

KOOKABURRA

CARD 43

GROUP 2: BIRDS

ORDER
Coraciiformes

FAMILY
Alcedinidae

GENUS & SPECIES
Dacelo novaeguineae



The Australian kookaburra is the largest member of the kingfisher family. It will devour almost any small prey.

KEY FACTS



SIZES

Length: 1 1/2 ft.
Weight: Up to 1 lb.



BREEDING

Sexual maturity: 1 year.
Eggs: 2-3, white.
Incubation: About 20 days.
Fledging: About 30 days.



LIFESTYLE

Habit: A complicated social system with helpers at the nest.
Diet: Insects and other invertebrates, rodents, reptiles, birds and their chicks.



RELATED SPECIES

There is only one other species of kookaburra, the blue-winged kookaburra. The two other members of the genus *Dacelo* are the Aru giant kingfisher and the rufous-bellied giant kingfisher.



Range of the kookaburra.

DISTRIBUTION

The kookaburra is common throughout its range of Australia and Tasmania. The blue-winged kookaburra is found in the warmer parts of northern Australia.

CONSERVATION

Conservation measures are not needed at present, since the kookaburra is so widespread. It has been successfully introduced into Tasmania.

FEATURES OF THE KOOKABURRA



The kookaburra watches from its perch

for any small creature that might make

a tasty meal. It does not usually hunt over

water for fish. Preying on a variety of other

animals that humans regard as pests,

the kookaburra is a welcome sight to

people living in the area.



HABITAT

There are two species of kookaburra. One, the blue-winged kookaburra, is found only in northern Queensland in northeastern Australia, while the other is more widespread throughout the country in

woodland and open country. It has also been introduced into Tasmania.

The kookaburra prefers to roost in the small, leafy trees that grow in the woodlands. This habitat supports numer-

ous tree varieties, including eucalyptus.

Unlike other birds that inhabit Australia's acacia forests, the kookaburra is found in less densely wooded areas and sometimes near inland waters.

BREEDING

The kookaburra nests in hollow trees, holes in the walls of buildings, or the nests of termites.

The female lays two to three white eggs. Once the young have hatched, they are dependent on their parents for sev-

Below: Kookaburras perch on branches, waiting to spot prey.

eral months. Often the young remain with their parents as 'helpers', providing food for the next brood of chicks.

The young also help defend the territory by warning away other birds with their characteristic laughlike call, which becomes louder as more birds join in.

DID YOU KNOW?

- The kookaburra is also known as the "laughing jackass" because of its braying, laughlike call.
- The kookaburra is the largest of all kingfishers and is found only in Australia.
- The kookaburra can mimic unusual sounds, such as a steam whistle.

FOOD & HUNTING

The kookaburra is a member of a subfamily of kingfishers known as the *Daceloninae*, some of which are called "tree kingfishers." Like most kingfishers, the kookaburra hunts during the day, perching on a tree branch to spot prey.

From its high vantage point, the bird waits for prey, such as insects, snakes, crabs, rodents, and other birds (including young chicks) to pass underneath it. It then swoops down rapidly from its perch and seizes the victim in its long, daggerlike bill.

The kookaburra, like the majority of birds in the kingfisher family, does not actually catch fish.



Above: The female kookaburra feeds a small reptile to her hungry young.

Below: With great accuracy, the kookaburra swoops down to catch its prey.



HERRING GULL

CARD 44



GROUP 2: BIRDS

ORDER
Charadriiformes

FAMILY
Laridae

GENUS & SPECIES
Larus argentatus



The herring gull, also known as the seagull, lives on the coast and in populated inland areas. It breeds on rocky cliffs and sand dunes, as well as on rooftops at seaside towns.

KEY FACTS



SIZES
Length: Male, 1-2 ft. Female, slightly larger.
Wingspan: 4-5 ft.



