



The Iron Hypothesis has attracted substantial international attention, as well as controversy. Originally formulated by Dr. John Martin of Moss Landing Marine Laboratories, the testing of this hypothesis has led to some of the most significant oceanographic experiments and findings of this decade.

This issue is a Tribute to John Martin who passed away just prior to the first open ocean iron enrichment experiment. The result of the IronEx I experiment, as well as the subsequent IronEx II experiment, demonstrate a direct and unequivocal biological response of the equatorial Pacific ecosystem to added iron. These experiments provide a preponderance of evidence in support of Martin's Iron Hypothesis', to the extent that many refer to iron limitation as the Iron Theory'. These experiments also demonstrate the feasibility of such in situ experiments, and therefore open ocean

ecological studies are no longer limited to passive observations and bottle experiments.

This special issue focuses on the design, implementation and results of the original seminal experiments near the Galapagos Islands.

Kenneth H. Coale et al. -- IronEx-I, an in situ iron-enrichment experiment: Experimental design, implementation and results -- 919-945

T.P. Stanton, C.S. Law and A.J. Watson -- Physical evolution of the IronEx-I open ocean tracer patch -- 947-975

C.S. Law, A.J. Watson, M.I. Liddicoat and T. Stanton -- Sulphur hexafluoride as a tracer of biogeochemical and physical processes in an open-ocean iron fertilisation experiment -- 977-994

R.M. Gordon, K.S. Johnson and K.H. Coale -- The behaviour of iron and other trace elements during the IronEx-I and PlumEx experiments in the Equatorial Pacific -- 995-1041

A.D. Hatton, S.M. Turner, G. Malin and P.S. Liss -- Dimethylsulphoxide and other biogenic sulphur compounds in the Galapagos Plume -- 1043-1053

Carole M. Sakamoto, Frank J. Millero, Wensheng Yao, Gernot E. Friederich and Francisco P. Chavez -- Surface seawater distributions of inorganic carbon and nutrients around the Galapagos Islands: results from the PlumEx experiment using automated chemical mapping -- 1055-1071

Frank E. Hoge et al. -- Fluorescence signatures of an iron-enriched phytoplankton community in the eastern equatorial Pacific Ocean -- 1073-1082

Frank E. Hoge et al. -- Airborne bio-optics survey of the Galapagos Islands margins -- 1083-1092

John M. Steger, Curtis A. Collins and Peter C. Chu -- Circulation in the Archipiélago de Colón (Galapagos Islands), November, 1993 -- 1093-1114

Frank J. Millero, Wensheng Yao, Kitack Lee, Jia-Zhong Zhang and Douglas M. Campbell -- Carbonate system in the waters near the Galapagos Islands -- 1115-1134

Steven T. Lindley and Richard T. Barber -- Phytoplankton response to natural and experimental iron addition -- 1135-1150