

NEWSLETTER OF THE PUGET SOUND CHAPTER
OF THE AMERICAN CETACEAN SOCIETY

VOLUME 9, ISSUE 1

WINTER 2008

Next Meeting: Wed. Feb 20th

Please join us in welcoming
**Mike Etnier—"Using sectioned
teeth to study *Odontocete* diet."**

A zooarchaeologist by training, Mike uses bones and teeth to study changes in the ecology of marine ecosystems over the recent and distant past in the North Pacific. See page four (and www.acspugetsound.org) for more details. See you there!

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—donations to offset the room rental costs are gratefully appreciated of course as we operate on a shoestring like almost all nonprofits.

Inside...

Chapter Currents	1
Book Review: Trying Leviathan:	2
VHP Update: A Prolific Season	3
Winter Speaker Series.....	4,5
Request for Research Proposals	5
Book Review: Marine Mammals of the World.....	6
17th Biennial Conference on the Biology of Marine Mammals.....	7

Chapter Currents

by Uko Gorter, ACS/PS President

First of all, I would like to wish all of you a happy New Year and invite you to participate in another great year of ACS Puget Sound Chapter programs. Thank you for your continued support as members. Thank you also to those of you who answered our year-end plea with generous donations. Without our members and these donations we would not be able to continue our ongoing efforts to educate people about the plight of whales, dolphins, and porpoises. As an all-volunteer organization, ACS programs like our Research grants, the Vashon Hydrophone Project, and Educational Outreach benefit 100% from your donations.

Last month we published the Request for Proposals for our 2008 research grant. See page 5 for more details. This information, plus guidelines for grant preparation, and a history of the research grants is also available from our chapter website (www.acspugetsound.org).

In December we set up a storefront on Zazzle.com (www.zazzle.com/acspugetsound.org) plus a page on the chapter website describing the project. Our chapter is blessed with several talented artists who are sharing some of their original artwork to grace a variety of products such as mugs, mouse pads, tote bags, t-shirts, and custom US postage. These interesting and unique items are produced upon demand, and the proceeds benefit our chapter. Plus if you purchase anything from any Zazzle storefront, and you get to the Zazzle web site by first going to the ACS/PS chapter web site (and clicking on the link to our Zazzle storefront), the chapter gets a referral commission, which is small but it adds up. We plan to continue to add to the merchandise as our volunteers have time to set up new items, so please take a look around the site periodically.

On our web site you will also find a link to the Vashon Island Coffee Roasterie (<http://www.tvicr.com/>) . A delicious aromatic Orca Blend is available for purchase, which will directly benefit the Vashon Hydrophone Project.

As we head into this political year, we are reminded how much there is to be done to save our cetaceans and their habitats. We welcome your help, input, and participation with ACS. If you haven't been to one of our wonderful Speaker Series meeting, please do. They are insightful, fun, and you get to meet others who share your passion. We look forward to seeing you.



Book Review by Uko Gorter

Trying Leviathan: The Nineteenth-Century New York Court Case That Put the Whale on Trial *and* Challenged the Order of Nature.

Are whales fish? At the risk of being ridiculed, ask any fifth-grader and he or she will tell you that whales are mammals. They breathe air, suckle their young, and even have a few hairs (vibrissae). These and other mammalian hallmarks are today generally understood and accepted. However, not too long ago this notion was still very much in dispute.

In “Trying Leviathan”, Graham Burnett, history of science professor at Princeton University, reconstructs an obscure 1818 court case in New York City that put the whale on trial. While the actual dispute revolved around whether whale oil was subject to the same inspections and fees as fish oil, the case quickly turned into the larger debate of whether whales are fish, and ultimately put the entire classification system into question.

In his tenth edition of his *Systema Naturae* in 1758, Linnaeus triumphantly declared that hereby the Cetes (whales) are now, mammals. However, this was not widely accepted for some time. Ecclesiastic authorities in particular were uncomfortable positioning man together in the same category with the monstrous leviathan of biblical notoriety.

Trying Leviathan is extremely well written and vividly highlights this forgotten trial. It is at times poignant and humorous. But while we may easily dismiss this case as naïve and archaic, the reader will undoubtedly recognize and draw parallels to our current debate regarding evolutionary teachings and global warming.

