

## Sarah Ellen Rinkevich

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### Contact Information:

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### Education:

B.S., 1987, University of Arizona, Renewable Natural Resources.

M.S., May 1991, Humboldt State University, Natural Resources; Thesis title: *Distribution and habitat characteristics of Mexican spotted owls in Zion National Park, Utah.*

Ph.D., May 2012, University of Arizona, School of Natural Resources and the Environment, Major: Wildlife Conservation, Minor: Cultural Anthropology; Dissertation title: *An Assessment of Abundance, Diet, and Cultural Significance of the Mexican Gray Wolves in Arizona.*

Dissertation Abstract: In light of the interdisciplinary principles of conservation biology, my project combined non-invasive genetic sampling techniques, state of the art conservation genetics techniques, and ethnography to answer key questions about Mexican wolves within Apache culture. My objectives were to obtain a population estimate of reintroduced Mexican gray wolves (*Canis lupus baileyi*) on the Fort Apache Indian Reservation, compare diet of sympatric carnivores, and investigate the cultural significance of the wolf to the Western Apache people. I included an ethnographic feature to my research. My study showed evidence of shared knowledge about the wolf within Western Apache culture. I provided a literature review chapter in my dissertation regarding how traditional ecological knowledge has enhanced the field of conservation biology but also the challenges of collecting and incorporating it with western science. A possible outcome of combining a biological and ethnographic study is an improved dialogue between native and non-native resource managers in order to overcome cultural barriers that have precluded trust and cooperation with the wolf reintroduction program.

### Professional Experience:

Fish and Wildlife Biologist (2006 – present), GS-401-13, U.S. Fish and Wildlife Service, Southwest Regional Office, Division of Threatened and Endangered Species, Albuquerque, NM (duty station is currently Tucson, Arizona): While in pursuit of my doctoral degree, I worked on a variety of endangered species assignments including section 7 consultations, listing packages, 5-year reviews, and endangered species recovery. I currently work closely with National and Regional Native American Liaisons with regard to tribal consultation and how to incorporate Traditional Ecological Knowledge into endangered species documents. I was invited by Region 6 to present part of my dissertation at the Missouri River Recovery and Implementation Committee in Sioux City Nebraska, October 19, 2010. I developed a Traditional Ecological Knowledge Website linked with the National Native American Coordinators FWS site: <http://www.fws.gov/nativeamerican/TEK.html>. I was asked by the Service's Washington Office to draft Climate Change questions for a Tribal Panel discussion at the

2012 Trilateral Meeting. I am currently working with the Tohono O'odham Nation on assembling Traditional Ecological Knowledge on the jaguar for the Jaguar Recovery Planning effort.

Regional Consultation Coordinator (2003 – 2006), Fish and Wildlife Service Biologist, GS-401-13, U.S. Fish and Wildlife Service, Southwest Regional Office, Division of Threatened and Endangered Species, Albuquerque, NM: As Regional Consultation Coordinator for the Southwest Region, I had primary Section 7 responsibilities for the San Carlos Apache, White Mountain Apache, and Hopi tribes. I was responsible for several complex section 7 consultations that involved water exchanges between the entities such as the San Carlos Apache Tribe and Bureau of Reclamation. I was one of several Fish and Wildlife Service Biologists that developed a Statement of Relationship with the San Carlos Apache Tribe. This document sets forth a government-to-government relationship with the Tribe that articulates how the Endangered Species Act will be administered on tribal lands. This Statement of Relationship is extremely important pursuant to Secretarial Order 3206, which states that all government agencies have trust responsibilities with tribal entities.

### **Relevant Publications:**

Rinkevich, S.E. *In prep.* Traditional ecological knowledge, endangered species, and conservation biology: a review.

Rinkevich, S. E., R. Stuart, and D. Parker. *In prep.* Cultural significance of *ba'cho*, *ma'cho* (wolf) to the Western Apache in Arizona.

