Next Meeting
March 17

Darcie Larson works for Save Our Wild Salmon, a coalition of conservation, sport-fishing and commercial fishing organizations working to restore endangered salmon by partially removing four dams on the lower Snake River in eastern Washington. Darcie will describe how removing these dams will restore endangered Snake River salmon, meet America’s obligations to Columbia River Treaty Tribes, restore 140 miles of free-flowing river, and create several thousand jobs in eastern Washington. (Continued on page 8)

Event Information
All speaker series events meet on the 3rd Wednesday of the month at the Phinney Neighborhood Center, Room 6, 6532 Phinney Ave. N., Seattle, just north of the Woodland Park Zoo. Doors open at 7pm and the program starts at 7:30pm. Plenty of free parking is available in the upper and lower parking lots. Admission is free.

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We started the new year on a high note, as you will read in Ann Stateler’s update on the Vashon Hydrophone Project (VHP). While she credits everyone who has been instrumental in getting the hydrophone installed and running, we would be remiss not to thank Ann for all the effort she has put into this. The VHP is Ann’s brainchild. Ann Stateler, who is our vice-president, approached us with the idea of installing and operating a hydrophone system off Vashon Island. The VHP will give us better information on our declining Southern Resident Killer Whales’ winter distribution and travels in central Puget Sound. Ann and researcher Mark Sears have noted increased winter visits to the Vashon area since 1997. The importance as an educational and research tool was immediately clear and ACS/PS agreed to take it on. We thank Ann for giving ACS/PS this exciting project. Ann Stateler and Odin Lonning also raised most of the funds necessary to bring this project to fruition. We can’t thank Ann Stateler and Odin Lonning enough. (Continued on page 4)

Installation Day photo courtesy Richard Rogers—standing from left to right: Jack Crose, Belinda, Mark Sears, Ann Stateler, Odin Lonning with Stogarita, Uko Gorter. Kneeling: Joe Olson and Steve Olson.
In the fall of 2003, the chapter issued a request for research proposals for which two $500 grants would be rewarded. The chapter board decided to accept proposals for one of two main areas of research. The first grant would go to fund research on any cetacean species found in Puget Sound. The second grant would fund river dolphin research in South Asia. This was the first time our chapter solicited proposals for research on cetacean species not found within the Salish Sea.

Much too our surprise, we received seven proposals in all, four of which involved river dolphin research. The remaining three were for killer whale research. It was very difficult deciding on only two proposals from so many deserving submittals! After much careful thought and discussion, the grant committee awarded the following two proposals with a $500 grant.

Study of a species found in Puget Sound:

“Change in killer whale vocalizations due to anthropogenic noise” by Andy Foote

Andy is a graduate student (Master of Science) studying temporal patterns of killer whale acoustics at Durham University in the United Kingdom.

Andy states the benefit of this work will be to understand the effect of noise on killer whales with the goal of further developing guidelines for the whale watching industry and quieter zones in key locations around the world.

Study of river dolphins in South Asia:

“Proposal for a project to assess the feasibility of establishing a protected area for the river dolphin shushuk in the Sangu River, Bangladesh” by Benazir Ahmed

Benazir is a professor of zoology at the University of Chittagong in Bangladesh. He has a vast background in research and teaching. His particular interests are parasitology, fisheries and wildlife.

With the help of the grant award, he would like to accomplish several objectives: 1). Investigate environmental conditions, relative densities, and the intensity and distribution of human activities during different flow and tidal stages; 2). Conduct interview surveys to obtain information on fisheries and other activities affecting the dolphins; and 3). If there is sufficient interest and conservation justification, develop a proposal for a site-based program to establish a protected area for dolphins in the lower Sangu River.

Two Research Grants Awarded in 2003
by Stephanie Norman, Grants Chair

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ACS/PS Board
THE FIRST & ONLY HYDROPHONE FOR ORCAS
IN PUGET SOUND: Vashon Hydrophone Installed!

by Ann Stateler, VHP Coordinator

Thanks to generous financial and in-kind contributions from our donors, the long awaited Vashon hydrophone was installed January 10, 2004, in Colvos Passage on the west side of Vashon Island. This underwater microphone is the first and only hydrophone in Puget Sound dedicated to Southern Resident orca recovery, research, and conservation!

