

## SHORT NOTE

### FIRST RECORD OF AN ELUSIVE PREDATOR: THE SMOOTH-COATED OTTER (*Lutrogale perspicillata*) FROM VADUVOOR BIRD SANCTUARY, THIRUVARUR DISTRICT, TAMIL NADU, SOUTHERN INDIA

Kanagasabai ARIVOLI<sup>1</sup>, Kannadasan NARASIMMARAJAN<sup>2\*</sup>

<sup>1</sup>District Forest Officer, Tamil Nadu Forest Department, Thiruvarur District,  
Pin- 610 004 Tamil Nadu, India.

<sup>2\*</sup>Department of Zoology, Madras Christian College, East Tambaram, Chennai,  
Pin- 600 059 Tamil Nadu, India. e-mail: [wildlife9protect@gmail.com](mailto:wildlife9protect@gmail.com)



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**Abstract:** Vaduvloor Bird Sanctuary is one of the oldest bird sanctuaries in the state of Tamil Nadu, spanning over the area of about 128.10 ha. During March and June 2020 camera trap survey was carried-out in the sanctuary to examine the nocturnal animals and their movements. We deployed eight trap cameras randomly within the bird sanctuary. On 14<sup>th</sup> and 15<sup>th</sup> March 2020 about 1.30 AM a family of Smooth-coated otter was captured comprising of six adult individuals and no cubs were seen. Till date no otter has been reported from the Vaduvloor Bird Sanctuary. This report presents the first ever information on the new distribution range of the Smooth-coated otters from this region, but extensive surveys are necessary to generate reliable abundance estimates and distribution patterns for otters in this region and neighboring water bodies.

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**Keywords:** Smooth-coated otter; Vaduvloor Bird Sanctuary; Camera trap; Conservation

## INTRODUCTION

Three species of otters are found in India, namely the *Lutrogale perspicillata* (Smooth-coated otter), *Lutra lutra* (Eurasian otter) and *Aonyx cinerea* (Oriental small-clawed otter) (Foster-Turley and Santiapillai, 1990; Hussain, 2008). Throughout India the existing populations of the three species of otters and their habitat have not been surveyed systematically and hence not much information is available on their status (Hussain, 2008). All three species of otters have been reported from the Southern Indian part of the Western Ghats (Shenoy, 2003) but no records exist from the coastal districts of Tamil Nadu.

The Smooth-coated otter (*Lutrogale perspicillata*) is listed as ‘Vulnerable’ under IUCN Redlist (IUCN 2019). The animal lives in water bodies such as streams, rivers, lakes and dams (Kruuk, 1987), and are most vulnerable to local extinctions, since the most important threat to the survival of otter populations are the degradation of clean aquatic ecosystems (Foster-Turley, 1992). Smooth-coated otters are thought to be extinct in countries like Laos and India has a steadily declining population according to IUCN status reports (Shenoy, 2003). Other major threats to otters in India include illegal trade (Meena, 2002), reduced prey-availability persecution by fishermen and water pollution (Mason and MacDonald, 1986). At high trophic, levels otters are victim to the accumulation of contaminants in the food chains (Foster-Turley, 1992). Hence this species requires immediate conservation attention. No previous studies were conducted on otter conservation in Vaduvor Bird Sanctuary and this is the first ever otter report from this region.

