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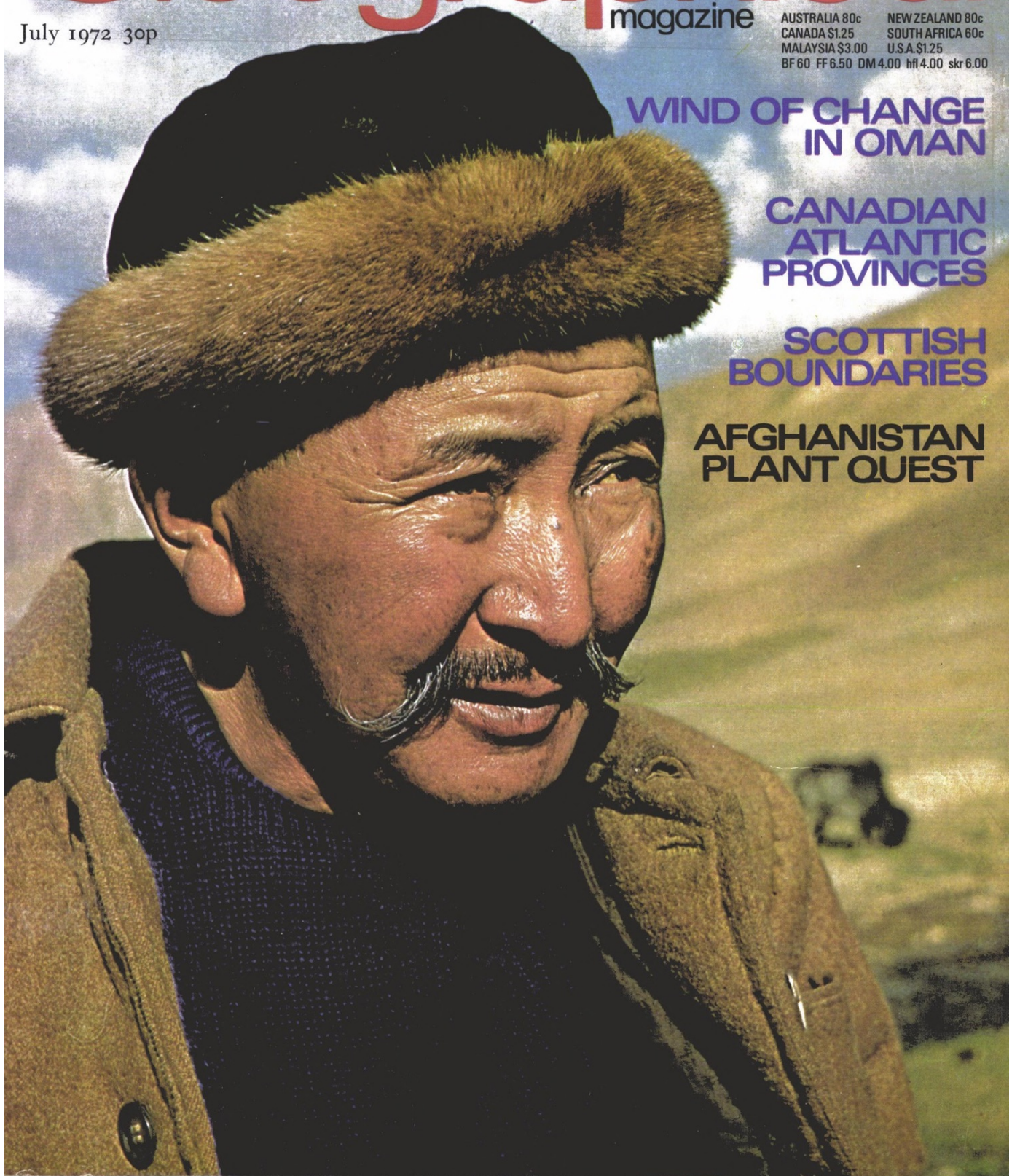
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**WIND OF CHANGE
IN OMAN**

