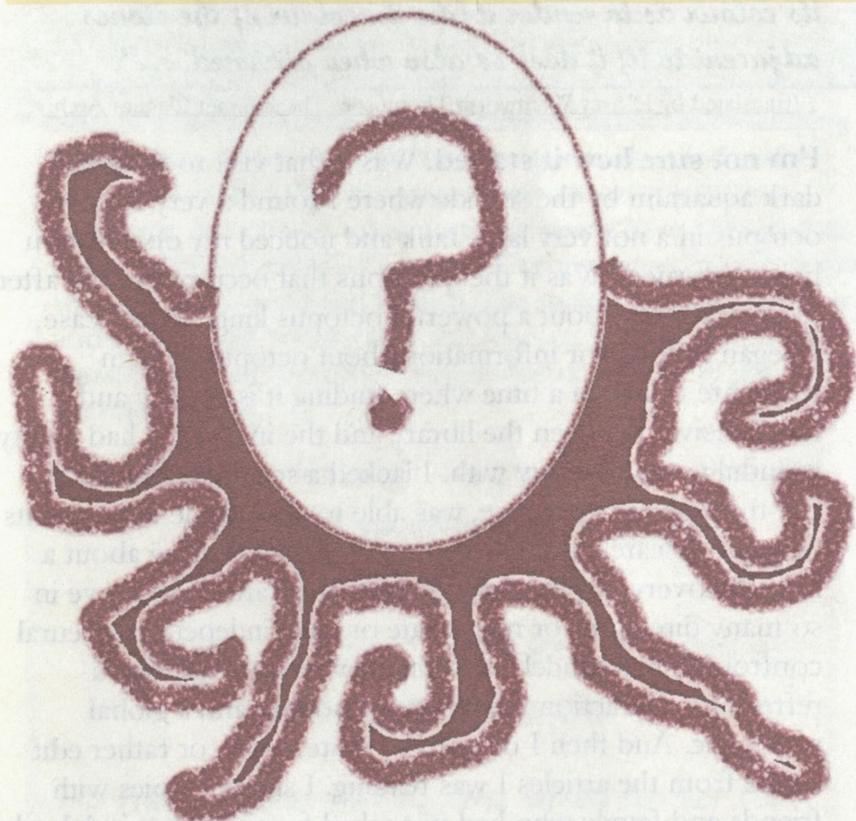


octopus gardening
a collage
of fact and fiction

~~~

#12 - 2022



In 350 B.C.E, the Greek philosopher, Aristotle wrote *The History of Animals*. In Book IX, Part 37, he declared:

*“The octopus is a stupid creature, for it will approach a man’s hand if it be lowered in the water; but it is neat and thrifty in its habits: that is, it lays up stores in its nest, and, after eating up all that is eatable, it ejects the shells and sheaths of crabs and shell-fish, and the skeletons of little fishes. It seeks its prey by so changing its colour as to render it like the colour of the stones adjacent to it; it does so also when alarmed. ...”*

*(translated by D’Arcy Wentworth Thompson, The Internet Classics Archive)*

**I’m not sure how it started.** Was it that visit to the small dark aquarium by the seaside where I found a very large octopus in a not very large tank and noticed my observation being returned? Was it the questions that occurred to me after reading a story about a powerful octopus king? In any case, I began to look for information about octopuses. I am fortunate to live in a time where finding it is so easy and inexpensive. Between the library and the internet, I had plenty to indulge my curiosity with. I lacked a scientific education, but through perseverance, was able to absorb the main points of some research articles. I discovered that reading about a new discovery, for example on how their arms can move in so many directions or regenerate or have independent neural control or are a model for some new technology, was a refreshing distraction from current politics and a global pandemic. And then I decided to write a zine, or rather edit a zine from the articles I was reading. I shared copies with friends and family who had not asked for them, but indulged my eccentricity. And now here we are. I want to share a bit of my passion with you. I have selected a few items that may allow you to appreciate what is available. I hope you find it entertaining. **L.F-5.**

**sqibk<sup>w</sup>** is the Lushootseed word for **octopus** which stems from the Ancient Greek **októpous**.

As a Greek word, the plural should be **octopodes**, but as Merriam Webster points out, whenever a foreign word is assimilated into the English language it assumes the English plurality—so **octopuses** it is.

