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THADA SUWONWIMOL: QUATERNARY PALAEOECOLOGICAL RECONSTRUCTION FROM BO PHLOI LOG DEPOSITS, KANCHANABURI PROVINCE, WESTERN THAILAND. THESIS ADVISORS: MANAS WATANASAK, Ph.D.,SURA PATTANAKAIT, M.Sc. 71p. ISBN 974-664-728-8.

This study aimed to investigate past ecology in Quaternary Period by using log deposits in Bo Phloi district, Kanchanaburi Province. Three hundred logs were collected from nearby *in Situ* and log plies of SAP mining were identified by microscopic examination and 33 samplings were submitted for radiocarbon dating at Office of Atomic Energy for Peace (OAEP), Bangkok, Thailand.

Fifteen identified species including big sizes and massive figures suggested that they were native species, and the remains of bark and roots indicated events of flash floods that caused uprooting and burying of trees. Thirty-three datings of 10 species were used for interpreting past ecology and times of flash flood occurring in this area. Findings of 4 specimens of *Xylia xylocarpa* Tarb, *Shorea obtusa* Wall. ex Bl, *Anogeissus acuminata* Guill & Perr, and *Milletia leucantha* Kurz during 33,940±4,540 and 26,070±3,190 years BP implied a period of long dry climate, and that some kinds of forest types lacked woody plants. Plant communities of those times compared to the present could have been deciduous to dry dipterocarp forests with at least four flash flood events or times of wet climate. Later, passing through the times of lack of woody material for dating (26,070±3,190 to 9,060± 420 years BP) which also implied the long drier climate and extreme lack woody plants, perhaps the forest type of these times could drier than dry dipterocarp forests as savanna, which has abundance of grasses. From 9,060±420 years BP until present, findings of *Xylia xylocarpa* Tarb and *Hopea odorata* Roxb, the first group, and followed by the periodic groups of more species, such as *Hopea helferi* Brandis, *Pterocarpus macrocarpus* Kurz, *Dipterocarpus alatus* Roxb, *Lagerstroemia calyculata* Kurz and *Shorea floribunda* Wall ex Kurz, and more specimens. Suggesting the development of rain forest from the beginning that less of species and gradually more divers through times of dry evergreen forest. And wood dating also suggested the times of flash floods occurring in this area.

Moreover, wood dating that suggested the times of flash floods occurring in this area seemed to be in accordance with world temperature studies, coincidentally due to whenever the average temperatures were higher than 15°C, about 1°C, the chances of finding buried logs were high as well.