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**A study of the distribution and topographical trend of Japanese giant flying squirrel (*Petaurista leucogenys*) in Shiga Prefecture, central Japan**

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This study examines the distribution and topographical trend of the Japanese giant flying squirrel (*Petaurista leucogenys*) from June 2006 to July 2008 at 307 small forests, mainly belonging to shrines and temples. The Japanese flying squirrel was found in only 17.8% of the 305 surveyed sites. Most of the sites where the flying squirrel was found were in the northern and eastern parts of Shiga Prefecture. However, the western and southern parts of contained only a few sites where the flying squirrel was found. Analysis was performed using the three elements. As a result, a relatively high correlation value of two large tree volume (Partial correlation coefficient (Pcc=0.38) and topography (Pcc=0.34), and location was weakly correlated (Pcc=0.17). The correlation ratio is 0.36 that not so higher. Therefore, other factors except for mature forest included nesting site of large trees are likely important.

The flying squirrel was found in only mountainous areas and not any plain or foothill areas. In the mountains, the flying squirrel existed in large forests from the piedmont to higher altitudes. However, there were no

flying squirrels found in isolated woods. The probability of flying squirrel existence at a survey site had a positive correlation to the percentage of forest in a city or town ward, especially natural forests. This trend was also related to the area of forest in a city or town ward. Therefore it seemed very important to have a massive natural forest for flying squirrel to exist.

This result suggests mature forest including large trees and wider area, broad-leaved forests were very important for distribution of flying squirrel. On the other hand there were other factors that may include history of forestry and hunting, the presence of natural enemies such as the hawk eagle and Japanese macaque.