The Lushootseed-speaking region extends along the shores of Puget Sound from modern-day Olympia to the Skagit watershed and from Hood canal to the Cascades.

- Tulalip Encyclopedia  
and Cephalopods, Smithsonian Ocean

Several tribes in the Salish Sea watershed region are developing resources to allow their neighbors to appreciate tribal culture and history. The Salish language programs are one of those resources. The Tulalip tribes north of Everett have uploaded an online picture book of a **Crow and Octopus** story in spoken and written Lushootseed and English. The spoken feature is from an audio recording of storyteller and scholar, Vi Hilbert which is a treasure in itself. Also, the colorful illustrations are in the traditional style.

ləʔibəš tsi kaʔkaʔ. ʔug<sup>wə</sup>čəd k<sup>wi</sup> sʔələds.

huy g<sup>wəl</sup> ʔəy<sup>w</sup>asbid ti bəsq<sup>w</sup>.

ʔucut tsi bəsq<sup>w</sup>,

"kaʔkaʔ, kaʔkaʔ, x<sup>wi</sup>? k<sup>wi</sup>? g<sup>w</sup>adsk<sup>wit</sup>!

ʔal tudiʔ tsi **sqibk<sup>w</sup>**.

This **crow** was walking. She looked for her food.

And then she was met by the **crab**.

The **crab** said,

"**Crow, Crow**, do not go down to the beach!

The **octopus** is there."

I have read several articles about a sport that developed in the Puget Sound region during the 1950's and 60's. It involved a bunch of guys heading out to the beach and diving into the water to find a giant Pacific octopus in its den. If they found one in the cold and murky depths, the diver would attempt to dislodge it, despite a multitude of arms and suckers that, being reluctant to cooperate with the game, would be grabbing onto any means of escape. If the diver invaded using the den's front door, there was often a back door. They called it octopus wrestling as if the octopus also had a chance to win a trophy.

According to the **Giant Pacific Octopus (Enteroctopus dofleini) Care Manual** published by the Association of Zoos and Aquariums, "Weights like 71kg (157 pounds) is a ...realistic upper size limit for this species." Perhaps resistance was not futile for the cephalopod. Points were awarded based on the use of snorkels rather than breathing tanks and for the weight of the animals. I don't recall seeing any counts for diver casualties or deaths.

The **1963 World Octopus Wrestling Championships** held at Titlow Beach in Tacoma was said to have been attended by over 5,000 people. I don't recall reading who won. After the judging, the octopuses were tossed back in the water, eaten or donated to an aquarium. Eventually, enthusiasm for the 'sport' dwindled.

**Fifty years later**, when Justin Huertas learned about a giant octopus that lived in the Puget Sound and the story of the World Octopus Wrestling Championships, he wrote his second musical, **The Last World Octopus Wrestling Champion**. His production combined a coming-of-age story with comic book elements, Seattle culture, and queer identity. He wrote a story about a wrestler who participates in this contest, wins, brings up an octopus and, instead of throwing the octopus back, she keeps it. 18 years later, her daughter begins to manifest octopus powers and she doesn't know why.

**The Last World Octopus Wrestling Champion**  
premiered in Seattle in 2019 with  
Book, music and lyrics by Justin Huertas and  
Musical arrangements & orchestrations by Steven Tran

**Washington Department of Fish and Wildlife**  
**Harvest of octopus prohibited**  
**at seven dive sites beginning Oct. 6**

ARCHIVED NEWS RELEASE

This document is provided for archival purposes only.  
Archived documents do not reflect current WDFW regulations or policy  
and may contain factual inaccuracies. Date Oct 3, 2013

OLYMPIA - A new rule that provides additional protection for giant Pacific octopuses will take effect Oct. 6, when the recreational harvest of the species will be prohibited at seven popular scuba diving sites in Puget Sound. Those dive sites include:

**Deception Pass** north of Oak Harbor,  
**Seacrest Park Coves 1, 2 and 3** near Alki Point in West Seattle,  
**Alki Beach Junk Yard** in West Seattle,  
**Three Tree Point** in Burien,  
**Redondo Beach** in Des Moines,  
**Les Davis Marine Park**  
adjacent to the Les Davis Fishing Pier in Tacoma,  
**Days Island Wall** in Tacoma.

While the octopus population in Puget Sound appears to be healthy, the new rule makes viewing opportunities for these magnificent animals a priority at the sites, said Craig Burley, Fish Management Division manager for WDFW.