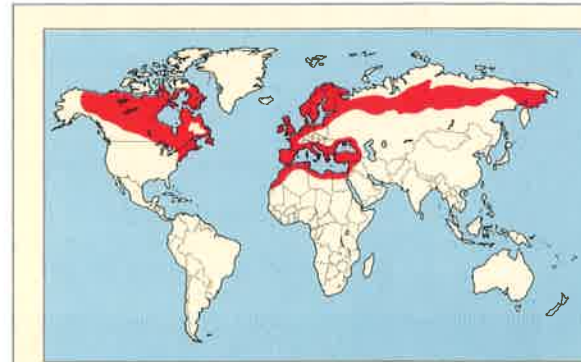
BREEDING
Sexual Maturity: 3-7 years.
No of broods: 1.
Eggs: 2-3, brownish olive with black markings.
Incubation: 28-30 days.
Fledging period: 35-40 days.



LIFESTYLE
Habit: Sociable, mates for life.
Call: Shrill calls and chuckles.
Diet: Fish, shellfish, birds, eggs, chicks, small mammals, and edible garbage.
Lifespan: Over 30 years in wild.



RELATED SPECIES
There are 11 subspecies, although some authorities name 3 separate species: herring gull, yellow-legged herring gull, and American herring gull.



Range of the herring gull.

DISTRIBUTION

Breeds throughout coastal Europe, North Africa, northern Asia, and North America. In winter, it moves inland or migrates south and west of these areas.

CONSERVATION

Without control, the increasing number of herring gulls could overcrowd bird reserves to the detriment of rarer birds.

COMPARISON BETWEEN GULLS

The herring gull, like the common gull and the black-headed gull, has a gray back with white underparts.

Common gull:
The smallest of the three, it has red legs and a red bill.

Black-headed gull:
The second largest of the gulls, it has a yellow bill, yellow-green legs and a black head in winter.



Herring gull:
The largest gull of the three, it has a yellow bill with a red spot and pink legs.

The herring gull once survived

mainly on fish and shellfish, but it has

become one of nature's opportunists.

It exploits man's waste by scavenging

on everything from scraps thrown

off of fishing boats to

edible trash at garbage dumps.



FOOD & HUNTING

The herring gull mainly eats fish, but it has become an accomplished scavenger, its numbers increasing rapidly due to the great supply of edible waste in garbage dumps and fishing ports.

Below: Herring gulls circle garbage dumps, looking for food to scavenge.

In rural areas, the gull feeds on small animals, frogs, and snakes. On the coast, the herring gull preys on the eggs and chicks of nesting birds, including those of its own species.

The gull hunts the shoreline for small crustaceans, dead marine animals, and

shellfish, such as mussels.

To break open the shellfish, the bird carries it into the air and drops it on to a hard surface in order to break the shell. The bird will continue to do this until the shell finally breaks.

When catching fish at sea, the herring gull half-folds its

wings and swoops down, dropping into the water. Usually only the gull's head and neck enter the water; its body is rarely submerged.

Below: Herring gulls will eat almost anything. Here a gull eats a stranded fish.



HABITAT

The herring gull, the most common species found in the United States, lives near water—in both coastal towns and rural areas. A sociable, noisy bird, the herring gull spends winter away from the colony and returns in spring to claim its territory and begin mating. Each spring the bird breeds in the same site with the same mate.

Herring gulls usually breed in large colonies on rocky cliffs, sand dunes, and by lakes. But many herring gulls seem to prefer the rooftops and chimneys of seaside towns, where they can scavenge for food.

DID YOU KNOW?

- The herring gull interbreeds with several gull species, including the lesser black-backed gull *Larus fuscus*, and the glaucous gull, *Larus hyperboreus*.
- The oldest herring gull in captivity lived 44 years.
- Young herring gulls travel and spend the winter further south than breeding adults from the same colony.
- Herring gulls swim well on water, but they cannot swim underwater or dive completely into the water from the air.



BIRD WATCH

Herring gulls are found along the coast, perched on buildings, flying over the sea, and searching for food on the ground. They are a familiar sight when they are scavenging for food on freshly plowed fields and garbage dumps. Inland, they often sleep on large reservoirs.

The herring gull looks similar to the common gull, which also has black and white wingtip feathers. The herring gull is much larger, though, with pink legs and a bright red spot on its bill.