**CANADIAN
ATLANTIC
PROVINCES**

**SCOTTISH
BOUNDARIES**

**AFGHANISTAN
PLANT QUEST**



The Geographical magazine

Editor: Derek Weber
 Art Editor: Ashley Pope
 Assistant Editor: Juliet Williams
 Production Editor: Rosalynde Cossey

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Notes on contributors, photographs and maps

Authors

Dr John G. U. Adams is lecturer in geography at University College London.
 John Connell is research officer at the Institute of Development Studies, University of Sussex.
 Christopher Grey-Wilson is a botanist at the Herbarium, Royal Botanic Gardens, Kew.
 Nigel Haigh is an engineer and chartered patent agent, and the assistant secretary of the Anti-Concorde Project.
 Dr Roger Millman is lecturer in geography at the Polytechnic of North London.
 Alan B. Mountjoy is reader in geography at Bedford College, University of London.
 Dr R. J. Price is lecturer in geography at the University of Glasgow.
 Dr Margaret C. Storrie is lecturer in geography at Queen Mary College, University of London.
 Barbara Wace is a freelance writer and photographer.

Photographs

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Maps

Pp. 660, 683, Deirdre Yuill; pp. 663 (top), 688, John Butterworth; pp. 663 (bottom), 664 (both maps), 666 (all three maps), 669, 671, 675, 702 (redrawn from an original compiled on an Ordnance Survey map base), 703 (redrawn from an original compiled on an Ordnance Survey map base), 706, Don Shewan; p. 694, Derek Harris; p. 699, from a map prepared for the author in the department of geography, University of Aberdeen; p. 704, from a map prepared for the author in the department of geography, University of Cambridge; p. 707, Ray Harris.

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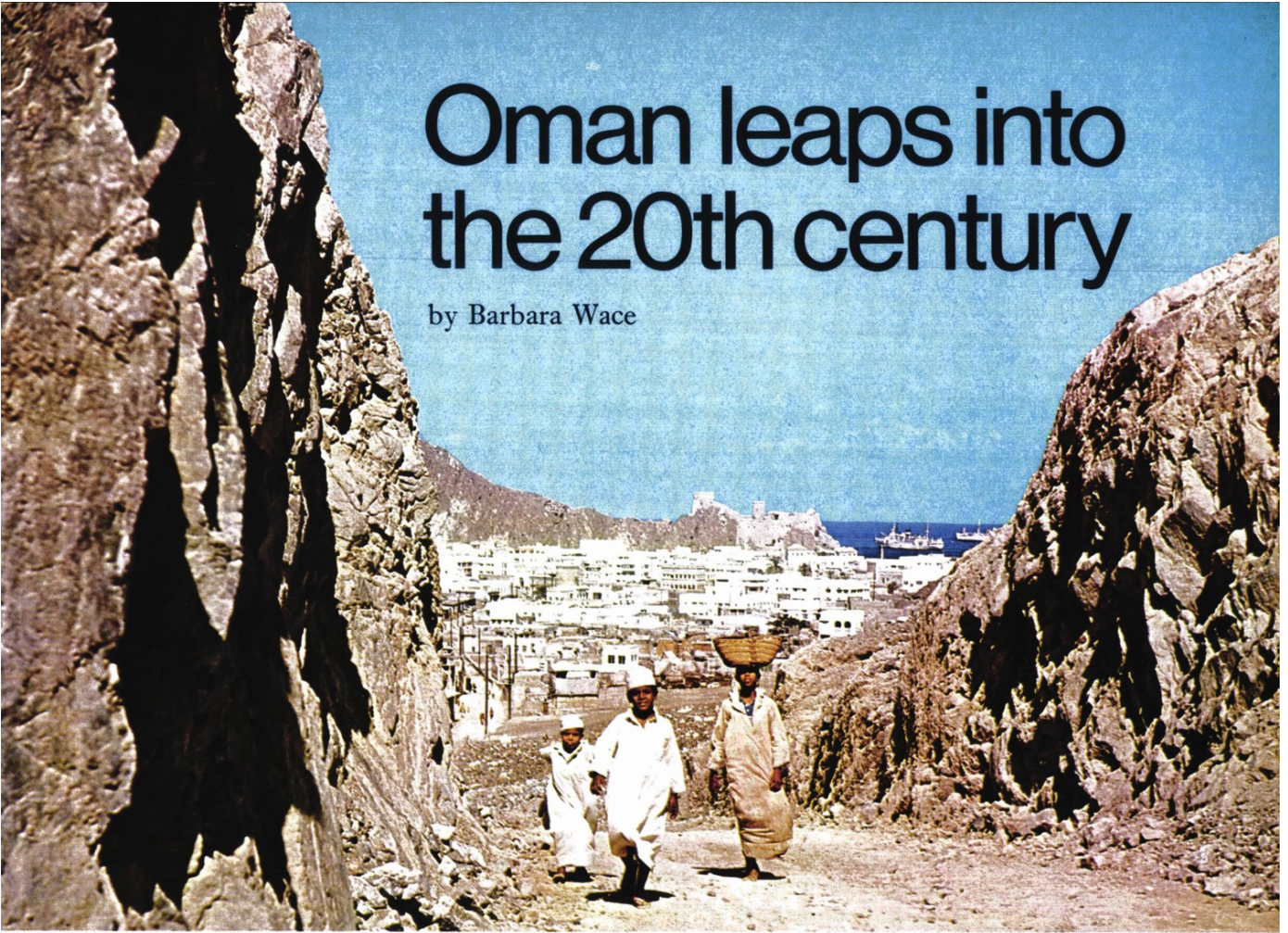
Profits from tourism supplement income from lobstering and other fishing in small peripheral settlements around the coast. (Top) Peggy's Cove, Nova Scotia

