Big Ditch Slough

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A vital part of the ecosystem

As we launch this new decade, we are faced with multiple uncertainties about our natural world and how we are going to address local issues that concern us. We read of an insect apocalypse, danger of multiple extinctions and potential loss of iconic species.

Here in the Pacific Northwest our Southern Resident Orca pod is reduced to its smallest number since 1995 when there were 98 individuals. In the two decades before that, 50 individuals had been taken or inadvertently killed by marine parks. New potential threats include Puget Sound pollution and a significant loss of food resources, e.g., Chinook salmon, with noise pollution contributing.

Major sources of freshwater to Puget Sound are the Skagit and Snohomish Rivers. Puget Sound rivers contribute about one-third of freshwater to the Salish Sea, with the largest volume coming from the Skagit. The Frasier River in Canada contributes most of the remainder. These rivers are breeding grounds for seven salmon (*Oncorhynchus* species): pink (humpies), sockeye (red), coho (silver), Chinook (king, tyee, blackmouth), chum (dog), steelhead (coastal rainbow) and cutthroat (sea trout or sea-run cutthroat) species of salmon.

The Upper Big Ditch Slough drains South Mount Vernon. The drainage is mainly from urban and commercial properties with a small amount from agricultural land. It has consistently had the most pesticide detections compared to all other monitoring sites around the state by the Washington State Department of Agriculture content management system. You can see the location map here: https://cms.agr.wa.gov/WSDAKentico/Documents/DO/NRAS/627-2018UpperBigDitchWatershedResults.pdf

As plant lovers (landscapers, nursery owners and gardeners) there are many things we can do to improve this situation and help reduce the unwanted pollution. We can implement IPM (Integrated Pest Management) to reduce our use of pesticides (herbicides). These sound gardening practices come from research by WSU and other universities. They involve a Pacific Northwest Handbook (disease, insect and weed versions), "Hortsense" website, “Gardening in Washington” website and multitudinous publications in the form of extension bulletins, fact sheets, extension management and plant leaflet series.

Before taking action it is always necessary to correctly identify the problem and establish a tolerance level. Nature is not a perfectionist! You take the LEAST invasive action first, meaning

you use cultural, biological and mechanical means to reduce the problem before considering a chemical action. You target the pest (disease, weed, virus, insect, environmental or cultural problem) impacting your landscape. This means putting the right plant in the right place, planting resistant or tolerant varieties of healthy plants, rotating crops, and practicing good sanitation. Then you ensure that their sunlight and watering needs are met and are suitable for our Northwest environment.

These birds swim in the waters of the Puget Sound, eat from it and breathe the air. *Photo by Nancy Crowell / WSU Skagit County Extension Master Gardeners.*

The percentage of insects that are a pest to man, his plants or his animals is 1%. This means the other 99% are beneficial, interesting or a combination. It is important to remember that our beneficial insects, including lady beetles, lacewings, ground beetles, flies and wasps for example, need those pesky pests as a food source. To keep our local ecosystem in balance the "good guys" need lots of "bad guys" to eat. Remember to “target the pest and protect the rest.” This is where your tolerance level needs to kick in. There are also other species that eliminate pests like small mammals, reptiles, amphibians, viruses and disease.

Mechanical means of pest control include hand picking, row cover, pruning for removal, water spray, barriers, mulching, vacuuming, rototilling, and trapping. Traps include pheromone traps, sticky traps, and paper traps. Light traps are not recommended as they lure insects in from a distance and kill many more beneficial insects than pests. We see row covers, shade cloths, sediment basins and plastic mulch on many of our Skagit Valley farms as examples.

When using chemicals be sure to use the least toxic ingredient and follow directions on the label. More is not better. Plan according to the weather to avoid wind or runoff. Buffers, setbacks and sediment basins are also a help in catching and filtering runoff. Make sure your applicator is calibrated and mix only what you will use. Old and unused pesticides (herbicides) can be taken to the hazardous waste disposal site at the Skagit County Landfill, 14104 Ovenell Road, Mount Vernon, WA 98273.

Swans, ducks, and herons are some of the creatures who inhabit this ecosystem. *Photo by Nancy Crowell / WSU Skagit County Extension Master Gardeners.*

We are caring for this Earth while we are upon it. We are not separated from the ecosystem but are part of it. Our lawns, gardens and landscapes are places where we spend our time, along with our children, grandchildren, friends, pets and birds, squirrels, deer, raccoons, frogs, insects, etc. They are walking in it, breathing the air and perhaps eating from it. The wind and rain connect it to our neighborhood, city, county and eventually Puget Sound and beyond.

Our legacy must be to improve this area we call home for future generations. Please do your part.

RESOURCES:

- https://cms.agr.wa.gov/WSDAKentico/Documents/DO/NRAS/627-2018UpperBigDitchWatershedResults.pdf
- https://www.pmel.noaa.gov/pubs/PDF/sutt4354/sutt4354.pdf
- https://www.endangered.org/campaigns/southern-resident-orcas/
- https://spsseg.org/meet-the-7-species-of-pacific-salmon/
- Puget Sound Map (this Burke Museum web address comes up this way!)