

FOREWORD

The special relationship between the southern part of the South American continent and Antarctica has its origin in the common past of the two regions as part of the Gondwana continent, and in their close vicinity up to the present day as compared to the distances between the Antarctic and the other surrounding continents. Under present-day conditions, the interchange between Antarctica and South America is largely restricted by deep water (up to 5000 m) in the Drake Passage and by the circumantarctic current system. At some point in the past, however, these areas must have started from a common ecosystem base, developing their specific characters in a long process which was accelerated once the distance between them began to increase. Climate essentially cooled during this period, but also underwent intermittent periods of warming which may have interrupted the process of separation and facilitated phases of biotic exchange. This exchange may have lasted longer, and have been more intense, with the South American continent than with the other landmasses surrounding Antarctica (which were separated earlier and drifted farther apart). Present day marine fauna and flora on either side of the Drake Passage reflect the regional development in the past, including periods of isolation and interchange, extinction and radiation, and represent a singular case study of ecosystem change and evolution within a worldwide perspective.

It was this uniqueness of relations between the Magellan region and the Antarctic, and the scarcity of information available on them, that induced the two co-organizing institutions to call for a specific meeting with the objective of assessing the state of the art. The international workshop "Marine biological investigation in the Magellan Region related to the Antarctic" (Investigación Biológica Marina en Magallanes relacionada con la Antártida, IBMANT/97), co-organized by the Universidad de Magallanes (UMAG, Chile) and the Alfred Wegener Institute for Polar and Marine Research (AWI, Germany), took place at the UMAG, Punta Arenas in April 1997. It was mainly based on the Joint Chilean-German-Italian "Victor Hensen" Magellan Campaign in 1994 and additional results from "Vidal Gormaz", "Cariboo", "Italica", "Hespérides" and "Polarstern" cruises during the past decade (see refs. in individual papers), but also included work from the shores of Argentina and Chile. Altogether 86 participants from Chile, Germany, Italy, Argentina, Spain, the United Kingdom and Belgium attended the workshop, 43 oral contributions and 42 posters were presented, and eight working groups discussed specific questions. Besides treating more specific issues of the Magellan region, the meeting was the first in recent times to address the connections between the fauna and flora of the southern tip ("cono sur") of South America and the Antarctic in more detail. This volume contains 56 contributions related to the conference theme. It tries to provide an accurate summary of the current state of knowledge, the balance of which has improved considerably for Antarctic waters in recent years but much less so for the Magellan region, and remains unsatisfactory from a comparative point of view. We are aware that this workshop could only be a first attempt at reviewing such a large subject area, but it will hopefully stimulate international interest in the region and provoke further meetings of a similar nature.

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