"Puget Sound is one of the most popular dive destinations in the nation, and giant Pacific octopuses are one of its main attractions," Burley said. "These new areas provide additional protection for the species and a greater chance for divers to see these fascinating animals."

The new rule takes effect nearly a year after a scuba diver provoked a public outcry after legally harvesting a giant Pacific octopus at Seacrest Cove 2 in West Seattle. The strong, negative reaction from the public and the dive community prompted WDFW to explore regulatory options for banning the harvest of giant Pacific octopuses.

After working with a 12-member citizen advisory committee that included members of the sport fishing and diving communities, WDFW developed options earlier this year to provide a greater degree of protection for octopuses in Puget Sound.

In August, the Washington Fish and Wildlife Commission considered the options and voted to prohibit recreational harvest of the species at the seven dive sites.

**Did you know that there is a university in eastern Washington that has a Marine Biology program?** It also has training in Scientific Diving. I discovered this interesting fact after reading in Ian Gleadall's CIAC report about the 2014 **Giant Pacific Octopus Symposium** in Seattle that Kirt Onthank had "set himself the task of reviewing the possible effects of hypercapnia (high CO<sub>2</sub>) driven ocean acidification on GPOs, along with hypoxia and ocean warming." I wanted to know what his progress was since then.

Fortunately, a report was published in 2020 of which he was the primary author. It was called "**Impact of Short- and Long-Term Exposure to Elevated Seawater PCO<sub>2</sub> on Metabolic Rate and Hypoxia Tolerance in Octopus rubescens.**" I was surprised to see that the institution that he was attached to was Walla Walla University!

I would love to quote several items from the Introduction and Conclusions for you, but there is this little blurb on the bottom of the first page:

"Physiological and Biochemical Zoology 94(1):1–11. 2021. © 2020 by The University of Chicago. **All rights reserved.** 1522-2152/2021/9401-0072\$15.00. DOI: 10.1086/712207"

What I would like you to know, in my non-scientist attempt at deciphering the message, is that carbon dioxide in our atmosphere has been rising for a couple hundred years by currently roughly 1 and a half times what it was at the beginning. About a third of the carbon dioxide generated by human actions has been absorbed by the oceans and has resulted in a process called ocean acidification. I hope I'm getting this right; you might want to look it up on your own.

It also discusses seawater hypercapnia which I guess is not the same as hypoxia which is a seasonal problem in Hood Canal as described by the **Review and Synthesis of Available Information to Estimate Human Impacts to Dissolved Oxygen in Hood Canal** published in 2013 by the Environmental Protection Agency and the Washington State Department of Ecology. Like hypoxia, hypercapnia limits the amount of oxygen available to animals like octopuses who live in the sea. Onthank's report also adds that the Salish Sea where they performed their research is a good place to study ocean acidification because of its currents and geography.

**And then I looked around for the Walla Walla University Marine Biology research site on the Salish Sea** and found the Rosario Beach Marine Laboratory near Deception Pass State Park. It looks very nice. The students live near the beach during the summer which is much easier than commuting from Walla Walla. The Scientific Diving training looks pretty challenging to me. It complies with American Academy of Underwater Sciences standards and the manual states:

"The candidate must successfully complete prerequisites, theoretical aspects, practical training, and examinations for a minimum cumulative time of 100 hours and a minimum of 12 open water dives. Theoretical aspects must include principles and activities appropriate to the intended area of scientific study. ..."

