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The relation between the home ranges and nest use of Japanese squirrels

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We researched the relationship between the home ranges of Japanese squirrels *Sciurus lis* and their nests in Morioka Takamatsu Park from April 2010 to December 2010. Ten squirrels were radio-collared. We recorded at least 1 location point of nest use per day. Nest sites were pinpointed by radio-fixes after sunset.

We examined tree species of squirrel nests, tree diameter at breast height, the shape of the nest (spheres nest or tree hollow nest), and the location of the nest (the woods or forest edge). We also examined the relationship between home range size, the number of squirrel' nests and distance between nests and walnuts trees. As a result, we found that each squirrel was using 4 to 20 nests. From this, we considered that adequate locations exist for squirrel nests in this study area. Also, 73% of nest sites were within 60 m from a walnut tree indicates the potential importance the walnut trees. In this study area, squirrels locate nests more commonly in deciduous forest than evergreen forest. In the defoliation period, nests were slightly higher on the deciduous trees. One of the reasons was that squirrels were using the tree hollow of deciduous trees. In the forest edge, the nest trees in deciduous species were thicker than evergreen trees. Trees that have

hollow nests were thicker than the trees have spherical nests. From these results, we considered squirrels to choose thicker trees that have tree hollow nests in the forest edge. Squirrels' home range size and the number of nests, the distance between nests and walnut tree were not correlated. We consider that squirrel's nests were not direct factors to influence home range size.