

# CHEETAH

CARD 123

GROUP 1: MAMMALS

ORDER  
Mammalia

FAMILY  
Felidae

GENUS & SPECIES  
*Acinonyx jubatus*



**The cheetah is the fastest of all land mammals, sprinting over 60 miles per hour after its prey. It is no match for a gun, however, and it was long hunted for its fur before gaining protection.**

## KEY FACTS



### SIZES

**Length:** Head and body up to 5 ft.  
Tail up to 2 ft.  
**Weight:** 100-130 lb.



### BREEDING

**Sexual maturity:** 20-24 months.  
**Mating season:** Throughout the year.  
**Gestation:** 90-95 days.  
**Litter size:** Up to 8 cubs.



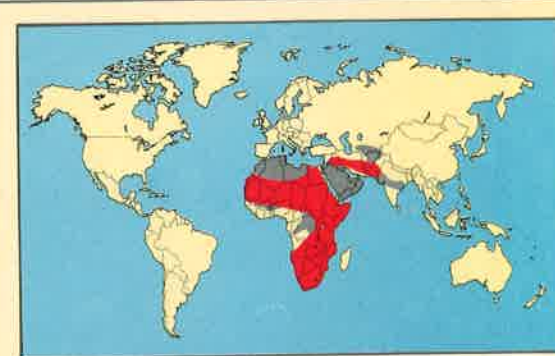
### LIFESTYLE

**Habit:** Female solitary; male lives in small groups.  
**Diet:** Antelope; also hares, rodents, sometimes larger prey such as zebra.  
**Lifespan:** About 12 years in the wild, more in captivity.



### RELATED SPECIES

An endangered subspecies of the cheetah, *Acinonyx jubatus venaticus*, lives in Asia.



■ Current range.

■ Original range of the cheetah.

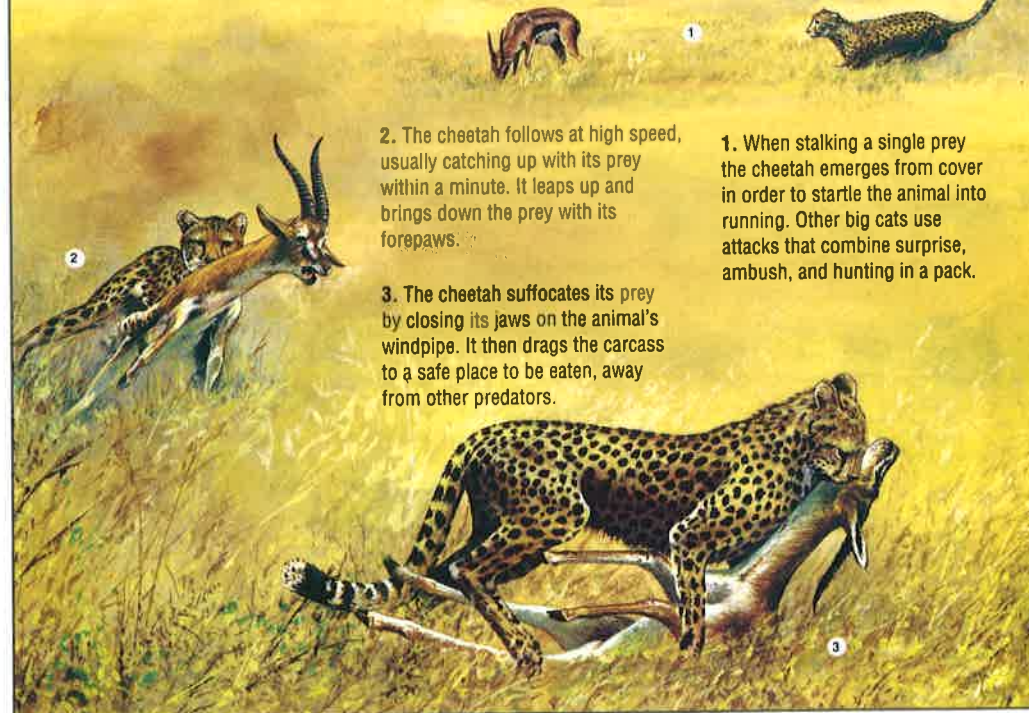
### DISTRIBUTION

Found mainly in South and East Africa, the Middle East, and southern Asia.