The Vashon Hydrophone Project (VHP) provides a valuable tool for Puget Sound orca studies. The VHP will help us learn more about the winter distribution, travel, and foraging areas of our depleted Southern Resident killer whales, J, K, and L Pods.

ACS/PS Technology Chair and Past President Joe Olson supervised the installation of his carefully built hydrophone. ACS/PS board members Steve Olson, Uko Gorter, and Jack Crose volunteered their time to help with installation.

These people were also indispensable on installation day. Todd Gateman of Vashon Sand & Gravel was our outstanding diver. We could not have deployed the hydrophone without his help.

Mark Sears brought his boat and donated critical hardware and labor during installation.

Richard Rogers of Rogers Graphics took some of the splendid Installation Day photos shown here. Deborah Wright let us borrow her laptop to test the hydrophone. Odin Lonning garnered hardware donations from gracious Vashon merchants at Island Lumber and the Country Store. He also built the hydrophone anchor with ACS/PS board member Steve Olson, donated talent and proceeds from art sales, and provided unwavering moral and emotional support to the VHP Coordinator!

Check our web site, www.acspugetsound.org, for more VHP information and updates. In the next phase of the project, we will feature orca calls and samples of underwater noise collected from Vashon on our web site and in educational presentations.

ACS/PS and Ann Stateler, the VHP Coordinator, are grateful to many Vashon individuals, non-profits, and businesses for making our dream a reality and supporting the VHP. We want to acknowledge our off-Island contributors, too:

- Mosquito Fleet, Everett
- DJ Mar of Eco Elements, Seattle
- Susan & Uko Gorter of Kirkland purchased artwork to benefit VHP
- Janet & Charles Stateler, Tucson, AZ
- Cetacean Research Technology, Seattle
- Sound Technology

(Continued on page 5)
K Pod Brings Holiday Bonus to Vashon

by Ann Stateler, VHP Coordinator

Vashon Hydrophone Project (VHP) associates were first to see K37, the new calf in K Pod. Researcher Mark Sears discovered the newborn on Dec. 26, 2003, while he took digital video of K Pod off the northeast side of Vashon Island. He documented fetal folds and the calf's sex (male). A few lucky islanders and I saw the unmistakably newborn baby the next day at Pt. Robinson on the east side of Vashon-Maury Island.

Rough weather kept boats from disturbing K Pod as they rounded Pt. Robinson on Dec. 27. Three-month-old calf K36 traveled with a group of orcas 100-200 yards offshore. Within 100 yards of the beach, we noticed the orca closest to us in a tightly grouped cluster had a tiny, floppy baby casually draped over her rostrum. Other podmates also nuzzled and cradled the baby. Many eyepatches flashed above water. The K12's and some of the K7's seemed to be watching us, and they certainly had our undivided attention. Mom K12, Sequim, and about eight of her relatives "presented" her infant son, K37, to us!

A rubbery baby with fetal folds suggests really recent birth. Mark and I believe K37 was born between Dec. 20 - 26, because Mom K12 did not have a newborn with her when we last saw K Pod at Vashon on Dec. 20th.

Over the years, Mark has discovered many Southern Resident births in Puget Sound. He has often witnessed the orcas' ceremonial behavior with newborns. It was a rare treat for observers at Pt. Robinson, an unforgettable experience. I feel deeply honored and touched that K Pod shared their new "bundle of joy" with my neighbors and I.


It's a Boy! - photo of K37 courtesy Mark Sears

Chapter Currents continued...

(Continued from page 1)

As we begin this new year, I would like to call out to our members to be involved with ACS. We want to hear from you.

You can do this by coming to our wonderful Speaker Series. We have amazing speakers, all experts in their fields, talk passionately about their subjects. Free admission and parking should be an extra incentive.

We also would love articles for our newsletter, "Whulj". If you have been on an incredible whale watch recently or would like to submit a great cetacean photo, please contact us.

Also we have space on our chapter board. We are looking for dedicated individuals who can and are willing to donate some time. Remember, you don't have to be a whale expert to join our board.

