

Atelier Luma Algae Review

ATELIER LUMA INTERNATIONAL ALGAE SUMMIT LUMA DAYS #4 / 27 – 28 MAY 2020

PITCH YOUR ALGAE PROJECT!

The Algae summit pecha kucha session is a public presentation for algae projects and initiatives. By providing this open discussion platform, Atelier Luma is giving the opportunity to individuals and collectives to pitch their project in front of a selected committee of international advisors and experts.

Register at algaeplatform@luma-arles.org. Email should include:

- Email object: Algae Pecha Kucha Pitch_name of individual or organisation
- An image and a description of the project (max 500 words) in a single PDF file

→ [Find more information on the Algae Summit here](#)

ATELIER LUMA ALGAE REVIEW *Everything you always wanted to know about algae*

The algae monthly review is a curated newsletter dedicated to algae knowledge and the Atelier Luma Algae Platform activities. By mapping existing algae knowledge — from literature to scientific research and history — the algae review acts as a pedagogical tool gearing up for the algae summit to consolidate a community of international algae practitioners, creatives and experts to actively participate in the event in Luma Arles in spring 2020.



2°C: BEYOND THE LIMIT ON LAND, AUSTRALIA'S RISING HEAT IS 'APOCALYPTIC.' IN THE OCEAN, IT'S WORSE

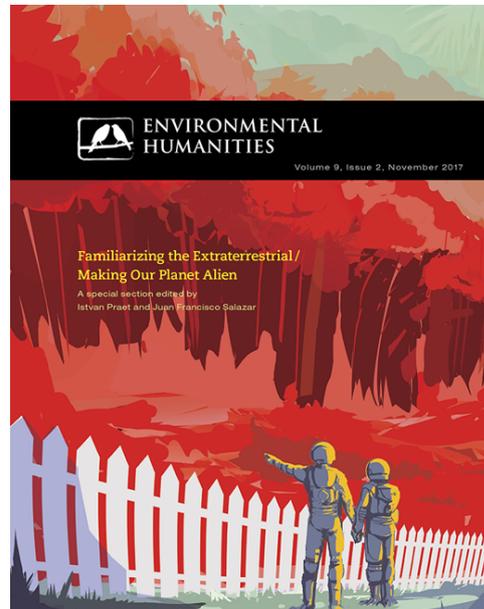
— *The Washington Post* / by Darryl Fears

Australia is experiencing a nightmarish summer this year, facing gigantic out of control fires. While conditions are described as apocalyptic on land, the tragedy is even worse underwater but much less visible. Parts of the Tasman sea have seen warming of up to 2°C, leading to dramatic ecological consequences. More than 95% of the giant kelp died, and with it all shells and diverse animals – including rare species – as kelp happens to be also their natural habitat. Kelp forests are crucial for marine ecosystems, in the same way forests are crucial on land. The crisis comes with other plagues: urchins, now flourishing in warmer waters, are greedily feeding on kelp. Toxic algae blooms, favored by pollution, are now replacing the majestic kelp, adding to the asphyxia of local ecosystems.

Descendants of Tasmania's first people are thereby losing their millennia-old connection to the ocean. If no change is done, the deeply intertwined aboriginal culture and marine life are going to be extinct.

SOURCE

→ THE WASHINGTON POST / BY DARRYL FEARS



OF ASTRONAUTS AND ALGAE: NASA AND THE DREAM OF MULTISPECIES SPACEFLIGHT

— *Environmental Humanities Volume 9, issue 2, p. 359-377* / by Leah V. Aronowsky

Heroic archetypes of the technological progress, astronauts proved they have an absolute control of the space cabin to survive in the most hostile environment. The story could have been different though.

In the postwar era, algae encountered scientific interest for their ability to supply oxygen and decompose human waste, and therefore sustain life in close environments. In that period, the US military and the NASA awarded countless grants to research algae-based life support systems, leading to promising results. Algae would then sustain astronaut life through a series of inter-species symbioses, turning the space cabin into a place of interdependency. However, the complexity of interlocked parameters underlying a living system where processes cannot be clearly controlled soon led NASA to deem the solutions as inherently instable and scientifically not valuable.

Interestingly enough, these researches occurred at the same time as ecology emerged as a new discipline in the 1960s. Ecologists started unveiling the universal system dynamics behind all terrestrial environments. They helped define a new ontology of the natural world: the more complex an ecosystem, the more stable it is, proving at the same time the inevitable limits of human epistemology.

SOURCE

→ FAMILIARIZING THE EXTRATERRESTRIAL / MAKING OUR PLANET ALIEN

• ENVIRONMENTAL HUMANITIES VOLUME 9, ISSUE 2, P. 359-377 / BY LEAH V. ARONOWSKY

THE SEAWEED HOUSES OF LÆSØ, DENMARK

On the Island of Læsø, Denmark, eelgrass (which is, in fact, not a seaweed but an aquatic plant) was traditionally used for roofing the houses. Eelgrass is a very abundant resource that washes up on the shores and a remarkable construction material with many qualities such as excellent insulation property, long durability, fire resistance and exceptional acoustic properties. The “seaweed houses” are part of the cultural heritage of Denmark, as several hundreds of those houses were built in the island’s history employing the whole community and in particular women. In the 20th century, 90% of the eelgrass in Denmark declined because of a fungal disease, bringing the old roofing technique to an end.