### CONSERVATION

The cheetah is a vulnerable species. Once widely shot for its fur, the cheetah now suffers more from loss of both habitat and prey. The cheetah became extinct in India in the 1950s. Less than 30,000 remain in Africa.

## HOW THE CHEETAH CATCHES ITS PREY



2. The cheetah follows at high speed, usually catching up with its prey within a minute. It leaps up and brings down the prey with its forepaws.

3. The cheetah suffocates its prey by closing its jaws on the animal's windpipe. It then drags the carcass to a safe place to be eaten, away from other predators.

1. When stalking a single prey the cheetah emerges from cover in order to startle the animal into running. Other big cats use attacks that combine surprise, ambush, and hunting in a pack.





*The cheetah is easily distinguished from other spotted big cats by its lithe build, small head, and long legs. These features, together with its large lungs, are perfect adaptations for high-speed chases after antelope in the African grasslands that are its home.*

### HABITS

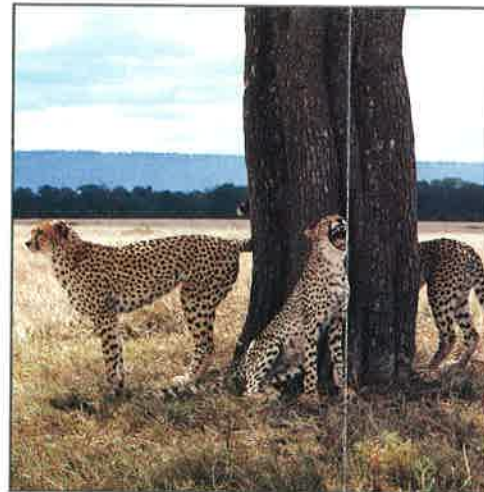
The male and female cheetah have different lifestyles. The female spends up to 20 months looking after each litter of cubs. She lives an otherwise solitary life. She is not aggressive to other cheetahs, preferring retreat to attack. Nor is she territorial, although her range may overlap with those of other females.

The male is rarely solitary. He lives and hunts in an all-male group of four or five animals. The group may be

brothers from the same litter that stay together for life.

Fiercely territorial, each male group scent-marks its boundaries with urine. If other males encroach on the territory of an established group, fights occur, sometimes resulting in the death of an intruder.

The female's scent tells a male when she is sexually receptive, although once the male has picked up her scent the pair communicate using a series of calls.



*Left: A female and her cubs rest under a tree. Landmarks such as these are marked with urine to set a territorial boundary.*

*Right: Cubs stay close to their mother. She carries them in her mouth when moving to a new den.*

### FOOD & FEEDING

The cheetah preys on hoofed animals such as impala and gazelle, as well as hares and rodents. Most big cats lie in wait for prey and pounce when it comes within range, but the cheetah's hunting technique is wholly original.

The cheetah first stalks the herd. At the right moment it shows itself and panics the animals into running. The cheetah follows at high speed, usually catching up to its prey within a minute. If forced to run longer than this the cheetah gives up.

The cheetah does most of its hunting during the day when other predators are sleeping. This is probably because the cheetah is easily frightened off its food—even

vultures can force a cheetah to abandon its kill. The cheetah often drags its prey to a safe place and eats its fill. It then leaves the remains to other animals.

*Left: Cheetahs sniff the air for prey in Masai Mara, Kenya.*

*Below: A cheetah bares its teeth in warning.*



### DID YOU KNOW?

- The cheetah was trained by man for hunting as long ago as 3000 B.C.
- Cheetahs were once raced against greyhounds.
- From a standstill, the cheetah can reach its top speed in about three seconds.



