

Australian oceanography

Going to sea at last

Canberra

TWO research vessels now undergoing sea trials off Australia will make a big difference to the country's civilian research effort in the marine sciences, and so help to fill the large gaps in present knowledge of the enormous sections of the Indian, Pacific and Southern Oceans to which Australia lays claim.

Declaration of the 200-nautical-mile Australian Fishing Zone (AFZ) in 1979 made Australia responsible for approximately 7 million square kilometres of ocean, almost the same as the Australian land mass and second only to the US zone, which totals 7.8 million square kilometres.

In 1981, the Australian Marine Sciences and Technologies Advisory Committee (AMSTAC) painted a gloomy picture of the state of physical oceanography and marine geoscience. Its reports described

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ORV *Franklin*

fragmented research and a general lack of coordination during the 1970s, stressing that the most obvious deficiency in the Australian programme was lack of access to deep-water research vessels.

The 53-metre *Soela* had served as a blue-water workhorse for the Commonwealth Scientific and Industrial Organization (CSIRO)'s Fisheries Division (at that time not yet split from the CSIRO Division of Oceanography), but Australia's small band of oceanographers had had to make do with the converted ocean-going tug *Sprightly* which, according to the AMSTAC report, barely met the minimum requirements for deep-water oceanographic research.

Keen to enhance Australia's credibility as the keeper of such a huge area, the Fraser government accepted a series of recommendations for the purchase or hire of a number of ocean-going ships totalling as many as six by 1986, but it was the end of 1984 before any of these craft hove into view.

A certain amount of space occasionally became available for civilian research on the Royal Australian Navy's 96-metre oceanographic vessel HMAS *Cook*, commissioned in 1980, but a great deal more work was judged by AMSTAC to be necessary in all fields. As a result, CSIRO will now have its own purpose-built blue-

water vessel and the Bureau of Mineral Resources, Geology and Geophysics (BMR) will charter one.

No new vessels are in prospect for the Department of Science's Antarctic Division, however, nor for the Australian Institute of Marine Science at Townsville, which concentrates on research into the Great Barrier Reef.

Last month, the CSIRO Division of Oceanography (now at its new home in Hobart, Tasmania) began putting the new ship, the Oceanographic Research Vessel (ORV) *Franklin*, through harbour and sea trials. Designed in West Germany, the 1,100-tonne 55-metre vessel will be operated as a national facility and, like the celebrated Franklin River in south-west Tasmania, is named after Sir John Franklin, Governor of Tasmania from 1837 to 1843 and recognized as the discoverer of the North-West Passage between Greenland and Alaska.

Built at a cost of \$A12 million, the *Franklin's* design complements rather than duplicates functions of other vessels used for fisheries research, geological exploration and Antarctic research, and so is not ice-strengthened or equipped with heavy trawling winches. The design, nevertheless, does embrace the needs of occasional and possibly inexperienced research teams working side by side on different projects. A total of twelve scientists may be accommodated and a crew of thirteen. With computer-controlled bow and stern thrusters, the *Franklin* can hold station under heavy conditions.

BMR, on the other hand, has chartered a specially-designed geoscientific research vessel for two years in the first instance. At 1,543 tonnes and 73 metres in length, RV *Rig Seismic* will be manned by a crew of fourteen and permits accommodation for up to twenty scientists for a maximum cruise duration of 80 days. In recent years, the BMR marine geosciences programme has included studies of Bass Strait, the Great Barrier Reef, and geoscience cruises in the south-west Pacific in partnership with New Zealand and the United States, to assist small island nations in assessing the geological framework and mineral potential of their offshore areas.

Early cruises planned for *Rig Seismic* include geophysical experiments and geological sampling of the Heard/McDonald Plateau near Kerguelen Island and cooperative projects with the Bundesanstalt für Geowissenschaften und Rohstoffe (West Germany) on cruises to the Lord Howe Rise, South Tasman Plateau and the Otway Basin. Later in the year, BMR will conduct two-ship crustal refraction experiments on the Exmouth Plateau in a cooperative exercise with RV *Robert D. Conrad* of the Lamont-Doherty Geological Observatory. **Jeffrey Sellar**

Canada baboon cruelty trial

Washington

A PHYSIOLOGIST and the chief veterinarian at the University of Western Ontario, Canada, are facing possible prosecution for cruelty to animals over an experiment in which a baboon was kept for several months in a restraining chair. The case is believed to be the first in Canada brought against researchers following complaints by an animal welfare group.



The experiment, by Dr Bernard Wolfe, was to examine dietary and hormonal influences on cholesterol and lipid metabolism. The veterinarian at the university who is also charged is Dr William Rapley. The experiment was supported by the Canadian Heart and Stroke Fund; the protocol and the laboratory have been approved by the Canadian Council on Animal Care.

The complaint, filed by a group called *Lifeforce*, followed a number of protests and break-ins at the university inspired by Wolfe's experiment, and some other experimental animals have been stolen. The complaint is made under a section of the Canadian criminal code which makes it an offence wilfully to cause unnecessary pain, suffering or injury to "an animal or bird". Whether the defendants will go to trial will be decided at a hearing before a provincial court judge on 15 February. The university will be meeting all of their legal costs.

The baboon in the experiment was fed a regular diet formulated for baboons; other nutrients were occasionally introduced by catheter into the gut. A university spokesman rejected the accusation of some protesters that the animal was totally immobilized; its head and legs were restrained and the animal could groom itself, though it was prevented from reaching the catheters. The baboon showed no obvious signs of distress, according to the spokesman, and spent much of its time watching television.

Tim Beardsley