

served the Falkland Islands Dependencies Survey. Starting in 1955/56, *Norsel* was chartered by French IGY expeditions to Dumont d'Urville station in Terre Adélie. Jakobsen himself was master on the first two voyages. After the IGY, his ship served TAAF/Expéditions Paul-Émile Victor until 1960/61. At the end of every Antarctic season, *Norsel* headed straight for the sealing grounds to pursue her principal and more lucrative calling.

After 50 Arctic or Antarctic voyages, Jakobsen's last

trip south — 36 years after his first — was as ice pilot in the Norwegian Coast Guard ship *Andenes* in 1985. Meanwhile, his legendary achievements had been rewarded with an OBE, a Lloyds Medal, and high honours from Norway, Sweden, and France. The man himself was always friendly, modest, and cooperative with expedition leaders — a characteristic not universally encountered on polar voyages.

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## Correspondence

### Dog driving in the Arctic

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I have enjoyed reading *Of dogs and men* by Kevin Walton and Rick Atkinson [see review, page 367], but I am sad to note that most men in isolated stations, as in Graham Land, must now feel more lonely without the companionship of dogs, and also, without them, more in danger of falling down crevasses, due to the apparent foolishness and poor judgement of those unknown individuals who decided that dogs were a potential menace to the local habitat.

On page 70 of the book there are diagrams of the methods of dog driving used previously in the British sector of Antarctica, but there is no diagram of the true fan formation, since the snow surfaces in the area are stated to be too soft. Nevertheless, dog driving in the Arctic is still hugely important to the majority of hunters, who know the importance of relative silence, as opposed to those who love the noise and power of skidoos.

There are three principal methods of dog driving: the tandem formation in single file, much used in forest country, where there is deep snow; the centre-trace system, used in Labrador and parts of the Canadian Arctic, when the dogs are tethered in pairs behind one another by short cords or traces, on either side of a stronger central trace; and the fan formation, when the dogs are attached fan-wise by independent traces of equal length to one point in front of the sledge.

The first of my five principal Arctic expeditions, each lasting about a year, was to Greenland, where I spent the seven and a half winter months based at Jakobshaven on the west coast. My job was to learn to drive dogs — in the process I travelled some 3000 miles — and to make depots on the edge of the ice cap, preparatory to Martin Lindsay and Daniel Godfrey joining me and crossing the ice cap, in order to discover and map the 'New Mountains' on the east coast between 68° and 70°N. These mountains, in fact, proved to be the highest north of the Arctic Circle, more

than 12,000 feet, and had never previously been mapped or visited.

Martin Lindsay had previously been a member of the 1930–1931 British Arctic Air Route Expedition led by Gino Watkins, who had been at school with me at Lancing. Martin insisted that I must use the centre-trace method of dog driving, since Gino knew only this technique from his experience in Labrador. In consequence, men who had been in the Arctic with Gino tended later to use in the Antarctic the centre-trace system or the modified fan.

The fan formation is infinitely superior in a country where there are no trees and where the snow is reasonably hard and windswept. The dogs are all abreast of one another, and they invariably seem to enjoy themselves; every now and then, one will lick the muzzles of those on either side and the licking will be carried along the line. The length of trace depends on the number of dogs and the type of country to be negotiated. The longer the trace, the better is the forward pull; if it is too long, the dogs will be out of the driver's control and the traces may then be caught and broken by boulders or ice en route. The usual length of trace for a team of eight over normal cross-country conditions is 14 feet, whereas for larger teams traces up to 20 feet are advisable.

As soon as I gave up the exhaustion of persevering with the centre-trace system and changed over to the fan formation, there was an immediate improvement in the *joie de vivre* and speed of my dog team, and we soon found we could outstrip any other team in the area, except for the Assistant Governor's. I learnt, too, that husky dogs respond wonderfully to affection and will rarely bite human beings except when frightened; in fact, I could even take food out of their mouths and give it to others more timid.

The use of the whip varies considerably among dog drivers. A first-class man who has trained his dogs since they were puppies may not use it at all. Instead, he will merely talk to his dogs, encouraging them over difficult country and steering by word of command. Another equally good driver may use it for steering and occasionally for punishment, but, when he does, the dog concerned is meant to remember it. On no account will a driver talk

to a companion while actually sledging, since any noise disturbs a dog's power of concentrating on the task at hand.

