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**TRAFFIC MORTALITIES OF THE OTTER AND ROAD-PASSES: A  
DATABASE**

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**Abstract:** A major cause of otter deaths is road traffic accidents. Various mitigation measures have been used to try to reduce the numbers, but assessment of their effectiveness is not consistently carried out or made available. The authors propose a project, the Database of Otter Roadpasses, to collect and disseminate knowledge from OSG members about otters, roads and mitigation measures. A pro-forma response is provided indicating what information should be collected; this should be returned to the authors for compilation into the database.

**BACKGROUND**

Most experts agree to three main causes for the decline in otter numbers: pollution/contamination of the food chain, habitat destruction and accidental mortalities. This last cause is mainly due to road traffic in most countries. The deaths of otters on roads are a direct threat to otters, not only due to the impact it can have on existing local otter populations but also on the otter's ability to recolonise new areas. According to LILES and COLLEY (2001) in Wales, four factors seem particularly relevant:

- i. Otter population densities are naturally low;
- ii. The majority of otters killed on roads are healthy individuals;
- iii. Some otter road death sites are 'accident blackspots' where several otters are killed over a period of time;
- iv. Pregnant or lactating females, and cubs, are killed at several sites.

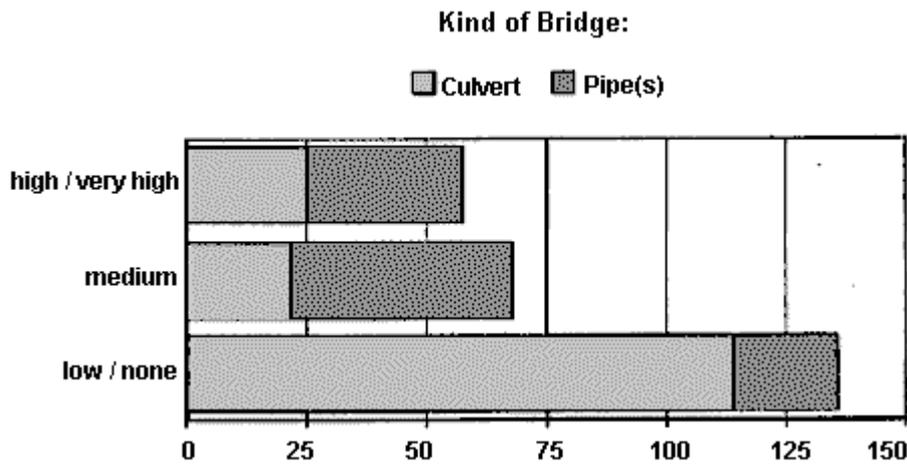
For 10 years or more, in some countries, attempts at mitigation measures have been made in order to significantly reduce otter road deaths. These have taken the form of providing safe underpasses at bridges or culverts (on new road schemes or at places where fatalities have already occurred) or through maintaining or improving the ecological continuity of a river (corridor function, prevention of the 'barrier effect', etc). Such measures have already been undertaken in some areas of the UK (GREEN, 1991), Denmark (MADSEN, 1992, 1996) and France (LAFONTAINE, 1991, 1993; LAFONTAINE et al., 1994), sites being identified through recognition of black-spots for otters (LILES and COLLEY, 2001) and/or through the wider collection of otter road death statistics (KÖRBEL, 1995; MACDONALD et al., 1999).

**PROJECT SCOPE**

Although some mitigation work has been carried out in some European countries, there has been little or no monitoring of these projects to see if they are effective as conservation measures, as well as cost effective. As written by R. Green (in press), it is true that 'mitigation measures will never prevent all otter road deaths', but also that 'while there have been a number of designs and specifications, there have not yet been many appraisals of mitigation measures published, although a number of such studies are underway'. The potential problem for otter populations from road deaths may be very significant in some parts of its range. A better understanding of effective mitigation measures, and their cost/benefit ratio, is urgently required. In Brittany, for example, results from a field study on Natura 2000 sites

showed that 22% of 264 bridges surveyed would present a high or very high otter road death risk (mainly pipes or drains on small watercourses). However, appropriate mitigation measures (culverts or ledges, fencing) on so large a sample of bridges would be very costly (LAFONTAINE, 2001).

Research on mitigation measures for otters carried out so far (LAFONTAINE, 1991, 1993; KÖRBEL 1995; MADSEN, 1996; GREEN 1991; CLARKE et al. 1999; LILES and COLLEY, 2001) has produced a range of solutions to the problem, including ledges, dry culverts and fencing. The measures themselves are interesting, and sometimes innovative, but specifications vary greatly (e.g. dry pipe or fencing? what size or length?, should it be in relation to bridge size?, is it operational?, is it always necessary?, etc).



**Figure 1:** Appraisal of road mortality risk for otters concerning 264 bridges from four EU Natura 2000 water catchments in Brittany, NW France (from LAFONTAINE, 2001)

Better cooperation and wider dissemination of knowledge and experience is now urgently needed. Not only is it necessary to investigate the success of existing mitigation measures but also to research into the best designs for future use, to provide engineers and planners with data on current best recommendations. Finally, it is important that road authorities do not substitute the effectiveness or 'appropriateness' of mitigation measures for lower costs, as sometimes happens today (LAFONTAINE, 1991,2001).

