



# Deep Blue

**Appreciating Earth's Oceans**



# Deep Blue

**OUR OCEANS: Pressure - Chemistry - Life - Food**  
**POEMS: Dipsy Divers - Plankton's Phyto-beasties - Seawater Chemistry**  
**Lost City's Thermal Vents - Reef Song - Sheriff Shark - Too Many Jellyfish**

**for National Science Week 2020**  
*with Whitfield State School Poetry Club*

**Connecting with the**

**Sea**

**S**ea

**W**ater

**I**mmerse

**m**oving

# Connecting with the

**W**et

**A**float

**V**ibrate

**E**nergise

**S**plash

**Sea**

# Connecting with the



**O**verboard

**C**urrents

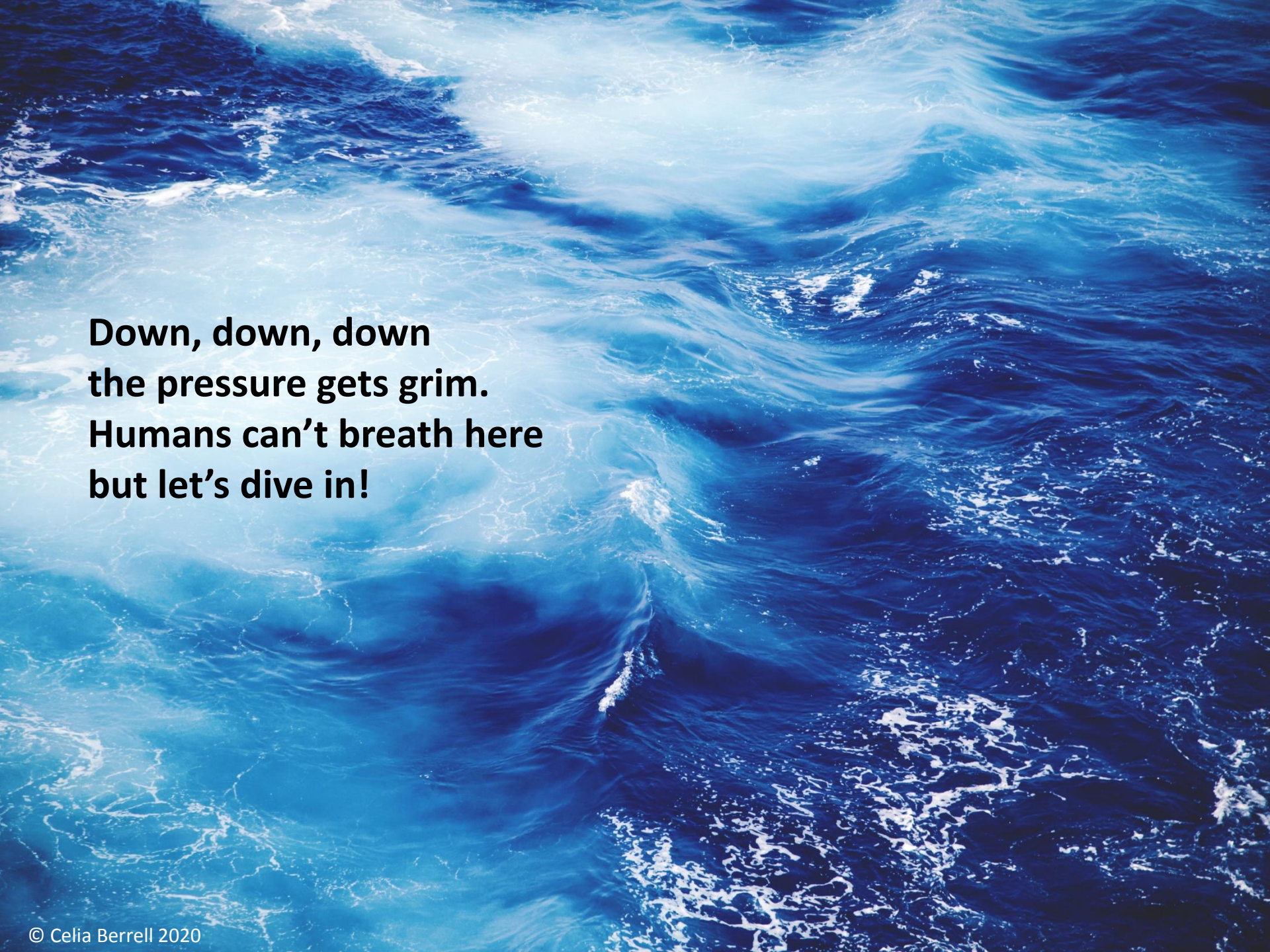
**E**ating seafood

**A**dventures

**N**autical

**S E A**

**What do YOU like  
about the SEA?**

An aerial photograph of a large, powerful ocean wave. The water is a deep, vibrant blue, and the crest of the wave is breaking into a thick, white foam. The perspective is from above, looking down at the water's surface. The wave's structure is complex, with various ridges and troughs visible. The lighting is bright, highlighting the textures of the water and the foam.

**Down, down, down  
the pressure gets grim.  
Humans can't breath here  
but let's dive in!**



## Dipsy Divers

*by Celia Berrell*

