Effects of different food on growth and ecteinascidins production of the tunicate *Ecteinascidia thurstoni* Herdman, 1891

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The Thai tunicate, *Eceinascidia thurstoni* Herdman, 1891, found around Phuket Island, is the first Asian tunicate determined to contain ecteinascidins. This compound exhibits potent cytotoxic activity against cancer cells. Culturing of *E. thurstoni* is one of the methods to increase ecteinascidin production. However, appropriate diets that can maximize both growth and ecteinascidin productions are unknown. In this study, *E. thurstoni* were fed either a single diet or a combination of two diets of the following: *Chaetoceros gracilis*, *Isochrysis galbana*, *Nannochloropsis* sp., or formulated shrimp feed. The experiments were conducted for two life cycles of *E. thurstoni*, and then zooids from each treatment were collected for ecteinascidins analysis. The results showed that *E. thurstoni* fed only *C. gracilis* had the best growth in zooid number, probably due to the high nutritional value of *C. gracilis*, while the lengths of zooids were not different compared to tunicates fed on other diets. The highest percent coverage of zooids per colony was also found for the tunicates fed on *C. gracilis*. Ecteinascidins production of the tunicates fed on only *C. gracilis* also showed the highest ecteinascidins production. Thus, the results showed that *in vitro* culture is a possible method to increase the production of this anti-tumor compound.

A new Thai Mesozoic lungfish (Sarcopterygii, Dipnoi) with an insight into post-Palaeozoic dipnoan evolution

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We describe a new species of lungfish, *Ferganoceratodus martini* sp. nov., based on a single specimen discovered in the Late Jurassic – Early Cretaceous of the Phu Nam Jun locality, north-eastern Thailand. The material comprises an almost complete skull roof with associated upper and lower jaws, as well as some postcranial remains. *F. martini* shows characters unexpected and/or unknown in other Mesozoic lungfishes, such as pieces of a 'hard snout'. The microstructure of the 'hard snout' provides support to the Bemis and Northcutt interpretation of the cosmine tissue of Palaeozoic lungfishes as homologous to the complex cutaneous vasculature of the living *Neoceratodus*. Because the homologies of the ossifications of the skull roof among lungfishes and among piscian sarcopterygians are unsatisfactorily understood, we use a topological nomenclature in the description of the specimen and in the discussion of post-Devonian dipnoan skull roof characters. We define a few characters for cladistic analysis only, but these are regarded as less theory-laden. We propose a hypothesis of phylogenetic relationships for most of the post-Devonian forms known by skull remains. The main feature is the ancient dichotomy between the *Neoceratodus* lineage and most of the other Mesozoic forms, including the Lepidosirenids. The palaeobiogeographical pattern shows a series of vicariant events between Laurasia and Gondwana in the Late Triassic – Early Jurassic, followed by a vicariant event between Africa and South America

A new semionotiform (Actinopterygii, Neopterygii) from Upper Jurassic – Lower Cretaceous deposits of north-east Thailand, with comments on the relationships of semionotiforms

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A new semionotiform fish, *Isanichthys palustris* gen. et sp. nov., is described from the Late Jurassic – Early Cretaceous Phu Kradung Formation of north-east Thailand. *I. palustris* is known from a single, nearly complete specimen found alongside abundant *Lepidotes* specimens at the Phu Nam Jun locality. *I. palustris* shows a mixture of semionotidlike characters, such as the pattern of cheek ossifications, and lepisosteid-like characters, such as the body shape and a dorsal fin opposed by an anal fin. *I. palustris* possesses only some of the characters currently used to define the Semionotidae. Cladistic analyses including various semionotid and gar taxa, together with *Amia calva* and *Leptolepis coryphaenoides*, suggest that the Semionotiformes (Lepisosteidae and 'Semionotidae') form a monophyletic clade, but the 'Semionotidae' taxa form an unresolved polytomy. The relationships between Semionotiformes, Halecomorphi and Teleostei are unresolved. When restricted to the best-known taxa, however, the analysis shows the monophyly of the Semionotidae *sensu stricto (Semionotus + Lepidotes)* and a sister-group relationship between halecomorphs and teleosts. These last two results are regarded as the preferred hypothesis for further studies. *I. palustris* is the only known example of a predaceous, probably piscivorous, 'semionotid'. It illustrates the great diversity and ecological adaptation of the semionotiforms during the Late Jurassic – Early Cretaceous. We question the phylogenetic relationships of 'ancient fishes' founded on molecular-based trees because we suspect that the use of very few Recent taxa as representatives of previously diverse lineages is an inevitable, but important, bias in the construction of such trees.

