

Ornithological cooperation in Siberia

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An unprecedented collaborative effort is taking place in a remote region of Siberia to investigate the biology of migratory birds.

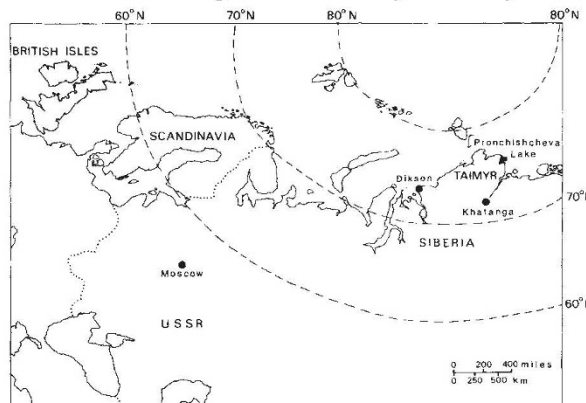
THESE are paradoxical times for cooperative scientific research in the Soviet Union. Politically, possibilities are opening up everywhere, but economic problems are concurrently creating a spreading web of difficulties across the path of sustained studies. Against this background, the International Arctic Expedition, initiated and run since 1989 by Academician E. E. Syroechkovski, head of the laboratory on ecological bases of protection and rational use of fauna at the Institute of Evolutionary Morphology and Animal Ecology (IEMAE), USSR Academy of Sciences, provides a story of unprecedented international interaction in the Taimyr peninsula, a vast and remote area of northern Siberia which was until recently entirely closed to foreign researchers. The focus of this joint work is to improve scientific understanding and to provide more effective conservation of the huge populations of migratory waders and wildfowl that breed there and then fan out along migration routes to wintering areas encompassing western Europe, Africa, southern Asia and Australasia.

A key stimulus to the development of this work has been the desire of Western ornithologists to investigate the causative factors underlying synchronized cycles of breeding success among high Arctic geese and waders, which have been deduced from age ratios observed in wintering populations in western Europe and southern Africa. Although feeding conditions before migration northwards and early summer weather conditions on the breeding grounds may also have some importance, correlational studies drawing on the limited published Soviet information on high Arctic lemming cycles suggest a striking relationship between lemming numbers and the reproductive output of both dark-bellied brent geese (*Branta b. bernicla*) and several wader species, probably mediated by prey-switching and population cycles among arctic foxes (*Alopex lagopus*) and other tundra predators^{1,2}. This research fits well with the broader aims of the Soviet group, which seeks to understand spatial and temporal patterning in the functioning of Arctic tundra ecosystems.

Progress in protection of key migra-

tion and wintering areas in western Europe, notably the Wadden Sea and many British estuaries, has naturally brought about a desire for more integrated protection of key waterfowl sites spanning the entire east Atlantic flyway, including the Siberian breeding areas. Again, these ideas converge with aspirations of Soviet biologists for a Great Arctic Biosphere Reserve, which would greatly extend existing protected areas in the Taimyr to encompass 5 million or more hectares of tundra, continental shelf and islands, as the crown jewel of a proposed chain of reserves within the Soviet Union. The Western Palearctic Waterfowl Agreement should provide a formal international framework for these ambitious goals³.

Studies began in a relatively small way



in 1989, when teams from the then Federal Republic of Germany and Poland, coordinated by WWF-Deutschland and the Gdansk ornithological station, respectively, visited the Taimyr between June and August in conjunction with IEMAE researchers. In 1990, a team from research and conservation institutes in the Dutch Ministry for Agriculture, Nature Management and Fisheries, joined the programme, as well as single researchers from the United Kingdom and from France. By summer 1991, 64 people from 9 countries were participating, including individuals from Finland and Canada and a joint British/South African team comprising three scientists from the British Trust for Ornithology, Royal Society for the Protection of Birds and the University of Cape Town. The participation of a South African researcher is not only encouraging politically but also appropriate biologically, as much data and analysis underlying the

theory linking lemming cycles and arctic wader nest predation originate from South Africa^{4,5}. Although the teams and individuals participating have had diverse research programmes, undertaken at six main research sites widely spread through the Taimyr, there has been considerable coordination in the collection of basic data of mutual interest. At their camp at Pronchishcheva Lake (75° 15'N, 112° 40'E), northeast Taimyr, in an area hitherto almost unknown ornithologically, the British and South African team worked with Dutch and Soviet researchers, and results will be published jointly.

The scale of the logistical problems facing Syroechkovski and his colleagues in carrying forward the International Arctic Expedition, stemming from a combination of the sheer remoteness of the Taimyr and the chaotic economic situation in the Soviet Union, is perhaps difficult for outsiders to grasp. Large quantities of equipment must be taken by air, often involving chartering of planes, from Moscow to the northern Siberian towns of Dikson and Khatanga, before being ferried by helicopter for up to 500 km to field camps. People have to be moved in and out of camps in ways which minimize use of the heavy, long-range helicopters, which are

both indispensable and expensive. Field camps, some in areas previously lacking even basic inventories of fauna and flora, comprise Mongolian-style yurts, circular felted tents heated by diesel-drip stoves, providing warm but basic accommodation. Much ingenuity and planning is used in acquiring both equipment and food for the three-month field seasons, and finance has required approaches to fund-raising, such as sponsorship, which are novel in the Soviet Union. It is to be hoped that the results will demonstrate that the researchers are as efficient as the birds themselves in their international interactions. □

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