

A trade in Antarctica

Many expeditioners down south are experienced trades people who help keep Australia's Antarctic stations running like clockwork. Plumber, Patrick Brennan, and carpenter, Damian Love, describe their experiences practicing their trade in the Antarctic and subantarctic.

Patrick Brennan, Plumber, Davis 2005

I gained my qualifications as a licensed plumber, drainer and gasfitter in 1988 after completing the basic three-year trade course and an additional two-year advanced course. My apprenticeship involved work in industrial, commercial and domestic environments and included the installation of water and waste piping, gas systems and sprinkler and fire hydrant systems.

I ran my own business from 1990-2001, and tendered the Olympic Live sites throughout Sydney in 2000. In 2001 I became an inspector for Sydney Water – inspecting work done by plumbers and drainers to ensure it met the relevant codes and standards.

In 2003 I applied to work in Antarctica. On a personal level, I wanted to experience a place that was largely untouched by humans, and to set foot where no other had stepped before. While trekking through the Vestfold Hills last summer I felt sure that I achieved this. On a professional level, the challenge of maintaining a complex system that included plumbing, heating and cooling, mechanical services, gas, refrigeration and maintenance, and anything else that fell under the blanket of 'base plumber', appealed to me. The need to work problems out systematically and adapt to different systems in a remote environment, often in extreme conditions, was something I had wanted to experience many years before applying for the position.

The basic skills of the trade remain the same no matter where you work. But in such a hostile climate the installation differs greatly – all external services are installed in an insulating sheath to protect them from extreme cold and strong winds. The weather also determines how long you spend outside on a task. We recently worked on the sewer outfall line in conditions of -25°C and 30 knots of wind. Days like these are extremely hard on the body and my hands suffered even with all the protective gear on. Two to three hours was all I could take before I had to go inside and warm up.

A large part of our time last summer was spent in the water production plant. This reverse osmosis system draws water from a small saline lake before it is filtered and treated for human consumption. The running and maintenance of this plant is time-consuming and demanding work, but necessary to keep it operating at a level that will provide enough water for winter, when production stops.

Apart from the regular plant room services and checks, we keep busy over winter with breakdowns and maintenance. We regularly monitor the indoor temperatures and adjust the mix of heated and fresh air to maintain a constant 17°C where possible.

I'm also the social co-coordinator on station and enjoyed helping to set up an Academy Awards night, a St Patrick's Day celebration, an indoor gaming night, and a spit roast and BBQ to celebrate the International Plumbers' Day on April 24.

My plumbing partner, Dave Nadin, and myself have managed to keep fit with three gym sessions a week. We also use the indoor climbing wall and play a fair bit of table-tennis, darts and snooker. In the evenings, I've been improving my hand writing by practicing calligraphy.

I would like to return one day. Antarctica has surpassed my expectations and left me mesmerised and speechless many times. The people I wintered with have become a surrogate family and are an amazing bunch whose company has greatly added to my experience. However, I would not subject my wife Lisa and our two young children to such separation again for a long time, as it has been hard on us all. When I return to Australia I intend to resume my previous role with Sydney Water.

Cutting the sewage line in order to clear a blockage.



DAVE NADIN

Damian Love, Carpenter, Macquarie Island 2005

I've been interested in the Antarctic and subantarctic since I was a child growing up with the stories of my father's friend, who was involved with the Australian National Antarctic Research Expeditions. In 1985 my brother ventured south as a diesel mechanic and, while bidding bon voyage to the *Ice Bird* in Hobart, I decided I wanted to go to Antarctica too. So I began to steer my career in that direction.

I gained my qualification as a carpenter through a four-year carpentry and joinery apprenticeship at Box Hill College of Technical and Further Education. The training included concrete construction, steel work, form work, and domestic and commercial building and maintenance. I then undertook further studies in building and construction, safety, rigging, scaffolding, management and supervision, and gained various plant and equipment licences.

I've worked in many sectors of the building industry including housing, multi-storey and resort construction, and directed my own company, which specialises in property management and maintenance in Melbourne. In 1998 I achieved my goal when I spent a summer at Mawson and a winter at Casey. From 1999 to 2002 I spent two summers and a winter at Mawson, where I was involved in the wind turbine construction. I'm now working at Macquarie Island.

For a tradesman, working in Antarctica or the subantarctic provides a great opportunity to learn about the scientific work that Australia conducts and to contribute to the achievement of our country's scientific goals. The projects I have been involved in give me great satisfaction, especially when the results are published. These projects have included the Penguin Monitoring Programme at Béchervaise Island, the Amery Ice Shelf hot water drilling project, and the Prince Charles Mountains Expedition of Germany and Australia.

As a carpenter at Macquarie Island I'm involved in a range of activities, including replacing doors and furniture, repairing storm-damaged buildings, venturing out into the field to maintain field huts, and coordinating cargo and personnel at resupply. Indoor maintenance is a priority in the colder months and so my skills at plastering and painting are called upon.

We only get one resupply a year, so stock inventory is of the utmost importance. As there is no local hardware store from which to purchase additional stock, some improvisation



Damian's carpentry skills took him to Macquarie Island where he was privileged to observe its unique wildlife, including these curious king penguins.

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may be required if the correct materials are not available. Because of the weather, work days need to be carefully planned. If the weather is clear then priorities may change in order to do outside work. If the weather is bad, or the conditions change quickly, outside work may need to be postponed and other jobs attended to.

I have a few other duties, the most interesting and important of these being fire chief and theatre nurse. As fire chief I'm responsible for fire management strategies on station. In such a remote location, it is important to be able to deal with any emergency response as it occurs, and this requires that I conduct routine checks and ongoing maintenance throughout the year. As a theatre nurse I assist the doctor with any medical problems that may occur. I am also on the boating team, search and rescue team, and during resupply I'm involved with cargo and logistics management.

I feel privileged to be living in this unique heritage area. From the station we can see elephant seals, hooker sea lions, fur seals, gentoo and king penguins and an abundance of other bird life. The chance to live and work with a group of people from varied backgrounds and experiences has also enabled me to learn more skills and work within a team environment.

Taken on North Head at the site of Douglas Mawson's wireless mast erected during the 1911-1914 expedition.