BREEDING

In spring the herring gull returns to the colony to claim its territory and begin courting its mate. It will find a new mate only if the old one has died. Then the bird builds a round nest from seaweed, grass, or other plants.

Each pair has a small territory. The birds of the colony squabble until they settle down and the birds find their own place to build a nest.

The female lays two or three brownish olive eggs with black markings. The pair takes turns incubating the eggs until they hatch 26 to 33 days later. The chicks stay close to the nest for six

weeks until they start flying. Parents defend their young by flying at other birds to scare them away and giving alarm calls for chicks to return to the nest.

The herring gulls feed the chicks *regurgitated food* (partially digested food brought back into the mouth). The chick pecks at a red patch on the adult's bill, stimulating it to regurgitate food. Later on, the adult gulls will drop pieces of food by the nest for the maturing chicks to eat.

The young black-billed herring gull molts its brown feathers in spring and fall. In

three years, the gull will have the full adult plumage. The regular molts make it easy to tell the ages of young birds.

Below: A chick hatches from its brownish olive and black shell.



RAINBOW BEE-EATER

CARD 45

GROUP 2: BIRDS

ORDER
Coraciiformes

FAMILY
Meropidae

GENUS & SPECIES
Merops ornatus



The rainbow bee-eater is a brilliantly colored bird that, as its name suggests, feeds mainly on bees. It removes the bees' stingers before eating the insects.

KEY FACTS



SIZES

Length: 7-8 in. Central tail feathers extend $\frac{3}{4}$ in. beyond male's body, 3 in. beyond female's.

Wingspan: Approximately 10 in.



BREEDING

Sexual maturity: 1 year.

Mating: Before and after rainy season in northern part of range; November to January in south.

Eggs: 3-7, usually 4-5. Glossy white.

Incubation: Approximately 24 days.

Fledging: 30 days.



LIFESTYLE

Habit: Very social. Pair for life.

Diet: Mainly bees and wasps. Also ichneumon flies, dragonflies, damselflies, moths, butterflies, and grasshoppers.



RELATED SPECIES

There are 22 other species of bee eater found throughout the warmer parts of the eastern hemisphere.



Range of the rainbow bee-eater.

DISTRIBUTION

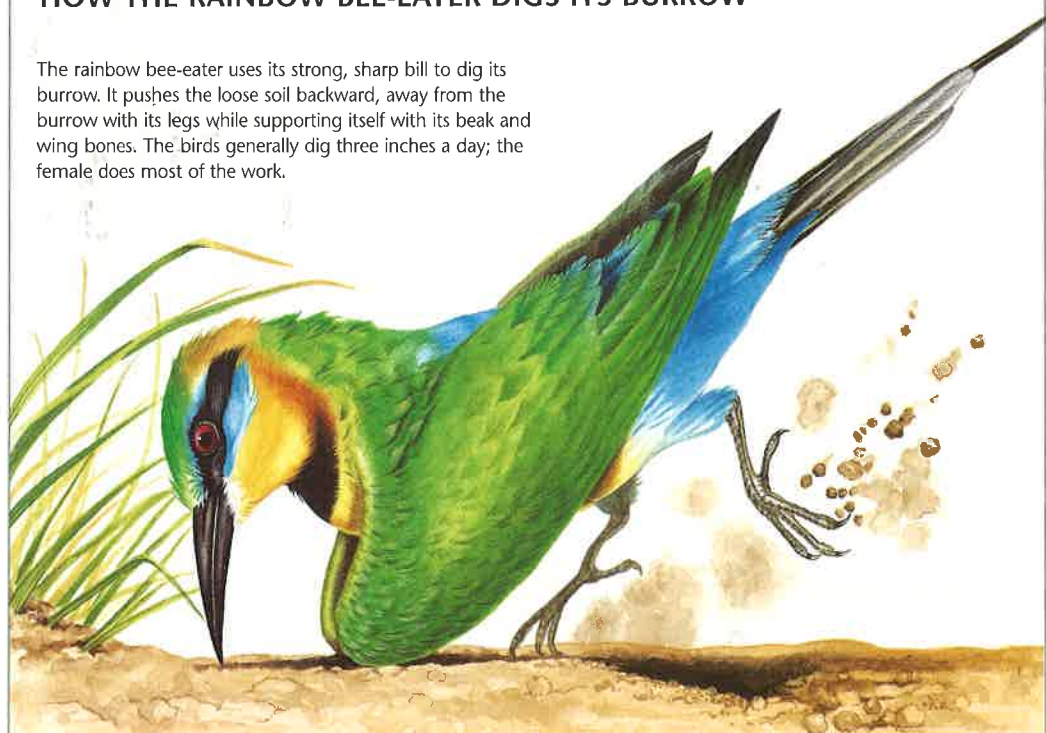
Found in summer in most of southern Australia, including Tasmania, but not in forest areas. Winters in northern Australia, some Indonesian islands, and New Guinea.

