



This Rainbow Dendronotus, *Dendronotus iris*, was photographed by Linda Schroeder at Point Whitehorn Park in Whatcom County, WA on June 22nd. It was "saved" from being stranded up on the beach at low tide. Many more were subsequently found stranded.

June Low Tide Adventure Photos and text by Linda Schroeder

A pandemic couldn't keep me from the good June low tides this year and Phase 2 came just in time to my county so I could continue with some planned activities. Throughout the spring I have been helping teachers by providing study material/field guides for local beaches to aid in their online schooling. Through this process I became acquainted with the executive director, Amy Eberling, of the Salish Sea School in Anacortes. This program is aimed at "creating student leaders in marine conservation", www.thesalishseaschool.org. We had hoped to be able to meet up on a low tide so I could help enhance her knowledge of the intertidal creatures. The early intertidal monitoring surveys were also cancelled for the aquatic reserves near me, another of my activities, I was hoping to introduce a new assistant in the program to some of our local survey sites. Luckily I was able to accomplish all these activities the last few weeks, along with doing my own surveys of some aquatic reserve sites. In the process I found a few interesting things at some of the beaches I visited.

A mass stranding of the Rainbow Dendronotus, *Dendronotus iris*, was certainly a highlight of the day on June 22nd at Point Whitehorn Park in Whatcom County, WA (Cherry Point Aquatic Reserve). I had never spotted this species at this beach before so was surprised when we found one stranded high into the dry cobble. Of course we immediately tried to save it and carried it down to the water, but it had already been high and dry for too long. We soon spotted one *Dendronotus* after another scattered all over the beach. Those nearest the water revived quickly when put back into the water. A couple specimens were found in tide pools and they were active and seemingly unaffected. **Fig. 1 & 2**

Walking only about 150 meters produced at least two dozen specimens found stranded. As they were found anywhere from the driftline to the water, we likely missed several since we didn't cover every little piece of the beach in that distance. They also might have been quite a ways laterally up and down the beach from the area we explored. Some specimens were fairly young but many were as big as 15 cm. This *Dendronotus* will group together for mating so we can only guess that during that event, something caused them to be stranded on the beach as the tide went out. It had been calm weather during the night and early morning so strong wind hadn't been a factor.

A visit to Shannon Point in Anacortes allowed the discovery of this rosy-red *Mopalia swanii*. **Fig. 3** It was a first for me to find one with this coloration.

On another day I was at Kinzie Beach in Port Townsend (Protection Island Aquatic Reserve). A fellow survey participant spotted this Buffalo Sculpin in a tidepool. It was at least 35 cm. We kept an eye on it through the low



Fig. 1: Three of the first ones found after being placed back into the water. The small one and orange-tipped one survived.
Fig. 2: A happier individual found in a good sized tidepool



tide. The water level lowered to a point where it just barely covered the sculpin but it was luckily a cooler day and the water didn't get overly hot. As the tide was returning and the pool filling again, the sculpin seemed pretty frisky with the incoming cool water. **Fig. 4**



The Dredgings, volume 60 No. 4, 2019, page 8 www.PNWSC.org

***Dendronotus iris* observations**
By Kathleen Fenner, photos by Kathleen Fenner except as noted

With the anchor dropped we back-rolled off our boat and descended to explore the ocean floor. It was June 7th, 2020, the sun was shining and the ocean had wonderful visibility. We wanted to share with Gord Bell's cousin, pictures and knowledge of what resided in the ocean directly in front of her Maple Bay, BC family home. Gord has early childhood memories here but no one had explored beneath the ocean's surface. The property sits on a steep rock embankment with a rock face joining land and sea. Having dove relatively close by, and by looking at the charts, we expected to find a continuation of the wall we have dove at Arbutus Point. The sea floor composition was not as we anticipated.

