Praiyanut Noitubtim 2011: Relationships between Plant Communities from Reclamation in Limestone Mining Area and Soil Insect, Kaeng Khoi District, Saraburi Province. Master of Science (Silviculture Technology), Major Field: Silviculture Technology, Department of Silviculture. Thesis Advisor: Assistant Professor Sakhan Teejuntuk, Ph.D. 117 pages.

The study on relationship between plant communities from reclamation of limestone mining area and insect population in reclamation zone C, reclamation zone A, restorated area, dry evergreen forest and mixed deciduous forest is aimed to investigate species diversity and distribution of insect including density of insect population in the limestone area after reclamation and determine plant communities characteristic variation of insect population during season.

The results indicated that species diversity of insect in each sample plots consisted of 11 orders, 20 families, 38 genuses, 43 species. According to insect species diversity structure, it revealed that diversity index in dry evergreen forest during dry season was the maximum value at 2.44 and the minimum value of 0.86 was gained from reclamation zone C during dry season. The similarity index of insect during rainy and dry season in each area was nearly 60%. It indicated the adaptation of insect can be. The density of insect was found that dry evergreen forest showed maximum density at 2850 individual/m^2 during rainy season. The composition of species could be was classified into groups as consisting of, in particular, ant, ground beetles and termite. The insect species composition could beused to indicate the seturation of site and success of reclamation in limestone mining area played a key role to change in soil structure and to success of reclamation of mining area. When the area was group based on insect species found in each area via cluster analysis, it indicated that rehabilitation of mine area done by Siam Cement (Kaeng Khoi) Co.,Ltd. showed positive trend as all areas tended to return to the condition similar to natural forest.

It can be said from the findings that the study on relationships between plant communities from reclamation in limestone mining area and insect population is one of the methods that can use insect as an indicator of the level of restoration in the area management planning of limestone mining area at Siam Cement (Kaeng Khoi) Co.,Ltd., Saraburi Province in the future.

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