CONSERVATION

The rainbow bee-eater is common in most parts of its range. Its habitat has increased as a result of deforestation, which has deprived many other birds of their habitat.

HOW THE RAINBOW BEE-EATER DIGS ITS BURROW

The rainbow bee-eater uses its strong, sharp bill to dig its burrow. It pushes the loose soil backward, away from the burrow with its legs while supporting itself with its beak and wing bones. The birds generally dig three inches a day; the female does most of the work.





In southern Australia the arrival of rainbow bee-eaters is usually regarded as a sign of spring. These vibrantly colored birds eat not only bees, but also harmful locusts, wasps, and hornets.

BREEDING

Soon after the birds reach their breeding grounds, they pair—possibly for life. The birds raise their crown feathers and lower and vibrate their tail feathers. The males bring the females insects. The birds then mate and dig their nest burrows.

After the female lays her eggs, both she and the hatchlings are vulnerable to predators such as large Australian monitor lizards

called *goannas*, wild dogs, and foxes.

Once the young *fledge* (grow feathers), they are reared by both parents, as well as by other young bee-eaters. Until the young birds are fully grown, they help raise their parents' or another pair's next brood. Other birds that are non-breeders or have lost a mate also help to raise other pairs' broods.

Right: The bird digs its nest burrow in bare, flat ground, in a pile of gravel, or in the side of a low bank.



Below left: Rainbow bee-eaters rest in a nest chamber.



BEE-EATER & MAN

Beekeepers have traditionally feared the arrival of bee-eaters, which eat the cultivated bees. Hives are especially vulnerable to attack when the weather is cool, since there are not as many insects flying about for hun-

gry bee-eaters to prey on.

But the damage bee-eaters do to hives is generally outweighed by their control of harmful insects such as locusts, as well as the wasps and hornets that are themselves honeybee predators.

DID YOU KNOW?

- The rainbow bee-eater is also known as the rainbow-bird, pintailed bee-eater, splintail, berrin-berrin, gold-digger, and gold-miner. Sometimes it is called a kingfisher, but the two species are not related.
- When adult rainbow bee-eaters enter or exit their nest burrows, their bodies fit so tightly into the narrow tunnel that they act like a piston, pumping in fresh air and pumping out stale air.
- A nest burrow found in southern Australia contained two adult and four nestling rainbow bee-eaters, along with 18 young white-backed swallows, all roosting together.

HABITS

Like all bee-eaters, rainbow bee-eaters are very social birds. When not breeding, they roost together at night in dense undergrowth or large trees. The roosts are often so crowded that the birds touch each other as they perch.

The birds sometimes perch

together with their backs to the sun and the feathers on their upper backs raised. They fly down to the ground occasionally to clean their feathers with dust, which also gets rid of parasites.

Many of the birds die during their summer migration.



FOOD & FEEDING

The rainbow bee-eater perches on power lines or branches of dead trees to search for food. It is always alert for flying insects and can spot a bee from 150 feet away. The bird immediately flies after it and almost always catches its prey.

