

The season ahead: science on a grand scale

THE 2001-2002 ANTARCTIC SEASON IS ALMOST UPON US AS we ready ourselves for another ambitious field season. In some ways the coming season will be less hectic than last year's, because we are not returning to Heard Island, but the scientific objectives are no less important.

Early in the season we will be conducting a major marine science voyage, departing from Hobart on 26 October and returning on 15 December. About 80 scientists from Australia and overseas will undertake a detailed examination of the physical and biological characteristics of the ocean along the 140°E longitude and stretches from the south of Tasmania to the ice edge. The ocean is able to store vast amounts of heat, freshwater and carbon and acts as a sensitive accumulator of small changes; it is thus a good place to look for evidence of climate change. Water samples from the surface to the ocean floor will give evidence of temperature, salinity and chemical composition and of how water masses and heat are transported through the ocean, and the interaction of physical and biogeochemical processes will provide clues to how the spring bloom of alga is controlled. Nine portable specialised containerised

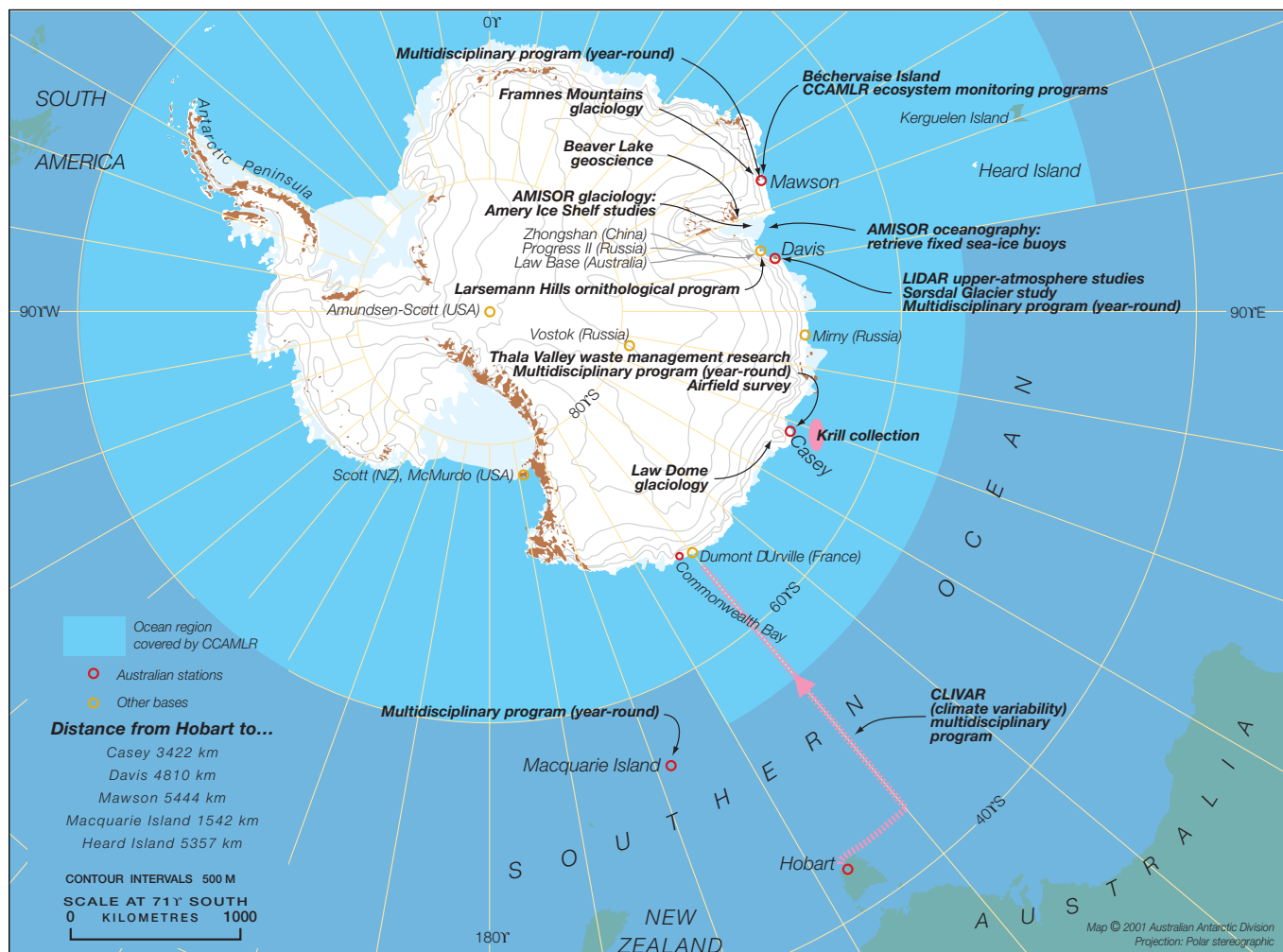


MIKE CRAVEN

The 'flubber' used as a surface supply of water for the hot water drill in the Amery Ice Shelf glaciology program.

laboratories will adorn the helideck, trawl deck and above the hangar of the *Aurora Australis*, and every built-in laboratory will be used to the fullest extent.

