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EDITORIAL - The Commission of Oceanography

The Commission of Oceanography finds itself at a turning point in 1997. In previous issues of this newsletter, I have written on historical issues in the marine sciences, often stimulated by significant anniversaries fifty or a hundred years ago. But this year I want to concentrate on the present and the future.

My concern about the present state of the Commission and for its future has been aroused by the retirement this year of our colleague Jacqueline Carpine-Lancre as librarian and archivist of the Musée océanographique de Monaco and as the Secretary of the Commission. In addition to her role as Secretary, Mme Carpine-Lancre played an important role in promoting the Commission on the European continent and world-wide. Equally, we are all grateful to her for compiling an annual bibliography (along with biographical notes) which has been published since this publication first appeared in 1989. Her contributions to the Commission in all these ways will be very difficult, if not impossible, to match.

The Commission of Oceanography was founded by the eminent French historian of biology and medicine Professor Jean Théodoridès. From the beginning, its function has been to promote the historical study of the marine sciences, including oceanography, and, increasingly, to support the organization of the International Congresses of the History of Oceanography. In 1989 the Commission took an important step with the publication of this newsletter, *History of Oceanography*, now a major (though only annual) effort through which anyone interested in historical aspects of the marine sciences can keep informed about progress in the field. In its basic functions the Commission must continue to work as it has done, but it appears to me that some reorganization may be helpful and in some cases necessary.

In less politically-correct times, the Commission might have been described as “all Chiefs and no Indians.” In fact, the only formal members of the Commission are its President, three Vice-Presidents, and a Secretary, as listed on the inside cover of this publication. There are no membership dues, and there is no ordinary membership - only the mailing list of *History of Oceanography*, which serves as a de facto membership list. I have long been uncomfortable with this aspect of the Commission, for it runs the risk of being both undemocratic and unrepresentative of its correspondents (there are more than 200 names on the mailing list for *History of Oceanography*). I have been concerned too about the future of *History of Oceanography*. Because there is no income to the Commission of membership dues, the only funds currently available to cover publication costs are annual grants of US \$300 from the Division of History of Science. This does not allow a very ambitious or expanding publishing programme. Perhaps there are two solutions: formal membership in the Commission, with membership dues, and use of the World Wide Web for our news items and bibliographic and biographic compilations.

At the end of this issue, you will find a questionnaire about these ideas. There is an old maxim, “if it ain’t broke, don’t fix it.” The Commission is not broken, but we do face difficulties which are brought into focus by the retirement of our Secretary/bibliographer, Mme Carpine-Lancre. Enormous individual talents like hers are never replaced, but we must try to find a way to continue and to expand our role in promoting historical studies in a way consistent with the contributions and intentions of the Commission’s founders. Please let us know what you think!

Eric L. Mills

**A HUNDRED YEARS' ANNIVERSARY:
THE DANISH INGOLF DEEP-SEA EXPEDITION 1895 AND 1896**

In the decades following the British Challenger Expedition other nations also took up deep-sea exploration, although smaller and more local in scope. Denmark also wanted to participate. In 1880 Chr. Lütken from the Zoological Museum in Copenhagen addressed the experienced naval officer C.F. Wandel, suggesting a deep-sea expedition in the North Atlantic. In preparation Wandel obtained permission to take part in the final cruise in 1880 of the American research vessel *Blake* off eastern USA. Wandel was fully aware of the modern and highly effective equipment used on the *Blake*.

After Wandel's successful participation on the *Blake*, nothing further was achieved until 1894, when DKK 120,000 was earmarked in the State Budget for 1895 for a deep-sea expedition to the North Atlantic on the cruiser *Ingolf* during four summer months in 1895 and 1896, with Wandel as captain.

Details about the tasks, the vessel, the equipment and its application, etc., are given by Wandel (*Dan. Ingolf-Edped* 1:1-21, 1899). In brief, the *Ingolf* was a three-masted screw schooner, length 64m, beam 9m, displacement 996 tons, with maximum speed of 10.5 knots. A 12x11m deck house, replacing the cannons, served as the laboratory. The ship carried one 7,500 m-long thermometer line (diameter 4.5mm) and two 7,500 m-long trawl wires (diameter 10mm). During trawling the wire ran over the ship's side through a block at the end of a 12m long, movable boom; an accumulator of solid rubber bands absorbed sudden jerks. The two sigsbee trawls were 3.2 and 1.5m wide, and swabs of untwisted ropes on the trawls or a 2m wide swab-rod collected particularly spiny animals. The plankton nets used were the most modern available. Two participants went to Kiel to visit Victor Hensen, who had recently returned from the German Plankton Expedition. The nets included a cylinder net for use at full speed. The water bottles as well as the sounding apparatus were modified from those used on the *Blake*.

The participating scientists in 1895 were Hector Jungersen, D.Sc.; H.J. Hansen, D.Sc.; William Lundbeck; Carl Ostenfeld Hansen; and Martin Knudsen; the three latter had just acquired their MSc degrees. All five later went far in their profession: Jungersen (1854-1917) succeeded Lütken as Professor of Zoology in 1899; H.J. Hansen (1855-1936) became a world authority on crustaceans; Lundbeck (1863-1941) wrote extensive monographs on the expedition's marine sponges and later switched on to insects, his former love; Ostenfeld (1873-1931) became Professor of Botany and member of the Board of Directors of the Carlsberg Foundation; Knudsen (1871-1949) became Professor of Physics and *inter alia* calculated the indispensable tables for titration; C.F. Wandel (1843-1930), who combined scientific insight with sailorly competence, later became an admiral.