Developments aimed at improving recreational facilities include naming of the Cabot Trail (above) around Cape Breton Island. Other developments are an arts centre in Charlottetown, Prince Edward Island, reconstruction of Louisburg fort in Nova Scotia, and new national parks

stopped. The strategy now being followed seems in many ways a considerable improvement over the piecemeal and sometimes misconceived attempts of the past; whether it will succeed or not is impossible to foresee. The attempt to solve the problem of regional disparities is being made at a time when the Canadian economy is under strain, and when international events in recent years have left economists much less certain of their ability to manage the balance between growth, inflation and unemployment. But the attempt is being made, and on a large scale.

Oman leaps into the 20th century

by Barbara Wace



THE ANCIENT SULTANATE OF OMAN has been plunged headlong into the rat-race of the 20th-century world in the short period of two years. The leap has been from an almost medieval civilization under absolute rule to membership of international organizations. Until the discovery of oil and the commencement of

exports in 1967, Oman had lain dormant for 100 years hardly touched by 20th-century civilization, despite modernization in other parts of the Arabian Gulf where oil-rich sheikdoms were emerging. The country seemed forgotten and had withdrawn. In the wild little-known interior of mountains, highland plains and

Revenue from oil in Oman now totals £50,000,000 per annum. The Sultan, who came to power after a coup two years ago, is working to unite his almost medieval 300,000-square-kilometre country. Illiteracy has been reduced, roads planned and developed, agricultural practices and medical services improved, and the construction of a £29,000,000 port complex is near completion. (Above and below) Muscat, capital of Oman





Zahra Girls' School in Muscat has morning and afternoon shifts with completely different staffs for each. The rate of literacy is only 5 per cent and many Omanis who were educated abroad still prefer to stay away

desert, the tribal villages remain isolated, not only from the outside world, but often from each other. The loneliness dates from the death of Sultan Said bin Syeed in 1856. His empire of Oman and Zanzibar was divided between his two sons at that time and the power of Oman, which for centuries had been a thriving centre for trade between India and the Middle East, steadily declined.

The nation's tendency towards self-isolation was increased by the character and philosophy of Sultan Said bin Taimur, who reigned from 1932 until he was deposed in 1970. When oil was discovered in Oman he produced a carefully thought-out but slowly implemented development plan which was too limited in scope to satisfy his subjects who had heard of the new riches in neighbouring Trucial States. His reign ended in a coup and his son, who had been educated partly in Britain, succeeded him.

