

Brighton's Aquarium - The Victorian Marvel That Defied the Odds

By David Alderton



Step inside the world's oldest aquarium, and the carefully restored Victorian building transforms into a living, glowing cathedral of the sea. Photo by Akara Heart.

In the middle of the nineteenth century, a quiet revolution transformed how ordinary people encountered the natural world. For centuries, the ocean had remained largely opaque—its inhabitants known only through fishermen's tales, dried specimens in cabinets of curiosity, or the occasional stranded creature on a beach. Then, almost suddenly, the deep became visible. Glass tanks filled with living seawater, plants and animals appeared first in private parlors and soon in public buildings, allowing Victorians to gaze upon anemones, octopuses and shoals of fish as if the sea itself had been brought indoors.

The catalyst for this change was the work of Philip Henry Gosse. Born during 1810, in Worcester, England, Gosse had spent his formative years in Newfoundland and the United States before returning to England as a self-taught naturalist of unusual observational skill and artistic talent.

In the early 1850s, while living in the south-west, on the coast of Devon, he perfected a method of keeping marine animals alive for months in closed glass vessels both by balancing the oxygen-producing activity of seaweeds with the respiratory needs of the animals, and also by ensuring the safe breakdown of the animals' waste products. Previous attempts had failed, often because the water quickly became foul. Gosse's insight into how to create a biological equilibrium within what was a miniature ecosystem changed everything.



Philip Gosse in 1855. Source: PD.

The Start of the Trend

In December 1852, Gosse transferred a collection of specimens he had kept healthy for two months into a new so-called 'Fish House' at the Zoological Gardens in Regent's Park, London, now known as London Zoo. On 21 May 1853, the world's first public marine aquarium opened to visitors. Gosse stocked the tanks and, the following year, published a book entitled

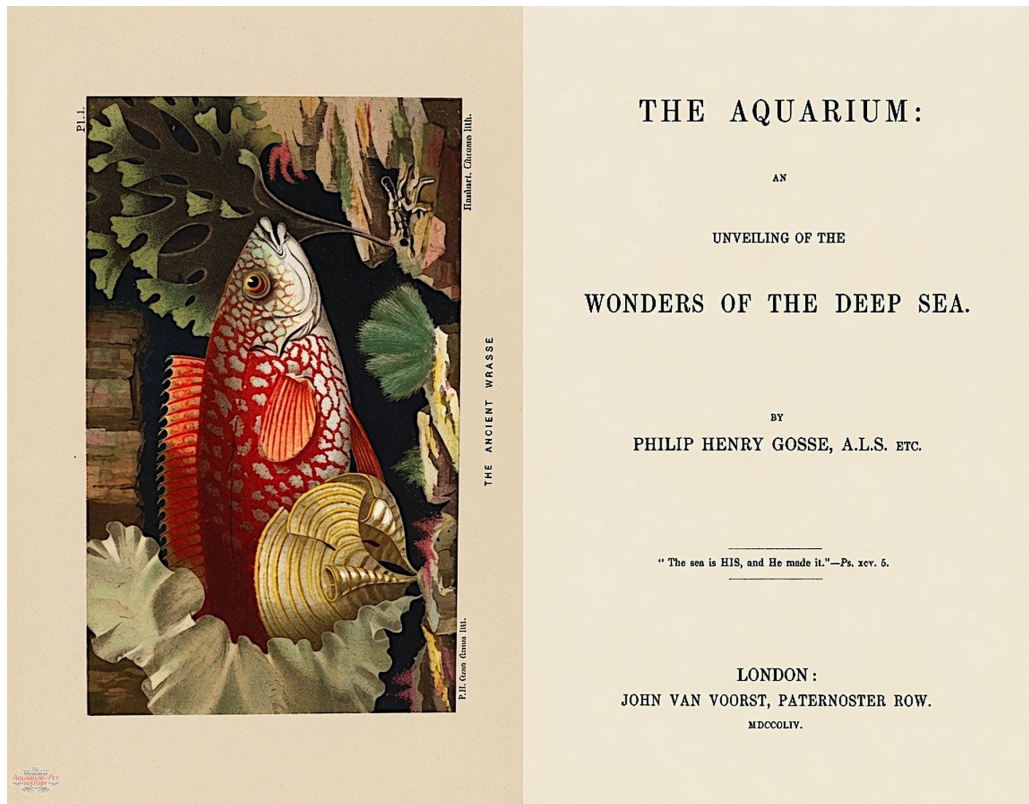
The Aquarium: An Unveiling of the Wonders of the Deep Sea.



Views of the Fish House at London Zoo - exterior and interior images.

The book sold rapidly, featuring twelve very expensive color lithographed plates capturing the beauty of marine life, and brought the word “aquarium” into everyday language. Gosse himself preferred this abbreviated description to the clumsier alternative of “aqua-vivarium”, effectively meaning an enclosure for living creatures in water. His efforts ignited a national craze. Parlor aquariums became fashionable status symbols; coastal collecting expeditions multiplied; and commercial suppliers of tanks, artificial seawater and livestock sprang up.

Gosse’s achievement was both scientific and cultural. He made the previously invisible accessible, educational and entertaining. The Regent’s Park Fish House proved that marine life could be displayed at scale and that the public would pay to see it. Within two decades, an aquarium boom swept Britain and continental Europe, starting in 1860 in the Austrian capital of Vienna. Others soon followed in Paris, Hamburg, Berlin and many British localities. Most were ambitious architectural statements as much as zoological exhibits, combining grand halls, reading rooms, restaurants and concert or performance spaces with tanks of seawater.



Gosse's ground-breaking book was spectacularly illustrated, at a stage when color printing was highly unusual and costly.