The 1895 cruise. With a crew of 65 conscripts, officers, etc., the *Ingolf* left Copenhagen on 5 May 1895. Work began at NE Iceland. A gale south of Iceland prevented investigations here, and in the Denmark Strait the ice limit was found to lie much further south than usual. After visits to towns and fjords in NW Iceland, the ship continued to West Greenland. Here the ice had also penetrated far south, almost to Holsteinsborg. Nevertheless, the scientists succeeded in several trawls and measurements through the Davis Strait. In Godthåb, the capital, celebrations ashore and on board were arranged. On the way back to Iceland further gales again hampered all work, but south of Iceland conditions for work were now favourable. They arrived back in Copenhagen on 23 August.

The 1896 cruise. Based on his experience of the first summer, Martin Knudsen revised the Negretti & Zambra reversing thermometers to prevent errors from bumps and shaking and constructed a complicated apparatus for the first immediate analyses on board of oxygen, nitrogen, etc. The participants in 1896 were the same as the year before, except that H.J. Hansen was replaced by the young Carl Wesenberg-Lund (1867-1955), the later well known professor of freshwater biology. Starting on 3 May, the investigations were resumed east and south of Iceland and again complicated by rough weather. The course of the so-called Reykjanaes Ridge was echo sounded off SW Iceland, but in the Denmark Strait they found to their dismay the same most unusual southwards extension of the ice border as last year. After concentrated work of NE Iceland, excellent results were achieved on the way to and from the isolated and rarely visited Jan Mayen Island. On return to NW Iceland, hopes for more favourable ice conditions were disappointed. Good results were again obtained south of Iceland and north of the Faroes before return to Copenhagen on 19 August.

The tremendous working effort (Figure 1), frequently under very rough weather conditions, may be summarized as follows: 144 stations (80 deeper than 1000m, max. depth 3521m), all with soundings, trawlings and recordings of bottom temperature, salinity, chloride content and specific gravity; 550 hydrographic measurements between surface and bottom; ca. 2650 registrations in tables on the basis of the above efforts; 150 analyses of gas contents in sea water between surface and bottom with ca.2400 resulting registrations; 150 measurements of contents of sulphuric acid, magnesium and

calcium; ca. 2500 surface registrations of meteorological data and water temperature, salinity and chloride, measured every four hours around the clock.

Figure 1. The chart published by Wandel (1899), with the 144 stations, the ice edge, etc. indicated. The actual route has, however, never before been plotted out. For 1895 (dot-and-dash line) the course is correct, since not only the stations but also the noon positions, given on a chart in the Zoological Museum Archives, have been employed; the handwritten numbers are the dates. For 1896 (solid line) no such chart has been preserved, so the course could only be drawn between succeeding stations and visits to ports.

Just prior to the expedition, the full extent of the North Atlantic Ridge, running at a depth of 500-600m from East Greenland via Iceland and the Faroes to Scotland, had been established. Probably the most significant biological result of the Ingolf Expedition was the demonstration of a fundamental difference in the components of the bottom faunas in the deep sea north and south of the ridge. Below ca. 600m depth, negative temperatures (down to -1.1°C) were continuously registered in the Polar Deep, and positive temperatures equally invariably prevailed south of the ridge and in the Davis Strait. In a survey article (*Geogr. Tidsskr.* 14:36-44, 1898, unfortunately in Danish only), Jungersen demonstrated a great distinction, particularly within fish, crustaceans and corals. He called the Polar Deep “Kingdom of the Lycodids” after the blenny-like eelpouts or lycodids. Large crustaceans such as troll crabs and troll lobsters, king crabs, blind lobsters (eryonids), etc., were numerous south of the ridge but completely absent to the north, where on the other hand the three shrimp genera *Bythocaris*, *Hymenodora* and *Boreomysis* were always present “with boring monotony”. Not one of the various corals such as sea fans, soft corals, isis, madrepores or cup corals to the south occurred in the Polar Deep. All in all, the North Atlantic Ridge is the most important submarine faunal barrier anywhere in the deep sea. Another pioneer achievement was H.J. Hansen’s construction of clever sieve apparatus. According to a pencil working sketch in the Zoological Museum Archives, a rectangular, fine-meshed sieve could be rolled gently back and forth on rails inside a large, rectangular vessel on four legs, half filled with continuously flowing water. Thus, the *Ingolf* collections contain many more minute specimens (particularly of peracaridean crustaceans) than any previous and all later deep-sea expeditions until the introduction in the 1960’s of a somewhat similar sieve system.

The Ingolf Report. Under the title *The Danish Ingolf-Expedition*, the report was published by the Zoological Museum from 1898 to 1953. It is in large quarto, with a total of 5554 pages and 333 plates in copper, lithography or photoengraving, sometimes in colour. After publication of about one sixth of the papers in both Danish and English, it was sensibly decided to edit the rest in English only. In addition to several minor papers published elsewhere, the report covers 15 volumes with 57 contributions, 43 by Danish, the rest by foreign authors. First and foremost due to Hansen, the crustaceans constitute the most voluminous group, followed by the cnidarians (medusae, sea anemones, corals, etc.).

Martin Knudsen refined the method of analyses of salinity and chloride contents. Founded on the numerous

data in his tables, his voluminous report contains commented curves in colour of temperature, salinity and specific gravity from surface to bottom at 76 selected stations north and south of the North Atlantic Ridge. The 76 stations were placed so much on lines that it was possible to enter their data into a total of 25 sections showing the greatly varying physical conditions of the water masses concerned and allowing Knudsen to evaluate both the more local vertical and horizontal water movements and the nature of the major current systems.

