

## Sighting of an Irrawaddy Dolphin Calf in the Bangpakong Estuary, Inner Gulf of Thailand

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The Irrawaddy dolphin (*Orcaella brevirostris*) is distributed discontinuously in coastal marine waters throughout Southeast Asia as well as in the estuaries and freshwater of some large rivers and lakes (DOLAR *ET AL.*, 2002; SMITH & HOBBS, 2002). In Thailand, Irrawaddy dolphin occur in Songkla Lake (PILLERI & GIHR, 1974; CHATRAPORNSYL *ET AL.*, 1996) and the Gulf of Thailand (MAHAKUNLAYANUKUL, 1996) although scarce in abundance. Indeed, in Songkla Lake it was reported as threatened by BEASELEY *ET AL.* (2003); SMITH & BEASLEY (2004), and critically endangered by REEVES (2008). In the Gulf of Thailand its status is listed as vulnerable and of special concern (REEVES *ET AL.*, 2008; IUCN, 2011). Population declines are generally attributed to habitat deterioration, conflicts with commercial fishers and failure to implement and enforce existing management regulations (BAIRD & MOUNSOUPHOM, 1994; SMITH & JEFFERSON, 2002; SMITH & BEASLEY, 2007)

A small population of Irrawaddy dolphin frequents the Inner Gulf of Thailand in an area of Bangpakong estuary and river that is subject to habitat deterioration, and conflicts with vehicular traffic and fishers (TONGNUNUI *ET AL.*, 2011). The present study documents observations of an Irrawaddy dolphin calf in the Bangpakong River estuary that may signal the beginning of a reversal in the population dynamics of this species.

**Methods.**—Sighting surveys were carried out within the estuary and lower regions of the Bangpakong River adjacent to Chachoengsao and Chonburi Provinces from November, 2009 to November, 2010 (Fig. 1). Observations were made from a boat on each of  $4 \pm 3$  days monthly for approximately  $10 \pm 2$  h/day between 0700 h and 1800 h. Dolphins were observed on the river's surface with binoculars (7x50 mm), and recorded with Nikon cameras, digital (models D100 and D80s and F90x, equipped with telephoto and wide lenses of 70–300, 80–400 and 28–105 mm, respectively). Adults and a dolphin calf were photographed with a Nikon camera D80 model with a 80–400 lens at a known distance of 30 m. Subsequently an object of 1 m in length was photographed from the same distance on the river and both frames printed at the same magnification. Lengths of dolphins were then estimated by comparing with an object of known length.

Body weight was calculated for the estimated calf length from a regression describing the length weight relationship for Irrawaddy dolphins in Mekong River (BEASLEY, 2007).

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**Results and discussion.**—An Irrawaddy dolphin calf was observed in Bangpakong estuary on 28 November, 2007, at 1334 h. (Fig. 2 A and B ). The dolphin calf was observed and photographed swimming with larger Irrawaddy dolphins that varied in number from 1 to 2. One dolphin, presumed to be the mother, maintained particularly close contact with the calf and occasionally gently nudged or possibly caressed the calf with her head and flippers. The calf was identified by 4 or 5 fetal folds on the neck, mid-body parts, and frontal caudal flukes, were obvious in this individual.

Total body length of calf was estimated at 0.9 to 1.0 m from the photographic images. Body weight for a calf of this length was calculated from BEASLEY'S (2007) regression to range from 8.9 to 12.1 kg. Reproduction by Irrawaddy dolphins and early care of calves seems likely to occur in the Bangpakong estuary and neighboring coastal areas of the Gulf of Thailand. Natives in this area report dolphin sightings most commonly from November to February in accord with our observations. Indeed, a local naturalist, Mr. Kleang, is reported to have observed and photographed a recently-born Irrawaddy dolphin in this estuary, supporting our contention that this be regarded an area of a special concern.

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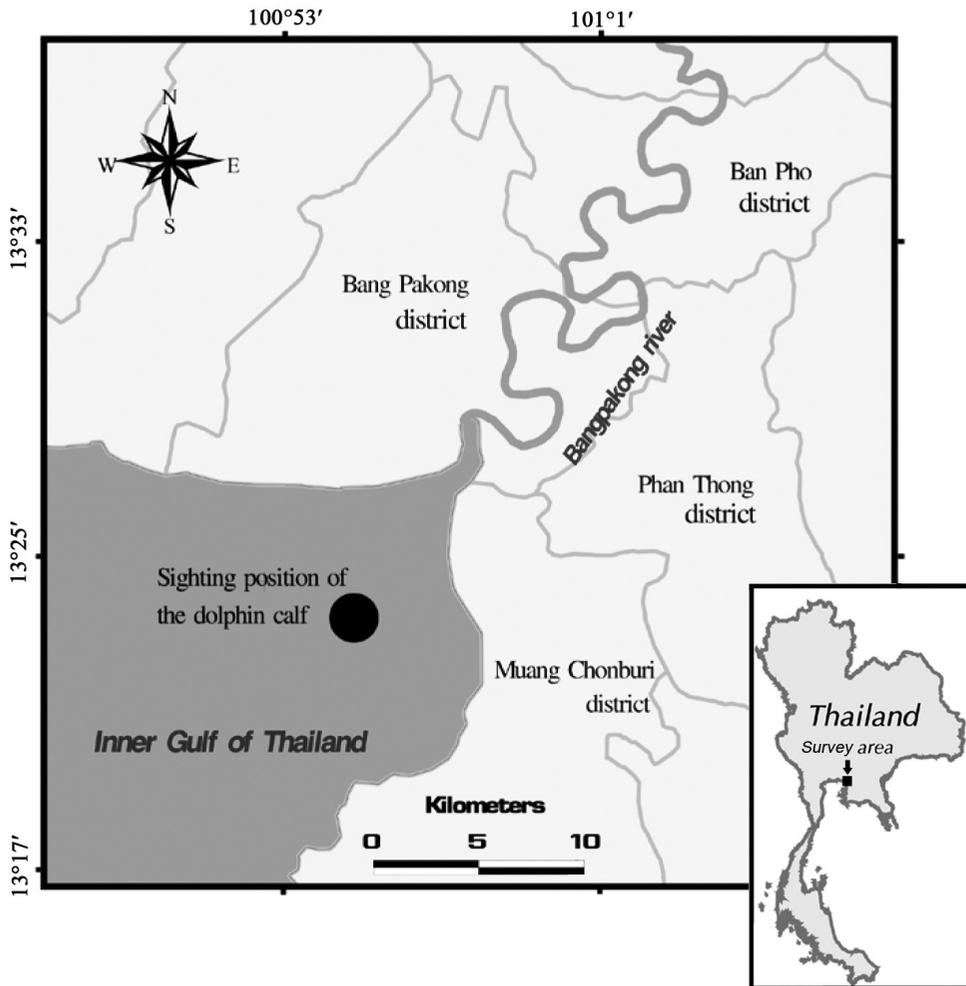


