ความหลากหลายของไบรโอไฟต์ในอุทยานแห่งชาติทองผาภูมิ จังหวัดกาญจนบุรี

Diversity of bryophyte in Thong Pha Phum National Park, Kanchanaburi Province

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Thong Pha Phum National Park is a mountainous area, ranging in elevations from 200 to 1,100 m. This area has a wide variation in ecological diversity. Therefore, the aim of this study is to explore bryophyte diversity in diverse habitats. Field collections were made from July 2004 to October 2005. Three hundred and fifty specimens have been collected in total. They were determined into 110 species, 77 genera and 40 families, which included 3 species of hornwort, 64 species of mosses and 43 species of liverworts. Eight species of these are new records for Thailand: *Aneura pinguis* (L.) Dumort., *Asterella khayana* (Griff.) Pande et al., *Cyathodium cavernarum* Kunze, *Dicranolejeunea javanica* Steph., *Fissidens flaccidus* Mitt., *Folioceros weistei* (Khanna) Bharadwaj, *Notothylas javanicus* (Sande Lac.) Gottsche and *Weissia controversa* Harv.

การศึกษาทางอนุกรมวิธานของหญ้า (วงศ์ Gramineae) ในพื้นที่ทองผาภูมิตะวันตก อำเภอทองผาภูมิ จังหวัดกาญจนบุรี

Taxonomic study on grasses (family Gramineae) in Western Thong Pha Phum, Thong Pha Phum District, Kanchanaburi Province

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A taxonomic study of grasses (Family Gramineae) in Western Thong Pha Phum, Thong Pha Phum District, Kanchanaburi Province was conducted. As a first step, data on grasses were compiled from both literature and herbarium specimens kept in the Forest Herbarium, National Park, Wildlife and Plant Conservation Department (BKF) and Bangkok Herbarium of the Department of Agriculture (BK). Then additional field surveys and plant collections in Western Thong Pha Phum were conducted. Morphological and ecological data of plants were recorded and photographs were taken. All plant specimens were identified by consulting literature and comparing with specimens named in both herbaria. Nomenclatural problems were solved. From the study of grasses found in Western Thong Pha Phum, keys to 5 subfamilies, 40 genera and 67 species were constructed. Full descriptions and ecology of species, supported by line drawings and photographs of grasses are provided. In this study *Paspalum canarae* (Steud.) Veldkamp var. *fimbriatum* (Bor) Veldkamp was recognized as a new record for Thailand.

การศึกษาอนุกรมวิธานของพรรณไม้วงศ์ถั่ว – อนุวงศ์ราชพฤกษ์ในพื้นที่ป่าทองผาภูมิ จังหวัดกาญจนบุรี

Systematic studies of the Leguminosae – Caesalpinioideae in Thong Pha Phum forest, Kanchanaburi Province

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Systematic studies of the Leguminosae-Caesalpinioideae in Thong Pha Phum Forest, Kanchanaburi Province are focused on morphological characters, ecology, distribution, diversity of species and habitats and to produce taxonomic keys.This study was conducted by surveying and collecting plants from various vegetation types in Thong Pha Phum Forest. Photographs including morphological and ecological data were recorded for each plants species. Specimens were identified using morphological characters and compared with identified specimens deposited at the Forest Herbarium, National parks, Wildlife and Plant Conservation Department, and the Siridhorn Herbarium, Department of Agriculture. Keys to genera and species with full descriptions supported by line drawings were provided. As surveying in the area for period of twelve month, the plant specimens were found for twelve genera as follows, *Afzelia, Bauhinia, Caesalpinia*, *Cassia*, *Chaemaecrista*, *Cynometra*, *Gymnocladus*, *Peltophorum*, *Pterolobium*, *Saraca*, *Sindora*, *Senna*. The plants were identified in species level as follows, *Afzelia xylocarpa* (Kurz) Craib, *Bauhinia bracteata* (Graham ex Benth.) Baker, *B. malabarica* Roxb. *Caesalpinia cucullata* Roxb., *C. mimosoides* Lam., *Cassia fistula* L., *Chamaecrista pumila* (Lam.) K. Larsen, *Gymnocladus burmanicus* C.E. Parkinson, *Peltophorum dasyrachis* (Miq.) Kurz, *Senna siamea* (Lam.) Irwin & Barneby and *S. timorensis* (DC.) Irwin & Barneby. And *Cynometra beddomei* Prain is a newly recod for the Western Thong Pha Phum Forest.