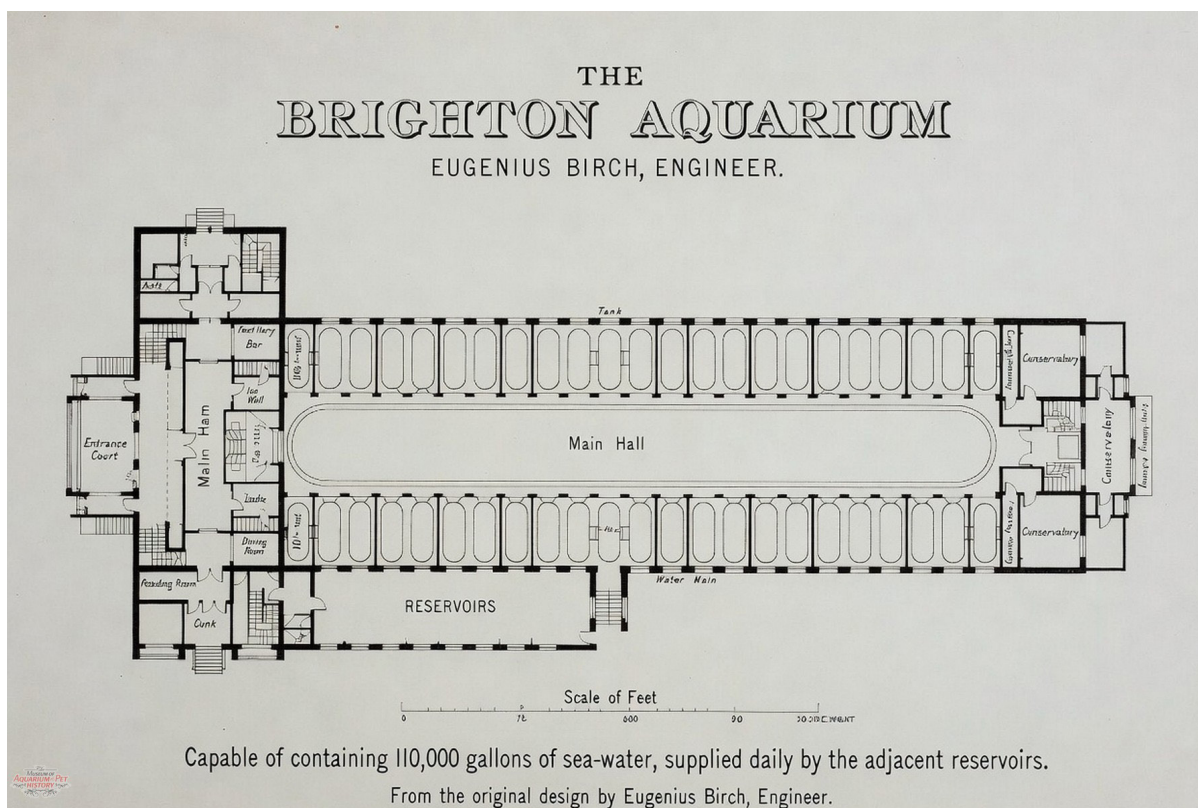


This is the famous multi-panel illustration by Emil Schmidt, published during 1873 in *Die Gartenlaube*, which was the first mass-market German newspaper. It shows the dramatic grotto-style interior of the aquarium in Berlin, which opened in 1869 and was designed like an artificial cave system.

Yet the majority of these public aquaria proved commercially fragile. Maintenance of living collections was expensive and technically demanding; novelty faded; and many institutions drifted into broader entertainment or closed altogether. Against this background of rapid rise and frequent fall, one public aquarium stands out for its unbroken continuity: Brighton on England's South Coast.

Conception and Construction

In the 1860s, Brighton was already a celebrated seaside resort, with its reputation established previously by royal patronage and the railways that brought day-trippers and longer-stay visitors down from London in barely an hour. Regular coach trips from around the country later helped to swell their numbers too. The idea of a major aquarium was effectively a natural progression from the widespread enthusiasm that Gosse had helped to create, combined with observations of the success of continental set-ups. Eugenius Birch, the civil engineer celebrated for designing Brighton's West Pier, visited the aquarium at Boulogne-sur-Mer just across the English Channel in France, and returned convinced that Brighton should have an even finer public aquarium to attract visitors.



Birch's plan for Brighton Aquarium.

Parliamentary authorisation came in 1869 with the passing of the *Brighton Aquarium and Improvements Act*. Work began the same year on a site that required substantial sea-wall construction and the creation of what became Madeira Drive, so that the new building would not obstruct views from the fashionable clifftop houses on Marine Parade above.



The sea was literally a stone's throw away from the newly-built aquarium, with its entrance positioned below ground, as seen in this photograph from 1917.



The aquarium was set low so as not to disrupt the sea views of those living in the houses above the site on Marine Parade, as seen in this later image from the early twentieth century.

The structure that emerged was deliberately monumental yet largely subterranean when viewed from the road above. A long vaulted corridor, 224 feet (68 m) in length, was lined with display tanks. At its heart stood a central hall containing a 100-foot (30 m) tank holding roughly 110,000 gallons (132,000 US gallons/500,000 litres) of seawater, marking it out as the largest aquarium tank in the world at that time.

Architectural influences mixed Gothic vaulting with Pompeian and Italianate details: columns of Bath stone, red Edinburgh granite and green serpentine marble, capitals carved with marine motifs, and decorative statues. Ancillary spaces included a reading room, a restaurant and a conservatory with fernery and cascade. The total cost for the project reached somewhere between £130,000–£133,000: equivalent to more than \$25 billion dollars today, allowing for inflation, which was a huge sum.



An engraving celebrating the opening of Brighton's aquarium from the *Illustrated London News* in August 1872.



The entrance to the aquarium was an impressive space, although this no longer exists today.

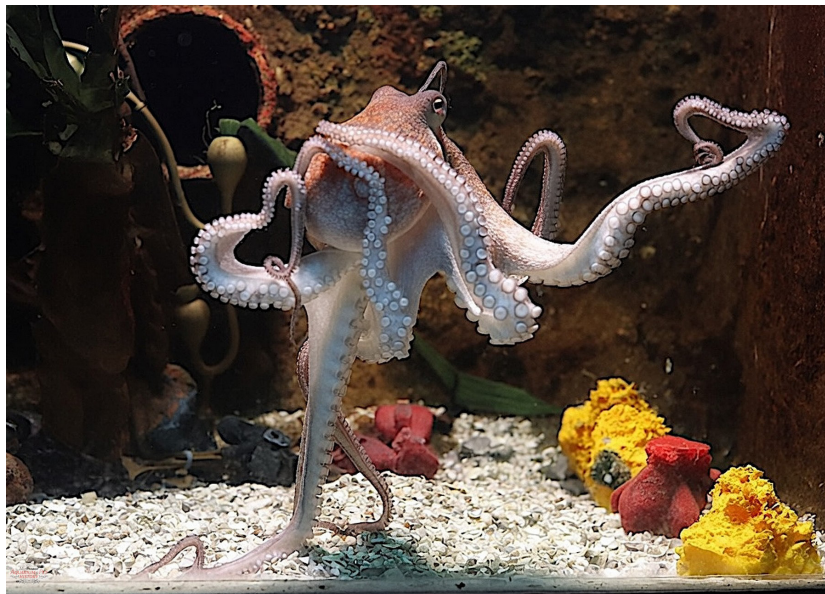
Construction continued into 1872. Then on Easter Monday, 1 April in that year, Prince Arthur, Duke of Connaught, performed an informal opening even though the building was unfinished and only one tank held fish! The formal public inauguration took place later on 10 August 1872, being conducted by Brighton's mayor, John Cordy Burrows. The occasion coincided with a meeting of the British Association for the Advancement of Science; Francis Trevelyan Buckland, the well-known naturalist of the period, produced a pair of juvenile American alligators from his pocket and added them to the collection, signaling the mix of science and spectacle that would characterize the institution.



