

**BORNH****Bulletin of
Regional
Natural History****Formerly Bollettino della Società dei Naturalisti in Napoli**

Updates on the presence of the Eurasian otter, *Lutra lutra* in the SAC/SPA "Area delle Gravine" IT9130007 and first sighting in the Oasis "Gravina di Laterza"

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DOI <https://doi.org/10.6093/2724-4393/10258>

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Conflict of Interest: The
authors declare that they
have no conflict of interest.

Financial Disclosure

Statement: The authors
declare that no specific
funding was received for
this work.

Submitted: 10 Mar. 2023

Revised: 13 July 2023

Accepted: 18 July 2023

Published: 02 Aug 2023

Associate Editor: Giovanni
Scillitani

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Abstract

The Eurasian otter is irregularly distributed in Southern Italy. In Apulia Region presence data are known mostly for the river basins of the Tavoliere delle Puglie, while in the province of Taranto only sporadic signs of presence have been documented in the last decade. Here we report of the presence of the otter in the Gravine Area in 2021 using camera trapping and in the area of LIPU Oasis "Gravina di Laterza", one of the most important and characteristic sites of the whole Gravine Area, in which in 2022 three different individuals were observed.

Keywords: *Lutra lutra*, Gravine, Laterza, Apulia

Riassunto

La lontra è distribuita irregolarmente nel centro e nel sud Italia. I dati di presenza per la regione Puglia provengono per lo più dai bacini fluviali del Tavoliere, mentre nella provincia di Taranto sono stati documentati nell'ultima decade solamente sporadici segni di presenza. Il presente contributo riporta la presenza della specie all'interno della ZSC/ZPS "Area delle Gravine" nel 2021 mediante fototrappolaggio, e di osservazioni di tre individui nel 2022 nel territorio dell'Oasi LIPU della Gravina di Laterza, uno dei siti più importanti e caratteristici di tutta l'Area delle Gravine.

Parole chiave: *Lutra lutra*, Gravine, Laterza, Puglia.

How to cite

M. Marra, N. Magaletti, V. Giacoia, G. Luce (2023). Updates on the presence of the Eurasian otter, *Lutra lutra* in the SAC/SPA "Area delle Gravine" IT9130007 and first sighting in the Oasis "Gravina di Laterza". Bulletin of Regional Natural History (BORNH), Bollettino della Società dei Naturalisti in Napoli. Vol. 3, n. 2, pp. 1 - 6 ISSN: 2724-4393.

Introduction

The Eurasian otter, *Lutra lutra* is an important conservation emergency at European level. It is listed as Near Threatened by the International Union for Conservation of Nature (Loy et al., 2023), and it is included in Appendix II of Berne Convention (1979), in Annexes II, IV of Habitat Directive (92/43/CEE) and also in CITES Annex A (Temple & Terry, 2007). In Italy, the species has been protected since 1971 with a Ministerial Decree, while the prohibition of killing and the protection status were subsequently sanctioned with National Law 968/1977. Currently, the otter is given the status of a particularly protected species under the law of 11 February 1992 n.157 (Panzacchi et al., 2011). *L. lutra* is a top predator in freshwater habitats and consequently can play an important role in the functioning and structuring of the ecosystems (Buglione et al., 2020a). As in many polygynous species, males defend a territory that typically overlaps the area of activity of one or more reproductive females (Erllinge, 1968). The activity areas are marked through the deposition of spraints, sometimes covered by gelatinous anal secretions, in given places such as on trunks protruding from the water, on outcropping rocks or under bridges (Prigioni et al., 1997). The otter is present in many areas of Eurasia with a dotted distribution. A field survey carried out in Italy in 1980s evidenced that the most numerous nuclei were located in the central-souther

areas (Macdonald & Mason, 1983; Cassola, 1986; Bolinesi et al., 2019), while it was almost extinct in the central-northern Italy (Reggiani et al., 2001; Spagnesi et al., 2000). In Apulia, the presence of the species has been confirmed in many areas (Loy et al., 2018), in particular, in the basin of the Ofanto river, in the Fortore river, in the Carapelle stream from 2007 onwards (Cripezzi et al., 2001; Gioiosa et al., 2008; Marrese et al., 2014) and in other areas of the Tavoliere delle Puglie (Giovacchini et al., 2018; Gaudiano et al., 2023). In the province of Taranto, some dead individuals were found near the area of Mar Piccolo (Buglione et al., 2020b) and at the mouth of Lato river (2022). In this paper we update the knowledge on the status of the otter in the province of Taranto, especially in the SAC/SPA "Area delle Gravine".

Materials and Methods

The study area is included in the SAC/SPA IT9130007 called "Area delle Gravine" (Fig. 1), which falls within the Regional System for the Conservation of Nature in Apulia (L.R. 19/97) in line with the Community directives of the Natura 2000 Network (Habitat Directive 92/43 EEC; Bird Directive 79/409, updated 2009/147/EC). It extends over an area that includes part of the Province of Taranto, touching the municipalities of Statte, Crispiano, Massafra, Mottola, Palagianello, Castellaneta, Laterza and Ginosa, with their respective furrows, located along the Ionian arch up to the border with Basilicata.

