

History of Oceanography

No.6

ISSN 1013-3917

September 1994

CONTENTS

	<u>PAGE</u>
EDITORIAL.....	1
ARTICLES & NOTICES.....	3-8
New archival collections at Scripps Institution of Oceanography.....	3
Historians of Oceanography.....	4
"Oceanography" magazine.....	5
Publication of ICHO-V papers.....	5
History of Canadian marine science.....	5
BIBLIOGRAPHY AND BIOGRAPHY.....	9-21
ICHO VI in 1998.....	22
NEWS AND EVENTS.....	22
MEETINGS.....	23

NEWSLETTER of the COMMISSION of OCEANOGRAPHY
DIVISION of HISTORY of SCIENCE
INTERNATIONAL UNION of the HISTORY and PHILOSOPHY of SCIENCE

INTERNATIONAL UNION of the HISTORY and PHILOSOPHY of SCIENCE
DIVISION OF HISTORY of SCIENCE
COMMISSION of OCEANOGRAPHY

President Emeritus

Prof. Jean THEODORIDES
16 Square Port Royal
F-75013 Paris (France)

President

Prof. Eric L. Mills
Department of Oceanography
Dalhousie University
Halifax, Nova Scotia
B3H 4J1
Canada

Vice Presidents

Dr. Margaret B. DEACON
Department of Oceanography, the University
Southampton SO9 5NH (Great Britain)

Prof. Luiz SALDANHA
Departamento de Zoologia
Universidade de Lisboa
Bloco C-2 - 3^o Piso
Campo Grande
1700 Lisboa (Portugal)

Secretary

Mme Jacqueline CARPINE-LANCRE
Musée océanographique (Bibliothèque)
Avenue Saint-Martin, Monaco-Ville
MC 98000 Monaco

Editor of Newsletter

Eric L. MILLS
Department of Oceanography, Dalhousie University
Halifax, N.S. B3H 4J1 (Canada. Phone (902)494-3437
FAX (902)494-3877. Telex (CCI)7401468 OCGY UC
e-mail: emills@ac.dal.ca

Text preparation

Tammie Galliot
Department of Oceanography
Dalhousie University

EDITORIAL - Makarov and Marsigli

When Vice-Admiral Stepan Osipovich Makarov was killed during the sinking of the battleship *Petropavlovsk* in a Siberian harbour in April 1904, his great monograph *Le "Vitiáz" et l'Océan Pacifique* was just ten years old. Makarov, the son of a naval officer, joined the Imperial Russian Navy as a cadet. His career took him from warrant officer to commander of a vessel stationed in Constantinople, on a training voyage around the world, and to his death during the Russo-Japanese War of 1904-1905. He was an exponent and a pioneer of travel in the ice of the Arctic Ocean and along the Siberian coast, using the icebreaker *Yermak* to reach Spitsbergen and Novaya Zemlya between 1899 and 1901.

Makarov was more than modestly literate in ocean science. Despite the limitations of his training ship *Vitiáz*, which had not been equipped as a research vessel, Makarov was able to occupy 31 stations in the Pacific and to compile temperature and specific gravity observations from the surface to 400m (occasionally 800m). Combining his observations with all the previous ones from the Pacific, he produced the first water temperature tables for Pacific surface waters and the 400m level. His observations from *Vitiáz* clearly showed the equatorial countercurrent, which had been observed sporadically since the early 19th century (see P. Hisard. 1993. *Mise en évidence du contre-courant équatorial dans l'Océan Pacifique et l'Océan Atlantique au cours de la première moitié du XIXe siècle*. *Oceanis* 19 (1): 1-56). He noted a patch of cold water at the equator around 110 degrees west, inexplicable at the time, and showed clearly in observations and a chart the "warm pool" of western Pacific water and the much cooler temperatures in the eastern Pacific. Makarov, unlike many of his scientific colleagues during the late 19th century, recognized that the earth's rotation would affect winds and ocean currents, citing the early speculations of Edmond Halley (in 1686) about the origin of the trade winds; he was unaware, apparently, of George Hadley's argument (1735) explaining the direction of the trade winds as a result of the earth's rotation.

The scanty accounts in English of Makarov's scientific work (A.I. Soloviev. 1968. *S.O. Makarov and the significance of his research in oceanography*. *Bull. Inst. océanogr. Monaco*, No. spécial 2 [Congr. int. Hist. Oceanogr. 1]: 615-625; I.A. Fedoseyev. 1974. *Makarov, Stepan Osipovich*. *Dict. Sci. Biogr.* 9: 42-43 - a Russian work, J.P. Potapov. 1982. *Stepan Osipovich Makarov 1848-1904*. Leningrad: Nauka, was not available) suggest that his oceanographic work began in the Bosphorus. There in 1881-1882 Makarov extended the observations of Luigi Ferdinando Marsigli in 1679-1680 that deep water flowed into the Black Sea from the Sea of Marmara, opposing the surface outflow from the Black Sea, and calculated the differences in level and the pressure gradients that led to the currents based on 4000 temperature and specific gravity measurements.

Makarov and Marsigli present us with a problem in the historiography of oceanography, namely the problem of the "original" researcher with no apparent links to communities of interest or to concurrent scientific work that can explain what happened. Thanks to John Stoye of Magdalen College, Oxford we have a detailed and highly engaging account of Marsigli's life (John Stoye. 1994. *Marsigli's Europe 1680-1730. The life and times of Luigi Ferdinando Marsigli, soldier and virtuoso*. New Haven: Yale University Press. xii+356pp.). Marsigli, son of a Bolognese noble family, spent much of his career as a busy soldier - engineer in the service of the Habsburg Emperor, Leopold I, often engaged in campaigns against the Ottoman Turks and in mapping the borders in the Balkans between Habsburg and Ottoman forces during the Turkish wars. His remarkable work on the currents of the Bosphorus resulted from Marsigli's membership, as a very young man, in a Venetian delegation to the court of the Sultan in Constantinople in 1679-1680. Much later in his career, in 1706, court-martialed after a military fiasco and in exile in Provence, Marsigli took up the study of the Mediterranean. Out of this in 1725 came the magisterial (and still mysterious) *Histoire physique de la mer*. Marsigli appears to be a true original -

there is little evidence that his work on the Bosphorus or on the Mediterranean off Cassis originated from more than his background as an engineer and a man of culture and from his personal curiosity.

Is the same true of Makarov? It seems unlikely that he was intellectually isolated from late 19th century science, both because of his training as a naval officer and because of his proximity to the academic circles of St. Petersburg. Now that Russian archives and libraries are opening to western researchers it should be possible to learn more of the intellectual world in which Makarov operated. It would be curious in the extreme if he and Marsigli had more in common than their interest in solving the problem of the currents in the Bosphorus.

NEW ARCHIVAL COLLECTIONS AT SCRIPPS INSTITUTION OF OCEANOGRAPHY

The UCSD Library has recently processed the following four science related manuscript collections with funds from a U.S. Department of Education Title IIC grant. For finding aids, write to SIO Archives, University Library 0175-C, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0175. Finding aids are also available via the Internet at: telnet infopath@ucsd.edu:

- 1) H. William Menard papers, 1938-1986, 42.5 linear feet. H. William Menard (1920-1986), marine geologist and director of the United States Geological Survey (1978-1981). Correspondence relates the research and memories of Menard and his colleagues about their roles in the plate tectonics revolution. His unpublished memoirs record his experience as U.S.G.S. Director.
- 2) Jerome Namias Papers, 1934-1990, 52 linear feet. Jerome Namias (1910-), meteorologist. The U.S. Weather Bureau's first Chief of Extended Forecast Division, Namias's research notes record his pioneering work in weather forecasting and sea-air interactions in meteorology.
- 3) William Aaron Nierenberg Papers, 1932-1986, 82 linear feet. William Aaron Nierenberg (1919-), physicist, administrator, and national policy advisor. The papers focus on Nierenberg's activities while director of the Scripps Institution of Oceanography (1965-1986) and as a member of numerous panels and committees advising on such topics as oceanographic research, national defense, and acid rain.
- 4) Roger Randall Dougan Revelle Papers, 1929-1991, 110 linear feet. Roger Revelle (1909-1991), oceanographer, environmental policy analyst. The papers document Revelle's role as director of the Scripps Institution of Oceanography and as director of the Center for Population Studies at Harvard University. Extensive subject files record the vast array of projects and policies to which Revelle contributed.

In addition, the Papers of Helen Hill Raitt (1905-1976) have been processed and are available to researchers at the Archives of the Scripps Institution of Oceanography.

Journalist and historian Helen Raitt was the wife of Scripps geophysicist Russell Raitt. She was the first historian and archivist of the Scripps Institution. She wrote several books on oceanography, the history of SIO and Tonga, including *Exploring the Deep Pacific*, Raitt's 1956 account of her participation in SIO Capricorn Expedition (1952-1953) to the South Pacific and *Scripps Institution of Oceanography: First Fifty Years* (with Beatrice Moulton). Helen Raitt founded Tofua Press with Donna Gerstle to Preserve Tongan history and legends and to make books on Tonga available to the Tongans. She helped found the Friends of the UCSD Library in 1961.

The Helen Hill Raitt Papers, donated by Russell Raitt, measure 3.5 cubic feet and include correspondence dated 1963-1976, manuscripts of books, subject files, material documenting Capricorn Expedition, Tofua Press, and newspaper clipping files. Researchers can order a copy of "A Guide to the Helen Hill Raitt Papers, 1935-1985" Manuscript Collection 19, Processed by Rebecca S. Smith (SIO Reference Number 93-47) (hard copy: \$9; DOS floppy disk in Wordperfect 5.1 format: \$5) by writing: Carolyn Rainey, Scripps Institution of Oceanography, SIO Archives 0175C, University of California San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0175C USA.

M. Woodbridge Williams has donated his papers and photographs to the SIO Archives. The collection consists largely of photographs, prints, original negatives and slides, but also includes correspondence and

other papers dated 1914-1992. The photographic images include several hundred taken by Woody Williams from 1946 to 1950 when he was a graduate student at the Scripps Institution of Oceanography. Photographs include work at sea, social events and portraits. Portraits include John Dove Isaacs, Sam Hinton, Joel Hedgpeth, Martin Johnson, Karl Kenyon and others. The majority are in black and white. The photographs also include images taken of marine biologists and work at sea undertaken by the Hancock Foundation, UCLA, the California Academy of Sciences, and several private individuals. The collection includes papers and photographs documenting voyages of M.S. STRANGER owned by Fred E. Lewis during the period 1934-1937.