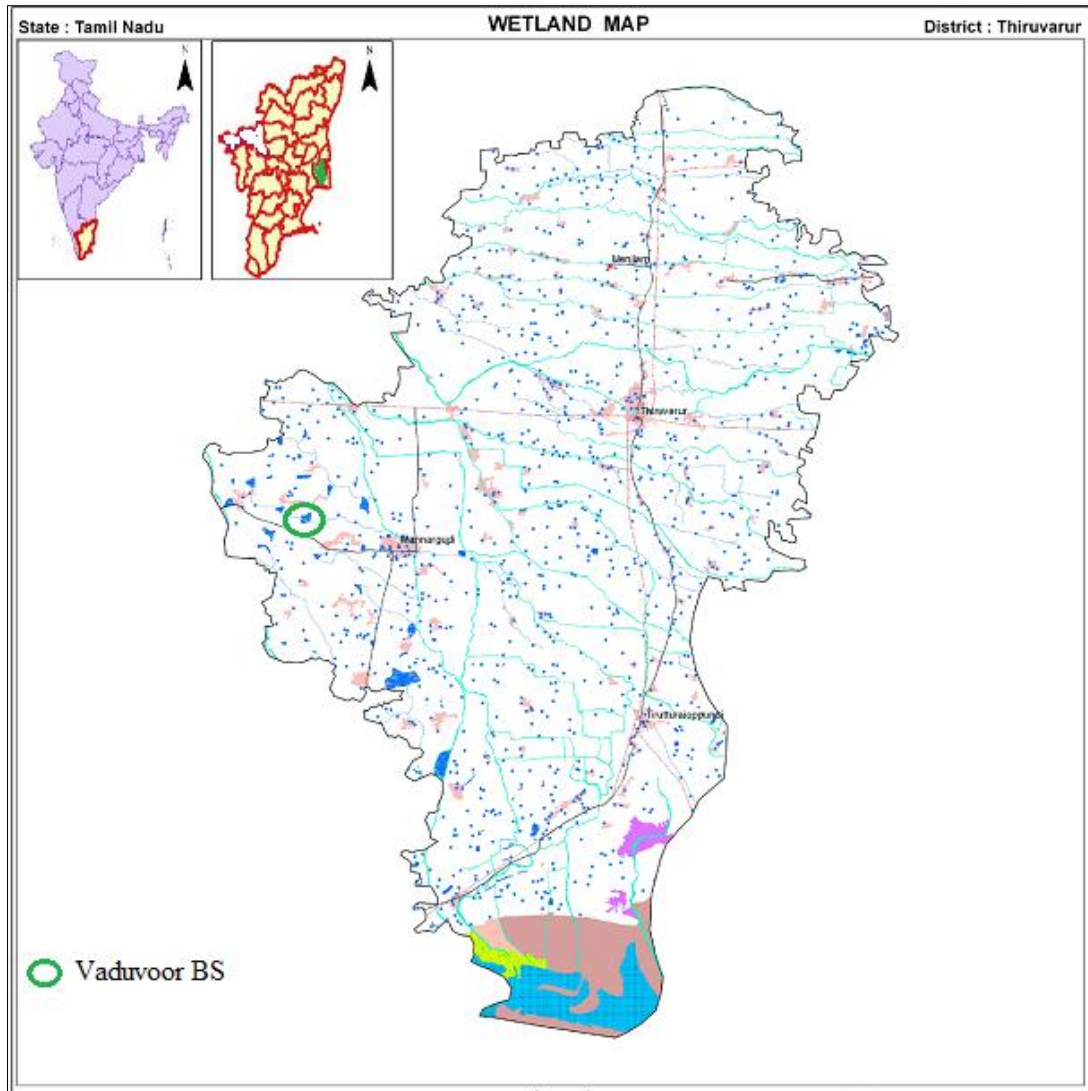
## STUDY AREA

Vaduvor Bird Sanctuary (10°42'9.39"N latitude and 79°19'4.94"E longitude) is located in Vaduvor Agraharam Panchayat of Mannargudi Taluk of Tiruvarur district, Tamil Nadu (Fig. 1). The sanctuary is basically an irrigation tank that receives water from Cauvery basin and North East monsoon from August to December and it remains dry from April to June (Subramanya 2005). The tank is also called as Sri Kodandaramaswami Eri. The Sanctuary bounded by Kondaiyur village in North, Vaduvor thenpathi village in South, Vaduvor agraharam village in East and Neivasal village in West. The Kannanar and Vaduvor canals are the main source of water to the wetland in addition to northeast monsoon. The area receives more than 384 mm rainfall annually and climate varies from 24 °C to 38 °C (Wetland Management Report, 2013).

The sanctuary covers an area of 128.10 ha and was created in 1999. The sanctuary attracts more than 80 species of wetland birds like Oriental white ibis (*Threskiornis melanocephalus*), Painted stork (*Mycteria leucocephala*), Spot-billed pelican (*Pelecanus philippensis*), Northenpintail (*Anas acuta*), cormorants, teals and herons among others (Subramanya 2005). The sanctuary has been identified as one of the Important Bird Areas (IBA) of India by Indian Bird Conservation Network. The sanctuary is rich in aquatic flora, with submerged, floating and emergent vegetation such as Pink morning glory (*Ipomia carnea*) and common water hyacinth (*Pontederia crassipes*). The vegetation of the sanctuary is mainly composed of *Prosopis juliflora*, *Azadirachta indica*, *Tamarindus indica*, including planted *Acacia nilotica* by the forest department under the Sanctuary Management Programme (Subramanya 2005). The area surrounding the Vaduvor Bird Sanctuary is densely populated with the human population density being 437.4 person/km<sup>2</sup>. A large population depends on the sanctuary for their livelihood thus making biodiversity conservation a highly difficult task.

## METHODS

We surveyed the lake part of the sanctuary randomly using automatically triggered trap cameras (Cuddeback20MP X-Change Color Day and Night Model 1279 Game Hunting Camera). We deployed 8 trap cameras in random locations within the bird sanctuary during March and June 2020. The survey mainly focuses to study the nocturnal animal movements.



