Report to Smithsonian's National Zoological Park and Cincinnati Zoo:

Fishing Cat Survey in Maenam Pachi Wildlife Sanctuary, Rat Buri Province, Thailand 14-18 September 2005

Submitted by
Passanan Cutter
Address: 77/24 Moo 1, Prueksakan 1, Lad Yah Rd, Tha Macaam, Muang District, Kanjanaburi, 71000, Thailand
Email: namfon@conservationasia.org
Phone: 66-1-944-1985

Executive Summary

This report covers the 4th field trip to document fishing cat presence/absence at Maenam Pachi Wildlife Sanctuary, Rat Buri Province, Thailand. This report covers the period 14-18 Semptemer 2005.

The primary goals of the surveys were 1) to set up camera traps at targeted locations within Maenam Pachi WS and 2) to carry out a general reconnaissance of the sanctuary for the purpose of planning additional surveys.

This survey is a preliminary effort to determine fishing cat presence and absence within a well-defined area. If the occurrence of fishing cats can be confirmed, then longer term distribution surveys and conservation strategies will be considered.

During our approximately 10 kilometer survey along Maenam Pachi and its tributary stream, Huay Pu Rakam, we did not detect any wildlife tracks due to heavy rain. However, according to our second survey result we detected one leopard cat on a camera trap set near Pu Rakam village and based on reports from villagers, there have been some sightings of small wild cats around the edge of the village. So, this survey was our second attempt to determine fishing cat presence and try out new strategy by setting up camera traps in the village vicinity.

Survey team and Border Patrol Police

We set 6 camera traps at locations where we thought would be best for capturing photos of carnivores along the stream. Camera traps will be left in those locations for approximately20 trap nights.

And due to moist issues with our 3rd survey, and we lost one film to exposure while attempting to release the film from camera, one camera trap was brought back to set at the same location near the Pu Namron Station. One of the camera traps was malfunction and being repaired.

We also tried out new camera traps modeled DeerCam, eventhough they're quite fragile because of their plastic body but they're three times cheaper than the Cam Trakker's cost and as the, these camera traps function well and lightweight and less complicated for rangers to handle. However, there is an issue with moist during the wet season but we experimented with using silicon beads inside the case and seal the cover outside the case with silicon gel.

Our selected route, the Huay Pu Rakam stream—which is part of our surveyed route has been known to be one of a travel routes of Karen rebels who would come to visit Karen villagers located inside the sanctuary to resupply. This stream flows from the border of Mianmar and because of the insurgency issue, the Border Patrol Police has set up a base up stream to guard the area. Our

attempt was to set camera traps along this stream but we were not allowed to go past the Border Patrol Police base, so we had to change our strategy by setting up some camera traps along the Maenam Pachi Stream.

After approximately 20 trap nights camera traps were retrieved and result shows total of one leopard cat photo, two muntjak, one Malayan porcupine photo, four stump-tailed macaque photos, one mouse sp. and two domestic dog photos. Camera traps Number 18, 4, 20 and 14 did not detect any wildlife photos,

We also received a piece of news of a dhole being shot by one of the rangers assigned to retrieve our camera traps. Their story was that they were surrounded by a pack of dholes and were about to be attacked. As a result, one dhole was shot dead.

Cuon cuon-dhole

shot by ranger

Cuon cuon-dhole

shot by ranger

Survey goals

1) to collect data on carnivore presence/absence

2) to train rangers to assist in the field survey on sign identification and camera trapping

Selecting the Survey Area

Maenam Pachi Wildlife Sanctuary is the second focal area selected for an ongoing survey of fishing cats in Thailand with an initial survey focusing on Klong Saeng Wildlife Sanctuary to the south. The selection was based on the following:

- **Nearby records**: Fishing cats have been photographed in neighboring Kaeng Krachan National Park (WCS 2004).
- **Suitable habitat**: several areas within the sanctuary are considered suitable habitat for fishing cats based on literature descriptions and current and historical records of fishing cat occurrence.
- **Conservation Management**. The sanctuary lies between the southern part of the Western Forest Complex and Kaeng Krachan and Kui buri NPs where the Thai government is now working with the Asian Development Bank to initiate a major landscape-scale conservation project over the next 5 years with the hope of establishing a greater amount of connectivity between all the protected areas in this part of western Thailand.

- **Logistics**. The site is a modest drive from both Bangkok and Kanchanaburi (Cutter's residence). Additionally, at this stage in the project--with a limited number of camera traps--it makes more sense to focus on a smaller survey area and attempt to survey it comprehensively than to focus on a large area.

Survey Area Description

Maenam Pachi Wildlife Sanctuary established in 1978. It covers 489.31 km^2 and is located in Rat Buri province approximately 135 km to the west of Bangkok. It is contiguous with the international border with Burma to the west and to Kaeng Krachan National Park (2915 square kilometers) to the south. The nearest major town is Rat Buri, some 60km to the east.

