

Drifting into art

Oil is derived from plankton, those drifting, microscopic organisms in oceans and lakes that so inspired nineteenth-century biologist Ernst Haeckel. In recognition and celebration of his work, the oil company Shell has sponsored this three-dimensional artwork by British fashion embroiderer Karen Nicol. Called *Out of the Blue into the Black*, it emerged from Nicol's observations of plankton at the School of Ocean Sciences at the University of Wales, Bangor.

The embroidery can be seen on 6–8 February as part of the exhibition 'Plankton in Art', which accompanies the American Society of Limnology and Oceanography meeting in Sante Fe, New Mexico.

The exhibition, which pays homage to Haeckel's illustrations, includes the extraordinary photography of Guido Mocafico, as well as items of jewellery, glass, wood carvings and quilting. It also features a video based on the patterns of movement of zooplankton in water, produced by Japanese scientist Ai Nihongi, accompanied by music from jazz musician Akira Sakata.

A rare treat will be the evening performances of the animated documentary *Proteus*, directed by David Lebrun. Named for the sea-god of Greek mythology, the documentary describes the conflicting scientific and romantic visions of the sea in the nineteenth century, using some cleverly animated illustrations from the period.

Proteus pivots around the story of Haeckel and includes fast-spinning sequences of hundreds of his images, each morphing convincingly into the next. But different threads are interspersed, reflecting the contradictory times in which Haeckel lived. The industrial revolution was blasting the romantic notion of nature while at the same time revealing the extent of its wonders. The film pits *The Rime of the Ancient Mariner* by Samuel Taylor Coleridge, for example, against the laying of the first transatlantic telegraphic cables. Broken cables hauled from the pristine deep sea beds revealed the teeming, plankton-rich life at depths previously assumed to be lifeless.

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K. NICOLA/JONES

looking at them. "Seeing was understanding," as Breidbach writes. But if that's so, it places an immense burden of responsibility on the veracity of the images.

This is the nub of the matter. Breidbach suggests that Haeckel's drawings are schematic and that, like any illustrator, Haeckel prepared them to emphasize what we are meant to see. But of course, this means we see what Haeckel wants us to see. Quite aside from whether he hid any nascent appendages that challenged his biogenetic law, consider what this implies for the plates of *Art Forms in Nature*. They are some of the most beautiful illustrations ever made in natural history — but it seems clear that Haeckel idealized, abstracted and arranged the elements in such a way that their symmetry and order was exaggerated. They are pictures of platonic creatures, of the ideal forms that Haeckel intuited as he gazed into his microscope. Their very beauty betrays them. They are, as Breidbach says (but seemingly without critical intent), "nature properly organized". In this way, "the labour of the analyst was replaced by the fascination of the image". Absolutely — as 'fascinate' originally meant 'bewitch'.

It is not as if Haeckel did not have the alternative of photography, as microphotography had been used as early as the 1850s. But Breidbach simply recapitulates the arguments against an overreliance on the veracity of photography, pointing out that what one sees is determined by the technology. That is true, and it is apt to give photography a false authority. But are hand-drawn images really any better — let alone those rendered with such apparent skill and realism that their schematic nature is disguised? Indeed, Haeckel felt compelled in 1913 to publish *Nature as an Artist*, a series of photographs of his subjects that demonstrates, he said, that "there can be no talk of reconstruction, touching up, schematization or indeed forgery" in his drawings. It was a remarkable work but it leaves us wondering why Haeckel did not use photographs in the first place.

Another danger of drawings is that they tend to reflect the artistic styles of the day. Haeckel's drawings fed into the florid, nature-inspired designs of the art nouveau and *Jugendstil* schools, but he was more influenced than influential. His medusae look like William Morris prints precisely because they have had

that visual aesthetic imprinted on them. Breidbach says that for Haeckel, as for Goethe, "aesthetics is the foundation of his view of nature". But is that a good thing? As the historian Ernst Gombrich has pointed out, artistic styles create unconscious biases and errors. When Gombrich speaks of the artist who "begins not with his visual impression but with his idea or concept", he might as well be talking of Haeckel. And what happens when the cultural aesthetic moves on — does nature have to follow suit? Breidbach points out that by using the visual language of his age, Haeckel helped to make science accessible to the public. But 20 years later, modernism had rendered his arabesque style old-fashioned.

As director of the Ernst Haeckel Museum at Jena, Breidbach has access to Haeckel's notes and sketchbooks, and he makes good use of them. But perhaps because of his position he felt unable to dig too deeply into the problematic areas his subject raises. So although this is undoubtedly a gorgeous book, and the questions it raises are fascinating, I can't help feeling that it represents an opportunity missed. ■ Philip Ball is a consultant editor for *Nature*.