# SERVAL

CARD 124



GROUP 1: MAMMALS

ORDER  
Carnivora

FAMILY  
Felidae

GENUS & SPECIES  
*Felis serval*



**The serval is a quick, graceful predator of the African bush. A versatile hunter, it may stalk, pounce, spring in the air, or simply lie in wait to ambush its prey.**

## KEY FACTS



### SIZES

Length: 2-3 ft. Tail, 1-1½ ft.  
Height: 1½-2 ft. at shoulder.  
Weight: 20-40 lb.



### BREEDING

Mating season: Varies according to region and climate.  
Gestation: 74 days.  
Litter size: 1-4.  
Suckling: Up to 7 months.



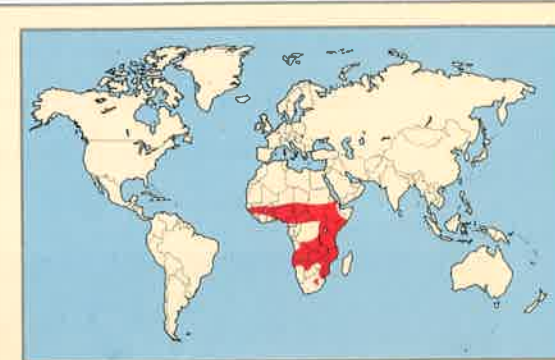
### LIFESTYLE

Habit: Solitary, territorial. Active mainly at dusk and night.  
Diet: Small mammals, birds, lizards, insects, and occasionally fish and plant matter.  
Call: High pitched cry.  
Lifespan: 13 years in captivity. Longest recorded in captivity: 19 years 9 months.



### RELATED SPECIES

The genus *Felis* comprises 28 species of small cat.



Range of the serval.

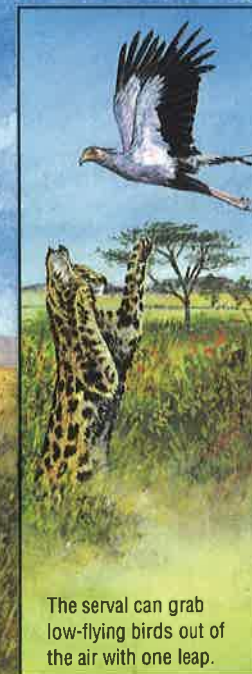
### DISTRIBUTION

Widespread in Africa south of the Sahara, though absent from the dense rainforest and the drier regions.

### CONSERVATION

Widespread but uncommon over most of its range. Hunting pressure in eastern and southern Africa has driven the serval from many areas.

## FEATURES OF THE SERVAL



**Hunting:** The serval hunts by stealth. It waits in the undergrowth, turning its ears to listen for prey. At the slightest rustle, the cat leaps in a graceful arc and pounces on its victim with a 50 percent success rate.

**Ears:** Large, broad at the base, rising to a point.

**Legs:** Hind legs longer than forelegs, giving extra power for attacking prey.

The serval can grab low-flying birds out of the air with one leap.



*The serval, with its long legs,*

*narrow head, slender build, and prominent ears,*

*is one of the most distinctive of the smaller cats.*

*It may lack the strength and power of*

*larger cats, but it makes up for it with*

*its swiftness and agility.*



*Left: Active in the morning and late afternoon, the serval spends its day resting from the heat.*

*Right: In the cool early evening, a serval drinks before starting its nightly hunt.*

*Below: When annoyed, the serval snarls, growls, and spits.*

## FOOD & HUNTING

The serval usually hunts at dusk and night, but it will sometimes hunt prey that is active during the day. In populated areas such as farmland, the serval reverts to its nocturnal habits.

When hunting, the serval

covers two to three miles of its territory searching for food. It preys mainly on rodents but will eat hares, hyraxes, and small antelopes such as duikers and oribi. It kills birds the size of guinea fowl, along with frogs and lizards. Occasionally it eats termites, grasshoppers, and plants.

The serval uses many hunting techniques. Because its hearing is so acute, the serval hunts by stealth. It lies hidden in the cover of dense vegetation and waits for prey to approach. It also stalks larger prey through cover, lunging forward over the last few feet in a surprise attack.

