# SEE YOU LATER, ZOOXANTHELLAE!

Claudia Schildknecht

We see the ocean as something unlimited and unimaginable, the last great wilderness on our planet. We carry this idea with us when we first encounter a coral reef diving; never seen organisms and shapes, fearsome reef sharks and elegant turtles swimming by leisurely. The impression arises that the underwater world is still wild and untouched.

The exploration of the reefs is historically still incredibly young.  When corals reefs had been on the most prestine state there wasn‘t photos or any videos. The data collected are nevertheless regarded as a „baseline“ in science. This is understandable at first view. The first data available to science on a topic are automatically defined as the original state of matter. However, reefs have existed and been subject to change for much longer than they have been explored. Therefore their original condition is relatively unknown to us.

This is exactly where the theory of „Shifting Baselines“ comes in. It dates the “baseline” to a point in time that does not correspond to the actual baseline. The same happens in society outside of research. What a diver perceives as an underwater world on his first dive becomes his personal „baseline“, finally his original state of the reefs. For the next generation, however, the „baseline“ will already be a completely different one. The „baseline“ is shifting from generation to generation. And so we don‘t notice how far the underwater world is from its original state. The theory of the „Shifting Baseline“ shows us: There is a risk that the underwater world will gradually disappear over generations without us really noticing it. And if we don‘t notice the decline of the underwater world, how can we do enough about it?

Many reefs have suffered serious damage in the human age, the Anthropocene. Rising water temperatures affect corals in particular. The first global coral bleaching occurred in 1998. The next one followed in 2002. Although researchers do not predict annual global coral bleaching until 2040/50, a global bleaching event in 2016 was followed by another one in 2017. Due to a lack of political intervention, researchers currently expect the reefs to disappear worldwide by the middle of the century.

If we lose coral reefs, we lose the rainforest of the sea. We would lose 25% of the fish that live in this „underwater rainforest“ leaving large marine animals without food. We would lose staple food sources from the sea, on which 400 million people depend every day. We would lose the seemingly last big wilderness on our planet, which has not been it anymore for a long time.

## EXHIBITIONS & SCREENINGS

Unterwasserfestival, Groupe Exhibition, Gossau, Switzerland

Curation of the Kick-Off day / Transnational Red Sea Centre / by the École polytechnique fédérale de Lausanne hosted by the Federal Department of Foreign Affairs (FEDA) / Bernerhof Berne

Personal Structure / GAA-Foundation /
Venice Art 2019 / Venice / Groupe Exhibiton

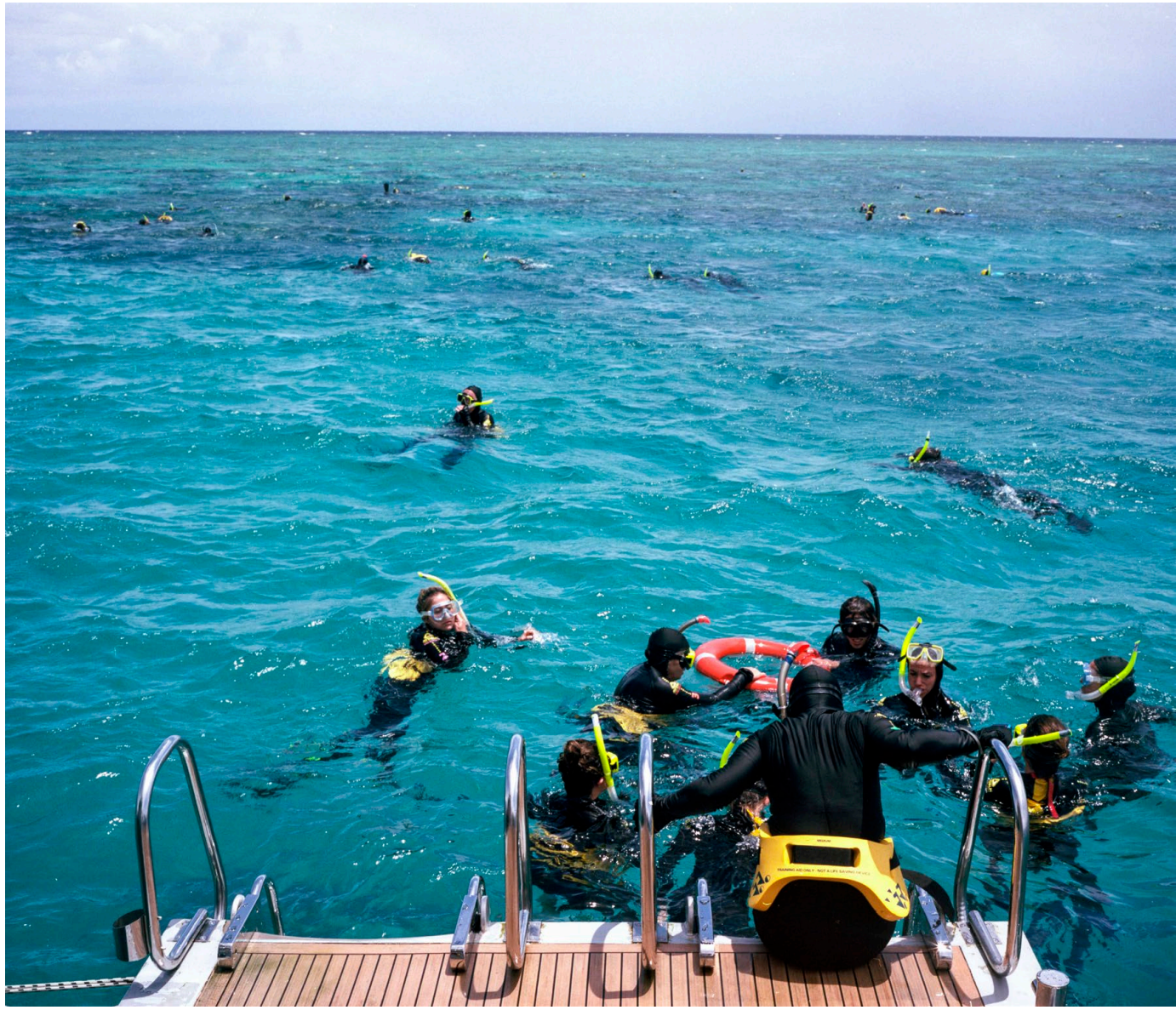
Curation of the appearance of the Transnational Red Sea Centre during the Swiss Reception at the Global Platform for Disaster Risk Reduction 2019 / United Nations Office Disaster Risk Reduction/ cooperated with École polytechnique fédérale de Lausanne and by the Federal Department of Foreign Affairs (FEDA) / ICGC Geneva

