

On a grand scale: the 2002-03 season

As I write this we are poised at the start of a new Antarctic season – a big season that will find us returning to Heard Island, undertaking a major marine survey in the waters of the Heard Island and the McDonald Islands region, returning again to the Amery Ice Shelf to drill another hole accessing the underside of the ice, undertaking an early-season marine science voyage, and undertaking a leg of the International Trans-Antarctic Scientific Expedition (ITASE) in which a number of shallow ice cores will be obtained along a transect running inland from Casey.

This comes on top of last year's highly successful program. Among many highlights was the joint collaborative work we conducted with our German partners from the Bundesanstalt für Geowissenschaften und Rohstoffe (the BGR – the German geological survey organisation). The study was undertaken in the southern Prince Charles Mountains and nicknamed 'PCMEGA'. Planning for this project started in 2000 and involved the establishment of fuel and supply caches along a traverse south-east from Mawson. As Professor Chris Wilson, the Australian science leader of the expedition, writes in this magazine "The PCMEGA program has been one of the most comprehensive onshore geoscience projects ever undertaken under the auspices of the Australian Antarctic program". Twenty scientists spent almost fifty days in twenty three field locations scattered around the southern end of the Mountains, ably supported by a team of field staff. Good weather helped with logistics and our use of a Twin Otter fixed-wing aircraft demonstrated to us the versatility of fixed-wing aircraft to support research of this kind. At the recent ATCM meeting in Madrid Australia presented a short paper on the expedition and a number of nations asked us about how we managed to coordinate such a large and successful international collaboration. I have to thank everyone who was involved in PCMEGA over the three years from start to finish, including Chris and his German counterpart, Dr Norbert Roland.

We also undertook a major marine voyage to study how krill swarms move relative to sea currents and other factors. Curiously, the field party named this research voyage 'KAOS' – though I am aware of at least one prior claim to this name made by glaciologists in recent years. I am glad to



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report the research outcomes were far from chaotic! We were able to demonstrate for the first time that krill swarms can change their position and size very quickly, and that the composition of the swarms changes considerably between day and night. This has great implications for the integrity of the swarm, and for migration. We finished that voyage with an oceanographic survey of the western boundary current that swings around the Kerguelen Plateau, and a measurement of the flow of the Antarctic Circumpolar Current between the Kerguelen Plateau and Davis. As Steve Nicol writes elsewhere in this magazine, "the edge of the Kerguelen Plateau [is] the region with the highest wave height in the world!" It is clear that work in this region is not for the faint-hearted!

I have picked out only a few of the many projects we undertook last season. The program was highly successful, with significant research and operational goals achieved reflecting credit on everyone involved with every aspect of our work. We enjoyed remarkably favourable operating conditions, and made hay while the sun shone! But good outcomes do not depend upon luck. Once again a wealth of planning and careful attention to detail underpinned our activities resulting in a successful season free from major incidents.

In early June we were all saddened by the death of Wayne Papps, a gifted and talented photographer and a dear colleague. Wayne died doing what he loved doing – taking pictures. Our thoughts and condolences go out to his family and friends. Part of him will live on in the many beautiful photographs he left behind. A full tribute to Wayne appears elsewhere in this magazine.



STEVE NICOL

Top: Staging post for PCMEGA – Mt Cresswell base camp. Above: Deploying the net on the major marine science voyage in early 2003.

As the sun slowly repossesses the Southern Hemisphere, our colleagues on the ice and on Macquarie Island can start to look forward to spring, and to a return to Australia. As ever, they have done – and continue to do – a magnificent job keeping our stations functioning and in good shape for the big season ahead. I wish them well for the remainder of their sojourns, and send my best wishes, and thanks, to those who are now preparing themselves to walk in their footsteps. I am confident that the 2003–04 Antarctic season will be as successful as the last.

Tony Press