B426 Ecological Relationships of Coarse Woody Debris and Small Mammal Community in Forests of Western Washington

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Live trapping was conducted on 1 ha trapping grids in 3 sites with high amounts of coarse woody debris (CWD) and 3 sites with low amounts of CWD for 3 consecutive days twice a month from June 1991 to June 1993. Each sampling grid consisted of a 10x10 array of trapping stations with 10-m spacing. Within the center of live trapping grid 25 pitfall taps were placed in a 5x5 grid, 10m apart. For microhabitat characteristics mean travel distance from each piece of CWD to the capture points was used (mean=23.82m). Homogeneity test among age class between sexes was not significant. A total of 1,425 capture frequency of deermice and 346 insectivores from pitfall traps were used. Among 13 predictor variables number of CWD, mean decay class, and mean distance to capture points were the important variables for forest rodents. This study indicated that volume of CWD was a good predictor of small mammal habitat use at macrohabitat level. It is therefore critical to retain large size of CWD to forest ecosystem because large ones last longer than small ones. Retention of large logs is important in nutrient cycling and cover for larger animals.

B427 Foraging niche of forest living birds in Mt. Jumbong

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Foraging niche of forest living birds was investigated from September 1995 to July 1996 in Mt. Jumbong at Kwangwon Province, Korea. The study area was located in 900 - 1,000m altitude, the size of it is 10 ha(400 x 250 m). Foraging niche was analysed by foraging sites, tactics and heights used by birds, and the birds were sampled by scanning method within study area. In breeding season, foraging niche of Arctic Warbler(*Phylloscopus borealis*), Varied Tit(*Parus varius*), Nuthatch(*Sitta europaea*), Crowned Willow Warbler(*Phylloscopus occipitalis*), Coal Tit(*Parus ater*), Japanese Pygmy Woodpecker(*Dendrocopos kizuki*) Brown Flycatcher(*Muscicapa latirostris*) and Marsh Tit(*Parus palustris*) was examined. The distribution of foraging heights varied among species, and the Siberian Blue Robin used the lowest height and Marsh Tit used the highest height. Coal Tit used a diverse food resources and tactics, also this birds used a every foliage height, these phenomena could be attribute to the low social dominance rank of this species. Varied Tit utilized a diverse food resouces such as leaf, catkin, fallen log, brance, air, litter and the ground, but made high use of gleaning tactics. Foraing tactics and sites of Nuthatch were changed seasonally, but highly utilized in trunk. Marsh Tit utilized diverse food resources, and highly used a feeding tactics in Spring but in Summer and Autumn gleaning tactics was relatively high. Japanese Pygmy Woodpecker showed a high using ratio of trunk in Spring, did that of branch in Summer, did that of fruit in Autumn and did that of branch in Winter. Pecking and gleaning tactics were a main maneuver to foraging. Crowned Willow Warbler highly utilized food resources in air and preferred a sally tactics. Brown Flycatcher also highly used a food resources in air and trunk, and preferred a sally tactics. In comparison with foraing height of Japanese Pygmy Woodpecker, Marsh Tit and Nuthatch, Nuthatch use a almost same distribution range seasonlly. Marsh Tit used all of the foliage strata except winter but in winter it utilized its food resources in lower height. Japanese Pygmy Woodpecker used a lower part in Spring, but distributed in higher strata in the other season. Therefore, forest living birds survive by maintain their nonoverlapping niche and the change of niche was not completely fixed all over the species.