



The
SeaDoc
Society

Research Update Winter 2007

A Marine Ecosystem Health Program

Dear SeaDoc Society Supporter:

At first glance, domestic cats and river otters seem worlds apart. One thrives in our marine waters, the other despises water. One often snuggles by us in our homes at night and the other avoids humans when possible. Recent SeaDoc research, however, has shown that like our own lives and the health of the marine ecosystem, these two animals are probably more intimately connected than most of us realize.



For several years we've been working to better understand what impacts the health of river otters in the Puget Sound Georgia Basin (see the October 2002 research update). While the Pacific Northwest is fortunate to have a robust river otter population, more than 20 states are spending millions of dollars to bring back wild river otters. Maintaining our river otter population requires that we understand what impacts them and what we can do to prevent them from becoming endangered. Disease is one important regulator of river otter populations and recent SeaDoc research revealed that a parasite called *Toxoplasma gondii* is one of the most common disease agents known to infect river otters in our region. In fact, 17% of river otters sampled had been exposed to this parasite. This SeaDoc Society work, which also includes other new information about river otter health, has just been published in the *Journal of Wildlife Diseases*.

Interestingly, cats are the source of this parasite. In California, *Toxoplasma gondii* is a major cause of death for the threatened southern sea otter. Like in sea otters, *T. gondii* causes inflammation in the brain of river otters but just how many river otters are dying from this disease is still unknown.

How do cats transmit a parasite to river otters? A study in California showed that in the small communities of Cayucos, Los Osos and Morro Bay, feral cats were estimated to put 29.5 tons of feces into the environment annually, while owned cats defecating outdoors contributed an estimated 76.4 tons of feces. Feces deposited on land often travels to the ocean via fresh water and river otters are likely exposed when they drink fresh water running into the ocean or when they eat filter feeding bivalves like mussels that can concentrate the infective form of this parasite.

We impact the health of river otters and other marine wildlife in everything we do, even in the way we care for our pets. By being aware, we can make daily decisions that will benefit our marine wildlife and their ecosystem. For example, to reduce river otter exposure to *Toxoplasma gondii* you can spay or neuter your cat and help reduce unwanted feral cats. Allowing your cats to use an indoor litter box and disposing of feces in a landfill also will help. And our individual ability to help extends far beyond just how we care for our pets. Please see the "How You Can Help" page on the SeaDoc Society website for a list of other things we all can do to help create a healthy marine ecosystem.

Your support of the SeaDoc Society is helping us better understand the connections between what we do on land and how it impacts river otters and other marine fish and wildlife and we thank you. For details on the work referenced here and other SeaDoc Society-sponsored research visit www.seadocsociety.org.

With Thanks,

Kirsten Gilardi

Joe Gaydos

UC DAVIS OFFICE

EXECUTIVE DIRECTOR

Kirsten Gilardi
Wildlife Health Center
One Shields Ave.
University of California
Davis, CA 95616
(530) 752-4896
(530) 752-3318 fax
kvgilardi@ucdavis.edu

ORCAS ISLAND OFFICE

REGIONAL DIRECTOR

Joe Gaydos
1016 Deerharbor Rd.
Eastsound, WA 98245
(360) 376-3910
(360) 376-3909 fax
jkgaydos@ucdavis.edu

PUGET SOUND OFFICE

DIRECTOR OF DEVELOPMENT & COMMUNICATIONS

Anne Stoltz
3213 West Wheeler Street, Ste. 225
Seattle, WA 98199
(206) 281-9987
(206) 283-0797 fax
awstoltz@ucdavis.edu

WWW.SEADOC SOCIETY.ORG