

Emperor penguins endure the harshest weather conditions of any bird. They're the only animal breeding in Antarctica over the darkest, coldest months of winter, raising their chicks in temperatures as low as -60°C. As a result, emperor penguins are one of the most difficult birds to film because the camera crew must also endure the same freezing conditions. Discomforts aside, the rare privilege of observing and filming the birds' extraordinary breeding cycle is like witnessing an act of magic.

Our filming project, which was based at the Auster Rookery, about 50 km east of Mawson station, involved the BBC Natural History Unit and the production team behind the successful series *Life in the Freezer* and *The Blue Planet*. The material we filmed will be used in the *Frozen Worlds* episode of an 11-part series called *Planet Earth*, due for television, cinema and DVD release next year.

Ambitious wildlife films are a complicated and costly affair. Like all complex ventures, the best place to begin is with a detailed plan and a script, or a 'shopping list' as it's commonly called in the trade. The shopping list details a series of key shots and sequences to film in order to tell the story.

A collaborative project between the Australian Antarctic Division and the renowned BBC Natural History Unit, led cameraman Wade Fairley and biologist Frederique Olivier on a journey through one of the toughest environments on Earth, documenting the breeding cycle of Antarctica's emperor penguins.

In the field, however, the script often plays out differently because the only one not involved in its writing is the animal. Our aim was to capture the winter component of the birds' breeding cycle.

To do this, Frederique and I spent long hours in patient observation, sitting immobile or shivering, and watching carefully for the specific behavioural events that we wished to film. It's an odd job, waiting and observing. The work can be tedious, it's usually uncomfortable, but it's always rewarding. Even on the days when we couldn't capture what we set out to film (and there were many of these), there were always other surprises.

One of the major behavioural events we wanted to film was the extraordinary huddling of the emperor penguins, usually in the wildest winter conditions, to illustrate the behaviour and adaptation needed to survive. We wanted images in the worst weather that the birds have to endure. It's a fine line between a blizzard with enough visual drama to work on film, and so much real life drama that it becomes too hazardous to work.

The footage was hard won. There were many failures and

discomforts, but highlights too, and I'm confident the results will prove to be some of the most moving footage I've had the privilege to shoot. All of the year's work was shot on film (being more robust and reliable for hard field work than video tape), but we won't see a single frame of our efforts until it's been through the lab back in Australia, long after the shoot is finished. There's no chance to return, so we try to get it right first time!

We couldn't help but feel for the birds, and particularly the chicks, when observing them during severe weather events. Their perfect physiological adaptation aside, it's a tough world and as much as the emperor penguin has been anthropomorphised and romanticised, the reality is sometimes shockingly different. Some of the events we filmed were confronting and at times difficult to witness. Two sequences that stick in my mind are chicks being violently fought over because there are inevitably more expectant breeders than successful eggs, and then later, groups of fat, healthy chicks being abandoned during a blizzard. As a cameraman, I'm drawn to the wonderful aesthetic of these beautiful birds. More than this though, as a documentary-maker, I feel it's also

important to provide a broad and sometimes confronting realistic view.

Our access to the rookery and the long periods of time we worked there also provided an opportunity to gather scientific information. Frederique, an ornithologist, was able to carry out day-to-day observations on the huddle, and census work that will prove valuable to the long-term monitoring of the Auster Rookery.

Field life was a relatively simple affair and I feel privileged to have spent so much time in such a wild and remote place. Macey Island hut, a spartan but functional 1950s freighter hut, is six kilometres from the rookery and for most of the winter and spring we based ourselves there.

From Macey Hut, in candle-light, I tap this note out on my laptop - powered by a wind generator - while a blizzard rages outside and the vent overhead screams in the wind like a jet engine. The opportunity to live with emperor penguins is an honour both personally and professionally that will remain with us both. Thanks must go to the 2005 Mawson winter crew for their wonderful support, but most of all to the beautiful emperors at Auster Rookery.

—WADE FAIRLEY
Freelance cameraman

Filming a frozen world for Planet Earth

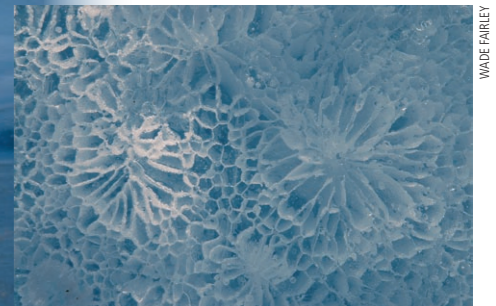


FREDERIQUE OLIVIER

Filming an emperor penguin huddle requires patience, endurance and a good set of high altitude mountaineering clothing. Here Wade endures -25°C temperatures and 45 knot winds to capture the penguins in their element. His 35 mm camera, with lens attached, weighs about 50 kg, and each roll of film captures five minutes of footage. The cameras and lenses were modified for Antarctic conditions and tested to -40°C.

FREDERIQUE OLIVIER

Part of Wade's footage will help illustrate sea ice formation around Antarctica. Time-lapse photographs of the Antarctic landscape will be interposed with close up images of ice crystals (below), and satellite images (provided by NASA) of ice forming around the continent.



Ice Flowers

WADE FAIRLEY