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A New Record in Distribution Region of Otter (*Lutra lutra*) in Turkey

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ABSTRACT

This research is based on field observations of a male Otter (*Lutra lutra*) specimen killed by hunters in february of 2014 at the city of Balıkesir. The generation of this species is in danger in both Turkey and the World. For this reason, it is placed in the category of protected species with the Bern and CITES agreements. This study, based on true sample, is important by filling a brick in the Wall in the existence of an empty hole in the distribution localities of Otter in Turkey.

Keywords: *Otter, Lutra lutra, Distribution, Balıkesir, Turkey.*

1. INTRODUCTION

Three species belonging to Lutra genus of Mustelidae family are distributed throughout the World. *Lutra* species are semiaquatic mammals, so are well-adapted to both water and land. They prefer shallow, narrow areas of streams surrounded by mature trees and with rocks, especially where weirs reduce the flow of the water, as well as attract fishes. They seem to tolerate roads, residential and agricultural areas, but only moderate human interaction. They clearly avoid areas without vegetation cover and rocks [1]. In the Lutra genus, *Lutra lutra* (European otter) and *Lutra nippon* (Japanese otter) is distributed in the palaearctic region and *Lutra sumatrana* (Otter with hairy nose) is in the oriental region. Belong to this group, *Lutra lutra* is distributed in the broad area of palaearctic region covering Portugual [2], Spain [3], France [4], UK [5], Central Europe [6], Finland [7], Turkey [8], Mongolia [9], Sri Lanka [10] and India [11]. The distribution area of *Lutra lutra* also includes Turkey. This species is a carnivor adapted to aquatic life. Their feet are short and space between fingers are semi-curtained. The tail length is longer than half of the head-body length. The outer surface of pads are hairy and the inner surfaces are naked. The body color at dorsal, lateral and paw region is shiny brown and at ventral region is dirty white. An adult male has 12 cm of whole body length and 76 cm of tail length. Ears are short and 3 cm long [12]. The Otter is placed under the " must protected species " in the Bern agreement Ad-II since 1984 with the Turkey as a part. Also, according to CITES agreement Ad-I list, the animal furs and stuffing is forbidden to hold at home and Office space. For this reason, the hunting of otter is forbidden the whole year according to the Land Hunting Act number 3167 in Turkey. But the otter hunt continuous secretly and its monetary punishment per individual is 3.200 turkish liras [13]. The amount of monetary punishment stays same since 2008.

A recorded locality map of Otter with or without samples in Turkey by many researchers exist [12,14-33]. The city of Balıkesir is marked without sample in this map. A perfect map showing the distribution areas of Otter based on sampling does not exist in Turkey. For this reason, the necessary steps should be taken for the distribution areas of the Otter whose life is at risk in

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Turkey and the "*Lutra lutra* protection plan" must run on healthy grounds.

The aim of this study is to record *Lutra lutra* as one sample in the city of Balıkesir as an important biological diversity project of Turkey and to obtain information about their living areas and to close the data gaps in the areas of this subject.

2. MATERIAL AND METHODS

This research is based on a male otter sample shut by hunters in Salur locality of Manyas, Balıkesir, Turkey at the february of 2014. The four standart external measures of the sample could not be included because of its biological destruction (Figure 1).

Figure 1.The death body material of *Lutra lutra* specimen.

For example, the age group is identified according to tooth abrasion degree, sagittal and lambdoid spike emphasis degree, interorbital and postorbital length interval ratios and bacculum structure [34-37]. The bacculum is prapared according to Topal [38]. Skull is cleaned by maceration technique [39]. A compass with 0.02 mm sensitivity is used to measure 17 internal character measurements of head skeleton and bacculum length [40] (Figure 2).

Figure 2. The cranium and bacculum of *Lutra lutra*.

3. FINDINGS

The sample is obtained in Salur area (40^o 05'K,27^o 56'E) in the industrial–through channel hilly place, 5 km South of Bird lake and 10 km South of Bird Paradise National Park. At the North of Salur, the agriculture of rise, bean, tomato, corn, sunflower and clover takes place. Karşıyaka creek periferally circles Salur town beginning from south to west and leaves its water to Bird Lake. This creek is very important irrigator for cultivating the culture plants in the region. The water channel passing out of 150 km of northwest Salur is also very important second degree water resource where we obtained the sample (Figure 3).

