



P.O. Box 492, Hoquiam, WA 98550
www.coastalraptors.org
Monitoring Raptors on the Washington Coast Since 1995

Number 2

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COASTAL RAPTORS TIDEINGS



Coastal Raptors is concerned about the long-term health and viability of raptors found along coastlines. Their risks are many, including exposure to contaminants, disease, wind turbines, oil spills, human disturbance (e.g., being shot, vehicle collision), and severe storms. Given such vulnerabilities, coastal raptors deserve serious study.

Coastal Raptors works tirelessly to provide information for the general public, scientists, land managers, and policy makers on raptors in coastal environments.

For more on the non-profit Coastal Raptors and its board, see pages 2 and 3.



Bald Eagle feeds on sea lion carcass north of Ocean Shores, Washington. Dan Varland photo.

Coastal Raptors and the environmental consulting firm Hamer Environmental have launched a multi-year study to examine contaminant exposure in beach-cast carcasses of California sea lions and harbor seals and the Bald Eagles, Common Ravens, and Turkey Vultures that feed on them along coastal beaches in Washington and Oregon. These bird species will also be examined for bacterial, viral and parasitic diseases. The study goals are to: 1) assess the health of Bald Eagles, Common Ravens and Turkey Vultures, avian scavengers occupying key positions at the apex of the coastal food web, and 2) evaluate the risk of exposure to contaminated food sources in the critically endangered California condor, should they be reintroduced to the Pacific Northwest.

For more on the emerging study and California Condors in the Pacific Northwest, see pages 4 and 5.



Turkey Vultures feed on sea lion carcass south of Grayland, Washington. Dan Varland photo.

To support the avian health study, this year we received grant funding from:

- US FISH AND WILDLIFE SERVICE
- OREGON ZOO
- AMERICAN ASSOCIATION OF ZOOKEEPERS, PUGET SOUND CHAPTER



California Condor.

*Board of Directors**Dan Varland -- Executive Director**Dianna Moore - President**Dave Murnen - Vice President**Dan Miller - Secretary**Jeannette Bruun -Treasurer**Libby Mojica**Contact Dan at 360-591-5959 or danvarland@coastalraptors.org**or**Coastal Raptors**PO Box 492**Hoquiam, WA 98550*

Coastal Raptors is dedicated to providing research and education programs leading to better understanding and conservation of raptors in coastal environments. Active since 1995 and with non-profit 501(c)(3) status beginning in 2009, the **goals** are to:

- Conduct scientific research
- Provide education programs
- Train wildlife biologists
- Collaborate with experts in wildlife research and management

Mission: *Coastal Raptors* conducts research and education programs to provide better understanding of raptor ecology and conservation in coastal environments.

Vision: As people gain knowledge, they will achieve a deeper understanding of raptors in coastal environments. Their lives will be enriched, and their will to protect raptors in coastal environments will be strengthened.

MEET THE COASTAL RAPTORS BOARD

DAN VARLAND EXECUTIVE DIRECTOR AND BOARD MEMBER



I'm so pleased to be pictured here with a Peregrine Falcon. My survey team and I caught this first-year female on the coast near Grayland, Washington on October 31. She marks the 147th peregrine captured and banded for a research project that started in 1995.

Most studies last a few years at best. Long-term research projects like ours are rare. We have conducted more than 900 surveys, counting raptors, documenting their locations, behavior, and habitat use. In addition to the peregrines, banded, we have banded 11 Bald Eagles, four Gyrfalcons, three Merlins, two Northern Harriers, and one Snowy Owl.

To date, two papers have been published on the research. These are posted on the Coastal Raptors website (www.coastalraptors.org; under *Publications*). This spring, colleagues Joe Buchanan, Tracy Fleming, Mary Kay Kenney, Tom Loughin and I will publish a third research paper in *The Journal of Raptor Research: Fifteen Years of Peregrine Falcon Banding and Surveys on the Washington Coast*. Field volunteers and authors hope to continue the study another fifteen years.