Burnett’s current interest in “whales as a problem of science” has also led him to write about the history of cetology (the study of whales). Particularly in the nineteenth and twentieth century. No word on when this publication is due. If it is as well written and thoroughly researched as his “Trying Leviathan”, I have high expectations.

By D. Graham Burnett
Princeton University Press, Oct. 2007
ISBN 9780691129501
Hardcover, 304 pp (16 color plates, 19 halftones)
\$ 29.95 (\$ 23.48 Amazon.com)

Whulj “the saltwater we know”

The Newsletter of
the Puget Sound Chapter
of the American Cetacean Society



P.O. Box 17136
Seattle, WA 98127-0836
206-734-4737

acspinfo@acspugetsound.org

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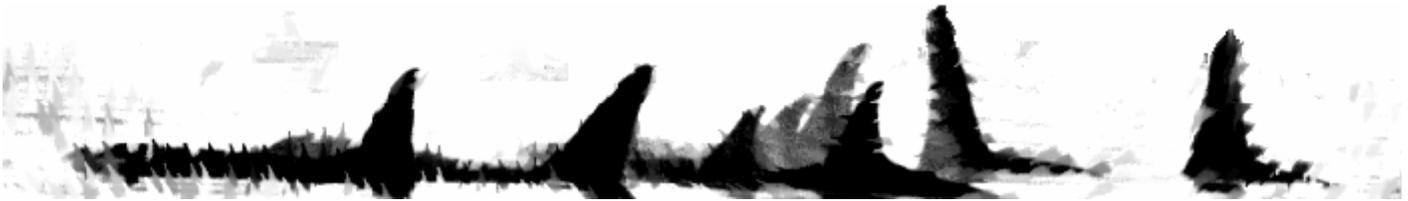
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Dr. David Bain, Dr. Robin Baird, John Calambokidis,
Dr. Marilyn Dahlheim, Dr. John Ford,
Dr. Richard Osborne, Dr. Adam Pack,
and Dr. Peter Ross

Whulj publication schedule: February, May, August, November
Editor - Diane Allen, diane@artemisComputing.com - 360-437-1303
46 Village Way, suite 171, Port Ludlow WA 98365
submissions, comments, suggestions, and questions welcomed



Vashon Hydrophone Project Update: A Prolific Season

by Ann Stateler, VHP Coordinator

The Vashon Hydrophone Project (VHP) collaborated with Mark Sears and researchers from NOAA Fisheries NWFSC to document 25 Southern Resident killer whale (SRKW) encounters in Vashon-Maury waters between November 2007 and January 2008. The VHP made an unprecedented 14 recordings of the Southern Residents this season, more than in any year since ACS/PS installed the hydrophone in Colvos Pass in January 2004. The VHP collects ID data “after hours” and in conditions that are not conducive to vessel-based research. For example, we recorded K Pod on Christmas at 1:30 AM.

A welcome bounty of chum salmon in lower Puget Sound likely explains the attraction for the SRKW this fall and early winter. During the same period in 2006, the VHP documented Southern Residents only eight times in Vashon-Maury waters, and J Pod was completely absent in 2006.

J Pod visited the Island five times in November 2007, but did not return after November 23. K Pod arrived with the L2 matriline in mid-December. By the end of December, the L2's apparently were no longer traveling with K Pod; however, lone male L87 (Onyx) was with K Pod.

The Southern Residents departed Vashon-Maury waters in mid-January, leaving us with a wealth of fond, dazzling memories. K20 (Spock) and her three-year-old calf K38 (Comet) were two whales we saw frequently in our encounters. K38 is a “Vashon baby,” discovered as a newborn in December 2004 by Mark Sears in Colvos Pass. The photo that accompanies my update is a tribute to Spock and Comet.



Spock (K20) and her calf Comet (K38) swim over the rainbow in East Passage (Vashon Island) - photo © December 2007, Mark Sears



Southern Resident Killer Whales—photographed in Monterey Bay on January 27, 2008—photo © Nancy Black — gowhales.com

In a fascinating twist that underscores the vastness of SRKW habitat, researcher Nancy Black, an ACS/MB member, photographed L2's among a group of 40 SRKW foraging in Monterey Bay in late January and early February. Winter trips to central California are becoming an annual tradition for some SRKW. Nancy first spotted members of K and L Pods near Monterey Bay in January 2000.

A correction to the VHP update in the November *Whulj*: after scrutinizing his film from a November 9 encounter, Mark Sears and the Center for Whale Research determined that no L Pod whales were present, only J Pod. We apologize for the error.



