

# BLACK-CAPPED LORY

CARD 72

GROUP 2: BIRDS

ORDER  
Psittaciformes

FAMILY  
Loridae

GENUS & SPECIES  
*Lorius lory*



**The black-capped lory inhabits the tropical rainforests of the western Pacific Ocean. This colorful parrot rarely approaches the ground, preferring the tops of tall trees instead.**

## KEY FACTS



**SIZES**  
Length: 1 ft.  
Wingspan: 2 ft.  
Weight: 5-7 oz.



**BREEDING**  
Sexual maturity: 2-3 years.  
Breeding season: April to September in captivity.  
No. of broods: 1-2.  
Eggs: 2.  
Incubation: About 24 days.



**LIFESTYLE**  
Habit: Lives singly or in pairs. Often feeds in groups.  
Diet: Flowers, fruits, insects, nectar, pollen, and seeds.  
Lifespan: 8-10 years in captivity.



**RELATED SPECIES**  
There are 8 species of lory including the chattering lory, *Lorius garrulus garrulus*, and the purple-capped lory, *L. domicellus*.



Range of the black-capped lory.

### DISTRIBUTION

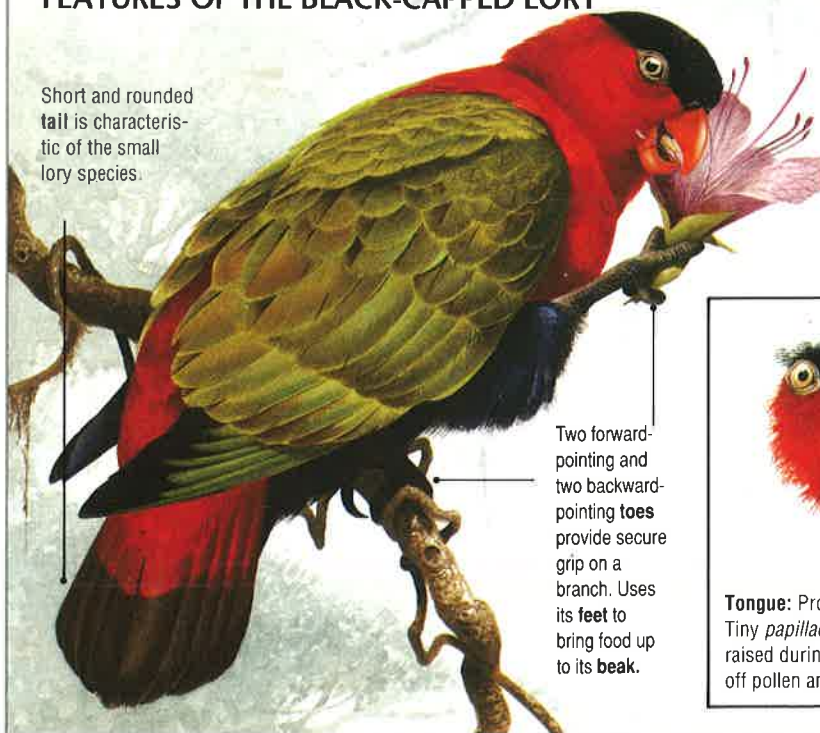
Found in the undisturbed parts of rainforests in New Guinea. Also found on some islands in Sarera Bay and in the Gulf of Papua.

### CONSERVATION

The main threat to the black-capped lory is the destruction of its natural habitat. The species does not easily adapt to replanted forests.

## FEATURES OF THE BLACK-CAPPED LORY

Short and rounded tail is characteristic of the small lory species.



Well adapted to living in trees, like most parrots. Uses its feet and bill for climbing and feeding.

Two forward-pointing and two backward-pointing toes provide secure grip on a branch. Uses its feet to bring food up to its beak.



**Tongue:** Probes flowers for food. Tiny papillae (bumps) become raised during feeding and brush off pollen and nectar.



*The black-capped lory is elusive and hard to study in the wild. But in captivity the bird displays intelligence, playfulness, friendliness, and an ability to mimic sounds. The captive lory needs extra care that is best given by specialist birdkeepers.*

#### FOOD & FEEDING

The lory's tongue is especially adapted for eating flowers and pollen, its main food. The tongue's tip is covered with tiny *papillae* (bumps) which are raised when the bird is feeding or exploring a flower for food. The papillae are flat at other times.

