A big thank you to Chuck and Charli Meacham for sharing their Harbor WildWatch story with us. We really appreciate their continued involvement with the community. Be sure to say hello to them at a future Harbor WildWatch (HWW) event!

HWW: Why did you get involved with Harbor WildWatch?

Chuck: I grew up in Wrangell, Alaska and spent my time beachcombing. I liked that HWW offers kids an introduction to the beach like I had. My career was also in Alaska as a fisheries biologist, working from Bristol Bay to Prince William Sound, and ultimately the entire state.

Charli: Shortly after we arrived in Gig Harbor, we attended “A Salmon Enchanted” where half the proceeds went to HWW. I am happy that kids here can get the type of outdoor education that my kids received in Alaska.

HWW: I always ask…what is your favorite intertidal animal?

Charli: Sea Cucumbers! I saw them being eaten in Hawaii and was struck by their beautiful colors.

Chuck: I really like hermit crabs…their life history and how they mobilize, and trade shells is fascinating.

HWW: Do you have a memorable HWW program?

Chuck: I like Cocktails & Fishtales and Pier Into the Night.

Charli: I like Cocktails & Fishtales, too. I really enjoyed the talk about birds. I also like the systematic nature of the seaStars & Beyond junior naturalist program. Kids go from being a young seaStar student to a teen volunteer.

HWW: You are both very involved with the Gig Harbor community. What motivates your involvement?

Charli: We moved here for the small-town atmosphere. I have found that it helps to put a foot forward when meeting people. We found groups with similar ideals and found it easy to become involved.

Chuck: We enjoy so many things here, like the Waterfront Farmer’s Market and the walking tours in the summer, and we want to give back. Individuals can make a difference. I also like that students are exposed to our natural resources and public service, which encourages responsible citizenship. I’d like to encourage people in Gig Harbor who enjoy the HWW programs to participate and make them even better!

HWW: How do you feel philanthropy benefits a community?

Chuck: We both enjoy the chance to continue to grow and learn after retirement and it continues to open our world to new things. We find it easy to share with worthwhile causes that benefit our town.

Charli: Whatever you give, no matter the value, you always get so much back!

HWW: What is your selection process for charitable giving?

Charli: I review larger organizations on-line. But I prefer to be involved in local organizations where I can directly see a change.

Chuck: I base it on personal experience with the organization—judicious use of funds, performance and products, and volunteer participation.
Rockfish Reflections-Diver’s Wanted!

Thinking about rockfish takes me back to the shores of SE Alaska before my time with Harbor WildWatch; fresh rockfish tacos, under the stars, next to a campfire, all to the tune of sighing humpback whales in the distance. Now that I’m now living the dream here in Washington, I can still tap into that rockfish goodness at many local restaurants. However, to full enjoy those rockfish tacos, it is important to know that these delicious meals are coming from sustainable rockfish populations.

Worldwide, there are 102 species of rockfish and the Salish Sea is home to at least 28 of those species. Rockfish are unique because their life history takes them through many habitat types. Many rockfish species are venerated, meaning the mother gives live birth to her young once they’ve hatched within the female’s body. After being released from their mother, rockfish, young spend one to two months in open water. During this pelagic life stage, rockfish are quite vulnerable because they (and their zooplanktonic food sources) can be negatively impacted by many factors such as temperature, currents, and upwellings. As they mature, rockfish move from a pelagic lifestyle to a benthic or bottom dwelling life. At depth, young rockfish depend on near-shore vegetated habitats as nurseries that will later connect them to their adult habitats in deeper, rocky reefs. Rockfish are long living, mid-level, predators that eat crustaceans and small fish, but also get eaten by larger predators like lingcod and harbor seals. The oldest recorded rockfish ever caught was 205 years old! Name a marine habitat, and that rockfish probably used it during one of its life stages. Consequently, if any of those habitats are disrupted, rockfish populations could have a problem.

In addition to degraded habitat, over-exploitation is also a concern for maintaining healthy rockfish populations. Particularly, the fishery removal of larger and older individuals, which are more successful breeders than their smaller, younger counterparts. Think about how many babies that 205-year-old rockfish could still be having! Even the idea of catch-and-release can be deadly for a rockfish because as they are caught and brought to the surface from depth, the fish is unable to release the expanding gases in its swim bladder. This resulting barotrauma can cause the inflated swim bladder to extend from the mouth of the rockfish. Rather than popping the distended swim bladder before releasing the fish, fisherman can cause the issues caused by barotrauma by using tools developed to return the rockfish back to depth, thus compressing the gas in the swim bladder before releasing the fish.

