

On the relation between the Institut für Meereskunde in Berlin and the Biologische Anstalt Helgoland

W. Lenz

*Zentrum für Meeres- und Klimaforschung, Universität Hamburg; Bundesstraße 55,
D-20146 Hamburg, Germany*

ABSTRACT: The "Institut für Meereskunde" (IfM) in Berlin, founded in 1900, first took up marine biology as a section of its museum, in which emphasis was placed on the environment and the components of local ecosystems rather than on extraordinary species. The first joint research project of the Biologische Anstalt Helgoland (BAH) and the IfM in Berlin was instigated by the physicist A. Merz; it included several time-series of hydrographical and biological samples at fixed stations (light vessels) in the German Bight. When plans were made to establish a biological station in Constantinople during World War I, the colleagues in Berlin tried to change it into an integrated physical-biological station, in which biological research would concentrate on revealing the laws of nature rather than simply describing the biosphere. During the recession after the war, the Prussian government was anxious to unite both institutions in order to save money. However, Mielck of the BAH succeeded in preventing the take-over by the Institute in Berlin. The relation between the two institutes stayed cool up to the destruction of the latter in 1945.

At the turn of this century, when the "Institut für Meereskunde" at the University of Berlin was founded by the geographer Ferdinand Frh. von Richthofen (1833–1905), an essential part of the concept was that it should include a marine museum. This museum was opened in 1906 by the German Emperor Wilhelm II. Also present at the opening ceremony was Prince Albert I. of Monaco, who was himself an enthusiastic marine researcher, and founder of the famous Musée Océanographique in Monaco. Besides other aspects of German interests in the sea (military and economic), the museum offered a marine biological section, which gained an outstanding reputation owing to its successful didactical presentation.

Shortly after the opening of the museum, its biological section became well-known to teachers of natural science throughout the country, due to a detailed article in the journal "Monatshefte für den naturwissenschaftlichen Unterricht". The author (Klatt, 1908) praised the exhibition, the likes of which Germany had never had before, as a triumph of the new way of presenting research results. This biological way of looking at nature was completely new, i. e. all components of an ecosystem were considered without any valuation. Up until then, single species used to be selected for their economic importance, or their beautiful or exotic appearance, as is still the case in some zoological museums and aquaria even today. The Berlin museum presented examples of living communities taken from selected areas in the North Sea, the Mediterranean Sea, the Red Sea and the Antarctic. The aim was to give visitors some understanding of the specific character of ecosystems and to show their dominant species.

When the geographer and geologist Alfred Grund (1875–1914), who was responsible for the exhibition, visited the Biological Station in Bergen/Norway in 1907, he was surprised to learn that both its director, as well as his assistant, were not biologists but hydrographers.¹ As Norway played a leading role in hydrography – due to Fridtjof Nansen (1861–1930), Vilhelm Bjerknes (1862–1951), Johan Sandström (1874–1947), and Björn Helland-Hansen (1877–1957) – his report probably had a lasting influence on the opinion, prevalent in Berlin, that biological research should be guided by the hydrographers' way of thinking.

In the beginning, Berlin conducted almost no research activities at sea. This was, of course, considered a deficiency to be overcome. The second director of the Institut und Museum für Meereskunde, Albrecht Penck (1858–1945), wrote on this subject:

"With this view of oceanographic work, in mind, it became increasingly urgent to get a place by the sea for the Institut für Meereskunde, where students could be introduced to the observation of the sea itself and to the methods of marine research. The German coast unfortunately offers few appropriate places for it . . . ; only the island of Helgoland is a suitable base for marine research. The Biologische Anstalt, located on Helgoland for some years now, has been conducting surveys with great success, namely in the interest of fisheries. However, Helgoland is not easily usable for training at sea: the necessary accommodation is lacking." (Penck, 1912, p. 421).

As an alternative, Penck proposed the coast of Istria, where the Berlin Aquarium already had a zoological station in Rovigno (Rovinj). Its director, Prof. Thilo Krumbach (1874–?), became custodian of the Institut and conducted many courses in the Adria for students from Berlin in the following years.

Besides this orientation to the South, the wish to give students the chance to become acquainted with the waters off the German coast was not relinquished. Since the Institut in Berlin did not have access to a research vessel, the idea arose to use light vessels in the German Bight for observation purposes. Thanks to the co-operation of the local authorities, who ran the light vessels, an observation programme was set up in 1910/11, in which the BAH was in charge of the biological part. The hydrographical results were published by Wendicke (1913) as the first thesis of the Institut in Berlin, whereas the biological results were not documented. The main objective of the programme was to conduct observations at fixed points for a couple of days. This method was based on the findings of Alfred Merz (1880–1925) – oceanographer of the Institut from 1910, who had postulated 24-hour-observations to understand the movement of the sea. Today it is a standard method for tidal waters, but Merz was one of the first to be aware of the fluctuations of temperature and salinity within short periods at the same point, which he had already found in observations in the Adriatic Sea (Merz, 1910). He demanded the observation of many hours as a third oceanographic method besides expeditions and "Terminfahrten". His proposal was accepted years later by ICES.

