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### Title

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W. E. Allen's Phytoplankton Species Time Series and Environmental Factors from the North American Pacific Coast, With Related Illustrations from Cupp and Kofoid.

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During his residence at Scripps Institution of Oceanography (SIO), Professor Winfred Emory Allen (1873-1947) collected, identified, and enumerated marine phytoplankton species in weekly samples taken at single North American Pacific coastal locations from 1917-1939. His time-series of species spatial and temporal distribution stood as probably the best of its kind in the world. Fortunately after his death, much of his original data, was placed in a chest and eventually stored in the attic of a building at SIO. It was "discovered" in the 1970s, and Sargun Tont was the first to compile a computer database of diatom and dinoflagellate species abundances having time series data for SIO and Port Hueneme (California) piers. Those tapes were lost through time, but the time series of species abundance has again been reconstructed into a new database. This later database included not only time series data of SIO and Port Hueneme diatom and dinoflagellate species abundances, but species abundance data from Oceanside, Pacific Grove, Farallon Islands, and Scotch Cap (Alaska) piers as well (Thomas et al., 2001).

The purpose of this e-book is to disseminate the historical phytoplankton data set as reconstructed by Thomas et al. in a more practical manner, as well as to incorporate available meteorological, climatic and oceanographic time-series data that pertain to the location and period of the Allen phytoplankton data. The data sets themselves are constructed as Lotus 123\_ (wk1) or comma separated values (csv), and being unformatted worksheets, these are easily imported into various spreadsheet programs. The csv files could also be modified by a text editor to "find and replace" commas with tabs (or any other separator) if needed. All data are easily located through a menu system that is run with an internet browser. Also, historical background has been incorporated to provide context with these data. Additionally, diatom illustrations by Easter Cupp (who worked with Allen several years) and some dinoflagellate illustrations commissioned by Charles Kofoid (Allen's professor) associated with the species described by Allen have been included. This e-book is distributed as a set of three compressed and archived computer files.

... Allen1.zip 16MB Contains all data and most html for the e-book  
... Allen2.zip 32MB Contains the diatom illustrations of Easter Cupp  
... Allen3.zip 21MB Contains the dinoflagellate illustrations of Charles Kofoid.

The three ZIP files archive separate components of this e-book, and were produced using WinZIP® 8.0. Allen1.zip contains all essential html files and time-series data. If necessary, this could be used as the only file for extraction. However some of these files contain references (links) to files contained in Allen2.zip and Allen3.zip and therefore it

is best to download all three files to extract. 120MB of hard disk space is required for the complete e-book. Extraction of these zip files will require WinZIP<sup>®</sup> or equivalent decompression software. Extraction of the files will create a directory (folder) on the hard disk named "AllenData" and place all files and subdirectories under this. The entire directory structure could be copied to CD or DVD for practical permanent storage. To begin the e-book, open "Start" or "Start.htm" (or drag this file into a web browser) in the \AllenData directory (folder) and continue. Resize the windows to optimize the configuration of the monitor used. More experienced users may want to bypass "Start" and directly open "contents.htm" located in the \AllenData\html\_nf" directory (folder).

This e-book was optimized for Microsoft Internet Explorer and created using a personal computer having 1024 by 768 pixel resolution on its display. Although 800 by 600 pixel resolution will work, a greater resolution is recommended.