Collaberation Performance Riccarda Naef /
Zürcher Hochschule der Künste / Screening

97.5% of the water on Earth is collected in oceans. About 400 million people depend daily on proteins of the sea and it's producing 50% of our oxygen.

Ribbon Reef, Great Barrier Reef 2017.

The Great Barrier Reef stretches for 2,300 kilometres along Australia‘s east coast. It covers an area of 350,000 square kilometres. The ecosystem is considered one of the largest coral reefs in the world and can also be seen from space. About 2 million tourists visit the reef every year. Many travellers from the Asian region are not able to swim.



Lady Mustgrave & Hendricks Reef.
2017 & 2018.

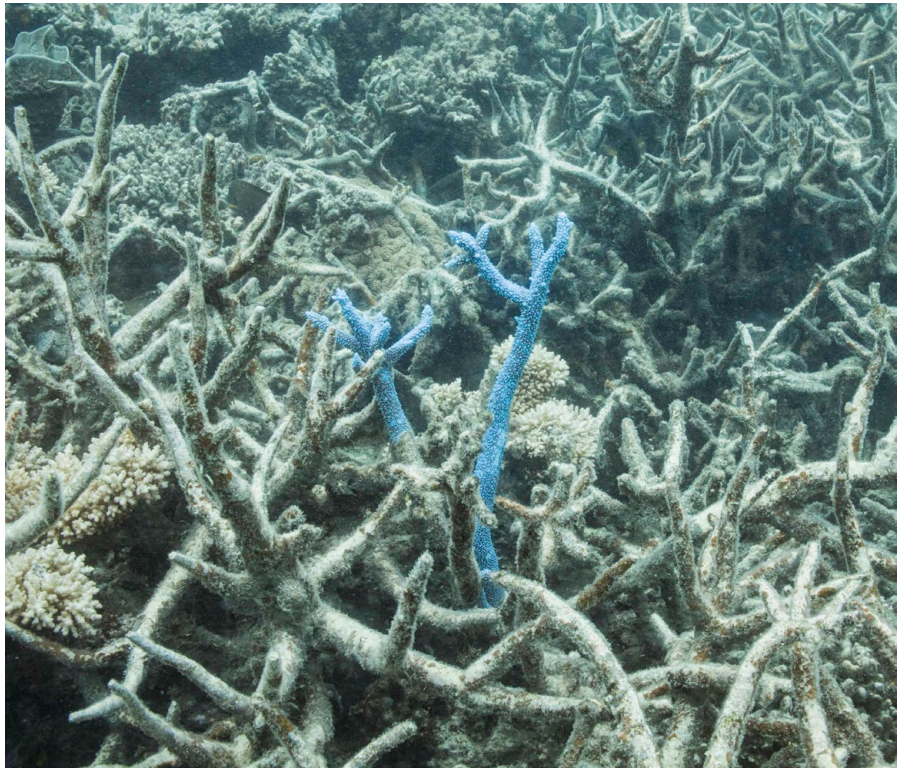
Townsville. 2017

The size and diversity of the ocean lie beneath the surface. For many people, the biodiversity of the sea goes far beyond their imagination, leaving them mostly without any relation to the ocean. In addition, we are anatomically not made to function under water and only a small percentage of people have the financial means and interest to break through the surface of the water.