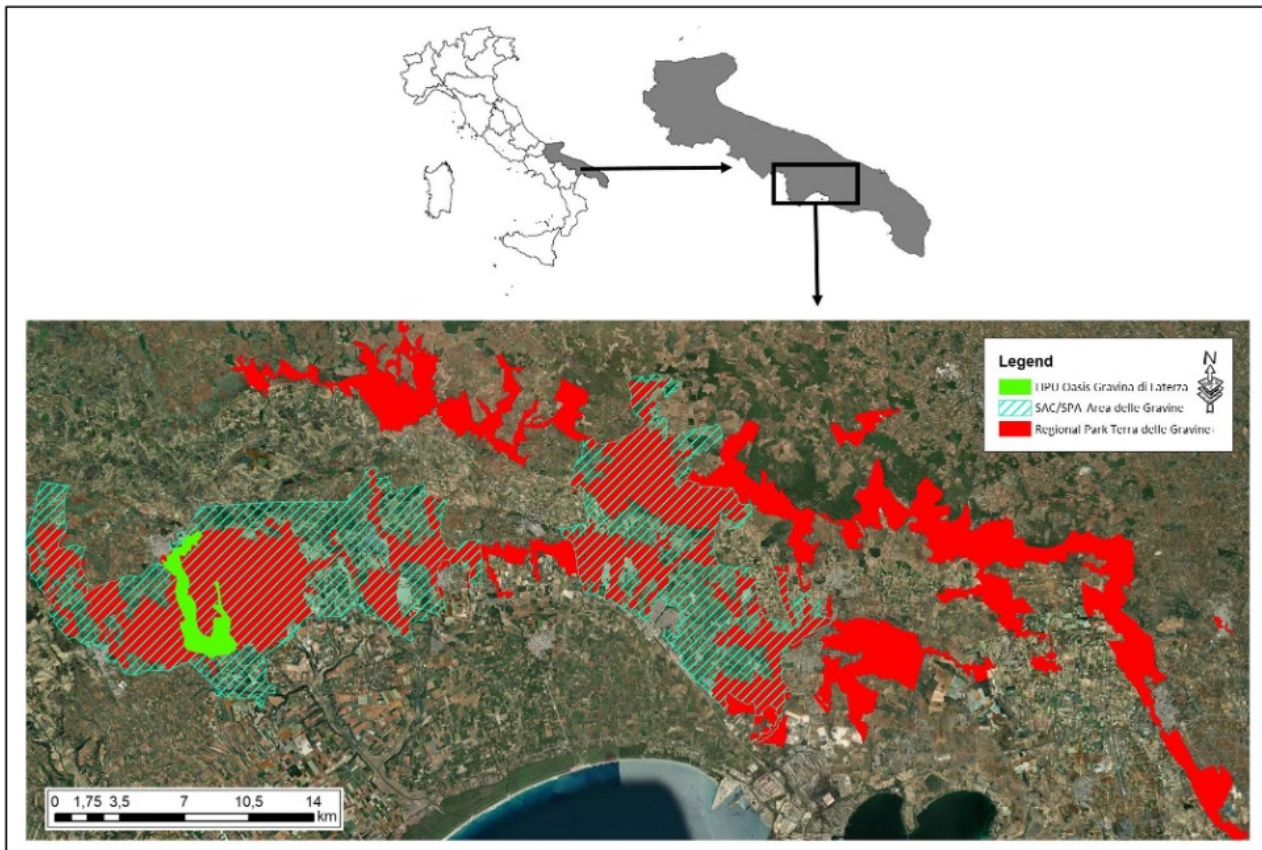


Figure 1: Study area.

Furthermore, part of these territories is included in the Natural Regional Park Terra delle Gravine, over about 25000 hectares, established by the Apulia region with Regional Law 18/05 in December 2005 (modified with Regional Law 6/2011). The SAC/SPA includes the LIPU Oasis of "Gravina di Laterza", covering approximately 870 hectares, established in 1999 thanks to a collaboration agreement between the Province of Taranto, the Municipality of Laterza and the LIPU (Lega Italiana per la Protezione degli Uccelli - Italian League for Bird Protection). Presence data were collected *ad libitum*, during monitoring actions dedicated to other taxa (dragonflies & damselflies and birds) from May 2021 to September 2022. The May 2021 observation (spraint) made in the SAC/SPA "Area delle Gravine" (but outside LIPU Oasis of "Gravina di Laterza") was followed by a small photo-

trapping session and a transect-method assessment. The transect method was applied only in this case to verify the actual persistence of river rod use both upstream and downstream of the photo-trapping point.

The data collected in "Gravina di Laterza" were obtained during a bird monitoring session from favourable fixed points (Gilbert et al., 2011), and the presence was proved by a photo shoot.

Results and discussion

In May 2021 in the SAC/SPA "Area delle Gravine" some probable otter spraints were observed. A camera trap was placed near the outcropping rock on which the spraint was found to confirm the effective presence of the mustelid. Indeed, on 11 May 2021 the animal was camera-trapped (Fig. 2). In



Figure 2: Otter adult camera-trapped. Photo by Marra M. & Luce G.

