

EXPLORING THE POSSIBILITIES OF COLLECTION-BASED ECOSYSTEM RESEARCH AT THE HUSTEDT CENTRE

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The Hustedt Diatom Study Centre, founded around Friedrich Hustedt's diatom collection in 1965, has been part of the Alfred Wegener Institute for Polar and Marine Research since 1986. Our activities in the last two years have focused on exploring possibilities of involving the collection in ecosystem research centered on Southern Ocean diatoms, a traditional group of focus for the AWI. We identified three main, connected disciplines which can benefit from the double embedding into a taxonomic collection and into an Earth systems science research institute: digital taxonomy, biogeography and biodiversity informatics. Besides their inherent connections, these disciplines are also increasingly in contact through their shared interest and activities aimed at archival, exchange and re-use of primary biodiversity data. We initiated projects using primary biodiversity data in parallel with ones providing such, in an attempt to augment traditional ways in which the collection is being used and to experiment with improving the communication between taxonomy and its 'user disciplines'. The poster presents an overview of our activities, including establishment of a digital taxonomic repository about planktonic diatoms of the Southern Ocean, progress towards data provision to the GBIF network, using species occurrence data in a species distribution modeling project and initial experiments towards automating digitization of microscopic slides and downstream use of these images. The mid-term goal of these activities is to extend the current information infrastructure of the Hustedt Centre into a digital biodiversity research facility useful for a researcher community beyond taxonomists, while keeping and extending traditional taxonomic roles like deposition of types.