Rinkevich, S. E., and D. Parker. 2010. Role of the Wolf in Apache Culture. The Wildlife Professional 4(4): Web Extra at [www.wildlife.org](http://www.wildlife.org)

Rinkevich, S. E. 2008. Apache leader promotes tribal conservation rights. Endangered Species Bulletin 33(4):26-27.

Rinkevich, S. E. 2008. Traditional Ecological Knowledge. Endangered Species Bulletin 33(4):34-35.

### **Relevant Presentations:**

Rinkevich, S. E., *An Assessment of Abundance, Diet, and Cultural Significance of Mexican Gray Wolves in Arizona*, Ph.D. Defense, School of Natural Resources and the Environment, University of Arizona, Tucson, Arizona, April 23, 2012.

Rinkevich, S. E., *Cultural significance of ba'cho, ma'cho (wolf) to the Western Apache in Arizona*, Native American Fish and Wildlife Service annual conference, Cherokee, North Carolina, April 30 – May 4, 2012.

Rinkevich, S. E., *Cultural significance of ba'cho, ma'cho (wolf) to the Western Apache in Arizona*, Native American Fish and Wildlife Service annual conference, Custer, South Dakota, May 2-5, 2011.

Rinkevich, S. E., *Implementing Traditional Ecological Knowledge in Conservation Biology*, Southwest Native American Fish and Wildlife Society annual meeting, Scottsdale, Arizona, July 27-29, 2010.

Rinkevich, S. E., *Implementation of Traditional Ecological Knowledge in Natural Resource Management*, The Wildlife Society annual conference, Snowbird Utah, October 2-6, 2010.

Rinkevich, S. E., *Traditional Ecological Knowledge and Endangered Species Act Conservation*, 24<sup>th</sup> Annual Native American Fish and Wildlife Society Meetings, Pueblo of Isleta, New Mexico, 2009.

Rinkevich, S. E., M. Culver, and R. S. Toupal, *Assessing prey selection patterns and cultural significance of the Mexican gray wolf on the San Carlos Apache Reservation* (poster). The Wildlife Society Annual Meeting, Tucson, Arizona, September 22-26, 2007.

Rinkevich, S. E., *Secretarial Order 3206 and Federal Trust Responsibilities*. Tribal Gathering Meeting, Chandler, Arizona, August 22, 2007.

### **Awards:**

The Wildlife Society – Student Wildlife Presentation Award 2012  
U.S. Fish and Wildlife Service – Time-off Award 2011  
U.S. Fish and Wildlife Service – Recognition of Twenty Years of Service 2011  
U.S. Fish and Wildlife Service - Star Award 2010  
U.S. Fish and Wildlife Service - Star Award 2009  
U.S. Fish and Wildlife Service - Star Award 2006  
U.S. Fish and Wildlife Service - Regional Director Special Award 2004  
U.S. Fish and Wildlife Service - Star Award 2002  
U.S. Fish and Wildlife Service - Star Award 2002  
U.S. Fish and Wildlife Service - Star Award 2001  
U.S. Fish and Wildlife Service - Star Award 2000  
Department of the Interior – Conservation Service Award 1999  
U.S. Fish and Wildlife Service - Star Award 1998  
U.S. Fish and Wildlife Service - On-the-Spot Award 1997  
U.S. Fish and Wildlife Service - Star Award 1997  
U.S. Fish and Wildlife Service - On-the-Spot Award 1996  
U.S. Fish and Wildlife Service - Star Award 1996  
U.S. Fish and Wildlife Service – Special Act Award 1995  
Zion National Park - Eagle Award 1991

### **Professional Affiliations:**

The Wildlife Society  
Arizona Chapter of The Wildlife Society  
Native Peoples' Working Group – The Wildlife Society (Board Member 2009)  
The Wildlife Society (New Mexico Chapter of the Wildlife Society – President 2002;  
Executive Board Member – 2000 & 2001)  
Native American Fish and Wildlife Society  
Southwest Native American Fish and Wildlife Society  
Ecological Society of America