

The type specimens are being kept in the Department of Zoology, University of the Punjab, Lahore, Pakistan, duplicates have been distributed to the Section of Botany and Zoology, Forest Products Research Division, Royal Forest Department, Bangkok, and the American Museum of Natural History, New York, Maryland, U.S.A.

The work under review is so far being the first intensive study of Thai termites, and gives a good cross-section of the termite fauna of the country. Analytical keys to genera basing both on the imagoes and soldiers are provided; under each genus an identification key is being given. Each species is given a descriptive account and an illustration.

Although the work is by far not complete, as more collections are still needed, it is well deserved as a very practical handbook, as well as to encourage future entomologists to carry on the work left over by the author.

T.S.

## 2. Nature Studies of Southeast Asia\*

The results of the Japanese biological expedition to Southeast Asia has been published by the Fauna and Flora Research Society Kyoto, Japan under the title "*Nature and Life in Southeast Asia*" commencing in 1961. The work under review is the third volume of the series.

The volume contains 16 original articles based mainly on the Osaka City University biological expedition to Southeast Asia 1957-58 (OCUBE), the entomological survey on natural enemies of insect pests in Thailand by Drs. K. IWATA and K. YOSHIKAWA in 1961, the Thai-Japanese biological expedition to Southeast Asia 1961-62, and small collections of freshwater molluscs and insects by some Japanese collectors from Thailand, Cambodia, as well as Borneo.

The content of the volume is as follows:—

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\* *Nature and Life in Southeast Asia III*, edited by Tatuo KIRA and Tadao UMESAO. Pp. vii+466 with plates and figures. Tokyo, 1964.

I) **Contribution to the moss flora of Thailand** by Drs. Y. HORIKAWA and H. ANDO. Pp. 1-44, 9 figs. The collection was gathered from Chiangmai at Doi Inthanond and Doi Suthep, containing 131 species. New records are reported by 67 species. Four are new to science: *Homaliodendron homoideum*, *Thamnion siamense*, *Symphyodon umasaoi* and *Mastopoma subfiliferum*, whereas a new genus, *Dixonia*, typified by *Dixonia thamnoides* (*Camptochaete thamnoides*), is created.

II) **Freshwater molluscan fauna of Thailand**, by Tadashige HABE. Pp. 45-66, 2 pls. Sixteen gastropods and five bivalves are enumerated, of all these two are new to science:— *Sinotai ingallsiana abnormalis* and *Unio thaiensis*.

III) **Water mites (Acari, Hydrachnellae) from Thailand**, by Taiji IMAMURA. Pp. 67-79, 9 figs. The collection was made from ponds in Chiangmai and a Canal in Thonburi, containing 8 species of which one, *Hydrachna kloomi* is proposed as new; the new species is named in honour of Prof. Kloom VAJROPALA of the Faculty of Sciences, Chulalongkorn University, Bangkok.

IV) **Note on the soil micro-arthropod Collection made by the Thai-Japanese Biological Expedition 1961-62**, by Gentaro IMADATE and Tatu KIRA. Pp. 81-111, 13 figs., 3 tabs. Method and description of the samples and collecting sites are given. The collection is composed of samples gathered from Vietnam, Thailand, Malaya, Singapore, Borneo, Philippines, Hongkong and Formosa, where 180 litters and soil samples were collected from 51 localities. Micro-arthropods are sorted by orders and the number of individuals is tabulated in Tables 1 and 2.

The abundance of the micro-arthropods depends on the soil organic matter content. The Collembola is an indicator of the accumulated soil organic matter, while the Acarina is to a poorer condition.

V) **Records of Thailand Odonata taken by Prof. K. IWATA, Dr. K. YOSHIKAWA and Mr. H. IKOMA**, by Syoziro ASAHINA. Pp. 113-115.

Twenty-two species belonging to 7 families are enumerated of which two species are recognised as new records. The collection was made from Chiangmai, Chantaburi and Songkhla (Haad Yai).



VI) **The Odonata taken by the Thai-Japanese Biological Expedition in Thailand and Malaya**, by Syoziro ASAHINA. Pp. 117-112, 14 figs. Thirty-one species belonging to 7 families are enumerated with an appendix of 5 Libellulid larval specimens.

This is the third report on Thai Odonata made by the author, the first was the result of the 1957-58 Osaka City University Biological Expedition to Southeast Asia, and was published in Vol. I. of this series in 1961, where 57 species was reported.

VII) **Butterflies collected by The Thai-Japanese Biological Expedition 1961-62 in Thailand and Malaya (Part 1)**, by Akito KAWAZOÉ. Pp. 123-159, 22 figs., 9 pls. Thirty-three species being 25 Hesperids and 8 Lycaenids are enumerated. Following his predecessor the author gives full descriptions and figures of male genital organs of species not hitherto illustrated. The article is well illustrated by black-and-white photographs.

VIII) **Coleoptera from Southeast Asia (III)**, arranged by Michio CHÛJÔ. Pp. 161-315, 35 figs., 27 pls. Besides the author, other 16 collaborators are contributing to the 29 families enumerating 332 species, based on the collections from Vietnam, Thailand, Cambodia and Borneo. Of all these 2 new genera, 26 new species, 1 new form and 2 new subspecies are proposed.

*Mordella charkrabhandui* (*Mordellidae*) is "dedicated to H.S.H. Prince Charkrabhandhu Pensiri Charkrabhandhu who is a famous leader of the entomological world of Thailand."; Prince Charkrabhandhu is actually the Director-General of the Department of Agriculture. *Tailandia chakratongii* (*Chrysomelidae*) is "dedicated to Sir Chakratong Tongyai, who is the Undersecretary for the Ministry of Agriculture in Thailand"; M.R. Chakratong Tongyai is most appropriated to call "a famous leader of the entomological world of Thailand." His collection, occasionally quoted was made from various parts of Thailand and forms the nucleus of the collection in the Section of Entomology, Plant Sciences Division, Department of Agriculture, Bangkok.

Other Thai nationals credited by this scientific study are Mr. Ariyan MANJIKUL enlivened by *Hyperaxis ariyani* (*Chrysomelidae*) and Mr. Kamol KAJARAVECH by *Octodesmus kamoli* (*Bostrichidae*).

IX) Pages 323-434 are devoted to the study on the biological control of insect pests, comprising 5 articles contributed by Drs. Kunio IWATA, and Kimio YOSHIKAWA. It is for the first time that an extensive study on the bionomics of both social and non-social wasps has been undertaken. The text is well illustrated by both line drawings and photographs, and proved to be a useful guide to workers in Thailand.

X) Pages 435-466 conclude the volume and are devoted for the study on dipterous insects, comprising three articles.

Dr. Rokuro KANO gives an account on 14 species of flies of medical importance; Dr. Syusiro ITO on two not properly known flies of the families *Trypetidae* and *Empididae*; Dr. Toyohi OKADA enumerates 15 species of Drosophilid flies from Thailand, Malaya and Boneo, and recognised 3 new bornean species, one of which is dedicated to Mr. Thamnoon SYNPAISH of the Faculty of Science, Chulalongkorn University, Bangkok, a Thai member of the expedition: *Drosophila synpanishii*.

T.S.