Our Speaker Series was kicked off in January by Mads-Peter Heide Joergenson, who talked about the ecology of the Narwhal. The February meeting featured Stefanie Hawks-Johnson on the Foraging Dive Behavior of Puget Sound Orcas. Information on the March presentation by Darcie Larson of SOWS (Save Our Wild Salmon) starts on page one. Future topics are:

April 21st — Dr. Robin Baird: Hawaii's diverse cetaceans: studies of whales and dolphins in the Hawaiian archipelago

May 19th — Anna Hall: Holidaying harbour porpoise - where do they go, what do they eat and why do they sometimes strand?

(Continued on page 5)
Vashon Hydrophone Project continued...

(Continued from page 3)

The VHP still requires funding for ongoing monitoring, maintenance, and future expansion. You can support this exciting project and aid Southern Resident orca recovery by writing a check to:

ACS/Puget Sound Chapter, specify VASHON HP in memo section, and send tax deductible donations to: ACS/Puget Sound Chapter, P.O. Box 17136, Seattle, WA  98127-0836.

Thank you!

“The VHP Has Landed!”
Installation Day photo courtesy Uko Gorter

Chapter Currents continued...

(Continued from page 4)

Other news is that a very attractive new chapter website was released since our last newsletter. Thank you Joe Olson! The web address is the same—www.acspugetsound.org. Check it out!

ACS/PS was on hand at the Seattle Aquarium's Ocean Career Day on February 7th. Many students and teachers visited our booth. Ann Stateler, our vice-president, was one of the speakers.

We are working on a Whale Celebration to be held at the Seattle Town Hall on April 25. This is the same venue where our 2002 conference, "The Culture of Whales" was held. We are working with a few other organizations as well as Jiah Miesel to produce this event. For more information see: www.whaleday.com

As we go to press, we've been informed that Joe and Ingrid are the proud parents of a baby boy! Both mother and baby are doing well. Congratulations!

Tighter Regulations Sought After Edmonds Oil Spill

Source: Seattle P-I, Robert McClure

On the heels of one of Puget Sound's worst oil spills in years, Rep. Mike Cooper, an Edmonds Democrat, who heads the House Fisheries Ecology and Parks Committee filed a bill requiring deployment of floating curtains known as a boom around at least some fueling vessels.

When about 4,800 gallons of oil spilled from a Foss Maritime barge Dec. 30 at Point Wells, near Richmond Beach, no boom had been put out. It ended up swirling across the Sound to foul shellfish beds and marsh on the Kitsap Peninsula used by the Suquamish Tribe for traditional purposes.

The news that the Legislature will consider tightening the rules was welcomed by members of the Suquamish Tribe. "We hope your committee will consider rules that will prevent this from happening again," said Rob Purser, a tribal spokesman. He recounted a sad meeting of the tribe the night before: "The oil spill has been a traumatic event for our people, and many people cannot visit the site because they are heartbroken."

Government officials and representatives of oil-spill cleanup contractors described the Point Wells response as efficient and well-supplied, but Purser had to wonder what the potential is for far more damage. "What if a million-gallon spill would occur? Would there be enough equipment (available) before it caused damage?" Purser asked.

Environmentalists pointed out that even with lots of response equipment -- and central Puget Sound has one of the heaviest concentrations in the state -- even a small spill got away and caused damage. A number of sea birds were found oiled, and one harbor seal was found dead. At the time of the spill, members of the Southern Resident Killer Whale K pod, were observed in central Puget Sound. Among them a new born calf K 37.

Addendum—by Ann Stateler, VHP Coordinator

To what extent orcas were exposed to the Edmonds fuel spill on Dec. 30, 2003, remains completely speculative. No one reported sightings of Southern Resident orcas close to Edmonds until January 2, 2004, nearly 72 hours after the spill occurred. By Dec. 31, most of the fuel had dispersed across Puget Sound and washed up on Suquamish tribal land on the Kitsap Peninsula.