If you stand on the sand where the sea is near the air that is there is one atmosphere.

And that is the pressure we measure, the push the sea-level air can exert upon us.

It wants to stay equal. So just to breathe in expand your chest cavity. Air gets sucked in.

And when we breathe out maybe sing or just shout we squash up our lungs so the air rushes out.





**10 metres down  
2 atmospheres  
pressure**

## Dipsy Divers

*continued 1*

But if you should ever  
dive into the sea  
the pressure below  
will increase. Believe me!

Ten metres of water  
is heavy enough  
to double the pressure  
exerted on us.

Since most of our body  
has water in cells  
they don't really notice.  
They won't shrink or swell.

But where there is air  
like our ears, gut and lungs  
their spaces are squashed,  
shrinking melons to plums.

## Dipsy Divers

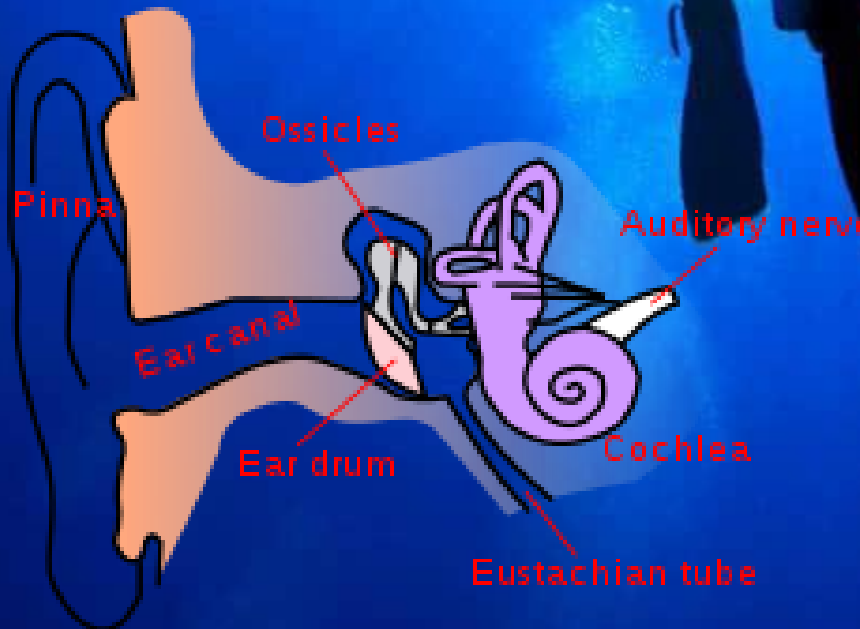
*continued 2*

Our ear-drums get stretched as the sea pushes in. Try swallowing first so the water won't win.

You're aiming to have your ears equalised by making the middle-ear air pressure rise.

Try pinching your nose while your mouth is closed tight. Then blow – not too hard! And then listen a mite.

The squelches and pops that you're hoping to hear confirm pressured air's reached your middle ear.