The black-capped lory also eats fruit, nectar, insects, and caterpillars. When feeding, the lory uses its feet to bring food up to its long, hooked bill.

*Left: Black-capped lorries are usually seen alone or in pairs.*

*Right: The arrangement of the lory's toes enables it to hang in any position from a branch.*



#### BREEDING

Little is known about the black-capped lory's breeding habits in the wild. It is known to nest in the hollows of trees or in termite hills.

The lory's main breeding season is from April to September. To attract a female, the male perches upright, spreads

his wings, and turns his head to one side. He bobs his body up and down while hissing through his open bill. The mated pair forms a strong attachment, and the male is aggressive toward other birds during the nesting period.

Mating and breeding may

occur twice during each season, and two eggs are usually laid in each brood. They have an incubation period of about 24 days. The young black-capped lorries remain in the nest for 8 to 10 weeks.

*Below: A male lory displays his plumage during courtship.*

#### DID YOU KNOW?

- The captive lory is well known for its mimicry, but it does not use this skill in the wild.
- Lorries are also sometimes called "brush-tongue" parrots because of the papillae on their tongues.

#### BEHAVIOR

Because it is solitary and lives high in the treetops of its range, naturalists know very little about the black-capped lory's behavior in the wild. Most information is obtained by observing the bird in captivity. Even this may not be reliable because of variations in behavior that may result from the bird's adaptation to artificial living conditions.

The black-capped lory's natural habitat is in the undisturbed rainforests of Papua New Guinea. The bird is solitary except during mating season. It is especially ac-

tive at dawn and dusk, flying between roosting and feeding areas.

The black-capped lory is usually found at an altitude of 3,000

feet. In uncultivated areas, it is sometimes found at 4,500 feet.

*Below: A black-capped lory preens (smooths) its feathers.*



#### THE LORY & MAN

Black-capped lorries are less popular as pets than macaws or cockatoos. They are expensive to feed, since they need fresh fruit throughout the year. Their droppings are messier than the seed-eating parrots', and their cages need cleaning more often.

To thrive in captivity, lorries must be housed in *aviaries* (large, naturalistic enclosures for birds). They are usually kept only by specialists, so the main threat to their survival is destruction of the rainforests of New Guinea, not the parrot pet trade.

# CHAFFINCH

CARD 74

GROUP 2: BIRDS

ORDER  
Passeriformes

FAMILY  
Fringillidae

GENUS & SPECIES  
*Fringilla coelebs*



**The chaffinch, one of the most common finches in Europe, lives in gardens, parks, and woodlands everywhere during summer, flocking in open country during the winter.**

## KEY FACTS



**SIZES**  
Length: 5-6 in.  
Weight: 1/2-1 oz.



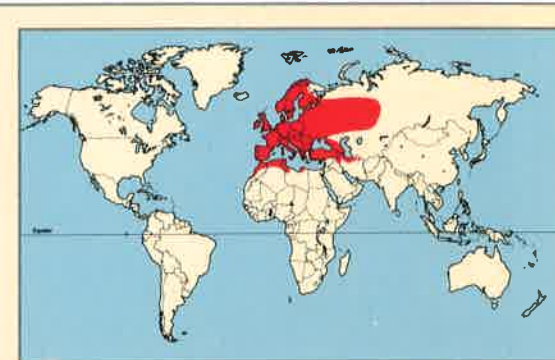
**BREEDING**  
Sexual maturity: 1 year.  
Breeding season: April to June.  
No. of broods: 1 or 2.  
Eggs: 4-5.  
Incubation: 11-13 days.  
Fledging: 13-14 days.



**LIFESTYLE**  
Habit: Sociable outside breeding season.  
Diet: Varied, mainly seeds.  
Call: Song during breeding season. Warning call.



