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Long term habitat stability in the Japanese giant flying squirrel *Petaurista leucogenys*

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The Japanese giant flying squirrel *Petaurista leucogenys* is common at shrine groves in villages of mountain foothills that are covered with old trees. Aiming at clarifying habitat requirements of the squirrel, long term change of habitat conditions for about 30 years from 1972-1979 to 2006-2011 were investigated at 27 habitats in Kanto and Kyushu districts, Japan. The average number of individuals identified by fixed-point observation for 30 minutes after sunset was higher at shrine groves than at mountain forests: 2.1 at large shrine groves (≧1ha), 1.9 at small shrine groves (＜1ha), 2.0 at isolated shrine groves, 0.1 at broad-leaved forests in mountains, 0.1 at coniferous plantations and 1.3 at village stands. The population density at all habitats was generally stable. At Yakuoin temple in Tokyo, individual numbers by the above fixed-point observation were 7.5 during 1972-1975 and 4.0 in 2006. By the line-transect method at surrounding areas of the temple, 1.2 individuals were observed during 1975-1977 and 2.4 in 2006. Squirrels were not lost completely from any habitats during the period. Typhoon damage had the largest impact on habitat. At many locations, the growth of planted Japanese cedar *Cryptomeria japonica* has

gradually changed floral composition. Decrease of broad-leaved trees may deteriorate food availability. Habitat loss by human development activities at surrounding areas was not recognized, but habitat fragmentation by road construction occurred. In some habitats, competition over tree hollows is high due to an increase in the masked palm civet *Paguma larvata*. Out of 21 tree hollow nests that had been found in 1972-1979, 15 remain in use at present. Three nests were lost by logging, three by natural tree death. Stability of habitat conditions seems important for survival of the fully arboreal squirrel in small semi-isolated habitats.