The Zoological Museum owns prints of ca.130 photos. They represent a gold mine of documentation of work and life and guests onboard, of visits and excursions ashore, of townships and the local population, etc. Copies are being distributed to relevant institutions in Denmark, Iceland and Greenland and have, together with plates from the *Ingolf Report*, letters, animals, etc. been part of an exhibition which I arranged last year in three towns in Iceland (incl. Reykjavik) and in the Copenhagen Zoological Museum and which is now touring towns in Greenland.

Torben Wolff, Zoological Museum, University of Copenhagen, 2100 Copenhagen Ø, Denmark.

OTTO PETERSSON

In two years' time a century will have elapsed since the International Council for the Exploration of the Sea, ICES, was initiated at a meeting in Stockholm in June 1899. OP, its promoter, at the sixth International Geographical Congress held at London in 1895, presented results of a temporary cooperative investigation in 1893-4, organized by himself, between the Scandinavian countries, Scotland and Germany. When, at the end of his presentation, he outlined how to make the cooperation more permanent, the Congress adopted a resolution to that effect. Thereafter he seems to have felt this resolution was addressed to himself, and was not content before the new organization was ready to start its activities in 1902. During thirty years following he was a member of the ICES Bureau, and as President in the period 1915-20 he fought for its survival during and after the First World War.

OP was born on 12 February, 1848 and died on 16 January, 1941. He took his Doctor's Degree in Uppsala in 1872, with a thesis on the selenium-alums. In 1878 a Högskola, (university college) was founded in Stockholm. A few years later he got its first chair of chemistry, which he held till 1909. At this college there was more room for new scientific ideas than at the old universities. Such an environment was perfect for OP, who was one of the first to understand the greatness of modern chemists, like Svante Arrhenius and Hendrik van't Hoff. As member of one of the Committees of the new Nobel Foundation he was very active when these two were awarded prizes.

It is said that a paper of OP on the properties of water and ice, written in 1878, happened to attract A.E. Nordenskiöld's attention, and led to his inviting OP to report on the hydrographic observations made during the "Vega" Expedition north of Europe and Asia in the years 1878-80. It was probably also the poor health of F.L. Ekman, the pioneer of Swedish oceanography, that opened this new road for OP. When Ekman died prematurely in 1890, OP was asked to finalize Ekman's report of his great investigation of the waters around Sweden in 1877. Furthermore, from chemistry OP brought with him careful methods for the determination of gases dissolved in seawater.

It should be observed that one hundred years ago it was customary to have scientific occupations alongside of the main subject, especially in chemistry, as least in Sweden. Like OP, the marine scientists F.L. Ekman and P.T. Cleve were professors of chemistry, Cleve mostly working with plankton.

In a late autobiography OP considered a finding made by his life-long friend Gustaf Ekman to be the most important impetus to his new scientific passion. In late 1877 there was in the coastal areas of the Skagerrak for the first time since about 1810, an invasion of over-wintering herring, and by the beginning of 1878 Ekman found out that salinity determinations could present an explanation: the herring seemed to prefer absence of low-salinity water of Baltic origin. When still a child, OP had heard about such herring-periods. His grandfather, who had worked at a herring oil factory, made a profitable investment when buying cheap what was left from bankruptcies at the end of the period 1755-1810, when the herring fishery failed.

From the turn of the century OP acted as a full-fledged oceanographer, producing a great number of scientific papers partly to demonstrate that the applicability of the ICES collection of data should be tested. To begin with, his biology colleagues were impressed by "his hydrography controlling their field", but gradually they grew disappointed when they found out that the connections, if they existed, must be more complicated than he suggested. OP, more

stimulated than restrained by criticism, passed on to long-term control by physical factors. Accepting Ljungman's herring periods of about 100 years' length, he looked for abiotic causes and thought he had found them in the tides, especially through internal waves. He soon added a period of 1800 years and interpreted the disappearance of Norse settlements in southern Greenland at about 1350 as due a climate deterioration of tidal origin; this was an early introduction of what later was called the Little Ice-Age. OP is referred to in Lamb's "Climate: Present, Past and Future" (1972); it is observed there that recently the period has been corrected to 1670 years. OP, no doubt, was stimulated to these ideas by his membership of the Stockholm Physical Society, founded by Arrhenius, who himself wrote articles about "Cosmic Physics".

The tentative ideas presented in the 1878 paper were gradually developed into a hypothesis of oceanic deep water being formed through ice-melting. Fridtjof Nansen, however, forcefully contested this, favouring iceformation and cooling by the atmosphere. The arguments were presented in scientific articles about 1906-12; today Nansen's alternative is the generally accepted one. One may feel that Nansen, from having admired the 13 year older OP and with whom he cooperated intimately during the birth of ICES, had grown up to at least the height of his mentor, whom he could now criticize with authority. Another rising star was the 25 year younger V. Walfrid Ekman (son of F.L. Ekman), whom OP tried, in vain, to challenge by attacking his theoretical results that the winds can move oceanic bottom water. Both of them designed instruments. As regards current meters, Ekman's design was a much better solution than the one presented by OP. In his obituary of OP, however, Ekman praised OP's photographically recording instrument from about 1911 as being much ahead of its time. V.W. Ekman has survived scientifically better than OP, possible because he is more "narrow-deep" than OP, who rather may be characterized as "broad-shallow".

ICES has survived, it is true, as well as the successors of another of OP's promotions; the Swedish Hydrographical-Biological Commission (1901-1948). Bornö Station, once belonging to OP's country estate Holma and center not only of the Commission but of Swedish oceanography of that time, still serves this science, now as a field station. It is unfortunate, however, if we remember OP only for these organizational achievements. In his time he was a highly esteemed representative of the Scandinavian school of ocean sciences, bringing stimulation by his many publications, especially when these contained unlikely hypotheses.

