

Glass Jewels of the Sea – Diatoms

David W. Walker, UK (email micscape@ntlworld.com)

In the world's oceans and many freshwater habitats there feature a wide variety of microscopic plankton. One of the major groups are the single-celled diatoms which have exquisitely sculptured shells made of silica i.e. glass. Diatoms are algae and their vast numbers in the ocean have an important role via photosynthesis in capturing dissolved carbon dioxide.

The shells have a structure akin to the old pill boxes where the smaller half closely fitted with the other half.

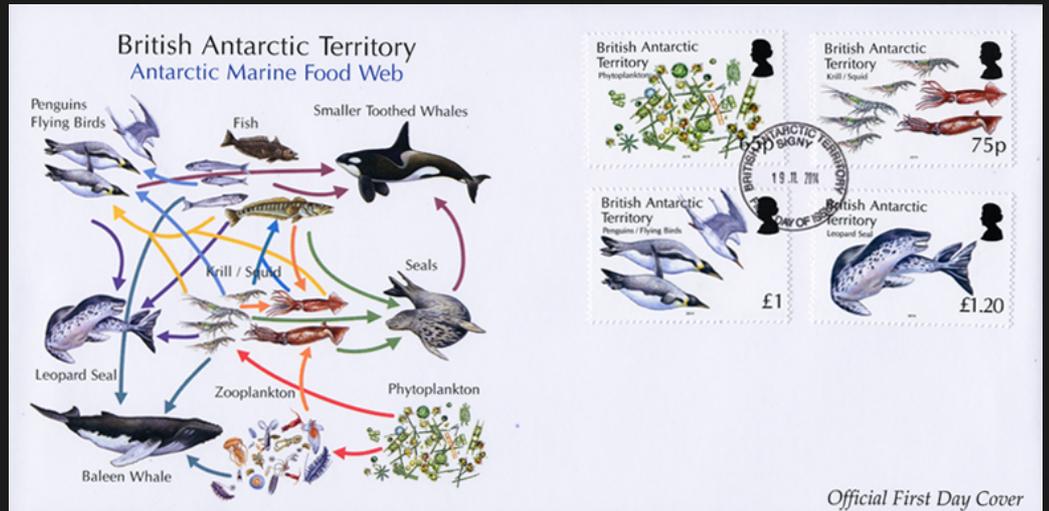
As an amateur microscopist who enjoys studying and photographing prepared slides of diatoms both modern and 19th century, collecting diatoms as a philately thematic complements this hobby.

Above, right, Germany 2015, an issue in the 'Microwelten' ('microworld') series, an attractive postmark depicting a diatom accompanies this example.



Above, all 115% actual size. Left, the Portuguese issue (1998) illustrates a species that form colonies. Middle, the Macedonia example (2010) shows a species with an intricate twist of the shell. Right (1984), a species with a very distinctive shape.

Right. The cover (2014, 60% actual size) illustrates the important role that phytoplankton (including diatoms) form in the food web for larger organisms.



Left, 2016 (117% actual size), design credited to S. Beaujard. The diatoms have slightly raised inking, providing a 3D impression to each species. Right. From the 19th century onwards diatoms were intensely studied by microscopists, their very fine detail were used as optical tests as objective designs improved. They were also manipulated under a microscope to make attractive patterns such as this example by J. A. Long who lived a few miles from the author's home in West Yorkshire in the north of England. Image taken by the author using a microscope, magnification ca. 30X.

Acknowledgement. Thank you to Mark B. Edlund who has compiled and presented thematics on diatoms and who helped me to build my own collection.