It sometimes moves through tall grass, listening for prey. Standing on its long legs, the serval accurately pinpoints the exact location of its prey before leaping with a powerful thrust, forming a graceful arc, and landing on its victim (see back cover).



*Above: A serval cub stays with its mother for a year until it learns survival hunting techniques.*

## DID YOU KNOW?

- The servaline, a small, woodland-dwelling species with a coat of fine spots, was once thought to be a separate species.
- An all-black species of the serval lives in highland areas of East Africa such as the Aberdares Mountain range in Kenya.
- Servals can leap up to 10 feet in the air to catch birds.

## BEHAVIOR

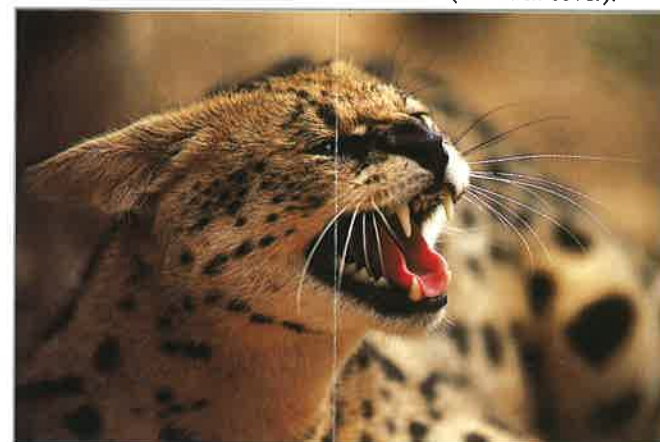
The serval, a widespread but uncommon mammal, inhabits much of the sub-Saharan African savannah. It also occurs in high-altitude moorland, bamboo forest, and the edges of the rainforest. It shuns very dry terrain and is most common under dense cover near water. Its long legs help it to stride across the swampy ground of reedbeds and marshes.

Although it can climb and swim well, the serval spends most of its time on the ground resting or hunting. It runs swiftly, and, if disturbed, it races away with high bounds

over the tall grass.

Like all small cats, the serval lives alone in a well-defined territory marked by the scent of urine. The female keeps her cubs for a short time before forcing them out. They wander long distances over rough terrain before establishing their own territories. The serval remains close to the area for many years.

Servals fighting with each other use threat postures, loud calls, and slashing movements with the forepaws. As well as emitting shrill cries, this species often growls and purrs.



## BREEDING

The mating season varies in different regions, and some females give birth twice in one year. The female attracts the

male with a call to mate. She purrs and rubs her cheek against the male.

The female gives birth to

one to four cubs in a den hidden by dense vegetation and lined with dry leaves.

At birth the cubs are blind

and helpless. The mother suckles them for many months until they learn to fend for themselves.



# SIAMANG GIBBON

CARD 127



GROUP 1: MAMMALS

ORDER  
Primates

FAMILY  
Hylobatidae

GENUS & SPECIES  
*Hylobates syndactylepops*



**The siamang gibbon is the largest of the nine gibbon species. It is found swinging agilely from tree to tree in the rainforests of Sumatra and Malaysia.**

## KEY FACTS



**SIZES**  
Height: Both male and female about 3 ft.  
Weight: About 22 lbs.



**BREEDING**  
Sexual maturity: 7-8 years.  
Mating season: None in particular.  
Gestation: 230-235 days.  
No. of young: 1.



**LIFESTYLE**  
Habit: Sociable; lives in small family groups.  
Call: Female barks; male screams.  
Diet: Mainly fruit and leaves.  
Lifespan: About 25 years.



**RELATED SPECIES**  
There are 9 species of gibbon, of which the siamang is the largest. All of the gibbon species are found in Southeast Asia.



Range of the siamang gibbon.

### DISTRIBUTION

Found in the rainforests of Sumatra and Malaysia.

### CONSERVATION

All gibbon species are rapidly declining in numbers. Unless the destruction of their rainforest home stops, many species will become endangered.