During World War I, the inhabitants of Helgoland had to be evacuated since the island was used solely for military purposes. Most of the male colleagues of the BAH joined the armed forces. Its oldest custodian Clemens Hartlaub (1858–1927) was ordered to work in the Institut in Berlin.

When the Ottoman Empire, Germany's ally, called German troops to the Black Sea, a biological station near Constantinople was planned. Penck was asked for his opinion and he stated that this station should not be a zoological one but an integrated physical-

biological station, in which biological research would have to be subordinated according to physical demands. And he gave an example of what he meant: Constantinople would not be suitable for the location of a station, because the study of fauna and flora should be carried out at places where conditions are constant and clearly pronounced, but not where changes are dominant as is the case in the Bosphorus.² In a statement by Krumbach, the idea of a station in Turkey was rejected, with the argument that the Mediterranean and Black Seas already had enough stations, and that Germany had better look further to the South where stations in German colonies in Africa could find completely undiscovered marine environments. Krumbach proposed the word "Meereskunde" instead of biology to define the aims of those stations. The cosmological thinking of Alexander von Humboldt should be adopted, in which the question of evolution of species would only be one part³ – although it was the most discussed problem in those days.

These dreams soon had to be buried due to the results of the First World War. Lack of money forced the responsible administration in Berlin to think of a fusion between the BAH and the Institut für Meereskunde. Wilhelm Mielck (1879–1933), following Friedrich Heincke (1852–1929) as director of the BAH, was wary of becoming dependent upon the colleagues in Berlin. With great foresight he wrote to Merz, who had just followed Penck in the directorship of the Institut in Berlin, that closer cooperation would be eminently welcome, but that it would not be economical, unless the staff in Berlin were to be reduced. He even cynically offered unevaluated biological material to the biologists in Berlin, which would be cheaper than taking new samples. Merz answered that he did not agree with this and suggested that, rather than corresponding, Mielck himself should come to Berlin for further talks. This resulted in an agreement between both institutions in 1924⁴, in which

- facilities of the BAH should be available for the purposes of the Institut in Berlin at any time,
- the Institut in Berlin should conduct courses in hydrography at Helgoland, and it should assist the biological observations of the BAH with respect to hydrography, while scientists from the BAH should participate in the teaching programme of the Institut in Berlin,
- Berlin should host biologists from Helgoland – one at a time – who were to display the work of the BAH in the museum and to explain it by lectures.

On the basis of this agreement, Mielck asked for hydrographic courses at Helgoland⁵, but Merz did not want to interfere with the interest of the Deutsche Seewarte (Hydrographic Office), which had conducted such courses before the war. However, Merz asked for a contribution from the BAH to the forthcoming public colloquium of his Institut, suggesting a topic like "A day in the aquarium of Helgoland".⁶ The lack of response, however, forced Merz to withdraw his offer.⁷

It seems, that Merz and his colleagues had given up wanting anything from the tiny BAH off the coast. They directed their activities to the Atlantic Ocean and even further around the globe. Merz envisioned his Institut becoming number one in the world. That, however, is another story still to unfold.

In 1939, the custodian of the BAH, Helmuth Hertling (1891–1942), applied for the position of the retired Krumbach, the custodian for biology and sea-fisheries at the Institut in Berlin. Hagmeier supported his application by mentioning that Hertling was a member of the National-Socialist Party and a political leader at Helgoland. He also

referred to the good relationship between both institutions and that his appointment would strengthen this relationship.⁸ Documents of this kind of relationship are, however not available. Hertling got the appointment in Berlin and was designated professor in 1940, recommended by Defant, who attested his National-Socialist ideology.⁹

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NOTES: ARCHIVAL SOURCES

Archives of the Humboldt University Berlin: Institut für Meereskunde:

B5: Biologische Anstalten und ähnliche Institute

H10: Hertling

- 1 Letter of A. Grund to A. Penck, 21. 11. 1907 (B5).
- 2 Letter of A. Penck to F. Schmidt, 10. 10. 1916 (B5).
- 3 Letter of Th. Krumbach to A. Penck, 31. 8. 1916 (B5).
- 4 Proposal of 17. 7. 1924: Vereinbarungen zwischen der biologischen Anstalt auf Helgoland und dem Institut und Museum für Meereskunde in Berlin (B5).
- 5 Letter of W. Mielck to W. Stahlberg, 8. 3. 1924 (B5).
- 6 Letter of A. Merz to the director of the Biologische Anstalt auf Helgoland, 22. 10. 1924 (B5).
- 7 Letter of A. Merz to the director of the Biologische Anstalt auf Helgoland, 16. 12. 1924 (B5).
- 8 Letter of A. Hagmeier to A. Defant, 9. 1. 1939 (H10).
- 9 Letter of A. Defant to the Ministry, 19. 12. 1939 (H10).

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