Alliance aims to stem extinctions

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Scientists racing to save large groups of amphibians that are teetering on the brink of extinction are proposing the creation of an alliance to help save the animals. The Amphibian Survival Alliance (ASA) would be a new international group that would coordinate and facilitate conservation programs for amphibians.

The ASA would be led by an international secretariat, report the researchers who study amphibian declines worldwide and work in several disciplines including ecology, evolutionary biology, conservation biology and herpetology. Their proposal is published in the July 7 issue of *Science*.

One member of the group is James Collins, the assistant director of biological sciences at the National Science Foundation (NSF) who is on leave from ASU, where he is the Virginia M. Ullman professor. Other members include Joseph Mendelson of Zoo Atlanta, Ronald Gagliardo of the Atlanta Botanical Garden and Karen Lips of Southern Illinois University.

“Amphibian declines are global and rapid: 32.5 percent of 5,743 described species are threatened, with at least nine – and perhaps 122 – becoming extinct since 1980,” the group says. “Species have gone missing across the entire taxonomic group, and in nearly all regions of the planet.”

The group's proposal for the ASA comes after its members have witnessed the widespread devastation wrought on amphibians in Central

America by an emerging infectious disease. The deadly infectious disease, called chytridiomycosis, is caused by the fungus Batrachochytrium dendrobatidis. It has infected – and caused rapid die-offs – in eight families of Panamanian amphibians, Collins says.

The experience raises several serious ethical and scientific questions, Collins says.

“We have gotten to the point where we understand the system well enough, at least in Central America, where we have made predictions twice now as to where this disease will have an outbreak,” he says. “Once you get to that juncture in a scientific analysis, then you get past a tipping point in terms of science intersecting with other issues, such as policy and ethics.

“We can now predict with a high probability that, within a certain amount of time and within so many kilometers, an amphibian community will go from 70-plus species to five or 10 species. The question, then, is, ‘What, if anything, are we going to do about it?' ”

The ASA would help develop conservation programs in countries in response to threats from the fungus and other negative effects, such as habitat destruction. The group states that conservation activities should remain in range countries where possible with coordination and support through ASA, to engage and employ local scientists. A special initiative would be regional centers for disease research and captive breeding.

“Science as usual just is not going to work with this problem,” Collins says. “It will require large-scale interdisciplinary and collaborative work. Conservation as usual also is not going to work with this problem. The wildlife reserves and parks, in and of themselves, are insufficient to protect some of these organisms, because park boundaries will not stop an infectious disease.”

As the group states in its paper: “Scientists, wildlife managers and conservationists in range countries would create and staff the regional centers, prioritizing the tropical and subtropical regions. ASA would create and support readily available databases from a global network of centers, as well as support other research and training in countries with few amphibian experts.

“Such dedicated research capacity in affected regions is required to address a global crisis, and to keep amphibian research and conservation at the forefront of policy-making.”

Source: Arizona State University