## FEATURES OF THE SIAMANG GIBBON



SIAMANG'S ARM LENGTH

The siamang gibbon is 3 ft. tall, but its arm spread is 5 ft. It folds its arms over its head to keep them from trailing on the ground.



**Hands:** Cup-shaped for gripping.

**Legs:** Strong; uses back legs to walk upright.

**Throat sac:** Enlarges to amplify its call over long distances.

**Call:** Used by both sexes to define territories. This develops the bond between them.

**Rump:** Has calluslike pads for cushioning.





*The siamang gibbon lives in close-knit family groups.*

*The parents usually mate for life, and both father and mother take an active role in rearing and training their offspring.*

### HABITS

The siamang gibbon lives high up in the rainforests of Malaysia and Sumatra. It travels rapidly through the trees by moving arm over arm or swinging from branch to branch. It walks along the branches if they are too big to grip with its cup-shaped hands.

Although all gibbons communicate by calling to each other, the siamang's call is the loudest and can be heard two miles away. Its large throat sac, which can be inflated to almost the size of

its head, helps to amplify the call. A male and female pair sing in unison, and at the start of the song the young join in. The song reaches its climax with the great call of the female. Calling serves to announce territories and to develop the bond between male and female.

At night the siamang sleeps sitting upright high in the branches of the trees in the center of its range. The special pads on its rump help it rest more comfortably.

### FOOD & FEEDING

Almost totally vegetarian, the siamang's diet consists mainly of leaves and ripe fruit, particularly figs. It also gets some protein from insects and occasionally from birds' eggs. The siamang feeds during the day.

A siamang family occupies a home range of up to 100 acres. Family members seldom need to travel more than a mile to get food.

*Left: Siamang gibbons live high up in treetops and swing from tree to tree.*

*Right: The large throat sac amplifies its call, which can be heard two miles away.*



### BREEDING

The siamang mates for life. After a seven- to eight-month gestation period, a single baby is born.

For the first year of its life, the baby is fed and cared for only by its mother. Then the father takes charge of its education, although the mother continues to feed it for another year. By the time it is three years old, the father has taught it how to walk, swing through trees, and behave within the group. Because of the long period of parental care, the siamang produces only one offspring every two to three years.

*Above right: The siamang's arms are almost a third longer than its body length.*

*Left: The mother is protective of her offspring, which clings to her for warmth.*

### DID YOU KNOW?

- The gibbon's arms have a spread of five feet. If it stands erect, they dangle on the ground. It often carries its arms above its head so they do not trail on the ground.
- Except for humans, the gibbon is the only primate to walk upright.
- The gibbon hates water and cannot swim. When it has to drink, the gibbon usually cups the water in its large hands.
- The gibbon has binocular vision, which allows it to focus ahead on the next branches to grab.



### FAMILY LIFE

The siamang gibbon lives in a small, close-knit family group consisting of an adult male and female and two or three youngsters. Grooming is a major social activity that strengthens the family bond. At age six the youngsters become sexually aware and seek out mates. The young male will avoid its mother, so as not to anger its father. At age eight it moves out to start its own family.



# ORCA (KILLER) WHALE

CARD 129

GROUP 1: MAMMALS



ORDER  
Cetacea

FAMILY  
Delphinidae

GENUS & SPECIES  
*Orcinus orca*



The orca, or killer, whale is the only whale that preys on other warm-blooded animals. Using teamwork, it hunts in a group and will even attack larger whales.

## KEY FACTS



**SIZES**  
Length: Male, 26-30 ft. Female, 23-26 ft.  
Weight: 9,000-14,000 lb.



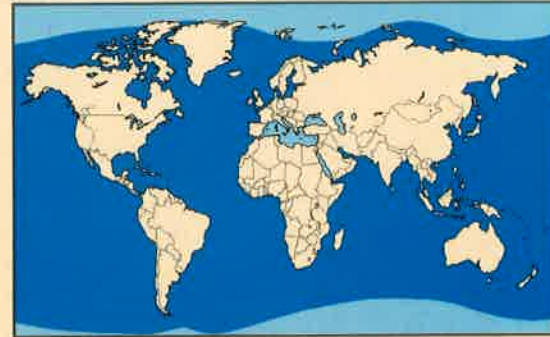
**BREEDING**  
Sexual maturity: 8-16 years.  
Mating season: Early winter.  
Females breed every 3-8 years.  
Gestation: 13-16 months.  
No. of young: 1 calf.



