CORAL

Something Rich and Strange

Edited by
Marion Endt-Jones

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Cover: Leopold and Rudolf Blaschka, Glass model of *Corallium rubrum*, 1879. Photo: Stuart Humphreys. Courtesy Australian Museum – AMS582/MA00777.

Halftitle page: Figure 1: Sea fan (*Gorgonia albicans*), Manchester Museum, Zoology collection. Photo: Paul Cliff.

Title page: Illustration of Great Barrier Reef corals, in William Saville-Kent, *The Great Barrier Reef of Australia: Its Products and Potentialities* (London: W.H. Allen, 1893), colour plate VIII, detail.

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Figure 2: Ippolita Scarsello, called Scarsellino (1550–1620), *The Discovery of Coral*, oil on canvas, 41.5 × 50 cm. Courtesy The Matthiesen Gallery, London.

"Full fathom five thy father lies;
Of his bones are coral made;
Those are pearls that were his eyes:
Nothing of him that doth fade
But doth suffer a sea-change
Into something rich and strange."

William Shakespeare, *The Tempest*, 1611

Introductory Essay

A monstrous transformation: coral in art and culture

Marion Endt-Jones

The use of coral as a material and symbol is recorded in art and culture since antiquity. Throughout the centuries, different communities and cultures have valued coral for its transformative qualities. In Book IV of his *Metamorphoses*, the Roman poet Ovid describes coral's creation myth as a monstrous transformation: after Perseus has freed Andromeda from the clutches of the sea monster that held her captive, he proceeds to wash the traces of the battle from his hands. Placing the head of the horrible Gorgon Medusa, whom he defeated by using his shield as a mirror to ward off her petrifying gaze, on a bed of seaweed, the plants immediately take on the colour of the blood dripping from Medusa's snake-infested head; as they absorb the dwindling power of the Gorgon's petrifying gaze, the plants harden and turn into coral, branches of which the sea nymphs scatter all across the sea (fig. 2). Thus the process of metamorphosis is inscribed in coral at the moment of its monstrous birth; the object's adaptability and intrinsic vital force become a topos that will remain inspirational for artists and writers for centuries to come.

Christian coral

Indeed, the myth of Perseus and Medusa remained essential for the iconography and reception of coral until well into the twentieth century. Used according to popular belief for protection against the evil eye and other kinds of misfortune, coral's blood red colour and its capacity for transformation and renewal became in Christianity a symbol for the passion and resurrection of Christ. Both motifs are combined in representations of Baby Jesus with a coral necklace, which are common in illuminated manuscripts from the twelfth century and, from the fourteenth century onwards, especially in Italian and Dutch panel painting (fig. 3). In these paintings, the infant's necklace is often complemented by intricately branching coral pendants, which, showcasing the natural, tree-like ramifications of coral, symbolize the biblical tree of knowledge, the tree of life, the crucifixion of Christ and the root of Jesse, Jesus's royal lineage from the House of David. Similarly, rosaries (fig. 4), crucifixes, statues of saints and other devotional objects, crafted from the crimson red, precious Mediterranean coral (*Corallium rubrum*), refer to the blood and the passion of Christ on the one hand and signify the transubstantiation – the literal transformation of bread and wine into the body and blood of Christ – as well as the resurrection and eternal life on the other. Ovid's myth of origin and, likewise, Pliny the Elder's descriptions of coral as a marine plant that, once fished out of the water, hardened to stone,[1] had made of coral a symbol of vital forces; as a living being that bridged the elements of water and air as well as the vegetable and mineral kingdoms of nature, it stood for conversion to mineral perfection and for durability of all that was organic and ephemeral.

Overleaf: Figure 3: Giovanni Santi, *The Virgin and Child*, *c*. 1488, egg and oil on wood, 68×49.8 cm. © The National Gallery, London.

Page 11: Figure 4: Maerten van Heemskerk, *Portrait of Margaretha Banken*, 1540–1542, oil on panel, 89.5×72.3 cm. Photo: Alan Seabright. © Manchester City Galleries.

