

Han, X. Far eastern leopard and Siberian tiger conservation measures. Miquelle, D. G., Zhang, Endi, Jones, M., and Jin, Tao. Workshop to develop a recovery plan for the wild north China tiger population. October 20th to 23th, 2000, Harbin. 102-103. 2001. U.S. Fish and Wildlife Service's Rhinoceros and Tiger Conservation Fund, Wildlife Conservation Society. 20-10-2000.

Keywords: 4CN/7RU/CCT/cct_ni/conservation/conservation needs/conservation strategy/distribution/Jilin Province/leopard/monitoring/Panthera pardus/Panthera tigris/poaching/recovery/Recovery plan/snow leopard/status/strategy/threat/threats/tiger/workshop

Abstract: Like the Siberian Tiger, the Far Eastern Leopard is one of China's largest Felidae and lives mainly in the eastern mountains of Jilin Province. The number of leopards is very low and it is even more endangered than the tiger. There is a very close relationship between leopard and tiger conservation, especially in areas where overlap occurs. In these areas, special emphasis has to be placed on each of the species' specific conservation needs. There is urgent need to step up our efforts to study and monitor leopard populations and to develop a conservation strategy. This document contains information of the status and main threats of the Far Eastern leopard and makes recommendations on needed conservation measures.

FAR EASTERN LEOPARD AND SIBERIAN TIGER CONSERVATION MEASURES

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Like the Siberian Tiger, the Far Eastern Leopard is one of the largest Felidae and lives mainly in the eastern mountains of Jilin Province. Survey data show that the number of leopards is very low and that it is even more endangered than the tiger. There is an urgent need to step up our efforts to study and monitor its population and to develop a conservation strategy.

1. Distribution of the Far Eastern Leopard in Jilin Province

Historically, the leopard was distributed between the northeast and southwest slopes of the Changbai Mountains and was found in Hunchun and Belong Counties that border Russia on the east, to Yanbian Prefecture bordering Jilin City to the west, Laoyeling in the south, and Wangqing County neighboring Heilongjiang to the north. This is an area of 600,000 km². With the increase in human activities and the impact of these activities on surrounding habitat, the volume of leopard habitat gradually decreased. Typically, the leopard would be found in Yanbian and Hunjiang Districts/Counties, and in the 1970s, it was even seen in the Lading Mountains in south and middle-eastern mountains of Jilin. In the 1980s it disappeared in Tonghua and Jilin districts and as of the early 1990s, the leopard was only on rare occasions observed on the southwest slope of Changbai Mountains. A recent survey shows that leopards are found only in Dalongling and Haerbaling regions of China, Russia and North Korea, the northeast slope of Changbai Mountains.

2. Population Size

The number of leopards in Jilin Province decreased from about 50 in the 1970s to less than 10 at the end of the 1990's. Table 1 shows that the number of leopard in Jilin has annually decreased, with a total decrease of 84.4% in the last 30 years. The leopard is on the verge of extinction and its habitat is limited to a very narrow region.

These animals were found primarily in the China-Russia boundary region.

Table 1. Far Eastern Leopards in Jilin Province

Survey time	Northeast slope	Southwest slope	Total
1976-77	31	14	45
1982-83	23	7	30
1991-91	15	3	18
1998.2-	4+3	0	7

3. Reasons for the Decrease in the Leopard Population

There are many reasons why leopard have decreased in number, but the main reasons are:

3.1. Most leopard habitat, and that of its prey, has been lost to logging. Increased competition from humans for territory and food is also a cause. Another problem is fragmentation and isolation of habitat, which makes it difficult for leopards to find mates, and which results in reproductive isolation and genetic loss, thereby decreasing in the leopard's reproductive capacity.

3.2. Human activities disrupt the leopard's way of life. Not only has development of the forestry industry resulted in large amounts of habitat loss, logging also directly disturbs the behavioral patterns of leopards and that its prey. Logging has brought increased human population and introduced new forms of economic development, for instance, mining, that seriously imperil the leopard's existence.

3.3. Poaching is another threat. With passage of wildlife protection laws and other related regulations in China, wildlife administration agencies, and some conservation groups are now addressing this issue and taking effective steps to improve education, to confiscate hunting rifles, and to establish hunting bans. However, some people continue to hunt and poach leopards and their prey using snares and traps. This both reduces the amount of prey available to the leopard and directly threatens the animal.

4. Relation between Leopard and Tiger Conservation

Since both the leopard and the tiger are large felids, their prey and habitat requirements share many similarities, though there are also differences.

According to tiger and leopard surveys along the Chinese-Russian boundary in February 1998, leopard and tiger distribution overlapped in some areas. This occurred in three of our five research areas.

There is a very close relationship between leopard and tiger conservation, especially in the three areas where overlap occurs. In these areas we must provide special emphasis on each of the species' specific conservation needs while at the same developing a comprehensive conservation plan.

5. Needed Conservation Measures for Leopards

5.1. Set up a monitoring system and develop a long-term project to monitor leopard populations, its habitat and prey. Using this data, develop GIS based maps for leopards and their habitat to assist in implementing proactive management of the species.

5.2. Examine current prey patterns for leopards and tigers and apply bio-technical means to stabilize and improve prey habitat to protect both species.

5.3. Select suitable regions in Dalongling and Haerbaling to establishment an international reserve. Set up separate, single species reserves for the leopard. Carry out baseline studies, improve genetic diversity of the wild population by hand raising and releasing leopards into the wild to increase their reproductive capacity and to restore and expand wild populations.

5.4. Establish ecological corridors between main habitat areas for more effective exchange of mates and to improve genetic diversity among leopards in different areas, and to accelerate the recovery of the wild population.

5.5. Improve legal instruments while simultaneously expanding conservation education efforts for the leopard and its preys. The objective is to change the way people view the leopard and its preys through planned, organized educational efforts that lead local people to pledge their support for conservation efforts.