Histological studies of the alimentary system in the adult spotted scat, *Scatophagus argus* Linnaeus, in mangrove forests of the Pak Phanang Estuary, Nakhon Si Thammarat Province

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Histological studies of the alimentary system, beginning with the mouth parts, confirmed that adult *Scatophagus argus* are mainly benthic omnivores. The dominant prey items were microplankton, protozoans, zooplankton, benthos and detritus. These fish have subterminal mouth and short gill rakers as good indicators. Villiform teeth appear on the maxilla and mandible in an inner band of 6-7 rows. Average teeth sizes were 131.67 μm on the maxilla and 42.25 μm on the mandible. Ciliiform teeth also appeared on the tongue. Enlarged esophagus mucosa and muscularis layers were 224.22±28.24 μm and 379.90±198.88 μm, respectively. The stomach was U-shaped with numerous pyloric caecae (10-20) allowing optimal absorption of diverse prey items. A mucus-secreting gland and gastric glands in the stomach helped facilitate digestion. The cardiac organ had mucosa and muscularis layers of average 239.01±21.17 μm and 205.32±72.63 μm, respectively. The fundus had a mucosa layer of 322.05±20.70 μm and a muscularis layer of 237.31±70.31 μm. The thicknesses of the mucosa and muscularis layers in the pyloric portion were 605.15±142.45 μm and 600.24±155.44 μm, respectively. The intestine length/body length ratio varied from 1.8-3.3. Mucus-secreting goblet cells, which aid in the absorption of nutrients, were found in the highest number. The bile duct from the liver and gall bladder together with enzymes from the pancreas all enter into the duodenum portion. In the duodenum, the average thickness of the mucosa layer was observed to be the greatest. The liver had the highest number of fat-storing cells. These histological studies of the alimentary system in adult scats correlates with the relative importance of components in their diet.

Taxonomy of spiny eels (Synbranchiformes: Mastacembelidae) in the Chao Phraya River Basin

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The main purpose of this study was to review and investigate the taxonomy of spiny eels. The study was based on the examination of mastacembelid specimens deposited in museums and, in addition, collected throughout the Chao Phraya River Basin, Thailand, during the period June 2006 to June 2007. For each specimen, 40 morphometric measurements and 13 meristic characters were taken. Numerical data were explored and analysed by principal component analysis (PCA) and Mann-Whitney U tests. PCA performed on the correlation matrix of log-transformed measurements and raw meristics were used for exploring multivariate data sets while Mann-Whitney U tests were used for univariate comparisons. Both the morphometrics and meristics could be used to alleviate difficulties with the identification of individual specimens. A total of six species in two genera, *Macrognathus siamensis*, *M. semiocellatus*, *M. circumcinctus*, *Mastacembelus armatus*, *M. favus*, and *M. erythrotaenia*, were recorded in the river basin. Most *Macrognathus* were found at the bottom of slow-flowing or standing waters and floodplain areas except for *M. circumcinctus*, whereas *Mastacembelus* spp. were found along the bottoms of flowing rivers including streams. *M. siamensis* is perhaps the commonest species of spiny eel in Central Thailand.

Species composition and distribution of fish larvae at Maeklong Estuary, Samut Songkram Province

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Species composition and distribution of fish larvae in Maeklong Estuary, Samut Songkram Province, were studied from June 2004 to June 2005. Nine sample stations were operated every month. A total of 37,523 fish larvae were found. The results showed that the fish larvae comprised 19 families in the study area of which 10 were economic families. The most widely distributed fish larvae were Gobiidae. The next highest were Clupeidae, Ambassidae, Blenniidae and Engraulidae. The highest density of fish larvae was found in January 2005 with a density of 108,582 larvae / 1,000 m of seawater, while the lowest abundance of fish larvae was recorded in June 2004 with a density of 2,161 larvae / 1,000 m of seawater.