Deborah Day
Scripps Institution of Oceanography Library
University of California, San Diego
9500 Gilman Drive
La Jolla, California
92093-0175
USA

HISTORIANS OF OCEANOGRAPHY

This Newsletter has not had a "personals" column previously. Herewith I introduce one, so that anyone working on the history of the marine sciences can give a short outline of his or hers background, research interests, and plans for the future. My thanks to Dr. Vlahakis for providing the outline that follows.

George N. Vlahakis.

Physical Oceanographer (M.Sc.). Historian of Sciences (Ph.D.). Address: Andromahis 17, 1525 Marousi, Athens, Greece.

Main Research:

- 1) Physics, Geography, Chemistry in 17-19th century Greece.
- 2) History of oceanography in 19th-20th century Greece. In particular: a) The establishment and the role of the "Comité Thallassographique Hellénique" and the Hellenic Navy Hydrographic Service during the first decades of the 20th century. b) Research vessels and trips in the Greek Seas. c) Biographies of early Greek oceanographers. d) The examination of some interesting oceanographic problems like the Euripus problem.

Until now I have published the following papers relative to the history of oceanography in Greece:

- a) George N. Vlahakis. 1992. "Early Theories of Tides in Greek scientific books during the 18th century." Symposium on the Physical Sciences in Greece during the period of Ottoman occupation. National Research Centre. Athens.
- b) G.N. Vlahakis and M.N. Tsimplis. 1993. "Euripus problem: Review and a proposal." Proceedings of the 4th National Symposium of Oceanography. Rhodes, pp.156-159.
- c) G.N. Vlahakis. "Termometrografo: Riferimento del primo strumento Oceanografico nell territorio Greco." Submitted to *Nuncius*.

I have two other papers in the history of science:

1. G.N. Vlahakis, "A note on the penetration of Newtonian physics in Greece," *Nuncius* 8(2): 645-656.
2. G.N. Vlahakis, 1994. "Problems and methodology of exploring the scientific thought during the Greek Enlightenment," pp.397-404 in K. Gavroglu *et al.* (eds). *Trends in the historiography of science*. Dordrecht: Kluwer.

"OCEANOGRAPHY" MAGAZINE

"Oceanography" magazine is a new journal serving the marine science community through varied articles on all aspects of the ocean sciences, including their history. Its founding organization is The Oceanography Society, centered in Virginia Beach, Virginia, U.S.A.

The new co-editors of the magazine, Dr. Larry Atkinson of Old Dominion University and Dr. Connie Sancetta of the U.S. National Sciences Foundation, would like to increase the appeal of the magazine to the international community of marine scientists and to increase its historical content.

Anyone interested in contributing a historical article to "Oceanography" should contact Dr. Atkinson, as follows:

Dr. Larry Atkinson
Center for Coastal Physical Oceanography
Old Dominion University
Crittenton Hall
Norfolk, VA
23529 USA
Internet: "atkinson@ccpo.odu.edu"

PUBLICATION OF ICHO-V PAPERS:

Many papers delivered at ICHO-V, held in La Jolla, California during July 1993, will be published in a book by University of Washington Press in Seattle. Preparation is well underway in the hands of the editors, P.F. Rehbock of the University of Hawaii and Keith Benson of the University of Washington.

HISTORY OF CANADIAN MARINE SCIENCE

Publications on the history of marine science in Canada are scarce in the extreme, despite Canada's distinguished record in fisheries science and marine ecology. A recent thesis puts the study of the history of marine science in Canada on a new footing. The abstract and table of contents are printed here to indicate the riches awaiting historians in Canadian laboratories, archives and libraries.

**An Independent Progress: The Development of Marine Biology On The Atlantic Coast of Canada
1898-1939**

by
Jennifer Mary Hubbard

A thesis submitted in conformity with the requirements for the Degree of Doctor of
Philosophy. Institute for the History and Philosophy of Science and Technology, in the
University of Toronto, 1993

ABSTRACT

Between 1898 and 1939, the Biological Board of Canada became an important exponent of fisheries biology and marine ecology. As the organization grew to become the Fisheries Research Board, it put Canada in the forefront of international fisheries research. How and why this was so is not made clear in the existing literature. This development also had important social ramifications. First, fisheries biology contributed to Canada's emergence as a science-based industrial nation, allowing Canada to develop independently its fisheries policies. Second, marine biological stations in Canada and elsewhere played an important role in professionalising biology, providing centres of research and employment for biologists outside of the universities. The present study, focusing on the Canadian Atlantic marine biological stations, examines the ties between Canadian academic and industry-related marine research between the two World Wars.

When E.E. Prince founded the first Canadian marine biological station in 1898, biology was still in the process of being defined and consolidated, and marine biological stations were critical to its emergence as a mature science. Since the German research ideal arrived late at Canadian universities, most Canadian university biologists gained their first opportunity for ongoing experimental research in Canada's marine stations.

The marine stations also became sites for advanced-level training, designed to turn out professionals. This study examines the Biological Board's association with Canadian universities through shared students, expertise, and teaching and research facilities, thus providing a case study in the professionalization of biology: it also illustrates how professional science came to terms with government financing and control in Canada. The research interests of academic biologists did not always dovetail with the desires of the Dominion government, which funded the marine biological stations. By the 1920's, the Biological Board had specialized in fisheries biology, with its practical implications for fish management; its scientists also became involved in showing fishermen how to improve their techniques. This study examines the extent to which this new specialization arose out of the biologists' own research interests, and assesses the importance of external pressures coming from government.

TABLE OF CONTENTS

Introduction

Chapter I:	Stations by the Sea
	Models for the Canadian Biological Station.
	Oceanographic Expeditions
	Institutionalizing Marine Biology -- The Foundation of Marine Stations

- Chapter II:**
- Basic Versus Applied Science in Early Twentieth-Century Marine Biological Stations.
 - Early Fisheries Biology
 - Basic Versus Applied Marine Biology:
 - Then and Now
 - Scientific Work at the Atlantic Biological Station
 - Creation of the Biological Board in 1912.
- Chapter III:**
- Canadian Fisheries Expedition
 - Johan Hjort and the Conseil International pour l'Exploration de la Mer
 - Canadian Fisheries Expedition
 - Hjort and Fish processing
 - The Report of the Expedition
 - Hjort's Legacy
 - Fish Handling Experiment
 - Later Expeditions
 - Conclusion
- Chapter IV:**
- The Biological Board and the Department of Marine and Fisheries
 - The Department of Marine and Fisheries
 - The Biological Board and the Department
 - Conflict and Co-operation
 - The Biological Board and the Department after the 1919 Episode
 - The Biological Board's Influence on the Department of Marine and Fisheries
 - Lobster Problems
 - Conclusion
- Chapter V:**
- Relations of the Biological Board with the Atlantic Fishing Industry
 - The Canadian Atlantic Fisheries: 1900-1939
 - Federal Indifference
 - Educating Fishermen: the Department of Fisheries and the Role of the Fisheries Experimental Station
 - Frozen Fish Research
 - Conclusion
- Chapter VI:**
- Huxley's Red Herring
 - T.H. Huxley and the British Fisheries
 - Huxley's Scientific Legacy to the Fisheries
 - Fisheries Biology: 1900-1930
 - The North American Council on Fishery Investigations
 - The International Passamaquoddy Fisheries Commission, 1931-1933
 - Classical Fisheries Biology and the North American Council
 - Conclusion
- Chapter VII:**
- Professionalization of Fisheries Research
 - Professionalisation in the Sciences
 - Problems in the Professionalisation of Science
 - The Biological Board: Beginnings of a new Profession
 - Shortage of Expert Biologists in Canada

Training Graduate Students
From Volunteers to Professionals: the Biological Board 1927-1937
The Fisheries Research Board of Canada
The Fisheries Research Board as a professional Association
The Department of Fisheries and the ICNAF

Conclusion

Bibliography

BIOGRAPHIES

Jacqueline Carpine-Lancré

- ADAMS, Arthur** [1820, Gosport, Hampshire, England - 1878]
 TREW (Alison), 1992. Henry and Arthur Adams, in : *Henry and Arthur Adams's new molluscan names*, p. 4. - Cardiff : National Museum of Wales.
- ADAMS, Henry** [1813, Gosport, Hampshire, England - 1877]
 TREW (Alison), 1992. Henry and Arthur Adams, in : *Henry and Arthur Adams's new molluscan names*, p. 4. - Cardiff : National Museum of Wales.
- AGASSIZ, Alexander Emmanuel Rodolphe** [17.XII.1835, Neuchatel, Switzerland - 27.III.1910, at sea]
 WOURMS (John P.), 1992. Great invertebrate zoologists: Alexander Emmanuel Rodolphe Agassiz (1836-1910). *Newsletter - Division of invertebrate zoology, American society of zoologists*, fall, pp. 3-6.
- ALEYEV, Yuri Glebovich** [1926 - 12.XII.1991]
 ANDRIASHEV (A.P.) & BURDAK (V.D.), 1993. In memoriam of Yu. G. Aleyev (1926-1991). *Voprosy ikhtiologii*, vol. 33, no. 5, pp. 701-706. [in Russian]
 publications of Yu. G. Aleyev : pp. 705-706.
- ANDERSEN, Knud Peter** [26.VIII.1925, Tarm, Denmark - 13.IV.1992]
 MADSEN (K. Popp), 1994. Knud Peter Andersen, 26 August 1925-13 April 1992. *ICES journal of marine science*, vol. 51, no. 2, pp. 239-240, portrait.
- BAKKER, Cornelis**
 NIENHUIS (Piet H.) & LAMBECK (Rob H.D.), 1991. Kees Bakker: hydrobiologist. *Hydrobiological bulletin*, vol. 25, no. 1 [Phytoplankton, zooplankton and their interactions, dedicated to Cornelis Bakker on the occasion of his retirement, October 1, 1991], pp. 3-8, portrait.
 list of publications of C. Bakker : pp. 7-8.
- BARNARD, Keppel Harcourt** [31.III.1887, London - 1964]
 GON (Ofer), 1994. A history of ichthyology in South Africa. Part III. Barnard at the South African Museum. *Ichthos, newsletter of Society of friends of the J.L.B. Smith Institute of ichthyology*, no. 41, pp. 13-14, 1 fig., 1 portrait.
- BERTELSEN, Erik** [8.VIII.1912 - 18.III.1993]
 NIELSEN (Jorgen), 1993. Erik Bertelsen (1912-1993). *Deep-sea newsletter*, no. 21, p. 20, portrait.
 PARIN (N.V.), 1993. In memoriam of Eric Bertelsen (1912-1993). *Voprosy ikhtiologii*, vol. 33, no. 6, pp. 834-836, portrait. [in Russian]
 list of publications of E. Bertelsen : pp. 835-836.
- BIRMAN, Iosiph Bentsionovich** [10.VI.1915 - 1984]
 SHUNTOV (V.P.), 1992. Iosiph Bentsionovich Birman (1915-1984). *Biologiya morya, Vladivostok*, 1992, nos. 5-6, pp. 105-108, portrait. [in Russian]
 list of publications of I.B. Birman : pp. 106-108.
- BRAVO DE LAGUNA CABRERA, Jerónimo** [4.VIII.1948, Las Palmas de Gran Canaria - 3.VI.1991, Santa Cruz de Tenerife]
 Jerónimo Bravo de Laguna Cabrera. *Boletín - Instituto español de oceanografía*, vol. 9, no. 1, pp. 7-8 (1993).
- BREKHOVSKIKH, Leonid Maksimovich** [6.V.1917]
 75th birthday of Leonid Maksimovich Brekhovskikh. *Oceanology*, vol. 32, no. 3, pp. 420-421, portrait (1992 = 1993).
- BRYAN, Geoffrey William** [- 17.IX.1993, Plymouth, England]
 PHILLIPS (Dave) & LANGSTON (Bill), 1994. Geoffrey William Bryan. *Marine pollution bulletin*, vol. 28, no. 1, p. 2.
- BRYAN, Kirk** [21.VII.1929, Albuquerque, New Mexico]

