Number 16
December 2025

COASTAL RAPTORS TIDEINGS

Annual Newsletter of Coastal Raptors

December 5, 2025

Greetings from the Washington Coast!

Madeline Schaeffer has a passion for science. In early June she was recognized as *Outstanding Science Student* at Grays Harbor College in Aberdeen, Washington. In the fall, with a two-year Associate of Science degree, she headed off to Harvard University to begin studies with a concentration in Integrative Biology.

Madeline would like to pursue science communication. Last summer she initiated an audio interview series with stories related to biology and ecology. I was pleased to be the first to be interviewed. Back in May I had given a presentation on our coastal raptors research to a biology class where Madelline was in attendance. While we didn't talk then, it must have left an impression.

She had visited our website at coastalraptors.com and read *Bald Eagle Washes Ashore in Puget Sound*, a blog I'd written about a Bald Eagle that we banded and that had died from lead poisoning. In an email to me she wrote, "I was wondering if you would be willing to do an interview on this story about P/O, and maybe shed some light on lead poisoning in birds. I am also interested in learning more about avian influenza and how it is impacting bird populations."

I didn't hesitate to say yes and was interviewed in July. The podcast, aptly named *Bald Eagle Blues*, is available on Apple and Spotify podcasts (see below).

This year marks 30 years of raptor monitoring on the Washington coast. It's been a very good run ! I hope you enjoy this year's *TIDEings*.

Sincerely,

Dan Varland

Bald Eagle Blues, available using the QR code above. On Spotify you can find by search ing with "Bald Eagle Blues Podcast."

Madeline Schaeffer pictured here during a camping trip in Olympic National Park's Hoh Rain Forest last summer.

New Findings Published on Coastal Peregrine Abundance

I'm pleased to share that co-authors and I published a science-based paper on Peregrine Falcon abundance in the September 2025 issue of *The Journal of Raptor Research*. For a copy, go to the Coastal Raptors website at coastalraptors.com/publications/. Here I provide an overview of the study, drawing from text and graphs in the published report.

Title: Estimated Annual Abundance of Migratory Peale's Peregrine Falcons in Coastal Washington, USA

Authors: Dan Varland, Joe Buchanan, Guthrie Zimmerman, Javan Bauder, Tracy Fleming, and Brian Millsap

Introduction. The Peregrine Falcon *(Falco peregrinus*) has a nearly global distribution consisting of 18 – 20 subspecies, most of which were substantially impacted by the effects of environmental contaminants in the twentieth century. Widespread conservation actions led to species recovery and delisting of two North American subspecies – *F. p. tundrius* and *F. p. anatum* – identified and protected under the Endangered Species Act. The Peale's Peregrine Falcon (*F. p. pealei*), with a distribution limited to the Pacific Coast of North America, was not ESA-listed but was protected under a similarity of appearances clause in the Act.

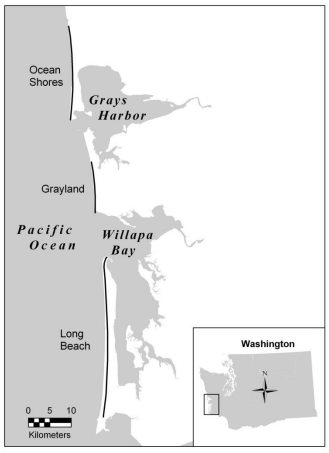
Peale's peregrines are larger and more heavily pigmented than other peregrine subspecies. For more information on Peale's peregrines, see my write-up in Bird Man Dan's Blog: *The Peale's Peregrine—A Quintessential Coastal Raptor*.

Nick Dunlop photo.

Peale's Peregrine

Following Peregrine Falcon delisting in 1999, the US Fish and Wildlife Service began a process to allow "take" (capture) of wild peregrines for falconry in the US. Recently, that effort involved generating updated estimates of the collective abundance of the three North American peregrine subspecies. Because of the more limited distribution of *F. p. pealei*, we conducted an analysis specific to its geographic range.

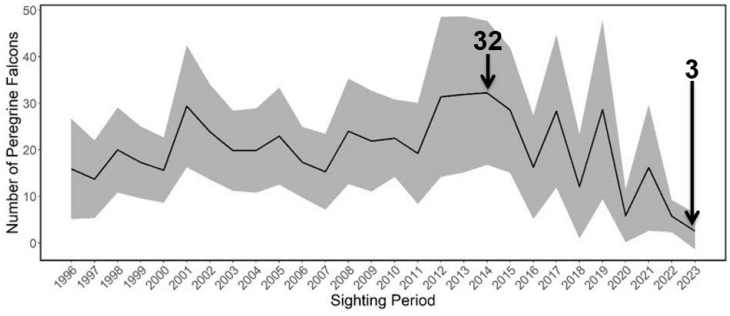
Methods. We analyzed data from a long-term banding and resighting program on three beaches on the southern coast of Washington to estimate the annual abundance of migrating and overwintering *F. p. pealei* using the capture histories of 250 Peregrine Falcons, nearly all of which were captured during more than 1,000 vehicle surveys between 1995 and 2024. Because we studied an open population of migratory individuals to estimate annual abundance, we employed a novel approach to population modeling.



