

MARTIAL EAGLE

CARD 102

GROUP 2: BIRDS

ORDER
Falconiformes

FAMILY
Accipitridae

GENUS & SPECIES
Polemaetus bellicosus



The martial eagle is Africa's largest eagle. It spots its prey while soaring high in the sky, then swoops down to kill and carry off its victim in its powerful claws.

KEY FACTS



SIZES

Length: 2-3 ft. Female larger than male.

Weight: Male, 11 lb. Female, 13 lb.

Wingspan: Over 8 ft.



BREEDING

Breeding season: September to July, depending on location.

Clutch size: 1 large egg.

Incubation: 6½ weeks.

Fledging period: 14 weeks.



LIFESTYLE

Habit: Pairs for life.

Diet: Varied; mostly game birds and small mammals.

Lifespan: Up to 50 years.



RELATED SPECIES

The closest relative is the crowned eagle, *Stephanoaetus coronatus*.

Others include Bonelli's eagle, *Hieraetus fasciatus*, and the long-crested eagle, *Lophoaetus occipitalis*.



Range of the martial eagle.

DISTRIBUTION

Found in most of Africa, except in forested areas and the Sahara Desert.

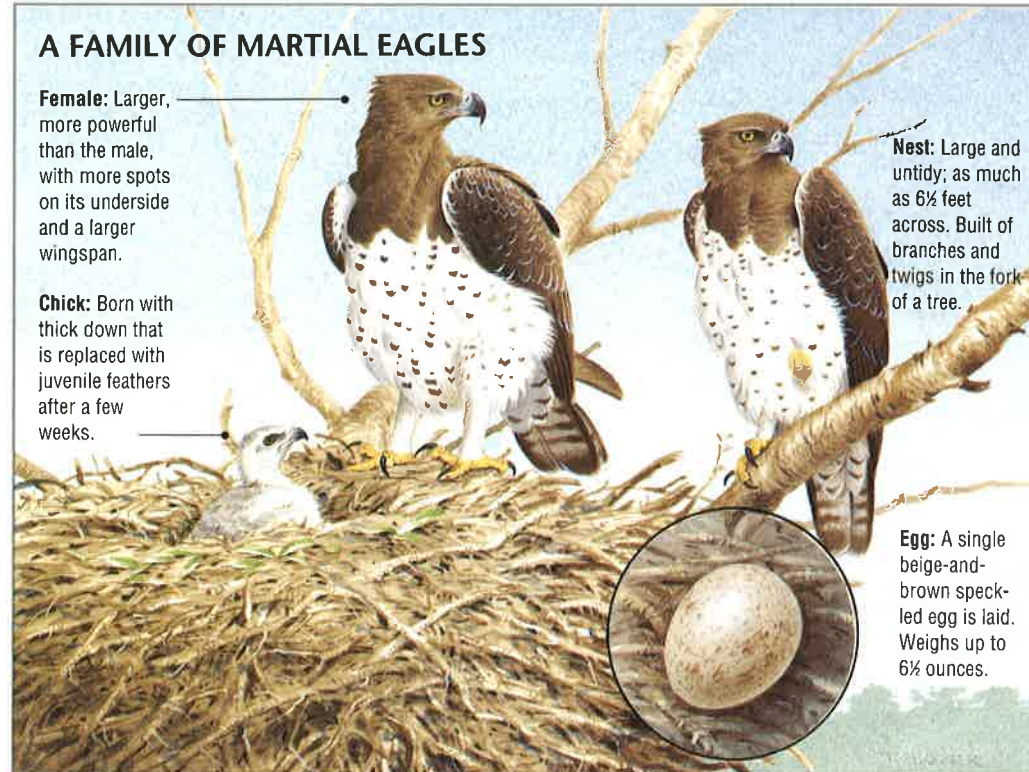
CONSERVATION

Although the martial eagle is not an endangered species, its numbers are being reduced by increasing settlement of its range and by humans who see it as a threat to livestock.

A FAMILY OF MARTIAL EAGLES

Female: Larger, more powerful than the male, with more spots on its underside and a larger wingspan.

Chick: Born with thick down that is replaced with juvenile feathers after a few weeks.



