

The Guemes Tide

Charting the Ebb and Flow of Island Life

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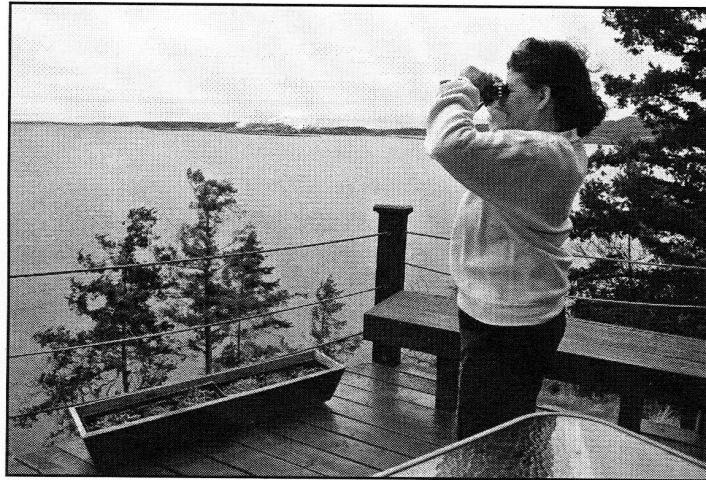
Citizen Scientists Chart the Elusive Harbor Porpoise

By Holiday Matchett

Time and place are everything. Two Guemes Island “citizen scientists” have taken the time—and live in the place—to help provide observations of one of the island’s neighbors.

Anne Casperson (watching from Casperson Point) and Phyllis Bravinder (observing from the cliffside of Section Road) are searching the waters off the Guemes coastline for a special mammal—a cetacean: the harbor porpoise (*Phocoena phocoena*).

Casperson and Bravinder are observers for a study being conducted by the Pacific Biodiversity Institute (PBI). In the 1940s and ’50s, the harbor porpoise was one of the most common of the four cetacean species residing in Puget Sound. But aerial flyovers in the 1990s, combined with the lack of notations in fishing records, led to concern that the numbers



Anne Casperson watches for harbor porpoises in Padilla Bay.

of these porpoises were so low that the species had become locally extinct. Consultation with Dr. Joe Gaydos, director of the SeaDoc Society and chairperson of the science committee for the Puget Sound Partnership, has resulted in a closer examination of the harbor porpoise as a possible “sentinel” species of Puget Sound.

The importance of a sentinel species is the relationship this species has with the health of its environment. Its general health and population stability are signs of the health of its entire environment, including food, quality of water, predator balance, and subtle influences like underwater noise, dissolved gases, and acidity. Understanding a sentinel species is important to understanding the health of our own environment.

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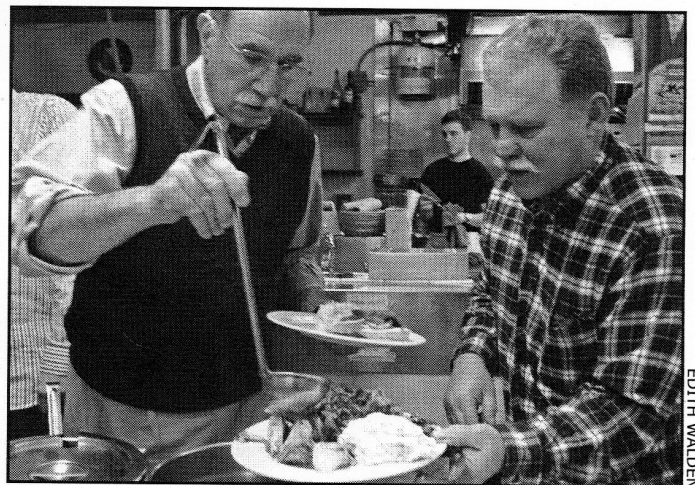
Store Hosts a Memorable Thanksgiving Feast

By Edith Walden

David Clifton, husband of Anderson’s General Store Manager Charlotte Clifton, had to work in Seattle on Thanksgiving Day. Charlotte decided she wanted to do something special on the island. So she invited the island community to Thanksgiving dinner at the Store.

And special it was for about 50 islanders who gathered there in the early afternoon on Thanksgiving Day for a free Thanksgiving dinner. Preparations for the group meal took three days, with the Store providing five turkeys (three roasted and two smoked), two smoked ducks, stuffing, mashed potatoes and gravy, and apple cider for all comers. Guests brought a myriad of potluck side dishes, including 14 desserts (yum!),

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Chip Bogosian (left) ladles gravy onto Bart Hetterle’s plate at the free Thanksgiving dinner at the Store.