1 Pliny, *The Natural History*, vol. 6, trans. John Bostock and H.T. Riley (London: Henry G. Bohn, 1857), p. 11.

Figure 5: John Ray and James Montague, Rattle and whistle, 1811–1812, varicoloured gold with coral, h.: 11.4 cm, w.: 3.2 cm, d.: 3.2 cm. Courtesy V&A, London.

Coral magic

While the religious symbolism of coral reached its peak in the late Middle Ages and early Renaissance, vernacular beliefs in its apotropaic and therapeutic properties survived for centuries to come. Even today, one can find key chains and small lucky charms with red *cornetti* dangling from them in Italian *Tabacchi*, but usually the red coral, which is now under threat by overfishing, diving tourism, pollution and global warming, has been replaced by cheap plastic. The alleged effectiveness of coral against the evil eye can be traced back to the legend of Perseus and Medusa; that it was also used as miraculous cure-all and powerful talisman is recorded in a wealth of late Classical, Arabic and medieval sources ranging from mineralogical to alchemical treatises. Thus Camillo Leonardi praises coral in his *Speculum Lapidum*, which first appeared in print in Venice in 1502, as a 'wonderful prophylactic' which, worn on the body or hung in the home or boat, dispels ghosts, demons, shadows, illusions, nightmares, lightning, unfavourable winds, storms and wild animals. Administered crushed and diluted in wine, coral was also said to stop blood flow, alleviate diseases of the stomach and heart, and treat ulcers of the spleen, stones in the urinary tract and receding gums. Scattered across the fields with the seeds or hung between the branches of fruit trees, coral was supposed to guarantee a plentiful harvest and to protect the crop from damage by hail storms; if swallowed regularly from early age, it was also believed to prevent a child from developing epilepsy.[2] A medical treatise, which was printed in Strasbourg in 1576 and mainly collated from writings by Arnaldus de Villanova, Ramon Llull und Johannes de Rupescissa, attested coral efficacy against 'melancholic fantasy', painful teething, discolouration of the teeth,

2 Camillo Leonardi, *Speculum lapidum* (Venice, 1502).

Figure 6: Unknown (Dutch), *Portrait of a Child with a Coral*, 1636, oil on panel, 89.4 × 68.4 cm. Courtesy The Bowes Museum, Barnard Castle, County Durham.

haemorrhoids and infertility. Depending on symptoms, coral powder could be dissolved and administered in rainwater, rose water, warm milk, warm wine or lime juice.[3]

Such a pronounced and unconditional belief in coral's miraculous healing powers increased its use value as a lucky charm, especially for children. All across early modern Europe, rattles mounted with a teething ring or teething piece made from coral on one end and bells or a whistle on the other proliferated as popular christening gifts, since they served as toy and lucky charm in one (fig. 5). If such a talisman then found its way onto a painted portrait of the child, the precious coral set in silver or gold confirmed at the same time the family's wealth and social status (fig. 6).

"…and he knew…that there is no more effective way to break the spell of tradition than to cut out the 'rich and strange,' coral and pearls, from what had been handed down in one solid piece."

Hannah Arendt,
'Walter Benjamin: 1892–1940', 1955

3 Arnaldus de Villanova, Heinrich Wolff, Giovanni Braccesco, Wolff Geuss, Johannes de Rupescissa, Ramon Llull and Johann Vogt, *Herliche medicische Tractat* (Strasbourg: Bernhart Jobin, 1576).