Once the bee-eater catches a bee it usually removes the stinger even though the bird is immune to bee and wasp stings, which kill other small birds. Bee-eaters eat several hundred bees and wasps a day. They cough up the indigestible portions in the form of pellets.

When a flock of bee-eaters spots a large swarm of small termites, it attacks the swarm and eats as many insects as possible in a short time.

Right: The bee-eater knocks its prey against the perch to subdue it. With lightning speed, the bird then alters its grip to grasp the insect by the tip of its abdomen. Closing its eyes to avoid being squirted with poison, the bee-eater then rubs the insect's stinger against the perch to remove it before eating its prey.



CANARY

CARD 47

GROUP 2: BIRDS

ORDER
Passeriformes

FAMILY
Fringillidae

GENUS & SPECIES
Serinus canarius



The canary is one of the most popular pet birds because of its beautiful song. It still exists in the wild on the Azores, Madeira, and Canary islands in the Atlantic Ocean.

KEY FACTS



SIZES
Length: 5 in.



BREEDING
Sexual maturity: 1 year.
Breeding season: January to July.
No. of broods: Up to 5 in a single season in some areas.
Eggs: 3-5. Blue-green with red-brown or violet markings.
Incubation: 14 days.
Fledging period: About 15 days.



LIFESTYLE
Habit: Sociable.
Diet: Mainly seeds and other vegetable matter.
Call: Twittering for contact.



RELATED SPECIES
The canary is a member of the *Cardueline* subfamily of finches, which also includes the goldfinch, greenfinch, and linnnet.



■ Range of the canary.

DISTRIBUTION

Forests, orchards, and gardens on the Azores, Madeira, and Canary islands.

CONSERVATION

The canary is a common bird in many parts of its range. It seems to be more resistant than other finches to the effects of crop spraying with insecticides. Still, in some areas the canary population has declined over the last 100 years.

FEATURES OF WILD AND DOMESTICATED CANARIES

Wild (below):
Gray-brown upper parts and yellow-green breast and rump.



Crested Norwich (below): Head feathers hang over eyes.



Pure yellow (left): Lacks dark pigment called melanin.



Red factor (above): Canary crossed with red siskin.



The wild canary is a small finch with a forked tail. It has gray-brown upper parts and a yellow-green breast and rump.

Domesticated canaries are more colorful and have bright yellow, yellow and white, yellow and black, orange, or pink feathers.

BEHAVIOR

The wild canary is a sociable bird that feeds and roosts in flocks, except during breeding season. The male is much more colorful than the female. Noticeable when he is flying, the bright yellow rump of the male is hidden

from view when perched.

The female is duller in color than the male. She has grayer wing feathers and yellow-green feathers on her underside.

Both the male and female are swift and agile fliers.

CANARY & MAN

The canary was introduced in Europe in the early sixteenth century and was bred in captivity. Since the wild canary is plain compared to European finches, it was probably valued for its song rather than its appearance.

Several varieties of canary have been bred—not all as pets. Canaries were once routinely taken into coal mines to test for poisonous gases; they are still occasionally used for this purpose today. They have also been used to test for the presence of poisonous gases in wartime.



Left: These canaries are domesticated varieties that have been bred. All domesticated canaries are descended from the wild species, and they have a wide variety of colors.

BREEDING

In early spring groups of male canaries perch together on tree branches and sing to attract females. Once a male attracts a female, the pair flies off together to mate. As more birds are paired and leave, the flock becomes smaller. But some mixed flocks of males and females still feed and roost together during the breeding season.

The canary prefers to nest in small trees and bushes. On the coasts of the subtropical Atlantic islands, the canary may start building its nest as early as January or February. In the islands' cooler mountains, the canary does not begin nesting until June.

The male chooses the nest site and collects building material, but the female constructs the nest on her own. She builds a neat, cup-shaped nest of small twigs,



grass stems, and moss, held together with white vegetable down or lichens. The inside of the nest is lined with a soft layer of vegetable down, feathers, hair, and wool.

The female lays three to five eggs that she incubates without her mate's help. The male feeds her during the incubation period, and both parents feed the young on soft, half-ripe seeds.