The new Sultan pledged himself to look to the Arab world for friendship and help, and determined to draw his huge 300,000-square-kilometre country together so that the rugged interior and other provinces would no longer be neglected. He immediately changed the name of the county to Oman instead of Muscat and Oman, and the country became a member of the Arab League, the United Nations, the World Health Organization and the International Monetary Fund. The British consulate general has become an embassy and a chargé d'affaires is already at work in London; Oman has an ambassador in Cairo as well as in many other places.

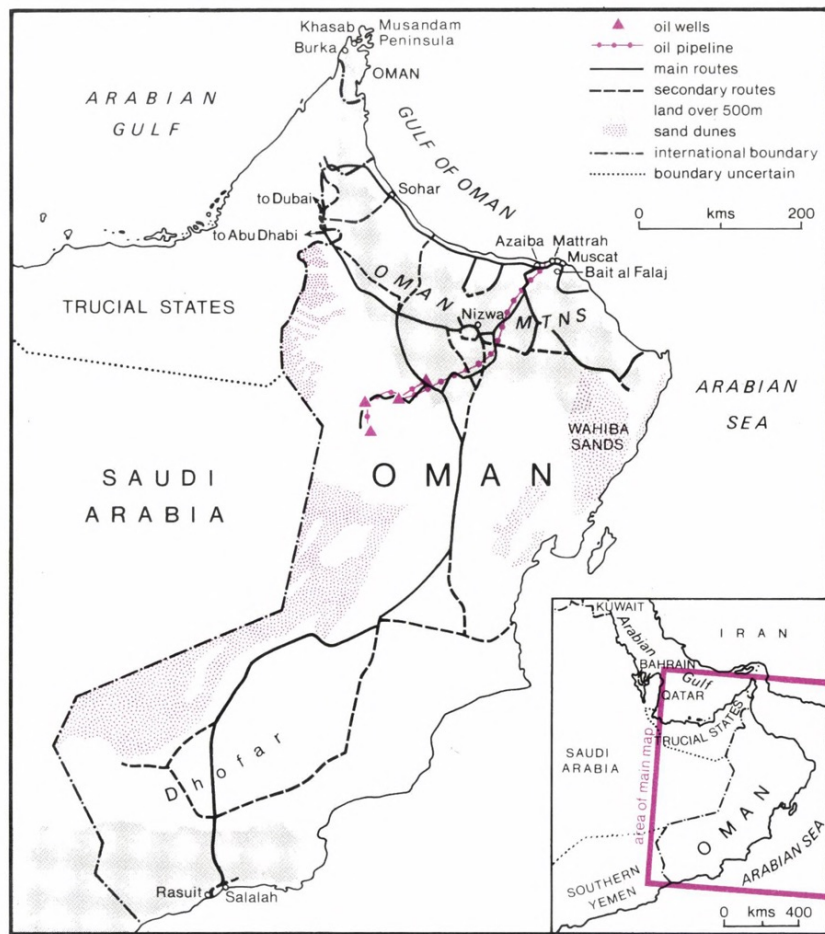
I returned to Oman in March 1972 after a four-year absence and saw many changes and ambitious develop-

