



THE AMPHIBIAN RESEARCH AND MONITORING INITIATIVE

Innovative Questions and Research



WHY AMPHIBIANS?

Many scientific reports have documented what is believed to be a Global Extinction event in which amphibians are disproportionately affected. This has highlighted the need for data on the causes of amphibian declines and how their status could be improved in the United States.

Since its initiation in 2000, ARMI has built an unprecedented national data set on amphibians. The knowledge gained and the data collected now allow the program to expand its goals to achieve broad syntheses while maintaining focus on ARMI's core objective: providing essential information to DOI managers on the most threatened group of vertebrates on earth.

ARMI OBJECTIVES

<http://armi.usgs.gov/>

- ◆ Provide information to natural resource managers on the status and trends of amphibians
- ◆ Relate status and trends to management options
- ◆ Identify causes of amphibian declines
- ◆ Provide essential scientific information to support effective management actions to arrest or reverse declines.



VISION AND DIRECTION

To conduct research that leads to reliable knowledge about the status, ecology, and conservation of amphibians in the United States. ARMI accomplishes this by using interdisciplinary research teams to implement rigorous monitoring and conduct field and laboratory experiments.

STRUCTURE

ARMI resulted from the first multidisciplinary funding request in USGS, and remains a leading example of what can be achieved by applying USGS's broad expertise and geographic scope to high priority resource problems.

RESEARCH BREADTH

ARMI scientists conduct research on topics such as the potential effect of emerging contaminants on frogs, development of adaptive management frameworks for recurring decisions, endangered species recovery, evaluation of habitat restoration techniques, effects of climate change on the fitness and abundance of amphibians, effects of invasive species, and the diagnosis, description, and treatment of new diseases.



COLLABORATIONS

ARMI routinely collaborates with federal and state agencies, universities, and international colleagues. This increases our overall effectiveness because it allows ARMI to have a larger impact with its research dollars, and diversifies our scientific perspective.



EXAMPLES of CURRENT ARMI COLLABORATIONS

-  Development of climate change adaptation strategies with NPS, FWS and the States to conserve several rare salamander species in Shenandoah National Park including aiding decisions on allocating conservation resources under a changing scenario.
-  Quantifying the effects of the NRCS Wetlands Reserve Program on amphibian populations in the Lower Mississippi Alluvial Valley as these sites transition back to their original forest type.
-  Collaboration with the National Park Service Greater Yellowstone Inventory and Monitoring Network to determine the status of amphibians in Yellowstone and Grand-Teton National Parks along the Great Divide Transect. NPS designated amphibians as one of its vital signs.

ARMI MONITORING

ARMI data provide the only large-scale quantitative information on amphibian declines in the US, producing more than 400 peer-reviewed publications. The statistical methods developed by ARMI are used across the world for many different wildlife species.

ARMI is a national program that is modular: it is composed of a series of monitoring projects designed to meet specific local objectives. Amphibian decline is a problem of local, national and international scope that can impact ecosystem function and diversity, and commerce.



Check it out: <http://fresc.usgs.gov/products/fs/fs2005-3096.pdf>



Interested in learning more or collaborating with ARMI?

Contact a Regional Principal Investigator or the National Coordinator

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