Artur Svansson, Oceanography, Earth Sciences Centre, Göteborg University, S-41381 Göteborg, Sweden.

SIXTH INTERNATIONAL CONGRESS ON HISTORY OF OCEANOGRAPHY

(First announcement from the organizers)

Mandated by the Commission of Oceanography (International Union of History and Philosophy of Science) and the Fifth International Congress Organizing Committee, and enthusiastically supported by the State Oceanic Administration of China and the People's Government of Qingdao Municipality, the Sixth International Congress on History of Oceanography (ICHO-VI) will be held in Qingdao during August 15-20, 1998. It will be hosted by the First Institute of Oceanography, State Oceanic Institution, the Association of Science and Technology of Qingdao Municipal Government, and the Hong Kong University of Science and Technology.

On behalf of the organizers, we cordially welcome specialists and scholars from all countries as well as all those who have expressed strong interest in participating. The Congress will be structured into symposia and parallel sessions with oral presentations as well as poster displays. Mid- and post-Congress tours for the participants and accompanying persons will also be arranged.

Surrounded by hundreds of miles of coastline, bays and islands, Qingdao enjoys fame as a lovely summer resort. Lao Mountain is a famous scenic spot and the birthplace of Taoism. The whole city is decorated with red-tiled roofs, green trees, blue sea and azure sky. Qingdao is called the oriental "Switzerland and bright pearl of the Huanghai Sea." Qingdao beer and Laoshan mineral water enjoy worldwide fame. Qingdao also serves as a center of education and research on marine science. Attendees are urged to take advantage of the opportunity to see Tai Mountain, selected as a cultural heritage site in 1988, which is only 400km from Qingdao. Qufu, the home of the great thinker and educator Confucius, is only 10km from Tai Mountain. Post-Congress tours to Xian and Beijing will also be arranged by a local travel service.

The Congress will focus on the following topics:

1. The historical development of ocean science, with emphasis on nations and science of the western Pacific and Indian Oceans.
2. International cooperation and exchange in marine science and economics.
3. Interaction between development of marine economics and marine science: reviews of the past and prospects for the 21st century.
4. Sustainable development of marine resources and environment, especially in the western Pacific and Indian Oceans.
5. Environmental protection and laws in maritime affairs and administration.
6. Scientific research on ocean science and technology.

In addition, contributions on related subjects will, as always, be welcome.

Organization:

Chairman of ICHO-VI: Mr Deng-Yi Zhang, Administrator, State Oceanic Administration, Beijing.

Vice-Chairmen: Prof. Eric L. Mills, President, Commission of Oceanography, Dalhousie University.

Mr Zheng-Sheng Yu, Governor, Qingdao Municipality.

Congress Secretary-General: Dr Zheng-Di Pan, Deputy Director, First Institute of Oceanography, Qingdao.

Deputy Secretaries-General: Dr Pei-Yuan, Hong Kong University of Science and Technology.

Mr Huai-Lu Sun, The Association of Science and Technology of Qingdao Municipal Government.

Deadlines:

1 August 1997 Second announcement sent to those who answered first announcement.

30 November 1997 Deadline for submission of abstracts

31 January 1998 Deadline for early registration.

1 March 1998 Notice of acceptance of abstracts

2 July 1998 Distribution of final program.

Detailed schedule, registration form and abstract format will be included in the second announcement.

Registration fees: US \$150 before 31 January 1998; US \$200 after that. 50% discount for accompanying persons and students.

Official language: English will be the official language for the entire Congress. Simultaneous translation will not be arranged.

Accommodations:

Arranged through the Congress Secretary. The following are highly recommended:

1. Haitian Hotel: 4 star \$120/night 2. Yiudian Hotel: 3 star \$90/night 3. Other economic hotels: \$30/night. All hotel rooms are provided with two beds, telephone, TV set and washroom and can be shared by two occupants. The rate includes breakfast.

Contact persons: Mr Gong-Ke Tan & Ms E-Mei Zhou, First Institute of Oceanography, SOA, 3a Hongdao Branch Road, 266003 Qingdao, P.R. China. Telephone +86 532 288 3127; fax +86 532 287 9562. E-mail: fiokjc@ns.qd.sd.cn.

To receive the second circular, you must reply to this announcement as soon as possible.

MAURY WORKSHOP ON THE HISTORY OF OCEANOGRAPHY

The first Matthew Fontaine Maury Workshop on the History of Oceanography was held June 11-13th, 1997, at the Woods Hole Oceanographic Institution (WHOI) in Woods Hole, Massachusetts. Twenty invited scholars spent three days at WHOI's Quissett campus discussing critical issues in the history of marine science in the United States. Support for the meeting came from the Office of Naval Research and the Marine Policy Center at WHOI. The workshop was organized by David K. van Keuren of the Naval Research Laboratory and Gary Weir of the Naval Historical Center, both in Washington, D.C.

The keynote address on Wednesday, 11 June, was given by Eric Mills of Dalhousie University. Professor Mills gave an overview of the history of modern oceanography, emphasizing those areas where expanded research is required if historians are to understand the intellectual, institutional, and contextual dynamics of the science. He argued that no one national oceanography can be completely understood when studied in isolation and pleaded for an integrationist and internationalist approach to the history of the discipline. Professor Mills' talk was followed up by spirited discussion and a round-robin in which participants discussed their own current research interests.