Winter Speaker Series

20 February 2008 - Mike Etnier—*Using sectioned teeth to study Odontocete diet*

Mike Etnier received his PhD in anthropology from the University of Washington in 2002, and is an affiliate association professor in the Department of Anthropology. A zooarchaeologist by training, he uses bones and teeth to study changes in the ecology of marine ecosystems over the recent and distant past in the North Pacific. The samples Etnier analyzes come from natural history museum collections and from archaeological excavations, allowing him to retrospectively examine ecological changes throughout the 20th Century, or potentially extending back thousands of years. He lives and works in Bellingham, where he operates a small business, applied Osteology, that combines his interests in archaeology, marine ecology, and secondary science education.



Sampled Killer Whale Tooth

ABSTRACT: The diets of free-ranging cetaceans can be extremely difficult to document: stomach samples from stranded animals may not reflect the diet of healthy animals, while field observation data are extremely expensive to acquire and yield a similarly incomplete picture. Our approach uses chemical signatures of carbon and nitrogen preserved in teeth as an index of diet—an index that scales roughly with trophic level. Although we are unable to identify specific components of the diet, this limitation is balanced by the fact that we are able to retroactively characterize diet in every growth layer that accumulated throughout the lifetime of an individual.

We are using this approach to study a wide range of aspects of the diet of Odontocetes. One is to analyze individual and pod-wide dietary patterns through the analysis of tooth samples obtained from mass strandings. Because we know the time of death with a high level of precision, we can link the chemical characterization of diet to calendar year for the whole group. We have used this approach to study the 1979 mass stranding of sperm whales (*Physeter macrocephalus*) at Florence, OR, and have obtained dietary data for some individuals going as far back as the 1940s.

The other main approach we have used is to piece together range-wide dietary information from teeth collected opportunistically over years or decades. While this doesn't necessarily give us the pod-specific resolution of the samples obtained from mass strandings, it allows us to cover a much broader geographic and temporal range.

We are currently analyzing teeth from killer whales (*Orcinus orca*) from the eastern North Pacific. Thus far we have obtained samples collected between 1961 and 2006,

spread geographically between southern California and the Central Aleutian Islands, AK, with all three eco-types represented. Our sample sizes for killer

whales are still quite small, but as we build our database we will be able to test a wide range of hypotheses about dietary change throughout the latter half of the 20th Century.

16 April 2008 - Jonathan Stern

Jonathan Stern is the ACS National Conservation Chair, has been attending International Whaling Commission meetings on our behalf, and participating in groups such as [Whales Need US](#).

Jon has studied minke whales since 1980. He has also conducted research on killer, pilot, fin, humpback and gray whales as well as bottlenose dolphins. He has Bachelor's and Master's Degrees in Biology and a Ph.D. in Wildlife and Fisheries Science. In addition to field work, he uses computer models to investigate a variety of ecological questions.

Jon first got interested in whales at the age of 8, when his father's ship was struck and its rudder disabled by a whale, about 500 miles from Australia



Winter Speaker Series

19 March 2008 - David Bain - Southern Resident Killer Whale Recovery

David Bain, one of ACS/PS's Scientific Advisors, has studied orcas both in captivity and the wild for over 20 years.

David's research has focused on social behavior, communication, and population dynamics of orcas. These studies have addressed kin and non-kin based association patterns, baby-sitting behavior, and energetics. They have also addressed sound production mechanisms; call structures, repertoires and learning; and hearing abilities. Other studies have addressed population dynamics of wild orcas and survivorship of cetaceans in captivity. Determining the effects of vessel traffic on orcas has also been a major research area, along with studies of the effects of noise on a variety of marine mammals.

He has also worked on rescue and rehabilitation of several species of stranded cetaceans, including orcas entrapped in Barnes Lake and the orphaned orca "Springer."

David has worked with a number of government agencies and non-governmental organizations, such as the National Marine Fisheries Service, U.S. Geological Survey, The Whale Museum, Center for Biological Diversity, and Earth Island Institute.

[Puget Sound Killer Whale Recovery ESA Plan](#)



Orca drawing courtesy Bonnie Gretz © 2006

Request for Research Proposals

This year the Puget Sound Chapter of the American Cetacean Society is offering one (1) \$1,000 grant to be restricted to research of Southern Resident Killer Whales within the waters of Oregon, Washington or British Columbia, Canada.