- SEMTNER (Albert J.) & BRYAN (Kirk), 1994. Bryan receives Ewing medal. *Eos, transactions - American Geophysical Union*, vol. 75, no. 9, p. 101, portrait.
- BURMEISTER, Carl Hermann Conrad** [15.I.1807, Stralsund - 2.V.1892, Buenos Aires]
 Carl Hermann Conrad Burmeisters Leben im Überblick. *Meer und Museum*, vol. 9 [Hermann Burmeister, ein bedeutender Naturwissenschaftler des 19. Jahrhunderts], pp. 4-7, portraits (1993).
- SCHULZE (G.), 1993. Das Werk Hermann Burmeisters. *Meer und Museum*, vol. 9 [Hermann Burmeister, ein bedeutender Naturwissenschaftler des 19. Jahrhunderts], pp. 76-89, 8 facsim.
- CADENAT, Jean** [16.IV.1908, Marmande, Lot-et-Garonne - 28.VIII.1992, Marmande]
 DAGET (Jacques), 1993. Jean Cadenat (1908-1992). *Cybium*, vol. 17, no. 4, p. 263.
- CARTER, R.W.G.**
 SHAW (John), STONE (Greg) & LOWRY (Phil), 1994. In memoriam "Bill" Carter. *Journal of coastal research*, vol. 10, no. 1, p. 216.
- CESARI, Paolo** [25.II.1929, Venezia - 29.III.1993, Venezia]
 CESARI (Laura), 1993. Paolo Cesari, Venezia 25 febbraio 1929 - Venezia 29 marzo 1993. *Bollettino malacologico*, vol. 29, nos. 1-4, pp. 2-4.
 bibliografia malacologica di Paolo Cesari : pp. 3-4.
- CLAUS, Carl** [2.I.1835 - 18.I.1899]
 DAMKAER (David M.), 1993. Carl Claus (2 January 1835-18 January 1899). *Journal of crustacean biology*, vol. 13, no. 4, pp. 823-824, portrait.
- COLLADON, Jean-Daniel** [15.XII.1802, Genève - 30.VI.1893, Genève]
 BENGUIGUI (Isaac), 1994. La vie et l'oeuvre scientifique de Jean-Daniel Colladon (15 décembre 1802-30 juin 1893). *Archives des sciences et compte rendu des séances de la Société*, vol. 47, no. 1, pp. 61-72, 2 fig.
- DAWSON, Charles Eric "Chuck"** [6.XII.1922, Vancouver, British Columbia - 11.II.1993]
 OVERSTREET (Robin M.) & POSS (Stuart G.), 1993. Charles Eric "Chuck" Dawson 1922-1993. *Copeia*, 1993, no. 3, pp. 921-925, portrait.
 selected bibliography : pp. 924-925.
 POSS (Stuart G.) & HEAL (Elizabeth), 1994. The scientific publications of Charles Eric Dawson, 1948-1990. *Gulf research reports*, vol. 9, no. 1, pp. 69-73.
- DEACON, George Edward Raven** [21.III.1906, Leicester - 16.XI.1984]
 DEACON (M.B.), 1992. Biography, in : List of the scientific and personal papers of Sir George Deacon, FRS: held at the Institute of Oceanographic Sciences Deacon Laboratory, Wormley, Surrey, UK. *Report - Institute of oceanographic sciences Deacon laboratory*, no. 301, pp. 8-13.
- DEGENS, Egon Theodor** [16.IV.1928, Inden, Germany - 18.II.1989]
 HILLMER (Gero) & ITTEKKOT (Venugopalan), 1990. In memorium Egon Theodor Degens. *Mitteilungen aus dem Geologisch-Paläontologischen Institut der Universität Hamburg*, no. 69 [Gedenkband Egon T. Degens (1928-1989) / ed. Gero Hillmer], pp. [V-VII], portrait.
 KRUMBEIN (Wolfgang E.), 1990. Der Atem Cäsars, Versuch einer Antwort auf die Frage, ob Geophysiologie eine Methode sie, die Erscheinungen und Vorgänge des Bioplaneten Erde in Bilder zu fasse. *Mitteilungen aus dem Geologisch-Paläontologischen Institut der Universität Hamburg*, no. 69 [Gedenkband Egon T. Degens (1928-1989) / ed. Gero Hillmer], pp. 267-301, 2 pl.
 SPRINGER (K.F.), 1990. Egon T. Degens - Autor und Freund. *Mitteilungen aus dem Geologisch-Paläontologischen Institut der Universität Hamburg*, no. 69 [Gedenkband Egon T. Degens (1928-1989) / ed. Gero Hillmer], pp. 1-2.
- DE NOTARIS, Giuseppe** [5.IV.1805, Milano - 22.I.1877, Roma]
 GRANITI (Antonio), ed., 1991. La figura e l'opera di Giuseppe De Notaris (1805-1877). *Rendiconti della Accademia nazionale delle scienze detta dei XL, Memorie di scienze fisiche e naturali*, serie 5, vol. 15, tomo 2, parte 2, 242 p., fig., portraits.
- DICK, Myvanwy Millar** [1910 - III.1993]
 HARTEL (Karsten E.) & MUSICK (John A.), 1993. Myvanwy Millar Dick, 1910-1993. *Copeia*, 1993, no. 4, pp. 1208-1209, portrait.
- DIETZ, Robert Sinclair** [14.IX.1914, Westfield, New Jersey]

- DIETZ (Robert S.), 1994. Earth, sea, and sky: life and times of a journeyman geologist. *Annual review of earth and planetary sciences*, vol. 22, pp. 1-32, portrait.
- FALKOWSKI, Leonard [6.XI.1933, Torun - 29.VIII.1993]
- PEMPKOWIAK (Janusz), 1993. Leonard Falkowski. *Oceanologia*, no. 34, pp. 3-4, portrait.
- FELSENBAUM, Alexander Isayevich [13.II.1922 - 2.I.1993]
- Alexander Isayevich Felsenbaum (February 13, 1922-January 2, 1993). *Okeanologiya*, vol. 33, no. 3, pp. 475-476, portrait (1993). [in Russian]
- FILYUSHKIN, Boris Nikonorovich [13.XII.1933]
- Boris Nikonorovich Filyushkin (to the 60th birthday). *Okeanologiya*, vol. 33, no. 6, pp. 939-940, portrait (1993). [in Russian]
- FITZGERALD, Gerard John [9.IX.1949, Newfoundland - III.1994]
- WHORISKEY (Fred), 1994. Dr Gerry FitzGerald. *Reviews in fish biology and fisheries*, vol. 4, no. 2, pp. 143-144, portrait.
- FLOCCINI, Giuseppe [1930, Brescia - 18.IV.1992]
- ELENA (Antonio), 1993. Memorial: Giuseppe Flocchini (1930-1992). *Bollettino di oceanologia teorica ed applicata*, vol. 11, no. 1, pp. 79-84.
- bibliografia : pp. 82-84.
- FORSSKÅL, Peter [11.I.1732, Finland - 11.VII.1763, Yemen]
- NIELSEN (Jørgen G.), 1993. Peter Forsskal, a pioneer in Red Sea ichthyology. *Israel journal of zoology*, vol. 39, no. 4, pp. 283-286, 3 fig.
- FOSTER, Brian Arthur [10.VII.1942, Warkworth, New Zealand - 26.VI.1992, Sydney]
- BUCKERIDGE (John S.) & NEWMAN (William A.), 1994. Brian Arthur Foster, 10 July 1942 - 26 June, 1992. *Crustaceana*, vol. 66, no. 2, pp. 247-252, portrait.
- publications : pp. 249-252.
- GAMULIN, Tomo [28.IV.1906, Jelsa, island Hvar - 4.VI.1991, Dubrovnik]
- KRSINIC (Frano), 1993. In memoriam to Prof. Dr. Tomo Gamulin. *Marine ecology, pubblicazioni della Stazione zoologica di Napoli I*, vol. 14, no. 2, pp. 93-96, portrait.
- bibliography of Tomo Gamulin : pp. 95-96.
- GILCHRIST, John D.F. [1866, Anstruther, Scotland - 1926]
- BROWN (Alec), 1992. John D. Gilchrist - South Africa's first oceanographer. *Archimedes*, vol. 34, no. 3 [special marine issue], p. 96, portrait.
- GON (Ofer), 1993. A history of ichthyology in South Africa. Part II. John D.F. Gilchrist, the father of South African ichthyology. *Ichthos, newsletter of Society of friends of the J.L.B. Smith Institute of ichthyology*, no. 39, pp. 17-18, 1 fig., 1 portrait.
- GLANGEAUD, Louis [14.VII.1903, Tulle - 22.III.1986, Paris]
- AUBOUIN (Jean), 1994 (1993). La vie et l'oeuvre de Louis Glangeaud. *Comptes rendus de l'Académie des sciences, série générale : la vie des sciences*, vol. 10, no. 5, pp. 495-499, portrait.
- GUILCHER, André [19.V.1913, Brest - 4.XII.1993]
- DOLOTOV (Yu.S.), 1994. Professor Andre Guilcher (1913-1993). *Okeanologiya*, vol. 34, no. 3, pp. 479-480. [in Russian]
- PASKOFF (Roland), 1994. In memoriam André Guilcher. *Journal of coastal research*, vol. 10, no. 1, p. 217.
- HART, Josephine Francine Lavinia [19.VI.1909, Victoria, British Columbia - 1993]
- McLAUGHLIN (Patsy A.) & ILLG (Paul L.), 1994. Josephine F.L. Hart (1909-1993). *Journal of crustacean biology*, vol. 14, no. 2, pp. 396-398, portrait.
- publications of Josephine F.L. Hart : pp. 397-398.
- IVANOV, Artemii Vasiljevich [18.V.1906 - 22.I.1992]
- POLYANSKII (Yu.I.), SKARLATO (O.A.) & MAMKAEV (Yu. V.), 1993. Artemii Vasiljevich Ivanov (1906-1992). *Zoologicheskyy zhurnal*, vol. 72, no. 6, pp. 154-159, portrait. [in Russian]
- KABATA, Zbigniew [Jaremicze, Poland]
- Ceremony of conferral of the honorary doctorate upon Professor Zbigniew Kabata, Ph.D., by the