Science and spectacle combined together in the layout of Brighton Aquarium.

Early Years: Fashion, Novelty and Marine Spectacle

The aquarium was an immediate fashionable success. Visitors could admire not only fish but an octopus that became a celebrity, a live Norway lobster that caused a sensation in 1874, and, from 1877, sea-lions. A manatee later appeared in a tank designed for eye-level viewing. The roof terrace, completed in 1874 and extended in 1876, offered a garden, roller-skating rink, café, smoking room and a music conservatory. Organ recitals, lectures, concerts and ultimately plays filled the calendar. Royal visitors arrived, with the building functioning as a social destination as much as a zoological one.

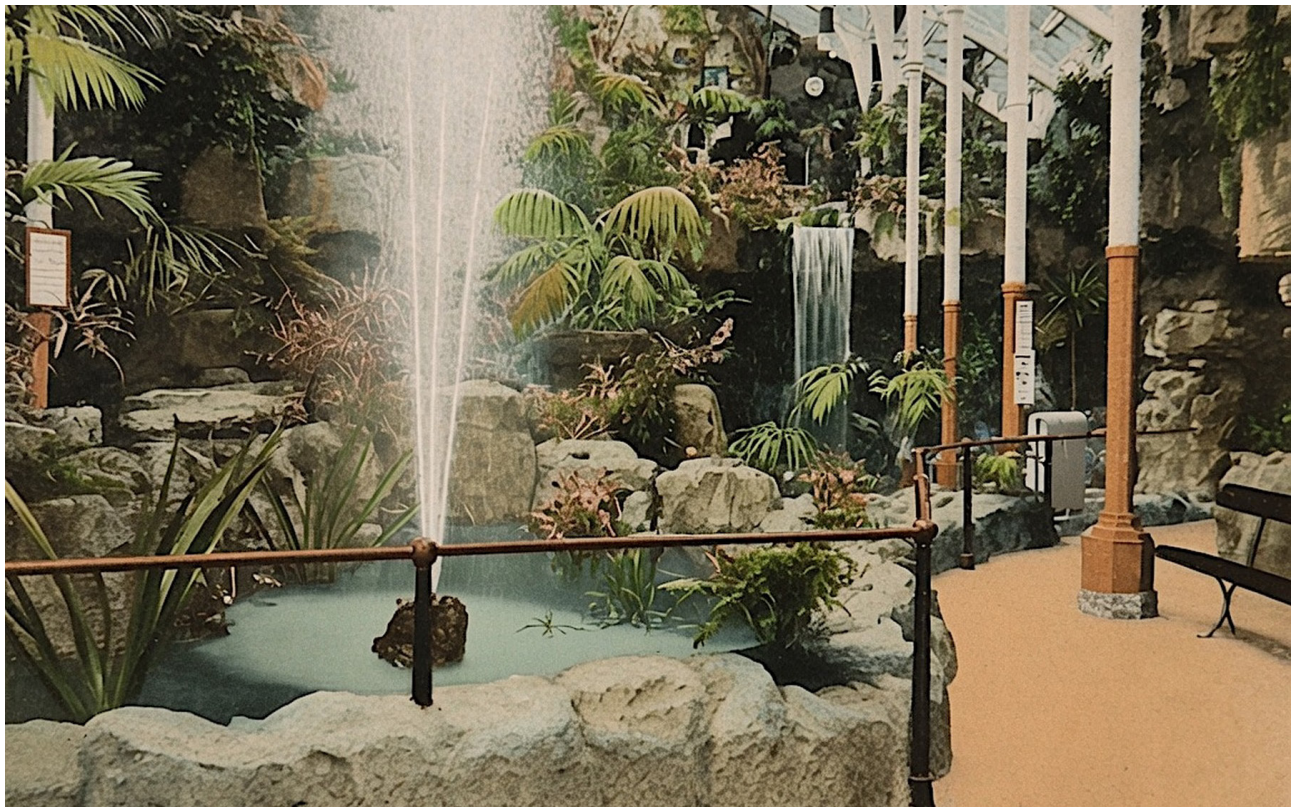


An octopus soon became a celebrity after Brighton Aquarium opened. This is the current octopus resident there, and is a very popular exhibit, continuing a tradition that has lasted over 150 years. Photo by Akara Heart

Technically the enterprise was advanced for its day. Seawater was pumped from the nearby English Channel, stored in large reservoirs beneath the building and circulated through the tanks. Rockwork by the Pulham company provided naturalistic settings. Yet the same difficulties that plagued other early public aquaria soon appeared. Maintaining water quality, obtaining healthy livestock and sustaining public interest beyond the initial novelty required constant effort and money. By the turn of the century, in spite of the venue's many uses, the private company that ran Brighton Aquarium was in serious financial difficulty.

Municipal Ownership and the 1920s Transformation

During 1901, Brighton Corporation purchased the aquarium for £30,000 (equivalent to about \$6.4 million today) under special parliamentary powers. Municipal ownership proved decisive. The Corporation invested in improvements, including a winter garden, and kept the institution open even when revenues were modest. A further crisis in 1922, when conversion to a bus station was briefly authorized, was averted after public inquiry.



A photograph of the Winter Garden which was introduced to Brighton Aquarium.

Between 1927 and 1929 the exterior was comprehensively rebuilt in white stone in a more contemporary Louis XVI-inspired style; the original Gothic clock tower and ornate entrance were removed; a large concert hall seating 1,250 replaced the winter garden; and modern pumping and filtration were installed. The Duke of York (later George VI) reopened the building on 12 June 1929. Internally, however, much of Birch's High Victorian vaulted architecture survived and remains as the atmospheric core of the present-day attraction.



The rebuilt exterior to the aquarium. Note that the Gothic clock tower was removed during these renovations.



The high-vaulted Gothic ceiling has been in place throughout Brighton Aquarium's history.
Photo by Akara Heart.

Mid-Century Diversification and Wartime Interruption

The inter-war and post-war decades saw the aquarium adapt repeatedly to changing leisure tastes. The 1930s brought a miniature rifle range, public salt-water baths and a lift from Marine Parade. During the Second World War however, the building was requisitioned for the war effort by the RAF; Brighton and Hove were heavily bombed, and the aquarium suffered neglect and damage.

