

BEYOND THE SEA

To discover the beautifying virtues of algae, Emilie Dingfeld ventures to Brittany, France.

IT'S A WARM JUNE afternoon and I'm looking out at the fishing boats that balance precariously in sand on the coast of Roscoff, a small seaside town in northwest France. The tide, which retreats dramatically throughout the day, has left streaks of algae that wait patiently for the ocean to drag them back in. Algae (which experts number at anywhere from 30,000 species to a million) are being used for many things, from biofuels to anti-cancer drugs, but I'm here to hone in on how it can beautify my skin.

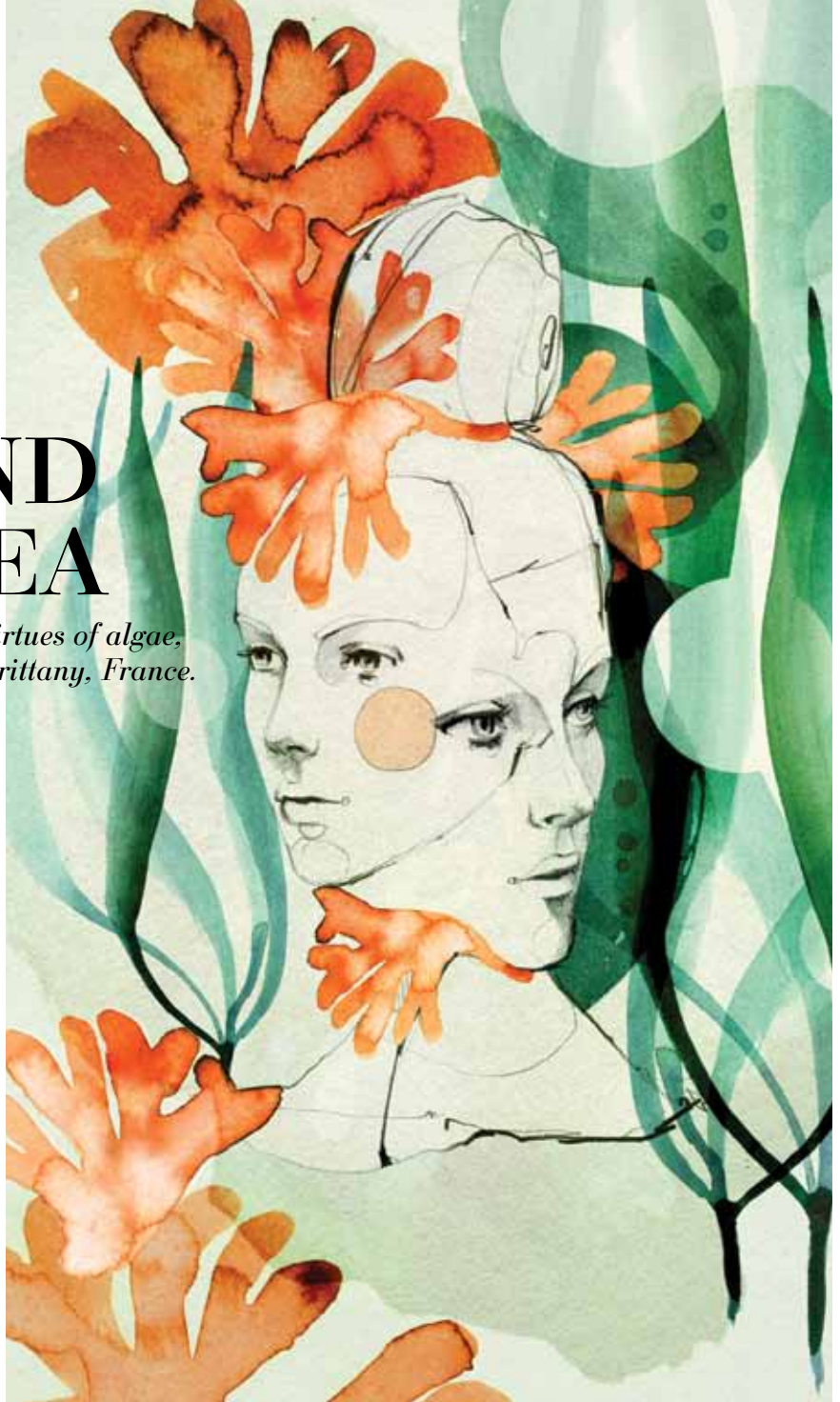
I've come to France's Station Biologique Roscoff to delve into the key ingredient of the latest addition to Biotherm's Blue Therapy line, Serum-in-Oil. Here, I learn about the two types of algae: macroalgae (classified as green, red or brown) and microalgae (not classified by colour and invisible to the naked eye). "Microalgae play an extremely important role in marine food webs, productivity cycles, and climate regulation as well," says our tour guide. We look at the plants up close. The macro ones sit segregated inside aquariums; lime-green spaghetti strands float, caramel-hued leaves drape lazily and red lettuce-like pieces jut upward. The micro kind are contained in flasks, their millions of cells comingling with the promise of flawless skin.