Relationships between fish assemblages and complexity of coral habitat at Chao Lao beach, Chantaburi Province

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Relationships between fish assemblages and complexity of coral habitats was studied by using a fish visual census method and line intercept method. Forty-one species in 24 genera and 14 families were found. The results showed that the diversity of fish in the area was low when compared with other areas on the east coast of the Gulf of Thailand. Dominant groups were damselfish, snapper, and wrasse. There was a positive correlation between the complexity of coral habitats and the diversity and density of fish species and this was similar for each coral life form. However, there was a negative correlation between the density of fish and dead coral and sand composition. The results also showed that small-sized fish used coral cavities as shelter. Relationships between fishes and physical factors (depth, salinity, visibility) were different for each species. No effect from tourism on the reef fish assemblage was found because the main tourism activity was glass-bottomed boat tours. But tourism affected the damselfish. High tourism activity caused low densities of damselfish because tourism activity disturbed damselfish. For future tourism management, it is necessary to control the behavior of tourists and waste deposal from the numerous resorts along the beach.

Variation and distribution of mercury in the tissues of aquatic organisms caught from Songkla Lake

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Accumulation of mercury (Hg) in fishery resources in Songkla Lake (SKL) may lead to a high risk to consumers via the food chain. This study assessed mercury contamination in economic aquatic species in the SKL which were collected from local piers, markets and directly from fishermen in 6 surveys around the SKL during August 2004 to July 2005. Identification of 218 samples determined 3 herbivorous fish species, 10 omnivorous fish species, 34 carnivorous fish species and 8 shrimp species. Mercury (Hg) content in edible tissues was measured using Hydride Generation Atomic Absorption Spectrometry after digestion with nitric acid (HNO_3) and sulfuric acid (H_2SO_4). The results reveal that the concentration of Hg in carnivorous fishes > omnivorous fishes > herbivorous fishes ~ shrimps. Average (minimum – maximum) and median Hg concentrations in carnivorous fishes were 95 ± 108 (11–625) and 68 ng/g wet weight, in omnivorous fishes were 36 ± 22 (12 – 66) and 33 ng/g wet weight, in herbivorous fishes were 33±32 (12 – 70) and 17 ng/g wet weight, and in shrimps were 15 ± 7 (7 – 26) and 12 ng/g wet weight. Although the Hg concentration in edible tissues of economic aquatic animals in the SKL do not yet exceed a maximum residue limit as recommended by the World Health Organization (WHO) and the Ministry of Public Health of Thailand (500 ng/g wet weight), the frequent consumption of Hg contaminated fishes and shrimps in the SKL may pose a health risk to consumers.

Phylogenetic relationships among Thai newts assessed using mitochondrial DNA sequences

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Seventeen individuals of the Himalayan newt (*Tylototriton verrucosus),* which are amphibians in the Order Caudata (Urodela), Family Salamandridae, representing 6 populations from Northern and Northeastern mountain ranges in Thailand were examined for mitochondrial DNA sequence variation in the 16S ribosomal RNA gene and D-loop. Molecular data support the existence of 2 types of Himalayan newts. The 2 types of this taxon can be distinguished by the color patterns of body parts, limbs and tails. Type I, characterized by orange to yellow body coloration, is distributed in Northern mountain ranges, and Type II, characterized by relatively dull body coloration, is distributed in Northeastern mountain ranges. In addition, the distributions and ecological data of these newts are updated and discussed. These data could be useful for further taxonomic evaluation and conservation of this animal in the future.

Molecular cloning of antimicrobial-peptide genes from frogs in the family Ranidae in Thailand

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Antimicrobial peptides (AMPs) are part of the innate immunity found in virtually all organisms as diverse as bacteria, plants and animals and including humans. AMPs can inhibit or kill various microorganisms such as bacteria, viruses and parasites. Most AMPs work by disrupting cell membranes. Thus the mechanism is non-specific to species of microorganisms. Therefore, AMPs could be used as broad-spectrum antibiotics especially in cases of multi-drug resistant pathogens which have become a major problem in medical care. Frogs have been known to secrete many bio-active compounds, including toxins, neuropeptides and AMPs, onto their skin. It has been estimated that one species of frog may have up to 20 different kinds of AMPs. Since Thailand has approximately 80 species of frogs, 1600 AMPs could exist in nature. This natural resource has not been investigated and utilized before. Therefore, we plan to clone genes that specify antimicrobial peptides, which is the first step for utilization of this valuable and rich resource. The cloned gene will be used for production of therapeutic proteins by the *Molecular Farming* method in the future.

