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RADIOTRACKING A TRANSLOCATED OTTER IN SPAIN

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Abstract: A subadult male otter, injured in a road traffic accident, was found in central Spain. After treatment, it was considered suitable for return to the wild. The opportunity was taken to radio track the released otter, using a subcutaneous transmitter implanted under the shoulder skin. This was very successful, and considered to be an improvement on harnesses and intraperitoneal implants. A new study in now taking place using two adult otters.

A young (< 1 year) male otter was found injured in March 1990 on a road close to the upper Gabriel river (Jucar basin, Central E Spain). It showed a little limp, possibly caused by a traffic casualty. After healing it was carried to the "Mata del Fang" Wildlife Research and Recovery Centre (Generalitat Valenciana, Regional Government). The specimen was examined through X-ray revealing a broken humerus, already knotted with a small deviation.

Blood samples proved normal haematological values and the animal could walk, run and swim properly. During all the time it was kept in captivity, the otter looked well and its behaviour was shy and aggressive, therefore it was considered feasible to return it to the wild.

It was decided to translocate the specimen to the Bergantes river (Ebro basin, NE Spain; 580 m altitude) which supports a good otter population, has very rich fish fauna, and optimum possibilities for controlling and following the animal. A radio-tracking project was planned rating all the different methods.

Harnesses have been much criticized for the chance of engaging with branches or any obstacle under water, movement limitations, and wound possibility. Intra-peritoneal implantation has many advantages, e.g. no influence on the otter's locomotion, less influence on behaviour and less possibility of casualties. Successful results have been obtained in *L. canadensis* (Melquist & Hornocker 1979, 1983; Hoover 1984; Reid et. al. 1986), *L. provocax* (Chehebar, in verbis) and *L. lutra* (Conroy, Armeno & Sjoason, in verbis). Despite these advantages, many problems have been found related to the surgical approach; danger of death, danger of infection, and decrease in the transmitter signal owing to body mass.

We consider that the subcutanean implantation could have some advantages if a transmitter with small dimensions and low weight could be produced. An AVM transmitter, P2B model with K-16 battery (life expectancy up to 2 years) and custom application M-Module Implant, measuring 63 x 17x16 mm (flex antenna of 195 x 0,8 mm) and weighing 26.5 g, was considered as a good one to do the experiment. The otter weighed 4.6 kg therefore the transmitter accounted for only the 0,6 % of its weight.

The otter dorsum was elected to be the place of implantation because:

1. It is exposed out of the water more frequently.
2. It is very difficult for the animal to bite himself.
3. It has no influence on locomotion and head movement.

The animal was anaesthetized with Ketamine HC1 and xylazine (20 mg/1 and 1 mg/kg respectively). The surgical procedure consisted of a single transverse incision of 35 mm, just behind the withers.

Afterwards, the otter remained in an indoor holding pen for nine days, and then drugged again and examined, checking that the incision had healed. On June 7, the otter was carried to a hacking enclosure (40 x 40 m) placed in the river. During all the time it remained inside the enclosure it showed strict nocturnal behaviour and it was verified that it could fish easily by itself. Six days later a sudden flood destroyed the enclosure and the otter escaped.

The specimen was followed for 25 days. During that period it took up a home rage of 20,7 km length of the river, and recorded a greatest movement of 9 km in one day. The behaviour was normal (nocturnal, crepuscular), and characteristic of a young individual in dispersion.

On the 26 th day, the transmitter was found in the river bed, the antenna was cut off and there was no sign of the otter. Two days before it was observed at night showing normal behaviour (going through 6,2 km that night and 4,0 km the night before it disappeared), with no sign of open incision. In spite of careful searching we found no trace of fight, depredation, or hunting.

The experience has been positive. One disadvantage of this implantation is the transmitter's shape (a smaller, plain one will probably be better).

Advantages are the small size, no entry of the body cavity (less danger of infection, complication and death), easily and quickly done, and it would be easy to take the transmitter in case the otter is recaptured.

This kind of implantation could be an important way of monitoring Lutrinae in the future. In January 1991 we started with two new adult otters, from Galicia (NE of Spain), which were provided by our colleague Dr Antonio Callejo.

REFERENCES

No reference list provided by authors - Ed.