The afternoon session on 11 June, as moderated by Dr. Weir, focused on the history of oceanography in the interwar and war years. The mobilization of marine scientists in World War II, and the resulting partnership between the War Department and oceanographers served as a watershed in the history of the discipline. The Office of Naval Research continued to fund oceanography in the postwar era, producing a high level of institutional support and development. The expansion of the federal patronage replaced the mix of Navy and private support that had characterized support in the interwar period.

The morning of 12 June was dedicated to a review of primary and secondary resources in the history of oceanography. Helen Rozwadowski of Georgia Tech reviewed the secondary literature in the history of oceanography and also noted areas where historical research is limited or lacking. Deborah Day of the Scripps Institution of Oceanography followed up with a survey of major archival collections. There is a continuing need, Ms. Day emphasized, for historians, archivists, and practising oceanographers to work together to ensure that major research collections find their way to professionally run archives for preservation and safe-keeping. Preserving the records of oceanographers is critical if the history of the field is to be successfully documented.

Ronald Rainger of Texas Tech University led a discussion of oceanography in the era of the Cold War and big science during the Thursday afternoon session. Dr. Rainger reiterated that historians must pay particular attention to issues such as relations between the oceanographic community and the military, federal funding, the organization of the National Science Foundation and the Sea Grant program, and the development of marine policy. The growth of the environmental movement also has had a major impact on marine science during the post WWII era. The Mohole Project and the JOIDES drilling program, additionally, helped introduce many of the facets of big science into marine science during this era.

The morning session of the 13th was dedicated to consideration of research methodology and historiography. William Glen of the U.S. Geological Survey discussed what an appropriate research methodology for the history of oceanography might look like. Greg Good, of West Virginia University, followed up with a discussion of historiographical issues that scholars must consider in writing the history of oceanography. Discussion was spirited and useful.

The Friday afternoon session was dedicated to a roundtable discussion between Naomi Oreskes of New York University and Andy Solow of the Marine Policy Center of "What Place for History" in the practice of oceanography and marine policy. Both historians and oceanographers agreed that it is important to foster closer engagement and cooperation between members of the two professions. Each has much to offer that would be useful to the other. A wind-up summary session moderated by David van Keuren and Gary Weir concluded the workshop.

Participants of the Maury workshop have tentatively agreed to return to Woods Hole in the summer of 1999 to follow up on this year's meeting. The 1999 workshop will consist of presented papers on research focus areas that have been identified as being particularly important and not well understood. Included among them are the history of oceanography during WWII and the Cold War; synoptic overviews of the field at specific points of time; the history of the Sea Grant Program; comparative studies of field science in different countries; studies of oceanography's changing disciplinary boundaries; internationalism; comparative patronage; the boundary relations between military and civilian oceanography; and the development of marine policy.

Attendees at the meeting included: Joseph Anderson, American Institute of Physics; Kai-Henrik Barth, University of Minnesota; Susan Bauer, Falmouth, Mass.; Keith Benson, University of Washington; Deborah Day, Scripps Institution of Oceanography; Margaret Deacon, University of Southampton; Ronald Doel, University of Alaska; Bill Dunkle, Woods Hole Oceanographic Institution; Dean Dunn, University of Southern Mississippi; Margot Garritt, Woods Hole Oceanographic Institution; Joel Genuth, American Institute of Physics; William Glen, U.S. Geological Survey; Greg Good, West Virginia University; Bruce Hevly, University of Washington; Porter Hogland, Woods Hole Oceanographic Institution; Julia Lajus, Russian Academy of Sciences; Eric Mills, Dalhousie University; Naomi Oreskes, New York University; Ronald Rainger, Texas Tech University; Philip Rehbock, University of Hawaii; Helen Rozwadowski, Georgia Tech; Andrew Solow, Woods Hole Oceanographic Institution; David van Keuren, Naval Research Laboratory;

Spencer Weart, American Institute of Physics; and Gary Weir, Naval Historical Center.

David A. van Keuren, History Office, Code 5204, Naval Research Laboratory, Washington, DC 20375, USA.

HISTORY OF POLAR RESEARCH SPECIALIST GROUP OF THE GERMAN SOCIETY OF POLAR RESEARCH

During the 16th International Polar Conference of the German Society of Polar Research a History of Polar Research Specialist Group was set up in Göttingen on 11.4.1991. First of all, this work group is concerned with German polar research using methods of historical research to analyse unpublished sources. We try to find unpublished works that are hidden in archives, private collections or old boxes somewhere in the attics of polar researchers in the former Western and Eastern parts of Germany. We want to motivate scientists from different disciplines such as astronomy, botany, cartography, ethnology, geodesy, human geography, physical geography, geology, geophysics, glaciology, medicine, meteorology, oceanography, zoology and others to analyse these materials in an interdisciplinary way.

Polar research is not studied as an isolated case; besides the context of scientific evolution, it is seen in political and economic context as well. Which trends favour or defeat which research programmes? What are the social components? Who promotes whom?

We are open for research in an international context, especially since Germany is not in a polar region. Expeditions were more or less dependent on the help of other countries. For instance, the Norwegian ice pilot Paul Björvik took part in:

- the South Polar Expedition under the leadership of Erich von Drygalski (1901-03),
- the Study Trip of the German Arctic Zeppelin Expedition (1910), and
- the Antarctic Expedition under the leadership of Wilhelm Filchner (1911-12).

Also, international cooperation like:

- the International Polar Years (1882-83 and 1932-33),
- International Cooperation (1901-04) in Antarctica, and
- the International Society for the Exploration of the Arctic by means of Aircraft (1924-37) (known as AEROARCTIC) was stimulated and/or organized by German researchers.