The individual conducting the research must submit the proposal, in addition to a CV. Project Managers or Principal Investigators will oversee all fieldwork. Applicants must have obtained any necessary permits or authorizations for conducting the proposed research prior to any awards being disbursed.

This grant is available to undergraduate students currently enrolled in a college or university and graduate students currently enrolled in, or accepted to, a masters or doctorate program who meet the evaluation criteria. The research must be conducted within the waters of Oregon, Washington State or British Columbia (Salish Sea). Researchers of any nationality are eligible to apply.

Please review our [Proposal Guide](#) for a full description of the guidelines for the research proposal and review process.

Proposals will be accepted through 30 MARCH 2008, and

letters of acceptance or denial will be issued no later than 30 APRIL 2008.

The grant awards will be available on 15 MAY 2008. Funding for this year's grant has been generously provided by the [Whale Watch Operators Association Northwest \(WWOANW\)](#) and from the following whale-watch operators: [Prince of Whales](#), [Springtide Charters](#), and [San Juan Safaris](#).

There is no deadline for the completion of work; however, a brief report describing the progress/status of the research should be presented to ACS/PS no later than one (1) year after receipt of funds. This report will be featured in a future issue of our chapter newsletter, *Whulj*. In addition, the grant recipients are invited to present a talk for our [Speaker Series](#).

Please review the information on the [chapter web site](#).

For submission of proposals or requests for additional information, please contact:

American Cetacean Society - Puget Sound Chapter
P.O. Box 17136—Seattle, WA 98127—USA



Book Review by Uko Gorter

Marine Mammals of the World: A Comprehensive Guide to their Identification

It has been more than fourteen years since the FAO (Food and Agriculture Organization of the United Nations) Guide of Marine Mammals of the World (1993) was published. For years this comprehensive guide was a useful tool in identifying marine mammals, but it finally became too outdated.

Now, two of its original authors, Tom Jefferson and Marc Webber, have endeavored to create a new ID guide for marine mammals. However, as fellow friend and co-author Stephen Leatherwood passed away in 1997 of lymphoma, Bob Pitman was asked to join the project.

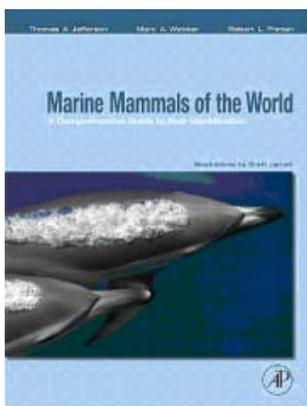
The final result, nothing short of sublime, would surely please Stephen Leatherwood, and may in some way serve as a fitting tribute to a remarkable marine mammal scientist (ACS journal *Whalewatcher*, 1999, Vol. 32, No. 1.).

This guide, published by Elsevier (Academic Press), is nothing like its predecessor. A quick thumbing through this work reveals an astonishing amount of beautiful color photos and illustrations. It must be noted that this is not a field guide. The size and scope of this work is really intended as an office and library reference work. As such it has succeeded beyond all expectations.

Up to date species accounts are given for every known marine mammal, and are –thank goodness– arranged taxonomically. Some recently extinct species are also included.

Amazing photos, many never before published, are included for every species, making it the first ever publication to do so. Photos were carefully chosen to show diagnostic features in the field, but many underwater and some stranding photos also give an idea of the entire gestalt of particular species.

Each species account is also accompanied by beautiful illustrations. Most, showing the different sexes, ages, and even some geographic variations. Brett Jarrett, an accomplished Australian wildlife painter was put to task to create the illustrations. His astonishing work is also featured in the recently published, “Whales, Dolphins, and Other Marine Mammals of the World”, by Hadoram Shirihai (Princeton University Press, 2006).



Besides the species accounts, this work also features a section with dichotomous identification keys. Here, one could, by eliminating or identifying observed diagnostic features, arrive at a positive ID. A similar key for skull features is also included.

References at the end of each species account point to works and publications for further reading.

This unprecedented collection of photos and illustration work alone makes this guide invaluable. It is not only an important ID reference work, but also gives us a wonderful look at the tremendous diversity of these beautiful marine mammals.

It will undoubtedly set the standard for years to come. This guide should find a home on a shelf of every marine mammal expert and enthusiast. Kudos to the Jefferson team.