**RELATED SPECIES**  
Of the 150 species of finch, only 3 belong to the genus *Fringilla*: the chaffinch, *Fringilla coelebs*, the brambling, *F. montifringilla*, and the blue chaffinch, *F. teydea*, which is found only on the Canary Islands.



Range of the chaffinch.

### DISTRIBUTION

Found across Europe, North Africa, the Azores, Madeira, and the Canary Islands. Species from northern and eastern regions spend the winter in Europe and the Middle East.

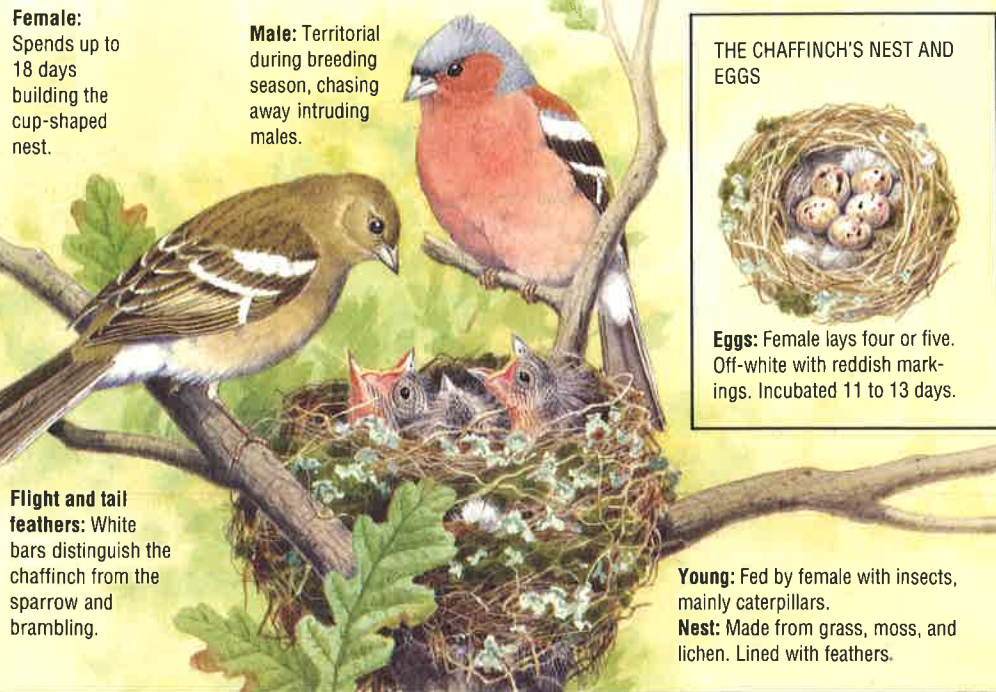
### CONSERVATION

A stable population of seven million chaffinch pairs lives in Europe. Some species of finch such as the Hawaiian finch are endangered, and a few are now extinct.

## THE CHAFFINCH AND ITS NEST

**Female:**  
Spends up to 18 days building the cup-shaped nest.

**Male:** Territorial during breeding season, chasing away intruding males.



### THE CHAFFINCH'S NEST AND EGGS



**Eggs:** Female lays four or five. Off-white with reddish markings. Incubated 11 to 13 days.

**Flight and tail feathers:** White bars distinguish the chaffinch from the sparrow and brambling.

**Young:** Fed by female with insects, mainly caterpillars.

**Nest:** Made from grass, moss, and lichen. Lined with feathers.



*The chaffinch is found throughout Europe and is easily identified by its pink-colored breast. During winter, flocks of more than 200 birds gather at roosting sites.*

### HABITS

During breeding season, the colorful male chaffinch marks his territory by singing and chasing away intruding males. The densely covered territory may be up to 1,300 square feet.

In winter the chaffinch

moves to open terrain in flocks of 200 or more birds, including sparrows, other finches, and the brambling, its closest relative.

At night it roosts with other species in trees and hedges.

### DID YOU KNOW?

- A female chaffinch may make 1,300 trips to gather nest-building materials.
- Only three finches feed their young entirely on

insects: the chaffinch, the blue chaffinch, and the brambling. All other finches feed their young predigested seeds or seeds and insects.