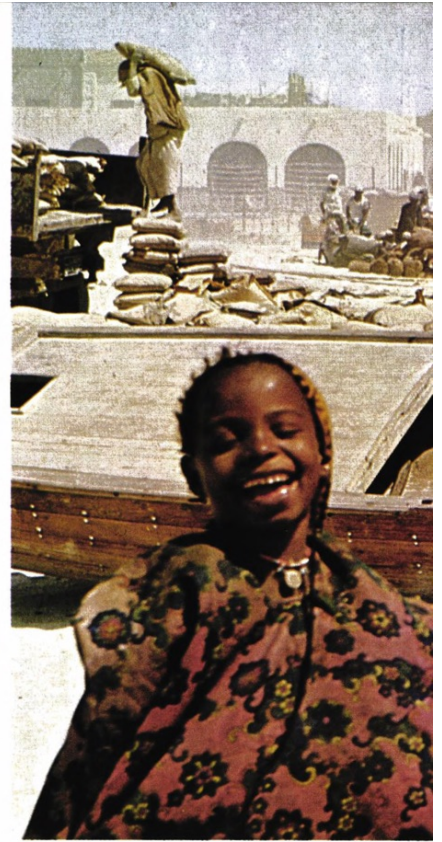
ments. The new Port Qaboos at Matrah, when completed, will provide deep water shipping capacity for up to eight ships, including one berth for container ships, and will have an annual handling capacity of 1,000,000 tons. This is the second phase, costing £17,250,000 and will be finished in 1974. Stage one, costing £12,250,000, was almost ready when I was there and provides quays, apron and sheds, storage areas, port authority buildings and customs. Outside Muscat at Mukulla, a £1,000,000 naval base for the reborn Omani Navy was being started. The British ex-Royal Navy captain of the Omani Navy's first ship, the Sultan's flagship *SNV Al Said*, told me that he was expecting three fast patrol boats soon, all built at Lowestoft as was the *Al Said*. British contract officers are training Omanis, now as crew and soon as officers; some have already gone to Pakistan for officer's courses.

On huge hoardings in the city announcing new constructions and projects were the names of companies from countries such as Germany, the Lebanon, India, Sweden and Japan; the whole world is welcome to tender here. A small hotel, originally planned, has opened and at Bait al Falaj a first class hotel with swimming pool, top service, and an excellent restaurant was also open. These still provide far too few rooms for the influx of businessmen to the Sultanate but in 1968 there were no hotels at all.

The whole atmosphere throughout the country has changed startlingly. Smoking outdoors is no longer forbidden, nor music, and many people carry blaring transistors. Cars are status symbols and every school-boy seems to possess a bicycle and crash helmet. Small

Development plans will make Mattrah the commercial centre of Oman, leaving Muscat as the older and more elegant capital. Named after the Sultan, new Port Qaboos (below), at Mattrah, to be completed in 1974, will have an annual handling capacity of 1,000,000 tons and berths for eight liners including one for container ships





Medical patients have increased since removal of travel restrictions in 1970 and new hospitals, dispensaries and health centres are being planned throughout the country. (Above left) Indian nurses from the Save the Children Fund work as midwives in Sohar on the Batinah Coast visiting village houses and helping the women. (Below left) Dhofari women arrive by Land Rover at busy hospital at Salalah



Cargoes arriving by sea at Dhofar are carried by dhows (above) from ships to the beach and then on shoulders of local men. New port at Rasuit, Dhofar, will make cargo handling easier and will serve coastal and Gulf shipping. Dhofar is the only province in Oman which catches the monsoon and so the port will open for only eight months each year

Oman has only seasonal rivers. Test drillings are being made to discover the water potential of northern Oman. (Below right) drilling crew in the heart of the interior, near Nizwa





Helicopter takes supplies to tribespeople and the armed forces in Dhofar mountains. Area has been cleared of rebels and herdsmen can now graze cows once more

girls in smart school uniforms seem enchanted at going to school for the first time and little girls in national dress take lessons next to their brothers. I saw classes in a cramped co-educational village school in the interior, while nearby a new school was being built, part of an education/hospital/health centre complex. European women are no longer irritated by rules about the length of their skirts and there are few restrictions on travel. People look happy and can often be seen gossiping outside the great gate of Muscat in the cool nights whereas three years ago it closed at dusk and could only be opened by special permit.

Traffic is unimaginably snarled up at times, and an accident on the mountain Muscat/Matrah road can block its whole length. New roads are planned to divert heavy traffic and lead into the interior. Bait al Falaj, where the barracks of the Sultan's Armed Forces are located, will soon be the site of government housing and offices. The Forces will move to the area of the new civil and military Mazoon Airport at Azaiba.