Nest: Large and untidy; as much as 6½ feet across. Built of branches and twigs in the fork of a tree.

Egg: A single beige-and-brown speckled egg is laid. Weighs up to 6½ ounces.



The martial eagle is a large bird with dark gray plumage. Despite its size and strength, this eagle is very timid and avoids contact with humans as much as possible.

HABITAT

The martial eagle is found in woodlands near large, open clearings. Its preferred habitat is the open savanna and semidesert regions of southern and eastern Africa south of the Sahara.

It soars in the air for hours at a time, tirelessly searching the ground for prey from heights that make it almost invisible to the human eye. Sometimes it stops to hover over an area where potential prey is present.

DID YOU KNOW?

- The martial eagle can spot prey more than a mile away.
- A pair of martial eagles has a range of 50 to 120 square miles and is separated from other pairs by about 20 to 25 miles. These distances make the martial eagle one of the most thinly distributed birds in the world.
- A martial eagle egg is large. It weighs about six and a half ounces.

BREEDING

The martial eagle nests high in the fork of a tree or on the top of flat-crowned trees. The nest is built from sticks gathered by the female and sometimes the male. Nest building takes several weeks. The finished nest can measure up to six and a half feet wide and three and a half feet deep.

Left: A young martial eaglet.

Below: An adult regurgitates meat to feed its hungry chick.



Once the nest has been built, the mates often return to it year after year.

Breeding takes place from September in the northern part of the range to July in the southern regions. The female lays a single egg, which she incubates for a month and a half.

After the chick has hatched,

the male provides the food. Later, as the chick grows and needs more food, both parents share the task of finding food and feeding it. At three months, the young eagle, or *eaglet*, attempts its first flight, but it may remain close to the nest for as long as three months after leaving it.



FOOD & HUNTING

The martial eagle hunts a variety of animals. It prefers game birds but also hunts young impalas, jackals, snakes, lizards, and smaller mammals such as the meerkat.

With the increase in farms and the introduction of domestic animals to its range, the martial eagle has added lambs, young goats, and chickens to its diet.

The martial eagle searches for prey by soaring high up and scanning the ground below. At other times it flies low and level. Once it spots its prey, the eagle swoops down quickly, holding its wings high over its back to increase its speed. After killing its prey, the eagle carries it off in its strong talons.

Above far right: A martial eagle watches over its untidy nest.



Above right: After killing a gazelle, the eagle raises its wings menacingly to scare off other gazelles.



Right: In flight, the eagle conserves energy by soaring on air currents.

VERMILION FLYCATCHER

CARD 105

GROUP 2: BIRDS

ORDER
Passeriformes

FAMILY
Tyrannidae

GENUS & SPECIES
Pyrocephalus rubinus



The vermilion flycatcher is a favorite of birdwatchers from the Southwest to South America. The male displays his brilliant red plumage to its fullest during his courtship flights.

KEY FACTS



SIZES

Length: 5-7 in.
Wing length: About 3 in.



BREEDING

Breeding season: Varies according to region. March to June in U.S. Southwest.
No. of broods: 1-3.
Eggs: 2-4, usually 3. White, with brown blotches.
Incubation: 12 days.
Fledging period: 15 days.



LIFESTYLE

Habit: Perches conspicuously. Has a distinctive song.
Diet: Insects, mostly taken in flight.



RELATED SPECIES

There are about 370 species of tyrant flycatcher, divided into 13 subfamilies, all found in North and South America.



Range of the vermilion flycatcher.

DISTRIBUTION

Widespread from southwestern United States through Mexico, Central America, and northern South America to Bolivia and Argentina. Also found on the Galápagos Islands.

CONSERVATION

The vermilion flycatcher remains abundant in suitable habitats.

FEATURES OF THE VERMILION FLYCATCHER

Female: Dark gray top. Creamy white throat and underparts. Peach-colored belly and undertail feathers.

Male: Bright red and dark brown plumage.



Nest: Made of short twigs woven with finer twigs, grasses, dead leaves, and spiders' webs. Spiders' webs are also used to bind the nest to branches. The interior is lined with plant down, feathers, hair, and other fine material.

Eggs: The clutch usually consists of 3 eggs marked with dark blotches.