**LIFESTYLE**  
Habit: Lives and hunts in a pod (group).  
Call: Clicking sounds.  
Diet: Fish, squid, seals, and other whales.  
Lifespan: Up to 100 years.



**RELATED SPECIES**  
Related to the dolphins. Some scientists group the orca whale with the pilot whales in the family *Globicephalidae*.



Range of the orca.

### DISTRIBUTION

Found in every ocean as far as the ice packs of the Arctic and Antarctic and in cooler inshore waters.

### CONSERVATION

The orca is widespread and is in no danger of extinction. Some are hunted by fishermen who claim that orcas deplete their fish stocks. They were often captured live for marine parks, but this activity is now controlled in the United States.

## FEATURES OF THE ORCA

**Dorsal fin:** Male's fin can be as tall as seven feet.

Female's fin is short and curves toward the back.

**Length:** Female measures 23 to 26 feet; male 26 to 30 feet. The sexes are alike except for size and fin shape.

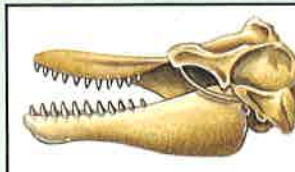
Female

**White markings:** Flashes above eyes. Belly and undersides of tail flukes and head are all white.

**Flippers:** Rounded, paddle-shaped.

Male

**Tail flukes:** Very powerful. They propel the orca to a top speed of 30 miles per hour.



**Teeth:** 40 to 50, sharp, curved, and oval. They interlock when the broad jaws close.





Sailors have spun tales around the orca whale's reputation for killing, yet this mammal has never been known to attack a human being. Its notoriously huge appetite is normal in proportion to its great size.

## BEHAVIOR

The orca whale lives in close-knit pods of 5 to 30 members. A smaller pod contains at least one adult male along with several adult females and young. A larger pod contains two to three adult males.

Each female stays in the same pod for life, but the males regularly move between pods. If the pod becomes too large, some of the whales break away to form new pods. When traveling together, pod members stay in line, rarely spreading out wider than half a mile.

Although capable of diving to 1,000 feet, the orca whale usually stays close to the surface. When traveling, it fol-

lows a series of 30-second dives with a longer dive of four minutes; when it hunts the dives can last longer.

While the orca spends most of its time hunting food, it is also very playful. Pods race along the surface of the water or *breach* (leap out of the water).

### DID YOU KNOW?

- When an orca breaches, the splash can be heard several miles away.
- The orca can toss 600-pound prey into the air.
- There are two types of whale: toothed whales and

baleen whales. The orca is a toothed whale and catches its prey with its teeth. Baleen whales have no teeth. Instead they strain food from the water through their comblike baleen plates.

## FOOD & HUNTING

The orca whale hunts in groups, or *pods*, in coastal waters. When hunting for food, the orca whale uses *echolocation*: it sends out clicking noises that bounce back in the form of sound waves. These waves form a "sound picture" by which the whale identifies and locates prey. Once located, prey is driven toward shore so it cannot escape.

In colder waters the pod may tip up a small ice floe to catch any basking seals that slide off into the water.

In open water the orca *spyhops*, or raises its head high out of the water and looks

around the surface for prey.

When attacking large whales, the whole pod joins in for the kill. Some seize the prey's tail in an attempt to immobilize it, while the others in the pod attack from all directions.

Right: A pod moves out to feed. Below: Mammals such as these sea lions form only a fraction of the orca's mainly fish-and-squid diet.



## BREEDING

The male reaches sexual maturity between the ages of 10 and 16 years; the female usually matures two years earlier. Little is known about the orca's breeding habits. Some sort of courtship behavior probably exists, and a single male most likely breeds with several females.

