

From arc to park

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(PhysOrg.com) -- Parasite infections are an important threat in conservation biology, particularly to individuals that have been bred in captivity for release into the wild.

Endangered animals bred in a sheltered captive environment suffer the double jeopardy of having a restricted diversity at their immune genes to combat parasitic infections and less exposure to natural pathogens.

Researchers from Cardiff University and the University of Hull are investigating this problem in the guppy, a small tropical <u>freshwater fish</u>, to understand how the risk posed by <u>parasites</u> in release programmes can be alleviated.

In controlled laboratory conditions, the researchers showed that preexposure to parasites made subsequent outbreaks of parasite infection less severe. These experiments suggest that by pre-exposing <u>fish</u> prior to release, conservation managers can reduce their susceptibility to parasite



infection and increase survival.

Drs Cable, Faria and van Oosterhout said: "Parasites form a natural part of the ecosystem, and by pampering endangered vertebrates with medication in captivity, we do not give them a chance to develop disease resistance that they would naturally acquire in the wild"

"To increase the success of reintroductions, we may need to challenge captive-bred individuals to natural parasites, and only select the most resistant individuals for release into the wild."

The research, funded by the European Union Framework 6 programme, is published in the journal *Biological Conservation*.

Provided by Cardiff University

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