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Legal status and conservation of cat species in China

Thirteen felid species are distributed over all three climatic zones in China: the monsoon area, arid and semi-arid area, and the high-altitude Qinghai-Tibetan Plateau. In terms of number of species and extent of distribution area, felids are numerous and widespread in China, and hence the country bears an important responsibility in cat conservation.

China is also a country with a long history of agriculture and forestry, both having a great impact on wildlife survival. From ancient time on, the distribution of cats in China has gradually shrunk from plains to mountainous lands, and over the country as a whole, habitat deterioration and destruction are common problems and have led to population declines of wild cats. In relation to the protection of wildlife and habitats, the Chinese government has promulgated some ordinances concerning wildlife protection since 1960, issued the Law of Wildlife Protection in 1988, and is now revising this law. There were various complicated situations concerning the implementation of the wildlife protection ordinances due to governmental and social attitudes and economic conditions from 1950 to mid-1980; at that time, governments at different levels had called for attacks on nature, promoting the over-use of woodlands and grasslands, and hunting fur animals etc., trying to solve quickly the country's economic difficulties and overcome poverty. This has had serious effects on wildlife protection. Wildlife has values for science, ecology, economy, and culture, and in addition, each species has a different position and function in the natural-social-economic system. The influence of those factors can directly or indirectly be reflected in the legislation and protection status of cats in China. Terrestrial wildlife resources in China belong to the forestry executive system, which is composed of the State Forestry Administration, the provincial Forestry Bureaux and the County Forestry Bureaux, and which is responsible for wildlife conservation and management. Police departments are authorized to persecute and punish poaching, illegal hunting and illegal trade in wildlife.

The establishment of nature reserves is one of the most important ways to conserve wild-

life. China's nature reserves are divided into national, provincial and county level parks, manifesting different levels of importance of the protected areas. In general, the establishment of new protected areas starts at county level and is gradually promoted to provincial and national level. The different levels of protected areas are financially supported by the respective governments.

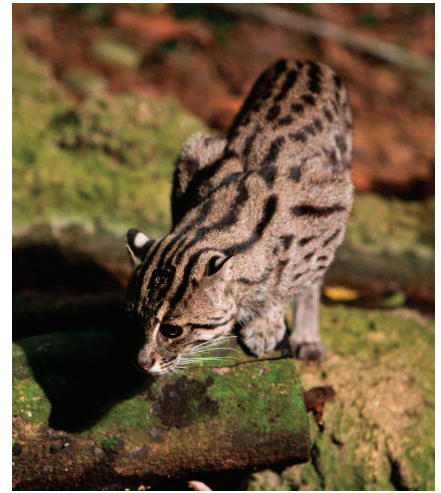
Large-sized cats

Large cats in China include the tiger *Panthera tigris* (with originally five subspecies occurring in the country: Amur tiger *P. t. altaica*, Indochinese tiger *P. t. corbetti*, Bengal tiger *P. t. tigris*, south China tiger *P. t. amoyensis*, and Caspian tiger *P. t. virgata*), the snow leopard *Panthera uncia*, and the leopard *Panthera pardus*.

The tiger occurs in forest and high grassy vegetation areas, and needs considerable territory to support its prey base. Therefore, there have been direct conflicts over space and prey demand between people and tigers. Historically in the light of economy and culture, the tiger is a valuable fur animal, and has an important symbolic significance, especially in Chinese traditional medicine. The tiger's close links with cultural and philosophical concepts led to over-harvesting and illegal hunting over many years in the past.

The five tiger subspecies in China can be ranked in decreasing order according to how they were affected by conflicts with agriculture and forestry. The socio-economic conflicts with local people were strongest for the South China tiger and the Caspian tiger (leading the two subspecies into such jeopardy), less prominent for the Siberian tiger, and least for the two southern subspecies, the Indochinese and the Bengal tiger, which occur in China only at the fringes of their distribution.

One of the main reasons for its decline was the tiger's conflict with agriculture and forestry. Tigers were regarded and listed as pest animals, and suffered from overhunting. Some hunters were rewarded like heroes for killing tigers in the 1950s and 1960s. In 1962, China's State Council announced the regulation of the utilization of wildlife resources, but did not then include the South China ti-



Fishing cat (Photo P. Meier)

ger. In 1973, the State Council issued a draft named Ordinance of Wildlife Resource Protection with the South China tiger ranked as a Class III protected animal. In 1988, China's State Council promulgated the Law of Wildlife Protection, which then ranked all subspecies of tiger as Class I protected animals, as the law only recognizes two classes. Class I protected animals can only be caught, hunted or traded with a special license obtained from the department of wildlife administration under the State Council. For Class II protected animals this license is issued by the relevant departments under the government of a province, autonomous region or municipality.

In the same year the Law of Wildlife Protection was promulgated, the Ministry of Agriculture of China prohibited the hunting of Amur tiger and Bengal tiger, but still allowed an annual quota of tigers to be hunted. In 1995, China issued a regulation to prohibit the trade in tiger bones in order to stop the production of Chinese traditional medicine containing tiger bone. But for South China tigers, all measures for rescuing this subspecies seemed to come too late. The academic community inside and outside China continues to discuss whether some individuals of this subspecies are still alive in the wild nowadays. At present, the numbers and ranges of the Amur, Indochinese and Bengal tigers have been established (Luo 2010, this issue). Tigers are reported from 39 natural reserves for tiger conservation at county, provincial and national level, covering a total of 20,000 km². 15 of these reserves are at national level and were established in regions where the tiger is confirmed or reportedly still lives.

