*, an umbel or umbrella, referring to the ruffs. The varietal name, *togata*, means dressed in a toga. A second variety is found in the Rocky Mountain regions, and a third on the Pacific coast.

The Canada Grouse is *Canace Canadensis*, the generic name being an old Latin name for a species of game bird, and the specific name means *Canadian*.

JACK. But these birds live on trees. They might be called "arboreal scratchers" as well as "terrestrial."

T. Very true. But they are so closely allied in many respects with our domestic fowls, turkeys, pheasants, etc., which are more decidedly terrestrial, that we must put them in the same order.

S. What is the scientific name of the order?

T. *Gallinae*, which really means "fowl-like birds."

JACK. *Gallinae* is an easier word than terrestrial scratchers. But all these scratchers' feet are not the same. They have three toes and one back toe (hallux) a little higher up. But in some of the barn-yard fowls there is a long, sharp spur quite high up on the shank. Is this a fifth toe?

T. No. It is called a spur; is useful in fighting as a special scratching weapon, and is generally found in the males, although in some old world species they are even found on the female. In some species two or more are found on each shank of the male. The domestic fowl, pheasant and peacock are the spur-bearing natives of the old world naturalized among us, while the turkey is the only spur-bearing, indigenous native of North America.

S. What is the scientific name of the original turkey?

T. After the wild turkey was taken from America into Europe Linnaeus gave it the generic name *meleagris*, which is exactly both the Greek and Latin

old name often applied to the Guinea fowl; and the specific name *gallopavus*, from *gallus*, a cock, and *pavo*, a peacock. *Meleagris gallopavus*, from Mexico, is the original of all the domestic varieties of turkeys.

S. And what is the scientific name of the original of our barnyard fowls?

T. *Gallus bankiva*, found wild in South-eastern Asia. But as our time is short let us turn to our Ruffed Grouse. How long would the bird be do you think, measured?

S. About seventeen inches.

T. Correct. The Canada Grouse is generally an inch or so shorter. How many quills (rectrices) in its tail? You can easily count them in the position given in our specimen.

S. Eighteen.

T. Correct. The Canada Grouse differ not only in the markings of these feathers but in their number, which is generally sixteen. You can count some of the quills called primaries in the wing in our specimen.

S. Why are they called *primaries*?

T. Because they are *secondary* ones and *tertiary* ones.

S. Three different kinds of quills in the wing?

T. Yes. Raise the back of your wrist up to your shoulder and try to droop your hand and fingers downward, making a sort of an M shaped figure with the side of the body. Suppose your hand and fingers to be a shaft as long as an arm bone, the three shafts of the arm would then represent the three shafts of a bird's wing when closed. Stretch the arm and it represents the wing stretched for flight. The long, first shaft—representing the hand and fingers—bears the strong flying quills called the *primaries*, and in nearly all birds these are either *nine* or *ten*. The second shaft bears the strong flying quills called the *secondaries*, and the third shaft—corresponding to the shoulder arm—bears the *tertiaries*. These three kinds of flying quills are called the *remiges*, or flight feathers.

S. And what are the smaller feathers overlapping or underlying the quill feathers of the wings or tail called?

T. The *coverts*. There are wing coverts and tail coverts, upper and lower coverts, greater and lesser coverts. Their names are their explanations.

JIM. Do tell us how the Ruffed Grouse "drums."

T. I will. A person who has often watched the performance describes it thus: The male bird, standing erect, generally on a prostrate, decayed tree, which it usually frequents during the season, raises the feathers of its body in the manner of a turkey-cock, draws its head towards its tail, erecting the