Now, in collaboration with Hamer Environmental and others, Coastal Raptors has a new initiative. We are monitoring for disease and contaminants in avian scavengers. This effort will help assess the overall health of Bald Eagles, Common Ravens and Turkey Vultures and is also a means to determine the health risk to California condors, should they be released in the Pacific Northwest. For more information on this project, see pages 4-5.

DIANNA MOORE

PRESIDENT AND BOARD MEMBER

In 1985 I worked in an office across the freeway from downtown L.A. and the Union Bank building, where a pair of *anatum* peregrines had a nest box provided by The Peregrine Fund. As I watched those two birds over a two-year period, little did I imagine I would one day see peregrines "up close and personal." Fast forward 14 years to my first Grays Harbor Audubon meeting where the guest speaker was Dan Varland talking about cavity-nesting birds. I introduced myself, we talked a bit, and he asked if I would like to ride along on a beach survey looking for raptors, specifically, peregrines. Oh, yeah! That was in March of 1999, and thanks to my good long-distance eyesight I have been a member of the team since then...and became President of Coastal Raptors upon its formation in 2009.



DAVE MURNEN

VICE PRESIDENT AND BOARD MEMBER



I met fellow Coastal Raptors Board member Dianna Moore in 2002 on a home inspection when I was the construction manager for NeighborWorks of Grays Harbor County. She had a giant cutout of a falcon on her living room wall. It immediately stirred my boyhood memories of the falconer that lived next door to our summer home and quickly stirred my deep-seated passion for raptors. A quick conversation revealed a chance to get very close to these fastest of creatures as a volunteer on weekly beach runs with Dr. Dan Varland. Two weeks later, I was included in my first of more than 100 sorties. I have since met many, many people who share this intense passion for raptors. We volunteer our time, skillsets and financial resources with Coastal Raptors for another chance to view nature at her best in locations that most folks have never seen. The experience has been world class.

LIBBY MOJICA

BOARD MEMBER



Dan asked me to join the Coastal Raptors board in 2009 to assist with the science side of the organization. I provide feedback on Dan's scientific journal articles and consult on techniques for proposed research projects. As a raptor researcher working with Eastern coastal populations, my research interests overlap a lot with Dan's. I currently work with Bald Eagles, Golden Eagles, Peregrine Falcons, and Osprey on research questions such as contaminants, migration, nest productivity, and wintering ecology. I participated in the 2010 March Madness banding extravaganza and hope to get back out for another in the near future. I'm glad to be working with an organization that does an excellent job of collecting valuable scientific data while educating the public about the unique ecology of raptors on the Northwest coast.

DAN MILLER

SECRETARY AND BOARD MEMBER

Probably no one finds himself sitting around one day wondering, wouldn't it be fun to get up before sunrise on a cold, wet winter morning, and go to the beach. I can safely claim very few people seriously consider that because I am out there on many cold winter mornings with those very few people. So, one might ask, how did this all come about? Did I take someone up on a dare? Was I kidnapped out of a warm bed by college sophomore pranksters cruising the neighborhood? Maybe early-onset dementia?

For me, the explanation is not so strange after all. Like most others who get involved with Coastal Raptors, connections are made through other connections, usually to fill some need. Being dependent on contributions, the simplest connection is a checkbook or wallet, but our group also depends on other resources. Initially, I was a potential resource for blood specimen collection information and materials, and the processing of blood specimens, because I direct a clinical laboratory at a local hospital. I would know what equipment was available, how it worked, where to buy supplies, etc. And just maybe, being of a scientific background myself, I might be interested in helping.

About 35 years ago, as a young adult, my notion of the ideal job was to do the lab work in a research facility. That was what I enjoyed most as a college student, and later as a researcher for the National Naval Medical Research Institute in Bethesda, MD. Alas, I found no such jobs upon leaving the Navy, and eventually found myself directing a hospital department, which is an interesting challenge, but not the same as being a lab rat. For me, there is something therapeutic about doing lab work and not being in charge of the planning, finances, or even needing to know much about the big picture. So, the outdoors is now my research lab, and I drag myself out of bed early some days because it is fun to get up before the sun on cold, wet winter mornings and go to the beach.



