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EDITORIAL - What is history of oceanography?

"... I wish you wouldn't keep appearing and vanishing so suddenly; you make one quite giddy." "All right", said the Cat; and this time it vanished quite slowly, beginning with the end of the tail, and ending with the grin, which remained some time after the rest of it had gone.

"Well! I've often seen a cat without a grin", though Alice; "but a grin without a cat! It's the most curious thing I ever saw in all my life!"

Lewis Carroll, *Alice in Wonderland*

Trying to define the history of oceanography is akin to finding the cat behind the grin. The closer one looks, the more one sees the grin and the less the cat. But as producers of a newsletter titled *History of oceanography*, we owe it to our colleagues and readers to state what *we* think the history of oceanography may be.

If we examine the published record of the field, for example the proceedings of the four Congresses of History of Oceanography, we find that cartography and exploration, tidal studies, naval history, marine archaeology and meteorology are among the many subjects that have been included in the history of our field. Are they part of the history of oceanography? Can we or should we draw lines delineating our study? In my opinion, the answer is yes - but making the cat reappear is easier to wish than to accomplish.

Perhaps definitions will help. The *Hydrographic dictionary* compiled by the International Hydrographic Bureau in 1951 gives us the following - "OCEANOGRAPHY... that science treating of the OCEANS, their forms, physical features and phenomena". This is difficult to use - for example, cartography deals with the forms and physical features of the oceans, and yet a study of an early *mappa mundi* is hardly history of oceanography. We can't solve our problem by just adding a few adjectives to the IHB definition of oceanography to make it define a historical field. But what may help is to add a human dimension to that of science.

The American oceanographer Willard Bascom in his recent book, *The crest of the wave* (1988, p. xiii) has said that "oceanography is not so much a science as a collection of scientists who find common cause in trying to understand the complex nature of the ocean". If this is so, then the history of oceanography investigates how and under what circumstances scientists have tried to understand processes in the ocean. Our study must turn us toward science as a *social activity* that investigates the *phenomena of the oceans*. It is this working principle that governs the context of this newsletter, and that leads us, deliberately to exclude much of the history of navigation, the narrowest aspects of hydrography, exploration and discovery, meteorology, archaeology and even much of geophysics and marine biology from the history of oceanography.

Here we face a problem. Oceanography, as a discernible science and professionalized field, hardly existed before about 1910. Late in the nineteenth century, when the ingredients that gave rise to oceanography - marine biology and fisheries science, physics and chemistry, scientific expeditions and international science - were being stirred together, marine scientists thought of themselves professionally in a variety of ways, but rarely as

oceanographers. As historians of oceanography we can either confine ourselves to the past few decades, when a definable field of oceanography existed, or make the more daring and significant choice of looking back to earlier, more puzzling times. Definitions turn out to be cramping, inhibitory, and worst of all, an unadventurous aid to our scholarship.

History of oceanography is what historians of oceanography write about. This is not a cop-out as long as we find common cause in investigating how scientists have learned about oceanic processes. "Oceanography" as ocean science, and "science" as disciplined investigation by individuals or groups, provide the boundary conditions of the history of oceanography. We must continue to admire and puzzle at the grin but to study the cat that disappears into the past.

Eric Mills

An editorial note

We, the members of the executive of the Commission, had hoped to have the second issue in your hands in January. Among other factors, my new new responsibilities in Dalhousie University slowed down its production. But the *Newsletter* is now back on track; I hope to have the third issue in your hands early next year.

Would you please send material for the next issue - short articles, notices of meetings, requests for information, outlines of work in progress, anything newsworthy related to the history of oceanography - either to me in Halifax or to Jacqueline Carpine-Lancre in Monaco by DECEMBER 31, 1990.

With thanks!

Eric Mills

New Publication

Just received, Anita McConnell's (1990) **DIRECTORY OF SOURCE MATERIALS FOR THE HISTORY OF OCEANOGRAPHY**, Unesco Technical Papers in Marine Science 58, iii + 40 pp.