- Academy of agriculture in Szczecin as requested by the Faculty [of] marine fisheries and food technology. *Acta ichthyologica et piscatoria*, vol. 23, no. 2, pp. 3-18, 1 fig., portrait (1993).
list of publications : pp. 12-18.
- KARTAS, Fredj** [30.V.1942, Akouda, Tunisie - 2.XII.1992]
QUIGNARD (Jean-Pierre), 1994. Fredj Kartas (1942-1992). *Cybium*, vol. 18, no. 2, p. 107.
- KINNE, Otto** [1923]
ZHIRMUNSKY (A.V.), 1993. Otto Kinne. *Biologiya morya, Vladivostok*, 1993, no. 4, pp. 109-112, fig., portrait. [in Russian]
list of publications of O. Kinne : pp. 111-112.
- KONSTANTINOV, Konstantin Gavrilovich** [24.II.1918 - 1983]
Posvyatsya pamyati K.G. Konstantinova (1918 - 1983 gg.), in : *Research on biological resources in the North Atlantic : Selected papers*, pp. 3-4, portrait. - Murmansk : Knipovich polar research institute of marine fisheries and oceanography (PINRO), 1992. [in Russian]
- KORNMAN, Peter** [- 20.VIII.1992, Helgoland]
Dr. Dr.h.c. Peter Kornmann gestorben. *Mitteilungen - Deutsche Gesellschaft für Meeresforschung*, 1993, no. 3, p. 43.
- KORT, Vladimir Grigorjevich** [4.VII.1913]
Vladimir Grigorjevich Kort (on the 80th anniversary on his birth). *Okeanologiya*, vol. 33, no. 5, pp. 795-796, portrait (1993). [in Russian]
- KOZICKI, V. Michael** [24.II.1938, Poland - 8.III.1993]
EVELY (Anne) & REEVES (Randall R.), 1993. V. Michael Kozicki, 1938-1993. *Marine mammal science*, vol. 9, no. 3, p. 342.
- KREFFT, Gerhard** [30.III.1912, Hamburg - 19/20.III.1993]
PARIN (N.V.) & SHELTMANN (M.), 1993. In memoriam of Gerhard Krefft (1912-1993). *Voprosy ikhtologii*, vol. 33, no. 6, pp. 837-840, portrait. [in Russian]
list of publications of G. Krefft : pp. 838-840.
POST (Alfred), 1993. Gerhard Krefft (1912 - 1993). *Cybium*, vol. 17, no. 3, p. 179, portrait.
- KROEYER, Henrick** [22.III.1799, Copenhagen - 14.II.1870] **WOLFF (Torben)**, 1993. Henrick Kroeyer og hans rejser. *Dyr i natur og museum*, Nr. 2, pp.13-17, portraits.
- LAGUNOV, Ivan Ivanovich** [1906 - 1985]
ZHIRMUNSKY (A.V.) & SHUNTOV (V.P.), 1993. Ivan Ivanovich Lagunov (1906-1985). *Biologiya morya, Vladivostok*, 1993, no. 3, pp. 121-122, portrait. [in Russian]
list of publications of I.I. Lagunov : p. 122.
- LAVERACK, Michael Stuart** [1931, Croydon, England - 28.VII.1993, Australia]
JOHNSTON (Ian A.) & MACMILLAN (David), 1993. Michael Stuart Laverack (1931-1993). *Marine behaviour and physiology*, vol. 23, nos. 1-4 [Proceedings of a conference held at the Ettore Majorana centre for scientific culture, Erice, Italy, 30 September-5 October 1991 : Behavioural ecology of fishes], pp. V-VII, portrait.
MACMILLAN (David), 1993. Michael Stuart Laverack (1931-1993). *Journal of crustacean biology*, vol. 13, no. 4, pp. 817-819, portrait.
- LEE, Arthur** [17.V.1920, Leicester - 28.XII.1993]
DICKSON (R.R.), 1994. Arthur Lee, 17 May 1920-28 December 1993. *ICES journal of marine science*, vol. 51, no. 2, pp. 235-237, portrait.
- LEVI MORENOS, David** [13.VI.1863, Venezia - 30.I.1933, Roma]
FERRARI (Fabrizio), 1994. David Levi Morenos a 130 anni dalla nascita. *Notiziario S.I.B.M. [Società italiana di biologia marina]*, no. 25, pp. 47-56.
elenco delle pubblicazioni del Prof. Levi Morenos : pp. 52-56.
- LISITSYN, Alexander Petrovich** [3.VII.1923]
Alexander Petrovich Lisitsyn (70-th anniversary). *Okeanologiya*, vol. 33, no. 4, pp. 635-636, portrait (1993). [in Russian]
- LUDWICK, John C.** [25.IV.1922, Berkeley, California - 27.X.1992]
STERNBERG (R.W.), 1993. John C. Ludwick. *Continental shelf research*, vol. 13, no. 7, p. I.

- MADSEN, Fritz Jensenius** [1916 - IV.1993]
WOLFF (Torben), 1993. Fritz Jensenius Madsen (1916-1993). *Deep-sea newsletter*, no. 21, p. 19, portrait.
- MARSIGLI, Luigi Ferdinando** [20.VII.1658, Bologna - 30.XI.1730, Bologna]
STOYE (J.), 1994. *Marsigli's Europe, 1680-1730: the life and times of Luigi Ferdinando Marsigli, soldier and virtuoso*. - New Haven: Yale University Press - 356 p., fig.
- MARTIN, John Holland** [27.II.1935, Old Lyme, Connecticut - 18.VI.1993]
DUCKLOW (Hugh) & CHISHOLM (Penny), 1993. Remembering John. *U.S. JGOFS news*, vol. 4, no. 4, p. 5.
- MILL, Hugh Robert** [28.V.1861, Thurso, Caithness - 5.IV.1950, Dormans Park, East Grinstead, Sussex]
PEDGLEY (D.E.), 1994. Pen portraits of presidents - Hugh Robert Mill, DSc, LLD, FRSE. *Weather*, vol. 49, no. 4, pp. 140-142, portrait.
- MONTGOMERY, David H.** [1921 - 26.VI.1993]
RICHARDS (William J.), 1994. David H. Montgomery, 1921-1993. *Bulletin of marine science*, vol. 54, no. 1, pp. 359-360, portrait.
- NANSEN, Fridtjof** [10.X.1861, Store-Froen - 13.V.1930, Lysaker] BROX (Karl H.), 1991. *Eva og Fridtjof Nansen*. - Oslo: Gyldendal. - p.366, fig.
- NESIS, Kir Nazimovich** [9.I.1934]
Kir Nazimovich Nesis (on the 60-th birthday). *Okeanologiya*, vol. 34, no. 2, p. 320, portrait (1994). [*in Russian*]
- NEUSHUL, Michael** [27.XII.1933, Shanghai, China - 19.II.1993]
REED (Daniel C.), NORRIS (James N.) & FOSTER (Michael S.), 1994. Dr Michael Neushul, Jr, 1933-1993. *Botanica marina*, vol. 37, no. 4, pp. 287-292, portrait.
publications of M. Neushul : pp. 289-292.
- NEYMAN, Viktor Grigor'evich** [27.II.1933]
Viktor Grigor'evich Neyman: his sixtieth birthday. *Oceanology*, vol. 33, no. 1, pp. 133-134, portrait (1993).
- ORADOVSKY, Semen Grigorjevich** [3.I.1934, Moscow]
Semen Grigorjevich Oradovsky (on the 60th anniversary of his birth). *Okeanologiya*, vol. 34, no. 1, pp. 148-149, portrait (1994). [*in Russian*]
- PACKARD, David** [1912, Pueblo, Colorado]
CONNOR (Judith L.) & DEANS (Nora L.), 1993. David Packard and Julie Packard. Monterey Bay profiles in depth. *Oceanus*, vol. 36, no. 2, pp. 74-79, fig., portrait.
- PACKARD, Julie**
CONNOR (Judith L.) & DEANS (Nora L.), 1993. David Packard and Julie Packard. Monterey Bay profiles in depth. *Oceanus*, vol. 36, no. 2, pp. 74-79, fig., portrait.
- PARIN, Nikolay Vasil'yevich** [21.XI.1932, Perm]
Nikolay Vasil'yevich Parin (on the occasion of his sixtieth birthday). *Oceanology*, vol. 32, no. 5, pp. 677-678, portrait (1992 = 1993).
- PARRISH, Basil Brockett** [25.III.1922, Guilden Morden, near Cambridge, England - 28.VI.1993, Aberdeen]
BLAXTER (J.H.S.), 1993. Basil B. Parrish, 25 March 1922-28 June 1993. *ICES journal of marine science*, vol. 50, no. 34, pp. 329-330, portrait.
BLAXTER (J.H.S.) & LUCAS (C.E.), 1994. Basil Brockett Parrish, CBE, BSc, HonDSC (Aberd), FIBiol. *Year book of the Royal Society of Edinburgh*, 1994 (= 1992-93), pp. 140-142.
- PARSONS, Timothy Richard** [1.XI.1932, Colombo, Sri Lanka]
G. Evelyn Hutchinson medal. *Limnology and oceanography*, vol. 38, no. 7, pp. 1590-1592, portrait (1993).
- POLL, Max** [21.VII.1908, Ruisbroek - 14.III.1991, Bruxelles]
HERLANT-MEEWIS (Henriette), 1994. Max Poll, Ruisbroek, le 21 juillet 1908, Bruxelles, le 14 mars 1991. Correspondant de la Classe des sciences en 1962 ; membre en 1974. Zoologiste. Conservateur du Musée royal de l'Afrique centrale. Professeur à l'Université libre de Bruxelles. *Annuaire - Académie royale de Belgique*, vol. 160, [notices biographiques] pp. 23-53, portrait.