Microhabitat use by the Median-striped Bullfrog, *Kaloula mediolineata*, in Tak Province, Thailand

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The Median-striped Bullfrog, *Kaloula mediolineata*, is a burrowing ground dwelling anuran. This species is widely distributed in North-Eastern, South-Eastern and Central parts through to Prachuap Kiri Khan. They have been exploited as food in the North-Eastern part of Thailand. For long-term conservation and utilization, culture and frog farming is necessary. The purpose of this study is to conduct a survey on vertical dispersion and physical characteristics of the burrowing position of *K. mediolineata*. The study was conducted in secondary forest in Tak Province during September and November, 2004, and July and August in 2006. Field observations indicated that individual vertical dispersion patterns were related to monthly rainfall. Depth of frog holes in the rainy season (July, August and September) was less than hole depth in the dry season (November) (t-test, $p<0.05$). Soil temperature at the burrowing site was lower than that of the surface soil (t-test, $p<0.05$). Soil samples collected in 2004 indicated that the texture of surface soil was sandy loam, while soil at the burrowing location was loamy sand. Soil moisture of both positions collected in 2006 was not significantly different.

Seasonal activity of amphibians at different elevations along Nam San Noi Stream, Phu Luang Wildlife Sanctuary

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Field work was conducted at Nam San Noi Stream, Phu Luang Wildlife Sanctuary, from May 2006 to March 2007. Three 100 m stream transects at 700, 800, 950, and 1300 m above MSL were selected as study sites. Visual encounter surveys were conducted every month along each transect at night. Species and numbers of adults found in each survey were recorded. A total of 23 species was recorded during the survey period. Seven species, *Leptolalax pelodytoides, Fejervarya limnocharis, Limnonectes kuhlii, L. pileatus, Rana livida* (from1), *R. nigrovittata,* and *Polypedates leucomystax,* were found throughout the year. The numbers and breeding activity of *R. livida* (from1) and *R. livida* (from2) were high during the rainy season whereas in *Limnonectes kuhlii, L. pileatus,* and *Microhylar berdmorei* these variables were high during the late rainy season to early dry season. In contrast, the number and breeding activity of *R. nigrovittata* peaked in the dry season. The patterns of occurrence of the other 11 species could not be evaluated due to the number of individuals found being too low. The effect of elevation on the abundances and distributions of frogs is under investigation.

Appraisal of the evolution of testudinoid turtle diversity from the Late Palaeogene and Neogene of Thailand

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The evolution of turtles in the superfamily Testudinoidea in Thailand was assessed by using both the fossil record and information about recent turtles. For appraising the systematic position of fossil turtles, a catalogue of the osteology of Thai testudinoid turtles was constituted. The osteology of Thai testudinoid turtles is illustrated for each species. Keys for shell characters are also provided. Two localities were selected for studying fossil turtles, Nong Ya Plong, Petchaburi Province, and Tha Chang Sandpits, Nakhon Ratchasima Province. The turtles from the first locality were identified as two new taxa; a new species of *Mauremys* and a new genus closely related to *Malayemys*. The turtles from the second locality were identified as giant testudinid turtles. Living genera of turtles before the late Neogene have not been found, including in this study. Five biogeographical provinces were obtained by using the geographical distributions of turtles in the superfamily Testudinoidea and by using clustering methods for separating areas based on similarity of taxa. These provinces were then integrated with a published phylogeny. It was found that *Heosemys* group is endemic to an Indochinese Province. In addition, the turtles in Thailand are more related to Indonesian Province turtles than to turtles in India and China. However, fossil turtle evidence of the *Heosemys* group has not been found before the Pliocene or Pleistocene turtles from Khok Sung, Nakhon Ratchasima Province. This means that the biogeographical identity of living turtles in Southeast Asia began recently.

Radio-telemetry study of home range size and activities of the black giant tortoise *Manouria emys phayrei* (Blyth, 1853)

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The objective of this study is to determine the activity, habitat use, diets and home range size of the black giant tortoise, *Manouria emy phayrei,* in Kaeng Krachan National Park, Thailand. Data were collected from November 2005 to May 2007. Ten *M. emys phayrei* were radio-tracked, including seven adults and three subadults. Preliminary results suggested that *M. emys phayrei* had different habitat requirements for different activities (e.g, feeding and hiding). Five different types of habitats were utilized: bamboo forest, dry evergreen forest, dry evergreen forest mixed with bamboo, streams and damp or wet areas. In the rainy season (May-October), many tortoises were found foraging in the bamboo forest whereas in the hot dry season (March-April) they were frequently found near streams or in damp areas. During the coldest months (November – February), a few tortoises were active and were commonly found under fallen branches or leaf litter. *M. emys phayrei* fed on a variety of plant species. Forty-nine diet samples were collected from 13 different plant species. *Zingiber* sp. and *Bambusa* sp. were the main diet in the dry season and wet season, respectively. Preliminary results on home range size indicate that adults tend to have home range sizes larger than subadults.