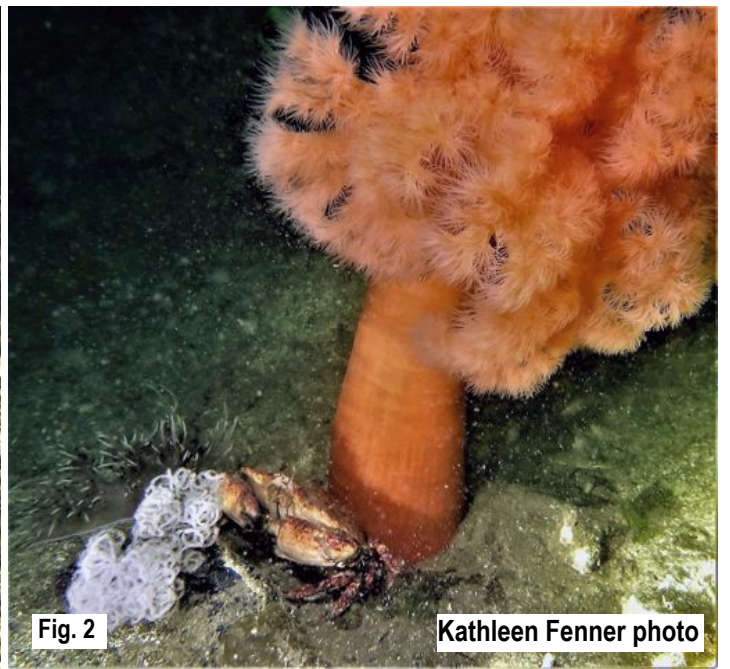
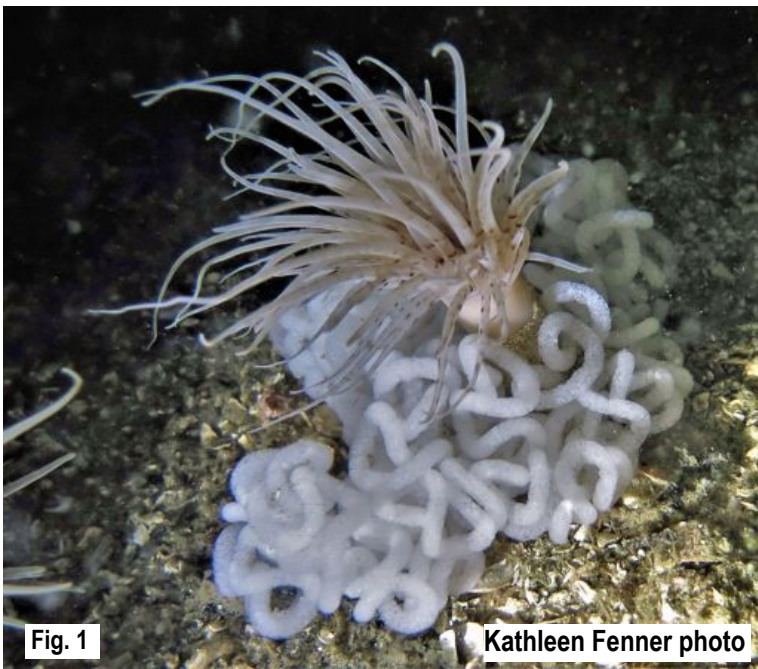


