



Highly Commended

Science Writing

Year 7-8

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Senior School

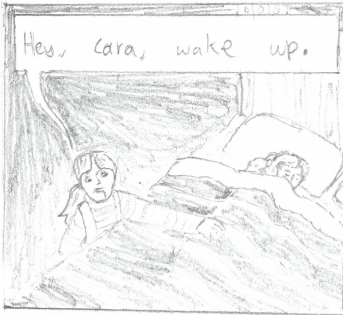


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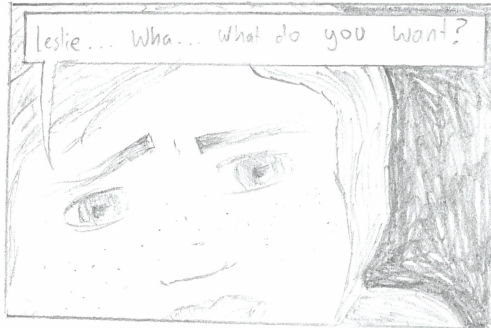
BIO-LUMINESCENCE



Hey, cara, wake up.

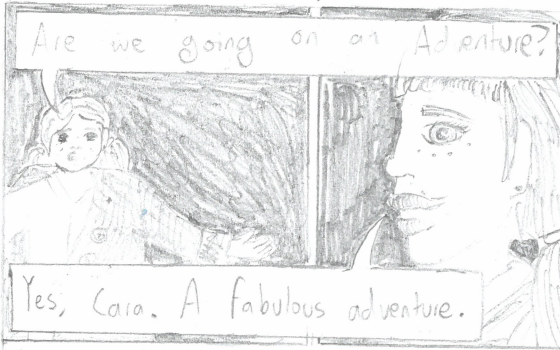


YAWN



Leslie... Wha... what do you want?

Come on, I would show you some-thing...



Are we going on an Adventure?



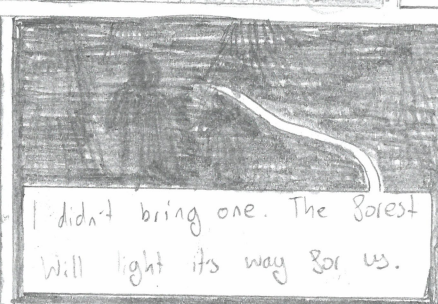
Come quietly, now.



SLAM



Leslie! I can't see anything. Where's the torch?



I didn't bring one. The forest will light its way for us.



Look...



GASP What is it?

Its called bioluminescence. That means organisms, like these fungi, are creating their own light. These fungi are only bioluminescent at night, when they can be easily seen. They are using their light to attract insects, which come to them and help spread the fungi's spores. Its clever.

Its beautiful. Is this what you came to show me?

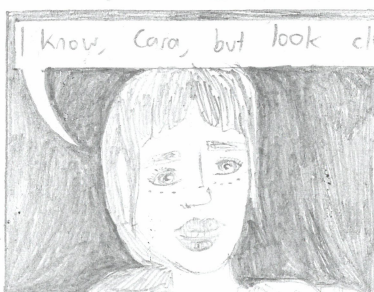
Nope, its just on the way. What were really looking for is that way... I can go back and get the torch, though, if you want.

No. I like the by-c-loo-me-ness-ents.

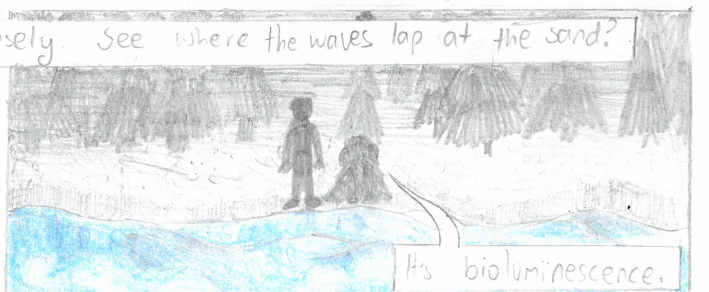


We're here.

Its just the beach.



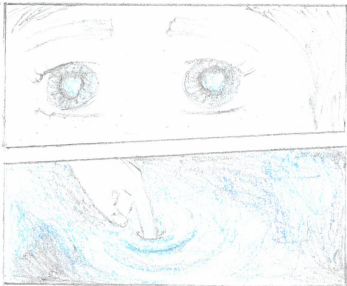
I know, cara, but look closely. See where the waves lap at the sand?



Its bioluminescence.



