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Otter distribution in Europe

par
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SUMMARY

Since the 1950s otters have declined or disappeared from large areas of Europe. Most substantial declines have occured in western and central Europe. The Atlantic seaboard from north Norway to south Portugal still supports viable populations while, in the east, populations thrive in Finland, through the Baltic states and into Greece. The periphery of Europe seems to support the bulk of the otter population. Current distribution may be explained by factors such as the wealth and industrial output of individual countries and exposure to winds which disperse pollutants. Problems caused by pollution are exacerbated by habitat destruction and other anthropogenic influences such as mortality on roads, in fish traps and by illegal hunting.

RESUME : répartition de la loutre en Europe.

Autrefois largement répandue dans toute l'Europe, la loutre est, depuis une quarantaine d'années, en régression marquée. Son aire de répartition actuelle est caractérisée par une large zone traversant le centre de l'Europe où l'espèce est rare ou absente. Les seules populations bien portantes ou viables subsistent dans l'extrême nord, sur la plupart des littoraux atlantiques et dans certaines régions de l'Est. La répartition actuelle s'explique par des facteurs comme l'abondance des pollutions industrielles de certains pays ainsi que par la dispersion éolienne de divers polluants. Dans certains pays de l'Est, de nombreux facteurs se combinent en faveur de l'espèce : faibles rendements industriels et agricoles, cours d'eau, étangs de pisciculture et zones humides abondants, vents du nord dominants. La distribution de la loutre n'est pas statique. L'espèce a notamment progressé en Angleterre et au Danemark tandis qu'elle risque de régresser davantage en Espagne et dans les pays de l'Est. La sauvegarde de la loutre en Europe nécessite la protection des habitats abritant les populations viables. Dans la communauté européenne, la directive 92/43 sur la conservation des habitats naturels et des espèces sauvages devrait être appliquée sans retard. Des réseaux hydrographiques entiers ou des portions de littoral devraient recevoir le statut de zone protégée.

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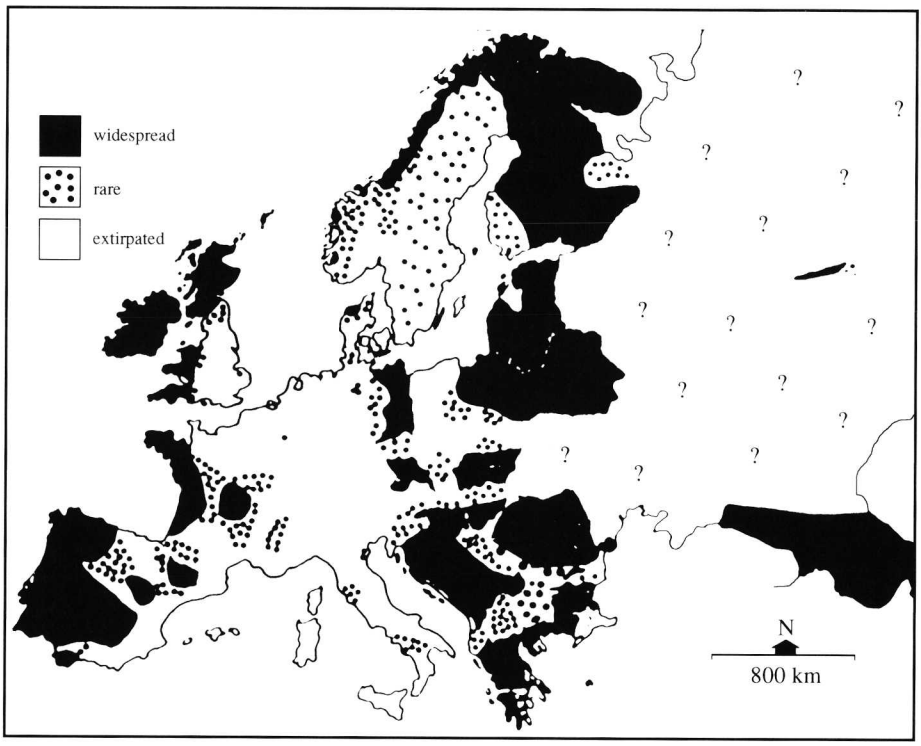

Fig. 1. Répartition de la loutre en Europe (d'après MACDONALD et MASON, 1994)*.
The distribution of the otter in Europe (from MACDONALD and MASON, 1994).

The otter, once widely distributed in Europe, has, over the past four decades, suffered substantial declines both in numbers and geographic range. Our knowledge of distribution has increased recently, especially in western Europe, as field surveys using a standardized methodology have been carried out in several countries.

In Scandinavia major losses have occurred in the south of Norway and in Sweden while in Denmark the species is now confined to one region (FOSTER-TURLEY *et al.*, 1990 ; MADSEN and NIELSON, 1986 ; MADSEN *et al.*, 1992). In western Europe otters have disappeared from large regions of France (BOUCHARDY, 1986), England (STRACHAN *et al.*, 1990), Austria (GUTLEB, 1992) and Germany (BINNER, 1992 ; HEIDEMAN and RIECKEN, 1988 ; REUTHER, 1992). The species is virtually extirpated in the Netherlands, Switzerland, Belgium and Luxembourg, only occasional signs being found (DE JONGH, 1991 ; WEBER and WEBER, 1991 ; METSU and VAN DEN BERGE, 1991 ; SCHMIDT and ADAM, 1992). In southern Europe there have been extensive declines in eastern Spain (DELIBES, 1990), while in Italy the species is close to extinction (CASSOLA, 1986).

