

# FIREFLY KNOWLEDGE DEVELOPMENT AT COMMUNITIES IN CENTRAL THAILAND \*

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## ABSTRACT

This study examined the state of knowledge of fireflies in the communities of Amphoe Amphawa, Samut Songkhram province and Tambon Bang Nam Peung, Samut Prakarn province, Central Thailand. Populations of synchronizing fireflies in these two communities have become so well known that they now attract many tourists on firefly watching tours. Given the importance of the firefly populations to these communities knowledge of the biology of the fireflies is likely to be important to allow the community to advertise and provide a better experience for tourists as well as, more fundamentally, understand how to conserve this biological resource. This study examines, through questionnaires, group meetings and discussions with tourist guides, tourists and the community generally, the state of knowledge of fireflies in these communities and reports on some activities the community has undertaken to increase their knowledge. About 98% of the interviewed firefly watching group do not know the scientific names of fireflies, nor little of their biology. Many reported that they would like to have this information to be able to provide to tourists and possible help conserve the fireflies. None of the interviewed tourists knew the names of fireflies they were watching and little of their biology. Clearly the tourist attraction value of these firefly populations currently is largely similar to a fireworks or other "lighting" display. Currently the only aspect of the current firefly observations that take account of the biological phenomena of the flashing is that guides advise tourists on ways to watch fireflies with minimal disturbance. While this is unfortunate, and is unlikely to be sustainable, it does mean there is great opportunity to increase community knowledge of fireflies and for this knowledge to be used to give extra value to the experience tourists have when watching fireflies. Currently the only efforts toward community education about fireflies are the efforts of teachers with their students. Some teachers have used aspects of firefly biology to address problems on destruction of river bank habitat through conservation activity in schools and communities. Local teachers have made brochures, posters and pocket books on biology of fireflies to educate students and parents. While the efforts of teachers are laudable the poor state of knowledge found in the people who most directly deal with fireflies, the guides who promote their tourist value, shows there is a need to develop an educational scheme to help locals who lives in firefly attraction areas better understand fireflies and their conservation.

**Key words :** firefly watching, environmental conservation, Thailand, firefly education



## Introduction

Thailand is located in the appropriate site of South East Asia where the country is rich in the natural tourism resource and unique in its cultural heritage. (Suree, 2005) Central plain of Thailand is covering the board alluvial plain of the Chao Phraya river, Mae Klong river. Basin of both rivers were covered by revereine forest and agricultural plant. The riverine forest comprising *Sonneratia* stand and provide suitable habitats for fireflies. Amphawa district is an agricultural village surrounded by fruit orchards, small farms and fisheries and located in Mae Klong basin, Samut Songkhram province. Bang Nam Peung district is located on alluvial island of Chao Phraya river, Samut Prakarn Province. The Thai government has proclaimed this area to be "Protected Green Area" since 1992. The firefly watching tour of Amphoe Amphawa has initiated about 10 years ago, and 5 years ago for Tambon Bang Nam Peung. Today, Amphawa attracts over 3,000 visitors a month to come to watch the synchronized flashing firefly, and more than 300 visitors a month for Tambon Bang Nam Peung. It generates income to a majority of the villagers either directly as boat operators and tour guides or indirectly from the sale of local handicrafts and food. Homestay type tourism has added its charming to the firefly watching tour.



Flashing firefly habitats



## Methodology

The study was done in order to find out the status of and how to acquire knowledge on fireflies of the communities and tourists at Amphoe Amphawa, Samut Sakorn province and Tambon Bang Nam Peung, Samut Prakarn province, Central Thailand. Students and volunteers had helped distributing the questionnaires 3 times during November 2006, April and July 2007. Four hundreds and eighteen questionnaires were fill out by 6 target groups (see Table 1). The questionnaire was to ask about their knowledge of fireflies, how much do they know about fireflies, the important, value and impression from watching fireflies. The questionnaires were analysed and report of our finding.

Table. 1 The target groups in Amphawa and Bang Nam Peung, who filled out the questionnaires

examine groups	Amphawa	Bang Nam Peung	total
firefly watching guides	17	4	21
students	37	10	47
teachers	12	3	15
university students	32	13	45
homestay organizers	9	2	11
firefly watching tourist groups	273	62	279
total	380	94	418



Sonneratia Stand at Bang Nam Peung canal

## Results and discussions

73.44 % of the study examine has only little firefly knowledge in Thailand, and 98.32 % of the interviewed firefly watching group neither do not know the scientific names of fireflies, nor little of their biology. They are moderately know about firefly importance (61.24%). However, they could not replied correctly when we questioned them to more detail. Sources of firefly knowledge of tourists were from searching in internet (61.48%), from school or teachers (31.58%), from firefly watching guides (9.33%), from books (2.87%), and other sources (11.48%). We use many search engines from World Wide Web were found that they have very few documents related to firefly in Thailand. The tourists have moderate to high impression (50.95% and 42.58%) after the firefly watching activity. The flashing of firefly itself appreciated them the most (57.66%), only 34.7% appreciated the surrounding environment and least appreciation (6.5%) toward the tour guide. The study from Narinithip (2008) also show that tourists appreciated homestay the most and appreciate the tour guide the least. On the firefly population decline, 66.5 % of the tourists believed that it is due to the noise from the long-tailed motor boat, 22% is due to the water quality. The noise from the operated motor boat annoyed the residents who live nearby the firefly watching sites and created much conflict among them at Amphoe Amphawa, Samut Sakorn province but not at Tambon Bang Nam Peung, Samut Prakarn province. This finding also supported by the study of Patarawan (2005).

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\* Prasit WONGPROM. 2008. Firefly Knowledge Development at Communities in Central Thailand. Poster presentation, International Firefly Symposium II. Queen Sirikit Botanic Garden, Chiangmai, Thailand, 26-30 August, 2008. Queen Sirikit Botanic Garden, Chiang Mai, Thailand.



Supported by Thailand Nature Education Center (ThaNEC)