They also have written exams that include the following:

"Function, care, use, and maintenance of diving equipment;  
Advanced physics and physiology of diving; Diving regulations;  
Applicable diving environments; Emergency procedures for OM-specific dive mode(s) and environments, including buoyant ascent and ascent by air sharing; Currently accepted decompression theory and procedures;  
Proper use of dive tables; Hazards of breath-hold diving and ascents;  
Planning and supervision of diving operations; Navigation; Diving hazards & mitigations; Cause, symptoms, treatment, and prevention of the following: near drowning, air embolism, **hypercapnia**, squeezes, oxygen toxicity, nitrogen narcosis, exhaustion and panic, respiratory fatigue, motion sickness, decompression sickness, hypothermia, and **hypoxia**/anoxia; Applicable theoretical training and knowledge development from the Required and Suggested Topics"

The University of Washington also does a lot of marine research for which they often use Friday Harbor Labs. One of my favorite octopus diving accounts was written by a UW PhD candidate:

### **An Octopus' Garden in the Urban Underwater Environment**

by Eliza Heery, UW Friday Harbor Laboratories - Tide Bites, 2016.

"... Amy and I visited octopus dens throughout Puget Sound. Octopuses leave "middens" piles outside their dens - trash piles of shells from the various prey items they've consumed. For the ecological detective, these octopus trash piles are wonderfully informative, offering insight into the animal's feeding behavior and prey composition. We collected 46 middens from 24 different sites. From these middens, we discerned that octopuses were primarily feeding on prey items from surrounding soft sediments, such as Dungeness crabs, butter clams, and razor clams. ..."  
Doesn't it sound like fun? Just a couple of researchers wandering around beneath the waves looking for octopus trash. I will keep an eye out to see what research she gets published someday.

---

The largest octopus on planet Earth lives right here in Puget Sound. The Giant Pacific Octopus lurks in the deep around Seattle. According to Tacoma legend, they inhabit the ruins of collapsed bridge "Galloping Gertie" with the infamous "King Octopus."

National Geographic notes the biggest on record at 30 ft wide and over 600 lbs. If you encountered that in the depths of our Sound, you'd tell tales of one thing...  
You just saw the Kraken.

- National Hockey League, **Seattle Kraken**, 2021

---

1

**I grew up in various parts of Washington.** Kindergarten in Soap Lake, 1<sup>st</sup> Grade in Montlake Terrace, 2<sup>nd</sup> Grade in Lynnwood, 4<sup>th</sup> in the Madison valley of Seattle, 7<sup>th</sup> on the other end of the UW Arboretum, 8<sup>th</sup> bussing from Index to Sultan below Skykomish Pass, 9<sup>th</sup> near Snohomish, 10<sup>th</sup> south of Stanwood. I had a lot of practice being the strange new kid, but never mastered the skill. I had four younger sisters who were on the same journey, and we usually found a patch of woods nearby to explore. Those gatherings of trees and brambles became our familiar playground. I still use the 'we' pronoun rather than 'I' when recalling that period of my life, as if all our experiences were in one body. As if we were a quintopus with five arms that could juggle five different balls at once and moved in the same direction. That assumption may irritate some of my sisters, but it is how my memory works. Running through the woods, climbing trees and boulders, swimming in streams, eating huckleberries, we were wild girls with tangled hair and skinned knees.

When I was thirteen, my joints began to get hot and painful to move. Later, I was diagnosed with Juvenile Rheumatoid Arthritis and given lots of aspirin. I missed a lot of school and when I returned, spent Phys Ed period in the library. So now I had another Strange Kid aspect to deal with. I learned that reading science fiction was an effective strategy to distract my head from my body's problems. I still found comfort in the forest, but as I began to lose the ability to run at the sound of a twig breaking, I realized that hikes in the deep woods were becoming a risk.

**Our father decided we would move to Arizona.** This was during the period of the billboard on I-5 saying "Will the last person out of Seattle please turn off the lights?" after Boeing's layoffs. I never asked him, but I think my arthritis was one of the reasons he decided to move us down to the hot climate of Phoenix. Knowing what it felt like to sit in the back seat of a car with four cranky sisters and no air conditioning on a hot summer day, I had strong reservations. It didn't matter. As the U-Haul crossed the desert, we learned the awful truth: vast flatness, heat reflecting from the pavement in waves, twenty varieties of cactus, and no welcoming patch of woods. I don't remember much from that time. I may have been in shock and grief.