Above and left: Young canaries hatch in a wool-lined nest made from twigs. They are fed on soft, half-ripe seeds.

FOOD & FEEDING

The canary's bill, jaw, and gizzard (the part of the stomach where solid food is ground) are very strong.

The canary holds a nut in a groove in the side of its mouth and crushes it with its lower jaw. The bird then peels the husk away with its tongue and swallows the kernel whole.

DID YOU KNOW?

- The yellow canary may have evolved as a result of a natural mutation that eliminated dark pigment.
- The Canary Islands' name comes from the Latin word for dog, *canis*, because of the large dogs that were kept on one of the islands by ancient Romans.
- Canaries have been used by biologists for experiments on bird physiology and behavior.

DIPPER

CARD 48

GROUP 2: BIRDS



ORDER
Passeriformes

FAMILY
Cinclidae

GENUS & SPECIES
Cinclus cinclus



The dipper is similar in appearance to the wren. It feeds by diving into shallow streams and rivers to catch insects and tiny fish that hide among stones below the surface of the water.

KEY FACTS



SIZES
Length: 7 in.
Wingspan: 10-12 in.
Weight: 2-3 oz.



BREEDING
Sexual maturity: 1 year.
Breeding season: April to June.
Eggs: 4-5, glossy white. Usually only 1 brood.
Incubation period: 12-18 days.
Fledging period: 20-24 days.



LIFESTYLE
Habit: Lives along clear, shallow streams and rivers.
Diet: Aquatic insects, water snails, and small fish.
Lifespan: Oldest known bird, 8 years.



RELATED SPECIES
There are 4 species of dipper worldwide. The small, dark brown European *Cinclus cinclus* is sometimes considered a separate species.



Range of the dipper.

DISTRIBUTION

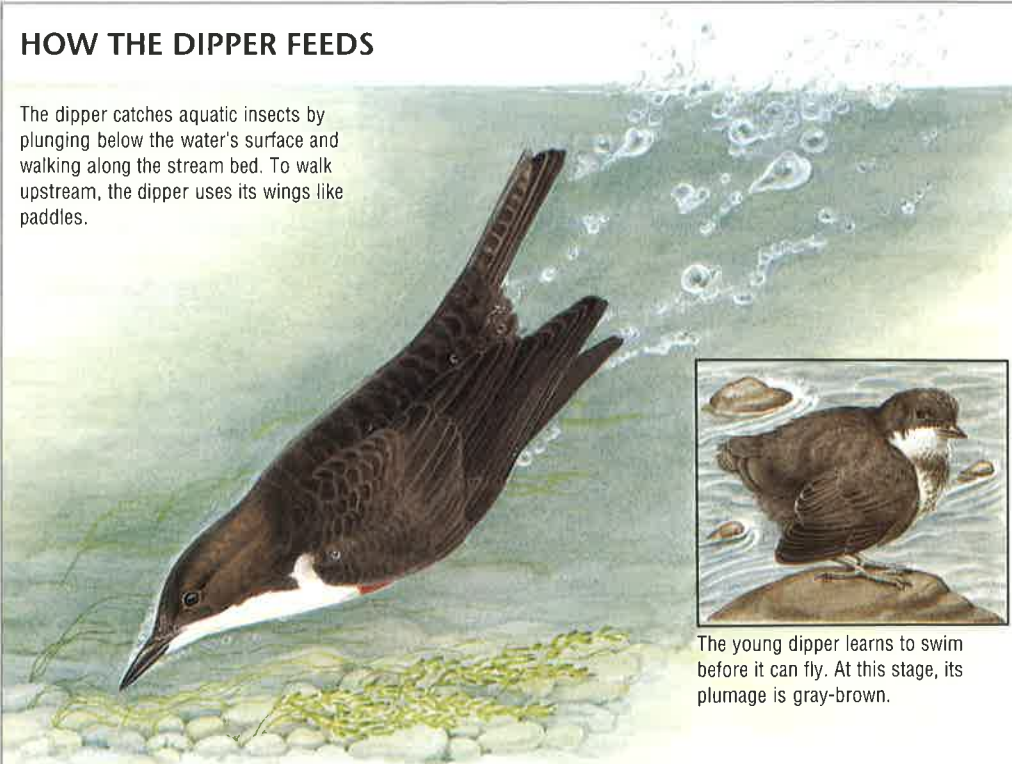
Found along rivers and streams in hilly and mountainous areas of Europe, North Africa, the Middle East, and Central Asia.