Physical Features. The topography of the area is primarily dry hills of 300-1500 m. A number of streams flow north to an irrigation dam near Kanchanaburi (Round, 1985; Sayer, 1981).

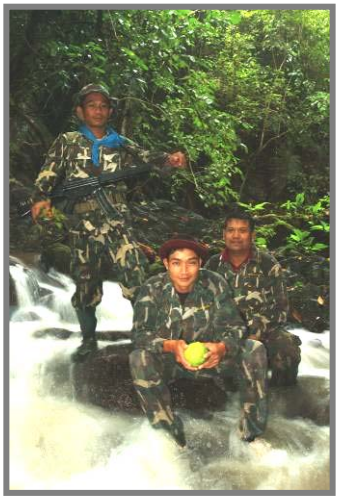
Climate. The climate is subtropical with a distinct December to April dry season. Mean annual rainfall is about 1500mm and mean annual temperature is about 28 degree C (RFD, n.d.)

Vegetation. Semi-evergreen and dry evergreen forests predominate, with dry dipterocarp and mixed deciduous formations occrring where soils are poor and shallow and widespread bamboo where forests have been impacted by selective logging and other activities over the last 50 years. Commercially valuable tree species include *Diptercarpus alatus*, *Hopea odorata*, *Afzelia xylocarpa*, *Pterocarpus macrocarpus*, *Xylia kerii*, *Shorea obtusa* and *Pentacme suavis* (RFD, n.d.; Sayer, 1981).

Fauna. In 1985, elephant *Elephas maximus* numbers were estimated at between 25 and 75 individuals. Shortly thereafter, however, elephants were almost completely extirpated due to intensive tin mining at one localized site and general poaching pressure. Now a small herd is occasionally seen near the border with Kaeng Krachan NP. Other large mammals include tiger *Panthera tigris* (E), leopard *P. pardus* (V), sambar *Cervus unicolor*, Indian muntjac *Muntiacus muntjak*, gaur *Bos gaurus*, serow *Capricornis sumatraensis* and tapir *Tapirus indicus* (E) (RFD. n.d.; Sayer, 1981). Although the bird community has not been surveyed (Round, 1985), green peafowl *Pavo muticus* (V) are reported (Sayer, 1981).

Conservation Significance and Management. The Maenam Phachi Wildlife Sanctuary and Kaeng Krachan National Park complex is considered a key site for elephant conservation (Dobias, 1987). The sanctuary also protects a part of the Kaen Krachan Reservoir catchment (Sayer, 1981).

Management Constraints. Game poaching of smaller species in the Phu Nam Ron and Huay Thong Kin Chao areas near the border of Kaeng Krachan is heavy throughout the year. The same areas are burned annually during the dry season (Storer, 1981) and there has been significant insurgent occupation (Burmese rebel groups) up through 2003 when Thai military troops set up permanently manned stations along the Burmese border. Up until 20 years ago tin mining operations were active in the Huay Thong Kin Chao and Huay Nam Nak areas. Impacted forests have recovered somewhat since their closure, but are still threatened by annual fire.



Survey team

Survey Team

Passanan Cutter, Jadet Com-A, and rangers from Nong Tadung sub-station.

Methods

Camera trap and sign surveys methods were implemented to detect evidence of fishing cats and other carnivores. Camera traps were set at potential spots where carnivore signs were found. Areas along streams or where water sources such as swamps, springs and mineral licks were the main focused sites for the survey.

Survey Routes

- Survey started with walking along part of Maenam Pachi and its tributary, Huay Pu Rakam (see map) to check out tracks and look for potential locations for camera traps.

Locations of camera traps

Camera trap #18	0525123, 1470745
Camera trap #4	0524954, 1470315
Camera trap #13	0525200, 1469656
Camera trap #20	0525600, 1469301
Camera trap #14	0525600, 1469301
Camera trap #3	0526125, 1470113
Camera trap #1	0541335, 1464953

Mammal observations

No mammals observed during our survey.

Survey results:

Please see high resolution photos retrieved from camera traps on: www.conservatonasia.org

Camera trap #1 UTM: 0541335, 1464953

Felis bengalensis-leopard cat

Muntiacus muntjak-muntjak or barking

Camera trap #3 UTM: 0526125, 1470113

Domestic dog

Domestic dog

Camera trap #13 UTM: 0525200, 1469656

Hystrix brachyura-Malayan Porcupine

Macaca arctoides-stump-tailed mamacaque

Macaca arctoides-stump-tailed macaque

Macaca arctoides-stump-tailed macaque

Mouse sp.