On an expedition involving a long journey, each team should have one bitch for the sake of morale, but for obvious reasons not more than one. The king dog and the next most powerful generally place themselves on either side of the bitch in the centre of the fan formation. The wing positions are, however, the key points in a team, and, as soon as a driver sees that certain dogs do not object to pulling with a companion on only one side, he will do all in his power to encourage them. If wing dogs run inwards, the traces become badly tangled. This, the one major disadvantage of the fan formation, is invariably the driver's fault if it occurs more than two or three times daily.

No one can appreciate the thrills of sledging until he has mastered cross-country technique. When he comes to a steep descent, the driver whistles to his dogs, who at once slow down. At the same time, they divide, and the two

teams go to opposite sides of the sledge, which then runs over the traces and out-strips the dogs. The driver clutches the sledge handle-bars, pulls them backwards, thus tipping up the bow; in this way, he can control the speed of descent and also steer the sledge. Meanwhile, the dogs behind are acting as an additional brake, although the loaded sledge is pulling them down the hillside under its own impetus. If, however, the ground is rocky, the traces are placed over the handle-bars, to prevent them from being cut. At the bottom of the hill, the driver stops for a moment to pull the traces from beneath the runners or off the handle-bars, and is then ready to go forward again in the usual way.

The true fan method is used north of the tree-line in Alaska and Arctic Canada, by specialists in Svalbard, and throughout Greenland. Choosing sledge dogs and other Arctic or war-time subjects were included in my autobiography, *A talent for adventure*, published in 1991 [see *Polar Record* 27 (163): 369–370 (1991)].

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## In Brief

UNITED NATIONS ENVIRONMENT PROGRAMME SELECTS ICAIR. The International Centre for Antarctic Information and Research (ICAIR), based in Christchurch, New Zealand, has been selected to become part of the United Nations Environment Programme (UNEP) Global Resource Information Database (GRID) network. This branch of ICAIR's activities will be known as UNEP/GRID-Christchurch. Twinned with UNEP/GRID-Arendal (Norway), which has primary responsibility for Arctic environmental data for UNEP, UNEP/GRID-Christchurch will take on responsibility for establishing and maintaining Antarctic and Southern Ocean environmental databases relevant to UNEP.

UNEP/GRID-Christchurch plans to focus its first year's efforts on compiling environmental information on Antarctica relevant to UNEP interests, including the implementation of Agenda 21 from the 1992 UN Conference on Environment and Development, also known as the Rio Earth Summit. A first task will be updating the UN General Assembly in 1996 on the status of Antarctic Treaty Party activities, the Scientific Committee on Antarctic Research (SCAR), the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR), and other scientific programmes in Antarctica that address problems relating to environmental change.

UNEP/GRID-Christchurch sees its role as bridging the gap between scientific data and easily understood information, as well as assisting the flow of information between the Treaty and the United Nations. (Source: Colin Harris, ICAIR)

POLAR TOURISM CONFERENCE. An international

conference on 'Polar tourism: environmental implications and management' was held at the Scott Polar Research Institute from 18 to 21 August 1996. Convened by the Institute's Polar Ecology and Management Group, under the leadership of Bernard Stonehouse, the conference was concerned with similarities and differences in management for tourism, especially ship-borne tourism, in three geographical areas: the Arctic, typified by Svalbard; the Southern Oceanic islands; and the area south of 60°S, covered by the Antarctic Treaty System. About 60 individuals attended, including field researchers, academics, cruise leaders and guides, and representatives of four tour operators, conservation groups, and government agencies concerned with tourism management.

The meetings included two days of papers and discussions, followed by a day of workshops; 16 posters were also presented. The 26 papers presented were grouped under four headings: 'Polar tourism, the industry,' 'Site management issues,' 'Human-biota interactions,' and 'People management.' Ten of the papers and 12 of the posters were based on fieldwork of Project Antarctic Conservation, the Institute's six-year research project on polar tourism. The final day was divided into three workshops, covering tourism issues in Svalbard, the southern islands, and Antarctica.

Discussions ranged widely, but tended to centre on three key issues: (a) facility of management under sovereign governments, compared with current uncertainties under the Antarctic Treaty System; (b) the need for effective monitoring and management of tourist landing sites in all three areas; and (c) the continuing importance of self-regulation by the industry, coupled with a need for inde-