The new Oman government structure is already taking shape. The Minister for Health is an Omani doctor who has returned from Dubai where he worked for the Trucial States Council. With the advice and assistance of a brilliant Dutch doctor as Director of Medical Services and an expert on public health from Egypt, this side of development is flourishing. The government has taken over the cost of the two American Mission hospitals in Muscat and Matrah, but has retained the dedicated staff. At Matrah a young American girl is training Omani boys and girls as nursing aides.

The Sultan has inherited an almost illiterate population, a result of the former lack of schools and restrictions on people seeking education abroad. Some educated Omani are returning and others, in comfortable

modern homes and good jobs in Kuwait, Bahrain and Abu Dhabi, would return if they could find the same facilities and comforts at home.

The Director General of Information, Mr N. Elbuali, has immediate plans for enlarging the radio network, so that the smallest mountain village may be well informed. I heard the radio station at Salalah, in Dhofar, send out a notice suggesting farmers should come in to buy the lucerne grown at the experimental farm. He must also interest the outside world in his developing country.

Oman has an exciting history but no archives. The Department of Information hopes to collect material from all over the country, and to open an archive museum, perhaps in an old house in Muscat. There is already a thriving Historical Society patronized by Omanis and expatriates. Visiting press and others are looked after by the Information Department and the first real tourist party was expected in May this year.

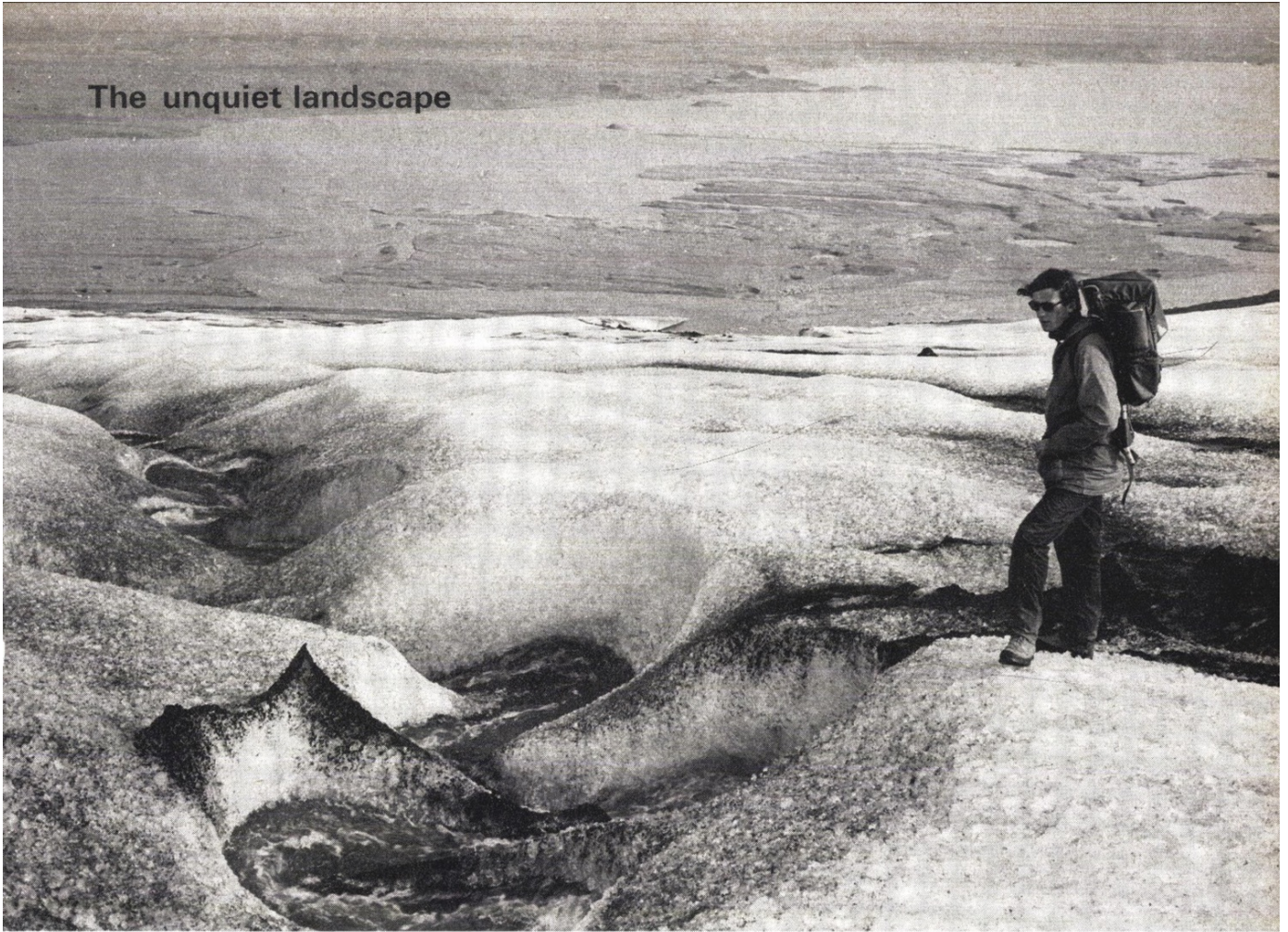
In formerly neglected areas outside Muscat and Matrah, progress and development are dramatic. One of the Sultan's plans is to increase the importance and influence of the Walis (regional governors) and to move them around so that they enlarge their knowledge and experience; this policy will help to break up tribal rivalries. In Nizwa, until recently one of the most independent and reactionary of places, the Wali has asked for the help of the Save the Children Fund helper, working in Sohar. Such a request enables the worker to go into the homes of the people as a friend and educator on hygiene. The work is badly needed, but the confidence of the Wali must be won first.