Interest for the ancient technique rose again recently with the wish to restore the few remaining original seaweed houses and to revalue eelgrass as a sustainable material. In 2012, the architectural firm Vandkunsten renovated a small summer house using eelgrass for the roof and as cladding, bringing the carbon footprint of the building to lower levels. In Denmark, design student Kathryn Larsen is also experimenting construction panels with seaweed. These new iterations of seaweed thatching show how knowledge from the past get re-appropriated at a time when sustainability is a key-factor.



SOURCES

- **A THATCH THAT CAN LAST UP TO 400 YEARS...**
- **THE MODERN SEAWEED HOUSE BY VANDKUNSTEN AND REALDANIA BYG**
- **DEZEEN**, AMY FREARSON / 10 JULY 2013
- **VIKING-STYLE SEAWEED THATCH UPDATED INTO PREFAB PANNELLING**
- **DEZEEN**, RIMA SABINA AOUF / 17 JUNE 2019



ATELIER LUMA X ECOVER WORKSHOP: PROTOTYPING ALGAE PACKAGING

In collaboration with the Luca School of Arts, supported by Z33 17-21 September 2019, Genk, Belgium

by Henriette Waal

p. 4 – 6

Under the supervision of designers Henriette Waal (NL) and Mevce Ciraci (TU) 25 design and photography students from Luca school of Arts (Genk, BE) explored the local context and cultural heritage of Genk to experiment with algae materials in relation to the global cleaning product company Ecover. The research led the participants to challenge the standards of packaging and connected the raw resource of algae to the notion of cleaning.

The workshop included a field trip, material experimentation, ideation and prototyping. Prof. Dries Vandamme, a bioscience engineer, shed a scientific



light on the workshop by presenting the potential of microalgae as biomass feedstock in a bio-economy.

The field trip went to Maaswinkel nature reserve near Genk in the Maas river valley. The area benefits from the European protection status “Natura 2000” and has taken its current shape through the activities of a former brick factory. Wells were dug in various places for clay extraction. The pools are now a good habitat for amphibians and algae. ‘Natuurpunt’ with support of WWF (The World Wide Fund for Nature) takes care of the management of the pools and have installed additional ones.

The first students team used the qualities of macroalgae from pools in the Maaswinkel nature to develop the “Maaswinkel algae pack”, a paper-like material achieved by heat pressing and embossing techniques. The photography students team explored algae as a material through the photographic medium by layering microscopic and life-size images using the light sensitive qualities of algae itself. The design students team focused on the reinterpretation of the current packaging by using the algae and bio-based filaments developed by Atelier Luma and Studio Klarenbeek & Dros.



The project focused on how the shape of a blow mould fabricated object could result in a new material printed in 3D. This is a limited-edition proposal for Ecover as a follow-up of their 50% Ocean Plastic bottle edition.

The elaboration of the bottle opens up a discussion about the new hygiene culture: bio-sourced cleaners were introduced in the 1990's and were less effective than the mainstream cleaning products carrying on the ideology that all bacteria, good or bad needed to be eliminated. Ecover poses the question whether this is still a relevant doctrine and whether cleaning products and their contain-

ers can also be restorative to their environment. For Ecover, cleaning doesn't end in the domestic environment but is connected to the land and water that surround us.

While bigger brands such as P&G or Unilever & Henkel are now focusing on ecological cleaning products, it is Ecover's mission to stay ahead and keep on challenging the norm. Algae have a huge potential for cleaning products and cleaning cycles. The Algae Platform and Ecover plan for a collaboration on developing and visualizing future scenarios for the biological, technical, geographical, cultural and social cycles of Ecover.



WHERE TO SEE THE ALGAE PLATFORM

→ *Nature* — Cooper Hewitt Design Triennial with Cube Design Museum, New York, USA. Until 20 January 2020. And CUBE Design Museum, Kerkrade, Netherlands. Until 20 January 2020

→ *Eco-Visionaries* at the Royal Academy of Arts, London, UK. From 20 November 2019 until 10 February 2020

→ *Nature morte / Nature vivante* at the CID, Center for innovation and design at the Grand Hornu, Hornu, BE. From 24 November 2019 until 20 March 2020

→ World Economic Forum Davos, Davos-Klosters, CH. From 20 until 24 January 2020

→ *Change Now, International Summit for Change*, Grand Palais, Paris. From 30 January until 1 February 2020

REMINDER: BE PART OF THE ALGAE SUMMIT!
CALL FOR IDEAS
AND CONTRIBUTIONS

Share your ideas and submit your contributions to participate to the **Atelier Luma International Algae summit** that will take place on May 27 and 28, 2020 in Arles as part of the Luma Days #4.
→ Find more information here.

ARTICLE 1

Strands of bull kelp at Shelly Point in Tasmania. The Tasman Sea is warming, and once plentiful giant kelp forests have rapidly declined. Indigenous artists rely on a kelp habitat for traditional jewelry and basket making.
© Bonnie Jo Mount for the *Washington Post*

ARTICLE 2

Cover of the *Environmental Humanities* journal (November 2017). © Environmental Humanities

ARTICLE 3

Image 1: Modern Seaweed House.
© Vandkunsten Architects

Image 2: the roof of this historical cottage in Denmark is made of over 32 tons of seaweed.
© Adam Schnack

COLUMN

Images 1 & 5: Algae Prototypes. © Senja Penttila
Image 2: Algae packaging prototype. © Maaswinkel
Images 3 & 4: Algaelab, Genk. © K. Vrancken