



Paleoceanography:

If you do not know your past, how can you know how you've changed over time? To understand who you are now, you must first understand your growth process leading up to this time. Environmental change is the same. The studies related to characteristics and their controlling mechanisms in the ancient ocean is called Paleocanography.

To understand the changes of the past in the land and the seas, you must first search for specimens that hold a record of environmental changes. Think for a minute, where can you find good materials to study? How about the permanently frozen ice caps of Antarctica? The sediments on the seafloor of the deep ocean, the Loess Plateau of China, ferromanganese nodules at the bottom of the ocean, and so on are all useful materials. Among these, their chemical compositions may hold records of the ancient environmental conditions of the land and sea. We understand there is a close relationship between the concentrations of carbon dioxide and temperature in the atmosphere, and iron flux in the ocean over the past several hundred thousand years. These parameters are obtained from gas bubbles, water molecules, and dust trapped in the ice cores.

