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Overview of sciurid status in Japan

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Japan has six native (three gliding, two arboreal, a chipmunk) and an alien sciurid species. Their distribution and domestic fossil records are: Eurasian red squirrel *Sciurus vulgaris orientis* (Hokkaido, no fossil records), Japanese squirrel *Sciurus lis* (below Honshu, Middle Pleistocene), Japanese giant flying squirrel *Petaurista leucogenys* (below Honshu, Middle Pleistocene), Japanese flying squirrel *Pteromys momonga* (below Honshu, Middle Pleistocene), Siberian flying squirrel *Pteromys volans orii* (Hokkaido, no fossil records) and Siberian chipmunk *Tamias sibiricus lineatus* (Hokkaido, no fossil records). Three species below Honshu are all endemic. Three species in Hokkaido are endemic subspecies, as mammal fauna of the island are similar to that on the Eurasian continent. All sciurids are common except *S. lis*, which has already disappeared from Kyushu and is becoming scarce in western part of Japan. Pallas's squirrel *Callosciurus erythraeus*, first escape in Japan occurred in 1935, already is resident in many temperate evergreen broad-leaved forests. In addition to these, continental *T. sibiricus* seems to have established in some places, and *S. vulgaris* near Tokyo. Although actual escape has not been reported, continental *P. volans* has been designated as an invasive alien species by law. *P. leucogenys* may be the most abundant sciurid species in

Japan, and is common at shrine groves and rural Satoyama environments, which are covered by large trees. Densities at mountain forests are rather low. Morphological differences between *P. momonga* and *P. volans* are minor. While *P. volans* is popular even at wind break forests in flatlands, *P. momonga* does not occur at small groves in the plain. The latter is more abundant in mosaics of coniferous plantation and natural forest rather than pure natural forest. Intensive sciurid field studies in Japan started in 1980s for *P. leucogenys*, followed by *S. lis* in 1990s. In 2000s studies of *P. volans* and *P. momonga* have advanced. Compared to somewhat shy nature of *S. lis*, *P. leucogenys* is not afraid of human. Taking advantage of this tolerance, nightly observation of the latter are becoming popular elsewhere as environmental education events.