

ART2M presents

# ウミノオヤ UMI NO OYA

a film by Ewen Chardronnet & Maya Minder

**Production** ART2M, Anne-Cécile Worms, Ewen Chardronnet, Maya Minder | **Image** Quentin Aurat, Lisa Biedlingmaier, Ewen Chardronnet, Maya Minder, Ryu Oyama | **Voice** Maya Minder | **Sound editing**, design & mixing Quentin Aurat | **Editing** Quentin Aurat, Ewen Chardronnet | **Written by** Ewen Chardronnet, Cherise Fong, Maya Minder | **Music** by Quentin Aurat & Kyoka | **With the support of** Antre Peaux & Région Centre Val-de-Loire, More-Than-Planet & the Creative Europe program of the European Union, Pro Helvetia fondation suisse pour la culture, Vitality.Swiss - Embassy of Switzerland in Japan, Jeu de Paume, DDA Contemporary Art



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# UMI NO OYA ウミノヲヤ

A documentary essay by Ewen Chardronnet & Maya Minder

Video HD, 60'00, 2024



## LOG LINE

Since 1963, a monument and festival on the coast of Kumamoto, southern Japan, has commemorated Kathleen Drew-Baker, a British scientist whose 1949 discovery of the life cycle of nori seaweed led to the globalization of sushi culture. *Umi No Oya* follows her influence and seeks to draw inspiration from the resilience she instilled in post-war Kyushu.

## SYNOPSIS

Artist and chef Maya Minder and author and curator Ewen Chardronnet follow the influence in Japan of Kathleen Drew-Baker, a British scientist from Manchester University who, in 1949, succeeded in describing the complex life cycle of nori seaweed. Her persistent research efforts, despite the patriarchal constraints of British academia, and her exchanges with the Japanese algal botany community, contributed to the development of nori aquaculture. The applications of her discovery led to systematic large-scale production and, more broadly, to the globalization of the maki and onigiri culture we know today. Since 1963, she has been celebrated as Umi No Oya, the Mother of the Sea, with a memorial near the Sumiyoshi Shinto shrine in Uto, Kumamoto. Minder and Chardronnet visit the heirs of this story on the occasion of the Shinto ceremony celebrating the memorial's sixtieth anniversary, and seek inspiration in the resilience it has instilled in post-war Kyushu to face the new challenges of climate change.

# DIRECTORS' NOTE

The urgency of the environmental crisis demands societal change - reducing our collective carbon footprint, adopting sustainable energies, food alternatives and new lifestyles. Whether as carbon sinks or food alternatives, algae can play a crucial role in the ecological transition. They can be used as biofuels, biomaterials, pharmaceuticals and cosmetics. Their nutritional role is well recognized, and the food cultures of Northeast Asia did not wait for the environmental crises of the 20th century to incorporate macro-algae such as kombu, wakame and nori into their diets.

In an interview filmed in 2021 at the Roscoff Marine Station on the northern coast of Brittany, France, Philippe Potin, a world-renowned researcher in the study of algae, told us the story of Kathleen Drew-Baker - how this algologist, who struggled as a woman in the pre-war Western scientific world, became a quasi-saintly figure in Japan, acquiring the legendary status of *umi no oya* - mother of the sea. We saw in her singular destiny many reasons to seek out more.

Indeed, we are both convinced that we need new narratives to help us meet the challenges raised by the Anthropocene era. We're working on this attentively, and in many different artistic and narrative forms. But as we went to meet Kathleen Drew-Baker and the community that honors her in Japan, it was film that stood out as the medium that could allow us to share the common sensibilities between science and culture at the heart of our rich encounters with the Ariake Sea fishing communities.

The perspectives of science are always place-specific and context-dependent: there are many sciences, just as there are many modernities. Drew-Baker's drive and enthusiasm helped spread her methodology not only to Japan, but throughout East Asia, as far afield as Korea and China. Through her story, it is remarkable to see how science could be made accessible to farmers simply by using tools such as the microscope, an exemplary case of citizen science. From this emerged in Kyushu a resilient, DIY biology method that led to the development of an aquaculture industry and the globalization of sushi culture.

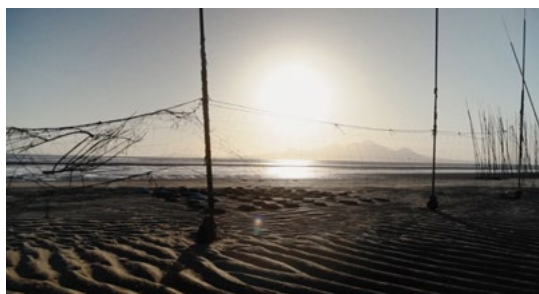
With this film, we also salute a passionate woman who overcame patriarchal obstacles and the enmities of a world war to advance her scientific field. But we are not trying to glorify her as a heroic, hypothetical English savior. Rather, we wish to tell the story of how her scientific generosity stimulated the resilience of an entire community of scientists and fishermen, on the other side of the world, in the years following the atomic bombs of Nagasaki and Hiroshima.