So are you wondering why I am talking about my life in the middle of an octopus zine? One of the many attributes that attracted me to the casual study of this animal was their vulnerability and resilience. As a good physical therapist may tell you, adapting to your new situation is the goal for coping with disability. After living with JRA and the resulting damage to my body for over fifty years and trying to keep up, more or less, with everybody else, I can appreciate this.

An octopus is at a great disadvantage moving about in the water with no shell, claws, teeth or stinging tentacles. Yet they have evolved such amazing abilities over the millennia that they continue to survive. They are born as tiny paralarvae and set off on their own without parental guidance. Perhaps two out of two thousand siblings survive to adulthood. For most, that is only a year from when they started. The survivors grow fast, mate, the females lay eggs once and then stop hunting and eating to guard and circulate water over the eggs until they hatch and she dies soon after if everybody is lucky. Not lucky is she dies before they hatch and the embryos die too. The males go crazy after mating and then die.

I was stunned when I learned how short their lives were. The happy ending for an octopus fan is learning about their skills and reading the continuing research that reveals new aspects of these animals. How they can solve puzzles to open containers containing prey. They can escape many enclosures due to their ability to fit through tiny spaces. They recognize different aquarium handlers and respond to them differently as a result. They will play by controlling the path of a floating pill bottle like bouncing a ball against a wall. Some may use captured jellyfish tentacles to sting their prey.

## DIRECTIVE 2010/63/EU

of the European Parliament and of the Council  
22 September 2010 (Official Journal of the European Union)  
**on the protection of animals used for scientific purpose**

In addition to vertebrate animals including cyclostomes, **cephalopods** should also be included in the scope of this Directive, as there is scientific evidence of their ability to experience pain, suffering, distress and lasting harm.



University of Washington

# Friday Harbor Labs

Animal Use Training Requirements



Are you going to be working with vertebrates or cephalopods?



Or entering where vertebrates or cephalopods will be housed?

If YES

You are required to complete the following before entering an animal area:

- Animal Use Laws and Regulations Online Course
- Animal Use Medical Screening
- Lab-Managed Animal Care & Records: Aquatic Animals

best done before coming to FHL

in Seattle or at FHL

**I have not been able to dive in the Puget Sound and observe them** in their environment, but I love reading stories and watching videos about people who have. The way their arms curl and uncurl are truly beautiful to me. Their camouflage ability continues to amaze. The deep sea explorations are finding the Glass Octopus, Dumbo Octopus, Vampire Octopus and more. When I feel like a Strange Kid overwhelmed by a challenging task, I look for an octopus solution. Despite living in different worlds, we both must try to solve life's problems and puzzles with what we have available to us within our limits.

I am attempting to recollect an 'octopus solution' .... Perhaps, while trying to prune back some fierce blackberry brambles with my loppers, it was when I was balancing on my shaky feet while using my cane to drag the cuttings out and place them on top of the yard waste container, then bashing them with the cane so they fold into it. Or maybe it is keeping a pair of pliers on top of my microwave, for when I need to unscrew a carton of milk. Or taking a cardboard carton from recycling and cutting it up to make zine issues dividers. Obviously my life is not as adventurous as I imagine an octopus's life might be. Little victories here and there.

Other folks have also been inspired by the octopus. In 1969, Ringo Starr of The Beatles wrote the **Octopus's Garden** for their Abbey Road album. Victorian naturalist and gentleman Henry Lee of Brighton famously stated that "An aquarium without an octopus is like a plum-pudding without plums." Someone created the Octopus Haircut which has been declared a 2022 Trend.

Lots of folks in Hollywood like giant octopuses.

Roland C. Anderson, a Seattle Aquarium biologist, compiled a delightful list called **20,000 Tentacles Under The Sea - Cephalopods In Cinema** that was posted on James B. Wood's **The Cephalopod Page** and included

**It Came from Beneath the Sea** (1955),  
**Bride of the Monster** (1955),  
**Octaman** (1971) and  
**Tentacles** (1977).

Stephen Hillenburg created a comic book titled **The Intertidal Zone** in the 1980's which led to the development of **SpongeBob SquarePants** and his grumpy neighbor, the octopus Squidward Tentacles. **Encyclopedia SpongeBobia** goes into great detail on Squidward's attributes, such as "Whenever he walks, his suction cups stick to the floor, meaning that he walks with a distinct squelching noise.... The sound of Squidward's footsteps is produced by rubbing hot water bottles."