Coral curiosities

Due to their apotropaic effects, their transformative powers and their bizarre shapes and patterns, corals took pride of place in sixteenth- and seventeenth-century cabinets of curiosities. According to its inventory, the Medici collection in Florence, for example, contained a branch of coral that continued to grow[4] – a potentially ever-expanding, excessive, infinite object that eternally defied categorization and containment and aroused both fear and fascination. For collectors, polymaths, dukes and merchants, the particular value of coral, which was still widely mistaken for an aquatic plant and consequently listed in collection catalogues as 'sea tree', 'sea oak', 'sea weed' or 'sea shrub', lay in its rarity, which was further increased because harvesting it from the depths of the sea held considerable risks – a status attributed, for similar reasons, to pearls, amber and ambergris. Moreover, the value of coral could be enhanced by elaborate craftsmanship combining it with the precious metals, gold and silver. Crafting decorative cups, caskets, small statues and similar *kunstkammer* objects, artisans and their clients often exploited the grotesque, intricately branching structure of the coral twigs in order to represent similar natural phenomena such as trees or antlers. The Green Vault in Dresden, the treasury of Augustus II the Strong, Elector of Saxony, for example, holds a drinking cup which illustrates another metamorphosis recorded by Ovid: the nymph Daphne, who, in order to escape the God Apollo's amorous advances, turns into a laurel tree (fig. 7). Both the arborescent growth of coral and its alleged metamorphosis from a supple aquatic plant into a hard precious mineral ideally lent themselves to illustrating such transformation myths. At the same time, the collector's item, skilfully crafted by the Nuremberg goldsmith Abraham Jamnitzer after a design by his father Wenzel, expressed the rivalry between human virtuosity and God's boundless creative power, which was believed to be especially evident in rare, precious natural phenomena like coral.

Although the Daphne cup is now regarded as an object intended purely for display without any concrete purpose assigned to it, scholarship assumed for a long time that the electoral household had used it as *Natternzungenkredenz*, or 'Viper's Tongues Credence'. The base of such 'poison indicators', which were placed at the centre of the dining table, usually consisted of a drinking vessel or salt cellar with a coral branch mounted on top (fig. 40). Fossilized shark teeth hanging from the coral twig – believed at the time to be viper's or dragon's tongues – were supposed to reveal spoiled food: since popular belief had it that the 'viper's tongues' began to 'sweat' in vicinity to toxic substances, the dinner guests would remove them from the table ornament in order to dip them into their drink and hold them above their meal – a practice called 'dare la credenza', which gave the object its name. Alongside the coral, which acted as a prophylactic, apotropaic talisman on the one hand and as a potential antidote to food poisoning on the other, 'viper's tongues' offered a supreme combination of protective and healing magic.

Figure 7: Abraham Jamnitzer, Statuette of Daphne, late sixteenth century, silver (mostly gilt) and coral, h.: 68 cm, Green Vault. Photo: Jürgen Karpinski. Courtesy Staatliche Kunstsammlungen Dresden.

4 Joy Kenseth (ed.), *The Age of the Marvelous* (Hanover, New Hampshire: Hood Museum of Art, Dartmouth College, 1991), p. 82.