This invaluable aid to research is available from

Division of Marine Sciences

Unesco

Place de Fontenoy

75700 Paris, France.

OCEANOGRAPHY ON POSTAGE STAMPS;
CHRISTMAS ISLAND HONOURS SIR JOHN MURRAY

By

Tony Rice

IOSDL, Wormley, Godalming, U.K.

I had originally intended to devote this first short article to the stamps of Monaco, and particularly to those dealing with the oceanographic career of Prince Albert I. However, since the first issue of the Newsletter appeared, Christmas Island in the Indian Ocean has released an oceanographically interesting set of four stamps (Figures 1-4) that I thought readers might like to know about.

The stamps were issued on March 16, 1989 to mark the 75th anniversary of the death of Sir John Murray in a motoring accident near Edinburgh in March 1914. One of the stamps depicts a chart of Christmas Island showing Murray Hill, but the other three show more directly oceanographically subjects; Murray himself, HMS *Challenger* and a group of contemporary oceanographic instruments.

Born in 1841, Murray was, of course, one of the junior naturalists on board the *Challenger* during her oceanographic expedition from 1872 to 1876, and he assumed responsibility for the publication of the Expedition's scientific results after the death of Charles Wyville Thomson in 1882. Over the next 30 years, Murray became the most celebrated oceanographer in the world. But during the same period he also became a very wealthy man as a result of his exploitation of the phosphate deposits on Christmas Island, discovered as a direct consequence of his interest in oceanic coral islands which had begun during the *Challenger* Expedition (see Burstyn, 1975 and Rice, 1987). It says a good deal about the relative respect accorded to science on the one hand, and to commerce on the other, that Murray's appearance on this set of stamps (Figure 1), and on the only other stamp to illustrate him (Christmas Island 1977, 4¢, Figure 2), were prompted by his business acumen rather than his oceanographic brilliance.

When Murray received his first phosphate-rich rock samples from Christmas Island in 1887 the island was uninhabited and unowned. Formally annexed by the British the following year, the tiny 135 square kilometre island was visited sporadically by Murray's associates and representatives during the next few years until the Christmas Island Phosphate Company was established in 1897. Thereafter, the population grew rapidly, reaching more than 3000 in recent years. Since the livelihood of the island's inhabitants has always been directly or indirectly dependent upon the exploitation of the phosphate reserves, now rapidly becoming exhausted, it is not surprising that many of the stamps released since Christmas Island began issuing them in 1963 have depicted various aspects of the phosphate industry or the events which led to its establishment (see Rice, 1987). In doing so, however, the island's postal authorities have inadvertently depicted a number of oceanographic topics quite apart from those on the most recent issue.

For example, two British hydrographic vessels, HMS *Flying Fish* and HMS *Egeria*, from which significant oceanographic observations were carried out in the 1880s and 1890s,



Fig. 2. John Murray depicted on one of Christmas Island's *Famous Visitors* set of stamps issued in 1977. Based on the same portrait as the 1989 stamp.



Fig. 1. March 1989 issue to mark the 75th anniversary of the death of Sir John Murray. The depiction of Murray is based on a portrait by Sir George Reid painted in 1913 and held by the Scottish National Portrait Gallery. The *Challenger* illustration is based on a vignette in Wyville Thomson's *The Voyage of the Challenger: The Atlantic*, published in 1877.

are both illustrated on Christmas Island stamps to commemorate their visits to the island in 1887 to collect rock samples (Figure 3). Similarly, their commanding officers, J.F.L.P. Maclear and Pelham Aldrich, respectively second-in-command and lieutenant during the *Challenger* Expedition, have also appeared on the island's stamps but, as in the case of Murray, to commemorate their contributions to the history of Christmas Island rather than their oceanographic efforts.

