Environmental Evaluation by Using Family Eumenidae

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To develope the technology of biologically environmental evaluation by using Family Eumenidae, Potter wasps were collected from eight locations including farming regions by nest traps. The collected potter wasps were classified and selected the candidate species as environmental evaluation indicator.

The family Eumenidae collected from eight locations were consisted of seven species and the *Anterhynchium flavomarginatum* was the dominant species.

The number of nesting was 12.8/m in non-fertilizer and non-pesticide areas and 7.2/m in general agricultural areas according to census the number of nesting of potter wasps by cultivation method in farming areas. The comparison the number of nesting with Degree of Green Naturality (DGN) is showed that the number of nesting in the higher level (4.28) of DGN was 13.4/m whereas the lower level(1.00) of DGN was 1.2/m. And then the index of richness and diversity were trend to increase in location with high nesting.

From these results, *A. flavomarginatum*, *Orancistrocerus drewseni* (Saussure), *Isodontia nigellus* and *Chalicodoma sculpturalis* were selected as indicator species for the environmental evaluation of agricultural ecosystem. Furthermore, environment level was classified from I to IV based on the occurrence, total number of nesting and diversity of potter wasps.