

Conservation of the Siberian flying squirrel in Hokkaido, northern Japan

Yushin ASARI¹ and Hisashi YANAGAWA²

¹Chodai Co., Ltd., Japan (ushin@pop17.odn.ne.jp) ²Obihiro University of Agriculture and Veterinary Medicine, Japan (yanagawa@obihiro.ac.jp)

The habitat in Hokkaido, Japan of the Siberian flying squirrel (*Pteromys volans orii*) is multiple land uses such as mountain area, residential area, and agricultural area in Hokkaido, Japan. However squirrel's habitats are faced with risks as reduction, isolation, and fragmentation may lead to extinction of the local population. The problem of forest fragmentation especially affects movement of flying squirrels among habitats. Two types of structure were installed at Obihiro in Hokkaido, therefore, for saving a pathway of flying squirrels. We assessed the use of the structures by flying squirrels.

Methods

We monitored two structures from May 2003 to April 2005 at Obihiro in Hokkaido, Japan. One consisted of two poles erected on opposite sides of a road to allow crossing by gliding. The other was a Japanese larch log installed along the reinforced wall within a road culvert. We monitored use of poles by observation using night-vision camera and by sensor camera for use of the log.

Results

Use of the poles was not observed at night. We released a

flying squirrel that was caught in the adjacent forest, however, the flying squirrel climbed a pole, then glided over the road and reached the other side of the forest at daytime. For a log, of all 156 photographs in the first year and second year, we recorded 38 photographs and 118 photographs, respectively. The log was most used between March and May, August and November, while less used in February, June and July. Flying squirrels moved by gallop locomotion on the log.

Discussion

Our field experiment showed that *P. volans orii* was able to climb and glide using poles placed along road sides. However we thought that the night-vision camera in wide area is an unsuitable method for identification of flying squirrels, which are nocturnal, small and gliding mammals. We also consider that the log is effective for movement of *P. v. orii*, although it is necessary to monitor for over two years, due to seasonal change of use.