Dan Miller (right) with Tom Rowley.

TOWARD REINTRODUCING THE CALIFORNIA CONDOR TO THE PACIFIC NORTHWEST!

The California condor is one of the world's most critically endangered species. As of October, 2011 only 394 were in existence, 205 living in the wild, the rest in captivity. Once found across North America, the species' range contracted to the Pacific Coast and adjacent foothills and mountains with the die-off of large terrestrial mammal species 10,000 years ago. On the coast, beached marine mammal carcasses offered an abundant food resource.

Condors were described by Lewis and Clark and other early explorers as relatively common in parts of the Pacific Northwest. In California, condors were regularly observed in the early and mid-1800s, sometimes in large flocks.



California Condor over the Pacific Ocean.

After 1850, condor observations in the Pacific Northwest began to decline, and condor observations were very rare north of California. Once recorded as ranging as far north as the Fraser River delta on the southern Pacific Coast in southern British Columbia, they were last sighted in Washington in 1897 and in Oregon in 1904. Causes for the decline included egg-collecting, shooting, lead poisoning, and feeding on poisoned carcasses.

Condor Management as Endangered Species. Listed by the U.S. Fish and Wildlife Service in 1967, the California condor was among the first in the US classified as an endangered species. Despite the listing, condor populations continued to decline through the 1970s, resulting in a decision to capture all remaining birds to initiate a captive breeding effort. With about 30 individuals flying free in 1980, the last of the wild condors was captured in 1987. Captive breeding has proven extremely successful, with 129 condors raised in captivity and released into the wild from 1992 to 2010. With releases at 3 sites in California, one in Arizona and one in Mexico, a major obstacle to program success is condor exposure to environmental contaminants, chiefly lead. Condors become very sick and often die from consuming lead, which they ingest primarily from feeding on the remains of lead-shot game left by hunters. Since 2000, condor recovery in Arizona includes an active program to regularly trap condors, assess blood-lead levels, and treat lead-poisoned condors.

Condors on the Pacific Coast. Where condors occur on the Pacific Coast, they may be exposed to lead when they consume marine mammals shot by some fishermen who see these mammals as competitors for fish resources. Moreover, DDT and other organochlorine pesticides that were responsible for the Endangered Species Act listing of the bald eagle, peregrine falcon and brown pelican remain in the marine food web on the California coast and affect California condor reproduction there. California sea lions breeding in southern California harbor high levels of organochlorine pesticides as a result of dumping of these contaminants in the ocean at Los Angeles in decades past. Male California sea lions migrate north along the Pacific coast each fall. Some perish and wash ashore on beaches from California to Washington, leaving condors in California and other avian scavengers vulnerable to contaminant uptake. Condors reintroduced at Big Sur in central California are beginning to nest, but lay thin-shelled eggs due to organochlorine exposure. Ventana Wildlife Society, a non-profit group responsible for the central California reintroduction program there, must replace the contaminated eggs with healthy eggs from captive condors.

Condors and the Yurok Tribe. Despite these challenges, today there is growing interest in re-establishing the California condor to the Pacific Northwest. From 2008 to present, northwest California's Yurok Tribe has been assessing lead and organochlorine pesticide levels in marine mammals and avian scavengers in an effort to evaluate the risk to condors, should they be released in their region. In 2011, the Yuroks began offering hunter education programs to promote the use of copper bullets as a non-toxic alternative to lead for big game hunting. The ultimate goal of the Yurok Tribe is release of California condors to their native lands in northwest California.