โครงการพัฒนาการใช้ประโยชน์อย่างยั่งยืนของพืชที่มีท่อลำเลียงและการถ่ายทอดเทคโนโลยีสู่ชุมชนในเขตทองผาภูมิตะวันตก

Development of sustainable utilization of vascular plants and rural technology transfer in West-Thong Pha Phum

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The first year of a project on the development of sustainable utilization of vascular plants and rural technology transfer in West-Thong Pha Phum was undertaken to collect data on vascular plants which were found in West-Thong Pha Phum by BRT researchers. Twenty species were evaluated for ornamental potential, namely *Mitrephora keithii*, *Anaxagorea luzonensis*, *Asplenium nidus* var. *nidus*, *Donax grandis*, *Tacca chantrieri*, *Gardenia sootepensis*, *Melastoma malabathricum* subsp. *malabathricum*, *Dracaena loureiri*, *Tamilnadia uliginosa*, *Trevesia palmata*, *Caryota maxima*, *Angiopteris evecta*, *Magnolia liliifera*, *Schima wallichii*, *Magnolia liliifera* var. *liliifera*, *Paphiopedilum parishii*, *Clerodendrum wallichii*, *Dillenia parviflora*, *Dendrobium puchellum* and *Dendrobium scabrilingue*. Five species namely *Gardenia sootepensis*, *Tamilnadia uliginosa*, *Magnolia liliifera* var. *liliifera*, *Asplenium nidus* and *Dendrobium scabrilingue* were propagated and cultivated for conservation and sustainable uses, demonstration plants and rural technology transfer to West-Thong Pha Phum area.

ความหลากชนิดและการแพร่กระจายของไรน้ำนางฟ้าใน ต.ห้วยเขย่ง อ.ทองผาภูมิ จ.กาญจนบุรี

Species diversity and distribution of fairy shrimps in Huay Khayeng, Thong Pha Phum, Kanchanaburi Province

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The species diversity and distribution of fairy shrimps in Huay Khayeng, Thong Pha Phum District, Kanchanaburi Province was studied during the dry season. Two replications of 2-4 kilograms of soil samples in dry temporary pools were collected in the study area and then incubated in the laboratory of Suphanburi College of Agriculture and Technology. A kilogram of soil sample was immersed in 20 litres of water in plastic containers. Hatched fairy shrimps were recorded and removed to new containers at 24 hour intervals for 5 days. Fairy shrimps were reared until reaching maturity before identifying the species. Incubations were repeated 2 more times by draining used water and drying the soil samples for 3 days before the next immersion. Twenty six localities for soil sampling in temporary pools were found with suitable habitats, i.e. roadside pools, natural drainage ditches, low areas in rice fields, natural pools, shallow and deep ponds. Fairy shrimps were found in only two localities of the first immersion. However, their numbers increased on the second and third immersions. Of the 3 immersions, fairy shrimps were found in a total of 19 localities (73.08% of the sampled localities) of every pool characteristic. Two species of fairy shrimps were identified; *Branchinella thailandensis* Sanoamuang, Saengphan and Murugan, 2002 and *Streptocephalus sirindhornae* Sanoamuang, Murugan, Weekers and Dumont, 2000. This study indicated that *B. thailandensis* and *S. sirindhornae* are able to colonize temporary pools at high altitude, 162-286 metres above sea level and have hatching characteristics different from lower area groups.

ผีเสื้อหนอนม้วนใบ 2 ชนิดใหม่ของโลกในสกุล *Eucoenogenes* Meyrick และ 1 ชนิดที่พบครั้งแรกในประเทศไทยจากอุทยานแห่งชาติทองผาภูมิ

Two new species and a new record of *Eucoenogenes* Meyrick (Lepidoptera: Tortricidae) from Thong Pha Phum National Park

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Two new species of *Eucoenogenes* Meyrick (Lepidoptera: Tortricidae: Eucosmini), *E. bicucullus* Pinkaew, 2005 and *E. vaneeae* Pinkaew, 2005, are described and illustrated that collected with blacklight from hill evergreen forest in the survey of Olethreutinae during 2001-2004 in Thong Pha Phum National Park, Kanchanaburi Province, Thailand. *Epinotia munda* Diakonoff, described from a female collected in Sumatra, is transferred to *Eucoenogenes* (n. comb.) based on male and female specimens collected and recorded as the first time for Thailand.