The vermilion flycatcher belongs to the large family of tyrant flycatchers.

The male's vivid red coloring distinguishes him from most other tyrant flycatchers.

The female is much less colorful than the male.

HABITS

The vermilion flycatcher can be found in tropical and subtropical regions of the Americas. It lives at the edges of woodland, in open fields, and in semiarid scrub.

Birds in the northern areas vary in their seasonal movements. In Arizona some move into the wetter valleys for the winter. Others spend only the summer in Arizona and then migrate to Mexico, the Gulf

coast, or southern California. The male vermilion flycatcher's distinctive song is heard during his courtship display. He starts from a low perch and flutters upward in a spiral, with his crest erect, his breast feathers puffed out, his tail spread, and his wings vibrating rapidly. All the time the flycatcher is singing. At a height of about 65 feet, he turns and flutters slowly down.

DID YOU KNOW?

- The male vermilion flycatcher tends to lose his vivid coloring in captivity. His head and breast become a spotty red and white.
- In the United States, the adult vermilion flycatcher

molts, or sheds, all its plumage after the breeding season. It also partially sheds its plumage in early spring.

- The male vermilion flycatcher is noted for its soft, tinkling courtship song.

FOOD & FEEDING

The vermilion flycatcher eats a variety of small insects such as beetles, grasshoppers, and flies. Near beehives, it may also prey on honeybees.

This bird catches its prey in a typical flycatcher manner. It sits upright on its perch. As soon as it spots a flying in-

sect, it darts out to snatch its victim. After returning to its perch, the bird swallows the insect. To eat a large insect, it holds the insect down with one foot and pecks off small pieces. The flycatcher may also snatch beetles and grasshoppers on the ground.

Left: During breeding season, a male starts to sing from his perch before flying upward.

Right: The female vermilion flycatcher lacks the male's bright red coloring.



BREEDING

The breeding season is signaled by the male vermilion flycatcher's courtship song and flight. After he attracts and mates with a female, the pair starts to build a nest in the fork of a horizontal branch. This nest is generally 10 to 25 feet above the ground and is often located near water.

The female usually lays three eggs, two to three times a year. She does the incubating, but the male stays nearby and fends off intruders. The young first fly about two weeks after hatching but take a year to develop their full adult plumage.

Left: The vermilion flycatcher is abundant in suitable habitats.

WOODPIGEON

CARD 108

GROUP 2: BIRDS

ORDER
Columbiformes

FAMILY
Columbidae

GENUS & SPECIES
Columba palumbus



The cooing of a woodpigeon is a well-known sound in Europe. This woodland bird has become more and more common as its natural predators have been killed off by humans.

KEY FACTS



SIZE

Length: About 16 in.
Wingspan: About 30 in.
Weight: 1-1½ lb.



BREEDING

Sexual maturity: 1 year.
Breeding season: All year but usually April to October.
Eggs: Usually 2, white.
Incubation period: 15-17 days.
Fledging period: 30-35 days.



LIFESTYLE

Call: Coo.
Habit: Lives and roosts in large flocks out of breeding season.
Diet: Varied. Flowers, seeds, herbs, grasses, grains, nuts, berries, and occasionally caterpillars and earthworms.



RELATED SPECIES

The feral pigeon and its wild ancestor the rock dove are among the woodpigeon's closest relatives.



Range of the woodpigeon.

DISTRIBUTION

Found throughout Europe and eastward to northern India. Also found in mountain forests of northwest Africa.

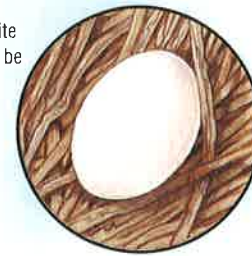
CONSERVATION

The woodpigeon is the most abundant wild pigeon in Great Britain. It may even outnumber the feral pigeon. Although many have been killed by farmers, who consider the bird a pest, the woodpigeon is not in any danger.

FEATURES OF THE WOODPIGEON

Adult: Both sexes look alike. The head, neck, and tail are gray. The breast is a purplish gray, and there is a green, purple, and white patch on the neck. The back and wings are grayish brown.

Flight: The distinctive white patches on the wings can be seen in flight.