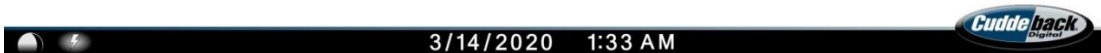
**Figure 1.** Vaduvor Bird Sanctuary as seen in February 2020; Thiruvarur District, Tamil Nadu, Southern India.

## RESULTS

On 14<sup>th</sup> and 15<sup>th</sup> March 2020 an otter family was captured during the camera trap survey between 1.17 AM and 1.30 AM and the family consisted of six individuals (Figure 2, 3 and 4). This report presents the first ever otter information on the distribution range in the region. Further survey is ongoing to enumerate the movement pattern and resource use pattern of otters. Otters could possibly come from the Kannanar River. This river has many check dams which hold the water during the summer season. Two third of the tank has water up to the depth of 6 feet to 15 feet remaining area of North and Western parts has densely vegetated by *Acacia nilotica* and *Ipomia carnea*. Apparently, nearby fish farms are the vital source of food for them during the dry seasons but, no conflict has been recorded between the otters and the farm owners. Further studies will help the concern department and other stakeholders to protect the vulnerable otters in this region.

## DISCUSSION

Historically Tamil Nadu is water dearth state in India. So, safeguarding existing wetland ecosystems are fundamental for species and people. Wetlands are open ecosystems vulnerable to degradation from terrestrial land uses. The potential of a wetland top predator such as the Smooth-coated otter (*Lutrogale perspicillata*) as a 'proxy' for conservation of wetland habitats has been least studied in India. Being aquatic carnivore, the intactness of land water continuum is critical for survival of otters. Increasing trends of global warming and developmental activities are impacting the wetland habitat thereby losing their associated species in many parts of the country. So, preserving the wetland ecosystems using otters as flagship species is an advisable strategy.





**Figure 2-4.** Camera trap pictures of Smooth-coated otters captured from Vaduvor Bird Sanctuary, Tamil Nadu on 14<sup>th</sup> and 15<sup>th</sup> March 2020.

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## RÉSUMÉ

### PREMIER ENREGISTREMENT D'UN PRÉDATEUR DISCRET, LA LOUTRE À PELAGE LISSE (*Lutrogale perspicillata*) DANS LA RÉSERVE NATURELLE ORNITHOLOGIQUE DE VADUVOOR, DISTRICT DE TIHRUVARUR, TAMIL NADU, AU SUD DE L'INDE

La réserve naturelle ornithologique de Vaduvloor est l'une des plus anciennes réserves ornithologiques de l'État du Tamil Nadu, s'étendant sur une superficie d'environ 128,10 ha. En mars et juin 2020, une enquête a été réalisée dans la réserve naturelle à l'aide de pièges photographiques pour examiner les animaux nocturnes et leurs mouvements. Nous y avons installé huit pièges photos de manière aléatoire. Les 14 et 15 mars 2020, vers 1h30 du matin, une famille de loutres à pelage lisse a été observée dont six individus adultes et aucun loutron. Jusqu'à ce jour, aucune loutre n'avait été signalée dans la réserve naturelle ornithologique de Vaduvloor. Ce rapport présente les toutes premières informations sur la nouvelle aire de répartition de la loutre à pelage lisse de cette région, mais des relevés approfondis sont nécessaires afin d'avoir des estimations fiables de l'abondance et des modèles de distribution des loutres dans cette région et les plans d'eau voisins.

## RESUMEN

### PRIMER REGISTRO DE UN PREDADOR ELUSIVO: LA NUTRIA LISA (*Lutrogale perspicillata*) EN EL SANTUARIO DE AVES VADUVOOR, DISTRITO DE THIRUVARUR, TAMIL NADU, INDIA DEL SUR

El Santuario de Aves Vaduvloor es uno de los más antiguos del estado de Tamil Nadu, ocupando una superficie de 128.10 ha. Durante Marzo y Junio de 2020 llevamos a cabo un relevamiento con cámaras-trampa en el santuario para examinar los animales nocturnos y sus movimientos. Desplegamos ocho cámaras-trampa al azar en el santuario. El 14 y 15 de Marzo de 2020, alrededor de la 1.30 AM, se capturó (fotográficamente) una familia de nutria lisa, compuesta de seis individuos adultos; no se vieron crías. Hasta la fecha, no se habían reportado nutrias lisas del Santuario de Aves Vaduvloor. Este informe presenta la primera información existente sobre la distribución de nutria lisa en esta región, pero se necesitan relevamientos extensivos para generar estimaciones de abundancia y patrones de distribución confiables, para las nutrias de esta región y cuerpos de agua vecinos.