Study area map

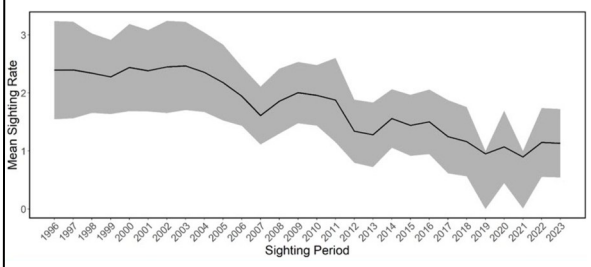
Results. The vast majority of the Peregrine Falcons that we captured and banded on study area beaches over the years were the Peale's subspecies (79% of 241 identified to subspecies). Annual abundance of Peregrines on the three beaches increased from the 1996-1997 sighting period to 2012-2014, and then began to decline. (Note: Our sighting periods extended from September of one year through May of the next; for example, from September 2014 through May 2015.)

This graph shows model-estimated Peregrine Falcon annual abundance for the three study area beaches. The highest estimate was 32 falcons during the 2014-2015 sighting period and the lowest was three falcons in 2023-2024.

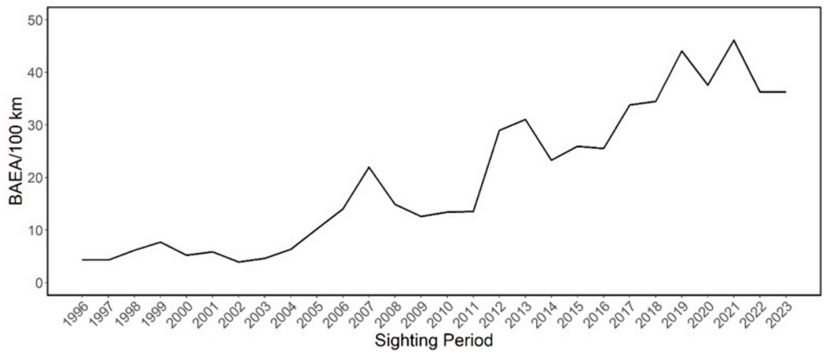


As Peregrine Falcon sighting rates decreased, Bald Eagle encounter rates increased. The graphs below show the model-averaged sighting rates for Peregrine Falcons and the number of Bald Eagles observed per 100 kilometers driven over the 29 year study.

Peregrine Falcon Sighting Trend



Bald Eagle Sighting Trend



Discussion. We suspect the change in sighting rate was a behavioral response by Peregrine Falcons to the threat of kleptoparasitism (food stealing) by Bald Eagles. These photos by Dalene Edgar show a Peregrine Falcon feeding at the Ocean Shores beach when its prey is spirited away by a Bald Eagle.

Although identifying other causes for the downward trend in Peregrine Falcon abundance at the end of the study period was beyond the scope of the project, high on the list of potentially relevant factors was peregrine exposure to highly pathogenic avian influenza (HPAI). This exposure occurs when peregrines feed on wild birds contaminated with the virus, including coastal gulls, terns, geese, ducks and shorebirds.

In 2014, HPAI H5N8 was the cause of death of one of our banded falcons, the timing of which coincided with the highest abundance of Peregrine Falcons during our study (2014-2015). In 2021, a strain of the virus far more virulent to wild birds, HPAI H5N1, was detected in eastern North America, and subsequently spread continent-wide to the Pacific coast. While we have no data to suggest that the presence of H5N1 affected falcon abundance on our study area, annual abundance of peregrines was lowest during the 2022–2023 and 2023–2024 sighting periods when wildlife mortality from HPAI was increasing significantly across North America.

Conclusion. Our findings add clarity to the migration and overwinter abundance of *F. p. pealei* on the Washington coast and may inform decisions about the capture of this subspecies for falconry.

Tom Rowley photo

Resightings by Team Ona Contribute Greatly to our Turkey Vulture Research

Maybe their mothers can tell 'em apart, but to the human eye, most Turkey Vultures look pretty much the same. Since 2012, we've placed uniquely coded wing tags on 62 Turkey Vultures, making these free-flying avian scavengers identifiable in the wild by spotting scope, camera with telephoto lens, binoculars, and, if they're really close, the naked eye. (We've fitted eight of these vultures with GPS transmitters, but that's another story!)

