



Society for the Study of Amphibians and Reptiles
American Society of Ichthyologists and Herpetologists
The Herpetologists' League
Canadian Herpetological Society



November 14, 2014

Dan Ashe, Director
U.S. Fish and Wildlife Service
Department of the Interior
1849 C St NW
Washington, DC 20240

Dear Director Ashe,

We are writing on behalf of the above-listed scientific societies to request immediate action by U.S. Fish and Wildlife Service to protect America's salamanders from a new, emerging wildlife disease caused by the chytrid fungus *Batrachochytrium salamandrivorans* (or *Bsal*). Together, SSAR, ASIH, HL, and CHS represent a global community of thousands of professionals dedicated to studying amphibians and reptiles and providing accurate scientific information to aid their conservation.

On Oct. 31st, the journal *Science* published results of a comprehensive study (Martel et al. 2014) explaining the threat posed by *Bsal*, a recently described emerging fungal pathogen of Asian origin, most likely spread via the pet trade, and now causing die-offs of salamanders in the Netherlands and Belgium.^{1,2} Comparable novel pathogen incursions in recent years have led to devastating outbreaks of West Nile virus in birds, white-nose syndrome in bats, and chytridiomycosis in amphibians. The latter, caused by another chytrid fungus (*Batrachochytrium dendrobatidis*), was a factor in declines and recent moves to list several western U.S. amphibian species (e.g., Sierra Nevada Yellow-legged Frog, Mountain Yellow-legged Frog, Yosemite Toad) under the Endangered Species Act (ESA).

Martel et al. (2014) have shown that while *Bsal* does not yet occur in the U.S., native U.S. salamanders are highly vulnerable. We ask you to use every possible authority to prevent the arrival of *Bsal*, with particular focus on the Lacey Act. Specifically, we strongly urge your agency to promptly suspend all imports of any salamanders (including newts), until a program is developed for only allowing imports that are certified as free of *Bsal* and other deadly salamander pathogens or parasites. Such certification could be based on verified clean sources, reliable testing, treatment, quarantine or other measures; the precise approach will require expert design and review.

We are also highly supportive of more comprehensive amphibian disease prevention approaches, as exemplified in our previous support of many aspects of the Defenders of Wildlife 2009 Petition: "To List All Live Amphibians in Trade as Injurious Unless Free of *Batrachochytrium dendrobatidis*." The Service has already taken public comment on the Petition, and the Service could reasonably decide the best response is to create a certification program aimed at all potentially deadly amphibian pathogens, using the template of the 2009 Petition.

About 190 species of salamanders occur in the U.S., making the U.S. the global center of salamander diversity. Salamanders are key components of forested and aquatic ecosystems, playing vital roles in trophic relationships and nutrient cycling.^{3,4} Native salamanders are already challenged by the interactive effects of habitat loss, climate change, and other diseases.^{5,6} Declining population trends have been noted for at least 10 U.S. salamander species for which long-term monitoring data are available.⁷ Thus, the introduction of a novel, highly

virulent pathogen like *Bsal* poses yet another threat that would likely lead to more salamander listings under the ESA. Any economic impact to the small number of salamander importers is bound to be much smaller than the costs of protecting these species and implementing recovery plans. Furthermore, recovery actions to mitigate effects of diseases, once pathogens are widespread in the environment, are highly limited and costly.

For all these reasons, we urge you to take timely steps to ensure that *Bsal* and other diseases that affect amphibians and reptiles are kept out of the U.S. Voluntary measures by live animal importers and information/education campaigns are also vital. The members of our respective societies are standing by to assist with these efforts and to provide further scientific information and technical guidance to aid in the development of effective protective measures.

Thank you for your prompt attention to this urgent issue.

Sincerely,



Robert D. Aldridge, Ph.D.
President, SSAR
aldridge@slu.edu

James R. Spotila, Ph.D.
President, HL
spotiljr@drexel.edu



H. Bradley Shaffer, Ph.D.
President, ASIH
brad.shaffer@ucla.edu



Stephen Mockford, Ph.D.
President, CHS
stephen.mockford@acadiu.ca

CC: D. Hoskins, B. Arroyo, G. Frazer, P. Souza, W. Woody, C. Martin, S. Jewell (USFWS)

Literature cited:

- ¹ Martel et al. (2014) Recent introduction of a chytrid fungus endangers Western Palearctic salamanders. *Science* 346, 630 [DOI:10.1126/science.1258268]
- ² Gorman (2014) Infection That Devastates Amphibians, Already in Europe, Could Spread to U.S. *New York Times*
- ³ Burton, T. M., and G. E. Likens. 1975b. Energy flow and nutrient cycling in salamander populations in the Hubbard Brook experimental forest, New Hampshire. *Ecology* 56:1068–1080.
- ⁴ Best & Welsh (2014) The trophic role of a forest salamander: impacts on invertebrates, leaf litter retention, and the humification process. *Ecosphere* 5(2):16 [DOI: 10.1890/ES13-00302.1]
- ⁵ Milanovich et al. (2010) Projected loss of a salamander diversity hotspot as a consequence of projected global climate change *PLoS One* 5(8):e12189 [DOI: 10.1371/journal.pone.0012189]
- ⁶ Blaustein et al. (2012) Ecophysiology meets conservation: understanding the role of disease in amphibian population declines. *Phil. Trans. R. Soc. B* 367 [doi: 10.1098/rstb.2012.0011]
- ⁷ Adams et al. (2013) Trends in amphibian occupancy in the United States. *PLoS One* 8(5): e64347 [DOI: 10.1371/journal.pone.0064347]