Figure 1. The survey area and location of sighting of the Irrawaddy dolphin calf.

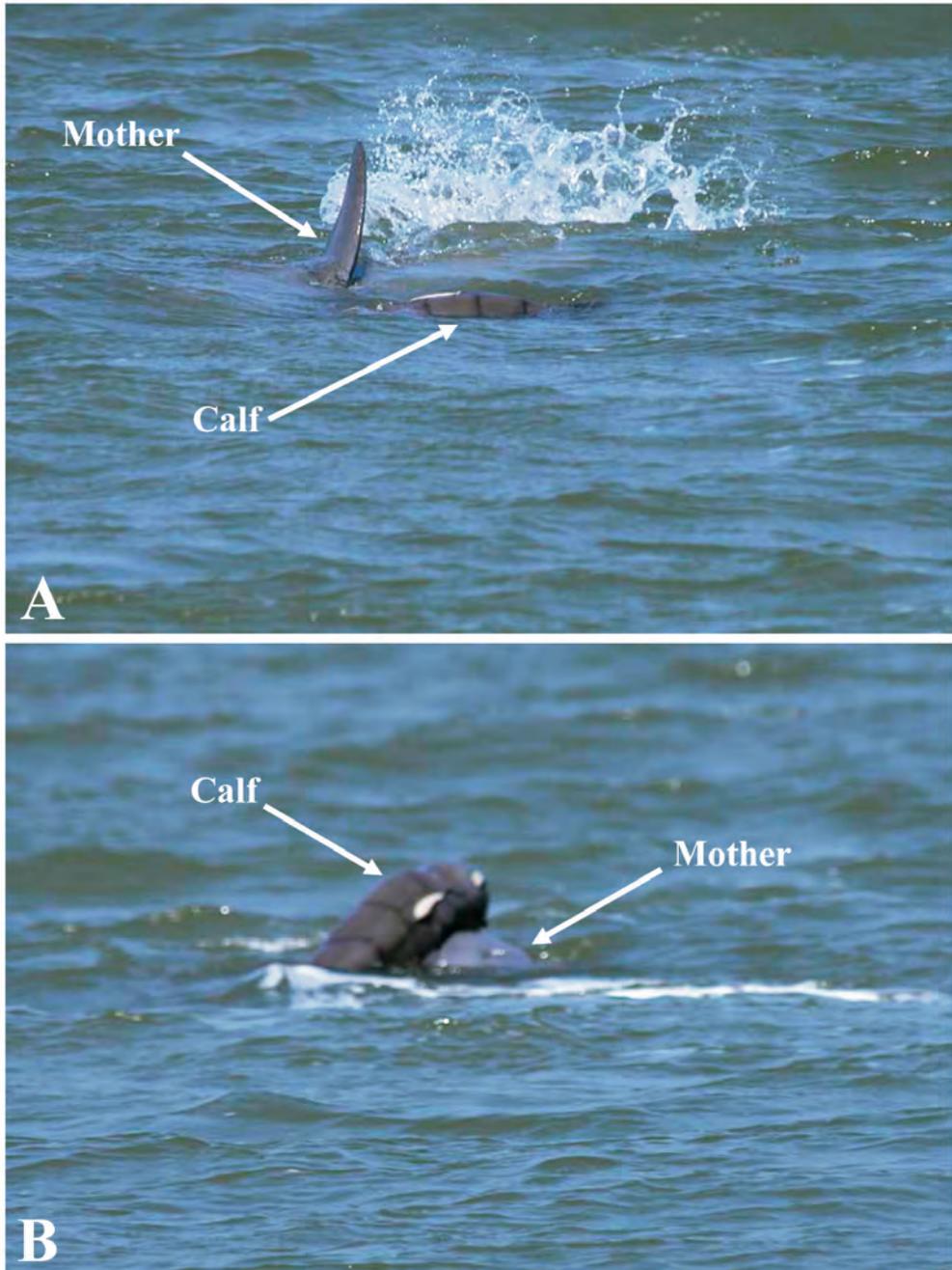


Figure 2. Presumed Irrawaddy dolphin mother and calf, A) calf swimming near its presumed mother. B) mother pushing the calf on its head. Note clear fetal fold on the calf's body.