The female gives birth to a single calf after a 12-month *gestation* (pregnancy), usually in November or December. At

Left: The orca whale is an attentive parent both in the wild and in captivity.

birth the calf measures about seven feet, which is almost a third of its mother's size. It suckles for about a year, but continues to stay close to its

mother for several more years.

Below: The calf rarely strays far from its mother although it can swim well from birth.



## SPECIAL ADAPTATIONS

**Speed:** The orca is the fastest member of the dolphin family, reaching speeds of 30 miles per hour, but its normal speed is 6 to 10 miles per hour.

**Teeth:** The orca has 40 to 50 conical teeth that point backward. These enable the orca to tear big chunks of flesh from large prey.

**Jaws:** The orca's jaws open so wide that it can swallow seals whole.



# WATER VOLE

CARD 131

GROUP 1: MAMMALS

ORDER  
Rodentia

FAMILY  
Muridae

GENUS  
Arvicola



**Water voles are aquatic mammals that look like large rats. They live mainly in meadows, but some kinds can be found along the banks of rivers, ponds, and canals.**

## KEY FACTS



### SIZES

Length: 6-9 in. Tail, to 6 in.  
Weight: 5-11 oz.



### BREEDING

Sexual maturity: 5 weeks in females in some locations.  
Breeding season: March to October.  
Gestation: 20-22 days.  
No. of young: Usually 4-6.



### LIFESTYLE

Habit: Lives in small family groups.  
Diet: Mainly grasses and waterside plants.  
Call: Rasping squeak when frightened; high, shrill squeak when fighting.  
Lifespan: About 5 months in the wild; up to 5 years in captivity.



### RELATED SPECIES

There are 3 species of water vole worldwide.



Range of water voles.

### DISTRIBUTION

Found in most of Great Britain, Europe (except Scandinavia and southern areas), and part of the Soviet Union. Also in southwestern Canada and northwestern United States.

