



P.O. Box 492, Hoquiam, WA 98550  
[www.coastalraptors.com](http://www.coastalraptors.com)  
Conservation Through Research and Education

# COASTAL RAPTORS TIDEINGS

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**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

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December 3, 2019



Dear Friends of Coastal Raptors,

Greetings from the Washington coast! I hope you enjoy this annual installment of TIDEings. TIDEings provides an opportunity to highlight Coastal Raptors activities as the year draws to a close. Established in 2009, this newsletter marks a milestone for Coastal Raptors - our 10th year as a tax-exempt, nonprofit organization.

While 2019 is Coastal Raptors' 10th anniversary, a wonderful achievement, I am personally pleased and satisfied to be reaching in 2020 my 25th year of raptor research and education programs here in Washington state. I began this work in 1995. In the coming 12 months I know I will be reflecting on the hundreds of amazing volunteers with whom I have had the good fortune to meet and work alongside to study, educate and conserve our coastal raptor species.

Thank you all!

Dan Varland  
Executive Director  
Coastal Raptors  
Hoquiam, Washington

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# TURKEY VULTURE ARTFUL DODGER

In June of 2018 Coastal Raptors and the Pennsylvania-based non-profit Hawk Mountain Sanctuary Association initiated collaborative research to determine site fidelity and migratory patterns of Turkey Vultures captured on the Washington coast using solar-powered GPS satellite transmitters. For this effort, we captured four Turkey Vultures and fitted them with wing-tags and back-pack mounted transmitters. We named them Coy (trapped with a Coyote carcass as a lure), Grayland (captured on the coast near Grayland), and Airy and Artful Dodger (both captured at the Ocean Shores airport). Airy's transmitter stopped transmitting two months after release; we suspect he was shot. The signals on the other three have been going strong for the past year and one-half. At this writing, they are spending their second winter in Mexico, more than 2,500 miles south of their summer residency in the Pacific Northwest.



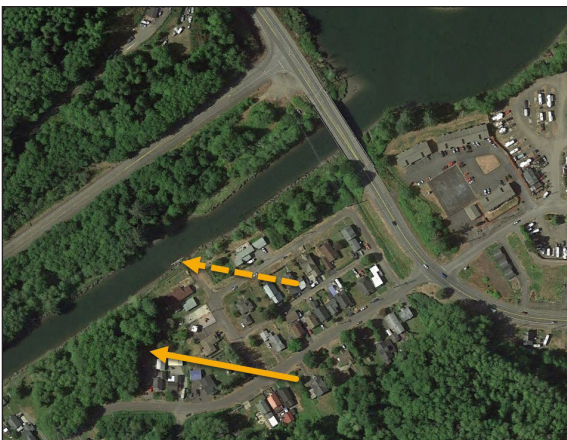
*Grays Harbor. Arrow points to the location of the Ocean Shores airport where Artful Dodger and Airy were captured.*

If you are familiar with Charles Dickens' writings, you may recognize the name Artful Dodger. He was the pickpocket in the Dickens book *Oliver Twist*. We chose Artful Dodger for this vulture because he was captured at the Ocean Shores airport. We hoped the name would bring him luck as he dodged the occasional plane at this sleepy little airport. Since then the tracking data has shown that Artful Dodger spends most of his time on the north side of Grays Harbor, miles east of the airport.

Sue and I live on the north side of Grays Harbor - the heart of Artful Dodger's summer home range. Last summer on occasion I put a carcass out at the edge of our bluff overlooking the harbor as a way to attract Artful Dodger and other vultures so I could read their wing-tags (all are red with white letters; Artful Dodger is HN). I used a motion-sensitive camera ("camera trap") at the bait site to identify tagged birds. While Artful Dodger was never in a picture, more than once I saw and photographed him with a telephoto lens as he flew by to check out the carcass. Not long after returning from Mexico, on the night of May 20, he soared by at dusk, and I was able to get the photo shared here. A check of his location on the tracking site, Movebank, later revealed that he had roosted for the evening on our property below the bluff line.



