

SHORT NOTE

THE NECESSITY OF MONITORING AND CONSERVATION OF SMOOTH-COATED OTTERS (*LUTROGALE PERSPICILLATA*) IN NON-PERENNIAL RIVERS OF SOUTH INDIA

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Abstract: Perceptions of Smooth-Coated Otters are different in the various areas of their distribution. In some parts of the world, the species is regarded as deities, while in others parts they have been loathed as vermin. Smooth-coated Otters have the widest distribution of otter species in the Indian sub-continent, but face both lack of information and lack of attention for conservation. As the distribution of this top carnivore species depends on semi-aquatic habitat, it faces immense threats. In particular, groups or families that inhabit non-perennial river systems face severe threats and are currently data deficient. We have recorded one such active family of Smooth-coated Otter on a non-perennial river system: the River Cauvery in south India. There is a strong need to take steps to study and conserve for the population inhabiting areas like this. The IUCN Otter Specialist Group also emphasize the need for good fundamental ecological research for every single species of otter.

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INTRODUCTION

Otters are semi-aquatic mammals belonging to sub-family Lutrinae within the family Mustelidae. They are often closely associated with riparian habitats and marine systems (Prakash et al, 2012). Otters occur in five out of seven continents of the world excluding Australia and Antarctica (citation). Otters play a significant role in the ecosystems as both carnivores and meso-carnivores occupying important positions in foodwebs (Roemer et al, 2009). In systems where top carnivores are scarce, such as the riparian ecosystems, meso-carnivores like otters play a crucial role in the food web and community stability by exerting top-down control on their prey species (Roemer et al, 2009). Loss of meso-carnivores like otters could lead to trophic cascade and other devastating effects on the ecological communities (Estes et al, 2011). Notwithstanding their crucial role in the ecosystem, ironically, many species of otters have been witnessing massive range and population declines (Gomez and

Bouhuys, 2018). The IUCN has categorized seven out of 13 extant species of otters in the globe as endangered. The overarching threats facing otters are habitat loss, depletion of fish and other prey (Anoop & Hussain, 2004) and direct hunting for their pelts (Duckworth & Hill 2008, Shepherd and Nijman 2014).

Considering their endangered status, there is an urgent need to formulate conservation strategies to secure remnant otter populations across their range (Hussain and Choudhury, 1997). Even simple indices such as occupancy and distribution of otters would be hugely helpful in conservation planning. While systematic distribution surveys are crucial, it is also important to report verified presence of otters in “new” areas from observations etc. from ‘new’ areas, and for these to be followed up with proper surveys. This approach is particularly relevant in the case of species such as the smooth-coated otter (*Lutrogale perspicillata*), whose range falls largely outside designated protected areas in India.

The smooth-coated otter is one amongst the many otter species listed as vulnerable, as their populations have reportedly suffered over 30% decline during the last 30 years (Pacifici et al., 2013; Shenoy et al., 2006). Smooth-coated otters are highly social and form large family parties to feed on fishes, shrimps, crustaceans, oysters, invertebrates and even birds (Duplaix and Savage, 2018). They occur in a range of habitats that include placid waters, even paddy fields, and floodplains along large river systems, lakes, peat swamp forests, mangroves and estuaries (Melisch and Foster-Turley, 1996). Smooth-coated otters have a wide distribution in India. However, systematic assessment of their habitat and populations is scarce (Hussain and Choudhury, 2007). Natural history observations suggest that smooth-coated otters require thick riverine vegetation to hide, make dens and raise their young, so their habitat occupancy depends on such dense riverine vegetation, protection from disturbance and prey availability.

Recently, in January 2019, we recorded a group of smooth coated otters in the River Mudikondan (Fig. 1 and 2), which is a non-perennial tributary of the River Cauvery flowing for about 50 km from its source to the coast.

Like the River Mudikondan, there are many other tributaries of River Cauvery, most of which are non-perennial and flow only during the release of water from the major reservoirs built upstream in the large river, during the period from June to January. The flow in these tributaries is highly regulated by dams and weirs. In addition to the sighting record that we report here, there is also a plethora of secondary information on sightings of smooth-coated otters reported from other tributaries in the region. For example, quite recently, Kolappan (2018) reported the presence of smooth-coated otters in the Vaduvor Bird Sanctuary (a Protected Area), which is around 30 km from the site that we report on in this article.

It is noteworthy that according to the Global Biodiversity Information Facility (GBIF), smooth-coated otters were not reported from any of the tributaries of the River Cauvery, and our reporting thus assumes significance. The site where we recorded the presence of smooth-coated otters in this article is unprotected, as is the case for most of the tributaries of the Cauvery river system. There is, therefore, an urgent to study, monitor and conserve these fragile populations, before these habitats further shrink and fish stocks deplete (Duplaix and Savage, 2018) making the river unsuitable for supporting otters. It is widely believed by the scientific community that the decline of otter species may be occurring more rapidly than it is generally perceived and thus, ex-situ conservation strategies are increasingly being recommended (IUCN Otter Specialist Group).