## Dipsy Divers

*continued 3*

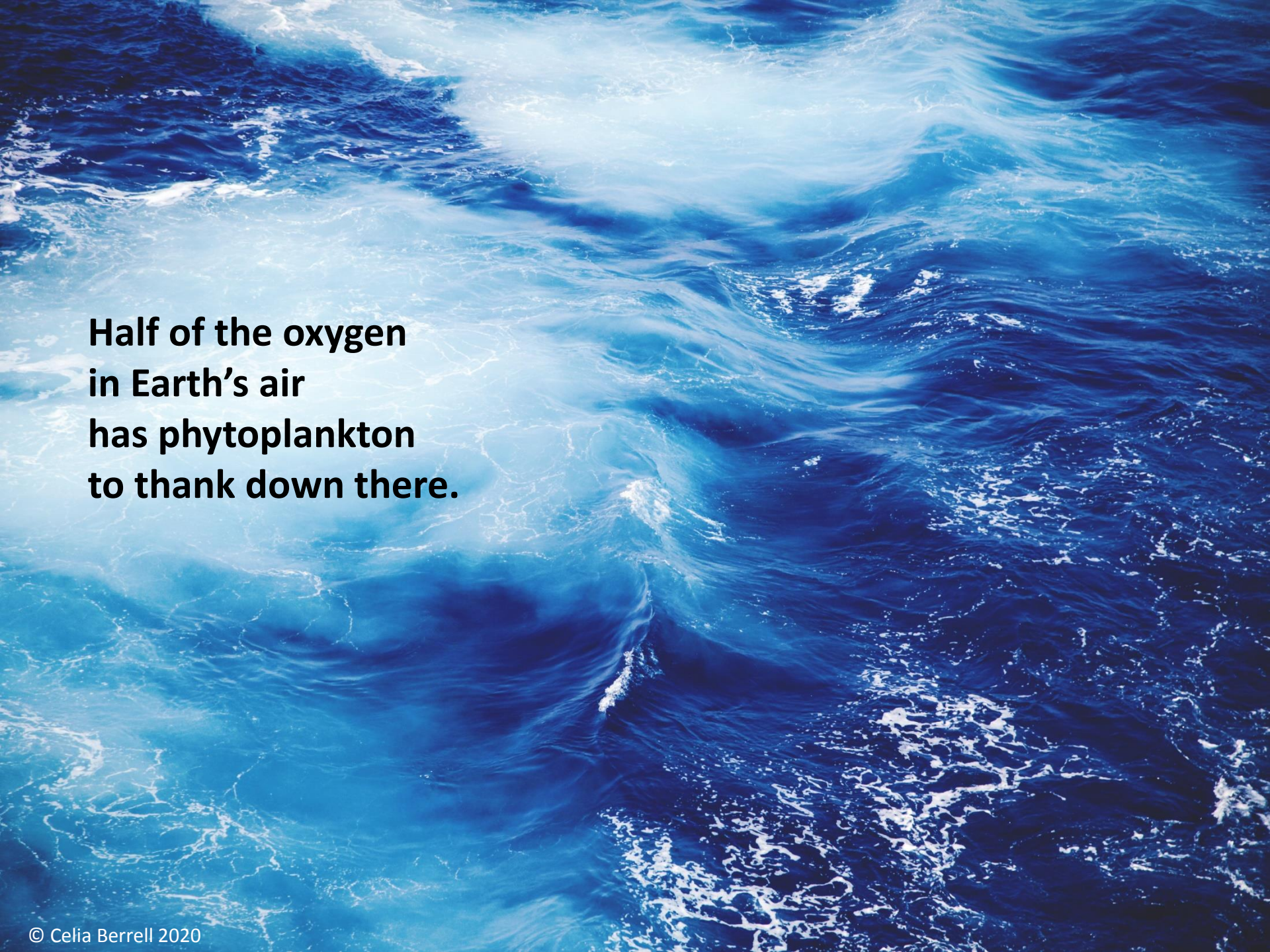
And that is good news.  
Now your ear-drums aren't curved  
and lucky for you  
they should no longer burst.