Turkey Vulture feet showing dried feces. Tom Rowley photo.

Turkey Vultures are wing tagged rather than banded because they poop on their legs and feet. This behavior, called urohydrosis, cools their legs through evaporative cooling. Urohydrosis also kills harmful bacteria on their legs that is harbored in the carrion they eat, given the acidic nature of their feces.

Over the years, **288 resightings have been made by 165 people not involved in our research efforts**. Their observations comprise 78% of the 370 resightings we've had as of this writing. Not surprisingly, a good number of these have been made by biologists not involved with our research efforts.

Marty Bray photo.

Turkey Vulture with visual identification tag ER catches sun on the Oregon coast.

Marty Bray and his wife **Jeannie Heltzel** are part of this group: biologists by profession who love to bird in their spare time. I've gotten to know them through email and phone conversations over their resightings of ER, a vulture that we tagged in 2014. Now retired, Marty had a career as a biologist with National Wildlife Refuges and with the US Forest Service. Not retired yet, Jeannie works as a consulting biostatistician for state and federal agencies, tribes and other groups.

Marty and Jeannie bird as a team, identifying themselves on *eBird* as "**Team Ona**." The name is a nod toward Ona Beach State Park where they often go birding. They resighted ER on three occasions spanning 10 years. A resighting that they made in 2015 was our first report. Six years later in 2021 they encountered ER again. Another four years flew by when, in 2025, they had their third resighting.

This map shows the locations and dates of their resightings with Newport, Oregon as a point of reference. Newport is about six miles west of the ER's tagging location (red pin). Team Ona's resightings, clustered less than three miles apart, occurred about eight miles south of Newport.

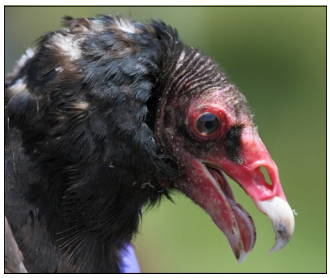
Turkey Vulture. Dan Varland photo.

Documenting Site Fidelity

In addition to Marty and Jeannie's resightings of ER, I've had six additional reports on the whereabouts of this vulture. Five of the six were from the same area south of Newport where Marty and Jeannie had observed him (or her, we're not sure which!). These observations, nine total, occurred from May through July each year across 10 years. Taken together, they provide evidence of summer site fidelity for ER on the Oregon coast.

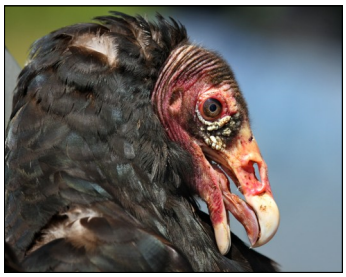
Documenting Longevity

Documenting the longevity of our tagged Turkey Vultures begins with determining their age at marking. With Turkey Vultures, paying attention to beak color at capture is key. In recently fledged vultures, the beak is black. Within several months the beak becomes an ivory color infused with gray. By age two and beyond, the beak is all ivory (photos below).



One year old Turkey Vulture.

Tom Rowley photos.



Turkey Vulture age two or older.

When tagged on July 14, 2014 ER's beak had not a hint of gray. Accordingly, we concluded that he/she was at least two years old at the time. ER was therefore at least 13 years old when resighted in 2025 by Marty and Jeannie. At 13, ER is situated with three other 13-year olds as the oldest vultures in our study. Turkey Vultures may live long lives. The oldest one on record with the USGS Bird Banding Lab is age 23 (as of December 2025).

Thanks much, **Team Ona**, for taking time to contribute data to our Turkey Vulture tracking study!

Marty Bray and Jeannie Heltzel on Bruny Island, Tasmania.

John Smallwood Joins the Coastal Raptors Board

By John Smallwood, Professor of Biology, Montclair State University, Montclair, New Jersey

I've always been fascinated by birds. They represent the extremes in the animal kingdom: they can fly faster than any other creature, with many species migrating thousands of miles; they have superb vision and are immersed in color; their vocalizations are among the most complex in Nature; and they have extraordinary behavioral repertoires. As an undergraduate I took a course in ornithology and discovered my true calling was a career as a university professor studying raptors and teaching ornithology.

For my master's thesis I wanted to test prey selection models on wild, free-ranging raptors. I chose the American Kestrel for my study species because (1) like all falcons, they're really cool, and (2) there was a very dense population of wintering kestrels in southcentral Florida, i.e., a great sample size. I studied the same winter population for my doctoral dissertation, focusing on why male and female kestrels are segregated by habitat. For my post-doc I established a large-scale nest box program (613 boxes) which re-set the carrying capacity for this nest-site-limited population. In 1994 I joined the faculty at Montclair State University and since then I maintain about 100 kestrel nest boxes for my New Jersey study population.