Fig. 1

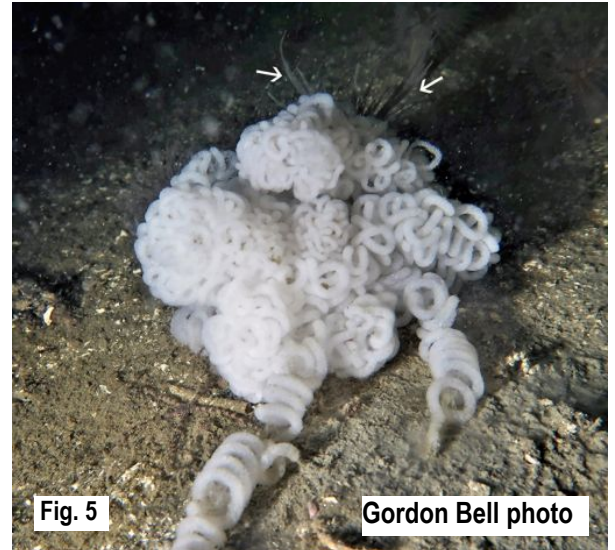
Kathleen Fenner photo

Fig. 2

Kathleen Fenner photo

Sand mixed with mud and shell debris covered the ocean floor. We went below 90 ft. and could not find any resemblance of a wall, just a steep sandy drop off. We were in a huge open area of soft substrate. Greeting us were *Dendronotus iris* in large numbers. They were everywhere we looked, usually having just a few feet between them. We saw well in excess of 100 *D. iris*. At this time we also noted a few of their egg masses and many *Pachycerianthus fimbriatus* (Tube Dwelling Anenomes). (Fig. 1) *P. fimbriatus* is a known food source for *D. iris* and a common sighting for us in this type of environment. There were four of us diving. Two of us have hundreds of dives each and two have thousands but no one had seen *D. iris* in these kind of numbers.

The soft substrate did provide home for some sculpins and flatfish as well as other invertebrates. We saw a significant number of *Cancer productus* (Red Rock Crab) including mating pairs. There also was the occasional *Metridium farcimen* (Giant Plumose Anenome). Watching *D. iris* move away from an egg mass under *M. farcimen* with *C. productus* sitting right beside the egg mass, I realized there is so much to learn about interconnectedness. (Fig. 2)



On June 27th we returned to explore further. This time we found huge numbers of egg masses. We watched a group of four *D. iris* (possibly five) huddled together as eggs were being deposited. (Fig. 3) We were seeing large numbers of *D. iris* but they weren't outnumbering the *P. fimbriatus* as seen on June 7th. The new sighting for us this dive were dozens of deceased

D. iris. (Fig. 4) It appeared the decrease in numbers of live *D. iris* could be accounted for by the numbers of deceased. Andy Lamb, in Marine Life of the Pacific Northwest, 2005, pg. 88 states that *P. fimbriatus*, which can form huge fields, can be a spawning site for *D. iris*. We definitely found a spawning site.

Many egg masses surrounded *P. fimbriatus*. One egg mass we saw was so large it almost buried the *P. fimbriatus* it was by. (Fig. 5) It appeared that numerous *D. iris* would begin their life directly beside their food source. Others would end their life, just as new ones started, in close proximity to *P. fimbriatus*. I hope death after spawning is a normal part of the life cycle for these large beautiful nudibranchs.

The Dredgings, volume 60 No. 5, 2019, pages 3-4 www.PNWSC.org

And more *Dendronotus iris* observations by Linda Schroeder

Shortly after the last issue of the newsletter was sent out, I received further observations about mass sightings of the Rainbow Dendronotus. As noted in the article of my June Low Tide Adventures, I'd commented that I had witnessed a mass stranding of this nudibranch at Point Whitehorn Park in Whatcom County, WA. I had guessed it was part of a mating event.

Just two weeks prior to my sighting, member, Michael Kyte, witnessed at least 15-20 stranded Rainbow Dendronotus just a mile south of where I had been on the same stretch of beach. This was a new sighting for Michael in this area also. The timing of both of our sightings coincides with the observations by Kathleen and Gordon mentioned in the article

above. Interestingly, the site where Kathleen and Gordon were diving on Vancouver Island is almost a straight line due west of the stretch of beach in Whatcom County where our sightings took place. (Fig. 1, adapted from *Google Maps*)



Fig. 1

For member, Bob Lemon, this wasn't a new sighting at this location. Bob wrote to say that on June 6th, 2015 he witnessed the same thing during a public educational event at Point Whitehorn Park. It created quite a bit of excitement from those attending the event. Bob researched the nudibranch afterward, learning they only live 1-3 years, then mate, deposit egg ribbons and die. We likely witnessed the strandings simply because their mating event occurred during some good low tides and the semi-responsive post-spawners were simply rafted onto shore with the falling tide and either an onshore breeze or current. He suspects a large number of their food source, the Tube Dwelling Anemone, *Pachycerianthus fimbriatus*, must be just offshore. Perhaps by wading the shallows on a good low tide we could spot some next year