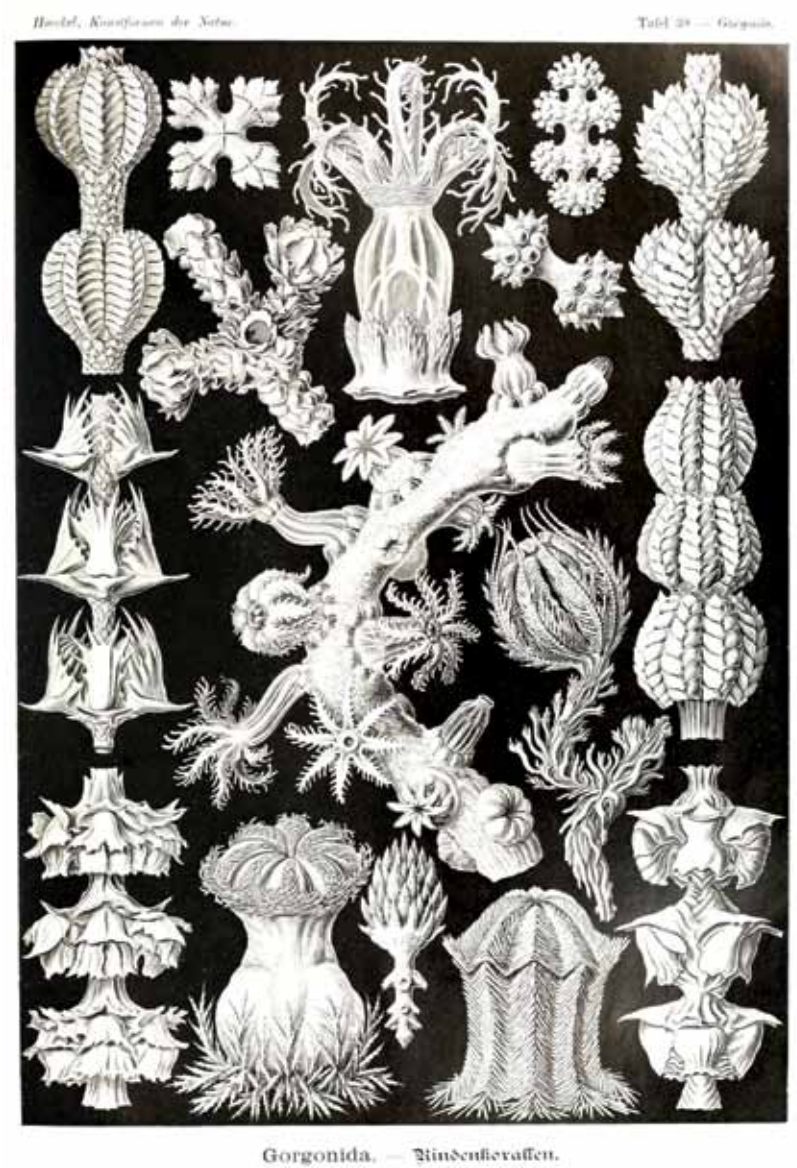

Figure 8: Ernst Haeckel, *Gorgonida*, in *Kunstformen der Natur* (Leipzig and Vienna: Verlag des Bibliographischen Instituts, 1904), plate XXXIX.

"At once pet, ornament, and 'subject for dissection', the Sea-anemone has a well established popularity in the British family-circle; having the advantage over the hippopotamus of being somewhat less expensive, and less troublesome, to keep."

George Henry Lewes, *Sea-Side Studies at Ifracombe, Tenby, The Scilly Islands and Jersey*, 1858

Coral animals

With the advent of the Enlightenment in the second half of the seventeenth century, ancient traditions and superstitions increasingly gave way to scientific accuracy. Encyclopaedic cabinets of curiosities and 'wonder chambers' were replaced by specialized museums accessible to the newly formed, educated middle classes. These public institutions no longer displayed the unique and extraordinary, but showed exemplary objects representative of the constant evolution and progress of 'civilized' mankind. Using recently developed technical innovations such as the microscope, researchers attempted to get to the bottom of natural phenomena and advanced into environments that had previously been regarded as unreachable. At last, marine organisms such as coral were not only fished out of the water and examined as pallid, stiff skeletons on the dissecting table, but also observed as living beings in their natural habitat under water.

Whether coral should be attributed to the vegetable, mineral or even animal kingdom remained controversial among naturalists up until the mid-eighteenth century. In the end, it was Jean-André Peyssonnel from Marseille who proved once and for all in a series of essays presented to the Académie des Sciences in Paris in 1726 that corals are 'inhabited' and produced by small creatures, polyps, which he called 'insects' – then a common term for small invertebrates. The idea that the alleged plants were in reality 'zoophytes' or 'animal-plants' first came to him during excursions he took with coral fishermen

off the coast of Marseille; back on shore, he substantiated his observations through a series of experiments in which he picked single polyps from their cups with his fingernail in order to slice them, plunge them into boiling water and douse them with acid liquids.[5] His discovery was so groundbreaking that it took some time for it to become accepted by fellow researchers and to catch on in the public imagination.