Our main aim is to establish a data base on German polar expeditions in the period up to WWII (1939). Subjects are:

- biographies of German polar researchers
- genealogical tree of polar researchers (who is pupil/assistant/collaborator of whom?)
- chronological list of German polar expeditions, with additional data on participants and research projects.
- bibliography of polar expeditions.
- list of archives holding documents or manuscripts concerning polar expeditions.

A yearly newsletter (in German, since 1996 with English explanations) outlines activities of the work group and publishes informal contributions of our members. It also contains some pages of bibliography dealing with historical subjects concerning German speaking polar expeditions and gives references to archives, to libraries with polar literature, anniversaries and conferences. Each newsletter, published in December, has a special priority: Bibliography (No.1, 1992), Archives (No.2, 1993), Resources (No.3, 1994), International Cooperation (No.4, 1995), Polar-Philately (No.5, 1996).

Our members contribute to the International Polar Conference organized by the Society. These conferences take place every 2½ years in a German-speaking country (March 1996: Potsdam (D), September 1998: Bern (CH). During the 1st German History of Sciences Meeting (Berlin, September 1996), our group will organize a session on Polar Research in the 1900s. At the moment, our specialist group concentrates on publishing historically oriented papers in "Polarforschung" (Journal of the German Society of Polar Research).

Interlocutor for German history of polar research before the turn of the century is Dr. Reinhard A. Krause (*Alfred Wegener Institut, Columbusstrasse, D-27568 Bremerhaven*). His PhD thesis deals with "The Period of Founding of the German Polar Research, 1865-1875" (Reports on Polar Research, Bremerhaven, Nr. 114 '92, 1992, 375 p. + 64 p.). Dr. Cornelia Lüdecke (*Institut für Geschichte der Naturwissenschaften, Universität München, Museumsinsel 1, D-80306 München*) specializes in German polar research since the turn of the century up to World War II. Her PhD thesis analyzes German Polar Research since the Turn of the Century and the Influence of Erich von Drygalski (Reports on Polar

Research, Bremerhaven, Nr. 158 '95, 1995, 340 p., + 72 p.).

We would be glad to make contact with you. Please write to the head of the History of Polar Research Specialist Group:

Dr. Cornelia Lüdecke, Valleystr. 40, D-81371 München, Germany. Tel./Fax: [49](89)725 6 725

FROM THE SIO ARCHIVES

Scripps Institution of Oceanography Archives
University of California at San Diego

ACQUISITION OF ROBERT S. DIETZ PAPERS

Scripps Institution of Oceanography Archives, University of California, San Diego in La Jolla, California announces the acquisition of the personal papers of marine geologist Robert Sinclair Dietz (1914-1995), perhaps best known as the coiner of the phrase "sea floor spreading" and for his research on meteoric impacts.

The papers measure nineteen cubic feet and include material dated 1936-1995. They include correspondence, manuscripts of scientific papers, photographs, subject files, reprints, newspaper clippings and other material. The papers contain documentation of Dietz's graduate training, including his interactions with his mentor Francis P. Shepard and his work with Shepard and fellow graduate student K.O. Emery at the Scripps Institution of Oceanography during the 1930's. There are also files on his career as a civilian scientist with the Navy, including his work at the Naval Electronics Laboratory in San Diego (1946-1952; 1956-1958). The collection includes material describing Dietz's work with Jacques Piccard on the bathyscaphe TRIESTE during the years 1956-1962, and files documenting Dietz's confrontations with creationists over the age of the earth, science education and other topics. Dietz's contacts with creationists, which began in the 1980's, led to the publication of his 1987 book, *Creation/Evolution Satiricon: Creationism Bashed*, and subtitled, *Did the Devil Make Darwin Do It?*

The collection includes full documentation of Dietz's scientific research, including files on his study of the Sudbury Basin, astrolemeas and meteoric impacts. The files contain fulsome documentation of Dietz's oceanographic research including material documenting his interest in continental margins, ocean basins, plate tectonics, tsunamis and sea floor. Included also is a small quantity of material on Arctic and Antarctic research and expeditions including a small file on Operation Highjump.

The papers are in process. A preliminary folder list is available to researchers at the SIO Archives. Deborah Day, Scripps Institute of Oceanography Archives, SIO, La Jolla, CA 92093-0219, USA.

CENTENARY OF ICES

In 2002 the International Council for the Exploration of the Sea (ICES) will celebrate its centenary. As part of the preparations for the event, ICES has hired historian of science Dr Helen Rozwadowski to write a book about the history of ICES from its founding through its metamorphosis into the multi-faceted intergovernmental organization it is today.

Although ICES as an institution has remained remarkably conscious of its history, producing jubilee volumes and publishing historical papers and volumes from time to time, the current book project is the first to involve a professional historian to study the development and achievements of this unique advice-giving organization, which continues to hold an important place in northern European science. As one of the earliest international marine science organizations in the world, ICES set standards and precedents for international cooperation at a time when science was more commonly organized through channels of personal acquaintance and communication. Its practical orientation around problems of the fisheries marked a shift in marine sciences from an early nineteenth century national

preoccupation with exploration and discovery to a new expectation that international science would help to solve political, economic, and (more recently) environmental issues.

ICES hopes that this project's attention to its historical development will provide insight as its leaders consider its contemporary form and foci. The book resulting from Dr Rozwadowski's research should interest a broad audience, ranging from ICES scientists to historians of science, environmental historians, and specialists in marine policy.

Address for communications: Helen Rozwadowski, 1147 Blue Ridge Avenue, Atlanta, Georgia 30306, USA. E-mail: helenroz@compuserve.com.