Since no Dipsy Diver  
will want to get sick  
they frequently practice  
this Valsalva trick.



Poem and drawing from [The Science Rhymes Book](#)



An aerial photograph of the ocean, showing deep blue water with white foam from waves. The perspective is from above, looking down at the water's surface. The text is overlaid on the left side of the image.

**Half of the oxygen  
in Earth's air  
has phytoplankton  
to thank down there.**

# Plankton's Phyto-beasties

by Celia Berrell

Plankton tiny,  
plankton trim,  
within the oceans  
float and swim.

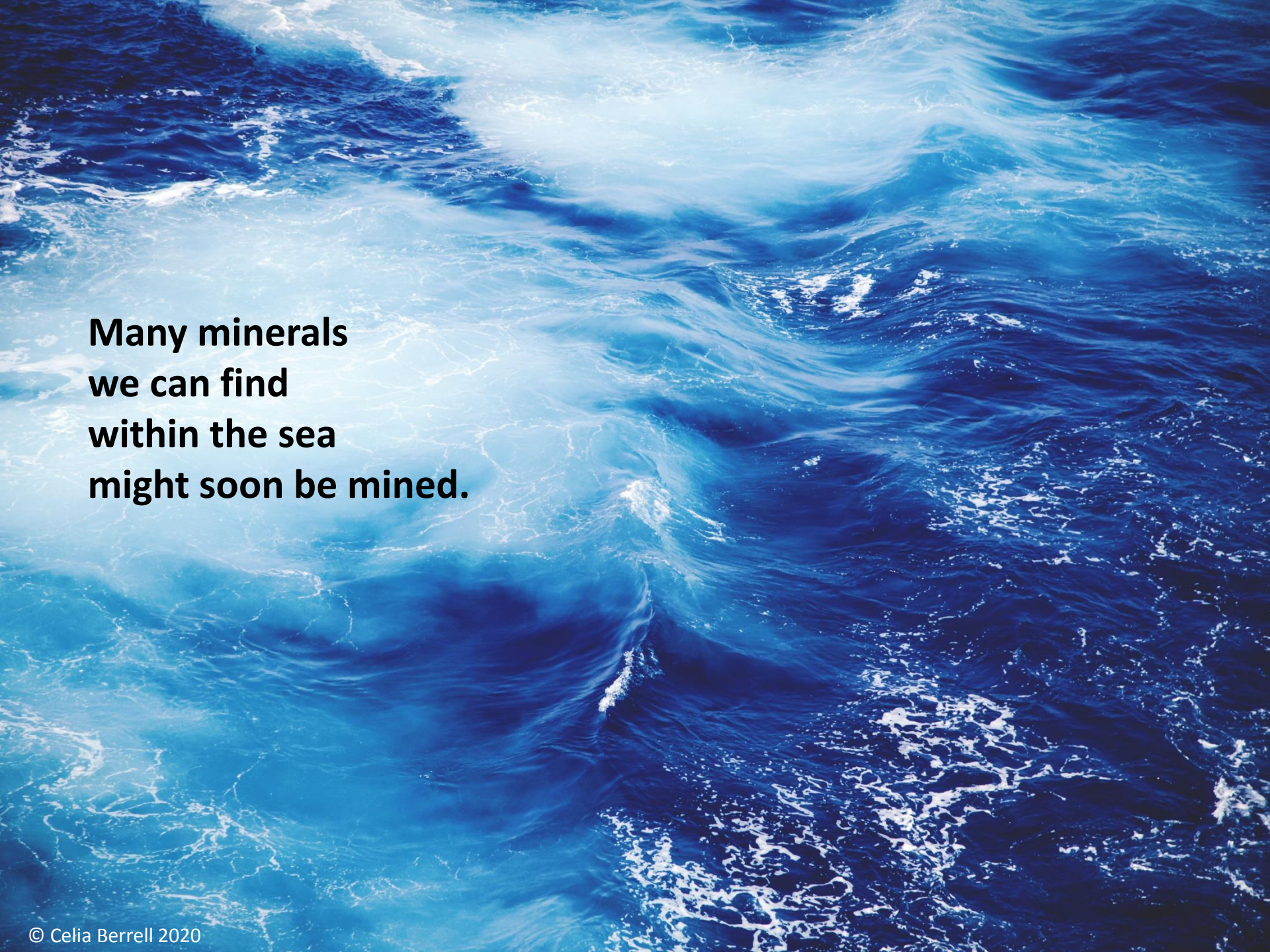
Phytoplankton,  
plant-like ones,  
are making sugars  
through the Sun.