Camera trap #2 UTM: 0524954, 1470315

Muntiacus Muntjak- Muntjak or barking

Acknowledgements

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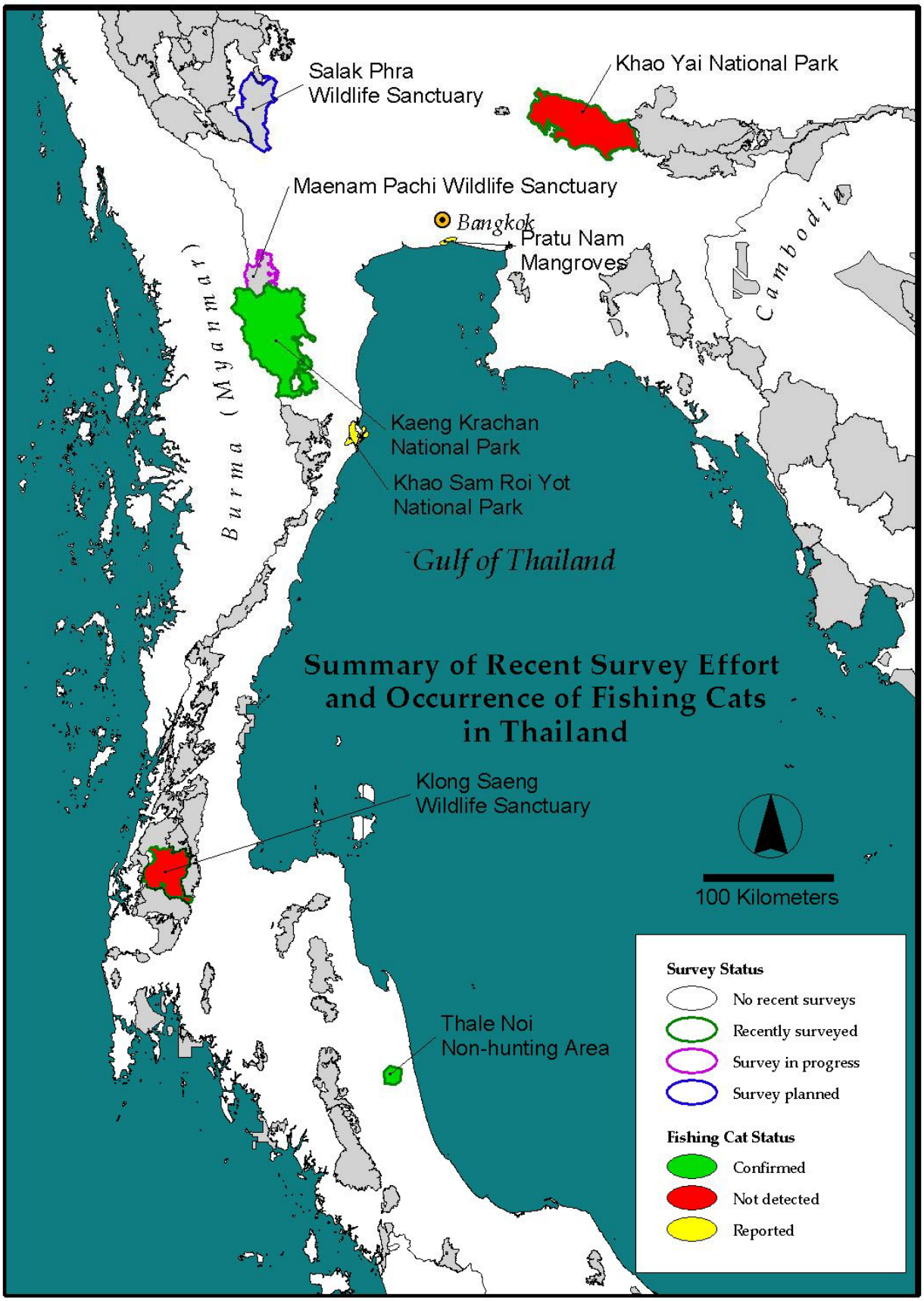
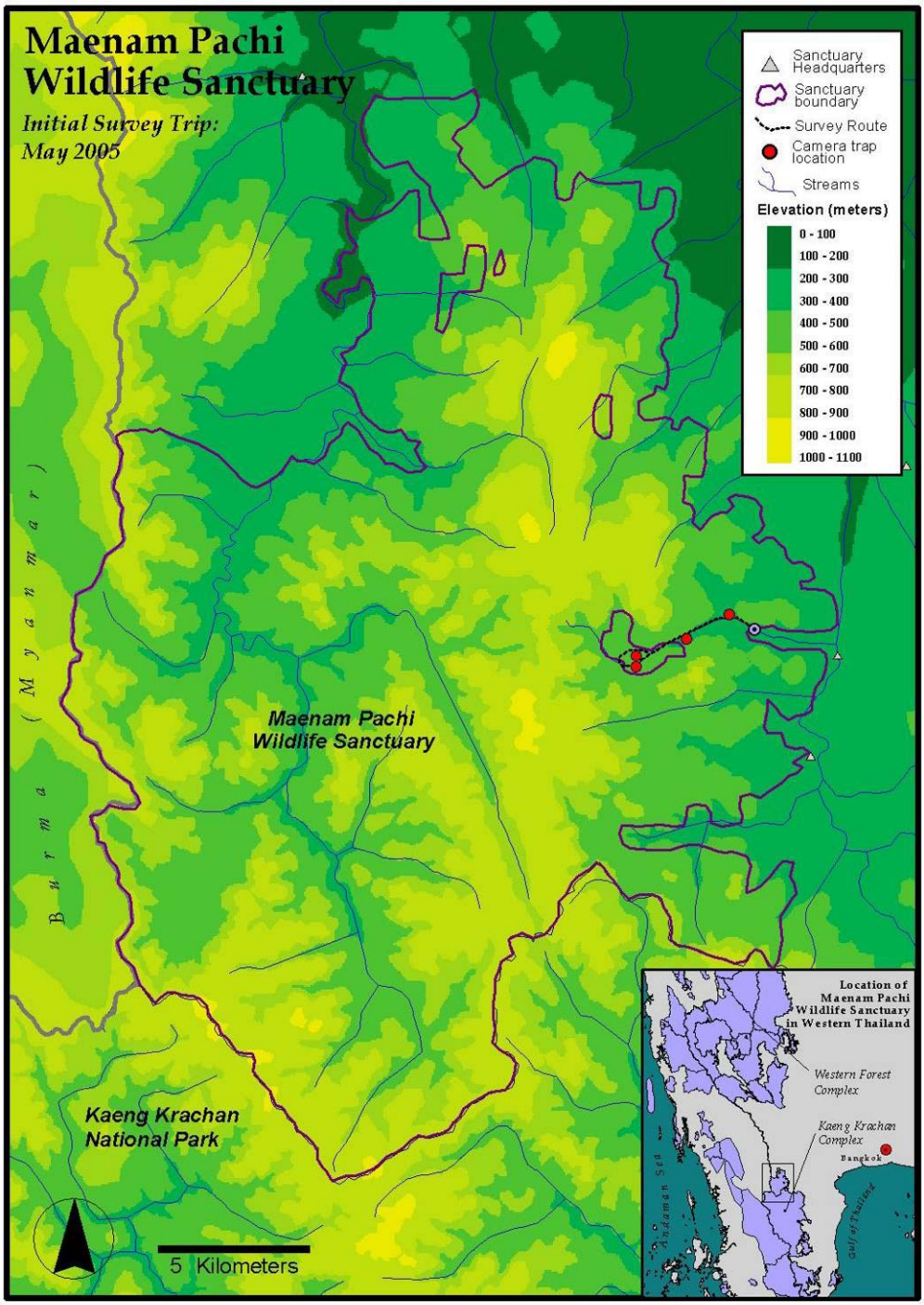
This survey would not be possible without the thoughtful and field assistance of Jadet Chom-A, Jan Guapu and Chid Chin-wongtuam–all staff from the wildife sanctuary.