By Thomas A. Jefferson, Marc A. Webber, and Robert L. Pitman

Illustrations by Brett Jarrett
Academic Press, Elsevier, 2008

ISBN 9780123838537 — Hardcover, 580 pp. —\$ 69.95

Ocean Career Day

On Saturday, February 2, the Seattle Aquarium hosted their sixth annual Ocean Career Day. This event was open to open to all teachers, parents and students attending middle school, high school and college. Guest speakers talked about their work and gave advice on how to pursue careers related to marine science. The new spacious Puget Sound Hall at the Seattle Aquarium served as a career room where more than a hundred students and their parents could learn about schools, volunteer opportunities, and ocean careers.

ACS/PS was on hand, and manned a table providing information about marine mammals as well as careers that deal with these charismatic animals. Chapter president, Uko Gorter, was a guest speaker and spoke about his work as a freelance natural science illustrator. A quick show of hand revealed at least 6 students interested in illustration and the marine environment.

17th Biennial Conference on the Biology of Marine Mammals in Cape Town, South Africa

by Stephanie Norman

As a member of the Society for Marine Mammalogy (SMM), I attended the conference in order to present my recently completed master's thesis project. That was entitled "Evaluating risk factors for leptospirosis in California sea lions (*Zalophus californianus*) using a geographic information system (GIS) and epidemiologic methods." Leptospirosis is a bacterial kidney and liver disease transmitted by water contaminated by urine from affected animals. This disease may affect humans and many species of animals alike.

While at the conference, I encountered many familiar colleagues, such as former ACS/PS president Joe Olson, as well as new faces. I had the privilege of meeting Dr. Benazir Ahmed, a 2004 recipient of one of our research grants. He is a professor in the Department of Zoology, University of Chittagong, Bangladesh and presented a poster on conserving the Ganges River Dolphin in the Sangu River, Bangladesh.

A summary of the conference, adapted from the most recent SMM newsletter write-up, follows.

A total of 940 delegates from 57 nations attended the conference which was held in the Southern Hemisphere for the first time and outside of North America for only the second time. The conference was hosted jointly between the SMM and The Mammal Research Institute of the University of Pretoria, South Africa. Quite a number of delegates attended from the host nation (56) which represented the third highest number after the USA and UK, respectively. Eleven preconference workshops were held, and during the conference there were a total of 312 oral

and 510 poster presentations.

This conference was unique in that for the first time, the organizers made a special attempt to make the conference socially responsible. The conference bags, lanyards and label pouches were manufactured locally by underprivileged communities, and delegates were encouraged to purchase close to 350 trees to offset the carbon footprint caused by long-distance travel to the conference. The



African Penguins—photo © 2007 Joe Olson
ok, they're not marine mammals but isn't this a great photo!

trees will be planted as wind-breaks for vegetable gardens in impoverished townships in the Cape Town area.

Delegates purchase close to 1,000 bottles of Special Release wine from Whalehaven Wine Estate near Hermanus, South Africa, who in turn presented a check for R15,000 (~US \$2273) to the South African Whale Disentanglement Network at the conference banquet. Lastly, the proceeds from all sales of the conference T-shirt went to the SPCA's Wildlife Unit.

Speaking of wildlife, Cape Town is the gateway to the expansive Table Mountain National Park. Stephanie, Joe, and many other conference attendees took ecotours of the Cape of Good Hope. From our tour van, seal-watch boat, and bicycles, we experienced a taste of the amazing wildlife on the Cape. The Cape fur seals and African Penguins were a special treat, not to mention the baboons, oryx, and hyrax

Overall, it was a very informative and enjoyable conference where we came together with old and new colleagues for the greater good of all marine mammals.

AMERICAN CETACEAN SOCIETY



Puget Sound Chapter
P.O. Box 17136
Seattle, WA 98127-0836

www.acspugetsound.org
info@acspugetsound.org
206-734-4737

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SAVE THE DATE—Wednesday February 20th

Please join us at 7pm at the Phinney Neighborhood Center, Room 6 (just north of Woodland Park Zoo)

Mike Etnier—”Using sectioned teeth to study *Odontocete* diet.” A zooarchaeologist by training, Mike uses bones and teeth to study changes in the ecology of marine ecosystems.



Photo courtesy Mark Sears © 2002 All Rights Reserved

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