



Darwin News

Newsletter of Defra's Darwin Initiative
February 2012



Welcome to another issue of the Darwin Initiative newsletter. We've been going through a very busy period here with the stage 2 applications undergoing assessment by the Darwin Expert Committee. We hope to make a formal announcement of these results shortly. We're also just beginning the assessment process for applications to the Fellowship scheme, Challenge Fund and Scoping Awards. We've seen some truly wonderful applications this year and it is just a shame that we can't fund all the applications.

An important change occurred in 2010 which means that there will be alterations in due course to the Darwin Initiative. In 2011, the Department for International Development made a commitment to provide significant financial support going forward to the Darwin Initiative. As a result of this funding, we expect to launch another funding round in 2012, albeit with some changes in eligibility. Keep an eye on the Darwin website (and of course the newsletter) for more news on how the changes evolve in 2012.

To find out more, follow these changes on the website (darwin.defra.gov.uk) and Twitter @Darwin_Defra.

The future of conservation in Tajikistan (17-013)

Dr Alex Diment from Fauna & Flora International talks about the natural beauty of Tajikistan and explains how support from Defra's Darwin Initiative is helping local people to secure the future of their natural heritage.

"I'll never forget my first trip to Tajikistan. This

landlocked country in Central Asia is breathtakingly rich in biodiversity, and has the most dramatic and awe-inspiring mountainous landscape I've ever seen."

Its biological richness is equivalent to countries 20 times its size, with a wonderfully diverse range of fauna and flora, including a globally significant population of the snow leopard. There are also 84 mammal species, almost 350 birds, and a wide array of interesting mountain plants.



Snow leopard from camera traps. Credit: Panthera and FFI

Between a rock and a hard place: doubling salmon farming in Chile while complying with CBD 2020 (EIDP041)

Chile is one of the world's top salmon producers, the third most consumed fish in the world. Therefore the country is making an important contribution to global food security and helps to fulfil the increasing demand for fish worldwide. Chilean salmon production is expected to reach 1 million tonnes by 2020, the year when signatories to the Convention

their views and sought points of convergence on the importance of reducing the impacts of aquaculture with alien species. They also served to build capacity and raise public awareness. Intensive sampling campaigns carried out over a six year period have resulted in a large geo-referenced database of invasive and native fish (19,068 records from 383 locations within 143 basins) that provides an essential baseline for future monitoring. An isotopic and molecular toolkit was developed (Schröder & Garcia de Leaniz, 2011; Vanhaecke et al. 2011) and used to track down the origin of salmonid escapees and assess their impact on native fishes (see <http://darwin.defra.gov.uk/featured-project/2011-10-EIDPO041>).



Endangered galaxiid fish *Aplochiton zebra* in Chile.
Credit C. De Leaniz

on Biological Diversity (CBD) aim to manage aquaculture sustainably.

Doubling Chilean salmon production poses a special challenge for sustainability, given that salmon is alien (non-native) to the southern hemisphere, and that alien species represent one of the main causes of global loss of biodiversity (second only to habitat loss). In just over 25 years, Chilean salmon production has increased almost 7,000 times, from 80 tonnes in 1981 to 550,000 tonnes in 2007. But is it possible to continue increasing production sustainably?

Defra's Darwin Initiative project in Chile has addressed various impacts of invasive salmonids on the native fauna and has provided evidence-based science to inform policy and management (www.biodiversity.cl). A series of international workshops brought together a range of stakeholders who shared

We also examined the predicted scope for competition between invasive salmonids and invaded galaxiid fish (Young et al. 2009, 2010; Garcia de Leaniz et al. 2010), while the use of molecular markers allowed the project to determine the extent and incidence of trout escapees, which was directly related to the number and distance to fish farms (Consuegra et al 2011). Overall, the findings provide a strong causal link between salmon farming and presence of invasive salmonids, and can be used to inform policy in relation to conservation of native galaxiid fish in the region. In particular, the project recommends that for the effective protection of native galaxiids, two action points should be urgently considered, namely (1) improvements in bio-containment of salmonid farms, and (2) the creation of aquaculture-free areas in local biodiversity hotspots not yet affected by salmonids.