Not The Evergreen State

Why most of What We Know about the Landscape of the Salish Sea Is Wrong

Presentation for the
South Sound Chapter
Washington Native Plant Society

Michael Kucher

University of Washington, Tacoma

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Anecdotes and the shifting baseline syndrome of fisheries

Fisheries have recently become a topic of interest for marine and global audiences, but then again, fisheries are a global disaster one of the few that affect, in very similar fashion, developed countries with well-established administrative and scientific infrastructure, newly industrialized countries, and developing countries. This is quickly summarized:

- Hourly subsidized fleets, exceeding by a factor of 2 or 3 the numbers required to harvest nominal annual catches of about 90 million tonnes.
- Staggering levels of discard bycatch representing about one third of the nominal catch, large unrecorded catch that perhaps raises the true global catch to about 190 million tonnes or more per year.

Fisheries science has responded as well as it could to the challenge this poses by developing methods for estimating targets for management, or at least the best guess of Maximum Sustainable Yield (MSY), now annual total allowable catch (TAC) or individual transferable quotas (ITQ). If these methods are to remain effective, fisheries scientists need to follow closely the behavior of fisheries and fleets, but this has been increasingly difficult to achieve from the Biological study of marine or freshwater organisms and communities, and to factor out ecological or evolutionary considerations from our models. There are obvious exceptions to this, but I believe the rule generally applies, and it can be illustrated by our lack of an explicit model accounting for what may be called the "shifting baseline syndrome". Essentially, this syndrome has arisen because each generation of fisheries scientists accepts as a baseline the stock size and species composition that occurred at the beginning of their careers, and uses this as the basis for comparison. When the next generation starts its career, the stocks have further declined, but it is the stocks as that time that serve as a new baseline. The result is that fisheries science is a gradual shift of the baseline, a gradual modification of the creeding disappearance of resource species, and inappropriate reference points for evaluating economic losses resulting from overfishing, or for identifying targets for rehabilitation measures.

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- The early role of small cetaceans in evolution, Martin Field and John J. Martin

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Daniel Pauly and his 1995 “shifting baselines” paper
Arrangement of main and subsidiary dams in plan and section.
A beaver sniffs out a meal in Meadowbrook Pond in Seattle. The beaver family’s nightly activities are drawing a lot of attention.

Dam fine family builds a following

‘The Cleavers’ draw crowd to Meadowbrook Pond

By Lisa Rivera
Seattle Times staff reporter

With a smile on her face, Bonnie Begolka carefully watched a big brown lump move quickly across Meadowbrook Pond, north of the Wedgwood neighborhood.

“Look how fast he swims,” she said to a crowd of spectators, many of whom had gathered daily to view the growing community of beavers in the pond.

When Seattle Public Utilities opened the Thornton Creek floodwater-holding facility in June 1998, beavers were among the many animals that found a home in the pond. The site across from Meadowbrook Community Center on 35th Avenue Northeast also is a natural area for people and urban wildlife.

Jeanette Merki, left, enjoys the antics of the beavers along with granddaughters Sara, left, Rachel Wood, 12, and family friend.
Scientist discovers beavers building prime salmon habitat in Skagit Delta

By Lynda V. Mapes
Seattle Times staff reporter

SKAGIT COUNTY — As sometimes happens with science, Greg Hood went looking for one thing, and found something else:

Tidal beavers.

Just about everyone knows about freshwater beavers, damming streams and gnawing down the forested uplands like furry chain-saw gangs. But what Hood found in the Skagit River Delta was something else. Not a different
Greg Hood in the Skagit Delta
Ecological amnesia

Wetland habitat used to be much more abundant and complex in Puget Sound estuaries. Much of the Skagit Delta has been diked, drained and converted to farmland and development. Only about 6 percent of the estuarine “scrub-shrub” habitat remains from what surveyors noted in the 1850s, re-created in this map.

Source: Brian Collins, University of Washington

MARK SOWLIN / THE SEATTLE TIMES
TREES OF SEATTLE

The Complete Tree-finder's Guide to the City's 740 Varieties

ARThUR LEE JACOBSON
Fig. 1. The area of Morgan's observations in Marquette County, Michigan, about 1867. Modified from Morgan's map.
Fig. 2. The same area as shown in Figure 1, in 1948.
Figure 4. Beaver have had a substantial impact on the drainage network of the Kabetogama Peninsula, Minnesota, between 1940 and 1986. Shown is a representative area. The areas affected by beaver are enclosed by dark lines.
Green shading shows “core” zones. Orange “peripheral” zones. Red lines show movement of furs out of region.
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Bess Arnold and Miriam towels
“As I did stand my watch upon the hill,
I look’d toward Birnam, and anon, methought,
The wood began to move.”

Messenger in MacBeth Act V Scene 5
The Natural History of Puget Sound Country

Revised Edition

ARTHUR R. KRUCKEBERG
The End