Eggs: Two pure white eggs in each clutch.

Nest: Built from small twigs, thin roots, and dead plant and grass stems. The *squabs* (chicks) stay in the nest for over a month.





The woodpigeon is the largest species of dove or pigeon found in Europe. It is now common in some European cities and suburbs. But it is even more widespread in the open countryside, where it feasts on farmers' crops.

HABITS

Outside the breeding season the woodpigeon spends most of its time in a flock and uses a communal roost at night. The male also uses this roost while the female incubates the eggs.

In the country the woodpigeon prefers to roost in small woods, preferably close to farmland. This bird eats large

quantities of cereal crops and greens, so farmers consider it a major pest.

Closer to the cities and suburbs, the woodpigeon is not viewed with the same mistrust and has become fairly tame. In London, for example, it can be found in wooded parks and large suburban gardens.

DID YOU KNOW?

- In spite of its size and shape the woodpigeon is surprisingly agile. It can cling upside-down to a branch to reach fruit or nuts.
- A male woodpigeon is very fussy about the quality of building materials for the

nest. He picks each piece up and tests it in his bill before accepting or rejecting it.

- On the Orkney Islands, off Scotland's coast, there are no trees. Woodpigeons nest on the ground, usually in the shelter of a rock.

BREEDING

During the breeding season the male woodpigeon attracts the female with loud cooing calls and dramatic displays in the air. Before a pair actually mate, they carefully preen each other's plumage and entwine their bills.

The birds find a nesting site in a tree or shrub. The female settles in the chosen spot, and her mate brings twigs and stems to weave together a

Left: The woodpigeon can be identified by the white patch on its neck.

nest. Often they build on top of an abandoned nest.

The female lays two white eggs, and both birds incubate them. Soon after hatching, the young, or *squabs*, feed on vitamin-rich pigeon's milk. The squab pushes its head into the adult's throat and drinks up the milky substance. After several days the squab begins to eat more solid food. By six to eight weeks, it is independent.

Right: In the spring male woodpigeons woo potential mates with their soft cooing sound.



BIRDWATCH

Woodpigeons have a distinctive call and are not difficult to locate. If disturbed, a pigeon rises from a tree with a great flurry.

Many Europeans put out bread for pigeons in winter. At first the birds may hesitate over this food. But they soon adjust to it.



Left: Careful preening of its feathers is part of the woodpigeon's daily ritual.



ENEMIES

The large birds of prey are the woodpigeon's main enemy. Recently, the woodpigeon has benefited as birds of prey have been killed off by people.

In some places the woodpigeon is prey to martens or

other tree-climbing mammals. In Great Britain the bird is also caught by foxes and badgers.

Farmers often consider the woodpigeon a pest, and they shoot many woodpigeons every year.

FOOD & FEEDING

The woodpigeon eats a variety of foods, including flowers, leaves, seeds, acorns, grasses, grains, and berries. It also sometimes eats caterpillars, small snails, and earthworms. Woodpigeons that live close

to people may eat bread and other scraps.

The woodpigeon may eat specific crops. It often eats clover in winter and feeds on newly sown grain and wild mustard in spring. In summer large flocks can destroy fields of ripe grain. Toward the east, the bird also eats wild figs.

The woodpigeon eats either on the ground or in a tree. It usually drinks after eating. The bird dips its bill into a puddle or pond and sucks up the water. It then lifts its head momentarily before taking a few shorter drinks.



Left: The woodpigeon takes long and short drinks, sucking water up through its beak.

COMMON RAVEN

CARD 110

GROUP 2: BIRDS

ORDER
Passeriformes

FAMILY
Corvidae

GENUS & SPECIES
Corvus corax



The common raven is the largest member of the crow family. This bird may appear to move slowly on the ground, but it can perform sophisticated displays in the air.

KEY FACTS



SIZES

Length: Over 2 ft.
Weight: 1¼ -3½ lb.



BREEDING

Sexual maturity: 3 years.
Breeding season: February to March.
No. of broods: 1.
Eggs: 4 to 6 pale blue or green eggs, speckled gray or brown.
Incubation: About 3 weeks.
Fledging period: 5-6 weeks.



