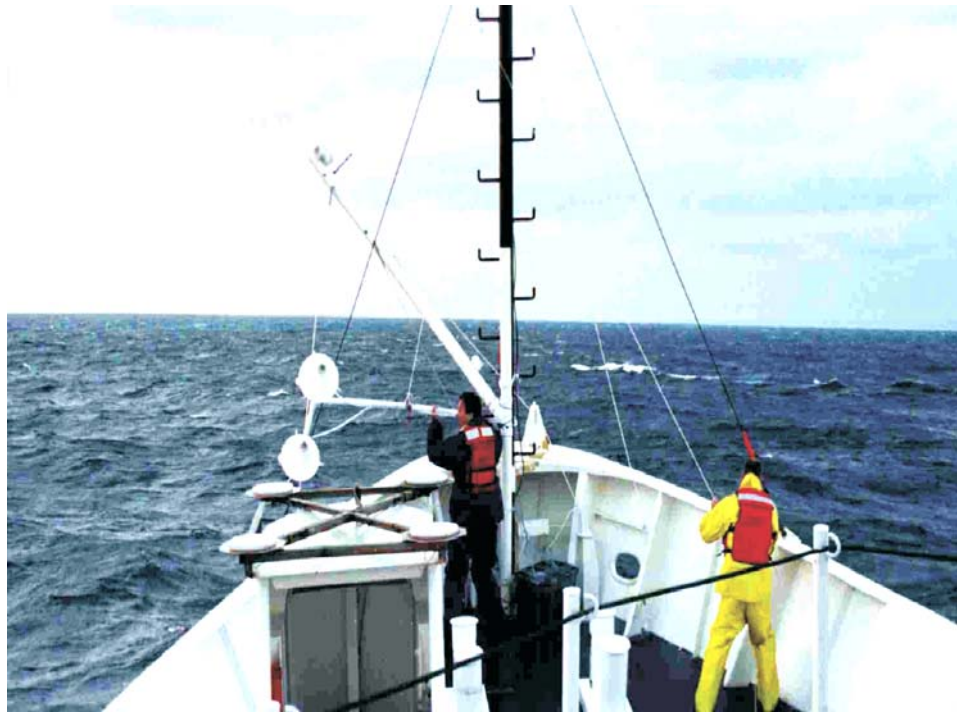


# GK-12 Graduate Fellows Program

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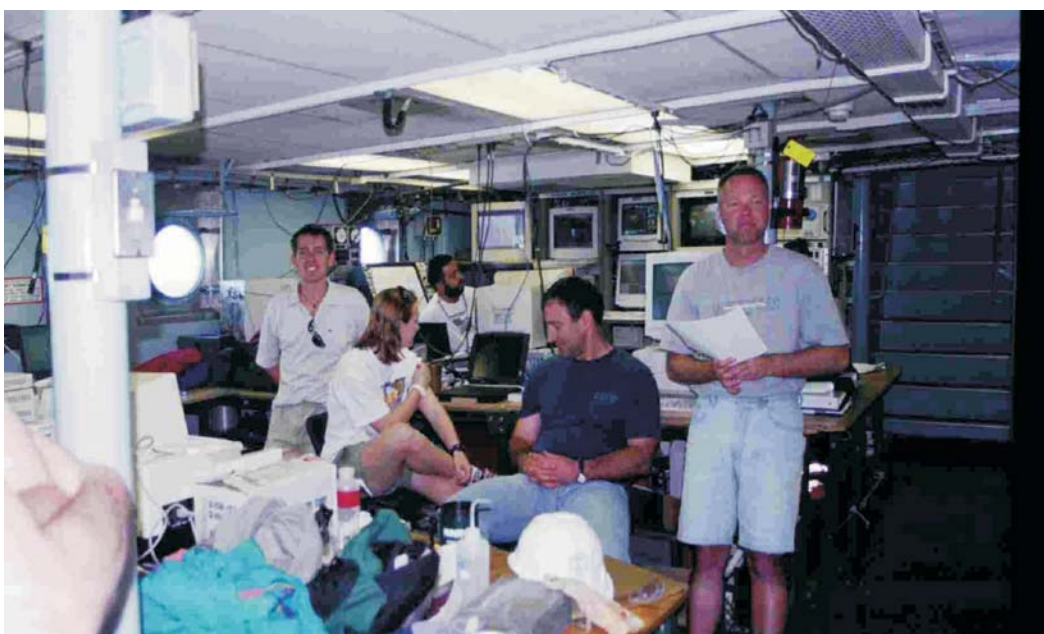
## Dr. Brooks Avery: the BioGeoChemist

A **biogeochemist** possesses a wide range of knowledge, pulling from three interdisciplinary sciences: **biology**, **geology**, and **chemistry**. A **biologist** studies living things from single-celled microscopic organisms to large mammals and plants. They want to know how it thrives and the habitat it needs, also how they grow and adapt to our changing environment. **Geologists** study rocks and the structure of the earth. They try to identify its history and how it came to be presently. A **chemist** studies chemicals - particularly their structure, composition, and properties and the reactions occurring between them. All three of these are considered scientists and can study very broad areas in their field or areas that are very specific and defined - such as a **marine biologist** who only studies the marine environment or a **coastal geologist** whose emphasis is on coastal environments and the processes shaping them.



Dr. Brooks Avery is a **biogeochemist**. He looks at the interactions of **biology**, **chemistry**, and **geology** in a specific environment. His work focuses mainly in the research areas of **Marine Chemistry** and **Atmospheric Chemistry**. With this research he examines fluxes of organic carbon in the sediment, water column, and the atmosphere. This allows him to determine which environments act as sources to release carbon to the other environments and which act as

sinks to remove carbon and store it long term. By analyzing these different environments and their interactions he can quantify the fluxes of organic carbon within the system. This allows him to produce models that will help him and other scientists predict and understand how each of these varied environments and their associated processes can impact carbon cycling. These impacts are determined both regionally and globally with implications for global warming.



Although, Dr. Avery loves his work as a researcher and an educator he also has many hobbies. In his free time he enjoys rebuilding classic cars, riding his motorcycle and spending time with his wife and son. He's also currently in search of the perfect wave.