Work on the Amery Ice Shelf will continue with a field party established for another season drilling. Last season a hole was successfully drilled through 370 m of sea ice and



Australian Antarctic field research activities 2001-2002

Australian Antarctic shipping program 2001-02

The following shipping schedule for the 2001-02 season was correct as at 8 October 2001. However, published voyage timings are subject to change without notice and may be brought forward or delayed by several days. The most current information is available on the AAD's website at <http://www.aad.gov.au/goingsouth/schedules/0102_ship_sked.asp?>.

Voyage 2 *Aurora Australis*: Macquarie Island and Casey summer deployment
Departing Hobart 28 September 2001, returning Hobart 26 October

Voyage 3 *Aurora Australis*: Marine Science (CLIVAR)
Departing Hobart 30 October 2001, returning Hobart 15 December

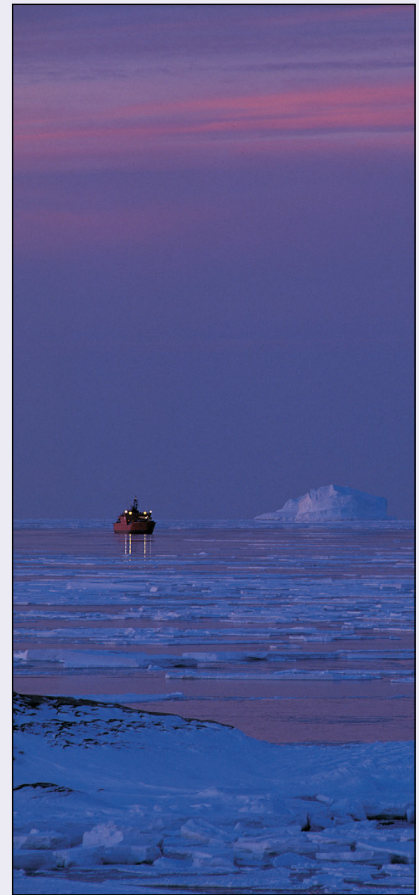
Voyage 4 *Polar Bird*: Davis resupply, deployment of AMISOR team at Amery Ice Shelf and summer personnel at Mawson
Departing Hobart 12 November 2001, returning Hobart 27 December

Voyage 5 *Aurora Australis*: Casey Resupply and Changeover
Departing Hobart 17 December 2001, returning Hobart 10 January 2002

Voyage 6 *Polar Bird*: Davis and Mawson changeover, Mawson resupply
Departing Hobart 30 December 2001, returning Hobart 5 February 2002

Voyage 7 *Aurora Australis*: Marine Science (Prydz Bay AMISOR Oceanographic Program and Sea Ice Thickness Program) and retrieval of summer personnel from Davis
Departing Hobart 12 January 2002, returning Hobart 21 February 2002

Voyage 8 *Aurora Australis*: Macquarie Island resupply
Departing Hobart 23 February 2002, returning Hobart 6 March 2002



GRANT DIXON

a number of instruments were introduced into the hole. This season a further hole will be drilled at the location where in 1968 a field party spent the winter. This year's hole will be about 450m, and it is hoped that the field party will extract an ice core from the point at which glacial ice overlies marine ice. An upward-look sonar device will be introduced into the hole to provide information on the process of melting and refreezing of ice shelf. Scientists on Voyage 7 will retrieve oceanographic instruments that were deployed across the face of the Amery last summer, to provide data on water movements, temperatures and composition as an adjunct to the ice studies.

On land there will be a large number of ongoing studies across the disciplines. The study of the effects of the Thala Valley tip site will continue with a major thrust to assess the effect of pollutant run-off into to waters around Casey Station. Work on the biochemical and physiological adaptations to life in extreme environments will continue at the saline lakes at Davis Station. Macquarie Island will see a return of botanists studying the effects of global climate change on a range of organisms, and at all our stations there will be usual buzz of activity as we advance our range of programs.

Professor Michael Stoddart, ANARE Chief Scientist, AAD

Proposals sought on Antarctic air transport system

Eight air transport companies – seven of them Australian-based – have been asked to submit proposals to develop an air transport system for Australia's Antarctic program. These companies had previously been short-listed to provide air transport between Australia and Antarctica.

The AAD is seeking proposals from the companies to enter into an agreement to develop an air transport system incorporating both an Australia-to-Antarctica component and a capability for flying within Antarctica itself.

Detailed proposals specifying the type of aircraft used and many other aspects of such a system are being sought.

The deadline for proposals was 21 September. With advice from aviation and other consultants, the AAD is now determining the company or companies best able to provide the service.

The decision on whether to proceed with the air link will be made after an assessment of the proposals is completed, including risk, cost-benefit and environmental analyses.