Lady Mustgrave. 2017.

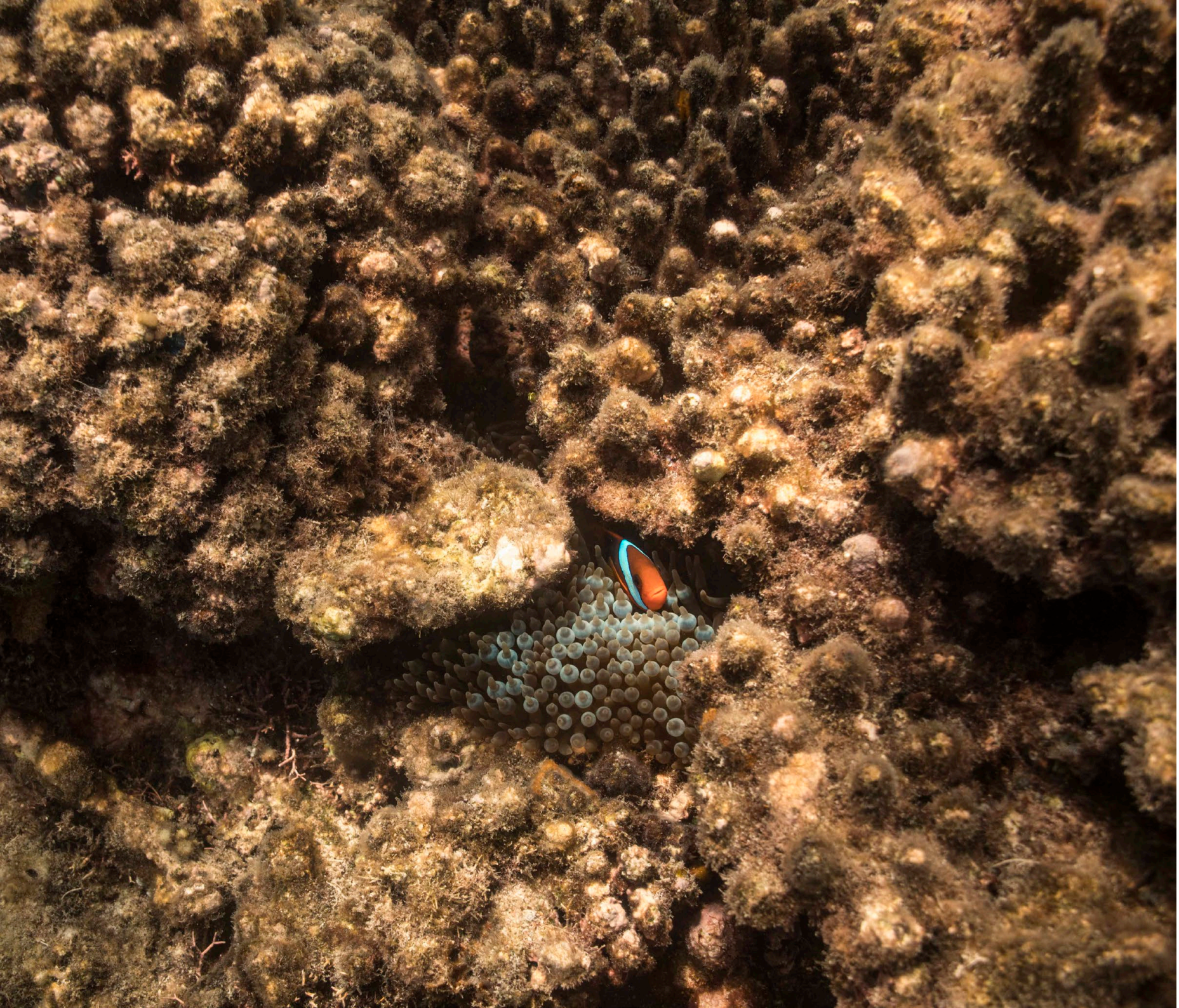
Ribbon Reef.
Port Douglas 2018

Tropical corals live in symbiosis with the algae Zooxanthellae. They produce carbon for the corals through photosynthesis and are responsible for some of the corals luminous colours. When the water temperature rises above 29° Celsius over a longer periods of time, the corals begin to lose the algae as they produce toxins due to the heat stress. Only the white skeleton and tissue of the corals remain, which slowly fade. After a short time they are covered by other algae.



Those last blue polys are an intact part of this *Acropora Cervicornis*.

Ribbon Reef.
Port Douglas 2018



Hendricks Reef.
Cairns 2018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Lizard Island Research Station 2017

Lizard Island Research Station. Northern Great Barrier Reef 2017.

Anne Hoggett is the director of Lizard Island Research Station in the northern part of the Great Barrier Reef. The global coral bleaching of 2016 and 2017 drastically changed the reef around Lizard Island. 67 - 80% of all corals died around the research station. When Anne dives, she perceives the extreme changes that have occurred since the beginning of her career.