Before leaving Christmas Island and its stamps, I would like to take the opportunity to correct an error of identity in my own previous work. The annexation of the island in June 1888 was carried out by Captain William Henry May (1849-1930) in command of HMS *Imperieuse* (Figure 4). Both May and the *Imperieuse* have featured on Christmas Island stamps, most recently in a set issued in 1988 to mark the centenary of the annexation. In a book on *British Oceanographic Vessels*, published in 1986, I identified W.H. May as the "Staff Commander May" who commanded HMS *Lightning* during her short, but epic, cruise to the north and west of Scotland with Charles Wyville Thomson and W.B. Carpenter in the summer of 1868. This was clearly an error, for the commander of the *Lightning* was actually Daniel J. May, who was at the nearing the end of his naval career. May had earned his considerable surveying reputation as a warrant officer, particularly in surveys of the River Niger under Dr. Baikie in 1854 and in 1857-59, and of the Rovuma River with Livingstone in 1860-61. He was promoted from Master to Staff-Commander immediately before the *Lightning* cruise and retired at the same rank on 22 February 1870.

V.W. May, on the other hand, at the time of the *Lightning* cruise was a nineteen-year-old midshipman, being promoted to Sub-Lieutenant in 1869 and to Lieutenant in 1872. In 1875 May volunteered for, and was appointed to, the post of navigating officer on HMS *Alert* for the Arctic Expedition under G.S. Nares, who had been recalled from the *Challenger* at Hong Kong to take command of this expedition.

May was promoted to Commander in 1881 and was given command of HMS *Imperieuse* in 1888 as flag captain to Admiral Sir Nowell Salmon on the China station. It was during the passage of the *Imperieuse* out to China that May was ordered to undertake the annexation of Christmas Island.

May's already distinguished career continued on its upward path and he ultimately officially retired from the navy in 1913 as admiral of the fleet, having already received a knighthood. In purely naval terms, Sir William May was clearly far more successful than his ex-warrant officer namesake with whom I confused him. But from an oceanographic point of view, D.J. May's career was much more significant. He probably did not regard his command of a 45-year-old and dilapidated paddle-steamer as a particular honour. But despite the ship's poor performance and the appalling weather she encountered during her six-week research cruise, I believe that the results obtained were more important in the development of marine science than those obtained in any similar period. D.J. May's enthusiastic assistance to Thomson and Carpenter, acknowledged in Thomson's classic account *The Depth of the Sea*, earned May an significant, if relatively peripheral, role in the history of oceanography - though he is unlikely ever to be depicted on a postage stamp!



Fig. 3. HMS *Egeria* and HMS *Flying Fish*, which collected the rock samples which convinced Murray that Christmas Island was a potential source of phosphate, have been depicted on a 1972-73 issue (6¢ and 10¢) and on a 1987 issue to mark the centenary of their visits to the island. In the 10¢ stamp the *Egeria* is wrongly shown as a steam turret-vessel, whereas she was actually a three-masted composite screw-sloop.



Fig. 4. Like Murray, W.H. May has also been depicted twice on Christmas Island stamps, once in the *Famous Visitors* issue of 1977 (8¢), and once in the 1988 issue to mark the centenary of the island's annexation.

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CONFERENCE ON 'OCEAN RESOURCES, INDUSTRIES AND RIVALRIES: 1800 TO THE PRESENT', BERKELEY, 4-6 MAY 1990.

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One of the feelings strongly expressed at ICHO IV in 1987 was the need for smaller meetings on specific topics to be held during the long intervals between ICHO's, so it is good that some people have taken up the challenge. This meeting was organized by Professor Harry Scheiber at the School of Law, University of California, Berkeley, U.S.A., as a preliminary to his workshop of the same title to be held as part of the proceedings of the 10th International Economic History Congress taking place at Leuven, Belgium, 20-24 August 1990. The meeting was informal, with invited speakers from very diverse backgrounds covering a wide range of topics from a more or less historical point of view with opportunity for some stimulating discussion. The principal items were:

First Session: (Atlantic Fisheries) Xoan Carmona, University of Santiago de Compostela, Spain (Spanish fisheries, 1830-1930); Margaret Deacon, University of Southampton, U.K. (Scientific research on Strategic fisheries, 1882-1899); Walter Lenz, University of Hamburg, German Federal Republic (the role of ICES in fisheries management); Stephen Fisher, University of Exeter, U.K. (the sea in the economy of south-west England).