After the war ended, it reopened under a private lease from 1955. Chimpanzee tea parties and other small-animal attractions appeared. The concert hall became the Florida Rooms nightclub, hosting jazz, early rock and roll, and residencies by bands including The Who. From 1961 to 1969, the same space then housed the Montagu Motor Museum, representing the largest collection of classic cars in Britain, which ultimately transferred to the stately home of Beaulieu, forming what has become the National Motor Museum.



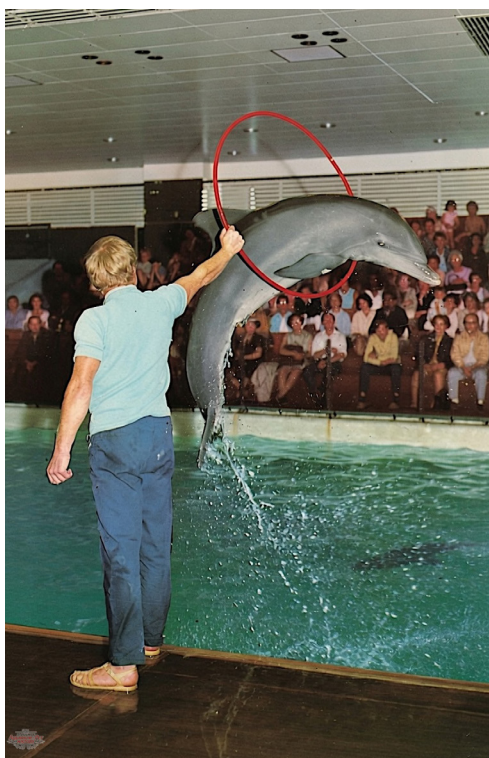
Chimpanzee tea parties proved popular once Brighton Aquarium recovered from the war years. Various parrots and monkeys, plus an American alligator were displayed there in the 1960s.

The Dolphinarium Years and Changing Attitudes

In 1968, a pair of dolphins was introduced in a temporary pool; their popularity led to conversion of the former motor-museum space into a permanent dolphinarium during the following year. A 210,000 gallon (252,000 US gallon/952,000 litre) pool and seating for a thousand spectators turned the site into Brighton Aquarium and Dolphinarium. Seal and dolphin shows drew large crowds at the venue for two decades.



For a period from the late 1960s onwards, dolphins became an integral part of Brighton Aquarium, with the name of the attraction changed to reflect their arrival.



Dolphin shows took place through the day, and the seating in the arena could accommodate 1,000 people for each show.



The dolphinarium became popular at a time before foreign travel was widespread, and the shows gave people a unique view of the natural world in up-close.

By the 1980s, however, public and scientific concern about the welfare of highly intelligent marine mammals in confined conditions grew steadily. Campaigns to end the keeping of dolphins at Brighton Aquarium and elsewhere intensified, while the relatively cramped Victorian fabric of the building there made improvements difficult. In 1990, the decision was taken to close the dolphinarium.



The two remaining Bottle-nosed Dolphins were returned to the wild.

The last two Bottle-nosed Dolphins, Missie and Silver, were transferred for rehabilitation and eventual release into the wild in the Turks and Caicos Islands—an early example of such a program, although whether they actually survived for any time back in the wild is unclear.

Reinvention as a Sea Life Center

In 1991, the Sea Life group (which later became part of Merlin Entertainments) acquired Brighton Aquarium and invested approximately £1.5 million (\$2 million) in restoration and modernization. Cracked Victorian tanks were repaired, new species introduced, and the emphasis shifted toward conservation, education and immersive exhibits, while respecting the historic fabric of the building.

Further major investment followed: a full interior restoration of the Victorian arcade was carried out in 2011–12, and the £2.7 million (\$3.6 million) “Day & Night” coral-reef experience opened in 2019, allowing visitors to observe diurnal and nocturnal behaviour in a large display. Today the centre houses thousands of animals, including an extensive collection of sharks and rays, turtles, seahorses and also offers close-up rock-pool experiences. The building itself is Grade II listed, reflecting its architectural significance.



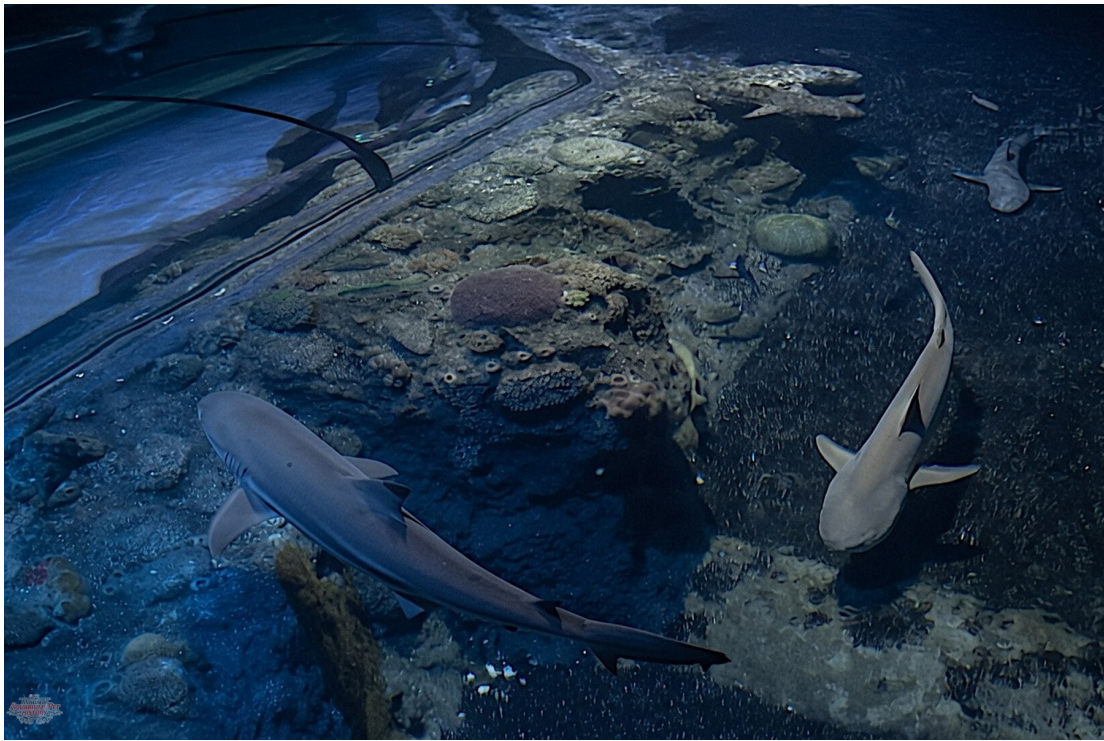
A view looking up from the entrance to the aquarium to the top of the entry point. Photo courtesy Michaelasbest/shutterstock.com



Restoring the fabric of the building to reflect its Victorian heritage was an important aspect of the work undertaken by the aquarium's new owners. Photo by Akara Heart.