The notion of coral as a marine plant and a gemstone used for jewellery is still obstinately present in the public consciousness: as a marine organism that is eyeless, colony-building, reproducing sexually and asexually and living in symbiosis with photosynthetic microscopic algae, so-called zooxanthellae, it is extremely difficult to grasp. In his treatise on the *Corals of the Red Sea*, published in Germany in 1876, the zoologist and popularizer of science Ernst Haeckel relates an anecdote which bears witness to the still prevailing confusion about the nature of coral. Triggered by the magnificent coral necklace worn by a lady during a social gathering, a dispute arouse about the nature of the 'red gemstone'. While some wanted it understood as 'the rock-hard fruit of an Indian tree', others attributed it, like pearls, to the genre of 'sea plants'. A third group, getting closer to the truth, declared it a stony animal shell. Haeckel's assertions that the red, precious coral was in fact the inner skeleton of a composite animal colony, which had been abandoned by its inhabitants, caused considerable consternation.[6]

Aquarium mania

As Haeckel suggested in *Corals of the Red Sea*, 'every single coral colony is, in fact, a small zoological museum.'[7] The invention and spread of public and domestic aquariums in the middle of the nineteenth century allowed researchers and the interested public to examine these 'miniature museums' up close – colourful living creatures in their natural habitat rather than pale, rigid specimens in actual museums or on the dissecting table.

In rapid succession, a series of natural history crazes swept through Victorian Britain (and, with a slight delay and less fervour, through continental Europe): studying and collecting the natural world was no longer reserved for experts and members of the academies and professional societies, but became a popular pastime accessible to young and old, rich and poor, and male and female alike. Thus the explosion of interest in the aesthetic and decorative qualities of sea shells ('conchyliomanie', as the French dubbed it) was eventually replaced by 'fern fever' (pteridomania), a passion for seaweeds, an obsession with orchids and a widespread craze for 'miniature oceans'.

Popularizers of natural history like Haeckel were partly responsible for introducing corals and other marine organisms like radiolaria and siphonophores – brought to life in Haeckel's beautiful drawings – to the public consciousness (fig. 8). In Great Britain, the naturalist Philip Henry Gosse's books on the habits and habitats of marine life, such as *A Naturalist's Rambles on the Devonshire Coast* (1853) and *The Aquarium: An Unveiling of the Wonders of the Deep Sea* (1854), were published in several lavishly illustrated editions aimed at a mass audience (fig. 56).

Although experiments with both fresh- and saltwater tanks had been carried out before, Gosse was the first to use and establish the term 'aquarium' in 1854: 'The MARINE AQUARIUM…bids fair…to make us acquainted with the strange creatures of the sea, without

Figure 9: Philip Henry Gosse, *The Fountain Aquarium*, illustration from *The Aquarium: An Unveiling of the Wonders of the Deep Sea* (1854).

5 Jean-André Peyssonnel, 'Traité du corail, contenant les nouvelles découvertes…', *Philosophical Transactions of the Royal Society*, 47 (1751), pp. 445–69.

6 Ernst Haeckel, *Arabische Korallen: Ein Ausflug nach den Korallenbänken des Rothen Meeres und ein Blick in das Leben der Korallenthiere* (Berlin: Georg Reimer, 1876), p. 2.

7 Haeckel, *Arabische Korallen*, p. 34.

Figure 10: 'Sea-Side Studies!', cartoon from *Punch Magazine*, 38.17 (1860).

diving to gaze on them.'[8] With their characteristic blend of scientific description, religious fanaticism and practical instructions for setting up and maintaining tanks in the home, Gosse's books firmly established the 'sea in the glass' as a parlour attraction and promoted 'rock-pooling' and 'anemonizing' as recreational activities for everyone (figs 9 and 10). Different coral species, such as the honeycomb coral, Gosse explained, were ideal aquarium residents, not only because of their aesthetic appeal, but also because they attracted a 'variety of animals which make their abode in its ample winding chambers.'[9] The result was a lively, colourful scene – a moving work of art that never ceased to arrange itself into new formations and invited the onlooker's imagination to roam. Consequently, for the protagonists of *fin-de-siècle* novels and poems, such as Jean des Esseintes in Joris-Karl Huysmans's *Against Nature* (1884), the aquarium served as a springboard for an overflowing, decadent and narcissistic imagination.[10]

Whereas reef-building corals, known since Charles Darwin's theory of coral reef formation as virtuous architects tirelessly toiling for the common good, had been described as embodying industriousness and hardiness, sea anemones and cold-water corals native to the seas around the British Isles struck the owners of and visitors to aquariums as rather odd. Even as George Henry Lewes assured the British public in 1856 that the sea anemone was a less expensive and troublesome pet to keep than a hippopotamus,[11] the creatures' voraciousness and reproductive habits were often perceived as repulsive and promiscuous; the grace and beauty of the 'animal-flowers' could not detract from their perceived monstrosity (fig. 11).