Second Session: (the Pacific) Milton Freeman, University of Alberta, Canada (Legacy of industrial whaling and problems in Japan's coastal fisheries; Harry Scheiber (Japan, the U.S. and marine fisheries development after World War II); Patrick O'Bannon (the U.S. Salmon Fishery); Annick Foucrier, Ecole des Hautes Etudes en Sciences Sociales, Paris, France (French Pacific whaling).

Third Session: (Whaling) Dale Ingmanson, San Diego State University (whaling in 19th century Brazilian and American colonial economies); Toshiya Hoshino (Antarctic whaling).

Fourth Session: (fur seals) Jon M. Conrad, Cornell University (harp seals); Erik Franckx, Free University of Brussels, Belgium (management of fur seals since 1911).

Fifth Session: Roger H. Charlier, University of Brussels, Belgium (non-living ocean resources).

The meeting benefited from the presence at several of the sessions of experts in related fields, mainly Berkeley faculty members, who made a valuable contribution to the discussions.

A REVISED HANDLIST OF PRINTED SOURCES
ON THE HISTORY OF OCEANOGRAPHY

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The reference books and monographs following have been selected to aid teachers and beginning students of the history of oceanography. The list is based on two principles, either that the publications are readily available in major libraries, or that they have not been superseded as sources of information. The periodical literature is not included except in Section 6 because of its extent. A good source of information on journal articles published between 1913 and 1985 is the *Isis cumulative bibliography* (ed. M. Whitrow and J. Neu); it is added to annually by the *Critical bibliographies* accompanying the journal *Isis*.

The 1989 Newsletter contained a preliminary version of my handlist of sources. The 1990 version contains one expanded Section 5, dealing with biography and bibliography, plus a totally new section on institutions. I hope this revision will have a little more staying power than the original. Please send me corrections or suggestions for additions.

1. *Basic texts*

- Deacon, M. 1971. *Scientists and the sea 1650-1900. A study of marine science*. London: Academic Press. xvi + 445 pp.
- McConnell, A. 1982. *No sea too deep. The history of oceanographic instruments*. Bristol: Adam Hilger. ix + 162 pp.
- Mills, E.L. 1989. *Biological oceanography: an early history, 1870-1960*. Ithaca, N.Y.: Cornell Univ. Press xvii + 378 pp.
- Schlee, S. 1973. *The edge of an unfamiliar world. A history of oceanography*. New York: E.P. Dutton. 398pp.

2. *Symposium and congress proceedings*

1965. *Colloque international sur l'histoire de la biologie marine. Les grandes expéditions scientifiques et la création des laboratoires maritimes*. Vie et Milieu, supplement 19, 370 pp.
1968. *Premier Congrès International d'histoire de l'océanographie*, Monaco, 1966. Bull. Inst. océanogr. Monaco. No. spéc. 2,3 vols.
1972. *Second International Congress on the History of Oceanography. Challenger Expedition Centenary*. Proc. Roy. Soc. Edinburgh, 72, viii + 462 pp; 73, viii + 435 pp.
- Sears, M. and D. Merriman (eds.). 1980. *Oceanography. The past*. New York: Springer-Verlag. xx + 812 pp.

3. Source books

- Deacon, G.E.R. and M.B. Deacon (eds.). 1982. *Modern concepts of oceanography*. Stroudsburg, Pa.: Hutchinson and Ross. xiii + 386 pp.
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- Thomasson, E.M. (ed.). 1981. *Study of the sea. The development of marine research under the auspices of the International Council for the Exploration of the Sea*. Farnham, England: Fishing News Books. xiv + 253 pp.
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4. Ships and expeditions

- Anonymous. 1972. *Selected references to literature on marine expeditions 1700-1960*. Fisheries-Oceanography Library, University of Washington. Boston: G.K. Hall. iv + 517 pp.
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- Estok, R. and R.E. Boykin. 1976. *A union list of oceanographic expeditions including results of some major cruise reports*. College Station, Texas: Texas A & M Univ. Libraries. iii + 138 pp.
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(1989, with additions from earlier years)

Jacqueline Carpine-Lancre

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- WIEDERKEHR, (K.H.), & SCHRÖDER, (W.), 1989. Georg von Neumayers geophysikalisches Project in Australien und Alexander von Humboldt. *Gesnerus*, vol. 46, no. 1-2, pp. 93-115.
- YAMAGUCHI, (Y.), 1989. Tuna long-line fishing: historical aspects. *Marine behaviour and physiology*, (8: fisheries science) vol. 15, no. 1, pp. 1-11, 4 fig.