Zooplankton are  
like tiny beasts  
that eat the others  
when they feast.

But some can be  
a plant-beast blend  
and feed on sunlight  
PLUS their friends!

First published in *Double Helix* #32



An aerial photograph of the ocean, showing a white wake from a boat cutting through the water. The water is a deep blue, and the wake is a bright white line that curves across the frame. The text is overlaid on the left side of the image.

**Many minerals  
we can find  
within the sea  
might soon be mined.**

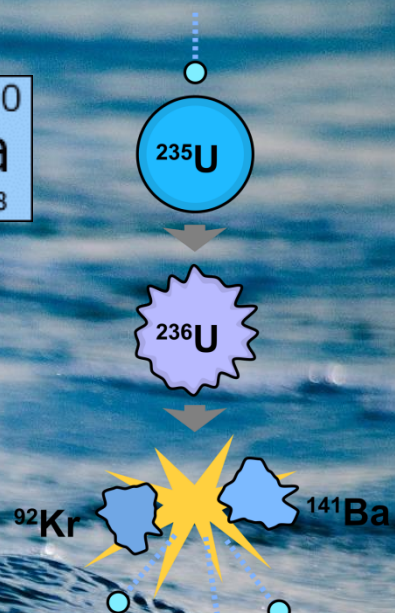
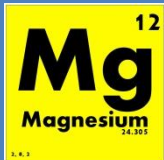
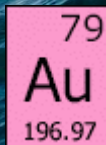
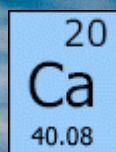
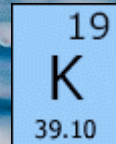
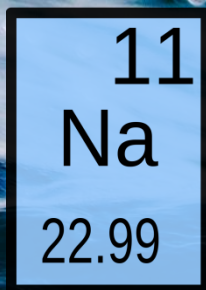


# Seawater Chemistry

by Celia Berrell

Gulps of sea will taste yukky and make us sick and faulty. That water has salinity which means it's rather salty.


It's not just common table salt dissolved in all the ocean but different types of salts that seem to keep their same proportions.