การป้องกันกำจัดไรฝุ่นด้วยวิธีการรมสารสกัดจากพืช

Control of house dust mites by fumigation with plant extracts

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Fumigation by ethanolic extracts obtained from 21 selected plants were applied to house dust mite, *Dermatophagoides pteronyssinus* (Trouessart). Ethanolic extracts at various concentrations of 0 (ethanol 95%), 0.1, 0.5 and 1% with volume of 3 cm^3 were applied within $2.5x10^4$ cm^3 knockdown chamber. The fumigation period was 1 hour, and mortality of house dust mite was observed at 24 hours after fumigation periods. It was found that *Eugenia caryophyllata* Thunberg and *Cinnamomum iners* Blume extracts were extremely toxic to the mite which resulted in 10, 95, 100 and 100% as well as 10, 30, 62.5 and 92.5% mortality, respectively. By the same method, those two plant extracts could completely control *Blomia tropicalis* Bronswijk. However, the extracts showed less toxicity to the egg of *D. pteronyssinus*, Therefore, egg hatching of 57.5 and 65% were found, comparing to 77.5% was observed from control. Fumigation bag(KIL 1) sized 200x200x32 cm^3 was designed and tested with *D. pteronyssinus.* It was found that application with 3% *Eugenia caryophyllata* extract at the volume of 100 cm^3 with fumigation period of 4 hours could completely control the house dust mite. The extract at 100, 200 and 300 cm^3 also applied in 3x3x2.5 m close bedroom for 6 hours and showed that it cloud control the mite of 51.6, 61.6 and 68%, respectively. The house dust mite kept in mattress and fumigated with 5% extract at 50 and 100 cm^3 for 6 hours by using KIL1 bag, then 38 and 65% mortality was found. Shelf life of both extracts was good for 6 months either they were kept in refrigerator or in a room temperature. This botanical fumigation method is very promising in order to control house dust mite in Thailand.

การศึกษาภูมิปัญญาชาวบ้านที่เกี่ยวข้องกับความหลากหลายและการเกิดของเห็ดโคน ในสวนป่าทองผาภูมิ จังหวัดกาญจนบุรี

A study of local people knowledge on diversity and formation of *Termitomyces* spp. in Thong Pha Phum plantation, Kanchanaburi Province

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Termite mushroom (genus *Termitomyces*) is the most famous non – timber forest product from Thong Pha Phum plantation. Termite mushroom has a mutual relation with termite (symbiosis mutualism) which both derives some degree of benefit from each other. Moreover *Termitomyce* has the economical importance (Jeng *et al*., 2004). The aim of research is to improve local knowledge on termite mushroom appearance of Thong Pha Phum plantation. The data collection is to investigate the opinion and knowledge that is a local knowledge on termite mushroom appearance and assess the economic value of termite mushrooms, the dependence of local people on forest resource, by using questionnaires in data collection. Chi – square is a statistic technique is used in data analysis and statistical significance is set at 0.1. There are three study areas located in Tumbon Hua kha yeng, Thong Pha Phum District, Kanchanaburi province on three villages, Ban Tha Madeau, Ban Raipa and Ban Rai. Each village is a representative of Thai, Karen and Burmese, respectively. The result of this study found that the main occupation of each nationality is significantly different from each other that is Thais always work as the governmental officers, while most Karens search for the forest goods for sell and employee and Burmeses almost work as the employees. It is also found that the net incomes of these three groups are not different as well as the knowledge of each nationality about origin of Termite mushroom and ways to pick up them. The consideration of ways in picking up Termite mushroom of Banrai community indicated that male and female are significantly different. The survey result in the area of Suan Pa Thong Pha Phoom in March to May found two types of Termite mushroom which can be classified as *T. albuminosus T. striatus* and the other two types which cannot be indicated.