### FOOD & FEEDING

The chaffinch feeds mainly on seeds, which it gleans from many sources. Its beak crushes the tough seed husks, its mouth has hard ridges and powerful jaw muscles that crack the seeds, and its tongue discards the empty husks.

The chaffinch also eats a

variety of other plant matter, including apples, blossoms, berries, and buds. It also probably eats more insects than any other finch species.

Owls and hawks prey on the chaffinch. Magpies, jays, cats, and stoats take its nestlings.

*Left: A pink breast and blue-gray crown easily identify the male chaffinch.*

*Right: The male chaffinch lives under dense cover in woodlands, parks, and gardens.*



### BIRDWATCH

The male's pale gray-blue neck and crown, pink-flushed underparts, chestnut back, and green rump distinguish it from other birds.

The light brown female has cream-colored underparts. Both sexes have distinctive white bars on the flight feathers and outer tail feathers.



### BREEDING

In February the male chaffinch establishes his territory under dense cover. He finds a mate by approaching her in a lopsided crouch, followed by singing and other displays.

Once the female has entered his territory, she finds a nest site in a bush, hedge, or small tree. It takes her up to 18 days to build the cup-shaped nest from grass, roots, moss, and lichen held in place with cobwebs. She

*Left: The female chaffinch builds the nest alone with grass and moss.*

lines the nest with feathers.

The pair breed from April to June. The female lays four to five eggs and incubates them for 11 to 13 days. The helpless newly hatched chicks are nurtured mainly by the female, who feeds them insects beak-to-beak.

The rapidly developing chicks fledge in 12 to 15 days. They follow the female to nearby dense cover, where she continues to feed them and helps them to fly. When food is plentiful, the chaffinch will raise a second brood within the same year.

### SONG

Each chaffinch learns its song by listening to and imitating other chaffinches in the area. It gains a local "dialect" from nearby males, especially the father. By learning to sing,

young males also learn how to establish territories for the next breeding season.

Chaffinches that are raised in captivity sing instinctively but less elaborately.



# EMU

CARD 75



## GROUP 2: BIRDS

### ORDER

Casuariiformes

### FAMILY

Dromaiidae

### GENUS & SPECIES

*Dromaius novaehollandiae*



**The emu is a very large, flightless bird that is second in size only to the ostrich. It is a native of Australia and appears, along with the kangaroo, on Australia's coat of arms.**

## KEY FACTS



### SIZES

**Height:** Up to 6 ft.  
**Weight:** 65-100 lb. Female heavier than male.



### BREEDING

**Sexual maturity:** 2 years.  
**Breeding season:** April to July.  
**No. of broods:** 1 or 2.  
**Eggs:** 9-11, large, olive green.  
**Incubation period:** 8 weeks.



### LIFESTYLE

**Habit:** Sociable outside the breeding season. Nomadic for much of the year.  
**Call:** Male hisses and grunts. Female makes loud and resonant booming noises.  
**Diet:** Seeds, fruit, insects, small rodents, and lizards.  
**Lifespan:** 5-10 years in the wild. Longer in captivity.



### RELATED SPECIES

Related to other flightless birds, including the ostrich and the kiwi.



■ Range of the emu.

### DISTRIBUTION

Found throughout Australia, except in rainforests and on cleared land. It is rare in northern areas and deserts.

### CONSERVATION

The emu is widespread throughout its range. It appears to be in no danger of extinction, although its habitat is shrinking as land is cleared for farming. The emu's population is controlled by the government.

## FEATURES OF THE EMU

**Chicks:** Top of the head is spotted. Body is downy with dark stripes along the back and flanks.

**Male:** Long, drooping feathers. General coloring is dark brown to gray-brown.  
**Wings:** Hidden under feathers. No longer used for flight. They can be held away from the body to keep the emu cool in hot weather.

