



**UNITED STATES OF AMERICA  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
ENDANGERED SPECIES PROGRAM**

**TELEPHONIC INTERVIEW (Time 6:27)**

**LAKE ERIE WATERSNAKE (HOST MS. HAAS HAAS WITH RICHARD KING)**

This transcript was produced from audio provided by FWS Endangered Species Program

**P R O C E E D I N G S**

(Music plays.)

MS. HAAS: This is Ann Haas with the Fish and Wildlife Service talking today with Dr. Richard King of Northern Illinois University about the Lake Erie water snake. Dr. King, are you there?

Dr. KING: I'm here.

MS. HAAS: Tell us about the Lake Erie water snake and how you got involved in conserving it.

Dr. KING: The Lake Erie water snake is a medium sized non-venomous snake. They are called water snakes because they impede mostly on aquatic prey such as fish and amphibians, which they catch in the water. So, they are proficient swimmers, but they also spend a lot of time on land and this makes it a little bit confusing. It is on land where things like courtship and mating occur, where the young are born, where we might see them basking on the rocks or hiding under rocks and it is also where the snakes hibernate over the winter.

When I was a beginning graduate student, I was interested in evolutionary biology and the Lake Erie water snake provided a textbook example of how the process of natural selection and isolation contribute to evolutionary change. Just as a little background. The Island populations of Lake Erie water snakes differ in color pattern from nearby mainland populations because their habitat differs. They are living along exposed rocky shorelines compared to the densely vegetative marshes on the mainland.

On the Island, it is the grey and un-patterned snakes that are more difficult for predators such as herons and gulls to see, so they have a survival advantage over the more regularly patterned snakes. Investigating these processes, it's kind of natural they led into documenting things like population size, population trends, movement patterns of individual snakes and so I kind of came into the conservation aspect from a somewhat different perspective.

MS. HAAS: Why should we protect this species?

Dr. King: Well, you know, that is always the hard question to explain why any individual species needs protection or is valuable. One of the reasons we should care about Lake Erie water snakes is because they are part of the Lake Erie eco system and this is an exceedingly complex system. It involves not only a species like Lake Erie water snakes that live there but it involves the surrounding marshes and upland habitat and as humans we benefit directly from clean water, natural resources, recreational uses and so one reason for protecting Lake Erie water snakes and any other species that are part of that eco system is that we want that eco system to continue to function in a natural and beneficial way.

MS. HAAS: So that is the bigger picture that we sometimes miss when we talk about individual species.

Dr. KING: It certainly is.

MS. HAAS: Why do you conduct surveys of the Lake Erie water snake?

Dr. KING: For many species the basic kind of information that wildlife biologists want to know is how many are there and are the numbers staying constant, are they increasing, are they decreasing. What we do, and Kristin Stanford and I have been kind of overseeing an intensive population census each spring for the last decade now, is call out all our friends that are willing to catch and handle water snakes with us, and we search the typical shoreline habitat. We have about fourteen study sights that we return to each year scattered across the islands and we simply catch as many of the water snakes as we can.

We are using what are called pit tags or RVD tags. They are essentially microchips that have a unique number encoded in them that we inject under the skin of the adult water snake so then we can scan any snake that we catch and see whether it is an animal that we marked in a previous year and if it is not then we inject one of these tags. What that provides us with is information on the ratio of new animals to previously captured animals within the population and we can use that to estimate both the population size and population trend.

MS. HAAS: How do you find researchers to help you count?

Dr. KING: We seem to have kind of a ready supply of students and former students both here at Northern Illinois University and through the FT Stone Laboratory that Ohio State has on South Bass Island and then we have a number of colleagues with the Toledo Zoo and the Columbus Zoo that actually take their days off and come join us for as many days as they can on a volunteer basis. Over the years, we have a number of local residents either from the Islands themselves or nearby areas to come out and participate. In any given year over a two-week period, maybe as many as fifty different people participate and probably over the ten years, a hundred or more students and other volunteers have been involved.

MS. HAAS: It sounds as though the community is embracing this cause too.

Dr. KING: You know they really are and a lot of that I think can be attributed to work that Kristin Stanford has been doing. One of the objectives in the Fish and Wildlife Service recovery plan for the Lake Erie water snake was to address public attitudes. Whenever we have a threatened endangered species public attitude is an important aspect, but when you are dealing with a snake which frequently elicits a negative reaction from the public, facing those concerns head on is important and my research associate Kristin Stanford divides her time between biological research and outreach activities aimed at the local residents and then visitors to the Island region.

MS. HAAS: So that outreach has been a big factor then.

Dr. KING: It certainly has and it takes a special kind of person to succeed at that and Kristin has skills and personality that really has made that a success.

MS. HAAS: Have there been unusual activities that have taken place in regard to your work over the years on behalf of this species.

Dr. KING: A number of things have surprised me. One of the things is that these animals live longer than I would have guessed. We have animals that we have marked as adults and then recaptured maybe as much as ten years later so not only are they an important part of the eco system there they are kind of long term kind of Island residents in some ways. It is always fun to tell the people about this and they come to appreciate, you know not only do we see snakes, but also it is the same snake year after year.

MS. HAAS: Well, congratulations to you on your recovery champion award of 2009, I know that you and Kristin Stanford have led the way to have peaceful coexistence here between people and wildlife.

Dr. KING: Thank you and that was an unexpected honor and Kristin and I were both really excited.

MS. HAAS: This is Ann Haas for the Fish and Wildlife Service.