

Colonization Patterns of Aquatic Insects after Typhoons

颱風後水棲昆蟲之拓殖模式

Kwok-Ching Wong* and Yi-Xuan Lin

黃國靖* 林怡萱

Department of Natural Resources and Environmental Studies, National Dong Hwa University

No. 1, Sec. 2, Da Hsueh Rd., ShouFeng, Hualien, 974, Taiwan, R.O.C.

國立東華大學自然資源與環境學系

* Corresponding authors : kcwong@mail.ndhu.edu.tw

*通訊作者： kcwong@mail.ndhu.edu.tw

Abstract

To understand the colonization patterns of aquatic insects by the impacts of typhoon, an intensive investigation was carried out after typhoon hits from April 2007 to March 2008. The study found that the structure pattern of the aquatic insects community shifted back toward that of pre-typhoon period. The pre-typhoon dominant taxa *Baetis* spp. and *Ecdyonurus* spp. were replaced by *Pseudocloeon* spp. and *Rhithrogena* spp. after environmental impacts by a typhoon. *Baetis* spp. and chironomids distributed in slow running water, while *Hydroptila* sp. scattered amongst filamentous algae at the bank. Among the functional feeding groups, a higher ratio of predators was found in the early stage of colonization after typhoon disturbance. The proportion of predators decreased gradually with an increased abundance of scrapers, followed by an increase in relative abundance of collector-gatherers, which subsequently caused a decrease in scraper ratio. Population density of collector-filterers was also found to be lower than that in the pre-flood period while the ratio of piercers increased.