

Sea science

Ostend was home to the world's first marine biology station

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Ostend's historical grandeur goes beyond its glory days as a high-end beach resort: the Flemish city also shined as a scientific centre, and the Flanders Marine Institute recently celebrated its pioneering marine station.

In 1843, biologist Pierre-Joseph van Beneden picked a site on his in-laws' oyster farm, located on the east bank of the port of Ostend, to set up a modest laboratory. The "laboratory of the sand dunes" was the first marine station in the world – before similar labs sprouted in other countries, such as France (Concarneau, 1859) and Italy (Naples, 1872).

In Ostend, van Beneden established his research on fish parasites and studied the Belgian coast's fauna. The marine station was located near the Ostend fish market, with fishing vessels and oyster

animals inspired him to become a biologist.

He went on to study medicine in Leuven and then specialised in zoology at the Natural History Museum in Paris. In these first years, van Beneden focussed on parasitology: he famously unravelled the life cycle of tape worms, demonstrating the link between the adult worms in humans' intestines and the larvae in pork or beef.

From 1859 on, van Beneden studied whales and explored the embryology and anatomy of marine invertebrate animals. In 1878, he determined that the fossil skeletons discovered in the Bernissart coal mine in Wallonia belonged to iguanodon dinosaurs.

Van Beneden's legacy also extends to Belgium's national dish, mussels. He is said to have caused an invasion of zebra mussel (*Dreissena*) in the area. His

provinces' waterways is well known: van Beneden introduced them... Ten years later, mussel shoals obstructed the canal locks, which had to be cleaned at great expense. The serious professor mentioned proudly that this experiment was so successful..."

Now, Flanders boasts about 100 research groups that study the sea, tides and coasts. The Ostend-based VLIZ is in charge of promoting all this work internationally. The institute does not carry out its own research, but it organises meetings and congresses and manages a collection of multidisciplinary scientific literature and media about marine and coastal sciences.

Importantly, VLIZ is home to a data centre that collects and accesses information from Belgium and abroad, as part of several international networks; in addition, the institute provides specific information to policy-makers.

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During the 1970s, the scientists abandoned the building, which was then damaged during the First World War and finally disappeared completely during the extension of Ostend's harbour channel. The Flanders Marine Institute (VLIZ) has recently unearthed historical materials to spot the exact location of the laboratory and found that the current institute actually overlooks the former site.

Last June, VLIZ unveiled a commemorative plaque to remind passers-by of the place's scientific past, and more generally to celebrate Ostend's international reputation throughout centuries of life sciences.

Marine science pioneer

Van Beneden started out as a pharmacy apprentice at Louis Stoffels' in Mechelen. There, he developed a knack for life sciences and palaeontology: Stoffels' collection of fossils, minerals and



Van Beneden built his marine station on his in-laws' oyster farm in Ostend

Like father, like son?

100 steps. EDOUARD IS ONE OF BELGIUM'S most famous biologists; he elucidated the stages of meiosis (the division process that cuts the number of chromosomes in two to produce reproductive cells). Van Beneden senior was a creationist: he believed that all plants and animals were put on earth just the way they are. But van Beneden junior believed in Darwin's evolution theory, which he introduced to the Belgian academic world.



Belgium's groundbreaking marine biologist Pierre-Joseph van Beneden

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Photos from Hamoir, G, *La révolution évolutionniste en Belgique: du fixiste Pierre-Joseph Van Beneden à son fils darwiniste Edouard*, Université de Liège, Liège, 2002, 187p