Cooperation and treatment

In the town of Salalah I watched a young Canadian call for tenders for a new meat and fruit market from local contractors; he made a paper model to explain what he wanted to protect the town's food from the blankets of flies. In Burka and Khasab on the Musandam Peninsula, where the local people had never in the past welcomed visitors even from other parts of Oman, I saw contractors and locals working together on a new breakwater, a new well, and a complex hospital, school and fort-and-barracks for the SAF. I watched a Shehuh tribesman from the mountains being taught to use paint – a substance he had never seen before. In a small village many kilometres from Nizwa a doctor held a clinic under a tree; the patients had arrived by Land Rover, donkey and camel. In the company of a hydrological geologist I drove across wadis and desert, over hills and through villages whose inhabitants had never seen a European woman until very recently. The geologist was surveying for sites for trial wells in a preliminary survey of water supplies in northern Oman.

In these remote places, as much as on the great roads near Matrah, the Sultan is developing his country and winning the race he started with a great handicap in July 1970.

The unquiet landscape



Ice and its meltwaters transform the land over which they pass. They excavate, transport and finally dump debris to create distinctive landforms. Meandering stream on the surface of Breiðmerkurjökull, an Icelandic glacier

Legacy of the Pleistocene ice sheets

by R. J. Price

TEN PER CENT of the earth's total land area is covered with debris left behind by the great ice sheets and glaciers of the Pleistocene period. This 'glacial drift' can be more than 400 metres thick but in Britain it rarely exceeds thirty metres even though many of the distinctive landforms fashioned by the ice and its meltwaters are to be found here. Drift debris deposited by the glacier ice itself is usually unstratified. In spite of this seemingly strict classification of drift by the agent that deposited it, the reality can often pose problems to the researcher because freezing and

thawing are parts of a complicated and continuous process. Deposition by the glaciers produces a sediment known as till but the meltwater streams deposit fluvio-glacial sands, gravels, silts and clays.

Deposition in glaciated environments can be associated with ice that is either actively moving or stagnant and can take place beneath (subglacial), inside (englacial), on top of (supraglacial), at the side of (marginal), and in front of (proglacial) the ice. Glacier ice deposits its debris load in three ways: release of material locked within it by melting of