The heritage of the building was preserved as much as possible, as seen here in this original tank front. Photo by Akara Heart.



Sharks now swim where dolphins used to jump. Photo by Akara Heart.



The lighting in the building is very atmospheric, capturing the Victorian feel of the original aquarium. Photo by Akara Heart.

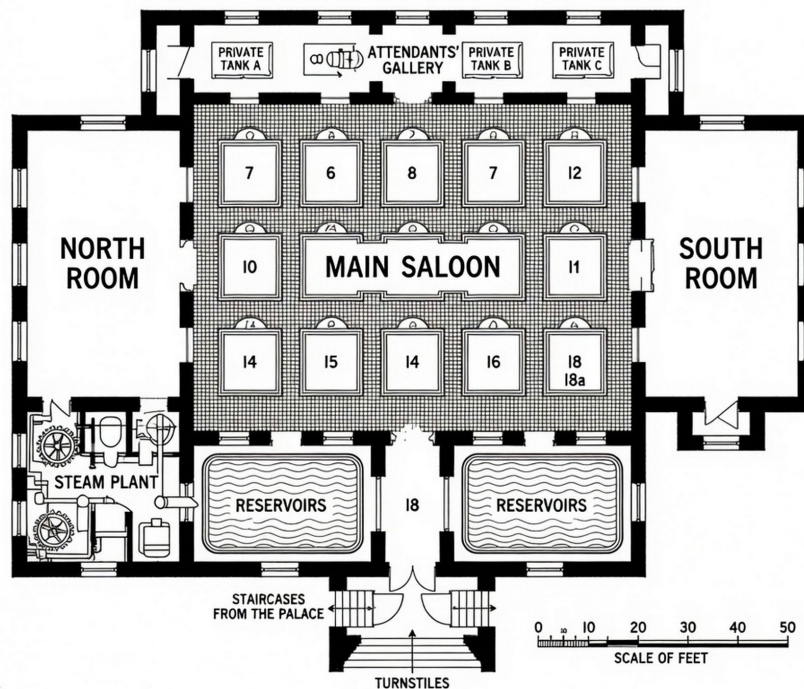
Out of roughly seventy public aquaria established in the first boom period between 1853 and 1914, only about twenty survived into the twenty-first century in any continuous form. Closer to London, Crystal Palace Aquarium, opened in 1871 and although technically sophisticated for its time, being under the management of William Alford Lloyd, it declined commercially within a decade, became a monkey house, and was ultimately destroyed by the 1936 fire that consumed the Palace itself.



An internal view of the Crystal Palace Aquarium.

THE CRYSTAL PALACE AQUARIUM

W. A. LLOYD'S HANDBOOK PLAN



A plan of Crystal Palace Aquarium plus a photo showing what remains visible.



Little remains of this aquarium today.

In the north of England, Scarborough's far larger and more exotic Hindu-Moorish aquarium, also designed by Eugenius Birch and opened in 1877, struggled financially almost from the start. It passed through successive reinventions as People's Palace and Aquarium, then Gala Land, before finally being demolished in 1968 for a car park. No trace remains of this large venue, which covered an area of nearly three acres.



An external view of Scarborough Aquarium.

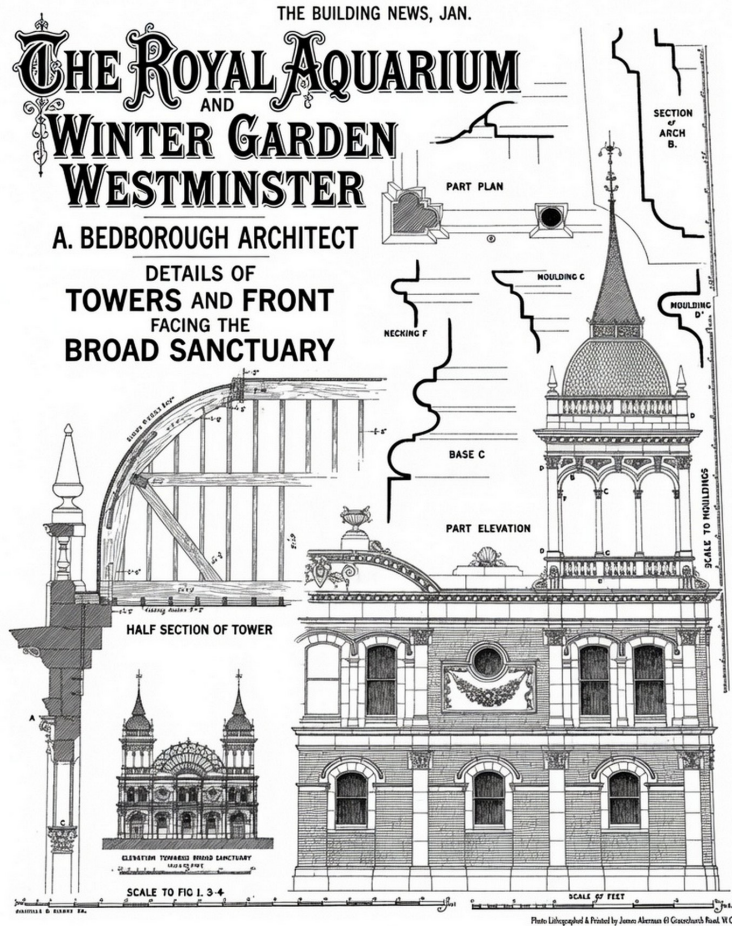


Internally, this aquarium had a strong eastern design elements - these may have been a reflection of the influence of Brighton's famous Royal Pavilion on Eugenius Birch.

The short-lived Royal Aquarium and Winter Garden, which stood opposite Westminster Abbey in London, closed in 1903, having only opened in 1876. The attached theatre surviving for another four years until that too was demolished. The aquarium had thirteen large tanks, but they were often only sparsely stocked. Things there were so bad that a dead whale had to be placed on display in 1877 as a stop-gap attraction. The situation was even worse outside the capital, with equivalent provincial ventures lasting literally only a few years after opening, leading to the loss of huge sums of money.

Brighton's survival, however, rested on several interlocking advantages. First was its location, across the road from the pier and seafront attractions. As a major seaside resort with excellent rail links, Brighton could count on a steady flow of visitors even when the initial novelty of the aquarium faded. It was located within walking distance of the railway station, almost right on the shoreline, meaning also that the issue of fresh seawater was never a problem. Crystal Palace Aquarium in contrast had to rely on supplies of sea water sent from Brighton by train to replenish its tanks.