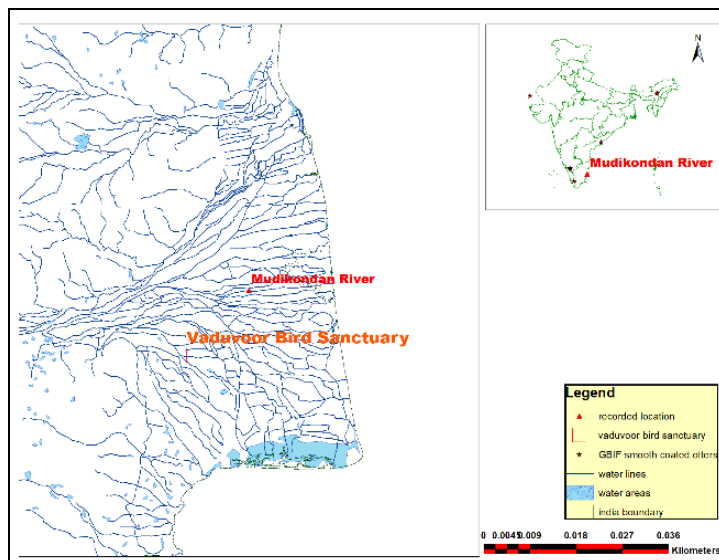


Figure 1. Map showing Location of smooth-coated otter sighting in the River Mudikondan, a distributary of the River Cauvery in South India.



Figure 2. Smooth-coated otter photographed in River Mudikondan in South India.

Being large mammalian predators, otters are generally considered to be tolerant of a wide range of habitat conditions (Chanin, 2003). However, identifying existing habitats and securing them is a pre-requisite for the long-term conservation of species like smooth-coated otters. Generally otters have wide linear home ranges. Their occurrence in human-dominated areas adds to all sorts of complexities to their conservation. Based on authentic sighting locations, it is possible use robust, intensive and flexible sampling techniques such as adaptive-cluster sampling to generate an informative distribution map.

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RÉSUMÉ

NÉCESSITÉ DE MONITORER ET PROTÉGER LES LOUTRES À PELAGE LISSE (*Lutrogale perspicillata*) DANS LES RIVIÈRES INTERMITTENTES DU SUD DE L'INDE

La perception des loutres à pelage lisse est différente selon les zones de répartition. Dans certaines parties du monde, l'espèce est considérée comme une divinité, alors que dans d'autres, elles ont été détestées comme la vermine. Les loutres à pelage lisse ont la plus large distribution dans l'aire de répartition du sous-continent indien, mais elles font face à la fois au manque d'informations et au manque d'attention porté à leur conservation. Étant donné que la distribution de cette espèce top carnivore dépend d'un habitat semi-aquatique, elle fait face à des menaces immenses. En particulier, le groupe ou famille qui habite les systèmes fluviaux intermittents est confronté à une menace grave et au manque de données. Nous avons observé une telle famille active de loutre à pelage lisse issue d'un système fluvial intermittent de la rivière Cauvery, dans le Sud de l'Inde. Il est urgent de prendre des mesures pour étudier et protéger la population vivant dans cet habitat. Le groupe de spécialistes des loutres de l'IUCN souligne également la nécessité d'une bonne recherche écologique fondamentale sur chaque espèce de loutre.

RESUMEN

NECESIDAD DE MONITOREAR Y CONSERVAR LA NUTRIA LISA (*Lutrogale perspicillata*) EN RÍOS NO-PERMANENTES DEL SUR DE INDIA

Las percepciones sobre las Nutrias Lisas son diferentes en distintas áreas de su distribución. En algunas partes del mundo, la especie es una deidad, mientras que en otras han sido detestadas como plagas. Las Nutrias Lisas tienen su distribución más amplia en el sub-continente Indio, pero se enfrentan tanto a una falta de información como de atención para su conservación. Como la distribución de este carnívoro depende de hábitats semi-acuáticos, enfrenta inmensas amenazas. En especial, los grupos o familias que habitan los sistemas de ríos no-permanentes enfrentan severas amenazas, y son deficientes en datos. Hemos registrado una de tales familias activas en un sistema de ríos no-permanentes vinculado al río Cauvery, sur de India. Hay una necesidad extrema de dar pasos para estudiar y conservar la población que vive en este hábitat. El grupo de especialistas en nutrias de la IUCN, también, enfatiza la necesidad de buena investigación ecológica básica en todas las especies de nutria.