

COMMENTARY

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Wulf Greve (1942–2018)

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It is with great sadness that we bid farewell to our esteemed colleague, Dr. Wulf Greve, who passed away on the 26th of January 2018.

Wulf Greve was one of the founding fathers of zooplankton research at the Biologische Anstalt Helgoland (BAH). When Wulf arrived to do his Ph.D. in the nineteen sixties the BAH was already more than 75 years old and, strangely, no one had seriously worked on zooplankton up until then. Moreover, zooplankton research in general had been, until then, focused mainly on zooplankton in its function as food for fish. Not much work had been carried out on the ecology and phenology of copepods and other zooplankters in the North Sea and especially around Helgoland. This changed when Wulf arrived. Wulf Greve grasped all the experimental opportunities available to him at the Biologische Anstalt Helgoland wholeheartedly and tirelessly. The BAH, which had at that point already been back on the island after its wartime evacuation, for merely a decade before he arrived,

was evincing an upswing of experimental ecology and thus, Wulf decided to follow an experimental approach in his research on zooplankton. He courageously focused on gelatinous zooplankton in his early years, which was difficult to sample because of its fragility and which was a nightmare to keep in the laboratory, and much less possible to culture. Undaunted and ingenious, he designed experimental vessels (for example the “Planktonkreisel”) to keep them alive and implemented appropriate methods for culturing them. This allowed him to carry out a suite of very important and groundbreaking experiments on the ecology and physiology of the ctenophore *Pleurobrachia pileus*. He was among the first to recognize the very strong interactions between *Pleurobrachia* and *Bolinopsis* as prey, with two other ctenophore species of the genus *Beroe*, *B. gracilis* and *B. cucumis* as predators. He recognized that each *Beroe* species specialized on one of the two prey species.

In those early days, German scientists were still very much expected to publish their results in German, as Wulf did, and thus it is even more amazing that despite this, his work made groundbreaking contributions to the world literature on ctenophores.

From the early 1960s, scientists on Helgoland were taking daily samples at Helgoland Roads for physical and chemical parameters such as temperature and salinity and nutrients, and concomitant analysis for determination of the population densities of phytoplankton. Wulf Greve realized soon after finishing his Ph.D., and his following tenure at the Biologische Anstalt Helgoland, that in order to achieve a complete understanding of what was happening in the ecosystem it was of utmost importance to monitor the zooplankton as well as the phytoplankton. Thus, he established the zooplankton time series in 1974, and thanks to his tenacity this time series has been running ever since, resulting in many publications on zooplankton dynamics. After establishing the zooplankton time series and seeing the dynamics of the North Sea

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ecosystem, Wulf became particularly interested in the phenology of zooplankton. Using relationships that he established from the time series, he was able to predict the dynamics of a great many zooplankton species very accurately. His understanding of the dynamics of the system were deep and profound.

In the 1970s Wulf was stationed and worked on Helgoland, and had, as all of the other researchers based on Helgoland, several hats on at the Institute. One of these “hats” was a special one: he was the contact person for the guest-research on the island. Guest science was and is pivotal to the BAH and German marine science. As early as the mid 1800 s, researchers from all over the world had been coming to Helgoland for sampling and experiments. Wulf felt honoured to carry on in this wonderful tradition of the Biologische Anstalt Helgoland, especially as he, having travelled extensively himself, valued scientific exchange greatly. In 1982, he left Helgoland and moved to the new headquarters of the BAH, in Hamburg. The locals and scientists alike sorely missed him, with his indomitable enthusiasm and straightforward personality.

Throughout his whole career, no matter where he was stationed, Wulf kept coming back to the ctenophores, his real true love in the plankton. His interest was particularly tickled when the invading ctenophore *Mnemiopsis leidyi* was discovered also in the North Sea. Wulf visited Helgoland loyally each summer and many wonderful anecdotal discussions ensued. Close to his retirement in 2007, we supervised a student together, who tested some of the questions that first were posed in Wulf’s 1970 s papers. With this we came full circle to the young Wulf who courageously established experimental zooplankton research on Helgoland.

We are honoured to have been able to work with Wulf, and to have shared a glass of wine on a warm summer evening while discussing the ecology of marine organisms in the context of the “grand scheme of life”. We will always remember him fondly and with deep respect.

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