

2-10. Aerial Dispersal of Spiders in Paddy Fields in Suwon

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Spiders are important general predators of insect pests in rice paddy fields. Aerial dispersal of some spiders is an important process of colonization into a rice ecosystem. The colonization of spiders by ballooning can influence the population size and species composition of spider community in paddy fields. However, little information is available on the ecology of ballooning spiders in paddy fields in Korea. To study the aerial immigration, five poles (3.5m h.) at each direction (E, W, S, N) were placed at the margin of the paddy field (Dangsoo-dong, Suwon). Sticky traps (32 x 16cm) were placed at 1, 2, 3m height at each pole facing outside of the field. Traps were replaced weekly from 14 June to 25 Nov., 1999. Spiders retrieved from the trap by paint thinner were identified to species or general level. A total of 11 families, 41 genera, 55 species was recorded: 37 species belonged to web-building spiders, and 18 species to wandering spiders. Web-building spiders including Linyphiidae (44.8%), Theridiidae (44.2%), and Araneidae (5.4%) comprised more than 90% of the total population. The fauna of ballooning spiders were dominated by five taxa: *Enoplognatha* sp. (29.1%), Erigoninae spp. (28.1%), *Enoplognatha transversifovea* (10.4%), *Gnathonarium dentatum* (6.7%), *Ummeliata insecticeps* (4.5%). *G. dentatum* and *U. insecticeps* have been reported as dominant species in paddy fields in Korea. Aerial dispersal of spiders continuously occurred throughout the study period with a peak in July. Neither direction nor height appeared to have a significant effect on the number and species composition of ballooning spider. Most of the spiders collected were immature (ca. 87%).