K Pod was the only Southern Resident pod observed in lower Puget Sound around the time of the spill. No one knows K Pod's precise location between Dec. 27 and Dec. 31. While working on the hydrophone project, I saw K Pod with their new calf, K37, at Vashon on Dec. 27. Both researcher Mark Sears and I saw K Pod at Vashon again on Dec. 31 and January 1, 2004 (see photo—"it's a boy!"). K Pod quite possibly could have been near Vashon, safely out of the spill zone.
Shoup Followup

courtesy of NOAA Fisheries

Summary of Preliminary Report on the investigation of harbor porpoise stranded in Washington around May 2003 coinciding with mid-range sonar exercises by the USS Shoup (for more information, see http://www.nwr.noaa.gov/mmammals/cetaceans/necropsy.htm):

During the period of May 2, 2003, to June 2, 2003, the National Marine Fisheries Service (NOAA Fisheries) Northwest Marine Mammal Stranding Network received reports of 14 stranded harbor porpoise in Washington, an abnormally high number when compared to the average stranding rate of 6 per year recorded over the past decade. The reports coincided with the use of mid-range sonar by the naval vessel USS SHOUP transiting Haro Strait on 5 May 2003, and observations by researchers and the public who reported altered behavior of marine mammals in the area. Eleven of the 14 porpoise were collected for examination.

NOAA Fisheries assembled a multi-disciplinary team of biologists, veterinarians, veterinary pathologists, research scientists and a neuroanatomist who conducted extensive classical forensic necropsy examinations from 22 July through 24 July, followed by laboratory diagnostic and histological analyses and complemented by high resolution computerized tomography scans. Samples were taken for a variety of analyses, including disease screening, parasitology, chemical contaminant and lipid analyses, aging studies, prey identification and domoic acid analysis.

The Preliminary Report presents a summary of past porpoise stranding reports, information on the discovery and collection of porpoise during the May-to-June timeframe, gross and microscopic findings from the necropsy examinations, analysis of the high resolution image data, and discussion on the possible causes of mortality.

More than 70 percent of the specimens were in moderate to advanced states of decomposition, which made interpretation of the data difficult. The cause of death was determined for 5 of the 11 porpoise examined by the multi disciplinary team. Of these five animals, two were found to have suffered blunt force trauma, while illness was implicated in the remaining three cases. No cause of death could be determined for the remaining six animals. The examinations did not reveal definitive signs of acoustic trauma in any of the porpoise examined. The possibility of acoustic trauma as a contributory factor in the mortality of any of the porpoise examined could not be ruled out. The multi-disciplinary team noted that lesions consistent with acoustic trauma can be difficult to interpret or obscured, especially in animals in advanced-post mortem decomposition.

ACS Well Represented In Greensboro

by Uko Gorter

Every 2 years the Society of Marine Mammalogy holds a conference for its members, made up of scientists, researchers and students in marine mammal science. The 2003 conference was held Dec 14 - 19, in Greensboro, North Carolina. The unusual location was far from any body of water, save for perhaps a buried creek underneath the adjoining shopping mall's parking lot. Despite the unlikely locale, the freezing weather, and the proximity of Christmas, an estimated 1350 conference attendees from all over the world filled the Joseph S. Koury Convention Center. As always, vendors and non profit organizations set up their booths in 2 exhibit halls. ACS was represented with the national booth & a large contingency of ACS members, chapter & national board members were on hand to help out at various times. We promoted our own upcoming conference, "Learning from Whales" in November 12-14, 2004.

Four of our own Puget Sound Chapter board members were present as well. Joe Olson represented his own company, Cetacean Research Technology. Steve Olson helped out in Joe's booth when he attended speaker sessions. Stephanie Norman, a marine mammal veterinarian, was on hand to co-chair one of the preconference workshops. Yours truly set up his booth for "Uko Gorter Natural History Illustration". There were many highly interesting presentations and poster sessions to go to. Our own SR Killer Whales were the subject of some of them. One of the highlights was video night, even though it lasted a good four hours: footages of blue whales, highly endangered Western Gray whales, comic sea otters, disturbing images of orca captures off Kamchatka, and dolphin slaughter in Japanese waters.
Ecosystems, Orcas, and the Food Web

by Laurie Mollo-McLain

ecosystem (n) An interacting complex of a community and its environment functioning as an ecological unit in nature.

(hyperdictionary.com)

Many factors contribute to the complexity of an ecological system, or ecosystem. These factors are interdependent and each has an important role in participating in the function of a thriving ecosystem.

