

## Chapter 5

### New Record of Chitra chitra Nutphand, 1986 in Mae Ping River, Thailand

#### Abstract

The distribution of the Siamese narrow-headed softshell turtle Chitra chitra Nutphand, 1986 had been known only in Mae Klong river system in Thailand. This study found the distribution range of C. chitra extends to Mae Ping River from the past to present. Life and skeleton (skull and carapace) specimens were found along Mae Ping River both below and upper Bhumipol Dam.

**Key words:** Chitra chitra, Distribution, locality, Mae Ping River

## Introduction

Chitra chitra Nutphand, 1986 is one of five native softshell turtle species in Thailand. It was listed as a Critically Endangered Species by IUCN in 2000. The river systems of Thailand have been classified into six major river drainages; the Salween, Mae Klong, southern Peninsula, southeastern part, Chao Phraya and Mae Kong river systems (Vidthayanon et al., 1997). However, C. chitra has not been previously reported from anywhere other than the Mae Klong river system (Nutphand, 1990; Smith, 1931; Thirakhupt and van Dijk, 1994).

This study shows the discovery of extension range of C. chitra in Thailand's river system.

## Materials and Methods

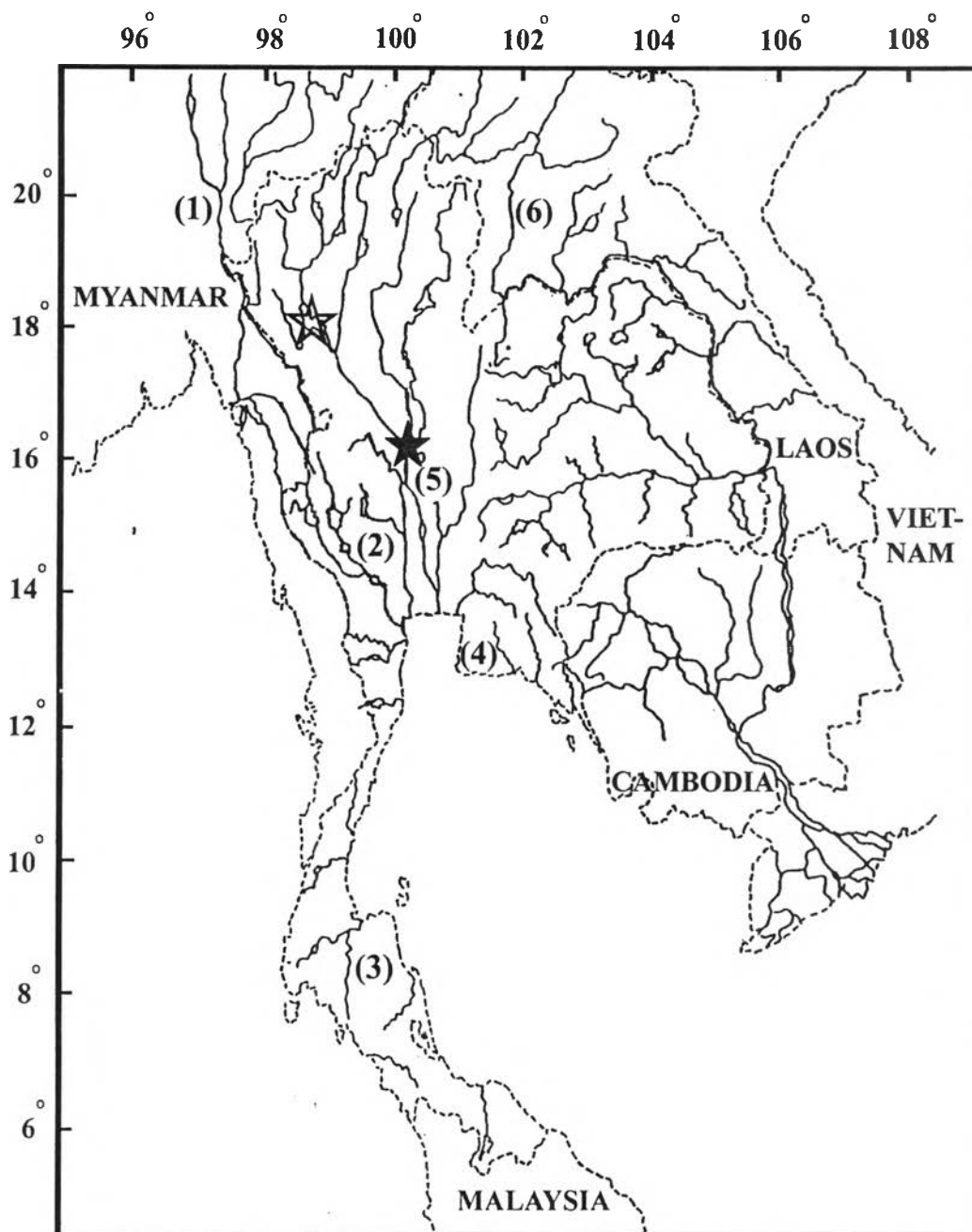
This study was conducted by boat surveys and by interviews with fishermen and local people along the Mae Ping River. The study area began at the mouth of Mae Ping River at Nakhon Sawan Province and extended to Mae Ping National Park, Lamphun Province, a distance of about 100 km. The data including size and locality of the live specimen and osteological specimens (skull and carapace) are shown below.

