
Walker's

**Mammals
of the World**

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- F. bengalensis* (leopard cat), Ussuri region of southeastern Siberia, Manchuria, Korea, Quelpart and Tsushima islands (between Korea and Japan), eastern China, Taiwan, Hainan, Pakistan to Indochina and Malay Peninsula, Sumatra, Java, Bali, Borneo, several islands in the western and central Philippines;
- F. rubiginosa* (rusty-spotted cat), southern India, Sri Lanka;
- F. viverrina* (fishing cat), Pakistan to Indochina, Sri Lanka, Sumatra, Java;
- F. planiceps* (flat-headed cat), Malay Peninsula, Sumatra, Borneo;

subgenus *Mayailurus* Imaizumi, 1967

- F. iriomotensis* (Iriomote cat), Iriomote Island (southern Ryukyu Islands);

subgenus *Lynchailurus* Severtzow, 1858

- F. colocolo* (pampas cat), Ecuador and Mato Grosso region of Brazil to central Chile and Patagonia;

subgenus *Leopardus* Gray, 1842

- F. pardalis* (ocelot), Arizona and Texas to northern Argentina;
- F. wiedii* (margay), northern Mexico and possibly southern Texas to northern Argentina and Uruguay;
- F. tigrina* (little spotted cat), Costa Rica to northern Argentina;
- F. geoffroyi* (Geoffroy's cat), Bolivia and extreme southern Brazil to Patagonia;
- F. guigna* (kodkod), central and southern Chile, southwestern Argentina;

subgenus *Oreailurus* Cabrera, 1940

- F. jacobita* (mountain cat), the Andes of southern Peru, southwestern Bolivia, northeastern Chile, and northwestern Argentina;

subgenus *Herpailurus* Severtzow, 1858

- F. yagouaroundi* (jaguarundi), southern Arizona and southern Texas to northern Argentina;

subgenus *Puma* Jardine, 1834

- F. concolor* (cougar, puma, panther, or mountain lion), southern Yukon and Nova Scotia to southern Chile and Patagonia.

All of the above subgenera are sometimes treated as full genera, and still other genera have been used for certain species here assigned to *Felis*. In contrast, some authorities include all living cats except *Acinonyx* in the genus *Felis*, and some do not employ subgenera (see account of the family Felidae).

North American authorities, such as Hall (1981), commonly recognize *Lynx* as a distinct genus and the New World populations of *Lynx lynx* as a separate species, *Lynx canadensis*. Jones et al. (1986), however, used the name *Felis lynx* instead of *Lynx canadensis*. There is also controversy regarding the Spanish lynx, *F. pardina*: it is recognized as a full species by most authorities, including Ewer (1973), Hemmer (1978), and Leyhausen (1979), but was considered to be only a subspecies of *F. lynx* by Corbet (1978) and Ellerman

Werdelin (1981) treated *Lynx* as a full genus and *F. canadensis* and *F. pardina* as species distinct from *F. lynx*.

The African and most Asian populations of *F. silvestris* have been assigned to a separate species, *F. libyca*, by numerous authorities, including Smithers (in Meester and Setzler 1977). There is substantial evidence, however, that *F. silvestris* and *F. libyca* intergrade in the Middle East, and there is also much doubt as to whether *F. bieti* of East Asia is distinct from *F. silvestris* (Corbet 1978). Leyhausen (1979) listed *F. silvestris* and *F. libyca* as separate species and considered the populations found from Iran to India to represent still another species, *F. ornata*. He united all three, however, in a single superspecies. Leyhausen (1979) also recognized *F. thinobia* of Soviet Central Asia, and *F. tristis*, of Tibet, as species distinct from, respectively, *F. margarita* and *F. temminckii*.

