



Salamanders: Deadly Skin Disease Threatening European Populations; New Conservation Methods Could Prevent Spread To North America

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An emerging fungal pathogen known as *Batrachochytrium salamandrivorans* (*Bsal*) has caused drastic declines in European salamander populations. As a result, the Amphibian Survival Alliance (ASA) and its partners are taking drastic measures to ensure the deadly disease does not spread to North America, a global hotspot for salamander biodiversity.



Bsal was first detected in salamanders in 2013 after it nearly wiped out wild European fire salamanders living in the Netherlands. When infected, salamanders many suffer from skin lesions, anorexia, lethargy, or even death. This fungal pathogen is similar to *Batrachochytrium dendrobatidi*, which causes Chytrid disease in frogs, researchers say.

Several measures have been taken to prevent the spread of *Bsal* in North America, according to a [news release](#). Some of them include:

- Forming a National Disease Task Team to facilitate the development of a strategic plan for *Bsal*;
- Holding workshops to educate the public on *Bsal* and creating a website to readily disseminate information on the emerging disease;
- Creating a *Bsal* National Task Force that can address all facets of *Bsal* preparedness, response, research and management;
- Developing a customizable *Bsal* rapid response plan for both wild and captive salamanders;
- Creating improved policies for wildlife disease management.

The good news is *Bsal* has only been documented in Asia, the Netherlands, Belgium, and Germany, which buys researchers time to get some control of this deadly disease before it makes its way to North America.

"What we really need is to keep *Bsal* out of North America as long as possible, allowing us time to better understand this pathogen and how to address it," Priya Nanjappa, amphibian and reptile conservation policy lead for the Association of Fish and Wildlife Agencies, explained in the release. "Unfortunately the policy tools are just not in place for swift action, even when urgency is required."

North America is home to half of the world's known salamander species, with particularly high populations living in Mexico and the Appalachian Mountains. It follows then a *Bsal* outbreak could be detrimental to the species' global diversity.

"North America's diversity of salamander species truly makes this region of the natural world special," Matthew Gray, professor of wildlife ecology at the University of Tennessee, added. "Salamanders provide society numerous benefits including use as educational tools, in carbon cycling, and even in shedding light

on biomedical procedures."

Their study was recently published in the journal [*PLOS Pathogens*](#).