One example of an ecosystem here in our local waterways is the process involving the food web of our Southern Resident orca community. First, orcas depend upon a healthy and balanced ecosystem for their survival. Some factors which play a role in their survival are clean air and water, but most importantly, they need food so they may grow, live, and reproduce!

Salmon is the main food source for resident orcas making up 90% of their diet. But salmon, like orcas, depend on certain factors that contribute to their health and sustainability. These factors also include a clean and protected habitat and, of course, food.

Salmon tend to enjoy an occasional nibble of small invertebrates, such as copepods, amphipods, and isopods, but they are more heavily dependent on Pacific herring eggs as a main source of food.

Pacific herring deposit eggs for spawning within the swaying blades of elgrass meadows.

Elgrass is one of the rare marine plants that seed and produce flowers in a saline environment. It grows nearshore in shallow estuary and coastal waters. The underwater forests resemble seaweed, but the lanky green elgrass stalks provide a wonderful harbor for juvenile salmon to hide from prey.

El grass is at the base of this food web and the orca is at the top.

Each one of these diverse communities of species; orcas, salmon, Pacific herring, and elgrass play a vital role in the ecology of the region and equally have important factors which assist in the balance of their own habitats and ecological niches.

Efforts toward protection and conservation of the marine environment is incredibly important at different levels.

If you are interested in plants or salmon as well as cetaceans, learn more about how to protect the elgrass beds or what can be done for salmon recovery. It makes ecological sense and inadvertently contributes to the protection and conservation of our resident orcas. Additionally, it will aid in the preservation and sustainability of the ecosystem here in the beautiful Pacific Northwest. The web of life is interconnected.

ECOLOGY RELATED KEY WORDS/PHRASES

Community: [n] a group of interdependent organisms inhabiting the same region and interacting with each other

Ecological niche: the status of an organism within its environment and community (affecting its survival as a species)

Habitat: [n] the type of environment in which an organism or group normally lives or occurs; "a marine habitat"

Sustainability: from Sustained meaning [adj] maintained at length without interruption or weakening; "sustained flight"

REFERENCES

Eelgrass decline report: "Z. marina Declines in San Juan County, WA - Westcott Bay Taskforce Mini-Workshop 26 July 2003 by: S. Wyllie-Echeverria (University of Washington) ; T. E. Mumford, Jr. (Washington State Department of Natural Resources) ; J. K. Gaydos (University of California, Davis) ; S. Buffum (Friends of the San Juans). FRIENDS OF THE SAN JUANS' Marine Studies


Educational Presentations

by Peggy Foreman, Education Chair

This last fall I gave two presentations. The first was to two primary classes at Decatur Elementary in Seattle. Enthusiasm filled Liz McCormack's room as we discussed mammals that reside in the Puget Sound, with an emphasis on our Southern Resident pod of killer whales. The students had been researching whales and dolphins so many good questions were asked.

In December I was invited to speak for a non-profit organization for Women in Science. This adult audience had more sophisticated questions in regards to the decline in the population, toxins in our watershed, and acoustic impacts on these fragile animals. This last talk led to another opportunity that is coming up in early March. I have been invited to speak at the Seattle Expanding Your Horizons 2004 Conference for middle school girls to get them hooked on Science. I'm thrilled to share my passions with them and get them turned on to a field that needs good people.
SAVE THE DATE — Wed. MARCH 17 !!
Darcie Larson — Removing Dams to Restore Wild Salmon

(Continued from page 1)
...ton. You will also find out ways you can help in this effort to save our Northwest icon (and favorite food of the Southern Resident orcas).

A native of the Puget Sound region, Darcie received her Bachelor’s and Master’s degrees in biology from Western Washington University. She is a certified Marine Naturalist through the Whale Museum in Friday Harbor, and worked as an intern at the Museum as well as on the Soundwatch boater education program. Darcie is the Administrative Manager/Development Associate at Save Our Wild Salmon in Seattle, where she has worked for four years.

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□ $25 Student/Teacher/Senior

Please make check payable to ACS and mail to: ACS/Puget Sound Chapter, P.O. Box 17136, Seattle, WA 98127-0836

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