The aquarium also benefited from early municipal intervention. Corporation ownership from 1901 provided a safety net unavailable to purely commercial companies elsewhere; ratepayer support and civic pride kept the institution alive through lean periods. Its architecture and design helped too. The building's large volume and roof terrace allowed repeated conversion to concert halls, nightclubs, museums, baths and play areas to reflect the latest trends, without destroying the halls where the tanks were sited



The plan of the Royal Aquarium.

AQUARIUM.

In the Tanks at the Royal Aquarium will be found a large variety of Aquatic Animals, rarely ever seen elsewhere in captivity. The following is a short summary of the more familiar:

TANK 1.—Ballan, Blue and Red Wrasse; Sponges, Ascidians, &c.

2.—King Crabs, Sea-Crawfish, Small Congers, Sapphire Gurnards, &c.

3.—Large Anemone Tank (various species).

4.—Spotted Dogfish, Young Topers, Large and Small Monkfish, Thornback, and Spotted Rays, &c.

5.—Grey and Red Mullet, &c.

6.—Rock and other Whiting, &c.

7.—Black Bream, Picked Dogfish, Streaked and Common Gurnards, Spider Crabs, &c.

8.—Bass, King Crabs, Bullheads, &c.

9.—John Dorys, Turbot, Soles, Brill, Plaice, Flounders, &c.

10.—Large Congers, (one weighing upwards of 50 lbs.) Edible Crabs and Lobsters.

11.—Large Anemone Tank (various species).

12.—Sticklebacks, King Crabs, &c.

13 to 20. (on the North Side).—Largest Aquarium Tank in the World, containing 95,000 gallons of water, is 145 feet long by 22 feet wide, being stocked with upwards of 1,500 fresh water fish, including Rudd, Bronze and Prussian Carp, Bream, Tench, Perch, Roach, Dace, &c.

In the Small Saloon will be found the Large Seal Pond, Small Anemone Tanks, Salmon Hatching Apparatus, The Insectarium, several species of Birds, and the Wall Tanks containing numbers of Marine and Fresh Water Animals.

In other Tanks are Otters, Alligators, Japanese Goldfish, &c.

The Large Reptile Case near the Reading Room contains amongst many other reptiles, Baby Alligators and Crocodiles, Chameleons, Bull Frogs, Tortoises, &c., &c.

The Seals are fed three times daily, viz., 1.30., 6.0. and 8.30 p.m.

The Otters at 2.0., 6.0., and 10 p.m.

All applications relating to the Aquarium Department to be made to the Naturalist and Curator, Mr. JOHN T. CARRINGTON.

NOTICE.—Visitors having complaints of any kind are requested to communicate with the Manager, or his representatives, at the Office near the Library.

A list of species it was claimed were exhibited at the Royal Aquarium.

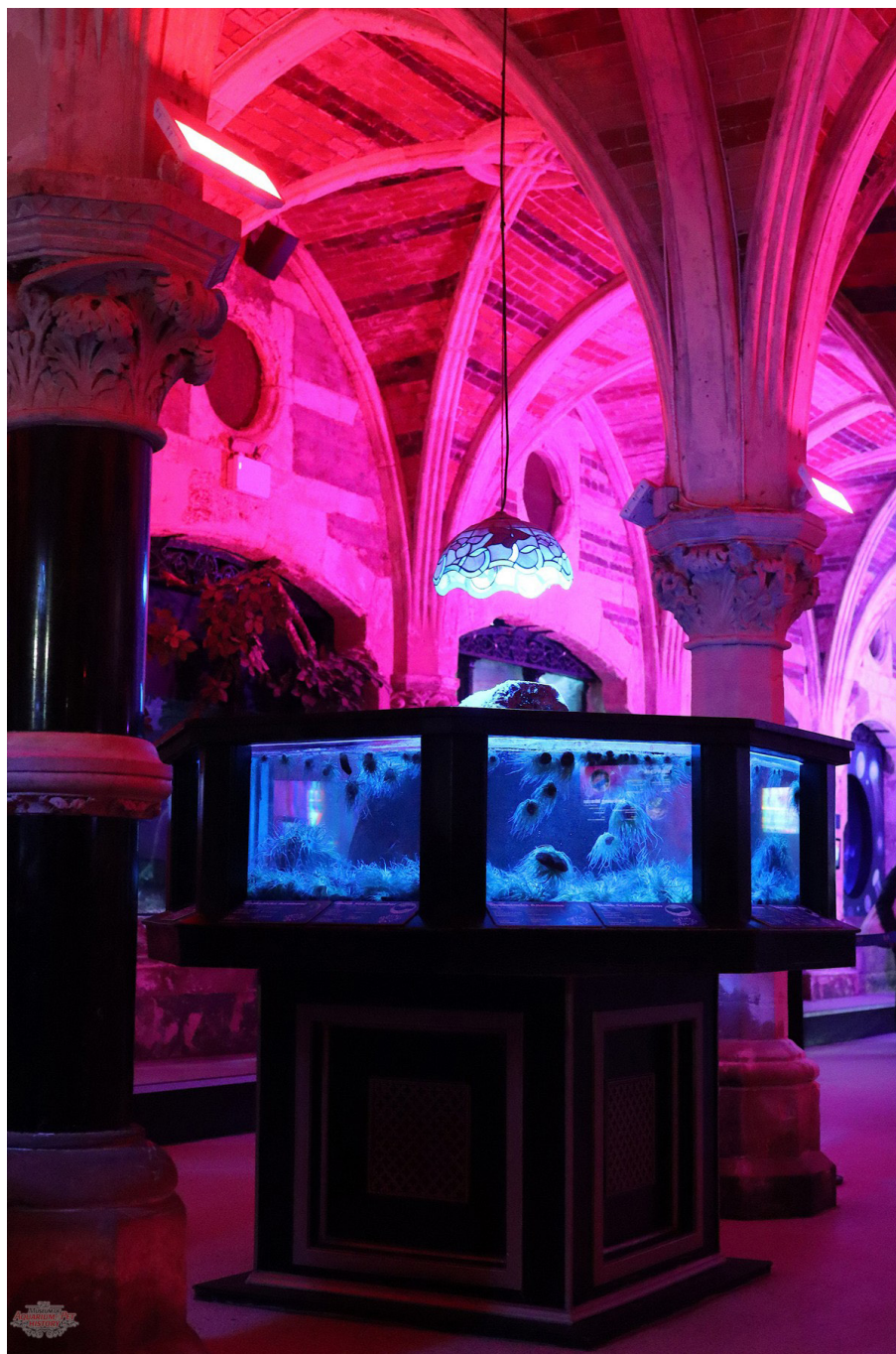


The exterior of this building, which stood in one of London's most important and prestigious locations.