Minute theropod eggs and embryos from the Lower Cretaceous of Thailand and the dinosaur-bird transition

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We report on very small fossil eggs from the Lower Cretaceous of Thailand, one of them containing a theropod embryo, which display a remarkable mosaic of characters. While the surficial ornamentation is typical of non-avian saurischian dinosaurs, the three-layered prismatic structure of the eggshell is currently known only in extant and fossil eggs associated with birds. These eggs, about the size of a goldfinch's, mirror, at the reproductive level, the retention of small body size that was paramount in the transition from non-avian theropods to birds. The egglayer may have been a small feathered theropod similar to those recently found in China.

Life history patterns of homalopsine snakes inside and outside the Khorat Basin, Thailand

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The purpose of this study is to compare life history patterns of homalopsine snakes inside and outside the Khorat Basin. Snakes were trapped by gill nets at two locations, Ban Badan, Nakhon Ratchasima Province (inside Khorat Basin) and Kabinburi District, Prachinburi Province (outside Khorat Basin), from April 2006 to March 2007. Five species of homalopsine snakes, *Enhydris enhydris*, *E. plumbea*, *E. subtaeniatus*, *E. boucourti* and *Homalopsis buccata*, were caught. *Enhydris enhydris*, *E. plumbea* and *Homalopsis buccata*, were found in both study sites whereas *E. subtaeniatus* was found only at Ban Badan and *E. boucourti* was found only at Kabin Buri District. Stomach investigation showed that homalpsine snakes inside and outside the Khorat Basin feed mainly on fish such as cyprinids, anabatids and belonids. Nevertheless, *E. plumbea* from Ban Badan was found to feed on burrowing frogs, *Kaloula pulchra*, and freshwater eels, *Anguilla alba*. Gravid females of *Enhydris enhydris*, carrying 25 to 37 embryos, were found only in April and June at Ban Badan whereas at Kabinburi District they were found throughout the year with the highest peak from April to July. In addition, three other semi-aquatic species, *Xenochrophis flavipunctatus*, *Xenopeltis unicolor* and *Cylindrophis ruffus*, were caught by gill nets at both study sites.

Food habits and nesting behavior of the collared scops owl (*Otus bakkamoen*a Pennant) in Chanthaburi Province

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Since information on the ecology of the collared scops owl in Thailand is extremely limited, this study thus attempts to develop an understanding of their basic ecology concerning food habits, nesting ecology and behaviour including nest site selection. Owl nests were searched for and located using GPS. Habitat descriptions, *i.e.*, plant structure and composition, at each nesting site were characterized by establishing a 10-m radius circular plot. Owl pellets and food debris were collected and analyzed to identifiy the type and amount of food. From August 2006 - September 2007, 23 nests were found and observed in Chantaburi province. The results showed that the collared scops owl started their breeding season from early February to the end of April. The numbers of layed eggs were 1- 4 eggs / nest (2.81 ± 1.60) and the hatching rate was 61.37 %. The average weight of hatched chicks was 12.8 ± 1.6 g. Females tended to choose tree holes with openings on the top. The average nest height was 2.77 ± 2.20 m from the ground. Food habits and nest site selection data were collected and are now in the process of analysis.

Effects of food supply on foraging patterns and weights of wintering shorebirds on a managed wetland in the Inner Gulf of Thailand

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This study was conducted at the Laem Phak Bia Environmental Research and Development Project, Phetchaburi province. Variation in food availability for shorebirds was monitored to determine whether it affected shorebird prey capture rates, chasing rates, pace rates, and body weight of Long-toed Stints. Comparisons were made to examine the differences between juvenile and adult shorebirds' prey capture rates, pace rates, and body weights. Invertebrate sampling**,** shorebird counting**,** foraging observations**,** and catching shorebirds were carried out during August 2006-April 2007. A total of 49 Long-toed Stints were caught and individually colour marked. The results of invertebrate sampling showed that *Chironomid* larvae were the most abundant invertebrates in the study plot and they were more abundant in autumn (August 2006-October 2007) than winter (November 2006-February 2007). Long-toed Stints were also heavier in autumn than winter suggesting a link between food abundantce and body weight. This may indicate that the quality of the wetland is important to the health of Long-toed Stints and other shorebird species.