- liste des publications de Max Poll : pp. 31-53.
- QUAYLE, Daniel Branch** [1913, United Kingdom - 19.X.1993, Nanaimo, British Columbia]
 BOURNE (N.F.), 1993. Daniel Branch Quayle, 1913-1993. *Canadian journal of fisheries and aquatic sciences*, vol. 50, no. 11, pp. 2528-2529, portrait.
 NEWKIRK (Gary), 1993. In memoriam Dr. Daniel B. Quayle, 1913-1993. *Out of the shell*, vol. 3, no. 3, p. 20, portrait.
- RAMPI, Leopoldo** [16.X.1905, Alessandria - 7.VIII.1982, San Remo]
 GAVAGNIN (P.F.), 1994. Leopoldo Rampi. *Notiziario S.I.B.M. [Società italiana di biologia marina]*, no. 25, pp. 42-46, 2 fig.
 bibliografia : pp. 44-46.
- RENOUF, Deane** [2.IV.1950, St. John's, Newfoundland - 17.IX.1993]
 LAWSON (John), 1994. Deane Renouf, 1950-1993. *Marine mammal science*, vol. 10, no. 1, pp. 134-136, portrait.
- REVELLE, Roger** [7.III.1909, Seattle, Washington - 15.VII.1991, San Diego, California]
 WOOSTER (Warren S.), 1993. Roger Revelle, 9 [i.e. 7] March 1909-15 July 1991. *Ocean yearbook*, vol. 10, pp. XVII-XVIII.
- SAILA, Saul Bernhard** [23.V.1924, Providence, Rhode Island]
 FOGARTY (Michael J.), 1994. Saul B. Saila: an appreciation. *Maritimes*, vol. 37, no. 1, p. 23, portrait.
- SARS, Georg Ossian** [20.V.1837, Kinn, Norway - 9.V.1927]
 CHRISTIANSEN (Marit E.), 1993. Georg Ossian Sars (1837-1927), the great carcinologist of Norway. *Crustacean issues*, vol. 8 [History of carcinology / ed. Frank Truesdale], pp. 143-164, portraits.
 bibliography of Georg Ossian Sars : pp. 153-164.
- SCHMEIL, Franz Otto** [3.II.1860 - 3.II.1943]
 DAMKAER (David M.), 1993. Franz Otto Schmeil (3 February 1860-3 February 1943). *Journal of crustacean biology*, vol. 13, no. 4, pp. 825-826, portrait.
- SHEKHVATOV, Boris Vasilievich** [2.V.1924]
 Boris Vasilievich Shekhvatov (on the 70-th anniversary of his birth). *Okeanologiya*, vol. 34, no. 3, pp. 477-478, portrait (1994). [in Russian]
- SHEPARD, Francis Parker** [10.V.1897, Brookline, Massachusetts - 25.IV.1985, La Jolla, California]
 RAINEY (Carolyn), 1993. Biography, in : *A guide to the Francis Parker Shepard papers (1921-1985), Manuscript Collection MC 7*, pp. 1-3. - La Jolla : Archives of the Scripps Institution of Oceanography (S.I.O. reference series, no. 93-4).
- SMITH, Edgar Albert** [29.XI.1847, London - 22.VII.1916]
 TREW (Alison), 1993. Edgar Albert Smith (1847-1916), in : *Edgar Albert Smith's new molluscan names*, p. 4. - Cardiff : National Museum of Wales.
- SOKOLOV, Boris Sergeevich** [9.IV.1914]
 Boris Sergeevich Sokolov. *Biologiya morya, Vladivostok*, 1993, no. 4, pp. 105-109, portraits. [in Russian]
 list of publications of B.S. Sokolov : pp. 108-109.
- SOLOVIEV, Sergei** [12.IV.1930, Novogorod - 9.III.1994, Moscow]
 In memory of Professor Sergei Soloviev (1930-1994). *Tsunami newsletter*, vol. 26, no. 1, pp. 1-2, portrait (1994).
- STARMÜHLNER, Ferdinand** [19.VII.1927, Wien]
 PETER (R.), 1992. Universitätsprofessor Dr. Ferdinand Starmühlner zum 65. Geburtstag. *Annalen des naturhistorischen Museums in Wien, Serie B für Botanik und Zoologie*, vol. 93 [= 1989], pp. 277-291, portrait.
 list of publications : pp. 283-291.
- STAUCH, Alfred** [18.XI.1921, Strasbourg - 21.VII.1993, Strasbourg]
 DAGET (Jacques), 1993. Alfred Stauch (1921-1993). *Cybium*, vol. 17, no. 4, p. 264.
- STOMMEL, Henry Melson** [27.IX.1920, Wilmington, Delaware - 17.I.1992, Boston, Massachusetts]
 LACOMBE (Henri), 1994 (1993). La vie et l'oeuvre de Henry Melson Stommel. *Comptes rendus de l'Académie des sciences, série générale : la vie des sciences*, vol. 10, no. 5, pp. 557-564, portrait.

- MAMAYEV (O.I.), 1993 (1992). In memory of Henry Stommel (1920-1992). *Oceanology*, vol. 32, no. 3, pp. 424-425, portrait.
- SUGIYAMA, Masao [11.XI.1908, Nagoya City, Honshu - 14.IX.1993]
 KOJIMA (Manabu K.), 1994. Masao Sugiyama (1908-1993). *Zoological science*, vol. 11, no. 1, pp. 1-3, portrait.
- SWENNEN, C.
 BEUKEMA (Jan J.) & PIERSMA (Theunis), 1993. Dedication to the 65th anniversary and the retirement of C. Swennen, marine biologist and ornithologist. *Netherlands journal of sea research*, vol. 31, no. 4 [Trophic interactions between shorebirds and their invertebrate prey / ed. T. Piersma], pp. 301-307, portrait.
- TREWAVAS, Ethelwynn [5.X.1900, Penzance, Cornwall - 16.VIII.1993, Reading, England]
 ALLGAYER (Robert) & UFERMANN (Alfred), 1993. Au revoir Madame. *Revue française des cichlidophiles*, no. 134, pp. 7-8, portrait.
 BEN-TUVIA (Adam), 1993. In memoriam Ethelwynn Trewavas (1900-1993). *Israeli journal of aquaculture, Banidgeh*, vol. 45, no. 4, pp. 188-189, portrait.
 GREENWOOD (P.H.), 1994. Ethelwynn Trewavas. *The Linnean*, vol. 10, no. 2, pp. 44-47.
 NOAKES (David L.G.), 1993. Ethelwynn Trewavas - a charmed life. *Environmental biology of fishes*, vol. 38, no. 4, pp. 295-298, portraits, facsimile.
 PULLIN (Roger), 1993. In memory of Dr. Ethelwynn Trewavas. *Naga, the ICLARM quarterly*, vol. 16, no. 4, p. 54, portrait.
 THYS van den AUDENAERDE (Dirk), 1994. Dr. Ethelwynn Trewavas. *Revue française d'aquariologie herpétologie*, vol. 20, no. 3, p. 65, portrait.
- UWA, Hiroshi [2.I.1940, Matsuyama - 19.VI.1993]
 TAKATA (Keisuke), 1993. Dr. Hiroshi Uwa (1940-1993). *Japanese journal of ichthyology*, vol. 40, no. 3, pp. 392-393, portrait. [in Japanese]
- VINE, Allyn Collins [1.VI.1914, Garrettsville, Ohio - 4.I.1994, Woods Hole, Massachusetts]
 Vision behind manned submersible *Alvin* dies at 79. *Sea technology*, vol. 35, no. 2, p. 9 (1994).
- WOODY, Jack
 DONNELLY (Marydele), 1993. A tribute to Jack Woody. *Marine turtle newsletter*, no. 62, pp. 1-3.
- YASTREBOV, Vyacheslav Semenovich [20.V.1932
 60th birthday of Vyacheslav Semenovich Yastrebov. *Oceanology*, vol. 32, no. 3, pp. 422-423, portrait (1992 = 1993).
- ZULLO, Victor August [24.VII.1936, San Francisco, California - 16.VII.1993]
 NEWMAN (William A.), BUCKERIDGE (John S.), PORTELL (Roger W.) & SPIVEY (Henry R.), 1994. Victor August Zullo (24 July 1936 - 16 July 1993). *Journal of crustacean biology*, vol. 14, no. 3, pp. 399-405, portrait.
 publications of Victor A. Zullo involving thoracic Cirripedia : pp. 401-405.