I met Dan when we were both graduate students studying kestrels. We attend the Raptor Research Foundation conference each year and in 2008 we presented the material on marking techniques that we included in the revised *Raptor Research and Management Techniques* manual. From 2014 to 2022 we co-taught a raptor handling and marking workshop at each of the RRF meetings. I've long been impressed by the research and education accomplishments of Coastal Raptors, and I'm happy for the opportunity to serve on its board.

Presentations in 2025

Date	*Title*	Audience/Location
January 28	*Where the Falcon Flies: Outdoor Adventures in Canada's Far North*	Friends of the Montesano Public Library, Montesano, Washingon.
February 9	*Where the Falcon Flies: Outdoor Adventures in Canada's Far North*	Grays Harbor Audubon, Hoquiam, Washington.
April 24	*Raptor Survey—Ocean Shores Beach*	Grays Harbor Home School Group. Ocean Shores, Washington.
May 19	*Reflections on a 32-Year Career in Wildlife Science and Conservation*	Grays Harbor College Biology Class. Aberdeen, Washington.
May 21	*A Bird in the Hand is Worth Two on the Beach*	Grays Harbor College Biology Class. Aberdeen, Washington.
June 21	*Thirty Years of Monitoring Raptors on the Washington Coast*	Science and Suds lecture series: Steam Donkey Brewing Company, Aberdeen, Washington.
October 18	*Issues and Challenges to Raptor Conservation Related to U.S. Policy*	Panel Member for Discussion: Raptor Research Foundation Annual Conference. San Jose, Costa Rica.
November 1	*Pacific Coast Peregrines*	Washington and Oregon Falconers Association Joint Meeting, Umatilla, Oregon (Banquet Speaker).
December 4	*Pacific Coast Peregrines*	Surfrider Foundation, Ocean Shores, Washington.

January 28 presentation. Helen Hepp photo.

April 24 field trip.

Blogs Posted in 2025

Available at *coastalraptors.com/blog*

January. *Better Late than Never: The Bald Eagle Becomes our National Bird*
February. *Long-lost Banded Peregrine Sighted on the Oregon Coast*
April. *Coastal Raptors Banded Bald Eagle Washes Ashore in Puget Sound*
May. *In Memory of Glenn Marquardt*
June. *May 30 Raptor Survey Reveals High Mortality of Gray Whales on the Washington Coast*
July. *The Secret Life of W/Z*
August. *A Full Circle Peregrine Memory from 2016*
September. New Findings Published on Peregrine Falcon Abundance
October. *Resightings by Team Ona Contribute Greatly to our Turkey Vulture Research*

Tom Rowley photo

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- Dale Larson, President
- Javan Bauder, Vice President
- Anita Plagge, Secretary
- John Smallwood

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- Sandie Mullikin

Coastal Raptors goals

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

Contributing Time

Many thanks to:

Dale Larson-concluding nine years of service as a Coastal Raptors Board member.

Charlotte Killien-hosting seven overnight stays for Coastal Raptors guests at the George Johnson House B&B in Ocean Park

Kelly Rupp and **Tom Phipps**-driving their personal vehicles when a second vehicle was needed for raptor surveys at Long Beach

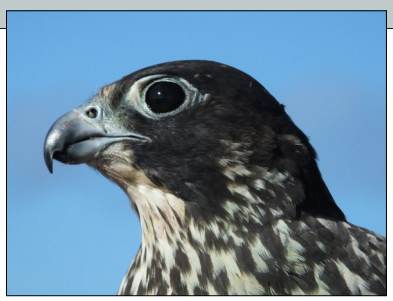
Nick Dunlop and **Tom Rowley-**shared their photos for use by Coastal Raptors

And many of you-participating in raptor surveys in 2025.

Contributing Financial Support

Financial support from individuals the essential to the success of Coastal Raptors. Please consider helping us move forward by making a tax-deductible contribution toward operating expenses. Donors so far in 2025 and all 2024 donors are recognized on page 8.

Annual operating expenses for Coastal Raptors: $10,000—$12,000



Suzy Whittey photo.

Your contribution is Tax Deductible. You can donate by check (payable to Coastal Raptors; send to 90 Westview Drive, Hoquiam, WA 98550) or online at www.coastalraptors.com. THANKS!

Many Thanks to **Coastal Raptors** Supporters

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Donations Made in Memory of: Romi Felbermeir, Stan Johannes, Glenn Marquardt, Margaret Mason, Wayne McCleskey, Wakan, and Mark Wilhyde.

Coastal Raptors
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Turkey Vulture (see page 4). Marty Bray photo.