Occasionally, the 'sea monsters' managed to upset an entire household. Thus Gosse reports in his *History of the British Sea-Anemones and Corals* (1860) how the sight of a sea anemone devouring a young conger eel drove his little son to tears; the beast, which suddenly seemed to consist of nothing but a giant, cavernous mouth, becomes in Gosse's account the epitome of merciless gluttony.[12] Similarly, John Harvey, in his aquarium manual of 1858, describes an incident with a maid who screamed upon seeing the sea anemone tank: 'O pleassir, do come and look, the enemy…is a turning hisself inside out!'[13] The marine zoologist Anna Thynne notes a similar episode in her research diary: returning to the house after a few days of absence, she found her madrepores surrounded by small piles of stones; her servants, flabbergasted by the creatures' asexual reproduction through splitting, had tried to stop them 'coming to pieces.'[14]

The 'grotesque' natural characteristics of sea anemones and corals profoundly challenged the prevailing classifications of gender and species, playing into subliminal fears of a society whose belief in supposedly 'established truths' about origin, sex and religion had begun to falter in the light of modern developments. Like all fads, the aquarium wave ebbed away in the 1860s – but the desire to transport a slice of the ocean to the living room, or to experience a taste of wilderness in the safe surroundings of a 'shark tunnel', continues to the present day.

Endangered coral

For French artists and writers of the *fin-de-siècle*, Symbolist poets, and some members of the Surrealist group, coral remained of interest because of its boundary-transgressing qualities on the one hand and its associations with metamorphosis and creativity on the other. As the product of an instinct-driven communal being, which had sprung from the ocean,

8 Philip Henry Gosse, *The Aquarium: An Unveiling of the Wonders of the Deep Sea* (London: Van Voorst, 1854), p. vii.

9 Gosse, *The Aquarium*, p. 121.

10 Joris-Karl Huysmans, *Against Nature* (Oxford: Oxford University Press, 1998).

11 George H. Lewes, *Sea-Side Studies at Ilfracombe, Tenby, The Scilly Isles and Jersey* (London: William Blackwood and Sons, 1858), p. 115.

12 Philip Henry Gosse, *Actinologia Britannica: A History of the British Sea-Anemones and Corals* (London: Van Voorst, 1860), pp. 165–66.

13 Quoted in Rebecca Stott, 'Through a Glass Darkly: Aquarium Colonies and Nineteenth-Century Narratives of Marine Monstrosity', *Gothic Studies*, 2.3 (2000), pp. 305–27, here p. 307.

