PREFACE

The experience of the 1982 El Niño was an event that caught the scientific community off guard, leaving many oceanographers feeling somewhat chagrined. At that time there were no large ocean current programs operating in the Pacific coastal regions adjacent to the North and South American continents. In both Canada and the United States, some major projects designed to survey currents over several years ended just before the 1982/83 El Niño started!

The experience of 1982/83 was not to recur this time. As the El Niño built in 1997, several emergency proposals were developed to monitor its evolution and impact. The result was that the 1997/98 El Niño is probably the best observed climate event in history.

However, climatologists and oceanographers around the world were still taken aback by the development of the 1997/98 El Niño event during the spring of 1997, because the unusual timing and dramatic rise in intensity very much earlier than normal was so extraordinary. The media quickly tagged this as "the mother of all El Niños". Such an amusing description aside, this was, by any standards, a very large event, having a world-wide impact.

This one-day symposium reviewed the effects of the 1997/98 El Niño on the physical, chemical and biological state of the northern North Pacific Ocean. The object was to establish a list of impacts that the climate anomaly had on the ocean, extending all of the way from the physics through the ecological system, to plankton biology and onwards to the fisheries. The symposium organizers wanted to provide a forum for discussion from all regions of interest to the PICES family of nations on the impacts of the El Niño. The symposium took place in October 1998, when the El Niño was barely over. Of necessity, the descriptions are, therefore, preliminary in nature. The unwritten hope was that substantial areas of overlap would be discovered as scientists presented their favourite observations. This would prompt others to revisit their observations, and encourage co-operation among investigators from different regions.

As the presentations occurred, it quickly became apparent that stories being related from California, Oregon, British Columbia, Alaska, the Bering Sea and so on, had an enormous overlap. All regions were reporting temperature changes, alterations in the stratification, and reduced nutrients and plankton. To that degree the symposium was successful — a consistent story *had* been developed.

We present that symposium material here. Contributors from both oral and poster sessions were invited to generate extended abstracts for this volume of proceedings. Most of them accepted this offer enthusiastically. Four talks scheduled for either oral or poster sessions were not, in fact, presented at the symposium. For those, at the end of the volume, we simply publish the abstracts as they were submitted. The entire package will be available electronically via the PICES web page at http://pices.ios.bc.ca and as a limited number of printed copies. This is the first report in the PICES Scientific Report Series with colour figures!

The results are preliminary, but we believe this volume represents a useful first look at the impacts of the 1997/98 El Niño on the North Pacific Ocean. The next step is taking place. PICES, in cooperation with the Inter-American Tropical Tuna Commission (IATTC), the International Pacific Halibut Commission (IPHC), the Interim Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC), the North Pacific Anadromous Fish Commission (NPAFC) and the Scientific Committee on Oceanic Research (SCOR), is organizing a four-day *Beyond El Niño Conference* to

discuss evidence, consequences, mechanisms and implications of such events. This conference will be held March 23–26, 2000 in La Jolla, California.

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