CONSERVATION

Severely affected by water pollution from acid rain, industrial waste, and sewage.

HOW THE DIPPER FEEDS

The dipper catches aquatic insects by plunging below the water's surface and walking along the stream bed. To walk upstream, the dipper uses its wings like paddles.



The young dipper learns to swim before it can fly. At this stage, its plumage is gray-brown.

The dipper can be recognized

by its dark back and wings. Its snowy white throat contrasts with its ruddy brown head.

The dipper's rapid, direct flight is

distinctive as well, and its song can

be heard year-round.



BIRDWATCH

Pollution has made many waterways of the dipper's habitat unlivable for the bird. Although the dipper is more difficult to spot today, it can be recognized by its white breast. It sits on rocks in the water and bobs

up and down before plunging in or taking off to fly low over the water's surface. Favored perches are often splattered with the dipper's white droppings. Listen for a loud, high-pitched call.

FOOD & FEEDING

The dipper is the only small bird that has developed the skills to feed on underwater insects. It particularly likes the larvae of the caddis fly. The dipper also feeds on freshwater shrimp, snails, and small fish.

The bird dives repeatedly

into three-foot deep water for prey, and stays underwater for up to 30 seconds.

Plants cannot live in the stony beds of the waterways where the dipper feeds, but aquatic insects live there in great numbers.



DID YOU KNOW?

- Both male and female dippers sing, but the male has a more melodious song.
- In the Soviet Union dippers can survive in temperatures as low as -40° F. As long as the water does not freeze, they can continue to feed.
- It is estimated that there are more dippers in the Soviet Union than in any other country.
- Dippers colonize areas near lowland rivers where dams and stepping stones create good feeding conditions.

Far left: *The dipper can be easily recognized by its white throat and breast and its red-brown belly.*

Right: *A dipper floats to the surface after a dive. When submerged, it walks along the beds of rivers and streams in search of food.*



HABITAT

Dippers live along shallow, rocky rivers and fast-running streams in mountainous and hilly areas. The richly oxygenated waters have no sediment, and they support the dipper's prey: aquatic insects, tadpoles, and worms.

Where food is abundant, pairs of dippers may be found every half mile along the water. They fly low over the water and perch on rocks, where they bob up and down repeatedly. Dippers rarely fly over land; instead, they follow the course of a fast-flowing river or stream.

BREEDING

Dippers begin mating toward the end of winter. Then the male and female build the nest together. They place it on a rock ledge within six feet of the water or in the cavity of an old tree near the water's edge. If rocks and trees are scarce, the birds build the nest on a man-made structure such as the underside of a bridge.

The only entrance to the nest is through a hole that opens down, toward the water. This makes it harder for predators to invade the nest. Despite this, one nest

in 10 is either raided by predators or lost in a flood.

If the weather is mild, the female may begin laying her eggs in late February, but most wait until April. She lays four to five glossy white eggs, which hatch 12 to 18 days later. The hatchlings can swim almost immediately, but they cannot fly until they are three weeks old.

Right: *Dippers build a domed nest with moss and line it with leaves. Both sexes care for the young (inset) until a week after they have fledged (grown feathers).*



DIPPER & MAN

The greatest threat to the bird is acid rain. The areas most damaged by acid rain are forests, where many dippers live. The coniferous (cone-bearing) trees act as giant filters, removing pollution from the air. Rain then washes the pollution into streams and rivers, killing the insects and small fish that are the dipper's prey.

Run-off from chemical fertilizers used on nearby farms also drains into the waterways. This type of pollution also kills aquatic life and reduces the bird's food supply.