**Nest and eggs:** Shallow nest about 3 feet across is built by the male. The female lays 9-11 large olive green eggs.

**Legs:** Long and strong so the emu can walk quickly for long distances. Feet have three large toes.





*The emu has coarse, shaggy plumage that is dark when new but gradually fades to a light brown as the molting season approaches.*

*This strange-looking bird is closely related to the other four flightless, ground-dwelling birds—the kiwi, ostrich, cassowary, and rhea.*

*Collectively these birds are known as ratites.*

### HABITS

The emu lives in small groups except during the breeding season. Occasionally several groups join to form a herd of several thousand.

The emu stays in one place while the male incubates the eggs. But usually it wanders,

traveling long distances in search of food. When food is plentiful, the emu builds up reserves of fat, which it uses when food is scarce. An emu normally weighs about 100 pounds, but it can still function at 45 pounds.

*Right: Emus need large amounts of water. They may drink from watering holes that ranch owners have made for their livestock.*



### BREEDING

The emu mates in December and January. The male builds a shallow, bowl-shaped nest under a bush or small tree.

In April or May the female lays 9 to 11 large, dark green eggs. The male incubates the eggs, while the female leaves and may mate again and lay a second clutch of eggs. Dur-

*Left: The emu is a nervous bird that is constantly on the alert for potential trouble.*

ing this period the male does not eat or drink but lives off his fat reserves.

The chicks hatch after eight weeks and can soon leave the nest. The male is very aggressive, driving away the female or humans who come too close. He guards the chicks for five to seven months.

*Right: Chicks are tended by the male until they are at least seven months old.*



### DID YOU KNOW?

- There is an old saying in Australia that someone is "as stupid as an emu."
- Early settlers made omelets from emu eggs. One egg fed several people. It was first broken into a basin and left overnight so all the oil could be skimmed

off before it was cooked.

- The stomach of one emu was found to contain nearly 3,000 caterpillars.
- Emus investigate any object they come across. One emu reportedly drank the contents of a can of paint and then swallowed the tin.

### EMU & MAN

Until the late eighteenth century several kinds of emu lived in Australasia, each on a separate island. Many were killed by early settlers for meat and for oil that could be extracted from the carcasses and used as medicine and in lamps.

The emu population on the Australian mainland survived

in spite of several government campaigns to reduce their numbers because of the damage they do to cereal crops. Now, man-made watering holes for cattle and sheep provide the emu with a permanent supply of fresh water in places where there was no fresh water before.

### FOOD & FEEDING

The emu eats only foods that are rich in nutrients, such as seeds, fruit, and young shoots, as well as insects, lizards, and small rodents. It avoids grass and leaves even if they are all that is available. To help its stomach grind the food; the emu takes in pebbles with its food. These pebbles can weigh as much as two ounces each. The emu must also have access to fresh water.

Because its diet is so nutritious, the emu grows quickly and reproduces in large numbers. It covers hundreds of miles searching for food after the supplies in one area have been exhausted.



# OLD WORLD WHITE PELICAN

CARD 76

GROUP 2: BIRDS

ORDER  
*Pelecaniformes*

FAMILY  
*Pelecanidae*

GENUS & SPECIES  
*Pelecanus onocrotalus*



**The Old World white pelican has a pouch beneath its bill that can hold nearly three and a half gallons—two to three times the capacity of its stomach.**

## KEY FACTS



### SIZES

Length: 4½ -6 ft.  
Bill: 1-1½ ft.  
Weight: 15-30 lbs.  
Wingspan: 8-9 ft.



### BREEDING

Sexual maturity: 3-4 years.  
Mating: April to July in Europe.  
Eggs: 1-3, chalky white.  
Incubation: 29-36 days.  
Fledging: 65-70 weeks.



### LIFESTYLE

Habit: Live in colonies.  
Diet: Fish.



### RELATED SPECIES

There are 6 other species in the genus *Pelecanus*: American white, brown, and gray; Dalmatian; pink-backed; Australian; and Chilean pelicans.



Range of the Old World white pelican.

### DISTRIBUTION

Concentrated in the Danube delta and other sites in Eastern Europe. Also found in scattered locations across Africa and Asia.

### CONSERVATION

The Old World white pelican's breeding range is shrinking, but there are still at least 3,000-5,000 breeding pairs in the Danube area.