In 2014, Ian Gleadall of Sendai, Japan described the talks given at the **Giant Pacific Octopus Symposium** for the members of the Cephalopod International Advisory Council. He began with the following statement:

"On the 29th of March 2014, the Seattle Aquarium was the venue once more for another (the second) symposium & workshop on the giant Pacific octopus (GPO). Organized and convened by Roland Anderson & Shawn Larson, it was overshadowed by the sudden but peaceful death of Roland on 19th February (see obituaries [here](#) and [here](#), and [message board](#)). The symposium was therefore naturally dedicated to him, with most of the presenters overtly acknowledging the positive role that Roland had on their lives and their science. As last time, it was a very interesting event, but also a little subdued in view of the shock of Roland's passing."

When I came across this paragraph in 2021, I had to catch my breath. I had been reading about Dr Anderson's research for several years (he wrote over **200** scientific articles) and imagined him still at work at the Seattle Aquarium, designing some new way to measure an octopus's abilities and to keep them entertained during confinement in a tank.

I then took another look at my pdf of the **Giant Pacific Octopus (*Enteroctopus dofleini*) Care Manual** by the AZA Aquatic Invertebrate Taxonomic Advisory Group. On page two, in addition to his name (as the only person west of the Mississippi) among the five Authors and Significant Contributors, was the following:

"Original Completion Date: September 2014

Dedication:

This work is dedicated to the memory of Roland C. Anderson, who passed away suddenly before its completion. No one person is more responsible for advancing and elevating the state of husbandry of this species, and we hope his lifelong body of work will inspire the next generation of aquarists towards the same ideals."

I would like to add to this Octopus Gardening issue some of the enrichment Dr. Roland C. Anderson has brought to my life.

He co-authored, with Jennifer A. Mather and James B. Wood, the popular book, **Octopus: The Ocean's Intelligent Invertebrate** (2010). In addition to descriptions of his work with Dr Mather on GPO enrichment, it includes several accounts of his dives in Puget Sound, such as:

"Once while diving on the wreck of the clipper ship Warhawk in Discovery Bay off Puget Sound, I saw the greatest number of GPOs I'd ever seen on one dive. This full-rigged sailing ship caught fire and went down in 1883, and all that remained were the skeletal ribs of the ship's starboard side protruding from the sand bottom and 100-ft.-long (30-m-long) pile of ballast rocks next to the ribs. Eight GPOs were living in the ballast pile, perhaps because there was little else to make a den out of nearby in the bay, only vast expanses of sand and mud. These octopuses made dens where they could, even though they were closer to each other than they would have liked. Instead of just a home, this was an octopus condominium."

I like to imagine him on those dives. As Drs Mather and Wood described his work in Seattle in their memorial statement for the **American Malacological Bulletin** (32(2) : 323, 2014),

"He worked at the Seattle Aquarium for over three decades, retiring in 2009. Many knew him as the senior octopus biologist at the Seattle Aquarium. Roland created and organized the Puget Sound octopus surveys, the Octopus Week events including the Octopus Blind Date on Valentine's Day, and the Giant Pacific Octopus conference."

They go on to recount a memory that describes his sense of humor:

"During our field work in Bonaire, Roland would bring a gelatinous "wall walker," chill it in the freezer and then slip it into someone's dive bootie (the approved technique was not to react but to quietly slip it into someone else's bootie)."

And they conclude:

In his obituary, Roland is described as "a researcher, author, diver, connoisseur of desserts, curmudgeon.....and friend."