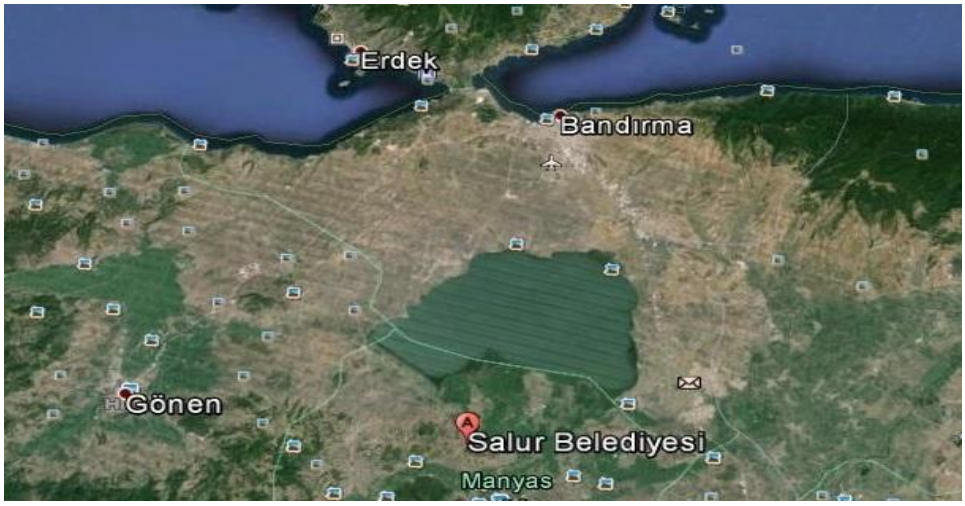

Figure 3. The map of Salur town where the *Lutra lutra* is obtained (Google Earth).

The otter sample is obtained dead near the irrigation channel where the human settlement ends (Figure 4)

Figure 4. The channel where the *Lutra lutra* is obtained as a death specimen.

According to our investigation of death animal on the field, we discovered that the animal was killed about 15 days ago by looking to fly larvaes on the corpse. By doing interviews with local people, we discovered that gunmen were killing wild carnivor animals and the otter is wrongfully hunted while attacking ducks living in the irrigation channel.

We concluded that our sample is 2-3 years old adult animal by looking at tooth abrasion degree and clearance of sagittal and lamboidal spikes. Some internal characters of the animal were recorded as in Table 1.

Table 1. Adult (♂) samle (*Lutra lutra*) internal character measures

Characters	Values (cm)
Longest cranium	11.42
Condylobasal length	11.71
Zygomatic width	6.94
Mastoid width	6.55
Interorbital width	1.81
Postorbital width	1.14
Brain capsule width	5.13
Brain capsule length	6.37
Palate length	4.82
Palate width	3.08
Basillar length	10.61
Upper jaw tooth set length	4.04
Bullae length	1.70
Cranial height	4.06
Lower jaw tooth set length	4.21
Coronoid height	3.26
Lower jaw length	71.03
Bacculum length	6.52

4. DISCUSSION AND RESULTS

Mustelidae family specieses are not investigated throughly because of their very fast moving abilities, wild and nocturnal characters. *Martes foina* of this family still has protected population structures but Martes martes and *Lutra lutra* populations almost reached to extermination points [22,28,41,42].

The otter population structure is getting smaller each day instead of CITES and Bern agreements and land hunting laws to protect them. The important reasons are opening fields, urban regeneration, unconscious use of water resources, habitat reduction and most importantly unconscious hunting. There are only few studies of demechologic structure of the otter in Turkey. However, the inventory of the otter natural living areas has not been studied in a healthy scientific way. Without completing this inventory, the protection of this species can not be made throughly. To keep their existence, the wild species like otter needing aquatic ecosystems, the changes and transformations on these ecosystems must be done sensitively in the framework of scientific principles.

To protect a species, hunting associations first and then the public must be informed and then information must be transformed to public conscious, and then conscious to action to be followed by a valid and reliable strategy. In this protection strategy, there is no place for human interference. Also, the research on the population dynamics, biology and distribution of this species must continue without any interval. The otter need must be considered by not allowing desertation of aquatic fields of their distribution media and consuming food sources shared with human.

It should not be forgotten that the human life quality indicator is the wild life species around him.

CONFLICT OF INTEREST

No conflict of interest was declared by the authors.

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