MONITORING AVIAN HEALTH AND DISEASE ON THE PACIFIC COAST IN SUPPORT OF CALIFORNIA CONDOR REINTRODUCTION PLANNING

Who

Coastal Raptors and
Hamer Environmental
in collaboration with

Avian Specialty Veterinary Services
US Fish and Wildlife Service
US Geological Survey
Marine Mammal Stranding Network
WA Department of Fish and Wildlife

When

Dec 2011 through 2015

Where

Coastal Washington and Oregon

What

Contaminants Monitoring in
California sea lions, harbor seals
and the bald eagles, turkey vul-
tures and common ravens that
feed on them for:

Lead and other heavy metals

Organochlorine pesticides, in-
cluding DDT and PCBs

Infectious Disease Monitoring
in bald eagles, turkey vultures
and common ravens for:

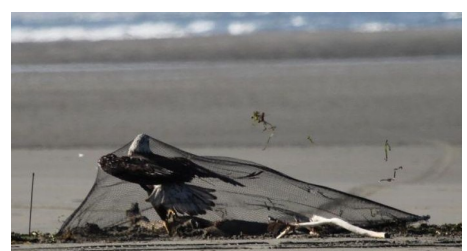
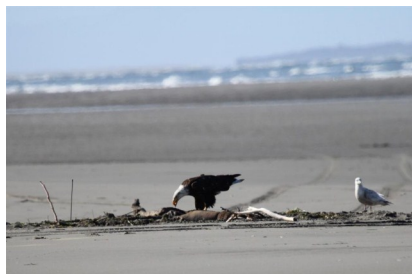
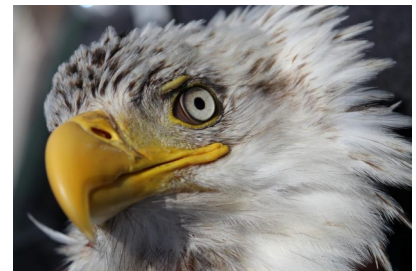
Avian Influenza
Newcastle Disease
Adenovirus
Others...

Why

Health monitoring serves as an early-warning system, helping to confirm that an avian community is free of disease and contaminants or confirming its presence. Avian scavengers occupy key positions at the apex of food webs. As such they are vulnerable to disease and contaminant exposure. This research is important to understanding the risk to California condors, should they be re-introduced in the Pacific Northwest. Moreover, some diseases, such as avian influenza, have acquired global significance and may affect the human population. Surveillance for these diseases is critical to monitoring human population health.

Pilot Research by **Coastal Raptors**, 2009-2011

In pilot research, **Coastal Raptors** captured, banded and blood-sampled nine Bald Eagles on Washington coastal beaches between 2009 and 2011. Blood samples were analyzed for lead; all eagles sampled had encouragingly low levels. Pictured here is one of these birds, a four-year-old female captured using a radio-controlled bow net while she fed on a California sea lion carcass. We measured only trace levels of lead in her blood: 79 parts per billion. All photos by Tom Rowley.



Applying color band.



Taking a blood sample.



Education Programs 2011

Month	Topic	Group
February	Raptor Marking Techniques	Grays Harbor Audubon, Aberdeen, WA
	The Bald Eagle	Emerson Elementary School First Graders, Hoquiam, WA
March	Peregrine Falcon Natural History and Conservation	Polson Timber Museum, Hoquiam, WA
	The Peregrine Falcon; The Bald Eagle	Men's Group retreat, Ocean Park, WA
April	Grays Harbor Shorebird Festival Field Trip: In Search of Coastal Raptors	Grays Harbor Audubon, Ocean Shores, WA
August	Coastal Raptors	Association of Avian Veterinarians, Seattle, WA
	Monitoring Avian Health and Disease on the Pacific Coast in Support of California Condor Reintroduction Planning	Bandon National Wildlife Refuge, Bandon, OR
October	Monitoring Avian Health...see above	Quinalt Indian Nation, Natural Resources Division, Taholah, WA
	Raptor Marking and Handling Workshop	Early Career Raptor Researchers, Duluth, MN
November	Monitoring Avian Health...see above	Western Snowy Plover Working Team, Portland, OR
	Monitoring Avian Health...see above	Quinalt Indian Nation, Natural Business Council, Taholah, WA



L to R: Jerry Smith, Wayne McKleskey, Will Dixon and Terry Gibson enjoyed time in the field at Long Beach.



