



Monitoring Populations of Amur Leopards and Tigers in Northeast China



An Amur tiger family passes our camera trap in Hunchun Nature Reserve. Photo © WCS China

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Executive Summary

During the reporting period, the Wildlife Conservation Society (WCS) China Program worked to improve the reliability of population estimates of Amur leopards and tigers in and around Hunchun Nature Reserve (HNR) via camera trapping, snow tracking, and corridor research. We collected camera trap data for 5 months from 50 sites in HNR, resulting in 223 encounters with tigers and leopards. We identified 15 tiger individuals and 5 leopard individuals from these photographs, which include 2 tiger family units.

Progress against Goals and Objectives

Objective 1: Continue (and expand) camera trap monitoring of Amur leopards and tigers in and around HNR

Activity 1.1. Monitoring in HNR

From November 2018 to March 2019, we deployed camera traps at 50 sites within 4 of the 6 HNR subunits—Madida, Yangpao, Banshi, and Jingxin—covering approximately 450 square kilometers of key habitat for Amur tigers and leopards. Traps were active for 10,955 trap nights and resulted in more than 19,200 images and videos of wildlife and human activity. The raw data of leopards and tigers received from these camera traps are presented in Table 1. During the monitoring period, no cameras were stolen, but four memory cards contained no data due to camera failure.

Table 1. Information on leopards and tigers from camera trap monitoring by WCS from November 2018 to March 2019.

Common Name	Encounters	Sites Represented	Images/Videos	Individuals
Amur leopard	32	14	90	5
Amur tiger	191	25	850	15

We photographed leopards and tigers at a total of 31 camera trap locations in the reporting period; the camera traps at 8 of these locations captured both leopards and tigers. By identifying unique patterns of spots for leopards or stripes for tigers, our team was able to then identify individual leopards and tigers. We found a minimum of 5 leopard individuals (3 males and 2 females) and at least 15 tigers (4 males, 5 females, and 6 sex unknown) present in our study area. These numbers include a family unit of an adult tigress with four cubs in Madida, and a family unit of an adult tigress with one subadult in Yangpao. Of the five leopards identified, four individuals were known to us from previous camera trap seasons. The fifth leopard was captured for the first time on camera trap in December 2018. Of the 15 Amur tigers, all of them had been photographed in the past and were already represented in our database. This suggests that the leopards and tigers we are seeing are largely residents of the region and not just animals dispersing from Russia and disappearing in China.



Figure 1. Leopard and Tiger camera trap images. Photo © WCS China

Activity 1.2. Monitoring in Dahuanggou

We are planning to deploy cameras in Dahuanggou region in cooperation with Hunchun Municipal Forestry Bureau. We expect to include the results of this activity in our final report.

Objective 2: Snow track leopards and tigers to glean information about their movements and behaviour

Activity 2.1. Snow track in Dahuanggou and HNR

We have not yet initiated work toward this objective as it is too early in the year. Due to the lack snowfall last winter, our team did not carry out tracking activities at the beginning of this year. We expect to begin in November and December 2019, when there is usually snow cover. Should weather conditions permit, we will include the results of this activity in our final report.

Objective 3. Conduct ecological corridor analysis

Activity 3.1. Offer guidance to TLNP on corridor design

We are collating information and developing plans for a meeting on ecological corridors with Tiger and Leopard National Park (TLNP) staff at the end of the year as initially planned. We expect to include the results of this activity in our final report.

Conclusion

To date, most of the work in and around HNR to monitor populations of Amur tigers and leopards has gone according to plan. The camera trap monitoring component is complete, and plans for camera trap monitoring in Dahuanggou, as well as our other activities, are moving along. We thank the WildCats Conservation Alliance for their support, and look forward to presenting our results in the final report.