## Results

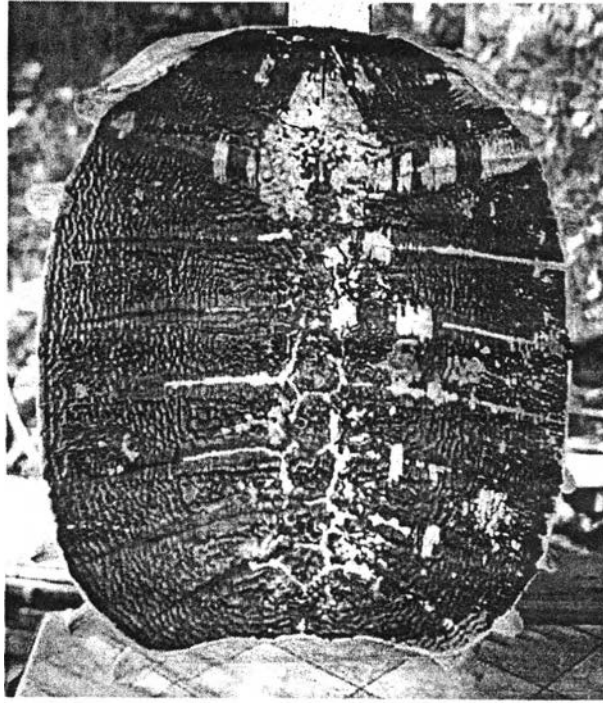
The habitat of C. chitra in this record was divided into two areas (Figure 5.1). The first is the area below Bhumipol Dam. In this area, one live male C. chitra was caught by the longline hook, usually used for Mystus spp., near the mouth of Mae Ping River at 15°43.020'N 100°08.632'E, Mueang district, Nakhon Sawan Province in June 1998. The hook was attached to its

leg. This live specimen was donated to Nakhon Sawan Inland Fisheries Research and Development Center and was later moved to Kanchanaburi Inland Fisheries Research and Development Center, Kanchanaburi Province on April 29, 1999 for the captive breeding program. The shell width, shell length and body weight were 66 cm, 76 cm and 44 kg, respectively.

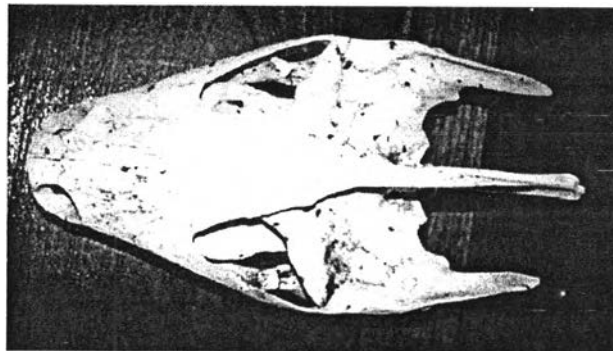
Other evidence of C. chitra in the Mae Ping River included four carapaces and one skull from the survey in November 2001 and in February 2002. All of these were found in the reservoir of upper Bhumipol Dam at different times. The first carapace with the skull (Figure 5.2) has been kept by a restaurant owner for more than 10 years. Its carapace width, carapace length, skull width and skull length were 61 cm, 66 cm, 13 cm and 27 cm, respectively. The second carapace (CUMZ (R) 2001.11.27, 1) was from a 90 kg C. chitra at Ban Pakveak, Sam Ngao District, Tak Province which was captured by a fisherman in 1987. Its carapace width and carapace length were 64 cm and 71 cm respectively. The third specimen (CUMZ(R) 2001.11.27, 2) was kept by a villager who bought it for food a few years ago. It was a juvenile with a carapace of 21.1 cm wide and 21.7 cm long. The fourth specimen (CUMZ(R) 2002.2.17, 1) was sold to a restaurant owner by a fisherman in 1997 and was reported to have been captured from Mae Toun, Mae Ramat District, Tak Province. It weighed about 11 kg and the carapace width and length were 27.5 cm and 29.1 cm respectively. At present, the last three specimens are deposited at the Chulalongkorn University Museum of Zoology, Bangkok.



**Figure 5.1** Six major river drainages in Thailand; (1) the Salween, (2) Mae Klong, (3) southern Peninsula, (4) southeastern part, (5) Chao Phraya and (6) Mae Kong river systems and the new record of *C. chitra* in Mae Ping River, upper Bhumpol Dam (open star) and below Bhumpol Dam (solid star).



a



b

**Figure 5.2** Carapace (a) and skull (b) of C. chitra in Mae Ping River.

## Discussion

Thirakhupt and van Dijk (1994) questioned why C. chitra remains restricted to the Mae Klong, apparently unable to reach the nearby and connected Tha Chin and Chao Phraya Rivers, and this remains a biogeographical mystery. This record may provide the answer that C. chitra did not only inhabit the Mae Klong river system but was once probably more common in the Chao Phraya river system as well. However, the apparent absence of C. chitra in the Tha Chino River is still not understood. Perhaps it was extirpated by human exploitation here before its presence was recognized by zoologists.

This record may be important for the conservation and management of this critically endangered species. An intensive survey on its population status and its breeding sites in the Mae Ping River is in progress. In addition, the study of other aspects of the biology and biogeography of this species is urgently needed.

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