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In general, information from eastern Europe is less clear but field surveys have shown that in Hungary the species is rare in the north (KEMENES, 1991), that populations are fragmented in the Czech Republic (TOMAN, 1992) and that distribution is restricted in Slovakia (KADLECIK, 1992). Losses have also been reported from Estonia (KIILI, 1991), Bulgaria (SPIRIDONOV and SPASSOV, 1989) and parts of Russia (FOSTER-TURLEY *et al.*, 1990) but data were not collected in a manner which allows direct comparisons with results from western Europe.

These widespread declines have resulted in the appearance of a broad geographic band through the centre of Europe in which the otter is rare or absent (**fig. 1**). Thriving populations are now only to be found in the west, the far north and in parts of the east. Viable populations still occur along the western seaboard including north Norway, Scotland, Ireland, western France and western Iberia (GREEN and GREEN, 1987 ; CHAPMAN and CHAPMAN, 1982 ; BOUCHARDY, 1986 ; DELIBES, 1990 ; SANTOS REIS, 1983). In Finland the species is widespread (HAGNER-WAHLSTEN and STJERNBERG, 1991) as it is in Poland, Lithuania and Latvia (ROMANOWSKI AND BRZEZINSKI, 1994 ; MICKEVICIUS, 1993 ; OZOLINS and RANTINS, 1992), in much of Hungary (KEMENES, 1991) and in Greece (MACDONALD and MASON, 1982 ; GAETHLICH, 1988). More detailed information on otter distribution in Europe can be found in FOSTER-TURLEY *et al.*(1990) and MACDONALD and MASON (1994).

In order to conserve otter populations it is necessary to try to understand the reasons why some countries have lost the species while in other regions populations still thrive. Many factors adversely affect otter survival including the draining of wetlands, the desiccation of rivers due to dam building, overhunting and accidental mortalities on roads and in fish traps. However, because the decline of the otter in Europe was both widespread and rapid, the likely cause is considered to be contamination of aquatic food chains and the view held currently is that the responsible contaminants were (and may still be) bioaccumulating organochlorines comprising both pesticides and polychlorinated biphenyls (PCBs) (CHANIN and JEFFERIES, 1978 ; MASON, 1989 ; OLSSON and SANDEGREN, 1991). Organochlorines enter waterways through run-off from the land, from sewage works and industrial discharges but they are also dispersed by winds to contaminate regions far from their point of origin. Thus in Europe, major losses of otters have occurred in regions with high industrial output like west Germany and Belgium but also in countries downwind such as Sweden (MACDONALD, 1991). Countries exposed to the clean westerly winds on the Atlantic seaboard have retained their otter populations.

In some eastern European countries, like Latvia and Lithuania, many factors combine to favour the otter. Industrial and agricultural output are low, waterways and wetlands abound and prevailing winds are from the north. In other countries fish pond culture may influence the survival of otters. Locally important populations have been reported in association with fish ponds in Hungary (KEMENES, 1991), the Czech Republic (DULFER, 1992), the former East Germany (STUBBE, 1989) and Austria (GUTLEB, 1992). Fish ponds can provide both cover and additional food supplies for local otters but it is possible that the management of the fisheries is also beneficial. The rapid turn-over of stock results in a limited period during which contaminants can build up in the fish tissues.

Otter distribution in Europe is not static. In Britain, for example, populations are gradually expanding from their traditional strongholds of the north and

west (GREEN and GREEN, 1987 ; ANDREWS and CRAWFORD, 1986). Recovery may be attributed to the withdrawal of persistent organochlorines together with the banning of otter hunting but it remains to be seen whether range expansion will continue or be limited by levels of PCBs currently present in the rivers of central, lowland England (MASON and MACDONALD, 1993).

In Denmark recent expansions in population range have been attributed largely to the introduction of stop-grids on fyke nets which has reduced accidental drownings of otters (MADSEN *et al.*, 1992) but there has also been a decline of PCBs over the past decade in otters living in the centre of the range (MASON and MADSEN, 1993). Some countries, such as England and Sweden are attempting to boost wild populations by reintroductions (JEFFERIES *et al.*, 1986 ; SJOASEN and SANDEGREN, 1992) while in the Netherlands efforts are being made, with government support, to restore habitats to a condition suitable for reintroductions (DE JONGH, 1991).

Over much of western Europe restoration of water quality and habitat will prove lengthy and very expensive. Some regions, like N-E Spain, may have to accept further losses of otters due to river desiccation as the demands for water for irrigation increase (JIMENEZ and LACOMBA, 1991). In eastern Europe the introduction of free market economies may inadvertently affect otters. It has been suggested, for example, that Hungarian fish pond owners, deprived of state subsidies, may be less tolerant of otter predation (KEMENES, 1991).

To safeguard otters in Europe, habitats currently supporting thriving populations must be rigorously protected. Within the European Community, the 92/43 Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora may provide a valuable lever for otter conservation. It aims to provide a network of special areas for conservation which would maintain at, or restore to, a favourable conservation status those habitats and species (including the otter), considered as of Community importance. Otter conservationists should press government agencies to declare entire watersheds or, if appropriate, substantial lengths of coastline, as conservation areas. The opportunities for trans-border co-operation on shared rivers is great. Unfortunately, however, about half of the EC member states have already lost, or nearly lost, their otters. Many of the substantial remaining populations exist in non-member states. We should aim for a trans-European network of protected habitats.

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