CURRENT BIBLIOGRAPHY OF THE HISTORY OF OCEANOGRAPHY
(1993-1994, with additions from earlier years)

Jacqueline Carpine-Lancré

- ALMAÇA (C.), 1993. The beginning of Portuguese carcinology. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 31-39, 8 fig.
- BAHAMONDE N. (N.), 1992. Cincuentenario de la fundación de la Estación de biología marina de Montemar, la primera de América latina: recuerdos y proyecciones. *Revista de biología marina*, vol. 27, no. 2, pp. 299-323.
- BAKER (R.A.), 1994. The Marine Biological Station on Puffin Island (Ynys Seiriol) and the work of the Liverpool Marine Biology Committee (1887-1892). *Archives of natural history*, vol. 21, no. 2, pp. 217-224, 1 fig.
- BARSKY (K.C.), 1990. History of the commercial California halibut fishery. *Fish bulletin*, no. 174 [The California halibut, *Paralichthys californicus*, resource and fisheries / ed. C.W. Haugen], pp. 217-227, 2 fig.
- BARTHELMESS (K.) & MÜNZING (J.), 1991. *Monstrum horrendum : Wale und Walдарstellungen in der Druckgraphik des 16. Jahrhunderts und ihr motivkundlicher Einfluss*. - Hamburg : E. Kabel Verlag ; Bremerhaven : Deutsches Schiffahrtsmuseum. - 221 p., fig. - (*Schriften des Deutschen Schiffahrtsmuseum* ; no. 29).
- BAZZICHELLI (G.) & ABDELAHAD (N.), 1991. Giuseppe De Notaris: algologo del tempo libero. *Rendiconti della Accademia nazionale delle scienze detta dei XL, Memorie di scienze fisiche e naturali*, serie 5, vol. 15, tomo 2, parte 2 [La figura e l'opera di Giuseppe De Notaris (1805-1877) / ed. A. Graniti], pp. 135-200, 19 fig.
- BENSON (K.R.), 1993. Brooks, stomatopods, and decapods: Crustaceans in research and teaching, 1878-1886. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 99-107, 1 fig.
- BISHOP (G.A.), 1993. History of North American decapod paleocarcinology. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 293-320, 4 fig.
- BOLOGA (A.S.), 1993. Romania and the International Commission for the Scientific Exploration of the Mediterranean Sea. *Noesis*, vol. 19, pp. 129-138, 2 fig.
- BOND (G.F.), 1993. *Papa topside: the Sealab chronicles of Capt. George F. Bond, USN* / ed. H.A. Siiteri. - Annapolis : Naval Institute Press. - XXVIII-272 p., fig.
- BRAVO (M.), 1993. James Rennell: antiquarian of ocean currents. *Ocean challenge*, vol. 4, nos. 1-2 [Special James Rennell issue], pp. 41-50, 5 fig.
- BRODSKY (K.A.), 1993. Studies of zooplankton of the far-eastern seas in the Far-East Branch and Zoological Institute of the Academy of Sciences of the USSR in 1933-1953. *Biologiya morya, Vladivostok*, 1993, no. 2, pp. 112-121. [in Russian]
- BRUNTON (E.V.), 1994. *The Challenger Expedition, 1872-1876: a visual index*. - London : Natural History Museum. - 189 p., fig. - (*Historical studies in the life and earth sciences* ; 2).
- CADÉE (G.C.), 1993. De ontwikkeling van de mariene oecologie in Nederland. *Econieuws*, Oktober, pp.6-12
- CARPINE (C.), 1993. Catalogue des appareils d'océanographie en collection au Musée océanographique de Monaco. 4. Bouteilles de prélèvement d'eau. *Bulletin de l'Institut océanographique, Monaco*, vol. 75, no. 1440, 175 p., 72 fig.
- CARPINE-LANCRE (J.), 1993. Le Prince Albert I^{er} de Monaco, marin et océanographe : chronologie sommaire. *Océanis*, vol. 19, no. 4, pp. 121-135, 1 fig.
- CARPINE-LANCRE (J.), 1993. Introduzione, in : *La carriera di un navigatore* / Alberto, Principe di Monaco ; trad. M. Serao, pp. IX-XII. - Napoli : Fratelli Ferraro.
- CHRISTIANSEN (M.E.), 1993. Georg Ossian Sars (1837-1927), the great carcinologist of Norway. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 143-164, 4 fig.

- COLEBROOK (J.M.), WARNER (A.J.), PROCTOR (C.A.), HUNT (H.G.), PRITCHARD (P.), JOHN (A.W.G.), JOYCE (D.) & BARNARD (R.), 1991. *60 years of the Continuous Plankton Recorder Survey: a celebration*. - Plymouth : The Sir Alister Hardy foundation for ocean science. - 24 p., fig.
- DAVID (R.), 1994. La fixation des dunes maritimes de Gascogne. *Comptes rendus de l'Académie des sciences, série générale : la vie des sciences*, vol. 11, no. 4, pp. 123-147, 14 fig.
- DAY (D.), 1994. Archival sources for the history of geosciences. *History of geophysics*, vol. 5 [The earth, the heavens and the Carnegie Institution of Washington / ed. G.A. Good], pp. 225-227.
- DEACON (M.B.), 1992. List of the scientific and personal papers of Sir George Deacon, FRS: held at the Institute of Oceanographic Sciences Deacon Laboratory, Wormley, Surrey, UK. *Report - Institute of oceanographic sciences Deacon laboratory*, no. 301, 84 p.
- DEACON (M.), 1993. Wind power versus density differences: a 19th century controversy about ocean circulation. *Ocean challenge*, vol. 4, nos. 1-2 [Special James Rennell issue], pp. 53-58, 3 fig.
- DELBOS (G.), 1989. De la nature des uns et des autres, à propos du dépeuplement des eaux marines, in : *Du rural à l'environnement, la question de la nature aujourd'hui* / ed. N. Mathieu & M. Jollivet, pp. 50-63. - Nanterre : Association des ruralistes français ; Paris : L'Harmattan.
- DE MOOR (G.), 1991. Developments in sea floor research, in : *Marine research in Flanders, 20 years IZWO*, pp. 14-28. - Ostende : Instituut voor zeewetenschappelijk onderzoek.
- DE WOLF (H.), 1993. History of diatom research in the Netherlands and Flanders. *Hydrobiologia*, vol. 269-270 [Twelfth International Diatom Symposium, proceedings of the Twelfth International Diatom Symposium, Renesse, the Netherlands, 30 August - 5 September 1992 / ed. H. van Dam], pp. 1-9, fig. - (*Developments in hydrobiology* ; 90).
- EMERY (K.O.), DIETZ (R.S.) & KUHN (G.G.), 1993. Influence of Francis Parker Shepard on marine geology. *Marine geology*, vol. 115, nos. 1-2, pp. 153-156, 2 fig.
- EVANS (P.G.H.) & SCANLAN (G.), 1989. Historical status changes of cetaceans in British and Irish waters, in : *European research on cetaceans - 3, Proceedings of the Third Annual Conference of the European Cetacean Society, La Rochelle, France, 24-26 February 1989* / ed. P.G.H. Evans & C. Smeenk, pp. 51-57, 3 fig. - Leiden : [s.n.].
- FARRUGIO (H.), OLIVER (P.) & BIAGI (F.), 1993. An overview of the history, knowledge, recent and future research trends in Mediterranean fisheries. *Scientia marina*, vol. 57, nos. 2-3 [Northwestern Mediterranean fisheries / ed. J. Leonart & L. Recasens], pp. 105-119.
- FONTAINE (M.), 1992. Les Anguilles : le rôle joué par l'Institut océanographique, Fondation Albert I^{er} Prince de Monaco, dans le développement de nos connaissances sur leur biologie. *Bulletin de l'Institut océanographique, Monaco*, no. spécial 10, pp. V-XXVI.
- GAMBELL (R.) & BROWN (S. G.), 1993. James Bartley - a modern Jonah or joke? *Investigations on Cetacea*, vol. 24, pp. 325-337, 1 fig.
- GARTH (J.S.) & WICKSTEN (M.K.), 1993. Studies on decapod crustaceans of the Pacific coast of the United States and Canada. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 75-85.
- GIERLOFF-EMDEN (H.G.), 1992. Columbus' navigation: navigation and oceanographic conditions of the first discovery voyage of Columbus. *GeoJournal*, vol. 26, no. 4, pp. 453-464, 7 fig.
- GOHAU (G.), 1994. Lavoisier, un géologue méconnu. *La recherche*, vol. 25, no. 264, pp. 436-437, 1 fig.
- GON (O.), 1993. A history of ichthyology in South Africa. Part I. From van Riebeeck to Gilchrist. *Ichthos, newsletter of Society of friends of the J.L.B. Smith Institute of Ichthyology*, no. 38, pp. 10-11, 2 fig.
- GON (O.), 1993. A history of ichthyology in South Africa. Part II. John D.F. Gilchrist, the father of South African ichthyology. *Ichthos, newsletter of Society of friends of the J.L.B. Smith Institute of Ichthyology*, no. 39, pp. 17-18, 2 fig.
- GON (O.), 1994. A history of ichthyology in South Africa. Part III. Barnard at the South African Museum. *Ichthos, newsletter of Society of friends of the J.L.B. Smith Institute of Ichthyology*, no. 41, pp. 13-14, 2 fig.
- GOULD (J.), 1993. James Rennell's view of the Atlantic circulation: a comparison with our present knowledge. *Ocean challenge*, vol. 4, nos. 1-2 [Special James Rennell issue], pp. 26-32, 5 fig.
- GRANITI (A.), 1991. La raccolta di ritratti fotografici di botanici dell'800 di Giuseppe De Notaris (1805-1877). *Rendiconti della Accademia nazionale delle scienze detta dei XL, Memorie di scienze fisiche e naturali*,

