This volume, of 25 papers, focuses on the JGOFS-Canada programme in the NE subarctic Pacific. This study consisted of 8 research voyages from September 1992 to June 1997, along an E-W transect from the coastal (station P04) to the open ocean (Ocean Station Papa, OSP). This oceanic province is of particular interest as it is one of three High Nitrate Low Chlorophyll regions in the World ocean, and possesses a unique overwintering population of actively growing phytoplankton and associated micro-grazers. Furthermore, OSP has been the focus of other research including the Institute of Ocean Sciences (IOS, Canada) 20-year time-series, and the US Subarctic Pacific Ecosystem Research (SUPER) programme. The JGOFS-Canada programme has built on aspects of previous research - such as studies of pelagic foodweb dynamics and ecosystem modelling - and conducted research into previously unexplored areas. Thus, many of the studies in the volume provide datasets on the basin scale, which permit the comparison of the pelagic ecosystem structure of the coastal and the open ocean. In addition, the biogeochemistry of the entire water column, rather than the pelagic realm is investigated at these locales using stand-alone pumps and sediment traps. We are fortunate to be able to include a number of papers analysing data collected as part of the IOS line P time-series, such as one of the longest records of deep ocean sedimentation and a 50 year physics time-series. Such papers help to put the JGOFS-Canada study into a wider temporal context for the NE subarctic Pacific. This volume presents findings on heterotrophic bacterial processes on a time scale of hours to paleo-oceanographic reconstructions of the last 20,000 years in this region.

P.W. Boyd, P.J. Harrison and B.D. Johnson -- The Joint Global Ocean Flux Study (Canada) in the NE subarctic Pacific -- 2345-2350

F.A. Whitney and H.J. Freeland -- Variability in upper-ocean water properties in the NE Pacific Ocean -- 2351-2370

Steven J. Bograd, Richard E. Thomson, Alexander B. Rabinovich and Paul H. LeBlond -- Near-surface circulation of the northeast Pacific Ocean derived from WOCE-SVP satellite-tracked drifters -- 2371-2403

Philip Boyd and P.J. Harrison -- Phytoplankton dynamics in the NE subarctic Pacific -- 2405-2432

David Farmer and Craig McNeil -- Photoadaptation in a convective layer -- 2433-2446

Maria T. Maldonado and Neil M. Price -- Utilization of iron bound to strong organic ligands by plankton communities in the subarctic Pacific Ocean -- 2447-2473

Maria T. Maldonado, Philip W. Boyd, Paul J. Harrison and Neil M. Price -- Co-limitation of phytoplankton growth by light and Fe during winter in the NE subarctic Pacific Ocean -- 2475-2485

M.A. Schmidt and D.A. Hutchins -- Size-fractionated biological iron and carbon uptake along a coastal to offshore transect in the NE Pacific -- 2487-2503

Diana E. Varela and Paul J. Harrison -- Seasonal variability in nitrogenous nutrition of phytoplankton assemblages in the northeastern subarctic Pacific Ocean -- 2505-2538

C.S. Wong and R.J. Matear -- Sporadic silicate limitation of phytoplankton productivity in the subarctic NE Pacific -- 2539-2555

Nelson D. Sherry, Philip W. Boyd, Kugako Sugimoto and Paul J. Harrison -- Seasonal and spatial patterns of heterotrophic bacterial production, respiration, and biomass in the subarctic NE Pacific -- 2557-2578

Richard B. Rivkin, Jennifer N. Putland, M. Robin Anderson and Don Deibel -- Microzooplankton bacterivory and herbivory in the NE subarctic Pacific -- 2579-2618

Robert H. Goldblatt, David L. Mackas and Alan G. Lewis -- Mesozooplankton community characteristics in the NE subarctic Pacific -- 2619-2644

P.W. Boyd, R.H. Goldblatt and P.J. Harrison -- Mesozooplankton grazing manipulations during in vitro iron enrichment studies in the NE subarctic Pacific -- 2645-2668
D. Thibault, S. Roy, C.S. Wong and J.K. Bishop -- The downward flux of biogenic material in the NE subarctic Pacific: importance of algal sinking and mesozooplankton herbivory -- 2669-2697

James K.B. Bishop, Steven E. Calvert and Maureen Y.S. Soon -- Spatial and temporal variability of POC in the northeast Subarctic Pacific -- 2699-2733

C.S. Wong et al. -- Seasonal and interannual variability in particle fluxes of carbon, nitrogen and silicon from time series of sediment traps at Ocean Station P, 1982-1993: relationship to changes in subarctic primary productivity -- 2735-2760

P.W. Boyd et al. -- Transformations of biogenic particulates from the pelagic to the deep ocean realm -- 2761-2792

Jinping Wu, S.E. Calvert, C.S. Wong and F.A. Whitney -- Carbon and nitrogen isotopic composition of sedimenting particulate material at Station Papa in the subarctic northeast Pacific -- 2793-2832

Matthew A. Charette, S. Bradley Moran and James K.B. Bishop -- 234Th as a tracer of particulate organic carbon export in the subarctic northeast Pacific Ocean -- 2833-2861

Magnus K. Eek, Michael J. Whiticar, J.K.B. Bishop and C.S. Wong -- Influence of nutrients on carbon isotope fractionation by natural populations of Prymnesiophyte algae in NE Pacific -- 2863-2876

K.L. Denman and M.A. Peña -- A coupled 1-D biological/physical model of the northeast subarctic Pacific Ocean with iron limitation -- 2877-2908

A.F. Vézina and C. Savenkoff -- Inverse modeling of carbon and nitrogen flows in the pelagic food web of the northeast subarctic Pacific -- 2909-2939

David L. Mackas and Douglas R. Yelland -- Horizontal flux of nutrients and plankton across and along the British Columbia continental margin -- 2941-2967


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