Movebank tracking data showed that Artful Dodger's most frequent night roost site was a stand of Red Alder trees along the Little Hoquiam River, 1.5 miles north of Grays Harbor. Last summer I walked through the stand twice at dusk, looking for vultures and vulture nesting activity. Each time I flushed 2-3 vultures from the stand as I walked through. I did not see Artful Dodger and found no evidence of nesting. During one visit, I met Jean and Dart Davis, active members of Grays Harbor Audubon, who just happen to live next to the Alder stand. They shared that vultures have been roosting in the stand for many years, though fewer in recent years. The Davises gave me permission to set fish carcasses and a camera trap on their dock along the river. I was immediately successful in capturing photos of Artful Dodger and his friends feasting on fish!



*The Little Hoquiam River north of Grays Harbor. Artful Dodger and other vultures chose a Red Alder stand as a night roost (solid arrow). When fish carcasses were set on the nearest dock (dashed arrow), Artful Dodger and others came in to feed.*





# Like a Message in a Bottle



On January 2, 2016 we captured and banded a first-year male Bald Eagle on the beach north of Ocean Shores, Washington (red pin on map). He's been sighted at four British Columbia locations since (3 marked with yellow pins). The **first sighting**, at **Location One**, was on the north end of Vancouver Island, British Columbia, 300 miles north of the banding location. Following is the email and 3 photographs I received on the sighting:

*This is Ivan Dublinksy, senior lightkeeper at Scarlett Point Lighthouse on Balaklava Island just off the NE coast of Vancouver, Island. I just received a certificate for the banded Bald Eagle I reported seeing on June 19, 2016...I just thought you might like to see some photos of the bird which I took at the time. Please find them attached.*



The **second sighting**, by Cindy Lewis at **Location Two** on the map, happened three years later on April 4, 2019. Cindy is a naturalist with Ocean Adventures Charter Company. In an email to me when sending her photos, Cindy wrote *We did a trip in the Great Bear Rainforest this spring during the herring spawn which was a first for us. We were fortunate in watching an entire spawn in action at Mustang Bay (south of Bella Bella) and this is where we photographed this eagle.*

Bald Eagles go through a series of annual molts, achieving their plumage with fully white head in tail in 3-6 years. Most eagles take 5 years to reach this stage and M/N, who was 4 at the time of these photos, is no exception. As the photo also shows, beak and eye color change with age, from brown to yellow. Another change for M/N was that he's managed to remove the silver band we put on his right leg!

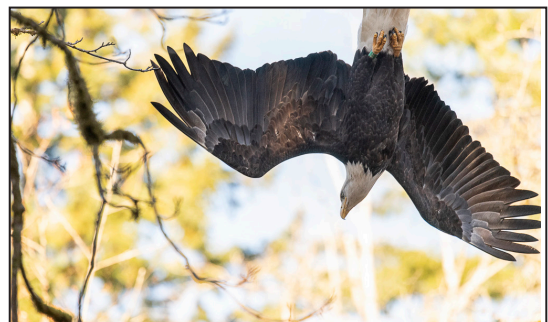


Cindy Lewis photo.

The **third and fourth sightings**, on the map at **Location 3**, were also made in 2019: Julie Collis on October 26 and Lisa Alder on October 29. Both times he was observed feeding on salmon on the Quinsam River west of Campbell River, British Columbia.



Julie Collins photo.

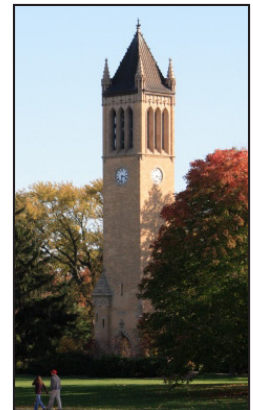


Lisa Alder photo.



