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HOW THE CORAL GARDENERS ARE SAVING CORAL REEFS

A group of ocean kids from French Polynesia have an ambitious goal: to save the world's coral reefs. Their first project is to restore the reef that surrounds their home-island Mo'orea.

Written by Christine Vitel - Updated on 22.10.2020 - 16:00 CEST - The Red Bulletin

What Titouan Bernicot calls his home is a place that most of us can only dream of: he lives in Mo'orea, the sister island of Tahiti that is part of the so-called Society Islands and is located in the middle of the Pacific Ocean.

Its deep blue waters and the mountainous, volcanic landscape make Mo'orea one of the most beautiful archipelagos of French Polynesia. The small island is only 16 kilometres wide and its 17,000 inhabitants get to enjoy tropical temperatures of 28 degrees Celsius all year round.

The French Polynesian has spent most of his 21 years either in or on the water, diving, surfing, or swimming and one would assume that Bernicot lives a carefree life with nothing to complain about. On the contrary, Bernicot is scared and upset at the same time, as his sanctuary, the coral reefs, are slowly dying. That's why he founded Coral Gardeners, an organisation to raise awareness for one of the most endangered ecosystems in the world – coral reefs.

It was back in 2015, remembers Bernicot, when he and his friends went surfing and made a concerning discovery – the colourful corals that surround Mo'orea had turned white overnight. «I wanted to understand what was happening,» he explains. So he did some research and quickly realised that he was witnessing a natural disaster.

The facts, short and painful, are: half of the world's reefs are endangered with at least 30 percent of all coral reefs lost in the past 40 years. The causes are overfishing, human pollution and above all, climate change, resulting in increased warming and acidification of our oceans.



The ‘gardeners’ are using the method of apnoea-diving

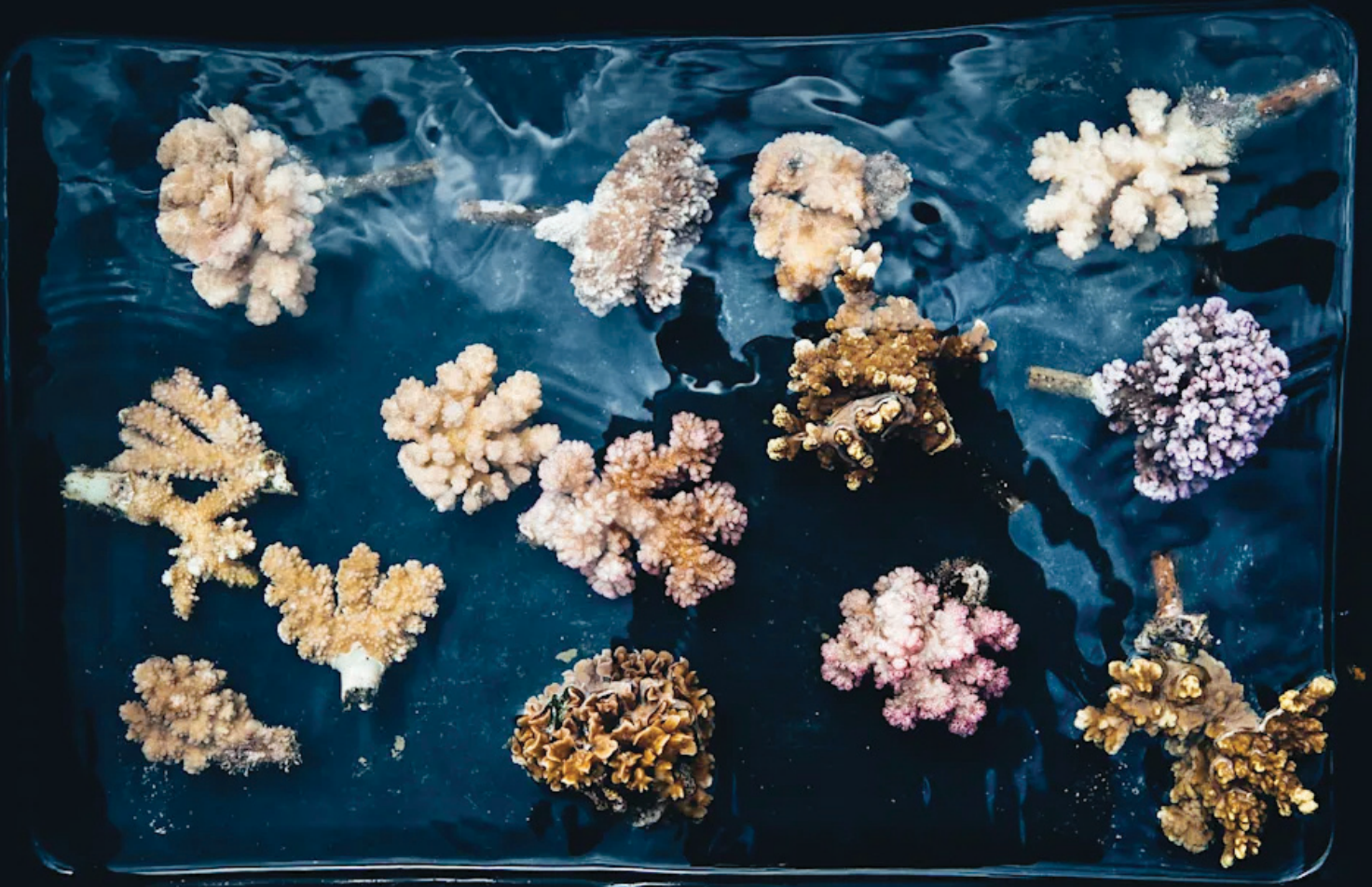
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The latter is also the reason for coral bleaching, the phenomenon that Bernicot witnessed a few years ago. The underlying cause for coral bleaching is as complex as coral itself: corals are somewhat fantastic creatures made up of thousands of polyps that give the coral its life and its beautiful colour. A polyp is a tiny animal with a calcareous skeleton that stems from the family of jellyfish. These polyps feed on micro plankton and the excrements of the micro algae, the so-called zooxanthellae, with which they live in symbiosis with.