LIFESTYLE

Call: Deep, far-reaching croak.
Habit: Sociable year-round.
Diet: Mainly carrion. Also small mammals, frogs, lizards, insects.
Lifespan: Up to 12 years in the wild. Much longer in captivity.



RELATED SPECIES

Closely related to other members of the crow family, including the carrion crow and rook.



Range of the common raven.

DISTRIBUTION

Found mainly in remote areas of the Northern Hemisphere, including North America south to Nicaragua, Europe, North Africa, and parts of Asia.

CONSERVATION

Although legal protection for the common raven has increased its numbers in recent years, there are huge areas within its range where it is no longer found.

FEATURES OF THE COMMON RAVEN

Bill: Large, heavy, and powerful.

Throat feathers: Shaggy and pointed.

Chicks: Fed by both parents. Leave nest after about 6 weeks. Juvenile plumage is dark brown and dull.

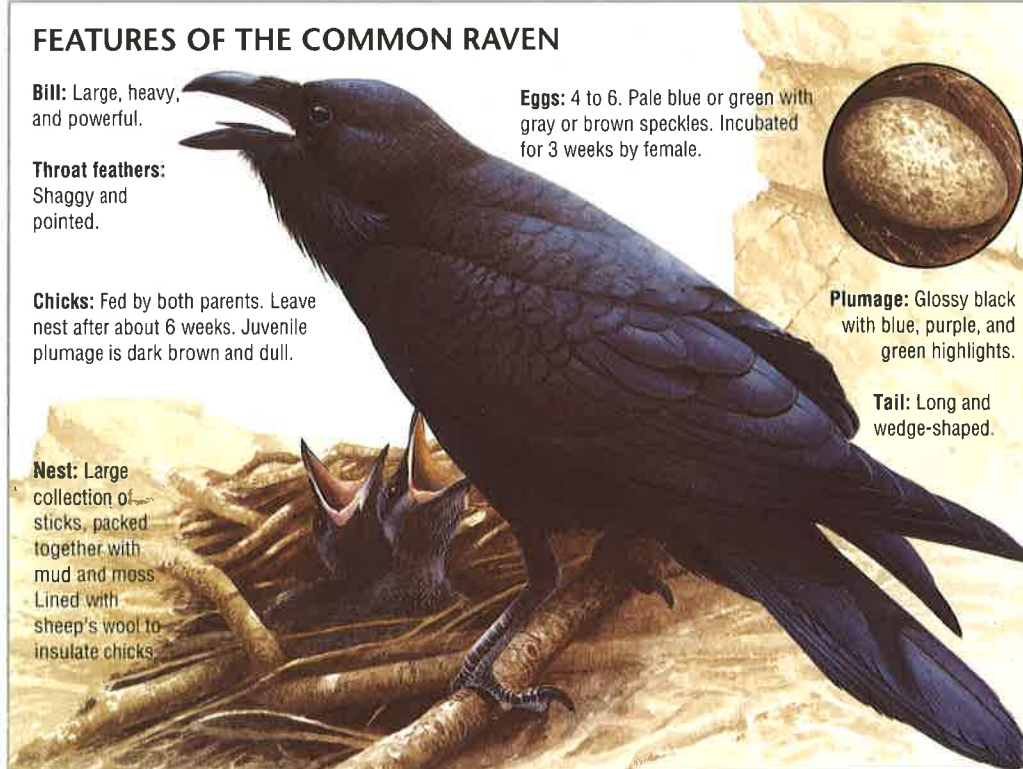
Nest: Large collection of sticks, packed together with mud and moss. Lined with sheep's wool to insulate chicks.

Eggs: 4 to 6. Pale blue or green with gray or brown speckles. Incubated for 3 weeks by female.



Plumage: Glossy black with blue, purple, and green highlights.

Tail: Long and wedge-shaped.





BREEDING

In the common raven's courtship display, both the male and the female soar and dive through the air. The two ravens then perch together and preen each other.

The common raven mates in February or early March. Most pairs stay in the same territory all year and use the same nest site each year. The couple gathers branches and large twigs to build a broad platform with a cup-shaped nest on a rocky crag or ledge. The nest itself is made of sticks

Left: The common raven raises its throat feathers when it calls.

packed together with mud and moss. It is lined with sheep's wool and soft grass.