At a time when TEPCO is discharging contaminated water off the coast of Fukushima, the protection of ocean ecosystems is a sensitive issue in Japan. Algae do not need pesticides or fertilizers to grow naturally. But the watersheds that release them into the waters of the Ariake Sea cause micro-algae to proliferate, disrupting sensitive marine areas that are generally devoted to nori aquaculture. How can farmers remedy these unbalanced ecosystems?

60 years ago, the scientists and fishermen of this Ariake Sea community decided to pay tribute to Drew-Baker. With this film, we seek to pay tribute to this community and suggest how it can draw on its own history of resilience to imagine ways to overcome current problems linked to disrupted ecosystems and global warming.

The film's title reflects our interest in the animism of nature's bounty that lies at the heart of Shintoism, the bounty of the sea revealed here by the deity status conferred on Kathleen Drew-Baker. But this story, which borrows from venerable traditions, also reveals the inseparable "nature-culture" relationship advanced by philosopher Donna Haraway or anthropologists Philippe Descola and Anna Lowenhaupt Tsing.

"We evolve through what we eat" is the film's final invitation to reflect on our deep intimacy with food, but also an invitation to pursue this film's research into new types of narratives - narratives that highlight the major role played by algae in human evolution, and our conviction that they can also play a role in food and ecological transitions to come.



# BACKGROUND STORY

In southern Japan, at the base of the Uto peninsula, inside Sumiyoshi park, near the shrine, there is a monument. The face of the monument is the profile of a bespectacled middle-aged woman wearing a button-down shirt, her gaze tilted slightly upward and into the distance, as if watching over the sea. Below the portrait is inscribed *IN MEMORY OF MADAME KATHLEEN MARY DREW, D. Sc.* - a British algologist who died in 1957 at the age of 56, having never set foot in Japan.

From this spot, you can see all the way around the Ariake Sea off the western coast of Kyushu, from Kumamoto to Fukuoka to Saga to Nagasaki. From late October to March, you might also see colorful nets floating by the seaside, or tall poles planted on the shore. This is the harvest season of nori, Japan's native seaweed.

Nori has been cultivated around the Kikuchi river in Kumamoto since the 19th century Meiji period, when the annual harvest was routinely subject to the whims of nature. The situation was particularly dire after World War II, when food was scarce, and Japanese scientists struggled to comprehend the full life cycle of nori in order to cultivate it more reliably.

Meanwhile in Manchester, Dr. Kathleen Drew-Baker was meticulously studying European species of red algae, such as Laver. In 1949, she serendipitously discovered that algae filaments nested in seashells during the summer were in fact the same species of algae that matured into the edible seaweed that was regularly harvested in autumn. What if the life cycle of Japanese nori was similar to that of Welsh laver?

Such was the theme of a heated exchange of letters over several years regarding *Porphyra*, nori seedlings (*Conchocelis*) and oyster shells with Japanese marine botanist Sokichi Segawa. The researcher relayed Drew's findings to his colleague Fusao Ota in Kumamoto, who finally disseminated the technique among local nori farmers. Within a few years, Ariake Sea nori production significantly rebounded, heralding an industry that would reach its peak in the following decades. The year was 1957.

Since 1963, the monument in Sumiyoshi park commemorates Dr. Kathleen Drew-Baker, who first discovered the missing piece of the nori life cycle. In the region, where nori spores are carefully seeded in oyster shells each summer, she is recognized as the birth mother - *umi no oya* (生みの親) - of nori aquaculture. Every year on April 14, her contribution is celebrated with a dedicated festival, while a Shinto ceremony honors the British algologist as a deity. It's no wonder some interpret her legendary status as *umi no oya* (海の親) - *Mother of the [Ariake] Sea*.

Cherise Fong

# CHARACTERS <sup>1/2</sup>



## Maya Minder

Maya Minder, the film's co-director, guides us through the film team's research into the legacy of Kathleen Drew-Baker. A voice-over, she gradually appears in the film, becoming a character in her own right in the second half.

Maya Minder is an artist and chef working in the field of Eat Art. "Cooking thus transforms us", is a framework she weaves like a string through her work. With a Korean mother and a Swiss father with British roots, Maya Minder defines herself as a native of planet Earth.

She's currently ambassador for Vitality.Swiss - on the road to World Expo 2025 Osaka Kansai - program of the Embassy of Switzerland in Japan.



