



KATE KIEFER

Scientific activity could challenge the near-pristine status of Heard Island.

Ecological risks to Heard Island assessed

The islands of the Territory of Heard and McDonald Islands (HIMI) are amongst the world's most biologically pristine. Recognising the need to extend the stringent quarantine measures applied to Australian Antarctic Program activities to all HIMI visitors, in 2003 the Australian Antarctic Division (AAD) commissioned an independent assessment of the risk of introduction, by human means, of organisms that may pose a threat to the region's plant and animal life. Professor Stephen Chown, in his report, *The probability of introduction of non-indigenous species to Heard and McDonald Islands: Taxa risks, and mitigation*, notes that although HIMI is isolated and infrequently visited, its 'pristine' status is likely to be challenged.

Already some 240 shore-based visits have been made to Heard Island and the level of activity is expected to rise as interest in the Territory increases for science, tourism and

fisheries. Scientific activity in the region has broadened its scope in recent years, as demonstrated by the duration of expeditions, the number of field camps and sites occupied, and the volume of stores and equipment landed – some 340 m³ of cargo was landed for the 28 expeditioners of 2003–04. The risk assessment identified equipment and stores, clothing, containers, wood and vehicles as critical pathways for terrestrial introductions; and the more cargo landed, the greater the risk of introducing non-native species.

Professor Chown concluded that, 'A wide variety of terrestrial and freshwater taxa, capable of substantially altering ecosystem functioning and causing the local extirpation of many different species, could potentially be introduced to Heard and McDonald Islands'.

With ballast water exchange already prohibited in HIMI, he noted that the primary routes for introduction of marine species are, 'by fouling of hulls and gear that is routinely left in the water and possibly by accidental waste-water discharge'.

Undoubtedly the best strategy for maintaining the islands' World Heritage-listed ecosystem is the application of preventative measures. Accordingly, fresh fruit and vegetables – identified in the assessment as high risk vectors for the transport of hitch-hiking species – were not taken ashore by the 2003–04 expedition.

Other controls applied last season and to be formalised via a new management plan for the region include: mandatory inspections for rodents on the day of departure for HIMI (regardless of vessels holding valid de-rat certificates); vessel hull and equipment cleaning; a ban on the landing of viable seed and fungal products; controls on yeasts handling; and the phytosanitary treatment of timber to be taken ashore.

—SANDRA POTTER
Environmental Policy and Protection, AAD

Expedition kit

Out with the old clothes, the velcro and open weave fabrics! That was the message of Australian Antarctic Division (AAD) clothing and equipment co-ordinator Damian Flynn, to the 2003–04 Heard Island expeditioners. Instead, expeditioners were equipped with a range of new, lightweight, purpose-designed clothing that provided warmth and comfort while minimising the risk of introducing seeds, soil and insects to the island.

Two of the new design features were light-weight Gore-Tex jackets with waterproof zippers, draw-string cuffs and rounded, capacious pockets for easy vacuuming; and gaiters made of cordura and canvas and fastened with buckles (zips and press studs are hard to manipulate in muddy, icy conditions).

A new tent, designed by One Planet in consultation with AAD staff, was also trialled by expeditioners. Based on the pyramid tents used since the earliest days of Antarctic exploration, the new tents were constructed of strong aluminium poles and waterproof, reinforced fabric that could withstand Heard Island's strong winds (of up to 250 km/hr) and driving rain. The aerodynamic design minimised the noise of flapping fabric and the apex of the tents were constructed of radiator hose to increase flexibility and strength.



DOUG THOST

Expeditioners erect a polar pyramid tent.