Australian lungfish

Neoceratodus forsteri

The Australian lungfish is one of only five surviving lungfish species in the world and is likely the oldest living vertebrate on the planet with fossil records dating back 380 million years. The project seeks to contribute new scientific knowledge necessary to stop the decline of, and support the recovery of, the endangered Australian lungfish.

At one time there were at least seven species of lungfish in Australia whose distributions extended to the centre of the Australian continent, but at present native populations of the Australian lungfish persist in only two rivers. The scientists will catch lungfish, harvest scale samples, and return the fish to the river. The fish scales will be analyzed to help determine biological trends in lungfish feeding ecology.

Conservation Observation of the Grant Recipient

Despite being federally-listed in Australia as a threatened species, globally recognized as a scientific icon and sacred to the indigenous people of the region, the long-term persistence of the Australian lungfish is in severe jeopardy.


© Julian Olden


© Julian Olden

© Julian Olden

PROJECT DETAILS

The project seeks to contribute new scientific knowledge necessary to stop the decline of, and support the recovery of, the endangered Australian lungfish. First, innovative stable isotope analysis of carbon and nitrogen in different regions of fish scales will provide the first ever investigation of century-long trends in lungfish resource use. Second, spatial and temporal patterns of lungfish resource use will be examined to inform strategic rehabilitation opportunities.

PROJECT RESULTS

"The project has advanced in three critical areas. First, I have completed a consultation period with local communities and other stakeholders in the study region and sought to enhance community participation in the field activities. Second, I have completed a preliminary exploration of scales from archived lungfish held in an existing scale databank. Third, field sampling for lungfish (to collect tissue for stable isotope analysis) has been conducted in multiple river sites strongly affected by dams and agriculture to examine how these threats affect lungfish resource use."

HOW THE FUND HELPED

"The Fund has been instrumental in helping fill fundamental gaps in our knowledge of lungfish feeding ecology and how it varies over large spatial and temporal scales. Support from the Fund has helped enhance collaborations with international researchers and management organizations charged with saving the Australian lungfish from extinction, and it has paved the way for subsequent grant proposals, including National Geographic."


© Julian Olden

Julian Olden
University of Washington