Sure it is. It's also a chemical reaction. In order to produce light, organisms have a special chemical called luciferin. The organisms that make this bioluminescence are called dinoflagellates, and they make luciferin all on their own. Dinoflagellates are a type of plankton, tiny single-celled organisms, and they're everywhere in the ocean. They light up when they're moved, which is why we can see them where the waves lap against the shore.



It's like our own personal light show, Leslie!



Like the plankton did this just for us!



Maybe, Cara. It is something of a mystery why a lot of organisms luminesce. Scientists think maybe the dinoflagellates use bioluminescence to scare off predators, which is why they light up when they're moved. They think they're being eaten.²

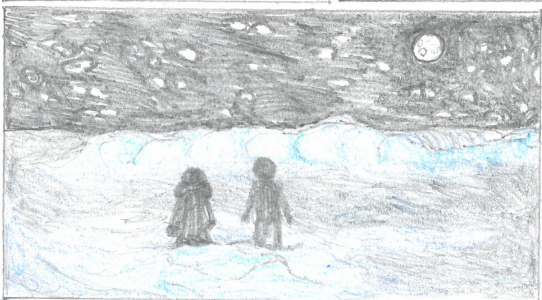


Hey Leslie, can we get in?

Of course, just take your shoes off. Leave your coat on, though;—



—the water will still be frigid. Bioluminescence is a cold light, which means less than 20% of it produces heat. It's not like fire, it won't warm you up.³

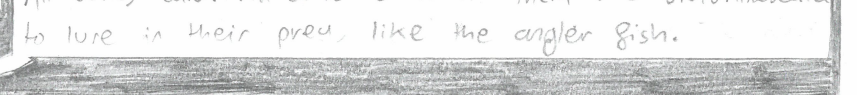
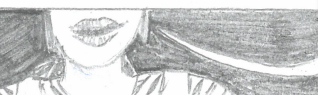


It's everywhere... I had no idea there was so much of it.

Yeah, it is everywhere, Cara. It's under the water, too. Way deep down, where the light doesn't penetrate, creatures make their own. You'll be surprised by how much light there is in the darkest part of the ocean.

Wow. What do these creatures use it for?

All sorts, Cara. All sorts. Some of them use bioluminescence to lure in their prey, like the angler fish.



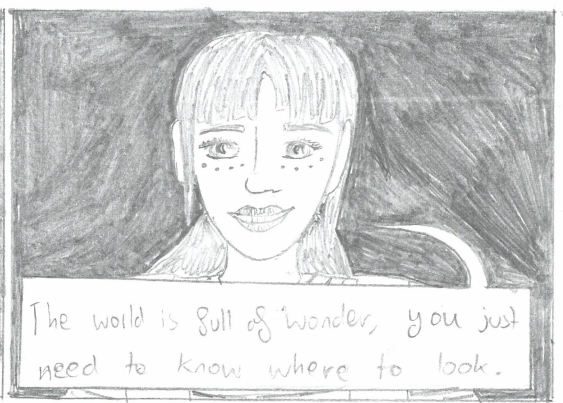
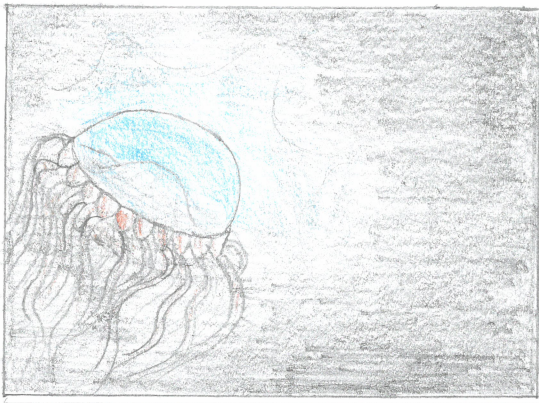
The creatures they eat are attracted by the glow produced by the fish's esca, which hangs on its illicium. In the darkness of the deep water, the esca looks like a floating light.⁴



Still, other animals use lights for the opposite reason: to deter predators. The gentle glow of an Angler Fish's esca attracts, while the sharp flashes produced by the Alarm Jellyfish repel. The Alarm Jellyfish's flashes are meant to attract bigger predators, to come and eat the one attacking it. Indeed, a staggering number of deep-sea jellyfish luminesce. They use their light to attract and repel, and some times even to warn other creatures of threats.⁵

It sounds so pretty.

I bet it is.



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END ~
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Word count: 574 words.

Bibliography:

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