WYVILLE THOMSON MATERIAL IN WOODS HOLE

In 1992 Mrs Jean Merriman donated to the Archives of Woods Hole Oceanographic Institution a collection of papers and memorabilia from the office of the late Professor Daniel Merriman of Yale University. These, as Accession Numbers 96-20 and 92-19, under the title "Sir Charles Wyville Thomson Papers," include several holograph letters of Wyville Thomson, some of them relating to family business at Bonsyde, Scotland, and to his move from Belfast in the 1850s. There is one letter one letter from "Challenger," dated 8 August 1874, written in the Queensland Club, Brisbane. Also included is a leather billfold with "C. Wyville Thomson" embossed in gold. From the same source is Daniel Merriman's manuscript "Challengers of Neptune. When Oceanography became a Science." This is apparently a "lost" book manuscript by Professor Merriman, consisting of eight chapters covering marine science from the ancients to the nineteenth century, with emphasis on Edward Forbes and preparations for the "Challenger" Expedition. Eric Mills has notes on this material and access is via the Archives of Woods Hole Oceanographic Institution.

NEWS AND EVENTS

DEATH OF A.A. ALEEM. Professor A.A Aleem of Alexandria, valued friend and colleague of many historians of oceanography and a noted scholar of marine sciences in the Islamic world, died on October 27, 1996. Professor Aleem was among the very few of our colleagues to have attended all the International Congresses of the History of Oceanography. A biographical account by Michael Wynne is in the journal "Botanica Marina," 1997, volume 40 (4): 257-261.

MARY SEARS (1905-1997). Dr. Mary Sears, one of the organizers of ICHO-III, died on September 2 in Woods Hole, Massachusetts. A student of Henry Bryant Bigelow at Harvard (her PhD was awarded in 1933), Mary Sears was originally a planktologist at Woods Hole Oceanographic Institution, but became more and more a scientific editor after a period in the U.S. Navy, 1943-1946. She was the editor of "Deep-Sea Research" from 1953 to 1974 and chaired the First International Congress of Oceanography, Held in New York in 1959. With Daniel Merriman, the co-organizer of ICHO-III in 1980, she edited the proceedings of the 1980 ICHO, "Oceanography: the past," published the same year.

HISTORY OF OCEANOGRAPHY IN LIÈGE. At the XXth International Congress of History of Science held in Belgium from July 20-26, 1997, the Commission of Oceanography sponsored a symposium organized by Margaret Deacon titled "History of Marine Sciences: Science and Technology at Sea." Topics included exploration of the deep sea, acceptance of dynamic oceanography, origins of long-distance acoustic submarine detection, oceanic circulation in the 18th century, English sea-fisheries committees and marine pollution, Johan Hjort's views on fish hatcheries, and the German Committee for Marine Research and Technology. Many of the papers may be published in the 5th issue of the journal "Historisch-Meereskundliches Jahrbuch."

DAS INSTITUT UND MUSEUM FÜR MEERESKUNDE IN BERLIN 1900-1946, a symposium held in Berlin during the German history of science congress in September 1996, included a wide variety of papers on the history of German oceanography. The majority are now in press in the 4th issue of the journal "Historisch-Meereskundliches Jahrbuch." For

information contact Walter Lenz, Zentrum für Meeres- und Klimaforschung, Universität Hamburg, Bundesstrasse 55, 20146 Hamburg, Germany (e-mail: walter.lenz@dkrz.de).

DAS MUSEUM FÜR MEERESKUNDE. The Berlin Museum für Meereskunde is commemorated in a new book, 1996, "Aufgetaucht. Das Institut und Museum für Meereskunde im Museum für Verkehr und Technik Berlin," Berliner Beiträge zur Technikgeschichte und Industriekultur, Schriftenreihe des Museums für Verkehr und Technik Berlin Band 15, available from the Museum at Trebbiner Strasse 9, D-10963 Berlin, Germany.

HISTORY OF NATIONAL OCEANOGRAPHY, a symposium held in the Museum of the World Ocean, Kaliningrad, Russia, from October 28 - November 1, 1996 celebrated the 300th anniversary of the Russian fleet. More than 60 papers dealt with subjects as varied as the origin of Russian oceanology, research institutions, disciplinary investigations, museum exhibitions, and new books on history of Russian oceanology.

HISTORY OF MARINE SCIENCE IN THE DDR. Professor H.-J. Brosin's book "Zur Geschichte der Meeresforschung in der DDR" was published in 1996 as No.17 of the journal "Meereswissenschaftliche Berichte" and is available from the following address: Bibliothek, Institut für Ostseeforschung Warnemünde, Seestr. 15, D-18119 Warnemünde, Germany.

CENTENARY OF ICES. The International Council for the Exploration of the Sea will celebrate its 100th birthday (formally in 2002) in several ways, including a commissioned history of the Council, and a historical symposium "100 Years of Science under ICES" scheduled to be held for three days in Helsinki in early August of 2000. Currently organized into 12 themes, keynote speakers will lead off consideration of the historical significance of ICES and look into its future. Publication of the papers is envisioned in either the ICES Marine Science Symposia series or in the ICES "Journal of Marine Science."

DIRECTORY OF HISTORIANS OF PHYSICS. Addresses, research interests and recent publications of more than 400 physicists/historians of physics (including geophysics and oceanography) have been compiled by the Committee on the History and Philosophy of Science at the University of Maryland, College Park, MD 20742, U.S.A. On the Web find them at: <http://carnap.umd.edu:90/chps/chps.html>. Under "Network Resources" choose "History of Science," then "Directory of Historians of Physics."