September 2021, a single transect of 1800 m along the watercourse was carried out to check for spraints. During sampling, 12 spraints were surveyed and collected (6,6 spraints/km), which will be analyzed in future work.

In September 2022, during a monitoring by observation from favourable fixed points, three individuals were observed for the first time in LIPU Oasis "Gravina di Laterza" (Fig. 3).

The presence of the otter in the SAC/SPA "Area delle Gravine" is very important, since the area is closely connected to the Ionian Arc by various hydrographic networks, which therefore represent important corridors between the coastal strip and the hinterland, particularly with the adjacent Lucanian watersheds where the species was previously recorded (Loy et al., 2015; Panzacchi et al., 2021, Prigioni et al., 2007). On the coastal strip several finds of carcasses are recorded, and spraints were observed in August 2021 on the Tara River (Marra, pers.

obs.). The presence of the species is most likely linked to the good flow of the Tara River and the consequent optimal trophic availability (especially fish). Indeed, Ruiz-Olmo (1995) verified that the abandonment by otters of several Mediterranean rivers that dry up or have intermittent flows is due to the death of large numbers of fish during dry periods. The otter adds to several other species present on the site and included in the various Directives of Community interest, like the Eurasian Eagle-Owl *Bubo bubo* (L., 1758), the Lanner Falcon *Falco biarmicus* Temminck, 1825, the Short-Toed Snake-Eagle *Circaetus gallicus* (Gmelin, 1788), the Black Stork *Ciconia nigra* (L., 1758), the Leopard Snake *Zamenis situla* (L., 1758) and the Apennine yellow-bellied toad *Bombina variegata pachypus* (Bonaparte, 1838). The "Gravina di Laterza", in fact, is one of the best-preserved places in the arc of the Ionian Gravine, thanks also to the LIPU Oasis, instituted about twenty years ago, which contributes to the conservation of

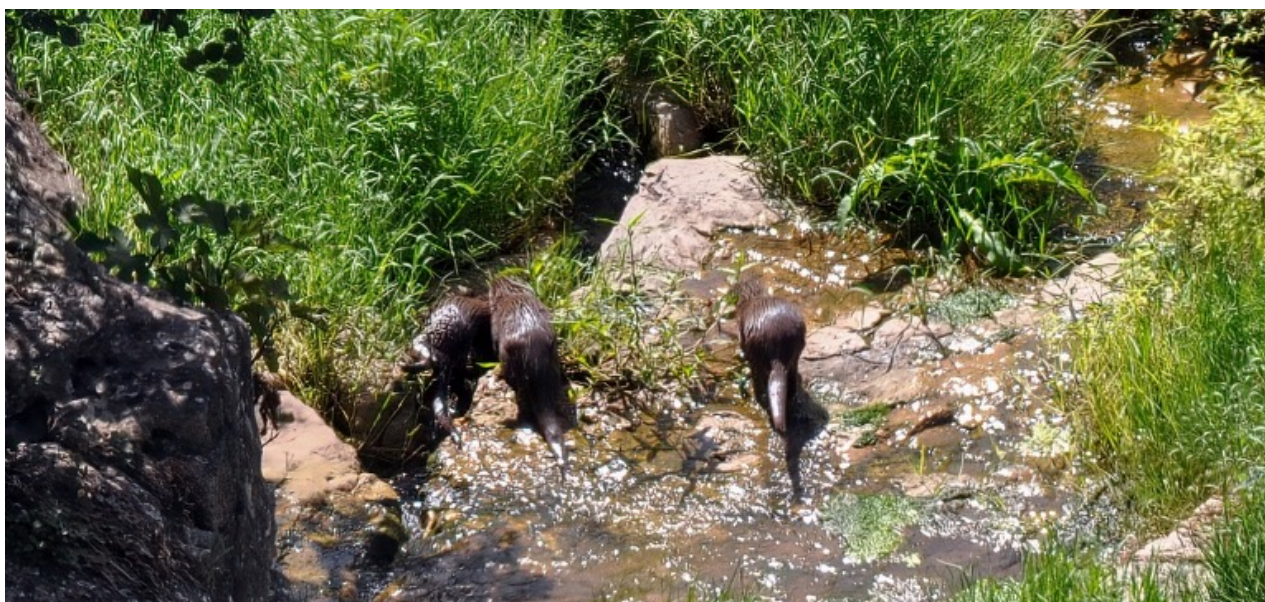


Figure 3: Three otter individuals photographed in LIPU Oasis "Gravina di Laterza". Photo by N. Magaletti.

biodiversity. In the near future, it is hoped that dedicated studies will continue in order to further investigate the distribution and trend of the otter in the "Gravina di Laterza" and in the surrounding areas in order to apply targeted conservation measures and, at the same time, to adapt management policies aimed at preserving the habitats that characterize these peculiar ecosystems.

Author contributions

Conceptualization: M. Marra, G. Luce.

Field research: M. Marra, G. Luce, V. Giacoia, N. Magaletti.

Writing the original draft, review and editing: M. Marra, G. Luce.

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