

Up, up and away: 2003–04 aircraft operations

Fixed wing feats

Two DeHavilland DHC-6 (Twin Otter) aircraft and aircrew, supplied by Ken Borek Air Ltd of Calgary, Canada, played a large part in the successful completion of one of the largest and most varied AAD flying programs ever.

Early in the season, in a forerunner to the 2004-05 introduction of CASA 212-400 aircraft, Mawson expeditioners and cargo were flown to and from Davis to connect with Voyage 2. The aircraft, able to be flown solely on instruments and equipped with de-icing gear, completed the flights on schedule despite varying weather conditions.

Twin Otters were based at Davis and Casey as required through the season supporting deep field programs such as AMISOR and ITASE. Areas of operation included the Grove Mountains, Prince Charles and Southern Prince Charles Mountains, Komsomolskiy Peak, Amery Ice Shelf and up to 1000 kms east of Casey. Operation of these aircraft from our stations has given valuable insight into the levels of personnel, types of equipment, fuelling facilities, vehicles and infrastructure required to support future fixed wing flight programs.

The operation of station-based, fixed wing aircraft also resulted in a higher degree of international collaboration with visits to Mirny (Russia), Dome C (Italy/France) and McMurdo (USA) stations. Davis and Casey stations provided logistic support to a visiting Twin Otter operated by the Italians in November and December. The aircraft conducted an ice radar survey over a large area and also performed some specific flights over the Amery Ice Shelf at AAD request. Further international collaboration also occurred late in January with a team from Davis assisting in the recovery of equipment from a NASA weather balloon which was launched from McMurdo and landed south west of Beaver Lake.

Helicopter operations

Versatile and efficient AS350BA (Squirrel) helicopters on contract from Helicopter Resources completed yet another busy season for the AAD. These aircraft, used by the AAD since 1986–87, perform a variety of tasks including marine science support, ice reconnaissance (for ship navigation through ice) ship-to-shore resupply of stations, Macquarie Island operations and station-based support.



KAREN KRISTENSEN



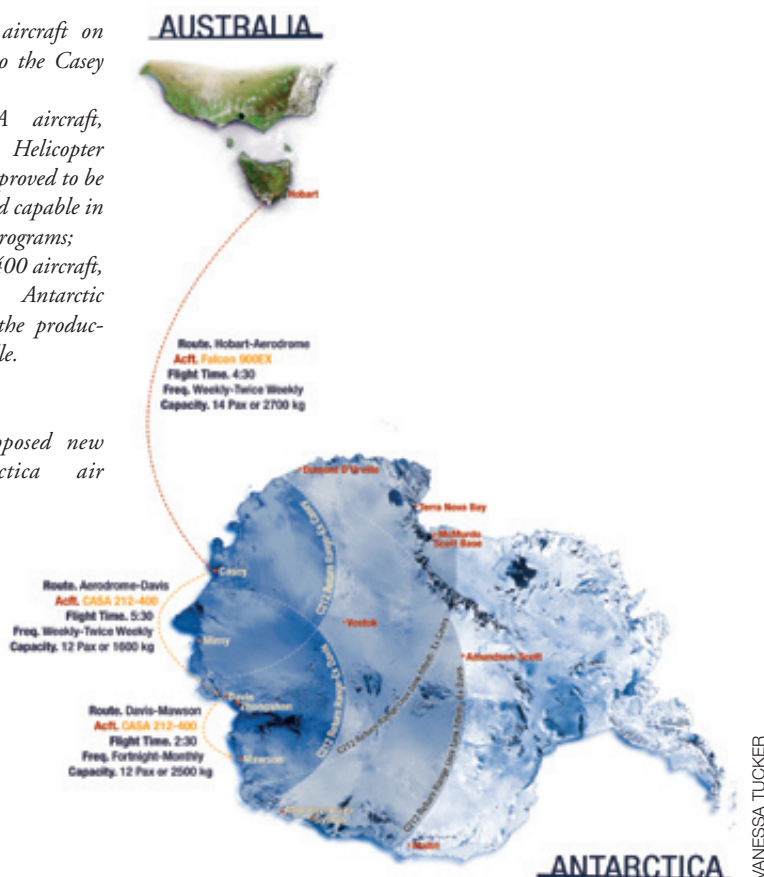
MIKE WOOLFRIDGE



SKYTRADERS

From top:
A Twin Otter aircraft on final approach to the Casey skiway;
The AS-350BA aircraft, operated by Helicopter Resources, again proved to be most versatile and capable in support of field programs;
The first C212-400 aircraft, decked out in Antarctic livery, rolls off the production line in Seville.

