

THE CENSUS OF ANTARCTIC MARINE LIFE (CAML) - PROGRESS AND CHALLENGES FOR BIODIVERSITY STUDIES DURING THE INTERNATIONAL POLAR YEAR

M Stoddart, V Wadley

Australian Antarctic Division, TAS, Australia

The Census of Antarctic Marine Life (CAML) is a five-year international project to investigate the distribution and abundance of Antarctica's marine biodiversity. All groups of organisms will be included, from microbes to whales. The fieldwork will occur mainly in 2007-08, during the International Polar Year (IPY). The aim is to study how biodiversity is affected by environmental change, and how change will alter the nature of the ecosystem services provided to the planet by the Southern Ocean.

In the collaborative ethos of the IPY, the Joint Committee of ICSU/WMO has endorsed CAML as a major initiative, assessing the CAML lead proposal and its 23 clustered projects as having the potential contribute to significant international scientific advances in the field of marine biodiversity. The Scientific Committee on Antarctic Research (SCAR) has given CAML a prominent position in its program *Evolution and Biodiversity in Antarctica*. SCAR has successfully obtained funding for CAML for scientific co-ordination activities from the Alfred P. Sloan Foundation (USA) under the ten-year program *Census of Marine Life* www.coml.org. The budget covers project coordination, workshops and data management, together with education and outreach activities.

The Scientific Steering Committee (SSC) for CAML, with members appointed by SCAR plus an additional member representing the Arctic Ocean Diversity project, held a planning workshop with about 20 invited experts in Brussels during May 2005 to prepare a comprehensive science statement, available at www.caml.aq. Invitations to participate in CAML have already been presented at scientific conferences in Amsterdam, Cairns, Copenhagen, Curitiba, Darwin, Frankfurt and Sofia, and the ATCM was informed of the activity in Stockholm, June 2005. The logistic and scientific coordination was discussed at the SSC meeting in Bremerhaven in June 2006.

In addition to traditional taxonomy, the use of powerful new tools for genetic sequencing will determine the extent to which the Antarctic marine fauna and flora is responding to change. CAML is collaborating with oceanographers and geophysicists in its work, addressing the integrated nature of marine ecosystems. Research will be conducted in the pelagic, sea-ice, and benthic realms in as many locations around Antarctica as the provision of research vessels will allow. To date, CAML has the prospect of coordinating research aboard over a dozen ships from a similar number of nations, with the potential to be the largest project yet undertaken in Antarctic marine biodiversity. This paper reports on the progress with CAML and its future challenges, particularly the coordination of vessels and research opportunities during the IPY.