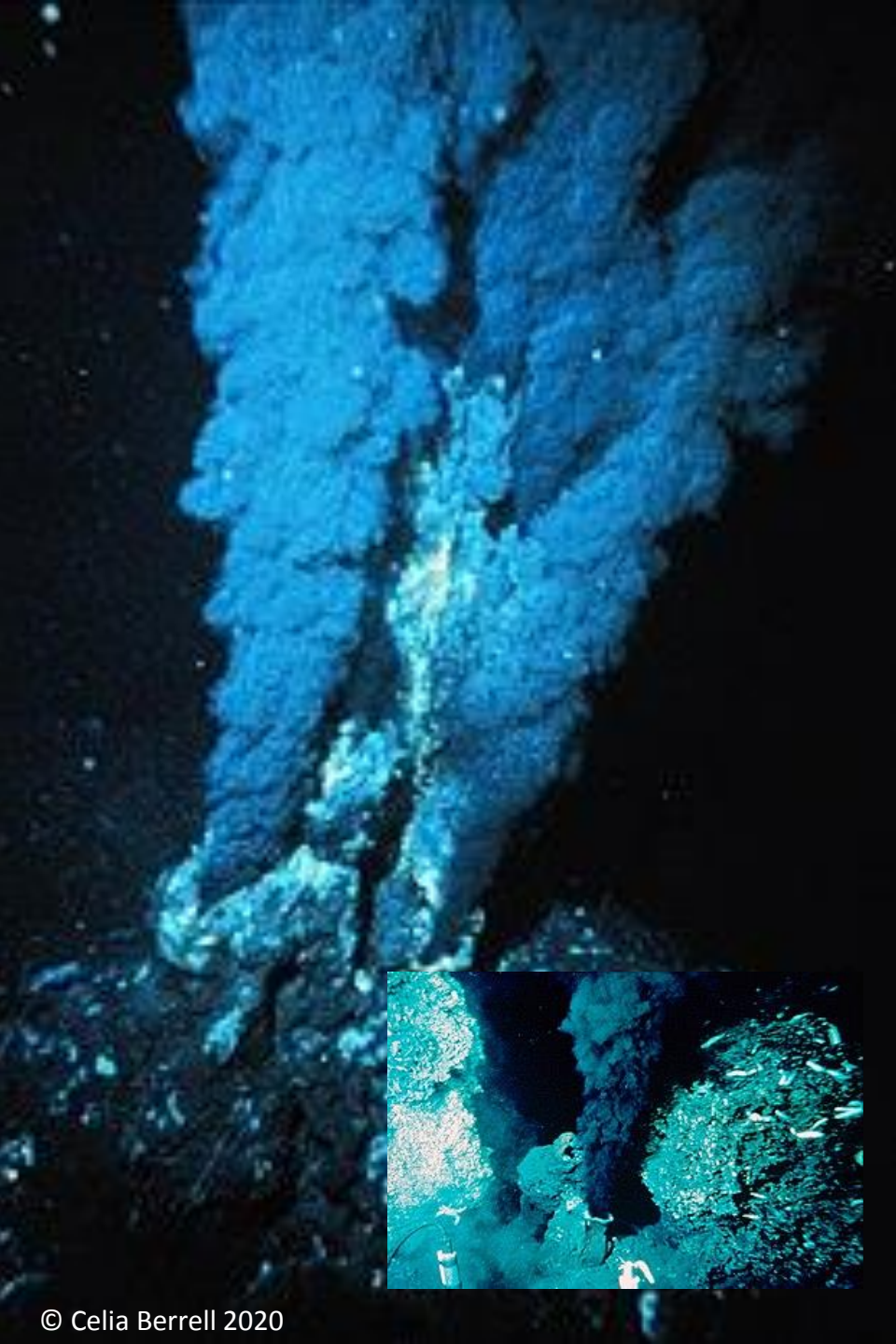
Sea holds many minerals in quantities we mine. There's bromine and magnesium and even iodine.

Trace elements exist in each seawater scoop. From gold to ions of sodium potassium and calcium and even some uranium in ocean's chemistry soup.



An aerial photograph of the ocean, showing a large, powerful wave cresting in the center-right. The water is a deep, vibrant blue, with white foam and spray visible at the top of the wave. The lighting is bright, creating a shimmering effect on the water's surface.