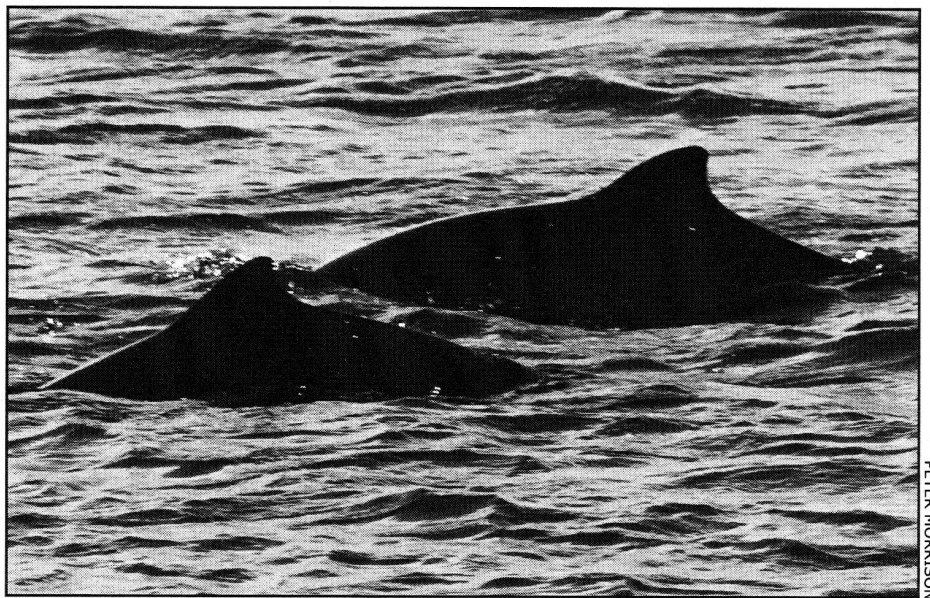
HARBOR PORPOISES

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The PBI study, conducted by Aileen Jeffries, has set up observations centered in Fidalgo Bay and the waters surrounding the nearby islands. Jeffries's first stroke of luck was to be able to work with "Daisy," an orphaned baby harbor porpoise in the Vancouver Aquarium. Her experience led to the design of acoustic tools that record the time and location of the porpoises and ways of monitoring some of the movement (especially at night) of these elusive small animals. One tool records the harbor porpoise's echolocation (at a frequency of 140 kHz).

Keeping a lookout—and a log

Casperson has been recording since August 12, 2012, with close to 100 observations. She has included the times and duration, number of porpoises, the Beaufort wind scale (wave activity), and the weather condition. She evaluates whether the porpoises are foraging for food (often revealed by gulls, rip-tide action, or eddies in the presence of the porpoises) or whether the animals are traveling to another location. She and many other islanders have spotted the porpoises from the ferry, going past Guemes. Of her tasks, Caspersion re-



PETER MORRISON

Harbor porpoises seldom breach out of the water and are most commonly seen with only their fins showing.

ports, "I love these animals—the whole whale family. The fact that they are surviving in our waters is very encouraging, and helping to record this data is deeply rewarding."

Observation tasks include:

- Regular observations over a period of time, for at least 15 minutes per day
- Regular recording of the observations on a data sheet
- Recognition that "no sighting" is important data

The citizen scientists have been very inspiring to Jeffries. She is thrilled to have at least two observers on Guemes and would love to encourage islanders on Cypress, Sinclair, Samish, Lopez, and other San Juan islands to become trained observers.

All in the family

The local cetaceans in Puget Sound are all in the family of Delphinidae, which are small toothed whales. Our locals are the harbor porpoise (often seen and recorded at Burrows Bay), the Dall's porpoise (never seen or recorded at

Burrows Bay), and the orca whale (both local and transient pods). The danger to the porpoises (both species are about 6 feet in length, compared to the orca at 30 feet) is the diet of the whales. The local whales are known to be fish eaters (largely salmon); the transients are opportunistic and will take any mammal or fish they can catch. The local orca is known to play "basketball" with the smaller harbor porpoises, but the transient orca comes for dinner.

The harbor porpoise is the only cetacean known to frequent the waters of Fidalgo Bay during the entire year.

Asked when the study will conclude, Jeffries responded, "This study has taken on a life of its own, expanding with the success of gathering data and the network of citizen observers. We hope to discover the food sources, the breeding locations, and the calving locations of this species because sentinel species are usually cetaceans and they help us to better understand the environment we are living in."

If you would like to help with this study, or know of someone on another island who would, contact Aileen Jeffries at aileen@pacificbio.org or Sue Ehler at setehler@msn.com.

For more information about the project or about harbor porpoises, visit pacificbio.org and select the Marine Mammal Project. ☺



SIMON BERROW/IRISH WHALE AND DOLPHIN GROUP

This image shows a very unusual event: a harbor porpoise completely airborne.