HISTORY OF CHEMISTRY. A new e-mail distribution list established by the Chemical Heritage Society, the Sidney M. Edelstein Center for the History and Philosophy of Science, Technology and Medicine in Jerusalem and the History Division of The German Chemical Society. To subscribe, e-mail a message with no subject and only the following text: **subscribe CHEM-HIST to maiser@listserv.ngate.uniregensburg.de**.

INTERNATIONAL SOCIETY FOR THE HISTORY, PHILOSOPHY & SOCIAL STUDIES OF BIOLOGY (ISHPSSB). Membership information, the programme of the 1997 meeting, much information, and links to other Web sites on science and technology are available at <http://www.phil.vt.edu/ISHPSSB/>.

HISTORY OF SCIENCE DATABASE. A premier information source, the database "Eureka" of the Research Libraries Information Network (RLIN), containing an extensive listing in history of science, is available free to members of the History of Science Society. Members are given access via a username and password. For information on membership, see the Society's Web page <http://weber.u.washington.edu/~hssexec/index.html>. "Eureka" contains a separate, surprising useful, listing of references on history of oceanography within its database.

FINDING OUT- OF- PRINT BOOKS. Daniel Conley of the Department of Marine Ecology and Microbiology, National Environmental Research Institute, Roskilde, Denmark, suggests that out- of- print books of interest in the history of the marine sciences may sometimes be located by a search of the Web site <http://www.bibliofind.com/>.

SCIENTISTS AND THE SEA, Margaret Deacon's classic work of 1971 is being reissued in autumn 1997 with corrections, additions, and a new introduction. To order, contact Ashgate Publishing Ltd, Gower House, Croft Road, Aldershot, Hants

GU11 3HR, U.K. A less expensive paperback edition is being considered, provided the market justifies it. It would be suitable as a text for students of the history of oceanography, who have kept copies of the original hardback edition in constant circulation in many libraries. **Would anyone interested in using a paperback printing as a text for students please contact Eric Mills (address on the inside front cover of this newsletter) by mail or e-mail so that I may encourage the publisher to print a paperback edition.**

WHOI ARCHIVIST. A correction to the listing in the last issue of the Archivist at Woods Hole Oceanographic Institution. Margot Brown Garritt's e-mail address is now: mgarritt@whoi.edu. Address and phone/fax numbers remain the same.

MEETINGS AND CONFERENCES

18-19 SEPTEMBER 1997. SCIENCE & EXPLORATION: EUROPEAN VOYAGES TO THE SOUTHERN OCEANS IN THE 18TH CENTURY, at the National Maritime Museum, London. Context, expectations and outcomes of Cook's 1768-1771 expedition in "Endeavour" to the South Seas and other voyages. Contact: Research Administrator, National Maritime Museum, Greenwich, London SE10 9NF, U.K. E-mail: aw08@dial.pipex.com.

26-27 SEPTEMBER 1997. NATURAL HISTORY AND THE SEA, a conference of the Society for the History of Natural History held at Discovery Point, Dundee, Scotland, where the research ship "Discovery" is moored. Devoted to voyages of "Discovery" and other aspects of the history of polar and marine exploration. Contact: Michael Taylor, Perth Museum & Art Gallery, George Street, Perth PH1 5LB, Scotland; phone (1738) 632 488.

5-9 NOVEMBER 1997. HISTORY OF SCIENCE SOCIETY, in La Jolla, California. Includes symposia of the Pacific Circle related to the marine sciences and symposia arranged by Ron Rainger on "Ocean science, spectacle & politics: historical explanations of the Earth's last great frontier" and "Perspectives on the Scripps Institution of Oceanography." Information on programme & accommodations is on the Society's Webpage at <http://weber.u.washington.edu/~hssexec/index.html> and by e-mail at hssexec@u.washington.edu.

22 NOVEMBER 1997. GENTLEMEN AND PLAYERS: AMATEURS AND PROFESSIONALS IN MALACOLOGY, 1900-1950, a joint meeting of the Malacological Society, the Conchological Society and the Linnean Society in Burlington House, Piccadilly, London.

15-20 AUGUST 1998. 6th INTERNATIONAL CONGRESS ON HISTORY OF OCEANOGRAPHY, in Qingdao, China. Mentioned in detail earlier in this newsletter. Contact: Mr Gong-Ke Tan / Ms EMei Zhou, First Institute of Oceanography, SOA, 3a Hongdao Branch Road, Qingdao 266003, China; phone 86 (532) 288 3127; fax 86 (532) 287 9562; e-mail fiokjc@ns.qd.sd.cn.

14-17 APRIL 1999. ART AND ILLUSTRATION IN THE HISTORY OF NATURAL SCIENCE, the 12th International Conference of the Society for the History of Natural History, jointly with the Natural History Museum, to be held in the Natural History Museum, London. The Museum will mount an exhibit to accompany the conference. Offers of papers to Jane Pickering, Oxford University Museum, Parks Road, Oxford OX1 3PW, England.

9-12 AUGUST 1999. NAVIGATIONAL STIMULUS TO THE HISTORY OF SCIENCE, at the University of Plymouth. Coinciding with the next total eclipse of the sun, it will explore the impact of navigation on history of science. Offers of papers and information: P.A.H. Seymour, Institute of Marine Studies, University of Plymouth, Drake Circus, Plymouth PL4

8AA, U.K.

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A FINAL WORD!

(With thanks to Johann Lutjeharms, Department of Oceanography, University of Cape Town)

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Please see the Editorial in this issue of *History of Oceanography* for background information on this questionnaire.

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