# EDUCATION 2019

Date	Presentations by Dan Varland	Organization, Location
January 17	South Africa Through the Lens of a Biologist	Coastal Interpretive Center, Ocean Shores, WA
February 3	South Africa Through the Lens of a Biologist	Grays Harbor Audubon Society, Hoquiam, WA
May 5	Get to Know the Raptors	Grays Harbor Shorebird Festival, Hoquiam, WA
May 28	South Africa Through the Lens of a Biologist	Hoquiam Elks Club, Hoquiam, WA
July 30	Coastal Raptors: A Bird in the Hand is Worth Two on the Beach!	Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA
September 28	Coastal Raptors: A Bird in the Hand is Worth Two on the Beach!	Furvana Conference, Ocean Shores, WA
September 29	Get to Know the Raptors	Furvana Conference, Ocean Shores, WA
November 6	Techniques for Handling and Marking Raptors After Capture: A Bird in the Hand is Worth Two in the Bush	Raptor Research Foundation 2019 Conference, Fort Collins, CO



*Especially memorable for me was the presentation I made on at Iowa State University. I earned my PhD in Animal Ecology at ISU in 1991, with Erv Klass (shown here) my "Major Professor". Though retired, Erv arranged for my presentation, toured me around town, and hosted me overnight.*



Michelle Landis photos.

*In November I attended the Raptor Research Foundation conference in Fort Collins, Colorado. The conference was a huge success, with more than 450 people attending from 38 states and 13 countries (97 of them students). During the conference I co-taught a workshop with John Smallwood on marking, handling and measuring raptors. We had permission to use raptor carcasses provided by licensed rehabilitation facilities to teach hands-on techniques. In the photos above, I help two students from Japan put wing tags on a Golden Eagle: Haruki Natsukawa (center) and Dr. Katsui Hirai (right).*

# Film Features the Rare Philippine Eagle Page 5

By Scott Ford

Scott is board-certified in avian veterinary medicine and since 2012 has collaborated with Coastal Raptors in research on the health of avian scavengers – Bald Eagles, Common Ravens, and Turkey Vultures - on the Pacific Northwest coast. He owns Avian Veterinary Specialty Services, providing avian veterinary consultation and surgical services, primarily for wildlife projects, throughout North America.



Kike Amal photos.



Photo: Kike Amal

You've probably seen Neil Rettig's work in nature documentaries without knowing it. He takes you so deep into the world of animals that you forget about cameras and people. He's been a heavy contributor to the world of wildlife cinematography for going on five decades but unless you look at the fine print, you would miss his name.

Such was the case with me. I learned of Neil after being consulted about a sick Harpy Eagle at the University of Wisconsin School of Veterinary Medicine a few years back. I had to see this unusual bird. As it turned out, the eagle was one of Neil's birds and I was soon in contact with Laura Johnson, his wife. Soon my husband, Colin, and I visited their farm. After seeing their wonderful birds, Laura showed us a trailer for *Bird of Prey*, Neil's latest project at that time. Thus began my deep interest in the stunning Philippine Eagle.

If you've ever seen old film footage of Philippine Eagles, it's probably Neil's. He was the first and only person to ever capture details of their nest life. The rarity of these images is due first to the rarity of the eagles. It's estimated that there may be as few as 150 left in the wild. Also, the birds only nest every two years and lay a single egg. Second, it's extremely difficult to film them, particularly if you are trying your best not to disrupt them. Even this most recent film, with the latest technology and the assistance of local conservation groups, took years of careful work to complete. It came down to sheer determination – a passion to share this charismatic bird with the world. It grew from a palpable need to tap into the overwhelmed, often apathetic, social environmental consciousness and turn things around before these amazing birds disappear forever.

In *Bird of Prey*, those grainy, older movies are supplemented by new, crystal clear digital video and Neil adds a new dimension to the eagle's story by comparing and contrasting the old footage with the new. I knew instantly that the film was going to be inspiring to many. But it takes more than just feeling the need for action. At some point people need to actually take action. The trailer was contagious and I felt the need to act.

