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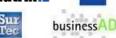






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Scientists create a black-spot map to prevent road kill of protected amphibians and reptiles

01.11.2007 • nächste Meldung • Researchers of the Department of Animal Biology at the University of Granada, in collaboration with the Junta de Andalucia Enviromental Department, have created the first "black-spot" map to prevent road kill of amphibians and reptiles in Andalucía. This peculiar "radiography" shows that in this region there are at least 29 black-spots where it is necessary to

act to prevent the death of these animals, most of them protected species.

The research, carried out by professors Juan Manuel Pleguezuelos Gómez and Jesús Caro (University of Granada) and Ricardo Reques (of the company Ornitour), has revealed that the Common Toad and the Montpellier Snake are the amphibian and the reptile most frequently run over, with more than 33% of the total deaths since

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barriers which most hamper the movement of amphibians and reptiles". During the period of time analysed, 57.39% of the dead animals found were reptiles and 42.61% (202) amphibians. Of the 24 species that have been identified, there are 12 amphibians (75% of the amphibian species in the region) and 12 reptiles (42,8% of the reptile species in the area).

The authors of this research explain that "roads are the

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7 Models for 15g-50Kg Animals Constant Volume/Constant Pressure www.harvardapparatus.co Amphibians and ophidians are the most jeopardized species

For the purpose of this research, GPS systems were used to locate all the amphibians and reptiles run over by automobiles, and local herpetologues were asked about the existence of other traffic black-spots for amphibians and

reptiles.

Some roads with intense traffic may cause the death of 100% of the amphibians that try to cross them, which threatens to cause their local extinction in some years. Amphibians are more likely to be run over at dusk on rainy days, from autumn to spring, on road sections near areas suitable for reproduction (small lakes, non-permanent pools and brooks, watering holes, etc.).

The Ophidian (snakes) is the reptile most frequently run over, with 92,25% of the total deaths analysed by the researchers of the UGR. Road kills are more frequent during the spring months, as this is when reptiles move because of the rut (may-june), and they affect mainly males looking for mates. Females are more likely to be run over at the end of the spring and the beginning of the summer when they move in search of an appropriate place for laying. There is also an increase in deaths at the end of the summer and the beginning of the autumn due to the dispersion of newborns or when adults show a high level of trophic activity after the summer lethargy.

The length of the 29 black-spots located in Andalucía varies considerably. "Some of them are not long and affect one or several species of amphibians and reptiles. In the most extensive sections, the whole area may not entail a danger to amphibians or reptiles, but some parts, such as near a watering place, the risk of being run over is very high.

Taking measures

For these reasons, the scientists point out that it is on these sections that measures have to be adopted to reduce the number of animals run over by automobiles. The iniciatives proposed are diverse: the construction of level crossings or subways, the creation of alternative reproductive habitats such as pools or watering holes for amphibians in order to reduce the migration of specimens across roads in search of adequate areas for their reproduction. Or even to limit the traffic on those roads during the periods of high migration, a measure to be adopted only on very particular points where the incidence of road kills is very high.

For reptiles, warning panels or bumps in the most conflictive sections would be the most adequate measures. And also, to act on the vegetation and shelters that attract the herpeto-fauna, as the vegetation close to the roads attracts not only potential prey (micromammals, birds, etc.) but also their predators (Montpellier snakes, Horseshoe Whip snake...).

Furthermore, these researchers consider that Environmental Impact Assessments (EIAs) need to be improved in order to correctly evaluate the impact of new roads on the populations of reptiles and amphibians.

Antonio Marín Ruiz | Quelle: alphagalileo
Weitere Informationen: prensa.ugr.es/prensa/research/index.php

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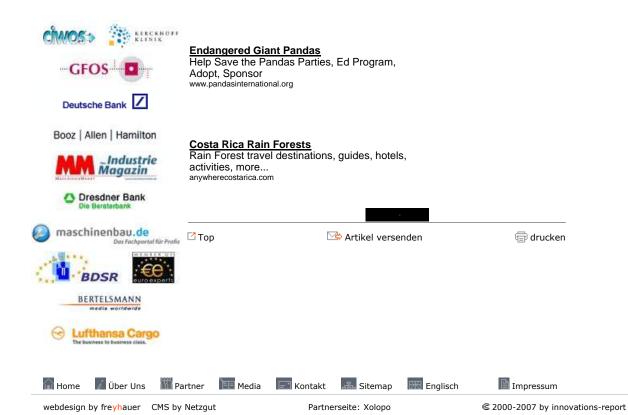
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