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Insect Fauna and Community Analysis of Ulju District

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This study was carried out to investigate the insect fauna and community analysis of the Ulju District (St. 1, 2: Samnam-myeon, St. 3: Samdong-myeon, St. 4: Ungchon-myeon, St. 5: Cheongryang-myeon, St. 6: Seosaeng-myeon) from May to July for 2007. Total terrestrial insects observed were 327 species, 279 genera, 90 families of 13 orders. Those terrestrial insects were composing of Coleoptera (115 spp., 35.17%), 51 species of Hemiptera (51 spp., 15.6%), Diptera (42 spp., 12.84%), Lepidoptera (29 spp., 8.87%), Hymenoptera (24 spp., 7.34%), Orthoptera (21 spp., 6.42%), Odonata (15 spp., 4.59%), Neuroptera (2 spp., 0.61%), and 1 species (0.31%) of Blattaria, Mantodea, Dermaptera, Ephemeroptera respectively. The dominant species were identified as *Nysius plebejus* (Heteroptera: Lygaeidae) in St. 2, 3, 4, 5, *Agelasa nigriceps* (Coleoptera: Chrysomelidae) in St. 1, *Phaneroptera* sp. (Orthoptera: Tettigonidae) in St. 6. The Species diversity index (H') showed the highest as 6.039 at St. 6 and the lowest as 3.018 at St. 2. The Dominant index (DI) showed the highest as 0.67 at St. 2 and the lowest as 0.106 at St. 6. The Richness index (RI) showed the highest as 11.37 at St. 5. Three species of evironmental index organisms were collected in Samnam-myeon area: *Nannophya pygmaea* (endangered wild species chosen by Minstry of Enviroment); *Platermaris* (*Euplatermaris*) *sericea* (bioindicator for high moor) and *Patrobus flavipes* (bioindicator for global warming).

Key words: Ulju, Insect Fauna, Community Analisys, Bioindicator.

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Anti-Diabetic Effect of *Alnus firma* Solvent Fractions in Streptozotocin-Induced Diabetic Mouse

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In this study, we investigated the hypoglycemic and antidiabetic effect of single and repeated oral administration of the MeOH extract of *A. firma* in normal and streptozotocin induced diabetic mice, respectively. Prior administration of *A. firma* (500 mg/kg) blocked the rise of glucose caused by the streptozotocin. Administration of *A. firma* (500 mg/kg) to diabetic mice for 26 days has been shown to decrease plasma glucose level to almost normal level. The effect of repeated oral administration of the MeOH extract on serum lipid profile in diabetic mice was also examined. A reduction in body weight of *A. firma* treated diabetic mice may be additional corroborating factors for its antidiabetic potential. No changes in the weight (%) of various tissues were shown in *A. firma* treated diabetic mice compared to normal mice. *A. firma* significantly reversed the increasing weight of tissues such as liver and kidney caused by STZ.

Triglyceride, Glutamic Pyruvic Transaminase (GPT) and Glutamate Oxaloacetate Transaminase (GOT) levels were also decreased by 85.3 mg/dl, 3.5 u/l and 19.3 u/l, respectively, in *A. firma* treated diabetic mice. All these effects could explain the basis for use of this plant extract to manage diabetes.

Key words: Alnus firma, solvent fractions, streptozotocin, Inhibitory effects