14 See Stott, 'Through a Glass Darkly', p. 307.

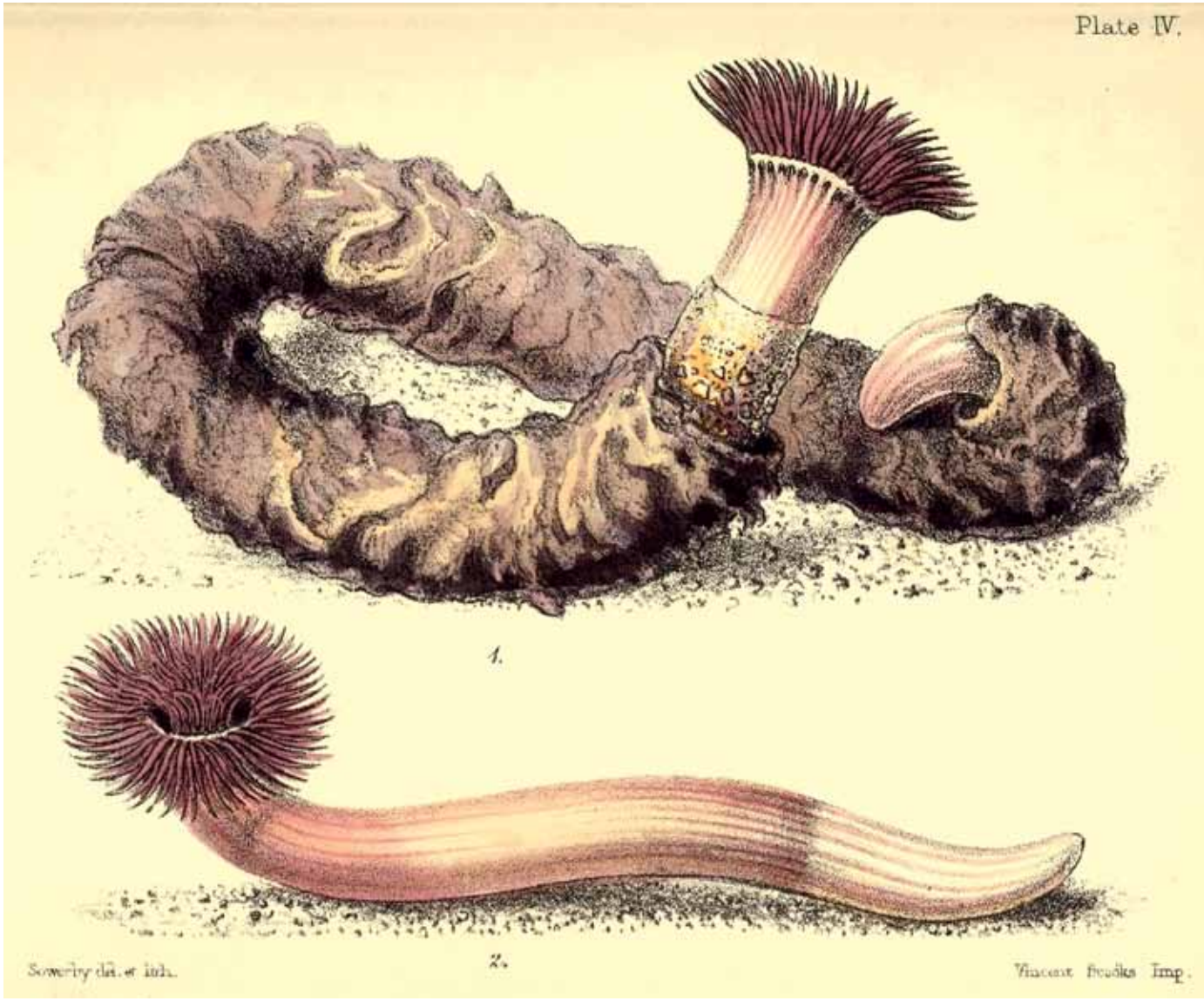

Figure 11: Illustration of Edwardsia vestita, 'clothed with its leathery coat' (above) and 'withdrawn' (below), in George Brettingham Sowerby, *Popular History of the Aquarium of Marine and Fresh-water Animals and Plants* (London: Lovell Reeve, 1857), plate IV.

This worm-shaped sea anemone was first described by Edward Forbes in 1841 as a 'very voracious feeder' which constructs a membranous tube encrusted with gravel and shells for protection.

the cradle of life, it embodied the ideal of an imaginative art created by unconscious forces (figs 64–67). Works by contemporary artists like Hubert Duprat (fig. 71), Mark Dion (figs 40 and 72) or Margaret and Christine Wertheim of the Los Angeles-based Institute for Figuring (figs 78–81) now playfully suggest that we are putting this rich tradition of corals in art and culture at risk by overfishing, polluting and acidifying the oceans.

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"The fact is, that the Madrepore, like those glorious sea-anemones whose living flowers stud every pool, is by profession a scavenger and a feeder on carrion; and being as useful as he is beautiful, really comes under the rule which he seems at first to break, that handsome is who handsome does."

Charles Kingsley, *Glaucus; or, the Wonders of the Shore*, 1855