

Survivorship of captive-bred and wild-caught reintroduced European otters in Sweden

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Lutra lutra, the European otter, also known as Eurasian river otter, common otter, or Old World otter. It is a European member of the mustelidae or weasel family, and is typical of freshwater otters. Otters are also seen along the coast, of the salt water, but it requires access to freshwater to clean their fur. The name of this species (European) is some misleading as the species also can be found in parts of Asia and Africa, including Europe.

The otters have a nice, thick, soft, dark brown fur with shiny surface. The size of the otters vary in a range of 120- 150 cm long, and weigh between 6- 15 kg. Their diet consists of different animals, like frogs, crustaceans, insects, small birds, and even sometimes small mammals, but their main diet consists of fish. The hunting takes place at the night.

Otters live with an individual's home range varying from 1-40 km, and are very strongly territorial. The mating takes place in the water, so the breeding is usually in the spring after the ice break up. In North this is from February to June. 1- 4 pups are born after a gestation period of about 63 days. The pups are dependent upon their mother for a year, but after that they will mostly be living alone, as otters do.

The last decade especially since 1950s the *lutra lutra*, the European otter has declined throughout much of Europe. As populations has declined or locally disappeared, reintroductions have been considered useful.

In Sweden otter were formerly common. Then in 1950s and 1970s high levels of PCB was found in the environment. The population of otters declined, and through most of southern Sweden the otter became extinct. In 1980s there were still some otters in southern part of Sweden, 100km south west from Stockholm. This area has an abundance of lakes and rivers and the majority of waters are productive with a high proportion of dense shoreline, and here it was showed that it still had a low prosentage of signs of otters, but then again in 1985, there were no longer any signs of any otters, an the population was judged to nearly extinct. For this reason it became important to reintroduce otters back into the nature, and the first study was to investigate the survival of such reintroduced otters. This took place in the area where the otters used to be, 100km south west of Stockholm.

Captive bred otters from two breeding families from the Swedish hunting association otter breeding centre, and wild caught otters from Norway were used in the reintroduction. They all got an implanted transmitter, lasting for two years. One male where released in late November, but all the others where released from February to June, when the ice break up. The spawning seasons for the majority of the fish species in this area is in the spring, this was one of the reasons why the otters got released at this time.

In 1992 there were a change in the separation- release time (= the time between separation of the offspring from the mother to the time of release in to the study area). In 1989-91 the separation- release time where long., over 49 days. To check if this really had an effect on the reintroduced otters, otters from captive bred where divided into two groups. One with long- and one with short separation- release time period. The range of separation days were between min 5-max 98 days. The dividing line ended at 49 days. The study showed that otters who had a longer period from they where separated to they where released into the nature had a lower survival rate than those who where separated at an earlier stage. We can compare these results to the an equal project in North America with yearly survival rates between 46%- and 91%, we can also se this result in Shetland and western Oregon, USA.

In seems that main factor to influence the survival for otters in the reintroduction program is the separation- release period. Offspring with short separation release periods (less than 49days) had a significantly higher survival rate than those with long separation periods. Most of those who died through this study died in the first four month. Overall sixteen out of 36 otters died. The study also showed that the rate of live wild-caught otters where higher than the number of captive-breed. When the offspring are released earlier it seems to have lead to a more natural mother- offspring separation. So if captive- breed otters or animals like the otters are used in future reintroduction projects, the separation release time should be carefully considered for the increase of the survival for the animal.

References:

- The scientific article of survivorship of captive-bred and wild-caught reintroduced European otters in Sweden.
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- <http://caplex.no/Web/Print.aspx?id=9326377>