Information about the elusive **Pacific Northwest tree octopus** (*Octopus paxarbolis*) originated on a website created in 1998 by Lyle Zapato ([zapatopi.net/TreeOctopus/](http://zapatopi.net/TreeOctopus/)). The **Library of Congress Web Archives** entry for the PNTO states,

“This fictitious endangered species of cephalopod was purportedly able to live both on land and in water, and was said to live in the Olympic National Forest and nearby rivers, spawning in water where its eggs are laid. Its major predator was said to be the Sasquatch. The Pacific Northwest tree octopus website is among a number of sites commonly used in Internet literacy classes in schools, although it was not created for that purpose.”

**Seattle writer Ted Chiang** wrote the award-winning novella, **The Story of Your Life**, that was adapted for the 2016 film, **Arrival**, about a linguist's encounter with alien emissaries. The team of linguists call them heptapods for their similarities to octopuses. Their written language consists of circular patterns that they draw by squirting ink and represents concepts that are nonlinear in time. The soundtrack was composed by Icelander Johann Johannsson and is perfectly strange.

I'd like to take a pause to mention a project brought to you by the same masterminds behind Olympia Zine Fest. **Community Print**, is an effort to build skills in using antique letter press equipment collected into a small studio that has been wandering around downtown for over twenty years. This winter, we woke one morning to discover that part of our downtown had burned in a huge fire and several small businesses had been ruined.

“The Community Print building was catastrophically damaged. Though its walls are still standing, water drenched the structure and contents, and smoke, heat and ongoing harsh weather has damaged five printing presses, hundreds of metal typefaces, storied wood type collection, printer's cuts and archives.”

A GoFundMe account was initiated to assist in the recovery, and I invite you to donate to Community Print if you are able to.

Information can be found at [www.community-print.org](http://www.community-print.org).

This is the 12<sup>th</sup> issue of my Octopus Gardening zine, and I think I'm beginning to get the hang of it.

This is the first one that I have personally appeared in, except for a couple of silly drawings.

My process has been to read a lot of different octopus articles, think about it for a few days, then collect some excerpts that I think my friends and family might not know about and fit them onto two pieces of paper folded in half. Six and a half pages of various fonts relating news from research articles, aquarium animal care manuals, octopus fan websites, pop culture, museum exhibits, recipe collections, aquaculture developments, book reviews, government and NGO announcements, British fishery reclassification of cephalopods as sentient, Detroit hockey mascot gossip and world soccer predictions, marketing for Alaskan canned octopus in Bullwhip Kelp sauce and Australian octopus traps, Mexican frozen octopus truck disappearances, Trolli Sour-Brite Octopus candy, and so on. It seemed like harmless fun.

Now, I am stepping into new territory and it's not so comfortable. As I dare to participate in the **Washington State Zine Contest**, I am forcing myself to show what's behind the curtain of all those copied excerpts. Creative growth is not easy.

If it wasn't for a brilliant librarian who helped to bring **Sister Spit's** poetry slam team to town and promoted the outrageous annual **Spring Peep Book Diorama Contest** and was one of the organizers of the **Olympia Zine Fest**, I wouldn't be trying to write something original instead of safely cutting and pasting someone else's work. With attributions. After several years of thinking about making a zine, the stress from the Covid pandemic and my efforts to become a city hermit has encouraged me to find a creative project to carry me through this trying time. And so:

**Octopus Gardening zine fun!**



## Results from the 18th annual Seattle Aquarium octopus survey

The Seattle Aquarium launched yearly giant Pacific octopus (GPO) surveys in 2000 in an attempt to answer a question often heard at the octopus exhibit:

### how many GPOs live in Puget Sound?

While there's no way to determine the exact number, the surveys do provide a sense of overall population trends and changes in where the animals are being found. If significant changes are noticed over several years, the information can be shared with government agencies and potentially lead to increased protections for these animals in the wild.

Our most recent survey, conducted by **49 volunteers and 11 Seattle Aquarium staff members** in October 2018, revealed that **29 GPOs** were spotted at **26 dive sites** throughout Puget Sound.

This annual effort wouldn't be possible without help from the local dive community - we're grateful for their longtime support.

[www.SeattleAquarium.org](http://www.SeattleAquarium.org)

submitted for the  
7th Annual  
Washington State Zine Contest  
~  
Washington Center for the Book

Creative Commons  
Attribution-Noncommercial

by  
Laurie Feral-5  
Olympia WA USA