It turns out that I didn't have to wait long to discover my most useful means of contribution. Laura contacted me a couple of weeks after my visit and put me in touch with the Philippine Eagle Foundation, a Philippine-based group run by locals that has been working since the 1980s to conserve the rare bird. Their approach has included educating the public, advocating politically for the Philippine Eagles and their ecosystem, treating the injured, and breeding more of them in captivity. I was consulted regarding several medical cases but one in particular stands out. The bird had survived gunshot injuries, a startlingly common problem despite the fact that the birds pose little danger to humans or livestock. I reviewed x-ray images and provided my input for medical care. I do a lot of online consulting for many different veterinarians around the world and it feels good to share my experience to help birds in far-flung places. It felt particularly amazing in this case since there are so few of these birds left.

The film was released on Amazon Prime in May of this year and I was, at last, able to see the whole thing. Being the bird sap that I am, I pretty much cried through the whole movie. But who can't be moved by such an awesome creature? The most touching part for me was the release of Matatag, the eagle I had been consulted about. For people involved in conservation, it's easy to lose hope as we fight against what seem like insurmountable odds. But seeing Matatag fly free reminded me that any contribution, whether it's money or expertise, no matter how small, can make a difference. It restored my hope.

You can see the film, *Bird of Prey*, at local charity showings, streaming through Amazon Prime, or buy your own DVD. See [birdofpreymovie.com](http://birdofpreymovie.com) for more details. You can also read a longer version of this article and learn of ways to help Philippine eagles by visiting [wildbirdvet.com](http://wildbirdvet.com).



*Dictionary.com* defines *Pub Crawl* as “to have drinks at one bar after another”. Here, *Pub Crawl* aptly describes the slow process of publishing Coastal Raptors’ research findings in the scientific literature. It is common for long-term monitoring efforts such as ours to employ years of data and involve multiple of co-authors. This process takes time, for sure!

One peer-reviewed paper on Coastal Raptors research appeared in 2019 (see the publication abstract below). The year of publication was 2018, however copies were not distributed until the start of 2019. Coastal Raptors publications, including past annual newsletters, are available on the Coastal Raptors website under Research/Publications.



Title	Co-authors, Years of Research	Journal, Year Published, Volume & pages
Mercury Contamination in Peregrine Falcons ( <i>Falco peregrinus</i> ) in coastal Washington, 2001-2016	Joe Barnes, Dan Varland, Tracy Fleming, Joe Buchanan, and Shawn Gerstenberger, 2001-2016	The Wilson Journal of Ornithology, 2018, Vol. 130, pp. 958-968.

