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## THE GOLDEN EAGLE AND THE AMERICAN (OR BALD) EAGLE—HOW THEY DIFFER

BY RUDYERD BOULTON  
CURATOR OF BIRDS

All peoples of all times have been impressed with the power and spirit of large birds of prey, and the many species of eagles that exist in all countries of the world have been a focus for this interest. Countless legends and traditions attest to the high regard, and even perhaps to a little of the awe, in which these splendid birds have been held from earliest antiquity to the present day. The "thunder bird" of the Indians of the southwestern United States was probably patterned after a huge condor known only from fossil remains. The coats-of-arms of many nations include an eagle on the device, and eagles could only be flown by royalty when falconry was at its hey-day in medieval Europe.

In North America there are two species that occur commonly and have wide distribution. Magnificent specimens of both are shown in Field Museum: the bald eagle in Hall 21, and a habitat group of the golden eagle in Hall 20. The group was prepared by Taxidermist Julius Friesser, with painted background by the late Staff Artist Charles A. Corwin, and has just been reinstalled by Taxidermist John W. Moyer. The two eaglets are the gift of Mr. Alfred M. Bailey, formerly a member of Field Museum's staff, and now Director of the Colorado Museum of Natural History in Denver.

Golden eagles are holarctic in distribution—that is, they are circumpolar, and inhabit all north temperate regions. In this regard they resemble a great many birds, mammals, and other vertebrates that have taken advantage of the proximity of Alaska to Siberia and have extended their domain to include all habitats suitable to them. About six or seven geographic races have been

recognized, based on slight differences in size and color. The American race is one of the largest and darkest, and the golden sheen from which the species gets its name is largely confined to the lanceolate hackle feathers of the neck.

Unlike the white-headed bird used as the national emblem of the United States, the golden eagle is partial to mountainous regions and arid barren wastes. It is there-

two or three nests which they use in alternate years. The nests, when first built, are no more than three or four feet in diameter, but as they are used for many years and are continually repaired and added to, they become huge structures six or eight feet in diameter and as many feet thick.

Almost invariably the nest is perched on a ledge in a canyon or on a rocky crag from which a wide view can be obtained. Rarely,

a huge tree is used. The eggs are two in number, occasionally three, and are white, attractively shaded and blotched with pinkish brown. It not infrequently happens that one egg is infertile and fails to hatch. If both eggs hatch, one of the youngsters is invariably larger than the other because the eggs are laid at an interval of about a week and the first-born gets a start on its nest mate. And thus it happens that often only one young bird is brought to maturity, for the elder and stronger youngster may tear its weaker brother to bits in the sheer exuberance of living.

Eaglets are clothed in thick, soft white

down when they hatch. They wear this coat for about three weeks. Then comes a period of about two weeks while their feathers are growing, during which time they are ragged, pathetic looking creatures. They remain in the nest for another three weeks—two months in all—while they gain strength and confidence to venture into the exciting and strenuous world.

A reliable eye witness in California states, in describing his observations of an eagle teaching its youngster to fly: "The mother started from the nest in the crags and, roughly handling the young one, she allowed him to drop about ninety feet. Then she would swoop down under him, wings spread, and he would alight on her back. She would



**The Golden Eagle**

Habitat group of an outstanding bird of prey, as exhibited in the Hall of Birds (Hall 20). Although not new to the Museum's exhibits, this group has been recently reinstalled and improved by Taxidermist John W. Moyer.

fore much more common in the western states than in the east, where it occurs only as a migrant. The nesting places of the eagles that yearly fly down the length of the Alleghenies are unknown, but the flights are of regular occurrence, and the birds can generally be seen in mid-October drifting past Hawk Mountain in Pennsylvania. Even in the Chicago region hardly a year passes without the visit of a straggler from his chosen mountain terrain. Yet golden eagles are not now known to nest east of the Rockies.

Eagle's nests, often poetically called eyries, are large affairs made of sticks and branches with a finer lining of leaves and lichens. Often a pair of eagles will have



soar to the top of the range with him and repeat the process. The farthest she let him fall was about 150 feet."

There is nothing particularly spectacular or bizarre about the courtship of eagles, but their complete mastery of the air makes the sight very impressive. The two birds circle in intertwining, ever rising spirals, sometimes brushing wings as they pass each other. Then the male will execute a series of "power dives" with half-closed wings, shrieking musically his *joie de vivre*. Eagles



**The American Eagle**

Also known as the bald eagle. Many people confuse this species, which is used as a national emblem of the United States, with the golden eagle shown in the illustration on page 1. The above specimen is in Field Museum's systematic collection of birds in Hall 21.

probably mate for life, but when one of a couple is killed, the other soon finds another partner and brings it to its established nesting territory.

Golden eagles feed largely on mammals—cottontail rabbits, ground squirrels, domestic and mountain sheep lambs, and even on antelope and deer occasionally. Strangely enough, they are also fond of rattlesnakes. There is an authentic instance of a fox attacking an eagle that was feeding on a rabbit that it had killed. After a fierce struggle, the eagle managed to rise into the air although the fox clung to its breast with clamped jaws. The eagle rose higher and higher and the fox, with nothing but thin air to brace himself against, was at a disadvantage. Eventually he released his hold and was dashed to death on the ground. The eagle escaped, exhausted and weak.