## FISHING METHODS OF THE OLD WORLD WHITE PELICAN



**Bill:** Very long. Pouch stretches to hold almost 3½ gallons of liquid. Pelican strains water, then swallows fish.

**Fishing:** The white pelican often fishes alone, but it also hunts in a team.

1. Birds gather in a semicircle.
2. They move together toward the bank, beating their wings to herd schools of fish into the shallows.
3. Pelicans scoop up the herded fish in their big bills.





*The Old World white pelican is clumsy on land, but it has adapted extremely well to life in the air and on water. It is aided in this by its light, air-filled skeleton and a network of air sacs under its skin.*

### FOOD & FEEDING

The Old World white pelican needs to eat more than four pounds of live fish per day, but a hungry bird will eat garbage or young birds.

White pelicans may fish alone or with others. When fishing together, they form a semicircle on the water and then swim together toward the shore. Beating their wings as they close in, they drive the fish into the shallows.

When the water is full of fish, the pelicans scoop them up with their beaks, using their pouches like nets. Then they drain off the water and swallow the fish.

### HABITS

Old World white pelicans nest in colonies. They fly together in formation, most often in a long "wing," with one bird beside, and just ahead of, the next.

Using air currents to soar upward, the birds cruise at an altitude of between 500 and 1,000 feet, beating their wings in unison.

White pelicans are so quick to copy one another that a group may seem to be acting on unseen signals. A group at rest will face the same way, with their heads held high and their beaks folded down along their pouches.



*Above: A pelican chick takes 165 pounds of food from its parent's bill before it is able to feed itself.*



*Below: Muscular wings and broad, black primary (wingtip) feathers aid the pelican in flying.*

### BREEDING

The Old World white pelican builds a nest from twigs and reeds on the ground, in bushes, or in mangrove trees, but always near water. There are usually two white eggs, which the parents take turns sitting on. Incubation takes about four to five weeks.

The newborn is featherless, blind, and weak. During the first week each parent dribbles half-digested fish into the chick's open beak. After that the chick is strong

*Left: A pelican at rest, displaying its deeply pouted bill.*

enough to pull food from the parent's pouch. To catch fish for itself and its family, the adult flies 5 to 30 miles each

day in the breeding season.

Due to cold and wet weather, only one chick usually survives in each nest.



*Above: Young white pelicans practice fishing techniques in groups.*

*Below: Still covered with dark, woolly down, young pelicans wait for their next meal.*

### DID YOU KNOW?

- Stories describe the pelican helping poor fishermen in India with their catch. It is also claimed that the pelican helped to build a Muslim shrine in Mecca.
- The tale that the pelican feeds its young with blood from its breast may be due to the Dalmatian pelican's color during breeding, when it has a reddish patch over its crop and pouch that looks like a wound.
- The pelican and its relatives are the only birds to have all four toes connected by webs.





# VULTURINE GUINEAFOWL

CARD 78

GROUP 2: BIRDS

ORDER  
Galliformes

FAMILY  
Numididae

GENUS & SPECIES  
*Acryllium vulturinum*



**The vulturine guineafowl is perfectly adapted to dry, scrubby terrain. It does not need to drink water because it can obtain enough moisture from its food.**

## KEY FACTS



### SIZES

Length: 2-2½ ft.  
Wing length: 1 ft.  
Weight: 2½-3½ lb.



### BREEDING

**Breeding season:** Follows pattern of rains. Peaks from December to January and in June.  
**Eggs:** 8-15, cream or pale brown.  
**Incubation:** 23-28 days.  
**Fledging period:** About 14 days, but chick can fly before grown.



### LIFESTYLE

**Habit:** Sociable; lives on ground.  
**Diet:** Seeds and other plant parts, berries, insects, spiders, mollusks.  
**Call:** Usually quiet. Metallic calls, especially when going to roost.



### RELATED SPECIES

The 7 species of guineafowl all live in Africa.



Range of the vulturine guineafowl.

### DISTRIBUTION

Semiarid scrub regions of Ethiopia, Somalia, Kenya, north-eastern Uganda, and northeastern Tanzania.