**I wanted to understand
what was happening**

Titouan Bernicot



194 of the world's 2,000 known species can be found here

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And now the problem: when the sea temperature rises above a certain temperature (around 28 degrees Celsius), the zooxanthellae start producing toxic substances, which their room-mates, the polyps, absolutely dislike. In return, the polyps 'kick out' their food supplier resulting in coral bleaching and the starvation of the polyps.

In 2016, about one year after Bernicot's discovery, the biggest reef in the world, the Great Barrier Reef on Australia's West Coast was affected badly by coral bleaching, causing the worst destruction of corals ever recorded – 90 percent of this gigantic oceanic construction had turned white.



**The coral reefs have given me
everything in life,
from the waves we surf
to the fish we eat**

Titouan Bernicot



With the help of these ropes, corals can recover and grow

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Experts fear that all coral reefs may be dead by the year 2050 if we don't take immediate action. And no one understands the disastrous consequences of the world's dying coral reefs better than Bernicot. Coral reefs provide habitat to about 25 percent of all marine life. They also protect coastlines against big waves, functioning as breakwaters. And they are the ocean's lungs: similar to trees, the zooxanthellae turn carbon dioxide into oxygen using photosynthesis and providing us with the air that we need to live. Coral reefs also support the livelihood of over 500 million people as the French Polynesian knows: «The coral reefs have given me everything in life, from the waves we surf to the fish we eat.»

Three years ago, he founded Coral Gardeners to conserve and protect the marine ecosystem – one coral at a time. By creating awareness for the coral crisis, Bernicot hopes to inspire people to actively support saving the reefs: on the Coral Gardeners' website, you can adopt a coral for 25 euros/pounds, give it a name and then watch it grow, thanks to the gardeners who take care of your coral.

The coral gardeners have developed a method to help restore the reef around Mo'orea: first, Bernicot and his team collect the chipped coral which they find in the shallow water surrounding the island. These 'splinters of hope' are then cleaned and attached to bamboo sticks before they are 'planted' in 2m-deep water where they're barely exposed to the current. The corals are left in these 'nurseries' for about a month, the time it takes them to get acclimatised to their new surroundings. Once regenerated and strong enough, they're replanted on the damaged or dead reefs.



Meet the Coral Gardeners

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This is how we revitalise the dead reef

Titouan Bernicot

It's time-consuming and arduous work, as Taiano Teiho, 22, one of the coral gardeners, knows. First, the coral is placed in a previously drilled hole to have more grip before it's stabilised with some underwater concrete on three points of contact. «This is how we revitalise the dead reef,» explains Teiho.

As a consequence, the coral gardeners observe and document the growth of their seedlings – and gain important insights into the life of corals. That's how they want to find out which corals are less sensitive to rising water temperatures and acidity than others. In the near future, the Coral Gardeners want to expand their nursing stations to the rest of the world's endangered reefs. There's still a long way to go before the world's reefs are saved. However, the Coral Gardeners can already celebrate their first taste of success: their Instagram account grew to half a million followers; the organisation employs 15 full-time gardeners and has cultivated about 15,000 corals since 2017. And the initiative has some famous supporters, for example, the free diving legend Guillaume Néry, 38.

Hold Your Breath - Guillaume Néry x Coral Gardeners

https://www.youtube.com/watch?v=ZWT03IQ7VAY&ab_channel=CoralGardeners

Trailer - The Children of Coral

<https://vimeo.com/392338348>



Taiano Teiho's passion is coral restoration

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The French apnoea diving world champion regularly spends six months in Mo'orea to help the Coral Gardeners succeed with their mission – not least because they've decided to do their underwater work without supporting scuba diving equipment.

«We turned our dream into our profession,» says Teiho. And adds, with a big smile on his face, «There's worse [things] than working in the ocean, planting corals and sharing our story and the story of coral reefs with the world.»

With the support of UNESCO GREEN CITIZENS

<https://www.unescogreencitizens.org/fr/projects/coral-gardeners/>



Freediving legend Guillaume Néry supports the gardeners at work

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ARTEDIS

*Cinema
Arts*

ARTEDIS - CINEMA ARTS
12 rue Raynouard - 75016 PARIS
tel: 00 331 53 92 29 23

Chantal Lam -
chantallam9@gmail.com
WhatsApp : 00 33 620 94 72 01
Pierre Richard Muller -
prmuller@aol.com
WhatsApp : 00 33 660 90 25 41