**We'd love to learn  
how life began.  
Perhaps the sea  
held life's first clan.**

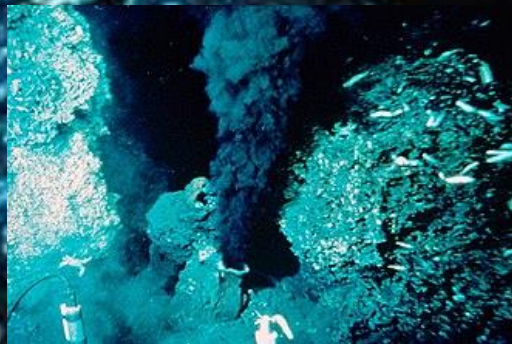


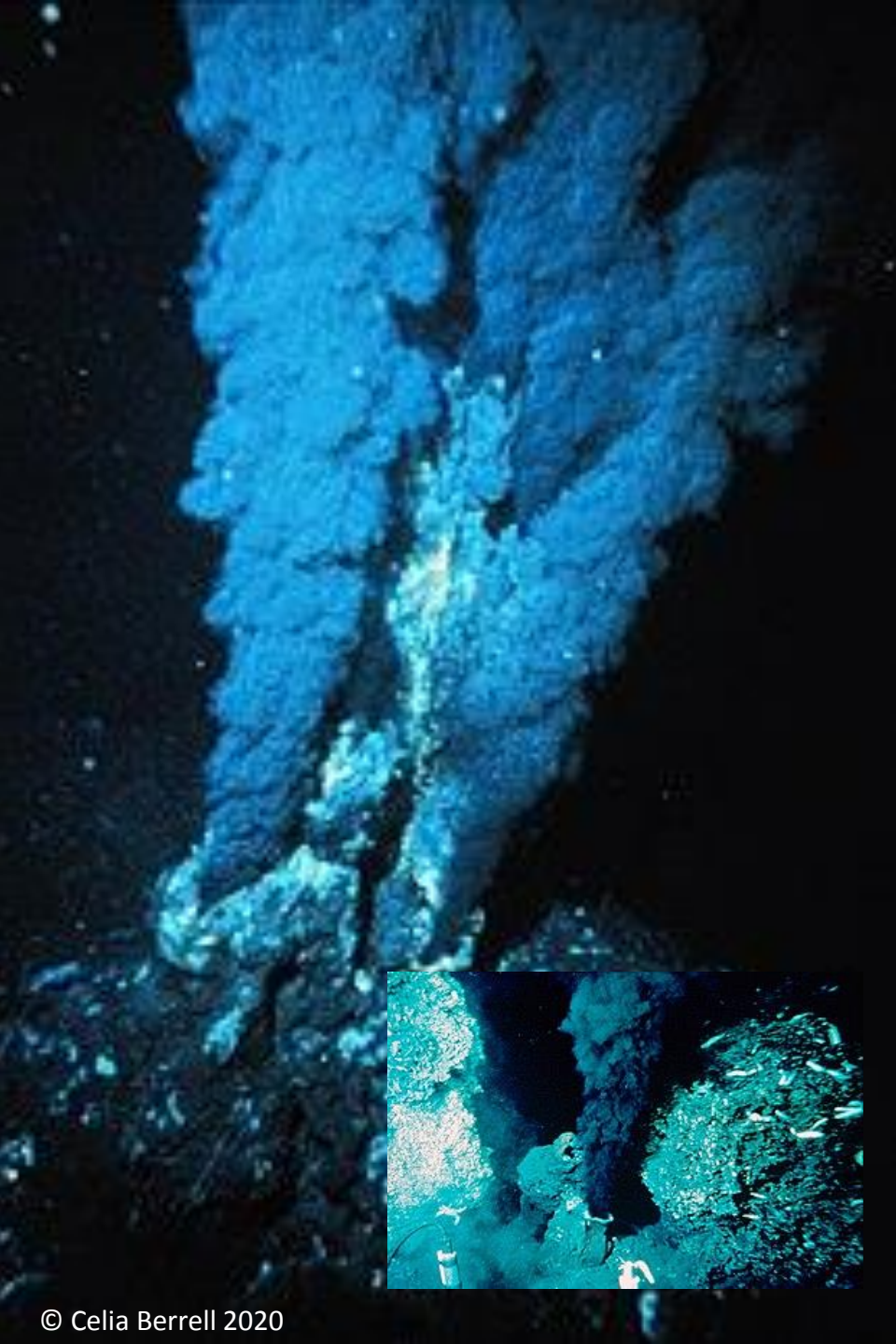
## Lost City's Hydrothermal Vents

*by Celia Berrell*

Hot water is thrust through some cracks in Earth's crust below the Atlantic Ocean. As hot and cold water encounter each other minerals leave the hot portion.

They crystallise out as white spires and spouts. Some tall as a ten-storey building. These feathery plumes make carbonate rooms for all manner of creatures to live in.



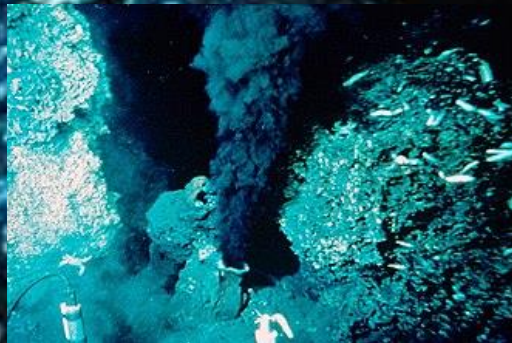


## Lost City's Hydrothermal Vents

*continued*


These vents, named Lost City are hauntingly pretty and chemistry's energy's key.

