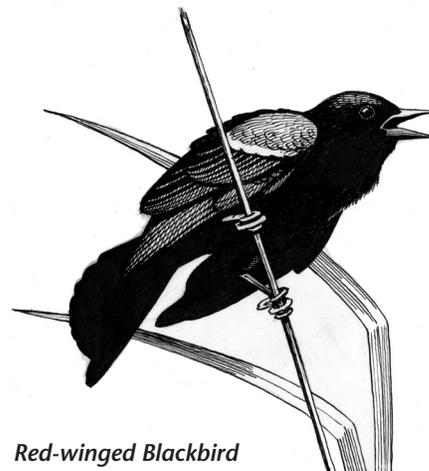




# Classifying Birds

Have you ever looked in a field guide and wondered why the brightly colored orioles and meadowlarks are lumped together with black birds like grackles and Red-winged Blackbirds, but other black birds such as starlings and crows are not in that group? The answer is that field guides are arranged so that related birds are placed together. Even though they look similar, grackles and crows are not closely related.

This brings us to a very important question: “How do people classify birds?”



*Red-winged Blackbird*

## History

At least since Aristotle (384 to 322 B.C.), people have been classifying birds or giving them names, trying to put them into logical groups. Exactly how people classify birds depends on which categories they choose. For example, in some societies, birds might be divided into two categories: birds you can eat, and birds you can't!

After Charles Darwin proposed his theory of evolution by natural selection in 1859, scientists began to classify organisms according to a shared common ancestry. In other words, organisms that were thought to be related to one another were put in the same group. This approach was the beginning of modern plant and animal **taxonomy** in which scientists assign scientific names and taxonomic grouping to reflect the species' evolutionary history.

## Binomial Nomenclature

Early in the 18th century, explorers travelled the globe, returning to Europe with many new plants and animals. However, scientists in different countries often gave the same organisms different names, which eventually became very confusing.

Finally, Swedish naturalist Carolus Linnaeus (1707 to 1778), a genius at organization, created a system of **binomial nomenclature** (“using two names”) for all plants and animals. This method worked so well that scientists have used it ever since to classify living things.

Linnaeus gave each plant or animal two Latin names: the first was its **genus** (plural “genera”; always capitalized) and the second, its **species** (plural is also “species”; never capitalized). Both the genus and species name must be written together to represent a unique organism—such as *Homo sapiens* (humans!).



# Classifying Birds

Together, the genus and species make up what is called the **scientific name** for each species, and it is always written using italics (in print) or by underlining (when written by hand). For example, the scientific name of the Canada Goose is *Branta canadensis*.

Here is an example for a certain large bird of prey that ranges widely over much of the world. This example illustrates why field guides give the scientific names after the common names—to eliminate any doubt in anyone’s mind about which bird is being described.

## ***Is that an Osprey?***

The “official” English name of this bird is Osprey, while in some parts of both the United States and Canada it is known as the fish hawk. The Swedes call it fiskgjuse; the Germans, fischadler; the Dutch, visarend; the South Africans, visvalk; the Burmese, wun-let; and the Argentines, sangral.

But to all ornithologists all over the world, regardless of the language they speak, the bird’s scientific name is *Pandion haliaetus*.



Frederick Truslow

## **Classification System**

As more organisms were described and placed into Linnaeus’ classification system, new categories had to be added. Today, each species of animal or plant is classified by placing it in a series of higher categories. These categories are based on evolutionary relationships when this information is known from scientific evidence.

Individuals of one type of bird are considered members of the same **species**. Different species that are closely related are grouped into the same **genus**. Closely related genera are placed within a **family**, related families within an **order**, related orders within a **class**, related classes within a **phylum**, and finally, related phyla within a **kingdom**.



# Classifying Birds

## How an American Robin's classification compares to a human's



American Robin	Category	human being
Animalia (animals)	Kingdom	Animalia (animals)
Chordata (with a spinal cord)	Phylum	Chordata (with a spinal cord)
Vertebrata (skeleton has vertebrae)	Class	Vertebrata (skeleton has vertebrae)
Aves (warm-blooded, feathers, hollow bones, lays eggs)	Order	Mammalia (warm blooded, hair, solid bones, live young)
Passeriformes (perching birds)	Family	Primates (flexible hands and feet, short snout, large brain)
<i>Turdus migratorius</i>	Genus and Species	<i>Homo sapiens</i>

So, how closely are we related to American Robins? We are both animals that have a spinal cords and vertebrae. But we are mammals (like dogs, cats, and rats), whereas robins are birds.

