

台灣昆蟲保育研究之發展及 瀕危、珍稀保育類昆蟲簡介

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摘要：昆蟲乃動物界中種類和數量最多之類群，在生態系、經濟利用、研究、教育、宗教及文學、藝術和娛樂上，均有其重要之角色。台灣產昆蟲之記載，始自西元 1684 年之方志；科學性之描述則起於 1850 年代。在 1850 ~ 1900 年間，台灣昆蟲資源之研究以歐美人士為主；及至日人據台至 1945 年台灣光復期間，已有更多之人力其中多數為日人投入此方面之研究，而為台灣昆蟲學研究奠定基礎。在 1945 ~ 1980 年間，國人之研究重點以經濟昆蟲學為主；有關昆蟲相及昆蟲資源和保育研究，在 1980 年代以後，於行政院國家科學委員會、農業委員會、內政部營建署（國家公園）及環境保護署之支援下，始有較大之進展。然而，目前宥於經費及人力之限制，全面性、有計劃性及持續性之昆蟲資源調查和保育研究，亟待努力。以昆蟲保育研究為例，在 1980 ~ 1990 年間，所發表之研究報告尚不及 20 篇；建議政府及學界今後應重視此方面之發展。

在昆蟲保育名錄方面，1935 年日人首將寬尾鳳蝶 (*Agehana maraho* Shiraki and Sonan) 列為天然紀念物；1989 年 8 月 4 日農委會公告「保育類野生動物名錄」；在 23 種瀕臨絕種動物名單中，有 3 種為昆蟲。另外，尚有 15 種昆蟲則被列為珍貴、稀有動物。這些動物均受同年 6 月 23 日公佈實施之「野生動物保育法」所保護。

1850 ~ 1900 年間，台灣昆蟲資源之利用以專家學者之研究及博物館之收藏為主；昆蟲標本之商業性利用則始自 1906 年；惟在第二次世界大戰時式微。在 1945 年台灣光復至 1960 年代，為台灣昆蟲企業之鼎盛時期，年外銷總額在 3000 萬美元以上；但在 1970 年代末期，又告式微，年外銷總值遽降為 200 萬美元。至 1980 年代末期，外銷幾乎停頓，國內以此為業者僅存 8 家，且悉為小規模經營。本文除探討此業之盛衰，利用現況外，並就未來發展和應注意問題提出建議。另外，本文並探索台灣有用昆蟲、昆蟲資源——包括家蠶、蜜蜂、食用及中藥昆蟲，和天敵昆蟲之利用概況及未來展望。同時，亦就未來昆蟲資源應用在觀光遊憩和國民科學教育上提出建議。

一、緒言：

在生態系中，昆蟲為食物網中之重要成員，其不但是食蟲性動物之食物，有些昆蟲亦為顯花植物不可或缺之授粉媒介。另外，腐食性昆蟲乃自然界中之分解者，能分解動

物糞便、屍體或枯枝敗葉，使營養能在生態系中繼續循環。然而由於昆蟲種類多、數量大，因此在維持整個生態平衡上，的確扮演舉足輕重之角色。

據 Wilson (1970)、Beer (1971)、Brown (1973)、Covell(1977)、Opler 及

Review on the development of insect conservation, endangered and rare insects in Taiwan

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Abstract: Among the animals, insects are the most abundant taxon in numbers and species. They still play an important role in ecosystem, economic utilization, research education, even though in religion, literature, arts and recreation. The first mention of insect in literature in Taiwan was 1684. But the scientific description of insects in Taiwan was from 1850s. During 1850 to 1900, most of the researchers of insect resources were Europeans. From 1900 to 1945, more and more Japanese had joined to the research of insect resources. Owing during 1945 to 1980, most of the research focused on the economic entomology, so the research of insect resources and conservation was still neglected. From 1980 some projects on the insect resources and conservation were sponsored by the National Science Council, Council of Agriculture, Department of Interior (National Parks), and Environmental Protection Agency of Executive Yuan. But, because of the limitation of man-power and budget, now it is still lack of a broad dimensional, good planning, constant project on the insect resources and conservation. So the total papers on the insect conservation from 1980 to 1990 wasn't over 20.

In 1935, Japan-occupied government first listed one species of swallow-tailed butterfly, *Agelana maraha* Shiraki and Sonan-as an endangered species of animal. Until on 4 Sep. 1989, 3 species of butterflies were listed on the name list of 23 species of endangered animals which announced by Council of Agriculture. On the other hand, 15 species of other insects were listed as the rare species of animals. All of these species are protected by the "Protective Law of Wild Animals" from then.

On the dimension of utilization of insect resources, from 1850 to 1900, most of the purpose of utilization for the museum and research collections. And the utilization for commercial use had started from 1906. But it had declined during the 2nd World War. From 1945 to 1960s, the utilization of insect resources, especially on the butterflies had reached to the peak, then the total export trade was about US\$30 million per year. But from 1960s to 1970s, the commercial utilization gradually declined to only US\$2 million per year. To 1980s, the utilization of insect resources for the export trade nearly to stop. In this paper, the impact between the conservation and utilization of insect resources was discussed. As meanwhile, some suggestions for the useful and beneficial insects, even though the insect resources for application on sightseeing and science education were mentioned too.

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