- serie 5, vol. 15, tomo 2, parte 2 [La figura e l'opera di Giuseppe De Notaris (1805-1877) / ed. A. Graniti], pp. 201-223, 99 fig.
- GRAU (G.), 1993. Le voyage du Challenger. *Océanis*, vol. 19, no. 4, pp. 105-119, 1 fig.
- GRIFFITHS (G.), 1993. James Rennell & William Scoresby: their separate quests for accurate current data. *Ocean challenge*, vol. 4, nos. 1-2 [Special James Rennell issue], pp. 34-38, fig.
- GROEBEN (C.) & WENIG (K.), ed., 1992. *Anton Dohrn und Rudolf Virchow : Briefwechsel 1864-1902*. - Berlin : Akademie Verlag. - XII-132 p., 6 fig.
- HARADA (E.), 1993. Carcinology in classical Japanese works. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 243-258, 8 fig.
- HARDY (S.J.), compil., 1994. The earth and space sciences at Carnegie: a pictorial sampler from the first six decades. *History of geophysics*, vol. 5 [The earth, the heavens and the Carnegie Institution of Washington / ed. G.A. Good], pp. 237-252, 39 fig.
- HASLAM (D.), 1993. International hydrography. *Journal of navigation*, vol. 46, no. 2, pp. 159-173. [Fourteenth Duke of Edinburgh Lecture, presented in London on 21 October 1992 for the 46th Annual Meeting of the Royal Institute of Navigation]
- HEIP (C.), 1991. 1971-1991 : twenty years of marine ecology, in : *Marine research in Flanders, 20 years IZWO*, pp. 29-33. - Ostende : Instituut voor zeewetenschappelijk onderzoek.
- HEISE (G.), 1993. 125 Jahre maritime Forschung und Dienste in Hamburg: Zur Gründung der Norddeutschen Seewarte 1868. *Deutsche hydrographische Zeitschrift*, vol. 45, no. 2, pp. 115-118.
- HLEBICA (J.), 1993. *Legacy of exploration: Scripps Institution of Oceanography since 1903*. - La Jolla : Stephen Birch Aquarium-Museum ; Scripps Institution of Oceanography. - [24] p., fig.
- HOBBIE (J.E.) & PEARCE (J.B.), 1993. Ecology in Woods Hole: Baird, Bigelow, and Redfield, in : *The biological century, friday evening talks at the Marine Biological Laboratory* / ed. R.B. Barlow, Jr., J.E. Dowling & G. Weissmann, pp. 261-286, fig. - Woods Hole, Mass. : Marine Biological Laboratory ; Cambridge, Mass. ; London : Harvard University Press.
- HOLTHUIS (L.B.), 1993. History of the carcinological collections of the Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands (1820-1950). *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 225-242, 2 fig.
- HOPE (P.L.) & WHITEHEAD (H.), 1991. Sperm whales off the Galápagos Islands from 1830-50 and comparisons with modern studies. *Report of the International Whaling Commission*, no. 41, pp. 273-283, 8 fig.
- HUSTACHE (C.), 1993. Le voyage de Lapérouse (1785-1788). *Océanis*, vol. 19, no. 4, pp. 17-26, 3 fig.
- INGLE (R.W.), 1991. Carcinology in the Natural History Museum, London; the brachyuran crab collections and their curation from 1813-1904 (Leach to Calman). *Bulletin of the British Museum of Natural History*, historical series, vol. 19, no. 2, pp. 161-224, 2 fig.
- JOW (T.), 1990. The California halibut trawl fishery. *Fish bulletin*, no. 174 [The California halibut, *Paralichthys californicus*, resource and fisheries / ed. C.W. Haugen], pp. 229-241, 6 fig.
- KAGEYAMA (N.), 1993. A historical study on the reorganization of higher education of fisheries in relation to Japanese fisheries after World War II. *Report of the Tokyo University of fisheries*, no. 28, pp. 55-82, 3 fig. [in Japanese, English abstract]
- KARRER (C.), WHITEHEAD (P.J.P.) & PAEPKE (H.-J.), 1994. Bloch & Schneider's Systema Ichthyologiae, 1801: history and authorship of fish names = Bloch & Schneiders Systema Ichthyologiae, 1801: Geschichte und Autorschaft der Fischnamen. *Mitteilungen aus dem Zoologischen Museum in Berlin*, vol. 70, no. 1, pp. 99-111, 2 fig.
- KINGSBURY (J.M.), 1991. *Here's how we'll do it: an informal history of the construction of the Shoals Marine Laboratory, Appledore Island, Maine*. - Ithaca : Bullbrier Press. - 364 p., fig.
- KORTUM (G.), 1993. IfM-Kiel Bibliothek: Neuester Zugang ältestes Buch. *Mitteilungen - Deutsche Gesellschaft für Meeresforschung*, 1993, no. 4, pp. 38-39.
- KORTUM (G.), 1993. Überfahrten in die Neue Welt - Die Atlantikquerungen von Christoph Kolumbus (1492) und Alexander von Humboldt (1799) in ozeanographiegeschichtlichen Vergleich. *Zeitschrift für geologische Wissenschaften*, vol. 21, nos. 5-6, pp. 605-616, 1 fig.

- KOSTE (W.) & HOLLOWDAY (E.D.), 1993. A short history of western European rotifer research. *Hydrobiologia*, vol. 255-256 [Rotifer symposium VI, proceedings of the Sixth International Rotifer Symposium, held in Banyoles, Spain, June 3-8, 1991 / ed. J.J. Gilbert, E. Lubzens & M.R. Miracle], pp. 557-572, fig.
- KOSUGE (S.), 1993. History of the precious coral fisheries in Japan (1). *Precious corals & octocoral research*, no. 1, pp. 30-38, fig.
- KOSUGE (S.), 1993. History of the precious coral fisheries in Japan (2). *Precious corals & octocoral research*, no. 2, pp. 40-41, 1 fig.
- KOTENEV (B.N.), 1994. On the 60th anniversary of the oldest marine fisheries research institute of Russia. *Okeanologiya*, vol. 34, no. 1, pp. 146-147. [in Russian]
- LAUGHTON (A.S.), 1994 (1993). Pulling the plug: the ocean floor revealed. *Ocean challenge*, vol. 4, no. 3, pp. 37-45, 9 fig.
- LINDQUIST (O.), 1992. Comments concerning old whaling statistics: the British whale oil measures gallons and tun, the Dutch and German *guardeelen* and the ratio between them. *Report of the International Whaling Commission*, no. 42, pp. 475-477.
- MacKENZIE (C.L.), Jr., 1994. - Swordfishing from Martha's Vineyard. *The Dukes County intelligencer*, vol. 35, no. 3, pp. 99-137, fig.
- MACKIE (G.V.) & HOUGHTON (J.F.T.), 1992. Marine meteorological services to shipping, past, present and future. *Journal of navigation*, vol. 45, no. 2, pp. 241-246, 1 fig.
- MANN BORGESE (E.), 1993. The International Ocean Institute story. *Ocean yearbook*, vol. 10, pp. 1-12.
- MANNING (R.B.), 1993. The scientific contributions of William Stimpson, an early American naturalist and taxonomist. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 109-117, 3 fig.
- MAREN (T.H.), 1994. An historical account of the Mount Desert Island biological laboratory: 1898-1993. *Bulletin - Mount Desert Island biological laboratory*, vol. 33, pp. III-XX, 18 fig.
- MARINESCU (A.), 1991. *O expeditie numita Belgica*. - Bucuresti : Ed. I. Creanga. - 128 p., fig.
- MAXWELL (A.E.), 1994. An abridged history of deep ocean drilling. *Oceanus*, vol. 36, no. 4, pp. 8-12, 3 fig.
- McCONNELL (A.), 1993. L.F. Marsigli's visit to London in 1721, and his report on the Royal Society. *Notes and records of the Royal Society of London*, vol. 47, no. 2, pp. 179-204.
- McLAUGHLIN (P.A.) & GILCHRIST (S.), 1993. Women's contributions to carcinology. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 165-206, fig.
- MILLER (B.A.), 1990. *The Scripps Institution of Oceanography library, 1950-1966: the minnow that gave birth to a whale*. - 25-VIII p.
- MILLER (R.G.), 1993. The history of ichthyology in the Antarctic Ocean, in : *History and atlas of the fishes of the Antarctic Ocean*, pp. 26-63, 39 fig. - Carson City : Foresta Institute for ocean and mountain studies.
- NAKAMURA (S.), 1993. On historical tsunamis at Susami-ura in Wakayama Prefecture. *La mer*, vol. 31, no. 1, pp. 37-39, 1 fig. [in Japanese]
- NEWMAN (W.A.), 1993. Darwin and cirripedology. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 349-434, 28 fig.
- NGUYEN THANH VAN, 1993. *Etude bibliographique : Institut océanographique de Nha Trang, fondation et participation française, 1922-1972*. - Paris : IFREMER ; Institut océanographique. - VII-24 p.
- OLLEVIER (F.), LAVENS (P.) & SORGELOOS (P.), 1991. Marine aquaculture in Flanders, in : *Marine research in Flanders, 20 years IZWO*, pp. 34-41, 3 fig. - Ostende : Instituut voor zeewetenschappelijk onderzoek.
- ORESQUES (N.), 1994. Weighing the earth from a submarine: the gravity measuring cruise of the U.S.S. S-21. *History of geophysics*, vol. 5 [The earth, the heavens and the Carnegie Institution of Washington / ed. G.A. Good], pp. 53-68, 3 fig.
- OSTENSO (N.A.), METALNIKOV (A.P.) & IMEREKOV (B.I.), 1991. A history of USSR-US cooperation in ocean research. *Oceanus*, vol. 34, no. 2, pp. 87-91, 2 fig.
- PAEPKE (H.-J.), 1993. Zur Entwicklung der Ichthyologie vom 18. bis 20. Jahrhundert in Berlin und zur Rolle von Mitgliedern der Gesellschaft Naturforschender Freunde in diesem Prozess. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin*, (N.F.) vol. 32, pp. 21-30.

- PHILLIPS (J.), 1993. James Rennell ... time traveller. *Ocean challenge*, vol. 4, nos. 1-2 [Special James Rennell issue], pp. 50-52, 1 fig.
- PICHOT (G.), 1991. Marine physics, in : *Marine research in Flanders, 20 years IZWO*, pp. 11-13. - Ostende : Instituut voor zeewetenschappelijk onderzoek.
- PLINSKI (M.), 1993. 25 years of oceanography at University of Gdansk. *Studia i materialy oceanologiczne*, no. 64 [= Marine pollution, no. 3], pp. 5-10.
- POLLARD (R.) & GRIFFITHS (G.), 1993. James Rennell, the father of oceanography. *Ocean challenge*, vol. 4, nos. 1-2 [Special James Rennell issue], pp. 24-25, 1 fig.
- PREOBRAZHENSKY (B.V.), 1993. Historical resumé of research on reefs, in : *Contemporary reefs*, pp. 8-24. - Rotterdam ; Brookfield : A.A. Balkema.
- RAINEY (C.), 1993. *A guide to the Francis Parker Shepard papers (1921-1985)*, Manuscript Collection MC 7. - La Jolla : Archives of the Scripps Institution of Oceanography. - 7-117 p. (S.I.O. reference series, no. 93-4).
- REINKE-KUNZE (C.), 1992. *Aufbruch in die weisse Wildnis : die Geschichte der deutschen Polarforschung*. - Hamburg : E. Kabel. - 479 p., fig.
- RELINI (G.), 1991 (1990). I venti anni della S.I.B.M. [Società italiana di biologia marina] : breve storia della Società. *Oebalia*, vol. 16, suppl. [Atti del XX Congresso della Società italiana di biologia marina, Vibo Valentia, 19-24 settembre 1988], 2, pp. 1-22, 1 fig.
- REVELLE (R.), 1993. The Scripps Institution of Oceanography, California. *Ocean yearbook*, vol. 10, pp. 153-171.
[reprinted, in condensed version, from *Ocean frontiers*]
- RICE (A.L.), 1993. Two centuries of larval crab papers: a preliminary analysis. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 285-292, 3 fig.
- RICHARD (H.), 1993. Le voyage de d'Entrecasteaux (1791-1794). *Océanis*, vol. 19, no. 4, pp. 27-38, 9 fig.
- RIVINUS (E.F.) & YOUSSEF (E.M.), 1992. *Spencer Baird of the Smithsonian*. - Washington ; London : Smithsonian Institution Press. - X-228 p., fig.
- RODRIGUEZ (G.), 1993. From Oviedo to Rathbun: the development of brachyuran crab taxonomy in the Neotropics (1535-1937). *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 41-73.
- RUMSEY (G.L.), 1994. History of early diet development in fish culture, 1000 B.C. to A.D. 1955. *Progressive fish-culturist*, vol. 56, no. 1, pp. 1-6.
- SANPERA (C.) & AGUILAR (A.), 1992. Modern whaling off the Iberian Peninsula during the 20th century. *Report of the International Whaling Commission*, no. 42, pp. 723-730, 1 fig.
- SAVAGE (S.), 1993. Early days in Brighton. *Aquarist and pondkeeper*, vol. 58, no. 6, pp. 83-85, 5 fig.
- SCARFF (J.E.), 1991. Historic distribution and abundance of the right whale (*Eubalaena glacialis*) in the North Pacific, Bering Sea, Sea of Okhotsk and Sea of Japan from the Maury whale charts. *Report of the International Whaling Commission*, no. 41, pp. 467-489, 2 fig.
- SCHNEIDER (C.W.) & SEARLES (R.B.), 1991. History of phycology in the region, in : *Seaweeds of the southeastern United States, Cape Hatteras to Cape Canaveral*, pp. 1-6. - Durham ; London : Duke University Press.
- SCHRAM (F.R.), 1993. A correspondence between Martin Burkenroad and Libbie Hyman: or, whatever did happen to Libbie Hyman's lingerie. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 119-142, 1 fig.
- SCHRAM (F.R.), 1993. The British school: Calman, Cannon, and Manton and their effect on carcinology in the English speaking world. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 321-348.
- SCHULZE (G.), 1993. Burmeisters Beiträge zur Meeresbiologie, insbesondere zur Walforschung. *Meer und Museum*, vol. 9 [Hermann Burmeister, ein bedeutender Naturwissenschaftler des 19. Jahrhunderts], pp. 59-64, 8 fig.