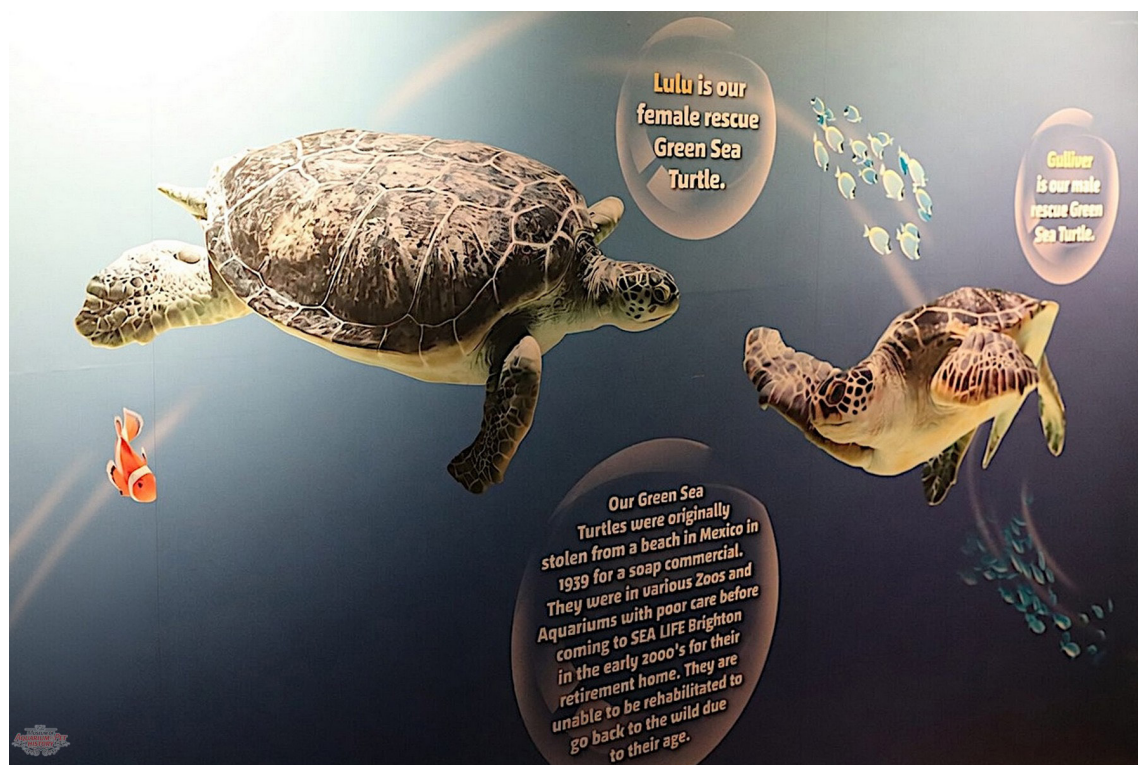
An early aerial view, revealing the proximity of Brighton Aquarium (bottom right) to the sea.

Although reinvented on various occasions through its history, Brighton Aquarium has operated continuously and indeed, once established as a permanent civic amenity, it became harder to close completely. Most recently, late twentieth century professionalisation under Sea Life ownership brought modern husbandry standards, marketing expertise and capital investment that earlier municipal or private managers could not match, while the Grade II architectural listing ensured that demolition was never a realistic option.



A rare survivor - an original octagonal wooden framed viewing tank still in use today at Brighton Aquarium. Birch utilized the same design at Scarborough too.
Photo by Akara Heart

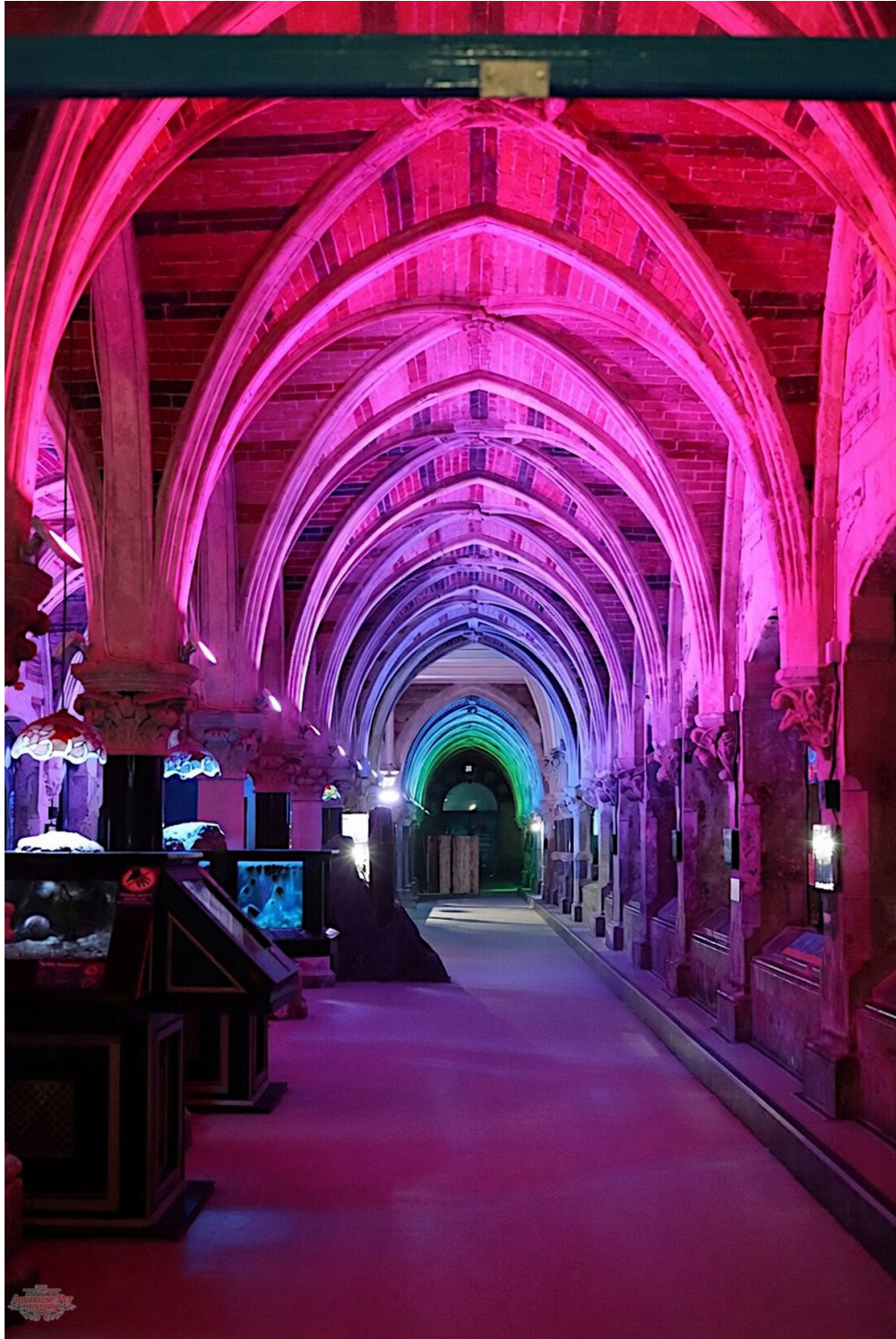
Technical lessons also mattered. Early aquaria often suffered from poor water circulation, temperature control and livestock sourcing. Brighton's direct access to seawater and the successive modernisations of its filtration systems reduced these problems. Equally important was the gradual shift from pure spectacle toward education and conservation, aligning the institution with contemporary values rather than fighting them.



