

Observations in Washington State

By Ralph Tiner

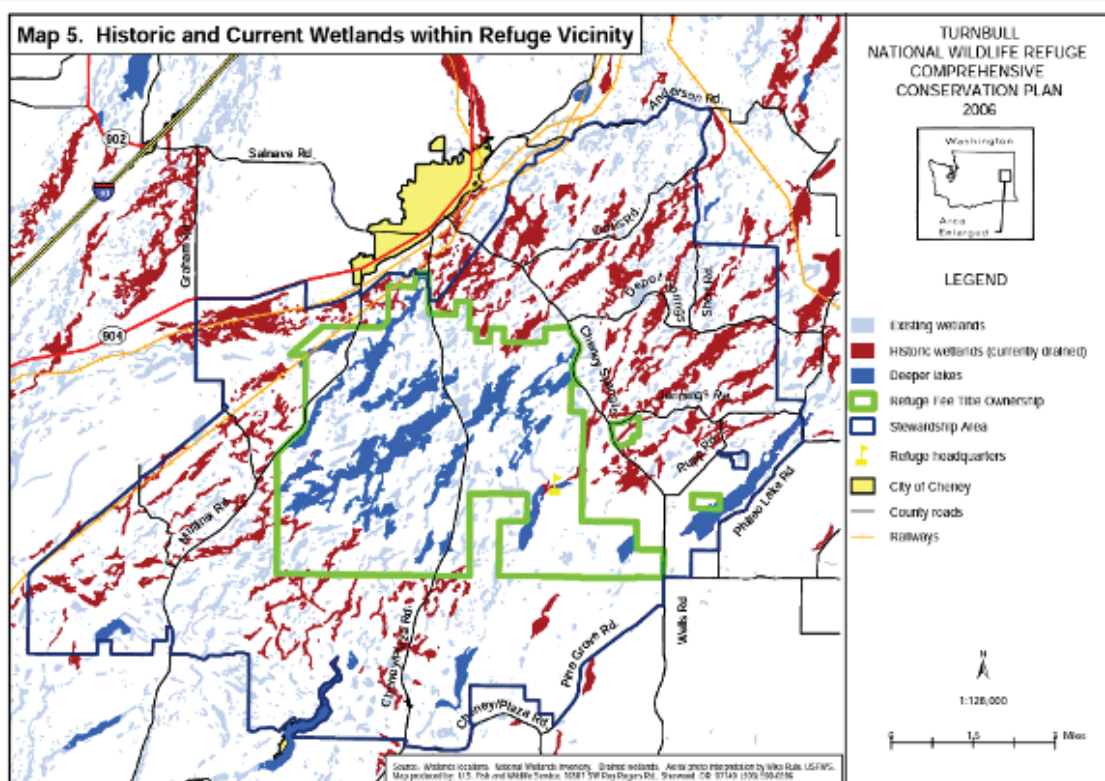
Given that I was on the West Coast for our 2023 annual conference (Spokane) I decided to take the opportunity to spend some time on the Olympic Peninsula after the meeting. While at the conference I took a short trip over to Turnbull National Wildlife Refuge (Cheney, WA). I was curious about Scabland wetlands since they were one wetland type I mentioned in my 2003 paper on geographically isolated wetlands (Wetlands 23[3]: 494-516). Here's a selection of images from those adventures along with an introduction to the Scablands.

THE CHANNELED SCABLANDS AND TURNBULL NATIONAL WILDLIFE REFUGE, CHENEY, WASHINGTON

The Channeled Scablands was created about 15,000 years ago when a glacial dam broke releasing vast amounts of water from Glacial Lake Missoula that scoured the landscape. Multiple floods like this over the past couple of million years have produced a landmass with numerous basins that eventually supported wetland vegetation. Like most areas of the country, many of these basins were drained for hay production and livestock grazing. The refuge was established in 1937 by President Roosevelt recognizing the importance of these wetlands for migratory birds. Today, the area's wetlands have been restored and enhanced for waterfowl, namely for breeding redheads.



View of pond at Turnbull National Wildlife Refuge with fringe of Hard-stem Bulrush (*Schoenoplectus acutus*).





Large-leaved Avens (*Geum macrophyllum*) and Poison-hemlock (*Conium maculatum*) occur at the upper edge of the bulrush marsh.



The sight of a depression filled with Elegant Downingia (*Downingia elegans*) was a surprise.



Tall Meadow Larkspur (*Delphinium burkei*) in swale and closeup of flowers.



The dark band of vegetation appears to be Baltic Rush (*Juncus arcticus* ssp. *littoralis*) in this wetland basin.



A hay meadow outside the Refuge boundary; wonder if it is effectively drained or still wet enough to be considered wetland (at least from an ecological standpoint).

OLYMPIC PENINSULA

The Olympic Peninsula is bounded by the Pacific Ocean (on the west), the Salish Sea (north), and Puget Sound (east). The Olympic National Park and National Forest occupy much of the region. The Peninsula is noted for its temperate rainforests, most notably the Hoh River Rainforest, and numerous beaches.

Satellite view of the Olympic Peninsula and neighboring areas. (Source: European Space Agency, Copernicus)



FRESHWATER WETLANDS



Sluggish stream inside the Hoh Rainforest.



Western or Coastal Boykinia (*Boykinia occidentalis*).



Cow Parsnip (*Heracleum lanatum*) with Marsh Horsetail (*Equisetum fluviatile*) a common site in seepage areas.



Slough Sedge (*Carex obnupta*) from a seep at Cape Flattery.



Yellow Monkeyflower (*Mimulus guttatus*) was observed streamside.



Candy Flower (*Claytonia sibirica*) grows in seeps too but also inhabits other wet shady places.

ROCKY SHORES AND KELP BEDS



The region's many rocky shores provide opportunities for tidal pooling adventures; this one is at Ruby Beach.



Ochre Sea Star (*Pisaster ochraceus*) feasting on Gooseneck Barnacles (*Pollicipes polymerus*).



Black Katy Chiton (*Katharina tunicata*), Shield Limpet (*Lottia pelta*), Mussel (*Mytilus sp.*), and Thatched Acorn Barnacle (*Semibalanus cariosus*) occupy this tide pool at Salt Creek Recreation Area.



Giant Green Anemone (*Anthopleura xanthogrammica*) was fairly common in tidal pools at Rialto Beach. Here it occurs with Articulated Coralline Algae (*Serraticardia macmillanii*) and Blue Mussels (*Mytilus cf. torssulus*).



On July 4, one of the year's lowest tides exposed the kelp beds whose stalks have remained erect.

SALT MARSH PLANTS



Lyngby's Sedge (*Carex lyngbyei*) dominates the low marsh (regularly flooded zone).



Pacific Silverweed (*Argentina egedii egedii*) occurs both in and beyond tidal environments.



Meadow Barley (*Hordeum brachyantherum*).



Sea Milkwort (*Glaux maritima*), a fleshy-leaved herb of the high marsh.



Baltic Rush (*Juncus arcticus*) sometimes forms thick dark patches in the high marsh.



Entire-leaved Gumweed (*Grindelia integrifolia*) was observed at Nisqually National Wildlife Refuge (just east of the Olympic Peninsula).