Salak Phra
Wildlife Sanctuary
Khao Yai National Park
Maenam Pachi Wildlife Sanctuary
Bangkok
Pratu Nam
Mangroves
Burma (Myanmar)
Cambodia
Kaeng Krachan
National Park
Khao Sam Roi Yot
National Park
Gulf of Thailand
Summary of Recent Survey Effort
and Occurrence of Fishing Cats
in Thailand
Klong Saeng
Wildlife Sanctuary
100 Kilometers
Thale Noi
Non-hunting Area
Survey Status
No recent surveys
Recently surveyed
Survey in progress
Survey planned
Fishing Cat Status
Confirmed
Not detected
Reported


Maenam Pachi
Wildlife Sanctuary
Initial Survey Trip:
May 2005
Sanctuary Headquarters
Sanctuary boundary
Survey Route
Camera trap location
Streams
Elevation (meters)
0 - 100
100 - 200
200 - 300
300 - 400
400 - 500
500 - 600
600 - 700
700 - 800
800 - 900
900 - 1000
1000 - 1100
Burma (Myanmar)
Maenam Pachi
Wildlife Sanctuary
Kaeng Krachan
National Park
5 Kilometers
Location of
Maenam Pachi
Wildlife Sanctuary
in Western Thailand
Western Forest
Complex
Kaeng Krachan
Complex
Bangkok
Andaman Sea
Gulf of Thailand