Deep into the shallows

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Georges Bank. Editor-in-chief Richard H. Backus. *MIT Press: 1987. Pp. 593. $225, £160.95.*

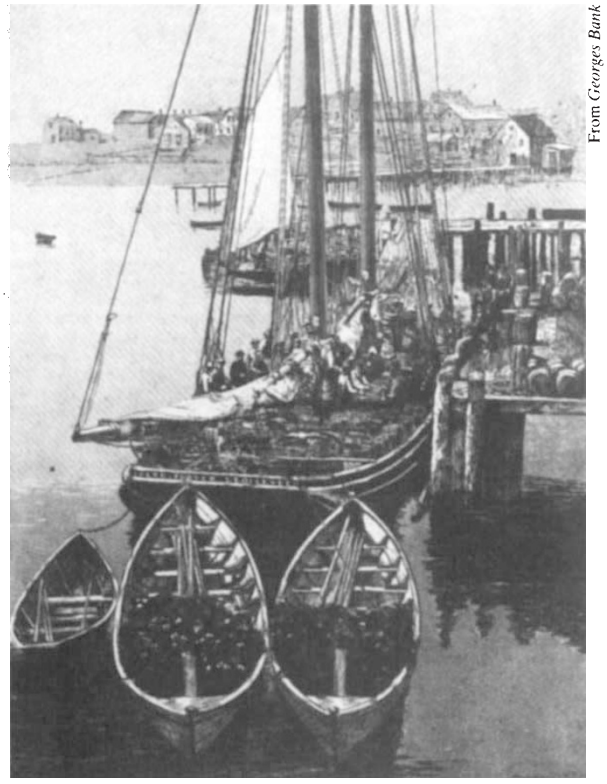
GEORGES Bank is situated off the coast of New England, with its western edge about 120 km from Cape Cod. It measures about 280 km by 150 km, of which some 14,000 km^2 is less than 60 m deep. At its northern and western edges it is connected by sills to the coasts of Canada and the United States, and so encloses the deeper waters of the Gulf of Maine.

Georges Bank has been an important fishing ground since the middle of the eighteenth century. Even in the nineteenth century signs of overfishing were evident, and unexplained ups and downs in the yield have meant varied fortunes for fishermen from both the New and the Old Worlds. In modern times, about 20 species from a total of about 100 have contributed to annual yields as high as 500,000 tonnes. Since the 1970s, however, a steep and consistent reduction in the catch followed heavy fishing, fleets from the USSR, Poland, and East and West Germany all taking a major share. These foreign fleets have now departed, leaving a depleted stock to the United States and Canada.

Although the Bank has always mattered to New Englanders because of its fisheries, much wider interest was sparked off by US plans in 1974 to lease parts of it for oil exploration. Lobbying by vested interests, especially the fishing industry, delayed the first drilling until July 1981. Exploitation was also hindered by the extension by both Canada and the United States of their fishing limits to 200 miles in 1977. The management zones overlapped, the conflict between the two countries was never amicably resolved, and a settlement was finally reached only after a hearing by the International Court of Justice in 1984.

This is the background to the book under review — a massive, multi-author work of 57 articles and 593 pages, each measuring 39 cm × 34 cm. Even so, it is an effective condensation of reality, using only 10 cm^2 of paper per square kilometre of bank. A bargain billion fold reduction!

In 1979, when the dispute over Georges was at its hottest, the Woods Hole Oceanographic Institution set up a coastal research centre. One of its remits was a long-term study with a view to finding out why the Bank was so productive. This book was conceived as a project summary, to treat all aspects of the natural science of the Bank, to describe its resources and to consider some of the political issues associated with their exploitation. Although technical in content, it was intended to inform not only scientists but also students, legislators, fishermen, engineers, lawyers and resource managers.



From *Georges Bank*

Been fishing — a purse seiner with barrels of salted mackerel on deck, a picture of 1887.

A first impression is that the editors have achieved their aim, a judgement that stands up to closer scrutiny. The feast of articles consists mainly of scientific reviews (although we are told that new material is also included) together with good accounts of history, commerce, economics, politics, and there are even some fishing anecdotes to leaven the fairly substantial meal. The style is in places somewhat more technical than *Scientific American* but the general appearance of the volume, with photographs, figures and maps, reminds one of that publication. The quality of production is extremely high.

The book's gestation period of seven years comes as no surprise to anyone associated with the publication of multi-author works. The contributors involved themselves in a range of informal workshops, 'tutorial' lectures and day-long meetings aimed at fostering coherence as well as cross-disciplinary contacts. A brief analysis of the articles shows the following distribution: "Exploration and History" 2; "Geology" 4; "Weather and Climate" 2; "Physical Oceanography" 6; "Chemistry" 5; "Phytoplankton, Primary Production and Microbiology" 5; "Zooplankton and Secondary Production" 16; "Fisheries" 10; and "Conflicting Uses" 8. Admirably, most authors set out lucidly the basics of their field before embarking on their application to Georges. Between the more serious contributions are engaging snippets with such titles as "How the Bank Got its Name" and "Bait Up: Dory Fishing on Georges Bank".

Few of the authors indulge in subject elitism. Rather, almost all of them seem acutely aware of the implications of their work for others interested in the Bank. The editorial policy persistently reinforces this unity. Thus the reader is constantly aware of recurrent themes: the influence of the last glaciation; proximity to the coast and its associated contaminants; canyons round the Bank; the ubiquitous effect of winter storms on the shallows; physical and biological seasonality; the contributions to work on the Bank from satellite remote sensing and submarine photography; the local 'mud patch'; the Bank's high biological productivity; difficulties of quantifying the energy flow through the trophic levels; difficulties of population measurement (and the inescapable urge of scientists to perceive and quantify biological diversity); and comparison with other coastal regions. All this is set against the background of commercial fisheries and, more recently, exploration for oil.

The book is a paean to regional oceanography at its best. A history of Georges, it is also the history of marine science written small. The leitmotiv is a mood of sympathetic exploitation of the environment informed by a thoroughgoing catholic interest in the sea. Whatever your viewpoint — oceanography, fisheries, commerce or law — and whatever stage your career, you will profit both in your particular field and from the wide panorama of maritime endeavour that this book offers. □

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