Bird diversity in grassland at Tung Salang Luang National Park

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A survey of grassland bird diversity was carried out at Tung Salang Luang National Park at 2 study sites, i.e., grassland savannah and grassland - mixed coniferous forest. The point count and line transect methods were used for data collection (Ralph et al., 1997) and was done once a month in 3 periods, for a year. The survey revealed 1,889 birds from 84 species, 32 families, and 11 orders occurring at both sites. Birds found in grassland savanna comprised 871 individuals from 62 species and 26 families in 10 orders and in grassland - mixed coniferous forest comprised 1018 individuals from 56 species and 27 families in 9 orders. Birds were classified into 6 groups based on feeding strategies, *viz.* carnivorous, frugivorous, omnivorous, insectivorous, nectarivorous, and gramnivorous birds. The highest percentage of species found was 45-46% for insectivorous birds and the fewest was 3-4% for nectarivorous birds. Similarity, using Sorensen's index, of bird species between both sites was 58%. However, values of the similarity index for insectivorous and nectarivorous birds between both sites were 70% and 100%, respectively Dominant bird species in 2 sites were determined using the highest frequency values, densities, and abundances. Four species, *viz.* *Streptopelia orientalis* (Oriental Turtle-Dove), *Pynonotus aurigaster* (Sooty-headed Bulbul), *Prinia hodgsonii* (Grey-breasted Prinia), and *Prinia rufescens* (Rufescent Prinia), were co-dominant species in both grassland sites. The results show that co-dominant, insectivorous, and nectarivorous birds are indicators of individual characteristics of grasslands in the area.

A study of genetic diversity of the roundleaf bat (*Hipposideros halophyllus*) in Thailand, a Thai endemic mammal

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The Thailand roundleaf bat (*Hipposideros halophyllus*), a Thai endemic mammal, has been locally categorized as an ENDANGERED species. There are currently known to be three free-living populations of *H. halophyllus* at least over 130 km apart from each other, which are located in Hui Khakhaeng wildlife sanctuary-Uthai Thani province, Khoa Samo Khon-Lop Buri province, and Khao Singto-Sa Kaeo province. The great distances between populations likely prevent gene flow among these three populations. Therefore, we hypothesized decreasing genetic variation among and within the populations would be expected. The main objective is to test the hypothesis of low genetic diversity among and within the 3 populations of *H. halophyllus* by using microsatellite markers. The first field work was conducted during 10-16 June 2007 at Khao SamoKhon, Lop Buri province, a habitat with the largest colonies of *H. hallophyllus*. We collected tissue samples from wing membranes using 4-mm diameter wing punches. The tissues were kept in 1.5-ml Eppendof tubes each containing 0.5 ml. of 95% EtOH, stored at room temperature in the field and at 4^{o}C in the freezer at the laboratory. We sampled a total of 79 individuals (40 adult males and 39 adult females) of *H. halophyllus* from three caves. DNA was isolated from the first two tissue samples and tested for its quality and quantity. We obtained a sufficient amount of DNA of good quality for PCR analysis. Additional results and data analysis will be reported and discussed.

Survey and preparation of a guide to natural resources in Khao Samo Khon, Amphoe Tha Wung, Changwat Lop Buri

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Khao Samo Khon is an important archaeological site and a substantial habitat of the Thailand roundleaf bat (*Hipposideros halophyllus*), a Thai endemic and locally endangered species, located in Tha Wung, Lop Buri province. This area is home to the largest colonies of *H. hallophyllus*. The landscape is remarkably attractive and is considered to have high potential for recreation, especially for ecotourism. Ecotourism, a knowledge-based recreation, requires scientific information of natural and cultural resources in the area, which has never been documented before. The main objectives of the project are to prepare learning materials and to educate local people about their natural resources. Our study team consists of three wildlife specialists, two botanists, two invertebrate specialists, and three technicians. The first study was conducted during 24-28 May, 2007. Our results revealed that organism diversity consists of at least 14 families with 24 species of mammals, 38 families with 78 species of birds, 7 families with 11 species of reptiles, 3 families with 4 species of amphibians, 1**7** families with **65** species of insects, and 53 families with 113 species of plants. Significant organisms consisted of *H. hallophyllus*, two rare species of plants, namely *Ehretia winitii* Craib and *Marcania grandiflora* Imlay, and two new records of species of plants in central Thailand, namely *Jusminum siamensis* Craib, and *Jusminum funale* Decne. subsp. *sootepensis* (Craib). In addition, we conducted 2-day natural science camps at the study site. The camp was attended by 65 students and 10 teachers from two local primary schools.