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## Interview: keeping the peace between Chilean wild cats and landowners

*Probably one of the world's lesser-known felids, the kodkod cat is classified as a vulnerable species by the International Union for Conservation of Nature. It is currently under threat from deforestation, the spread of agriculture, superstition and its taste for domestic poultry.*

Initiated in 2010 under the FP7 People programme, the Kodkod<sup>1</sup> project aims to identify the conservation needs of the kodkod cat (*Leopardus guigna*) in the Chilean temperate rainforest. Not only are the project results expected to increase knowledge of this rare and mysterious species, but they should also provide for more effective conservation strategies based on a better understanding of the perspective of indigenous populations. Interviewed by *research\*eu results magazine*, Dr Elke Schüttler, Research Fellow at Helmholtz Centre for Environmental Research, explains the aims of the project, its unique approach and its expected impact on future conservation strategies for the Chilean wild cat and other endangered species.

### What are the objectives of the Kodkod project?

It is a scientific conservation project focusing on a rare South American wild cat — the kodkod or guíña — which has received little

attention compared to more common and charismatic felids. Wild cats are carnivores requiring large areas over which to forage. This makes them vulnerable to fragmentation and creates conflict with humans over livestock. Weighing one to two kilogrammes, the kodkod cat is the smallest South American felid. It inhabits the highly threatened southern temperate rainforests of Southern Chile and Argentina and occasionally attacks poultry in agricultural areas. Landowners often retaliate by killing the cats, making research into their conservation a multidimensional challenge requiring an integrative socio-ecological approach.

On the one hand, we used classical methods such as radio-telemetry and camera-trapping to assess the cats' use of forest remnants and other habitats. On the other hand, we interviewed landowners and their children about their tolerance towards the chicken-killing cat. In the final project phase, this will

allow us to superimpose two different maps: the ecological landscape from the cats' perspective and the tolerance landscape from the landowners' viewpoint. In this way we can create different scenarios for the kodkod's future, to be discussed in conservation round tables with stakeholders.

### What is new or innovative about this project and your methodology?

We tried to integrate the vision of indigenous Mapuche people into our bio-social research. Researchers call this ethnozoology, which is still a relatively novel approach in conservation science. Indigenous perspectives on biological diversity often differ from the more globally motivated modern conservation approaches. Therefore it is important to better understand the spiritual and cultural relationships between local people and wild animals so as to move towards more integrative and responsible conservation strategies.



## ENVIRONMENT AND SOCIETY



© kodkod project

### Dr Elke Schüttler using telemetry equipment

In this project we asked Mapuche elders if the kodkod appeared in legends, places or surnames, or if it was used in ceremonies. Such information might also be used in bio-cultural education material such as bilingual books for children with stories about endangered wildlife. For example, kodkod in Mapudungun might come from 'ko', which means 'enter something', probably referring to the guña's presence in hen houses.

### What difficulties did you encounter and how did you solve them?

It was quite difficult to study such an elusive and rare animal as the kodkod cat directly via radio-telemetry. There are only a few animals, and being really intelligent they would not enter a trap right away. This meant we had to set up traps during the whole two-year field-work period instead of over several months as was initially planned. We only managed to trap an adequate number of cats with the help of many hands and creative ideas to attract them, such as CDs hung in trees to catch their attention or varied menus of meat

accompanied with tasty odours. In total, five graduate students and eight volunteers participated in different aspects of the Kodkod project, and I am happy that we managed to get additional funding to support their involvement.

### What are the concrete results from the research so far?

Based on telemetry data, we can see that kodkod cats still inhabit significantly modified landscapes, but also that they need forest corridors as stepping stones to connect the remnants of forest. Such corridors are often associated with rivers and could be promoted as ecologically important habitats among the landowners. Interviews revealed that knowledge of this species is poor and that kodkod cats occupy quite a mystic place in people's minds, such as being a sign of bad luck. This is probably linked to this felid's mysterious way of life.

We also found that greater tolerance can be achieved by enhancing the knowledge about how rare this species is and its role in controlling rodent pests. For the younger generation, innovative outreach material has already been developed by a team of teachers, designers and biologists. A video using kodkod puppets has been distributed among local schools, while the DVD 'Searching for an opportunity' tells the story of kodkod cat Leopolda's life in the forest and the challenges she must overcome to find food for her daughter. This DVD also insists on the benefits brought to the humans by kodkod cats, for example by showing Leopolda as she succeeds in catching some of the mice that are an important reservoir host of the deadly *Hantavirus* pulmonary syndrome for humans.

### What are the next steps in the project?

I have just finished the field phase in Chile and am back in Germany now. In the last year of the project we must publish the data, so most of the work will be done in the office. However, as soon as we have the final results, they will be presented in the study area. The

idea is to discuss the results in conservation round tables with local stakeholders, such as local authorities, Mapuche indigenous communities, rural agricultural associations and NGOs. This should lead to land-use recommendations for private landowners.

### What do you hope the project results can achieve?

I hope that our work will contribute to improving the coexistence of this beautiful felid species with the people in its neighbourhood. Our results will shed light on both the habitat requirements of this elusive and little-known species and on how it is perceived among landowners, who have the final word on the availability of adequate habitat. Understanding both perspectives is a first step towards long-term conservation strategies, not only for this felid species, but in general for most of our planet's biodiversity.

### Can and will your methodology be extended to other species?

Yes, the interdisciplinary approach of this project can be used for other species, particularly for carnivores which often involve human-wildlife conflicts. The project can probably be applied to other endangered small felid species as an example of how biologists, veterinarians, teachers and social scientists can work together on the same problem, each of them contributing a piece of the jigsaw to the whole puzzle.

- 1 "Forecasting conservation needs for endangered fauna: integrating landscape ecology and ethnoecology to predict habitat quality for the kodkod cat (*Leopardus guigna*) in the Chilean temperate rainforest."

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For further information see:  
<http://www.ufz.de/index.php?en=11382>



## Scientists put spotlight on marine biodiversity in Europe

*Scientists from 16 countries have kicked off a new EU-funded project that explores marine biodiversity and the environmental status of seas in Europe. Devotes<sup>1</sup> has secured almost EUR 9 million in funding under the Environment theme of the Seventh Framework Programme (FP7).*

Led by the Spanish Marine and Food Technological Centre AZTI-Tecnalia, more than

250 scientists from 23 research centres in the EU, Asia and North America are working together

to improve our understanding of how marine biodiversity is affected by human activities and global changes. Under the plan, the team will examine existing indicators and develop new ones in order to evaluate biodiversity in a harmonised way. The targets are European regional seas, namely the Mediterranean, Black

and Baltic seas, and the Atlantic Ocean.

From 2012 to 2016, the Devotes consortium will develop and validate sophisticated tools that relate to ecological theory and assessment in an integrated way. Examples of these tools include