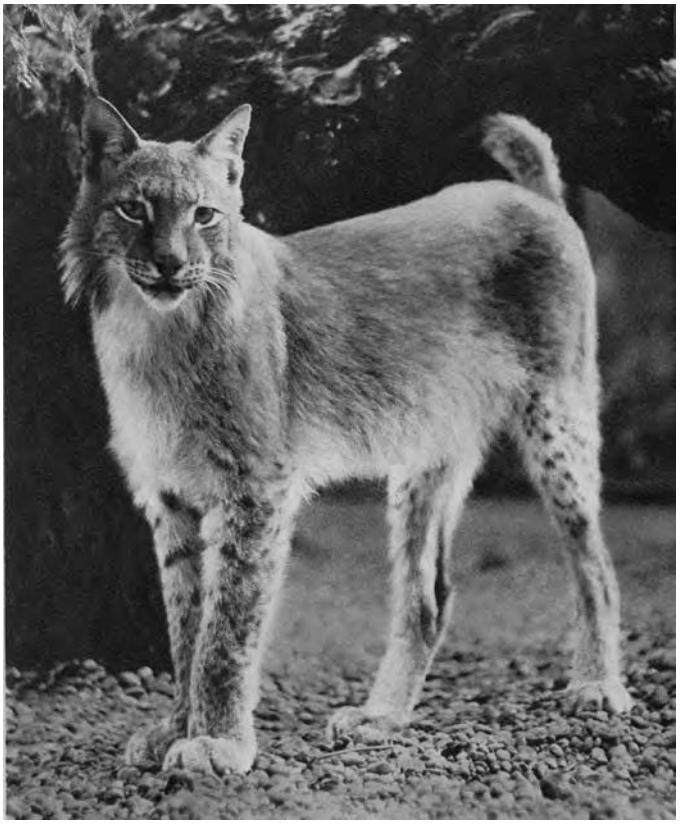


Figure 4.3. *Above:* Lightly spotted Eurasian lynx.
Below: The somewhat smaller spotted Iberian lynx (*Lynx pardinus*), a rare species found in Spain and Portugal.

Figure 4.4. *Opposite page:* The red fox (*Vulpes vulpes*) can climb trees. (Foto: F. Labhardt)

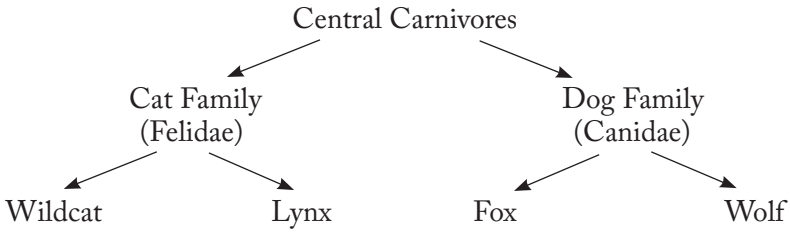
In addition to the wildcat, we also find in Europe, and in North America, the **lynx**, a larger cat with a brush of elongated hairs on the tips of its ears, side whiskers, a rather short tail, and long, powerful limbs. The lynx often covers great distances in a short time; it also makes use of its limbs when capturing prey. In this animal, therefore, the feline type slightly approaches the canine form.

Among the dog-like animals, by contrast, we find a smaller form, the **red fox**, as well as other fox species, such as the New World **gray fox**, with its disproportionately short legs and long tail; these animals generally stalk their prey or lie in wait for it, thus representing a sense-oriented form among the canids. Foxes can climb trees, albeit with more difficulty than cats, and, as in cats, their pupils are slit-shaped (see Fig. 4.4). Thus the basic contrast we have discovered between the sense-active cats and the metabolically-oriented dogs also exists even within the European members of each of these groups. The red fox, compared with other European canines, has rather feline characteristics, while the lynx is almost dog-like among the cats. Even so, however, the lynx, Europe's largest cat, remains smaller than the wolf. Correspondingly, the red fox, the smallest of the European canines, is larger than the wildcat. This fact is quite significant for the biology of form, for, as we have seen, size is dependent upon the relationship between the sensory and metabolic systems. Thus, as we saw

Figure 4.5. *Above:* In bright sunlight, the wildcat's pupils contract into vertical slits. (Photo: D. Nill)

Below: The pupils of the red fox show the same phenomenon, though not as clearly, whereas in wolves and lynxes the pupils remain round. (Photo: L. Dzirjak)

Figure 4.6. Red foxes. In the fall they like to eat plums and wild rowan berries. *Below:* While yawning, a fox displays its teeth: small incisors, long canines, and increasingly large premolars and molars. (Fotos: G. Schumann, F. Labhardt)



in Chapter 3, the very size of the different animals is indicative of the order inherent within the multiplicity of nature.

How are these native carnivores faring in our forests today? Foxes are surviving best and have become adapted to human surroundings, frequenting villages and suburban areas even during the day (much like coyotes in North America). In Germany, wildcats have also survived, but only in remote, mountainous areas (an estimated 4,000 wildcats live in Germany), and lynx have been reintroduced to some areas, where they are regulating the excessively large roe deer population. In North America, the Canada lynx has been reintroduced to sites in Colorado and Montana.

By 1904, **wolves** were thoroughly exterminated in Germany. In 1995, however, some wolves swam across the Oder River from Poland to eastern regions of Germany, and in 2007 wolf pups were born there in the wild. Subsequently, moose have been established to provide the wolves with their proper diet. The adaptable wolves have spread west, and in 2011 their wild population in Germany was estimated at 60. In North America, the gray wolf is common throughout Canada and Alaska but endangered in its more southern range through the U.S. into Mexico. A much celebrated reintroduction of wolves into Yellowstone National Park, Wyoming, has re-established these top predators in the ecosystem. Consequently, the native aspen forests are recovering as the wolves regulate the elk population and thereby reduce the impacts of over-browsing.

The innumerable horror stories about wolves are certainly false. Wolves do not attack human beings unprovoked, and they could, without creating problems, be settled in all of Germany's larger mountainous areas as the best natural regulators of the red deer. Today, there are 500 wolves in Italy and 2,000 in Spain. I had peaceful morning and evening encounters with Middle Eastern wolves while camping in the Negev Desert in Israel.

Another group of carnivores, the **bears** (family Ursidae), are also in need of protection. In the Carpathian Mountains of Slovakia, Poland, and Romania there are plenty of bears. But in the Alps they have been exterminated, with the exception of small residual populations in South Tirol. A study by the World Wildlife Fund has concluded that there would be appropriate habitat for 1,000 brown bears in the eastern Alps if people would take meaningful precautions. In Slovakia, 500 bears are officially allowed, but their numbers

Figure 4.7. *Above:* Mexican wolf running. (Photo: Jim Clark)
Below: Female Canadian wolf with pups. (Photo: D. Middleton)