## MERCURY CONTAMINATION IN PEREGRINE FALCONS

BY JOE BARNES, DAN VARLAND, JOE BUCHANAN, TRACY FLEMING AND CHERYL VANIER

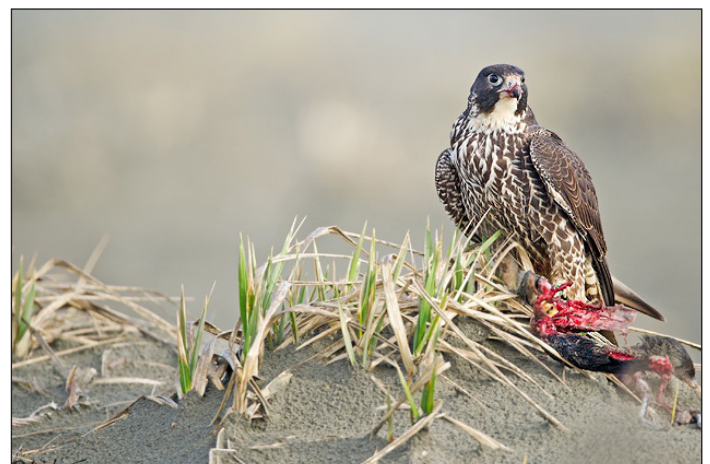
**Abstract.** We document concentrations of total mercury in feathers of 151 Peregrine Falcons captured from 2001–2016 on the coast of Washington. Peregrines were captured throughout the year, with breeding and natal areas of most individuals undetermined. The bulk of our samples consisted of fourth secondary feathers. We captured 23 individuals more than once to obtain feather samples from subsequent molts, with up to 12 years between first and last capture. All secondary feather samples contained detectable concentrations of total mercury (range = 0.7–69.83 µg/g), with mean concentrations in hatch-year feathers (average = 6.06 µg/g) significantly lower than in second-year (average = 22.55 µg/g) and after-second-year (average = 24.48 µg/g) feathers. All individuals first captured while in hatch-year plumage and subsequently recaptured (20 falcons), exhibited an increased concentration of total mercury in later years. Our 16-year study illustrates widespread contamination of total mercury in peregrines captured in coastal Washington, with evidence of bioaccumulation within individuals and between age classes. Encouragingly, peregrines in hatch-year plumage sampled during the final third of our study period exhibited a significantly lower average total mercury concentration than the first two thirds of our study. We detected greater total mercury concentrations in coastal Washington peregrines than in nearly all known published peregrine feather studies of various subspecies in North America and Europe.



Joe Barnes in the lab.

### Path to Mercury Exposure

While mercury occurs naturally in the environment, today’s levels are substantially higher than they were before the Industrial Revolution, with the difference largely due to fossil fuel combustion. As top-level predators, mercury bioaccumulates in Peregrine Falcons and is deposited in their feathers during feather growth. Peregrines attain a full set of body contour and flight feathers before they leave the nest. Each year thereafter, they molt in a new set of feathers. The feather samples we have collected provide a unique opportunity to examine mercury exposure over time.



Phil Seu photo.

# A Real Beauty!



Dan Varland photo.



Owen Schmidt photo.



Tom Rowley photo.

*She's a real beauty!* This thought was shared by Martha Cambridge after seeing the photos of this female Peregrine Falcon shared on Facebook. The photo on the left was taken on Washington's Long Beach Peninsula on banding day, November 10, 2012. The photo on the right was taken seven years later on September 27, 2019. The location was a sandbar 11 miles further south of the banding location, on the Oregon side of the mouth of the Columbia River. Wearing visual identification band H/7, she's been sighted 12 times over the years, all within 12 miles of her banding location. Kudos to Owen Schmidt for his photo of H/7. *I live in Portland and tend to get to the north coast of Oregon about once a month, if I'm lucky!* wrote in an email to me when sending his photo.

## Please Help Provide Financial Support to Coastal Raptors



Dan Varland photo.

Support from individual donors like you is important to Coastal Raptors. Please help us move forward by making a tax-deductable contribution toward operating expenses.

It takes quite a lot to run **Coastal Raptors** (\$15,000 annually). Listed below are examples of our annual operating expenses.

Vehicle mileage: \$3,000 - \$3,500

Conferences: \$1,000 - \$2,000

Publication Fees: \$500 - \$2,000

Data entry and analyses: \$2,000 - \$2,500

Mailing & Office Supplies: \$1,000

Field Supplies: \$1,000

Please Consider a Donation for this year or next if you have not already (see page 8 for a list of 2018 donors). Your Contribution is Tax Deductible. You may donate by check (payable to Coastal Raptors; Send to PO Box 492, Hoquiam, WA 98550) or online at [www.coastalraptors.com](http://www.coastalraptors.com). THANKS!

# MANY THANKS TO COASTAL RAPTORS SUPPORTERS

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**Donations Made in Memory of:** Ava and Mary, Donald Duncan, Steve Hallstrom, Sergej Postupalsky, and Mark Wilhyde.

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Tom Rowley photo.