"Algae are very popular in body treatments and facial masks for their healing benefits, such as firming and softening the skin," explains Gabriela Madrid, a lead aesthetician at Glow Medi Spa in Toronto who practices Thalassotherapy—centuries-old procedures that incorporate sea ingredients into treatments such as hydrotherapy, mud

masks and body wraps. "Algae remineralize the skin and body with things we don't produce, like potassium, selenium and zinc."

The vitamins and minerals in algae (especially zinc) often surpass those in land plants, and boost skin health and collagen production, says Se-Kwon Kim, a senior professor who studies marine algae at Pukyong National University in South Korea. Kim and his colleague, Noel Vinay Thomas, conducted a literature review of more than 100 studies and noted that the high levels of antioxidants—most notably beta-carotene—help counteract free-radical damage responsible for premature aging. Another element called fucoidans (found in brown algae) help protect the skin, preventing UV damage.

While land plants like açai berry and avocado are abundant in nutrients, algae are like little green factories, says Annaliese Franz, associate professor of chemistry at the University of California, Davis. Since algae float in water, they don't need to use their energy to make bark and branches, as a tree does, she says. "Instead, energy is focused more on making good stuff such as lipids, protein, chlorophyll and →



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vitamins in the green cells of microalgae.”

Because it's so readily available, seaweed has long been eaten in Asia—specifically Japan, where people reportedly consume up to 14 grams per day. A study that included researchers from Paris, Roscoff and Victoria, B.C., found that some Japanese have a novel microbe—transferred to their guts via algae—that helps them reap more nutritional benefit from algae like nori, which normally goes undigested. Even though North Americans are becoming more familiar with wakame salads, it's unlikely we'll end up with the microbe ourselves. Adding seaweed to your fruit-and-veggie repertoire, however, could have a skin-clearing effect because it's so packed with antioxidants and vitamins. (Note that certain varieties are high in iodine, harmful to people with a thyroid condition.)

While we're hearing more about getting our glow from the foods we eat—beauty from the inside out—we're also seeing more of these oceanic plants in complexion-enhancing creams. With so many species of the sea stuff, the benefits are varied and many. Ulkenia, the strain of microalgae used in Serum-in-Oil, has long been known as a health supplement, benefitting the brain, heart and eyes; now it's gaining approval for improving sun-ravaged skin. With more than triple the amount of DHA (the omega-3 fatty acid) found in fish oils, it absorbs into the skin and fills out lines and wrinkles, while improving radiance. “During aging, not only are the amount of lipids decreasing for women over 35, but the ability of the lipid membranes to repair themselves also decreases sharply,” says David Amar, director of the Biotherm Skincare Development Laboratory. To enhance the skin-boosting effects even further, an antioxidant-rich trio of sunflower, rosehip and blackcurrant-seed oils was added to the formula as well.

Though it's loaded with oils, the Serum-in-Oil is not greasy. Instead, it has a gel-like consistency because of micro-droplets of oil—20 times smaller than what you'd find in a regular oil emulsion—that absorb quickly into skin. “Some people prefer oils,” says Dr. Lisa Kellett, a dermatologist at DLK on Avenue in Toronto. “They tend to be good for mature skin that needs more moisture.” She warns that

oils might aggravate acne-prone skin—something I'm familiar with. I tested out the serum and so far, not a pimple in sight.

When I pat on the serum, I breathe in the fresh scent and think back to where I first tried it: by the vast, retreating sea. “It is an interesting biological fact that all of us have, in our veins, the exact same percentage of salt in our blood that exists in the ocean,” says Patrick Kullenberg, general manager of Biotherm International, quoting John F. Kennedy's speech from the 1962 America's Cup sailing race. “And therefore, we have salt in our blood, in our sweat, in our tears. We are tied to the ocean.”®



Biotherm Blue Therapy Serum-In-Oil, \$75

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