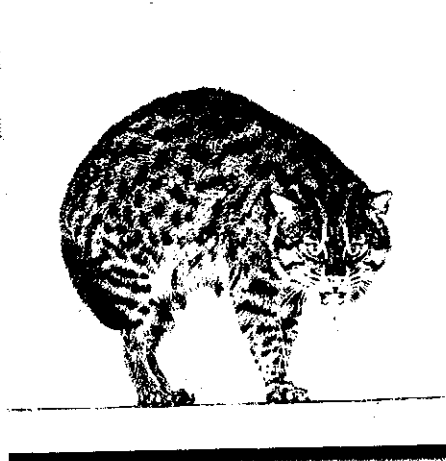
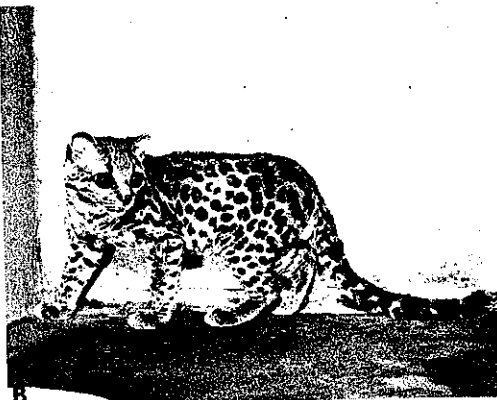
Except for *F. concolor* and some individuals of *F. lynx*, the members of the genus *Felis* are smaller than those of the three other genera of cats. Otherwise, the characters of *Felis* are the same as those set forth for the family Felidae. From *Neofelis* *Felis* is distinguished by having relatively shorter canine teeth and a smaller gap between the canines and the cheek teeth. From *Panthera*, it is distinguished by having a completely ossified hyoid apparatus without an elastic ligament. From *Acinonyx*, it is distinguished by having a greater gap between the canines and the cheek teeth, and usually by having shorter limbs and fully retractile claws. Additional information is provided separately for each species. Except as noted, the information for the following accounts was taken from Gugisberg (1975).

Felis silvestris (wild cat).

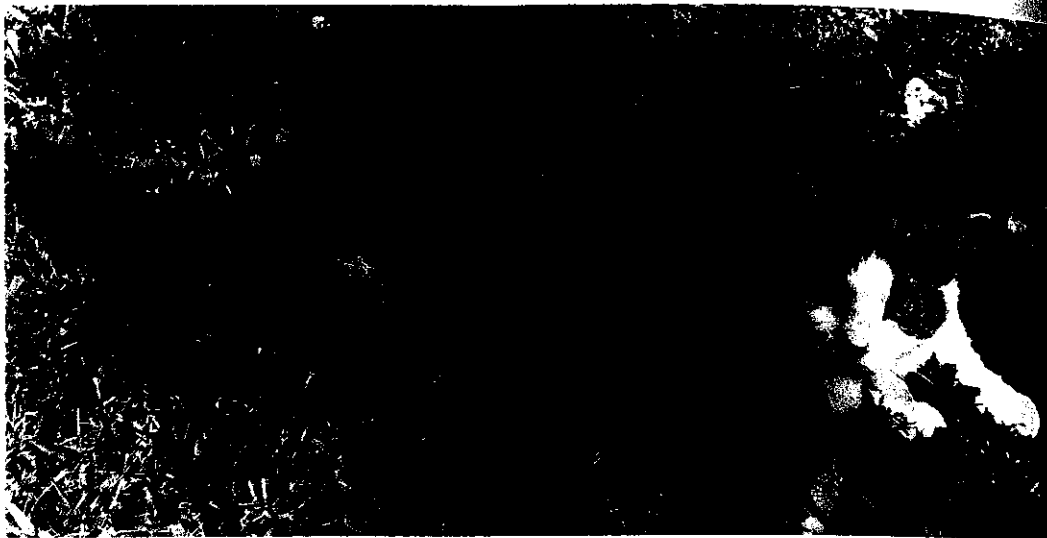
Head and body length is usually 500–750 mm, tail length is 210–350 mm, and weight is usually 3–8 kg. Males are larger on the average, than females. The fur is long and dense. In European populations the ground color is yellowish gray, the underparts are paler, and the throat is white. There are four or five longitudinal stripes from the forehead to the nape, merging into a dorsal line that ends near the base of the tail. The tail has several dark encircling marks and a blackish tip. The legs are transversely striped. In African and Asian populations the general coloration varies from pale sandy to gray brown and dark gray; there may be a pattern of distinct spots or stripes. European animals are generally about one-third larger than domestic cats and have longer legs, a broader head, and a relatively shorter, more bluntly ending tail. Females have eight mammae.

The wild cat occupies a variety of forested, open, and rocky country. It is mainly nocturnal and crepuscular, spending the day in a hollow tree, thicket, or rock crevice. It climbs with great agility and seems to enjoy sunning itself on a branch. It normally stays in one area, within which it has several dens and a system of hunting paths. It usually stalks its prey, attempting to approach to within a few bounds. The diet consists mainly of rodents and other small mammals and also includes birds, reptiles, and insects.

The wild cat is usually solitary, each individual having a well-defined home range of about 50 ha. Males defend these areas but may wander outside of their usual ranges during times of food shortage or to locate estrous females. Mating occurs from about January to March in Europe and Central Asia. Females are polyestrous, with heat lasting 2–8 days. Several males collect around a female in heat; there is considerable screeching and other vocalization, and sometimes violent fighting. There is usually only a single litter per year, though occasionally a second is produced in the summer. Births in East Africa may occur at any time of year but seem to peak there and in southern Africa during the wet season (Kingdon 1977; Smithers 1971). The gestation period aver-



A. Leopard cat (*Felis bengalensis*), photo by Lim Boo Liat. B. Margay (*F. wiedii*), photo by Ernest P. Walker. C. Pampas cat (*F. colocolo*), photo from San Diego Zoological Garden. D. Fishing cat (*F. viverrina*), photo from New York Zoological Society. E. Geoffroy's cat (*F. geoffroyi*), photo by Ernest P. Walker. F. African wild cat (*F. silvestris libyca*), photo by Bernhard Grzimek.