Snow leopards occur in alpine and sub-alpine mountain lands in northwest China. Fortunately, there is no competition with

agriculture, and especially no relation with traditional medicine, so these human threats are reduced. However, three factors are still critical threats to snow leopards: habitats being occupied by herders as summer pasture, poaching for pelts, and over-hunting of prey animals. As a large cat, the snow leopard has an inherently low population density, and as it has difficulties in withstanding disturbance from economic activities, it is ranked as a Class I protected species. So far there has been a lack of overall scientific information, but in part of the snow leopard's range, at least two surveys of population size and distribution have been conducted in recent years. By now there are at least 8 reserves which are said to have snow leopards.

Leopards are distributed in both the north and south parts of eastern China; they use almost the same habitat as tigers. We believe that the fate of leopards in the plains was similar to that of the tiger in past times. The leopard requires a relatively smaller space and uses much more diverse food items than the tiger, and is hardly linked to traditional medicine bone use. We think that these are the main reasons why leopards survived better than tigers. At present, a lack of suitable habitats or of sufficient prey are limiting factors for this species, but there is a general shortage of information on numbers and distribution in parts of its range. The leopard is ranked as a Class I protected species because of widespread strong economic activities (woodland and grassland transformed to crop-fields, logging, road building, mining, etc.) and scarce numbers. The leopard is found in no fewer than 20 reserves, where it is also listed as a key protected animal.

Medium-sized cats

The medium-sized cats of China are the lynx *Lynx lynx* and the clouded leopard *Neofelis nebulosa*.

Lynx are widely distributed in northern China and the Qinghai-Tibet Plateau. They are quite similar to leopards in their habitat and prey needs in boreal forest. The shortages of habitats and of prey are the major threats. At present the number and distribution of lynx countrywide remain unknown. Although lynx occur over a large area, there have been relatively strong socio-economic activities across their range, and so the species was ranked as a Class I protected species. At present we do not know how many natural reserves include lynx.

Clouded leopards occur almost all over southern China. Habitat loss and insufficient prey are probably the main factors restricting their population size. At present the numbers of clouded leopards countrywide as well as their regional distribution remain unknown. There are intensive socio-economic activities in the clouded leopard range, and although it covers a large area, but in limited numbers, the clouded leopard was ranked as a Class I protected species. Almost all reserves in middle and southern China are believed to host the clouded leopard as one of the main protected animals, but the exact number of these reserves remains unknown.

Because large-sized cats such as tigers and leopards are so rare nowadays, such that their role in the ecosystem has been greatly weakened, medium-sized cats can be a partial substitute for the big cats. Therefore, the protection of medium-sized cats becomes more important for maintaining ecosystem structure and function.

Small-sized cats

Cats of small size include the Chinese mountain cat *Felis bieti*, the wildcat *F. silvestris*, the jungle cat *F. chaus*, the manul or Pallas's cat *Otocolobus manul*, the marbled cat *Pardofelis marmorata*, the Asiatic golden cat *Catopuma temminckii*, the leopard cat *Prionailurus bengalensis*, and the fishing cat *P. viverrinus*.

The Chinese mountain cat, a species endemic to China, is found in western Sichuan and eastern Qinghai, the wildcat in the arid and semi-arid zone in northwestern China, the jungle cat in Yunnan and southern Tibet, the Pallas's cat in northern, northwestern and southwestern China, and the marbled cat in central and northwestern Yunnan. The golden cat is widely distributed in the central, southern, and southwestern parts of China and southern Tibet, the leopard cat in the eastern and northwestern parts of China and regionally on the Qinghai-Tibet Plateau, whereas the fishing cat may only still be found in Taiwan Province. All small cats except the marbled cat and leopard cat (which are not listed) are ranked as Class II protected species. Many natural reserves claim that small cats are on their list of protected animals, but they have no data on presence or population numbers.

Prominent features of small cats are that they require small spaces, move in dense cover, feed on small prey such as rodents, and occur in relatively large numbers. Tra-

ditionally, the main economic value of small cats was their fur. The main threats are habitat changes, and chemical poisons used for rodent control in agriculture, forestry and grassland. It is well known that small cats play a great role in rodent control and are indispensable in maintaining a well-sustaining ecosystem, a function to which much more attention should be paid.

In general, there is an obvious relationship between the survival status and body size of felid species: small-sized cats survive much better than medium-sized and large-sized species, and the latter are in high jeopardy. As of 2006, China has established natural reserves covering 15.16% of its total territory, notably based on the presence of Class I and II protected cats. Nevertheless, except in some areas where the number and occurrence of these species have been studied, knowledge of the accurate distribution and population size of each species is still suffering from a lack of systematic scientific data. Since 1995, China has decided to conduct a wildlife survey for Class I and II protected species countrywide every ten years, based on transect methodology. From 1995 to 2000, the first countrywide survey was completed (State Forestry Administration 2009). However, the method was not particularly appropriate for cat surveys, leaving gaps of knowledge about cats in each province. Meanwhile the local people still have a very limited awareness of conservation, and cats still suffer from occasional poaching activities. There are insufficient funds for protection and even less for regular monitoring of wild populations, both being necessary for the effective conservation and long-term survival of cats. Cat species would also benefit from increased recognition from government, academia and local communities.

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