### CONSERVATION

The vulturine guineafowl is common over most of its range and is not currently endangered. Some local populations have decreased because of hunting.

## FEATURES OF THE VULTURINE GUINEAFOWL



**Eggs:** Laid in a grassy dip in the ground.

### Feeding:

Scratches in the earth for seeds and other plant parts. Also uses its heavy, vulture-like beak to peck at insects and invertebrates.

**Habitat:** Adapted to survive in semi-desert scrub but also lives in mountainous forests. Its specialized gut enables the bird to digest tough food plants.



*The vulturine guineafowl is the tallest and most colorful of all the guineafowl. Its plumage of black-and-white stripes and dots is enlivened by areas of cobalt blue and lilac. The bird is named for its naked vulturelike head and neck.*

*The band of velvety chestnut feathers on the back of its neck resembles a monk's haircut.*



Left: The vulturine guineafowl's striking plumage has made it a popular bird in aviaries.

Right: These handsome blue, black, and white feathers are ineffective in flight but are integral to the vulturine guineafowl's courtship display. The velvety head feathers can also be seen in this photo.



## FOOD & FEEDING

The guineafowl begins feeding at dawn. The flock forages busily, generally keeping within easy reach of cover, until midday. During the heat of the day, the birds rest in the shade of bushes, but in late afternoon they resume their foraging.

The bird takes most of its

food from low plants or from the ground, scratching the earth with its feet. It eats grass seeds and other plant parts, insects, spiders, and snails. It may also clamber into shrubs and low trees to pluck berries and fruit.

The guineafowl is apparently able to survive without

drinking water. Succulent plants and insects provide moisture, along with the morning dew on foliage. Part of the guineafowl's *caecum* (gut) is much longer than in other birds. This feature ensures that as much water as possible is reabsorbed from the bird's waste.

## DID YOU KNOW?

- The vulturine guineafowl has unusually bright plumage for a ground bird in a dry habitat. Most ground birds have dull brown plumage for camouflage in the open terrain.
- The vulturine guineafowl is found in aviaries in North America and Europe. It copes well with the differences in climate.
- The guineafowl takes its name from Guinea, an old designation for the part of West Africa that extends from Gambia to Angola.
- The most widespread and sociable guineafowl is the helmeted guineafowl. Flocks of more than 2,000 birds have been recorded.
- Most guineafowl live in less arid habitats than vulturine guineafowl, such as light woodland. The black guineafowl and the white-breasted guineafowl live in dense rainforest.

## HABITS

The vulturine guineafowl lives in the semiarid parts of East Africa, where the vegetation is mainly acacia scrub. It is also sometimes seen in woodlands with other species of guineafowl.

The vulturine guineafowl prefers to walk or run swiftly on its long legs when it is disturbed, but it will burst into a short escape flight of 150 to 350 feet as a last resort. It retreats from the ground at nightfall, flying up to roost in trees. Each flock tends to se-

lect a tall acacia with dense surrounding shrubbery.

For most of the year the vulturine guineafowl lives in groups of 20 to 30, but flocks of as many as 70 birds may occur. During breeding season, the group breaks up into nesting pairs and small bands of unmated birds.

The guineafowl is quiet, except when giving occasional contact calls. But a flock of birds can be noisy when flying to roost and may fill the air with metallic cries.



## BREEDING

Seasonal rains trigger breeding activity by ensuring sufficient food for the young. The peak breeding season is June, but mating may occur at any time of year.

The male rears up in front of a female with his head bent down and his wings partly spread. If she fails to respond, he may follow her and try again. After successful

Left: The vulturine guineafowl spends most of the day walking about, foraging for food with the rest of the flock.

mating, the female lays up to 15 eggs in a depression in long grass or scrub.

The female incubates the eggs, but when the young hatch, they leave the nest and are cared for and fed by the male for the first few days. The downy chicks are a yellowish-brown color. They grow rapidly, gaining flight feathers after about two weeks and bright blue feathers on the breast after another six weeks. They normally acquire the full adult plumage within a year.