The female lays a clutch of between four and six eggs. She incubates the eggs herself and is fed by the male. The eggs hatch about three weeks later, and both parents feed the chicks for about six weeks. The adults roost away from the nest soon after the chicks have hatched, visiting them only to bring food. The young are able to fly at five to six weeks of age.

Right: The raven is the largest crow and the largest songbird.



For centuries, people have attempted to kill off the common raven. In the past many people believed that this all-black bird was an evil omen with strange powers, perhaps because it would feed on corpses hanging from the gallows. Today, the raven stays away from people and is found mainly in uninhabited areas.

DID YOU KNOW?

- The common raven and other crows may be the most intelligent birds.
- Parent ravens adjust their nest's lining depending on outside temperatures. They make the nest warmer or cooler for their young.
- The phrase "an unkindness of ravens" comes from the old belief that ravens neglected their chicks.
- It is said that if all the ravens living in the Tower of London flew away, the realm would fall. The ravens' wings are clipped to keep them from escaping.

BIRDWATCH

The common raven's usual habitats include sea cliffs, remote wooded valleys, and mountains. It can be confused with the carrion crow because of its similar shape and black color. But the common raven is larger, with a heavier, more powerful bill and shaggy throat feathers. In flight the raven is distinguished by its wedge-shaped tail, a large head, and finger-like feathers at its wingtips.

HABITS

Originally, the common raven was found throughout Europe, and was a frequent sight in many cities. During the seventeenth century, however, people came to believe that the raven had supernatural powers, and they tried to get rid of it. The raven then moved to more remote areas.

Today, the common raven is a protected species that lives on mountains, moors, and rocky coasts. But it is still

sometimes hunted illegally. The male does not mature sexually until his third year. Large flocks of up to 200 young fly and roost together until they are ready to breed.

The mature raven defends its chosen territory aggressively. The raven is agile in the air, so other birds are unlikely to harm it in flight. But it moves slowly on the ground, so it may have to leave dead flesh to larger birds of prey.



Left: The raven feeds mainly on carrion, but also eats small mammals and insects.

FOOD & FEEDING

The common raven's main food is *carrion* (flesh from dead animals), particularly sheep. Several ravens collect around a large carcass and pick the bones completely clean. During spring lambing season young ravens gather to feed on the *placenta* (afterbirth) left by *ewes* (female sheep).

The raven may hoard food in the winter, but there is usually a plentiful supply of food during the lambing season. The raven breeds in late February, so its eggs will hatch in spring. Young ravens have a protein-rich diet of stillborn lambs, nestlings, and carrion from rabbits, foxes, and deer.

The raven will eat almost anything when carrion is not available, including small mammals, birds, frogs, lizards, and insects.

CATTLE EGRET

CARD 114

GROUP 2: BIRDS

ORDER
Ciconiiformes

FAMILY
Ardeidae

GENUS & SPECIES
Bubulcus ibis



The cattle egret is a small white heron that usually spends its day in the company of cattle. It feeds on insects that are stirred up by the grazing animals as they move across pastures.

KEY FACTS



SIZES
Length: About 1½ ft.
Wingspan: About 3 ft.
Weight: 10-14 oz.



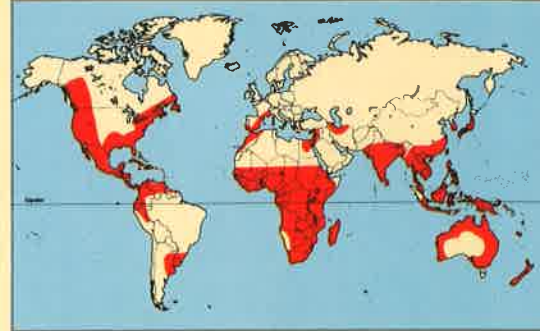
BREEDING
Sexual maturity: 2 years.
Breeding season: April to mid-August.
Eggs: 3-4.
Incubation: 22-26 days.
Fledging: 30 days.



LIFESTYLE
Habit: Sociable. Roosts in large numbers when not breeding.
Diet: Insects, frogs, lizards, birds, and small mammals.
Lifespan: Oldest banded bird: 13 years, 6 months.