MEETINGS

- 2-7 August 1990. 6th INTERNATIONAL CONGRESS ON THE HISTORY OF SCIENCE IN CHINA. Robinson College, Cambridge, U.K., celebrating 9th birthday of Joseph Needham. Contact: 6th ICHSC Secretariat, Jane Rowell Conferences, 43 Norwich St., Cambridge CB2 1NB, U.K.
- 26 August - 2 September 1990. 17th INTERNATIONAL CONGRESS OF HISTORICAL SCIENCES. Madrid, Spain, sponsored by International Committee of Historical Sciences. Themes include discovery of America by Europeans and its consequences. Contact: Prof. T. Barker, Dept. of Economic History, London School of Economics, Houghton Street, London WC2A 2AE, U.K.
- 25-27 September 1990. AUSTRALASIAN ASSOCIATION FOR THE HISTORY, PHILOSOPHY, AND SOCIAL STUDIES OF SCIENCE. Contact: Barry Butcher, School of Humanities, Deakin University, Victoria 3217, Australia.
- 18-20 October 1990. THE SOCIETY FOR THE HISTORY OF TECHNOLOGY. Clinic Center Hotel, Cleveland, Ohio, U.S.A. Contact: Lindy Biggs, Dept. of History, Auburn University, Auburn, Alabama 36849, U.S.A.
- 20 October 1990. SEA SURFACE TEMPERATURE STUDIES TO THE END OF THE 19TH CENTURY. One day conference at University of Wales College at Cardiff, associated with Royal Meteorological Society Welsh Group. Contact: R.J. Ogden, Group Secretary, Beechmast, Silverwood Drive, Camberley, Surrey GU15 2AT, U.K.
- 25-28 October 1990. HISTORY OF SCIENCE SOCIETY ANNUAL MEETING. Seattle, Washington, U.S.A. Several sessions on marine-related topics. Contact: Peter Galison and Timothy Lenoir, Program in the History of Science, Stanford University, Stanford, California 94305, U.S.A.
- 27-30 December 1990. HISTORY OF CARCINOLOGY at the annual meeting of the American Society of Zoologists, San Antonio, Texas, U.S.A. Contact Frank Truesdale, School of Forestry, Wildlife and Fisheries, Louisiana State University, Baton Rouge, Louisiana 70803-6202, U.S.A.
- 27 May-2 June 1991. XVIIth PACIFIC SCIENCE CONGRESS. Honolulu, Hawaii, U.S.A. Contact: Nancy Day Lewis, Secretary General, XVIIth Pacific Science Congress, 2424 Maile Way, 4th floor, Honolulu, Hawaii 95822, U.S.A.
- ?dates, August 1991. INTERNATIONAL ASSOCIATION FOR GEOMAGNETISM AND AERONOMY. Vienna, Austria. Subject: pioneers in geophysical research.
- 18-20 October 1991. CANADIAN SCIENCE AND TECHNOLOGY HISTORICAL ASSOCIATION. Ottawa, Canada. Devoted to 75th anniversary of National Research Council of Canada, government and science, and history of Canadian science policy. Contact: Philip Enros, Science Council of Canada, 100 Metcalfe Street, Ottawa K1P 5M1, Canada.
- July 1993. Vth INTERNATIONAL CONGRESS OF HISTORY OF OCEANOGRAPHY. Scripps Institution of Oceanography, La Jolla, California, U.S.A. Conference theme: Oceanography: the Pacific perspective. DETAILS OF THIS IMPORTANT MEETING WILL FOLLOW IN THE NEXT NEWSLETTER.

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