## Fumiichi Yamamoto

The living memory of the Drew-Baker memorial historical series of events is Professor Ota's assistant and heir, 85-year-old nori researcher Fumiichi Yamamoto. He still works in a makeshift warehouse laboratory just down the road from Sumiyoshi park in Uto, spending eight hours a day looking into a microscope, analyzing the current health of cultivated nori seedlings. The story of the Drew-Baker monument is also his story.



## Yumiko Shimada & her parents

Born into a family of nori farmers, Yumiko Shimada became actively involved in the family business from a young age. As an adult, her appreciation of quality nori painstakingly cultivated and produced locally around the Ariake Sea grew. Today, she manages and accompanies the year-round cycle of hands-on nori cultivation, from seeding and harvesting to processing, together with her son and daughter-in-law. She opened her own nori shop in Kawachi in 2023.



# CHARACTERS <sup>2/2</sup>



## Takahiro Yamamoto

Born in 1983, Takahiro Yamamoto is Senior Managing Director and Head of the Sales Division at Yamamoto Noriten. After graduating from Keio University Law School in 2005, he joined a major bank to work in corporate sales. He joined Yamamoto Noriten in 2008. In the purchasing division, he studied the entire nori sector. He then worked in a wholly-owned subsidiary in Shanghai, where he helped launch onigiri shops. As the new head of the company, he now manages all Yamamoto Noriten sales and is involved in activities to promote nori culture.

Yamamoto Noriten is a 7th-generation family-run business founded in 1849 by Tokujiro Yamamoto in the Muromachi district of Nihonbashi. The second head of the company invented “flavored nori”. When the Meiji Emperor (reigned 1867-1912) returned from Tokyo to the old capital Kyoto, the company was ordered by the Imperial Court to prepare gifts for the Emperor to bring with him. This is when flavored nori was made. It is said that because flavored nori spread from Kyoto into the Kansai region back then, this became the standard of the region. From this point onwards, Yamamoto Noriten Company was issued the Imperial Warrant of appointment.



## Noriko's Kitchen

Noriko's Kitchen is the women's division of the Sumiyoshi Fisheries Cooperative, which supports the local nori farmers with their cooking and preparation of nori products in various forms. Their signature products are nori tsukudani (preserved nori simmered with sugar, soy sauce, mirin and other seasonings) and tokoroten (cold agar agar noodles in a refreshing sauce). They also prepare the nori gift bags that are distributed after the Drew festival.



## Kathleen Drew-Baker

Born in 1901, Kathleen Drew-Baker began working as a lecturer in Manchester's cryptogamic botany department in 1922. Although she was one of the first women in Britain to receive a Commonwealth Fellowship in 1925 to research seaweed in California and Hawaii, she began working as an unpaid research fellow after her marriage to another academic, Henry Wright-Baker, in 1928. At the time the University did not employ married women.

Nevertheless, Kathleen Drew-Baker was awarded the degree of Doctor of Science by Manchester University in 1939. During the war she continued her research on *Porphyra* red algae from the Welsh Coast using aquariums that her husband built in their cellar and garden.

In 1949, her article on the discovery of the *Conchocelis* phase of *Porphyra Umbilicalis* was published in *Nature*. In 1952, she co-founded the British Phycological Society, serving as its first president.

Kathleen Drew-Baker died of cancer in 1957. In her lifetime she never visited Japan.



## Sokichi Segawa

Born in 1904, Sokichi Segawa studied algology at the Imperial University of Hokkaido and the Mitsui Institute of Marine Biology in Shimoda. In 1937, he joined the staff of the Mitsui Institute and married Shizuko Okamura, daughter of Kintarō Okamura, the "Father of Marine Botany in Japan". In 1942 the couple moved to Kyushu, where Sokichi Segawa was appointed assistant professor at the University.

During these years, and beyond the geopolitical conflicts, Shizuko and Sokichi Segawa developed an epistolary friendship with Kathleen Drew-Baker, who had studied Okamura's work. It was through these exchanges that they could be quickly informed of Drew-Baker's important discovery. Sokichi Segawa followed in Okamura's footsteps and in 1956 he published "Coloured Illustrations of the Seaweeds of Japan," which comprises beautiful photographs showing the habits of 592 species.

When Drew-Baker passed away in 1957, the Segawas spoke of erecting a monument to her. But in 1960, a few days after he became full professor of marine botany at Kyushu University, Sokichi Segawa died of a sudden cerebral hemorrhage at the age of 56.





## Fusao Ota

Born in 1918, Fusao Ota was a young research engineer at the Kagami branch of the Kumamoto Prefectural Fisheries Research Institute, when Sokichi Segawa told him of Drew-Baker's discoveries. Ota began practical research and in 1953 succeeded in developing an artificial seeding technology based on conchocelis filaments from oyster shells. By stabilizing this technology, he was able to spread it throughout the Ariake Sea region and to seaweed-growing areas across Japan.