- SMAYDA (T.J.), 1993. Flagellates and their blooms in the sea: Trygve Braarud's contributions to our knowledge, in : *Toxic phytoplankton blooms in the sea, proceedings of the Fifth International Conference on toxic marine phytoplankton, Newport, Rhode Island, U.S.A., 28 October - 1 November 1991* / ed. T.J. Smayda & Y. Shimizu, pp. 2-12, 1 fig. - Amsterdam ; London ; New York : Elsevier. - (*Developments in marine biology* ; 3).
- SOLIS SANTOS (C.), 1992. Captain Henry Sheeres, his currents; o aire y agua en el estrecho de Gibraltar. *Arbor*, vol. 141, no. 553, pp. 75-113, 4 fig.
- SPAMER (E.E.) & BOGAN (A.E.), 1993. Time capsule of carcinology: history and resources in the Academy of natural sciences of Philadelphia. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 87-98, 10 pl.
- SPEAK (P.), 1992. William Speirs Bruce and the Scottish National Antarctic Expedition. *Scottish geographical magazine*, vol. 108, no. 3, pp. 138-148, 5 fig.
- SPECCHI (M.), 1990. La Stazione zoologica di Trieste, centro scientifico all'avanguardia a cavallo di due secoli (1875-1918), in : *Le scienze mediche nel Veneto dell'Ottocento, atti del Primo seminario di storia delle scienze e delle tecniche nell'Ottocento 1989*, pp. 99-108. - Venezia : Istituto veneto di scienze, lettere ed arti.
- STEELE (J.H.), 1993. Ecology in Woods Hole: Baird, Bigelow, and Redfield. Introduction, in : *The biological century, friday evening talks at the Marine Biological Laboratory* / ed. R.B. Barlow, Jr., J.E. Dowling & G. Weissmann, pp. 257-260 - Woods Hole, Mass. : Marine Biological Laboratory ; Cambridge, Mass. ; London : Harvard University Press.
- TAVARES (M.S.), 1993. Toward the history of pre-Linnean carcinology in Brazil. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 7-29, 8 pl.
- TAVERNIERS (P.), 1993. La dérive du Fram dans les glaces. *Met mar*, no. 160, pp. 3-7, 4 fig.
- VAN GRIEKEN (R.), 1991. Marine chemistry, in : *Marine research in Flanders, 20 years IZWO*, pp. 1-10. - Ostende : Instituut voor zeewetenschappelijk onderzoek.
- WEINBERG (S.), 1993. Il corallo rosso e la ricerca scientifica nei secoli = Coral research through the centuries, in : *Il corallo rosso in Mediterraneo : arte, storia e scienza = Red coral in the Mediterranean Sea: art, history and science* / ed. F. Cicogna & R. Cattaneo-Vietti, pp. 37-60, 11 fig., pl. 3. - Roma : Ministero delle risorse agricole, alimentari e forestali.
- WERNER (P.), 1993. Die Gründung der Königlichen Biologischen Anstalt auf Helgoland und ihre Geschichte bis 1945. *Helgoländer Meeresuntersuchungen*, vol. 47, Suppl., V-179 p., fig.
- WILLIAMS (A.B.), 1993. Reflections on crab research in North America since 1758. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 259-273, 2 fig.
- WOLFF (T.), 1993. More than 200 years of crustacean research in Denmark. *Crustacean issues*, vol. 8 [History of carcinology / ed. F. Truesdale], pp. 207-223, 4 fig.
- WOOSTER (W. S.), 1993. On the evolution of international marine science institutions. *Ocean yearbook*, vol. 10, pp. 172-181, 1 fig.
- ZHIRMUNSKY (A.V.), 1993. Foundation of the Institute of marine biology in Vladivostok. *Biologiya morya, Vladivostok*, 1993, no. 1, pp. 98-111. [in Russian]
- ZHIRMUNSKY (A.V.), 1993. Chronicle of the development of the Institute of marine biology. *Biologiya morya, Vladivostok*, 1993, no. 1, pp. 112-123. [in Russian]

ICHO-VI IN 1998

This is a last call for proposals to organize the sixth International Congress on the History of Oceanography.

The criteria to be used by the Commission in selecting the next location are:

1. A suitable theme, centered on the history of oceanography, to help unify the programme.
2. A satisfactory location, with facilities for lectures, seminars and social gatherings.
3. Evidence or promise of financial support for logistics and organization.
4. The possibility of financial assistance for travel to some participants, particularly those from developing nations or others that do not offer grants for travel to conferences.

Proposals to organize ICHO-VI for 1998 should be sent to the Commission, via its President, Eric L. Mills, Department of Oceanography, Dalhousie University, Halifax, Nova Scotia, B3H 4J1, Canada, by 1 January 1995. Fax (902) 494-3877.

NEWS AND EVENTS

BENSON PROMOTED IN SEATTLE. Dr, Keith Benson, Department of Medical History and Ethics, University of Washington, an organizer of ICHO-VI, Executive Secretary of the History of Science Society, and scholar of American science and marine stations, has been promoted to full professor.

HISTORY OF SCIENCE AND MARINE SCIENCES AT DALHOUSIE. Eric Mills, who has taught oceanography and history of the marine sciences for many years, now has responsibility for a new programme of courses in the history of science as Professor of History of Science (address unchanged).

DARWIN AND THE PACIFIC, a new book edited by Roy M. MacLeod and Philip F. Rehbock, will be published this autumn by the University of Hawaii Press. A suite of distinguished authors has contributed articles on Darwin and Darwinism in the Pacific.

HISTORY OF SCRIPPS. *Legacy of exploration: Scripps Institution since 1903*, prepared by J. Hlebica, is a pictorial guidebook to the history of Scripps Institution of Oceanography. Order for US \$5.95 + shipping and handling from Stephen Birch Aquarium - Museum Bookshop, 9500 Gilman Drive, Mail Code 0207, La Jolla, CA, 92093-0207, USA.

NEW M.A. PROGRAMME. Royal Holloway College, University of London is offering a new M.A. in Modern History: Power, Culture, Society. It is a 1-year programme involving specialization in British imperial and naval history, Victorian studies and 20th century British state and society. An interdisciplinary focus is also possible in fields such as history and literature, architecture, and geography. Information: Prof. Gregory Claeys, Dept. of History, Royal Holloway College, University of London, Egham, Surrey TW20 0EX, England.

MEETINGS

MAY/JUNE 1995. WRITING SCIENTIFIC BIOGRAPHIES, to be held in London. Aim will be to discuss the value of scientific biographies written for a wider audience from the perspectives of both the authors and readers. Contact: Frank A.J.L. James, RICHST, Royal Institution, 21 Albemarle St., London W1X 4BS, England.

12-14 JULY, 1995. THE VISUAL CULTURE OF ART & SCIENCE: FROM THE RENAISSANCE TO THE PRESENT; at the Royal Society, London. To promote greater understanding of changing boundaries and interactions between Art (or Craft) and National Philosophy/Science from about 1400 to the present. Contact: BSHS Executive Secretary, 31 High Street, Stanford in the Vale, Faringdon, Oxon, SN7 8LH, England.

19-23 JULY 1995 BIENNIAL MEETING OF THE INTERNATIONAL SOCIETY FOR THE HISTORY, PHILOSOPHY AND SOCIAL STUDIES OF BIOLOGY, in Leuven, Belgium. Contact: Peggy Stewart, ISHPSSB, Science Studies, VPI and SU, Blacksburg, VA 24061-0247, USA.

29 JULY 1995. MUTINY & MEDICINE - AN INTERNATIONAL CONFERENCE ON THE HISTORY OF MEDICINE, on Norfolk Island Australia, by Australian Society for History of Medicine. Includes maritime medical history. Contact: Dr. John Thearle, Conference 95 Secretariat, Dept. of Child Health, Mater Children's Hospital, South Brisbane, Queensland 4101, Australia.

26-29 OCTOBER 1995. HISTORY OF SCIENCE SOCIETY ANNUAL MEETING, Minneapolis, USA. Contact: Amy Lanfear, HSS Executive Office, DR-05, University of Washington, Seattle, WA 98195, USA.

10-13 JULY 1996. SCIENCE MATTERS: THE ROLE AND ACHIEVEMENTS OF SCIENCE IN GREEK ANTIQUITY, at University of Liverpool. To bring together professional students of ancient science and mainstream classicists/ancient historians. Contact: Dr. C.J. Tuplin, Dept. of Classics & Ancient History, University of Liverpool, 12 Abercromby Square, Liverpool L69 3BX, England.

1
C
:

2000

2000

2000
2000
2000

C

:
D