RELATED SPECIES
The family Ardeidae contains 61 species in 17 genera, including the American bittern, *Botaurus lentiginosus*.



Range of the cattle egret.

DISTRIBUTION

Found mainly in central and southern Africa, southern Asia, and the southern tip of Europe. Recently its range has extended to South America, Central America, and parts of North America. Introduced to Australia, New Zealand, and the Hawaiian islands.

CONSERVATION

The cattle egret has greatly extended its range in the last hundred years and does not seem to be threatened.

FEATURES OF THE CATTLE EGRET



Nonbreeding plumage: Creamy white. Male has long throat feathers. Female has purer white coloring. Young are grayer.

Breeding plumage: Pinkish yellow or rich orange-yellow feathers on crown and breast. Bill darkens to red.

Eggs: Four or five. White tinged with pale green or blue. A second clutch is laid if the first fails.



Nest: Male gathers reeds, branches, twigs, and grass, which the female uses to build the nest.





The cattle egret differs from other species of heron in behavior and appearance. Unlike other herons, it does not need to live on or near water. Instead, it is found in open fields, where it follows cattle or other grazing animals in order to find food. With its short, hunched neck and ungainly walk, the cattle egret is one of the less graceful small herons.

BREEDING

The male cattle egret is usually quiet, but he becomes aggressive and noisy in the mating season. After he chooses a site in the breeding colony, the male struts about, hunching his neck, spreading his wings, and swaying from side to side. Up to 10 females watch this display from a nearby perch. They eventually respond by stretching their necks out and posturing at the male. Then they fly down to alight on the male's back. He drives them off until one female finally sub-

dues him. The two birds preen elaborately and then mate.

After mating, the pair builds a nest in a bush, a low tree, or a bed of reeds. Both sexes take turns incubating the eggs.

Both parents care for their chicks, feeding them by regurgitating food into their mouths. As the chicks grow, the adults place food in the nest. After about 20 days, the chicks leave the nest to perch nearby. They are fledged at 30 days but not fully independent for another 15 days.

Left: The plumage and bill of both sexes become more vividly colored in the breeding season.

Right: The parents take turns guarding their offspring in the first days of life.



DID YOU KNOW?

- In large nesting colonies, up to 100 pairs of cattle egrets may nest in a single tree, with six to eight nests perched on each branch.
- The egret is an enthusiastic nest builder. Both sexes continue to build their nest during incubation and even after the eggs have hatched.
- The number of birds at a cattle egret's roosting site can range from as few as 20 to as many as 10,000.
- If an adult catches a chick trespassing on its nest site, it will attack and may even kill the youngster.



Left: The African water buffalo is not disturbed by the presence of a cattle egret. The bird can spot insects on the ground from its vantage point on the grazing animal's back.

HABITS

The cattle egret prefers warm lowland areas, and it spends most of the day in pastures and open fields. Unlike most herons, it is not restricted to wetlands, but it sometimes settles on the banks of rivers, ponds, and lakes. The cattle egret tolerates humans and can often be seen in parks.

This sociable bird lives in small flocks of up to 20 individuals. Each morning the flock takes to the air in search of a

herd of domestic or wild animals. The flock follows the herd all day, dispersing to feed but coming together again in the late afternoon. The flock then flies back to the roost, stopping at a watering place along the way.

The roost is usually located in large trees near a good water supply. Cattle egrets often roost with other water birds in huge colonies that contain thousands of birds.



FOOD & FEEDING

The cattle egret starts the day with its flock, looking for a herd of cattle or other grazing animals to follow. As the cattle move, they disturb insects and other animals underfoot. The egret walks cautiously between the legs of the cattle, stabbing at the exposed insects with its long, pointed bill. It may hop onto

Left: Although its main food is insects, the cattle egret also eats larger prey such as frogs.

an animal's back to get a better view of its prey.

Insects, especially grasshoppers, form the main part of the cattle egret's diet. It also eats spiders, lizards, frogs, and snakes. Sometimes it preys on small mammals or birds and their young. It is a myth that the egret feeds mainly on ticks found on the skin of cattle. Ticks make up only a small proportion of the cattle egret's diet.