We should therefore like to propose a project to establish a cooperation and exchange programme between OSG experts, in order to compare respective situations and experiments into mitigation measures to prevent otter road deaths. For this we propose to create a DATABASE OF OTTER ROADPASSES, through a call for contributions from OSG members from all countries. The aim is to draw up an inventory of existing otter roadpasses, with biological, technical and financial data.

As a first step we have designed an Initial Questionnaire (one voucher per roadpass). See below, file available from: [lionel.lafontaine@wanadoo.fr](mailto:lionel.lafontaine@wanadoo.fr). We will be very grateful if you will complete this questionnaire and e-mail it to the address above. Any pictures of the measures will be very useful. When enough data is available, a progress paper can be written together and published in further issues of this bulletin, with updated results available on an especially designed website.

**INITIAL QUESTIONNAIRE 'DATABASE OF OTTER ROADPASSES'**

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one voucher per roadpass please (copy and paste)

(A follow-up questionnaire will be sent out later to ask for more details)

Your name/address/e-mail:

Country: \_\_\_\_\_ Region: \_\_\_\_\_

**Otter Species:**

**The roadpass:**

Roadpass: installed where: In a bridge/culvert \_\_\_\_\_ On a stretch of road \_\_\_\_\_

Location of Roadpass: (example - bridge name; municipality; grid ref; longitude/lat)

Mitigation installed: when the bridge/road was built \_\_\_\_\_ or on an existing bridge/read?

\_\_\_\_\_ Is it: a new road scheme? \_\_\_\_\_ and existing otter death site? \_\_\_\_\_

Date of otter death(s):

Location: (example latitude & longitude)

Watercourse : \_\_\_\_\_ Water catchment :

\_\_\_\_\_ Date mitigation installed

Type of roadpass (example: bolt on ledge; dry culvert; fencing):

\_\_\_\_\_

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(please send pictures if possible)

Biologist / Otter expert involved:

Has any monitoring of the mitigation been carried out?

Results published?

If yes, can you please send a copy?

Other relevant comments:

Thanks for sending this questionnaire back, with a picture of the roadpass, if possible at the following e-mail address: [lionel.lafontaine@wanadoo.fr](mailto:lionel.lafontaine@wanadoo.fr)

## REFERENCES

- Clarke, G., Howison, J., Hawker, B.H., O'Hagan, D. (Dir.) 1999.** The Good Roads Guide: Nature Conservation advice in relation to Otters. Design Manual for Roads and Bridges, the Highways Agency, HMSO London, 10/1, Part 9, HA 81/99,40pp.
- Green, R. 1991.** The impact of hunting, poaching and accidents on otter survival and measures to protect individual animals. *Habitat* **6**, 171-190.
- Green, R.** in prep. Reduction of road kills and traffic accidents as a contribution to the conservation of the Eurasian otter. In: **Reuther et al.**, Otter Action Plan 2000 (OAP), IUCN-OSG, chapter 2.10.7.
- Körbel, O. 1995.** Hindering otter (*Lutra lutra*) road kills. Part 2. IUCN OSG Bull. 11, 40-47.
- Lafontaine, L. 1991.** La loutre et la route. Report DIREN-Bretagne / PNR d'Armorique. 115 pp.
- Lafontaine, L. 1993.** Distribution of *Lutra lutra* in Brittany and first preventive measures against road traffic. IUCN OSG Bull. 8,37-39.
- Lafontaine, L., Grémillet, X., Joncour, G., Le Goff, Ph., Sourget, G., Ros, J., Raynaud, M., Cadiou, D., Fortumeau, E. 1994.** Taking into account the needs of otters *Lutra lutra* during habitat work schemes in Brittany, NW France, with reference to the costs. In: Council of Europe (ed.). Seminar on the conservation of the European otter (*Lutra lutra*), Leeuwarden, The Netherlands, 6-11 June 1994. Environmental Encounters, 24. 171-174.
- Lafontaine, L. 2001.** Documents d'Objectifs Natura 2000: Evaluation du risque de mortalité routiere que présentent les ouvrages hydrauliques vis-à-vis de la loutre d'Europe. Internal Report, csrpn Bretagne,Min. Env.
- Liles, G., Colley, R. 2001.** Otter (*Lutra lutra*) road mortalities: a procedure for the implementation of mitigation measures. The Otter Consultancy, report for the Environment Agency Wales, 43pp.
- Macdonald, D.W., Philcox, C.K., Grogan, A. 1999.** Patterns of otter (*Lutra lutra*) road mortality in Britain. *J. Appl. Ecol.* **36**, 748-762.
- Madsen, A.B. 1992.** Automatic registration of otter activities in Denmark. IUCN OSG Bull. 7, 38-39.
- Madsen, A.B. 1996.** Otter *Lutra lutra* mortality in relation to traffic and experience with newly established fauna passages at existing road bridges. *Lutra* **39**, 76-90.