

U3A Port Fairy

Red Tides?

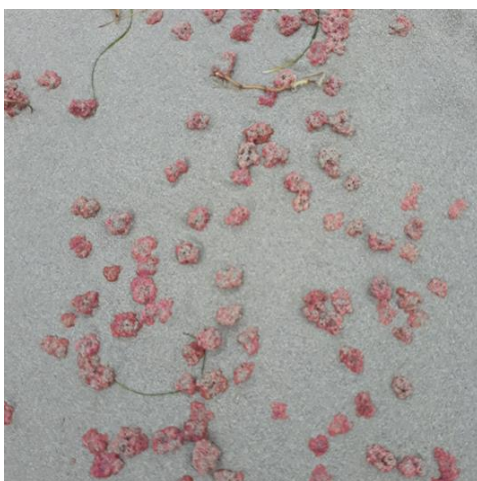
John Miller and Joan Powling

20 November 2020

A couple of weeks ago a small group of us went for a lovely walk around Cape Bridgewater, west of Portland. A cool grey day but a lovely walk.

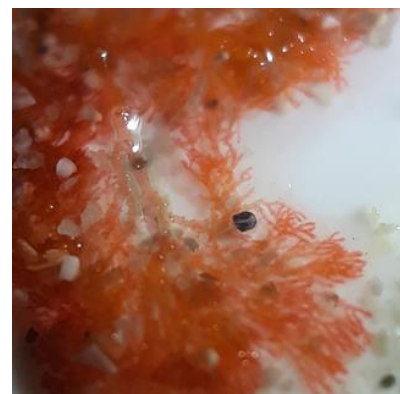
When we made it to Bridgewater Bay, sitting down having a leisurely coffee at the cafe, we noticed a pronounced reddening of the seawater near the shore and a definite line of red stuff on the sand.

Worth investigating!



A walk on the beach revealed that the red tide was due to masses of small discreet seaweed plants about 1-2 cm in diameter.

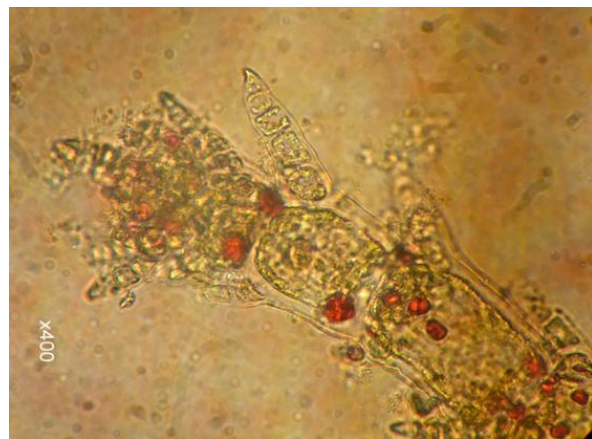
A closer inspection showed that it was comprised of thin branching filaments but there was no obvious holdfast like most of the red seaweeds we find on our beaches.



I had not seen anything like this before, so naturally the sample went straight to Joan.

When Joan floated one of the seaweed blobs in a petri dish the full structure of the seaweed was revealed as a series of branching stems emanating from a single point – holdfast maybe?.

Then down to the microscopy to reveal the cellular structure of the alga in all their glory at 100x and 400x magnification.



Red yes, but is it a red tide?

According to *Dr Google*: a red tide is a common name for algal blooms, which are large concentrations of aquatic microorganisms, such as protozoans and unicellular algae (e.g. dinoflagellates and diatoms) and are generally regarded as toxic or harmful to other marine organisms and humans.

This description does not seem to fit with what was happening at Bridgewater Bay.

Firstly, our specimens looked just like small red seaweed plants and certainly were not single celled and, secondly, they did not appear to be having any detrimental impact on other organisms – there were no associated dead fish or other animals obvious on the beach.

OK, so what is it?

After some terrific investigative algology by Joan, she came up with the following information:

The red alga is called *Amoenothamnion planktonicum*. Of course, like all good red seaweeds, it does not have a common name, but the “plankton” part of the name does give a bit of a clue to its lifestyle.

Further investigation of the *Flora of South Australia* provides the following information:

Amoenthamnion planktonium occurs on a variety of larger algae and seagrasses, with scattered records along the whole southern Australian coast. The free-floating tetrasporangial form is of frequent occurrence in **Bridgewater Bay**, Victoria, where it was first observed in 1959 (Womersley & Norris 1959) and has been observed by Mr Bill Steele, a previous proprietor of the Bridgewater Bay Kiosk, on numerous occasions mainly during summer months. This form is also known from **Port Fairy** and **Cape Nelson Bay**, Victoria.

We even get a mention, but I have not seen it on our beaches...yet.

Bizarrely, some further occurrences of the species have also been recorded from another different Bridgewater Bay – the one on the Blairgowrie ocean beach on the Mornington Peninsula. Spooky or what?

Conclusion

The good news is.....it is not a toxic red tide, it is just an interesting mass stranding of a floating red alga.

Also, it seems that our floating red alga does indeed have a holdfast and spends a part of its life attached to seagrass while the other part of its life is spent floating at the whim of tides, currents and wind – which this time blew them onto the beach at Bridgewater Bay, and we were lucky enough to find them.

We are also lucky to have someone like Joan to sort it all out for us.

Another mystery solved!