

SAGAR DAHAL^{1*} AND DIBYA RAJ DAHAL¹

Trapping of fishing cat in Chitwan National Park, Nepal

The fishing cat *Prionailurus viverrinus* is Endangered with a decreasing population throughout its distribution range in South and Southeast Asia (IUCN Red list 2010). Ten live traps in a 200 m line transect were deployed near the Tiger Tops Tent Camp area in Chitwan National Park at the interval of 20 m. Two individual fishing cats were captured in March 2011. Regular fishing in the wetlands by local fishermen living nearby was identified as the major threat.

The fishing cat is an elusive animal, and there is no data about its population status neither in Chitwan National Park nor in any other area of Nepal. In different studies done by various organizations, it has been recor-

ded in Koshi Tappu Wildlife Reserve (P. Kasal, Himalayan Nature, pers. comm.), in Chitwan National Park, Shuklaphanta Wildlife Reserve, and Bardia National Park (National Trust for Nature Conservation).

The fishing cat is the second most common small cat in CNP with indeterminate status in the Terai (McDougal & Smith, 1984). Fishing cats are found within Nepal, India, Bangladesh, Sri Lanka, Cambodia, Bhutan, Java of Indonesia, Malaysia, Myanmar, Laos, China, Thailand, Vietnam and Pakistan (Mukherjee et al. 2010). However, its presence in Laos and Sumatra is doubtful (Duckworth et al. 2009, Sanderson 2009, Duckworth et al. 2010). The presence in Cambodia was recently confirmed by Royan (2009). In Nepal, it is still not listed as protected.

Here we report on the live capture of two fishing cats in Chitwan National Park, Nepal, during a small mammal survey.

Study area

The study area was within Chitwan National Park. The park is situated in south central Nepal, covering 932 km² in the subtropical lowlands of the inner Terai. The park consists of a diversity of ecosystems, including the Churia hills, Ox-bow lakes, and the flood plains of the Rapti River and Narayani River. The Churia hills rise slowly towards the east from 150 m to more than 800 m. The park shares its eastern boundary with the Parsa Wildlife Reserve. The Chitwan valley consists of tropical and subtropical forests. Sal forests and grassland cover 70 % and 20 %, respectively. There are more than 50 different species of grass, including the elephant grass (*Saccharum* spp), renowned for its immense height. It can grow up to 8 m. The park is home to more than 50 mammal species, over 525 birds, and 55 amphibians and reptiles (Department of National Park and Wildlife Conservation 2011).

Kasara Park Headquarter KPH and Tiger Tops Tented Camp TTTC areas were chosen for the survey. Three sites - forest, grassland and riverine/wetland area - near KPH and TTTC were surveyed.

Methods

A survey of small mammals in the field was done with an experimental design from 14 February to 16 March 2011. A series of three replicate line transects of 200 m length was laid out in grassland, forest and riverine banks of the study sites with the help of a Global Position System device (GPS) at KPH and TTTC area. Each replicate consisted of 10 trapping points. The distance between two consecutive trapping points was 20 m. One live trap was placed at each trapping point in the field. Havahart live traps of two



Fig. 1. Fishing cat live trapped on 10 March 2011 (upper photos) and 12 March 2011 (lower photo) in Chitwan National Park (Photos S. Dahal).

different sizes (32x10x12 inches and 24x7x7 inches) and local house rat traps were used randomly along the transect lines. These live traps have proved to be effective for mice, rats and shrews (Shrestha 1980). The traps were baited with a mixture of dry fish, coconut biscuit powder, apple pieces, grains and one day old chicken meat. The traps were then open for five consecutive days – so altogether 30 trapping days – and checked and emptied daily in the morning between 7:00 and 9:00. Traps were covered with dry leaves to provide camouflage and protection against the cold.

Results and Discussion

Two different individual fishing cats were caught on 10 and 12 March 2011 (24th and 26th trapping night; Fig 1a, b) at an elevation of 127 m (27°31' 40.0" N/ 84°13'28.5" E and 27°31'39.4" N/, 84°13'28.5"E) at TTTC area. They were identified based on the coat colour and body size. The second cat caught was darker and smaller than the first one. The traps were set in a grassland area near the marshland formed by the overflow of the Rheu River (Fig. 2). This marshland is situated between the edge of forest and the beginning of the grassland. Besides the fishing cat, seven different species of mammals were caught during the survey: house rat *Rattus rattus*, little Indian field mouse *Mus booduga*, Indian crested porcupine *Hystrix indica*, large Indian civet *Viverra zibetha*, small Indian civet *Viverricula indica*, Indian grey mongoose *Herpestes edwardsii*, and small Asian mongoose *Herpestes javanicus*. Due to inexperience of handling small cats, both individuals of fishing cat were immediately released after taking the photographs to minimize any harm, without taking any morphometric measurements. One day old chicken meat was used as bait in the traps which were effective. This watershed remains with water all along the year according to the staff of the TTTC. Water birds like White Breasted Waterhen *Ammaurornis phoenicurus* and Greater Cuckoo *Centropus sinensis* were abundant in and around the watershed area. Although the fishing cat is the second most common small cat in CNP, only very few observations with exact location within the Park have been reported.

Fishing cats are facing threats by local fisherman (Majhis). The village Pandav Nagar with the largest population of Majhis is at one and a half hour walking distance from the trapping sites. Villagers frequently visit



Fig. 2. Habitat at trapping sites in Chitwan National Park (Photo S. Dahal).

these wetland sites for fishing and disturb the habitat. Human presence in the wetlands decreases the number of prey for the cat. However, we did not find any evidence of a fishing cat killed by the villagers. No other wetland in and around Chitwan National Park have been assessed, so neither the status of the fishing cat nor the threats to them are known for these sites.

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¹ Small Mammals Conservation and Research Foundation, New Baneshwor, Kathmandu, Nepal

*<sagardahalinktm@gmail.com>