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TRONGJAI HUTANGKURA : POLLEN ANALYSIS OF HOLOCENE
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This study aimed to obtain information on palaeo-vegetation during the Holocene period. The old alluvium sediments of Holocene period were sampled in Bo Phloi Basin, in the vicinity of S.A.P. Co., Ltd., Bo Phloi District, Kanchanaburi Province, Western Thailand at approximately 10-12 meter depth. The sample was chosen according to its texture and color, a black clay layer. This particular sample has high accumulation of organic matter, especially pollen and spore. In addition, a log, which was buried in the same layer as sampled, was also tested for radiocarbon dating to determine the age of the sampled layer. The sample was taken first for pollen analysis by chemical process. Subsequently, sieving technique was used with sieving cloth of 15 μ to collect pollen with the average size of above 15 μ , thus discharging other particles below 15 μ . The extracted pollen and spore were counted to obtain pollen diagrams.

The result of this study based on the pollen diagrams showed that pollen and spore could be divided into 4 palaeo-environments, namely, 1) sub-temperate/semi-tropical forest, 2) dry evergreen to deciduous forest, 3) swamp area and, 4) aquatic area. The radiocarbon dating of the wood sample was 4,540 \pm 50 BP. The palaeo-environments of dry evergreen to deciduous forest, swamp area and aquatic area can also be found in Bo Phloi Basin at present, while sub-temperate/semi-tropical forest, corresponding to pollen of *Pinus* spp., was not found. Pollen diagrams indicate that the general environment of this basin comprised of dry evergreen to deciduous forest more than sub-temperate/semi-tropical forest. However, the presence of *Pinus* spp. needs further study as to its origin.

It can be concluded that the palaeo-environment in the study area at the time of 4,500 BP consisted of dry evergreen to deciduous forest, swamp area and aquatic area which is very similar to what it is today.