Could life have begun without power from the Sun in the darkest-most depths of the sea?



First published in *Double Helix* #13



An aerial photograph of a coral reef. The water is a vibrant turquoise color near the reef, transitioning to a deep, dark blue further out. The reef itself is visible as a complex, winding pattern of white and light blue, creating a labyrinthine structure. The water's surface is textured with small waves and ripples.

**A labyrinth of  
living limestone,  
Coral Reefs  
make ideal fish-homes.**

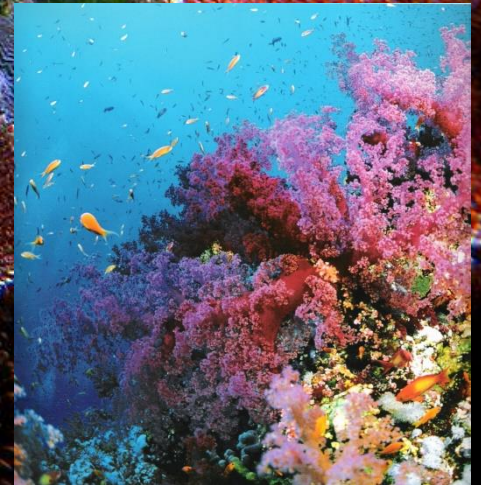
# Reef Song

by Celia Berrell

Our ears are used to noise through air  
where sounds are slow and fade.  
But sounds through water travel fast  
and far from where they're made.

Tiny shrimp claws clack and click  
as though they're close nearby.  
Yet metres down they're hiding  
where the coloured corals lie.


Crabs and fish can bubble, burble.  
Barnacles can crackle.  
A happy reef's a noisy reef.  
It's singing while you snorkel!



First published in *Double Helix* #20





An aerial photograph of a shark's dorsal fin cutting through the surface of the ocean. The water is a deep, vibrant blue, and the fin's movement creates a white, frothy wake that trails behind it. The lighting is bright, highlighting the texture of the water and the sharp edge of the fin.

**It's time for us  
to realise  
that sharks are NOT  
the bad-bad guys!**

# Sherriff Shark

by Celia Berrell

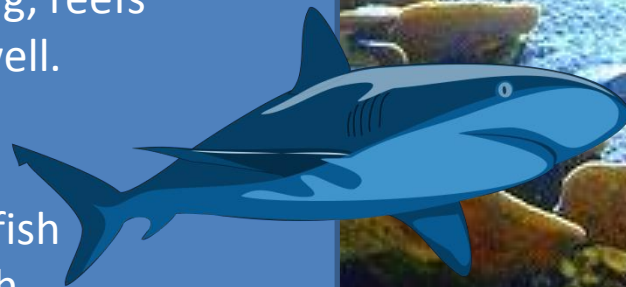


Scary sharks  
with gruesome teeth  
patrol along  
Australia's reefs.


With sharks around  
reefs grow and swell.  
When missing, reefs  
become unwell.

Perhaps the  
coral-caring fish  
are safer with  
some sharks like this.

Four hundred million  
years they've starred  
as Chief of Reef  
security guards!





An aerial photograph of the ocean, showing a white wake from a boat cutting through the deep blue water. The water is textured with small waves and ripples. The text is overlaid on the left side of the image.

**And if our Coral Reefs  
should die,  
we'll lose our fishy  
food supply!**



## Too Many Jellyfish

*by Celia Berrell*

Could you eat  
some future dishes  
made with lots of  
jellyfishes?

Crunchy noodles  
salad, sushi  
jellied ice-cream  
(slightly chewy).

Many fish  
that fed on jellies  
ended-up in  
human bellies.

Has this caused  
an ocean muddle  
full of too much  
jelly trouble?

# Too Many Jellyfish

*continued*

If fishermen could earn a living only going jelly-fishing, other fish-stocks might grow back and get the oceans back on track.





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