Rough-skinned Newt, *Taricha granulosa*. Photo: Elke Wind, BC, Canada.

Batrachochytrium salamandrivorans: North America Call to Action

By Dede Olson

A new amphibian fungal pathogen "*Bsal*" was identified in 2013 from a wild salamander die-off in Europe. Studies show that *Bsal* kills North American salamanders. *Bsal* is not known to occur in North America currently, but pathways for its entry do exist. Interagency and international collaboration and action will be essential to prevent or reduce risk of *Bsal* introduction to the United States, Canada, and Mexico.

Batrachochytrium salamandrivorans, or *Bsal*, is native to Asia, and Asian salamanders carry the fungus without showing signs of disease. Asian salamanders are held in international captive collections, and are common pets; of the nearly 3 million salamanders imported to the U.S. over the past decade, >85% were Asian salamanders. First detected and identified in the Netherlands, in the last year *Bsal* has been detected in captive salamanders in the United Kingdom. This pathogen has proved to be lethal to multiple species in both captive and wild situations. It is an emerging infectious disease that is at an early stage of global transmission. Wildlife scientists and managers aim to contain or treat infected animals in captive situations, and preempt the pathogen's introduction to wild populations outside its Asian range.

North America is a global hotspot for salamander diversity, home to nearly 50% of all species. Salamanders play key ecosystem roles, as they are centrally nested in food webs and occur both in water and on land. We use salamanders as metrics of environmental change, and they are critical to biomedical research that seeks human health benefits. Numerous threats affect amphibians, and despite the potentially dramatic impacts of the *Bsal* threat, it is controllable at this time.

PARC's Disease Task Team will develop a Strategic Action Plan that will outline approaches to protect our North American natural heritage, our native species, and ecological functions, as well as ecosystem services for human goods and services that these species provide.

The ***Bsal*** Strategic Action Plan components are as follows:

1. Identify *Bsal* entry routes into the United States, Canada, and Mexico.
2. Develop strategies to prevent the risk of *Bsal* entry to North America, and specifically its introduction into wild populations.
3. Develop continental surveillance strategies for wild and captive populations.
4. Develop and improve response and intervention strategies (containment, treatment) if *Bsal* is detected.
5. Identify education and outreach strategies to enhance public awareness and biosecurity compliance.

For more information visit the PARC Disease Task Team, Information Portal.