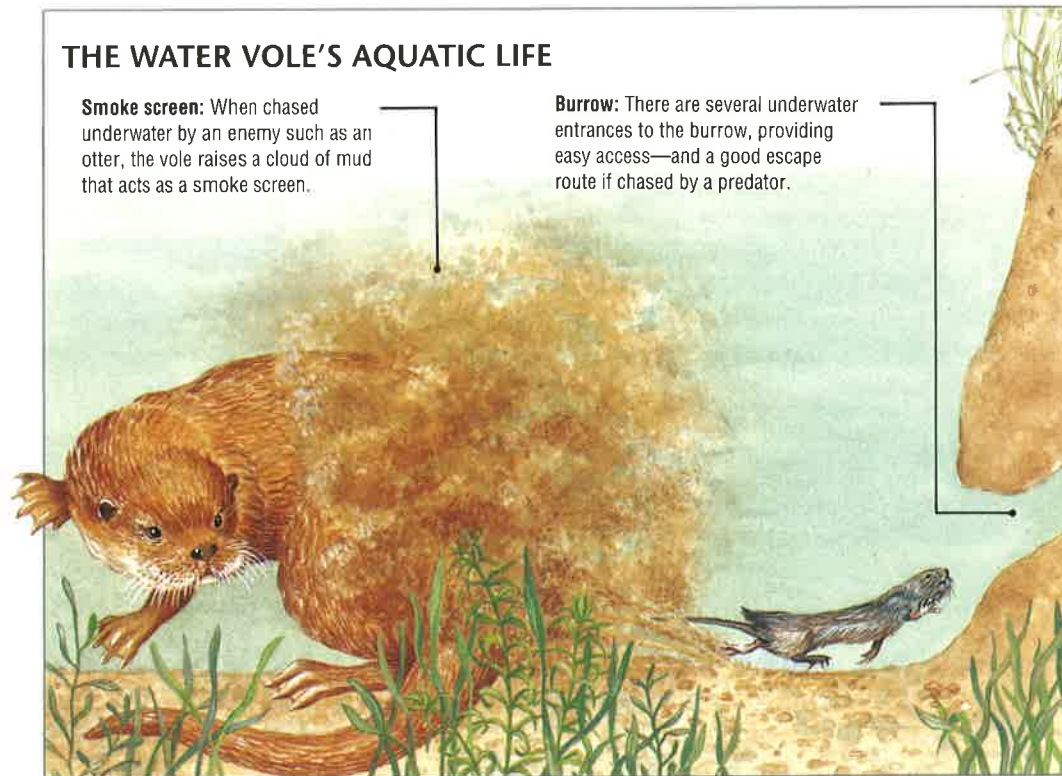
### CONSERVATION

Water voles are hunted for their fur in the Soviet Union but are considered pests in Europe. In Britain their numbers have declined in the last decade.

## THE WATER VOLE'S AQUATIC LIFE

**Smoke screen:** When chased underwater by an enemy such as an otter, the vole raises a cloud of mud that acts as a smoke screen.

**Burrow:** There are several underwater entrances to the burrow, providing easy access—and a good escape route if chased by a predator.





*As their name implies, water voles are at home in water. But in central Europe and further east, water voles are often found living far from water, in gardens, orchards, and meadows. Altogether there are three species of water vole, located in Britain, continental Europe, Siberia, southwestern Asia, and northwestern North America.*



### BEHAVIOR

The male water vole has a range of over 425 feet of water bank; the female somewhat less. To mark its territory, the male rakes its hind feet over its flank gland and pushes out a secretion that it then stamps into the ground with its hind feet.

*Below: Water voles swim and dive with great skill.*

Water voles generally do not form large colonies. Those that live on dry land may form groups consisting of the adult pair and two generations of young. Water voles will fight if they are overcrowded, uttering high, shrill squeaks.



### NATUREWATCH

It is easy to confuse a water vole with a water rat, but in fact its muzzle is blunter, its tail is shorter, and its back is not quite as arched. Also, its fur is soft and shaggy, while the rat's is stiff and sleek. Like the rat, the water vole is usu-

ally brown, but it can also be black.

A water vole's presence can often be detected by its greenish, cylindrical droppings. These tend to be deposited around the edges of its range.

### FOOD & FEEDING

Active by day and night, the water vole eats mainly grasses and waterside plants. It tears at the plant stems and pushes them into its mouth with its front paws. It will also eat twigs, buds, bulbs, roots, and fallen fruit.

In Europe, when seasonal conditions provide plenty of food for several years, "plagues" of water voles may occur. They eat greedily, leaving green pastures looking almost like deserts, undermined with burrows. The population then drops



dramatically, probably because of a lack of food.

*Above: Water voles gnaw the roots of young trees.*

### HABITAT

In the British Isles water voles live in burrows that they dig in the banks of slow-flowing lowland rivers or in ponds and streams—wherever the water level remains fairly constant. They are also occasionally found further upland.

Within their burrows they build ball-shaped nests of grass and other plant material. They may also build these nests under driftwood or on the water bank, if there is thick vegetation.

In central Europe, the Soviet

Union, and parts of Asia, water voles are more similar to moles in their lifestyle. In these regions they may be found far from water, burrowing close to the surface in woodlands, meadows, and even gardens.

North American water voles are semi-aquatic. In the summer they often build tunnels that link their burrows to nearby waterways. In winter they move away from the water and build their nests under the snow.

### BREEDING

Breeding generally begins in March and may continue until late fall. Females usually have three or four litters a year. The young of the first litter may produce litters of two by the end of summer.

The water vole's gestation period is 20 to 22 days, and up to eight young may be born. By 5 days the young have their furry coats, and 3 days later they open their eyes. They are weaned at 14 days, by which time they are about half the adult size.



### DID YOU KNOW?

- During its first week the water vole gains more than a quarter-ounce.
- A female water vole can give birth 22 days after its previous litter.
- More than 40 water voles may live on one acre.
- In Holland, water voles can threaten the tulip harvest because they eat the tulip bulbs in winter.

*Left: Babies are born blind and naked, weighing less than two-tenths of an ounce.*