#### THE BALD EAGLE, OUR NATIONAL BIRD

The bald eagle, which nests from Florida to Alaska, is a strictly American bird unlike its widespread golden cousin. It is therefore appropriate that it should have been chosen as our national symbol by Congress

on June 20, 1782. The habits and bearing of the white-headed bird do not compare, however, with the noble, fearless design for living characteristic of the golden eagle.

The bald eagle is rarely found far from water, for its food consists almost entirely of fish and water birds, although mammals that occur in marshes and along shores are taken. This eagle obtains its food whenever possible by strategy rather than by sheer power and speed. It is perfectly able to catch a full winged duck in the air. However, it is more likely to tire a duck by forcing it to dive repeatedly until the duck is exhausted and becomes an easy victim.

In its behavior towards the osprey or fish hawk, it is one of the most famous of pirates. The osprey, slightly smaller than the eagle, is an expert fisherman and expert he must be, for he often feeds both himself and the eagle. Waiting in majestic pose on the bare top of a dead tree, the eagle spies a heavily laden osprey returning to his nest. The marauder gives chase and though the osprey, if unburdened, might escape, he is eventually forced to drop the fish which the eagle often retrieves in full flight before it reaches the water.

#### TULIP TIME RECALLS A MANIA OF SEVENTEENTH CENTURY

BY SOPHIA PRIOR

The tulip probably is the most popular of all spring garden flowers. It is a native of China, Japan, Siberia, Asia Minor, Turkey, the Mediterranean countries, and central Asia. Its early history and origin are very obscure. However, records show that it was first introduced into Europe from Turkey in 1554, at which time seeds were brought to Vienna by the Austrian ambassador to Turkey, and soon tulips spread rapidly over Europe. Clusius, a Dutch botanist and horticulturist, developed on a large scale new varieties which he sold. The red and yellow tulip with the narrow pointed segments, a favorite of the Turks, was developed into broad, rounded, petaled forms of unusual color.

This anxiety for new varieties culminated in the year 1634 in the historic craze designated as "tulipomania," and during several subsequent years many Dutch fortunes were invested in bulbs and their culture, and vast sums were lost through speculation. Fabulous prices were paid for bulbs, as much as \$1,000 to \$4,000 each, until the government interfered. Holland nevertheless continued developing varieties for commercial purposes, and its tulips reached such a degree of perfection that to this day the Dutch bulbs are prized among gardeners.

Of interest to Chicagoans is the tulip festival held each spring at Holland, Michigan, a short drive from the city. This Michigan town was founded by Netherlanders and to this day has preserved much characteristic atmosphere of their homeland,

#### AN ODDITY AMONG MINERALS

BY L. BRYANT MATHER, JR.  
ASSISTANT CURATOR OF MINERALOGY

It looks like lard—it feels like butter—it cuts like cheese—yet it is a *mineral* that can't be melted!

The material possessing these striking properties was received at Field Museum as a gift from Mr. Ben Hur Wilson of Joliet, Illinois. Mr. Wilson reports that it came from a locality near Agate on the Union Pacific Railroad, fifty miles from Barstow, California, where it is being worked for use in the ceramics industry. The mineral has locally been called "Eyrite," derived from the name of its discoverer, but preliminary study in the Museum laboratory indicates that it is sufficiently similar to *Saponite* (Dana No. 488) to be classified as a variety of that species. Chemically it is a hydrous silicate of magnesium with about 20 per cent water, and small amounts of lime, fluorine and alumina. When the mineral is heated, the water is given off and the lard-like appearance of the specimen is changed to a chalk-like one. It is distinguished from its distant relative *Sepiolite* (better known as "Meerschaum") from which fine pipes are carved, and which is likewise a hydrous magnesium silicate, by several tests. The most striking of these is its failure to display that characteristic property of *Sepiolite* of adhering to the tongue.

#### EARLIEST SPRING FLOWERS

Among garden plants the earliest to bloom in the spring are the snowdrop (*Galanthus nivalis*), usually with white flowers, and the squill (*Scilla sibirica* and *Scilla bifolia*), usually with blue flowers. These are dainty low-growing herbs only a few inches in height. Both the snowdrop and the squill are natives of the cooler parts of Europe and Asia Minor, the Siberian squill inhabiting Russia and Asia Minor, while the snowdrop is a native of Europe from the Pyrenees to the Caucasus Mountains. They were introduced into cultivation in the United States by the early New England settlers. In the Chicago region they usually bloom in March and early April.

The crocus also flowers very early, as do the daffodils and jonquils, but these come into bloom somewhat later than the snowdrop and the squill.

—J. A. S.

#### Sculpture, Inside and Out —by Malvina Hoffman

This, the latest book by the creator of the Races of Mankind sculptures in Field Museum, will be published April 3. The book is copiously illustrated. Regular edition \$3.75. De luxe autographed edition \$7.50. On sale at the BOOK SHOP of FIELD MUSEUM.





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