Domestic cat (*Felis catus*), photo by William J. Allen.

ages 66 days in Europe and about 1 week less in Africa. Litters usually contain two or three young in the wild. At the Berne Zoo, Meyer-Holzappel (1968) observed that births occurred from March to August and that litter size averaged four and ranged from one to eight. The young weigh about 40 grams each at birth, open their eyes after about 10 days, nurse for about 30 days, emerge from the den at 4–5 weeks, begin to hunt with the mother at 12 weeks, probably separate from her at 5 months, and attain sexual maturity at around 1 year. According to Kingdon (1977), captives have lived up to 15 years.

The wild cat once occupied most of Europe but withdrew from Scandinavia and most of Russia by the Middle Ages, because of climatic deterioration. In modern times, especially during the nineteenth century, the species was intensively hunted by persons who considered it to be a threat to game and domestic animals and so was eliminated from much of western and central Europe. Diversion of human activity during World Wars I and II apparently stimulated recovery in such places as Scotland and West Germany. *F. silvestris* is now protected and encouraged in several nations (Smit and Van Wijngaarden 1981). It is classified as vulnerable by the Soviet Union.

Felis catus (domestic cat).

According to the National Geographic Society (1981), there are more than 30 different breeds of domestic cat, and the average measurements of several popular breeds are: head and body length, 460 mm, and tail length, 300 mm. E. Jones (1977) found that feral males on Macquarie Island, south of Australia, averaged 522 mm in head and body length, 269 mm in tail length, and 4.5 kg in weight, while females there averaged 478 mm in head and body length, 252 mm in tail length, and 3.3 kg in weight. On Macquarie, 90 percent of the cats were orange or tabby, and the remainder were black or tortoiseshell. Female *F. catus* have four pairs of mammae.

The domestic cat evidently is descended primarily from the wild cat of Africa and extreme southwestern Asia, *F. silvestris libyca*. The latter may have been present in towns in Palestine as long ago as 7,000 years, and actual domestication occurred in Egypt about 4,000 years ago. Introduction to Europe began around 2,000 years ago, and some interbreeding occurred there with the wild subspecies *F. silvestris silvestris*. Domestication seems originally to have had a re-

ligious basis (Grzimek 1975; Kingdon 1977). The cat was the object of a passionate cult in ancient Egypt, where a city, Bubastis, was dedicated to its worship. The followers of Bast, the goddess of pleasure, put bronze statues of cats in sanctuaries and carefully mummified the bodies of hundreds of thousands of the animals.

There have been relatively few detailed field studies of *F. catus*, but there is no reason to think that its behavior and ecology under noncaptive conditions differ greatly from what has been found for *F. silvestris*. On Macquarie Island, where the cat population has been feral since 1820, E. Jones (1977) obtained specimens in a variety of habitats by both day and night. The cats sheltered in rabbit burrows, thick vegetation, or piles of rocks. The diet consisted largely of rabbits (also introduced on the island) and also included rats, mice, birds, and carrion. Population density was estimated at two to seven cats per sq km.

In a rural area of southern Sweden, Liberg (1980) found a population density of 2.5–3.3 per sq km. About 10 percent of the cats were feral, and the rest, including all of the females, were associated with human households. Adult females lived alone or in groups of up to 8 usually closely related individuals. Each member of a group had a home range of 30–40 ha., which overlapped extensively with the ranges of other members of the same group but not with the ranges of the cats in other groups. Most females spent their life in the area in which they were born, seldom wandering more than 600 meters away. Nonferal males remained in their area of birth, along with females, until they were 1.5–3.5 years old but then left and tried to settle somewhere else. Males living in the same group had separate home ranges. There were 6–8 feral males in the study area; their home ranges were 2–4 km across, partly overlapped one another, and sometimes included the areas used by several groups of females. According to Haspel and Calhoun (1989), home ranges of unrestrained urban cats are much smaller than those in rural areas. In Brooklyn, range averaged 2.6 ha. for males and 1.7 ha. for females, the difference evidently being a function of body size.

According to Ewer (1973), the house cat is basically solitary, but individuals in a given area seem to have a social organization and hierarchy. A male newly introduced to an area normally must undergo a series of fights before its position is stabilized in relation to other males. Both males and