Right: The proposed new Australia-Antarctica air transport system



VANESSA TUCKER

The aircraft will fly directly from Hobart to Antarctica at the start of the season and be based at Davis and Casey throughout the summer. The range of the aircraft will allow direct flights between Casey, Davis and Mawson and to remote field locations.

Runway construction trials complete

This season saw the completion of trial construction of the Casey ice runway. A 4000m by 100m area of blue ice was graded and tested to confirm the integral structure of the glacial ice surface to support wheeled aircraft operations. A laser-controlled grader was used to remove undulations on the surface before snow and ice was blown clear by a snow blower. Further testing using a snow compaction roller confirmed that the density and strength parameters required for jet aircraft landings could be met throughout the season.



MATT FILIPOWSKI

Grader marks from the 2002–03 season were barely visible on the Casey runway when construction trials commenced this summer.

CHARLTON CLARK, AIR TRANSPORT PROJECT, AAD

Island exchanges enhance quarantine protection



SANDRA POTTER

Quarantine Tasmania detector dog inspecting mail bound for Macquarie Island.

Collaborations involving parties variously interested in preventing the unintentional transfer of plant and animal species into and within Australia are proving that inter-island exchanges can be beneficial on the quarantine front.

Although more than 5,300 km distant from the Territory of Heard and McDonald Islands (HIMI), Quarantine Tasmania, makes an important contribution to the Australian Antarctic Division's management of HIMI as one of the most biologically pristine areas on earth. The absence of a continuous management presence within HIMI makes a multiple-barrier approach to quarantine difficult – the opportunities

for post-border surveillance and incursion response being limited. Accordingly, emphasis is placed on ensuring that quarantine requirements are met 'offshore', i.e. well before field parties land in the area. Under an AAD-initiated Memorandum of Understanding arrangement (HIMI sits outside the Quarantine Act), Quarantine Tasmania conducts inspections of Australian Antarctic Program vessels and equipment. After fumigation and/or examination for the presence of soil, plant and animal contamination, cargo is sealed in shipping containers to ensure that appropriate levels of biosecurity are maintained during transportation.

This arrangement is however, just one aspect of a broader program of quarantine management decisions and activities acknowledging that the protection of HIMI is understood to be a responsibility that is shared by expedition planners and participants. Fresh fruit and vegetables are not supplied because they are among food stuffs considered a high-risk pathway for introductions. The AAD issues only new field equipment and clothing, some items of which have been specially designed to avoid the use of seed-harboring velcro. Field personnel accept that they need to comply with personal and scientific equipment preparation and packing protocols.

The AAD is sharing its experience in the protection of environmentally sensitive areas of high conservation value – on a Panel

of Experts providing input to industry on enhancing the current quarantine management system in place at Barrow Island, a 1910-proclaimed Class A Nature Reserve off the Pilbara Coast of Western Australia. The reserve is a producing oilfield and the proposed site of a gas processing plant, the 'Gorgon Joint Venture' – the environmental, social, economic and strategic implications of which have yet to be fully considered by Government. Barrow Island is recognised internationally as a highly important biodiversity repository. It is home to 24 terrestrial species of fauna (five mammals, one bird, two reptiles and sixteen invertebrates) that occur nowhere else in the world, and another five species that are restricted in their distribution.

In more southerly latitudes, AAD-supported assessments of the viability and risk of establishment of plant propagules that may reach Macquarie Island are among mostly monitoring-focussed studies expected to enhance the Tasmanian Parks and Wildlife Service's management of the island as a World Heritage Area and IUCN Category Ia Protected Area (Strict Nature Reserve) managed primarily for scientific research. Deliberate and unintentional introductions, in particular cats, rabbits, rats and mice, have already had a serious and irreversible impact on the island's native fauna, flora and landscape.

SANDRA POTTER, LOGISTICS SECTION, AAD