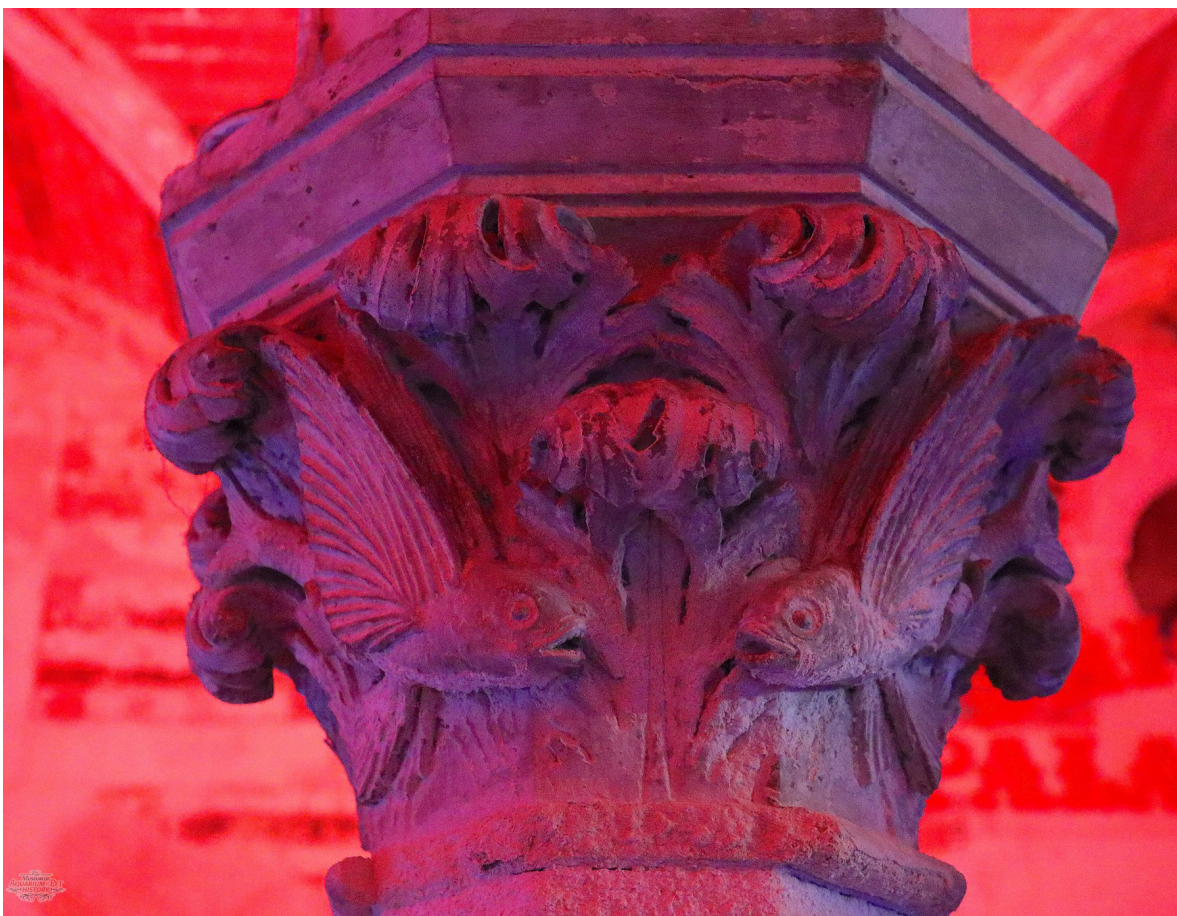
The aquarium is heavily involved in rehabilitation and conservation projects, as well as education, with behind-the-scenes facilities being used to aid stranded or injured sea turtles in need of assistance. Photo by Akara Heart.

From Gosse's first careful experiments with seaweed and glass jars to the present multi-million-pound exhibits, the history of public aquaria is a story of technological ingenuity, commercial risk and changing cultural attitudes towards tank occupants. Brighton Aquarium embodies that story more completely than any other surviving institution. It opened when the very idea of a public aquarium was still new; it outlasted the Victorian boom and the mid-century entertainment diversions; it abandoned the dolphin shows that once sustained it; and it reinvented itself again as a modern Sea Life Centre without abandoning its Victorian past, but rather, by embracing its origins.

More than fifty million visitors have passed through Brighton Aquarium's vaulted corridors since it opened in 1872. The same seawater that once filled Birch's great central tank still rises and falls with the Channel tides in the reservoirs beneath the building. In an age of digital spectacle and global travel, the quiet drama of fish moving through clear water retains its power. That continuity—architectural, institutional and experiential—is Brighton's distinctive achievement. Whereas so many ambitious Victorian aquaria became footnotes in history and were even flattened to form car parks, Brighton Sea Life Centre remains a living link between the first public unveiling of the wonders of the deep and the conservation-minded aquaria displays of the present day.



Looking down the main corridor at Brighton Aquarium towards the end of the building, where the former dolphinarium has now been converted into a walk-under set up, allowing visitors to experience sharks and other marine creatures swimming overhead. Photo by Akara Heart.



Flying fish and other aquatic creatures carved over 150 years ago decorate the top of the pillars beneath the vaulted roof. Photo by Akara Heart.

Akara Heart and I would like to extend our deepest thanks to Savannah and also Neil Harris, General Manager at SEA LIFE Brighton, for their kind and generous assistance during our visit. Without their help and support, this article would not have been possible.

Visit SEA LIFE Brighton

Website: www.visitsealife.com/brighton

Opening times vary seasonally (typically from 9:30am or 10:00am, with last entry one hour before closing). Please check the official website for the most up-to-date hours before your visit.