Opportunities for teaching often occur in the field. Here a Peregrine Falcon captured for banding and release makes a lasting impression on morning beach walkers who happened by our banding operation. Photo by Charlie Varland.

Coastal Raptors continues raptor surveys and banding on the Washington coast. To follow along, go to *Notes from the Field* at www.coastalraptors.org.



Peregrine Falcon in flight south of Grayland, Washington on October 31, 2011. Photo by Tom Rowley.



Snowy Owl at Ocean Shores, Washington on November 8, 2011. Photo by Dan Varland.

YOU CAN HELP SUPPORT COASTAL RAPTORS BY CONTRIBUTING TOWARD OPERATING EXPENSES

It takes quite a lot to run Coastal Raptors. Below are listed some of our annual operating expenses.

Insurance: \$400 (non-profit liability)

Training and development: \$2,000

Office Supplies: \$900

Field Equipment and Supplies: \$4,000



Peregrine Falcon. Photo by Dalene Edgar.

YES, I WANT TO SPONSOR COASTAL RAPTORS WITH THIS TAX-DEDUCTIBLE CONTRIBUTION (PLEASE MAKE CHECKS OUT TO COASTAL RAPTORS, SEND TO: PO BOX 492, HOQUIAM, WA 98550).

Name
Address (street and email)
Contribution Amount

Many Thanks to Coastal Raptors Supporters!



2010 donations

Gretchen Albrecht, Chris Altwegg, Javan Bauder, Julia Bent, Brad and Julie Bitar, Ellen Blackstone, Jeannette and Al Bruun, Judy Clarke, Denise Coats, Kate Davis, Don and Dalene Edgar, Rob Fimble, Getty Images, Terry Gibson, Bruce and Evelyn Haak, Rod Hanke, Hewlett Packard Foundation, Scott Horton, Mary Kay and David Kenney, Erv and Janet Klaas, Dale and Ingrid Larson, Ernie and Shirley Lysen, Hewlett Packard, Bill and Mary Richardson, Bill Mayne, Dan and Elise Miller, Ron and Jan Miller, Sandra Miller, Libby Mojica, Brian and Marsha McKinley, Dianna Moore, Dave and Connie Murnen, Mary O'Neil, Bill and Ellen Pickell, Tom and Carole Root, Amy and Scott Rowley, Tom and Nancy Rowley, Hans and Ellen Running, Bob Schwartzberg, Phil Seu, Betsy Siedel, Brian Sterling, Ruth Taylor, Andy and Cheryl Varland, Wayne Varland, Charlie and Ariel Varland, Dave and Pat Varland, Dan and Sue Varland, Kathleen Wolgemuth.

2011 donations through November

American Association of Avian Veterinarians, John Connor and Julie Cohn, Durney Agency, Chris Altwegg, Jerry Broadus and Clarice Clark, Jeanette and Al Bruun, Dave and Mary Daniels-Lee, Kate Davis, Will Dixon, Janie Fink, Scott Ford, Grays Harbor Audubon Society, David Hancock, Stan and Bonnie Johannes, Tracey and Jeff Kidston, John and Carrie Larson, Wayne McCleskey, Brian and Marsha McKinley, Dan and Elise Miller, Sandra Miller, Dianna Moore, Kara Mortimer, Dave and Connie Murnen, Torgeier Nygard, Mary O'Neil, Arthur Grunbaum and Linda Orgel, Del Pelan, Jerry Smith, Cameron and Christina Snyder, Suzanne and Marc Tomlinson, Bryan and Rosey Toney, Anneka and Wolter Van Doornick, Kathleen Wolgemuth, Charlie and Ariel Varland, Dan and Sue Varland.

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Bald Eagle perches on crab pot, Long Beach Peninsula.
Dan Varland photo.