After Segawa's sudden death in 1960, Ota took up the torch, alongside Shizuko Segawa, to propose building the Drew memorial to cement their collective breakthrough in seaweed research and culture.

Later, a monument was also erected on the site of Ota's work in Kagami, stating "location of the first artificial nori seedlings". Fusao Ota passed away in 2013 at the honorable age of 95.

# BIOGRAPHIES OF THE AUTHORS

## Maya Minder

Maya Minder (1983, CH) is an artist and chef working in the field of Eat Art. *Cooking thus transforms us*, is a framework she weaves like a string through her work. Cooking serves her to reveal the metaphor of the human transformation of raw nature into cooked culture and she combines it to the evolutionary ideas of a symbiotic co-existence between plants, animals and humans. She creates entanglements between human commodities and animism of nature. A table of diversity, not yet digested. Following the Biohacker, Maker and Thirdspace movement she uses grassroots ideas, safe zones and citizen science into her field to enable collective storytelling through food and cooking. Maya Minder lives and works in Zurich. She's currently ambassador for Vitality.Swiss - on the road to World Expo 2025 Osaka Kansai - program of the Embassy of Switzerland in Japan.

<https://mayaminder.ch>

<https://sonmas.ch>

## Ewen Chardronnet

Ewen Chardronnet (1971, FR) is an artist, author, journalist and curator. He is currently editor-in-chief of the bilingual web magazine Makery.info, The Laboratory Planet occasional newspaper and coordinator of the Creative Europe cooperation programs *More-Than-Planet* (2022-2025) and "Rewilding Cultures" (2022-2026). In his work, he is interested in practices, tactics and speculations that connect artistic research and scientific knowledge to the creation of social situations that intertwine discourses and shifts of perspectives in the very fabric of society. Since 2016, Ewen Chardronnet and Xavier Bailly (CNRS-Sorbonne, Roscoff Marine Station) lead the art & marine science platform Roscosmoe.org. Recent books include *Mojave Epiphany - une histoire secrète du programme spatial américain* (Actes Sud - Inculte, 2016), *Space Without Rockets* (ed., UV editions, 2022).

<https://art2m.eu>

<https://www.makery.info>

<https://laboratoryplanet.org>

<https://roscosmoe.org>

# TECHNICAL INFO

<b>TITLE:</b>	UMI NO OYA
<b>GENRE:</b>	FEATURE DOCUMENTARY
<b>LENGTH:</b>	60 min
<b>LANGUAGES:</b>	english, japanese
<b>SUBTITLES:</b>	english, japanese, french, german
<b>SHOOTING FORMAT:</b>	HD 1080p
<b>SCREENING FORMAT:</b>	DCP, DCI FLAT 1.85, Dolby Digital 5.1
<b>ALT SCREENING FORMAT:</b>	MP4, DCI FLAT 1.85, STEREO
<b>SHOOTING LOCATIONS:</b>	<ul style="list-style-type: none"><li>- <b>Uto</b>, Kumamoto, Kyūshū, Japan</li><li>- <b>Kawachimachi Funatsu</b>, Kumamoto, Kyūshū, Japan</li><li>- <b>Aso Volcano</b>, Kumamoto, Kyūshū, Japan</li><li>- <b>Nokama island</b>, Kami-Amakusa, Kyūshū, Japan</li><li>- <b>Ariake Sea</b>, Kyūshū, Japan</li><li>- <b>Tokyo</b>, Japan</li></ul>
<b>DIRECTION:</b>	EWEN CHARDRONNET, MAYA MINDER
<b>IMAGE:</b>	QUENTIN AURAT, LISA BIEDLINGMAIER, EWEN CHARDRONNET, MAYA MINDER, RYU OYAMA
<b>VOICEOVER:</b>	MAYA MINDER
<b>SCENARIO:</b>	EWEN CHARDRONNET, CHERISE FONG, MAYA MINDER
<b>FIXING &amp; INTERPRETERS:</b>	CHERISE FONG, RYU OYAMA
<b>SOUND &amp; MUSIC:</b>	QUENTIN AURAT, KYOKA
<b>EDITING:</b>	QUENTIN AURAT, EWEN CHARDRONNET
<b>SOUND EDITING &amp; MIXING:</b>	QUENTIN AURAT
<b>COLOR GRADING:</b>	QUENTIN AURAT
<b>PRODUCTION:</b>	ANNE-CÉCILE WORMS - ART2M
<b>CO-PRODUCTION:</b>	EWEN CHARDRONNET & MAYA MINDER

# UMI NO OYA ウミノヲヤ

A documentary essay by Ewen Chardronnet & Maya Minder

Video HD, 60'00, 2024



## PRODUCTION

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