Because of their unique life-history, past over-exploitation, and currently degraded habitats, many rockfish species in the Salish Sea have declined. Three rockfish species in the Puget Sound are listed as Species of Concern by the State of Washington under the U.S. Federal Endangered Species Act. Fortunately, there are things we can do to help. Habitat restoration, establishing marine reserves, minimizing bycatch, educating fishermen on effective catch and release techniques; these are all great actions to support. For divers out there, you can help by adding a twist of science to your next dive. Harbor WildWatch has partnered with NOAA to better understand the distribution of threatened rockfish species in the Puget Sound. We’d love for more divers to get involved with our monthly dive surveys. Contact Stena Troyer if you, or a diver you know, is interested in getting involved. Stena@harborwildwatch.org

Upcoming dive: December 15, meet 6pm at Tacoma SCUBA

Volunteer diver, Chris McKenna, has participated in many Rockfish surveys.

My kids love to roll back rocks at the beach to watch all the scuttling Oregon and Purple Shore crabs. The careful observer might find an even more delicate crab which likes to stay cool under the rocks in the intertidal zone. The Porcelain crab is adorned with brilliant blue marks on the mouth and at the pincer joint and is so tiny that its primary food consists of diatoms and other fine material found on the rocks. Typically, the abdomen under a crab’s underside helps distinguish males from females, but both sexes of the Porcelain crab have a broad flap which they use for swimming. Males, however, have larger pincers in proportion to their body and are more apt to have bright colors.

This little crab is big on self-sacrifice. It lives in a world where the Porcelain crab is David and the Purple Shore Crab is a predatory Goliath. So, the Porcelain crab employs a behavior called autotomy, which originates from the Greek for auto- “self” and tome- “severing”. When threatened, the little crab will self-amputate a claw to escape or distract a predator. The severed claw continues to clasp the predator even after it separates from the crab. The claw can regrow, and it takes about four molts to regain original size.

As a human, it is hard to imagine our arm having a dedicated fracture point for us to cast our arm aside, if threatened. Autotomy is not uncommon among invertebrates, especially echinoderms and crabs. Two species capable of leaving behind various body parts. The Sea Cucumber (an echinoderm) famously eviscerates its internal organs to save itself. But, there are also a few vertebrates who utilize this defense mechanism. Two species of the African Spiny Mouse automatically release their skin, like taking off a coat, if captured by a predator. They can completely regenerate hair follicles, skin glands, fur and more!

The next time you are at the beach, investigate some rocks (remember, only roll rocks the size of your head or smaller to protect the fragile wildlife underneath), and look for this beautiful, little crab. If you find one, snap a photo and upload it to iNaturalist to contribute to this awesome citizen science database. And, if you like to use Instagram, use #LearnHaveFun to share with the Harbor WildWatch community.

Porcelain Crab

Petrolisthes erinorius

Karl: Keep Out of the Garden!: Carolus Linnaeus & the Naming of Everything

A new Children’s Book for ages 7–11 reviewed by Gig Harbor Naturalist Frank Knight;


Imagine your favorite fish with three different complicated names depending on the name’s personal likes: was it an aquarium beauty, a delicious game fish, or a lowly bait fish? Until Swedish Karl Linné (1707-1778) saved science from total confusion, animals and plants were named for their uses, not as unique species with close family relatives. Familiarized with all the plants, insects, and small animals in his father’s garden, young Karl ignored school studies; his parents threatening apprenticeship to a shoemaker. Deciding instead on a medical career using healing plant remedies, Karl studied hard finally convincing his peers that every plant and animal have only one two-part name: a genus name and a unique species name – coho salmon (Oncorhynchus kisutch); bigleaf maple (Acer macrophyllum); humans (Homo sapiens) – the same around the world. Karl personally identified 10,000 species he published in Species of Plants. Knighted by Sweden’s grateful King, Karl then chose his formal Carolus Linnaeus name. Find Karl’s favorite childhood twin flower (Linnaea borealis), native in our Shemel Park. Beautiful color pictures and seven pages of end matter provide enriching parent and educator resources.

Kelp? Where is anemone? They told me they would be at the park, but I guess I should have been more Pacific! Joke courtesy of Haley F., HWW Intern.