

Frozen hell is their home

By Robert Temple

THE frozen continent of Antarctica may seem an inhospitable place to call home, but there are a hardy few who are hooked on the place.

Perhaps the most savage conditions of all are endured at the southernmost British base, known as Halley Station. It is perched on an ice shelf 320 km from the nearest land, further than 11 km from the nearest sea.

Roughly every 10 years, the base is crushed by the weight of the ice which has settled on top of it, and has to be evacuated to new buildings. Three Halleys have disappeared beneath the ice since the first was set up in 1957.

The construction of the latest is an untold tale of British ingenuity and endurance in the face of hellish conditions.

Four two-storied buildings inside protective wooden cylinders have been built, the first of their kind in the world. They are designed to withstand the weight of the ice and snow destined to crush them.

A team of 62 men spent the Antarctic summer assembling what they could, and then left a team of 13 men to finish the job during the terrible winter, under the command of Doug Allan, a 33-year-old Scot.

During the construction, the men all had to live in a single room much of the time. Doug describes the difficulties of taking a shower:

"The only place we could have the shower was in a corner of the garage, which was unheated, and so you had a temperature of about minus 25 degrees Centigrade in which to take your clothes off. You kicked the ice out of the bottom of the shower cubicle, and had 47 seconds to take your shower before the water ran out in a converted coffee boiler."

Things were little better in the makeshift kitchen: "It was about minus seven degrees Centigrade down at your ankles, and then it was comfortable about your waist, and if you could stand on a chair and put your head up near the ceiling, then it wasn't too bad. So, things were a bit difficult."

At the same time, the men had to cope with the darkness of the Antarctic winter, which lasts for a hundred days. For six weeks, the sun does not appear in the sky at all, and total darkness reigns.

The rest of the polar night has periods when the sky is vaguely light, so that one can see to move about. A red glow in the sky is then neither dawn nor sunset, but a combination of both. As Doug says:

"The sky will become faintly red, then fairly red, then faintly red, and then it's dark again."

These faint traces of light may not seem like much, but they were like

minor miracles to the men after weeks of darkness. Doug describes his elation:

"I remember one Saturday in early July when I stepped outside and for the first time you could see a bit of texture in the cumulus clouds above. You could actually look through and you could see the grey of the clouds and the blue of the sky above."

"And a couple of days later you could see the orange coming back to the snowcats, whereas before they'd been just dark shapes, silhouettes. And suddenly there was distance restored to the world, and you could see things that were more than three or four feet away. When everything starts to come back like this, it's very uplifting."

The unremitting darkness does have certain advantages. This is the best time of year for the auroral lights, which can also be seen best against a dark sky.

The Halley Station's purpose is to study such phenomena, since it is a station for ionospheric research and as soon as the construction was finished by Doug's hardy band, the scientists moved in and are now hard at their task of studying the upper atmosphere. This particular base is at one of the best possible sites for such study.

Doug says, by way of understatement: "Obviously Halley is not the place to be if you've got claustrophobic tendencies."

"Not only is one restricted to the buildings for the duration of the winter, but the snow accumulates on top at the rate of a metre a year so that after ten years, the edifice is being literally crushed on top of one."

Doug says of Halley that it is certainly one of the most isolated communities that it's possible to get anywhere. There is no comparison to oil rigs or anything like that. "Once that ship goes, you are not going to be able to leave."

Doug and his men were there for 14 months. However, it is possible to get stuck.

Doug, who has a degree in marine biology from Stirling University in Scotland, started his association with the British Antarctic Survey as a scientific diving officer.

He actually enjoyed being able to dive where no one else could, even though it was with an air temperature of 30 degrees below zero Centigrade. But on his second stint doing that, at Signy Station, he couldn't get away from the base. He says:

"It should have been just for a year, but that was the year the ship couldn't get in at the end of the summer because there was too much ice, so seven of us got stuck for an extra year."

Old hands say that

many people tend to get truly hooked on the Antarctic, and to keep on "going south", as they call it. But the type of men who "go South" is changing, and so is the lifestyle.

Says Doug: "It used to be a lot more roughie-toughie type folk. When you mention Antarctica, people's minds turn to the cold, the dogs, living in tents, and all that sort of thing. But that went right out the windows years ago. They don't use dogs anymore."

"As for the cold, you often don't have to go out in it; many jobs will keep you inside. Nowadays, to get the sort of scientific results which the survey needs, they're having to send down really whizzkid electronics engineers, biologists, and so on."

"And you cannot get a person who is of that sort and at the same time expect them to go out and hack seals apart and feed them to the dogs. Also, your power supply now has to be 100 percent secure today."

"You can't afford to have a power failure in the middle of the best magnetic storm for years, or interrupt some other atmosphere study which has to go on continuously for six months."

"The social side of base life has become far more sophisticated nowadays. Film night used to be a good occasion to get all of the base together for a bit of a special event."

"Now the advent of

videos has put this under a bit of pressure, because the last thing that we want is for a few people to take down their own private videos. It would mean they could become socially independent from the base. Down there you are all interdependent, and if you get someone being a social outcast, then it can split the base and make life very difficult."

"We can't let people disappear with their own private videos in their room every night. So although they've recently introduced videos to all the bases, they are big desk videos with big screens, and it keeps videos as a special show, a social event."

Smoking is something of a problem. It is banned in the dormitory blocks for safety reasons, and in dining areas. But, smoking cannot be banned from generally shared areas like the lounge because it would create too deep social divisions and tensions.

"Everyone on base usually ends up having his own little bit of space; ideally it's a room, perhaps a laboratory where they're working. But everybody finds somewhere where he can go for a bit of peace and quiet and privacy," said Doug.

British Antarctic Survey has so far never let a woman stay the winter on a base.

"Britain is the only country not to have women over-wintering. The Americans and Russians have been doing it for years."



Top: The Halley Station during construction and in the moonlight after completion. Right: The station floats 320km from land on the ice shelf in the Weddell Sea. Above: A snowcat hauls ice blocks from Valley Bay to the base for drinking water, and the kitchen inside the completed Halley Station.