

THE PACIFIC CIRCLE



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PACIFIC CIRCLE NEWS

Members' News

As many of you know, **Philip “Fritz” Rehbock** died of melanoma in Honolulu, Hawaii, on February 2, 2002. He was 59 and a long-time faculty member at the University of Hawaii, Manoa. We miss our dear friend whose interests and passions covered the world, from the Pacific Circle to model railroads, literature to jazz, influencing friends, students and colleagues near and far. He is remembered with great respect and affection.

Roy MacLeod (University of Sydney) has been kind enough to reflect upon Fritz's life and career.

“Philip F. Rehbock (1942-2002). ‘Fritz’ as he was known to all, was a co-founder of the Pacific Circle in 1985, and was, for over fifteen years, its focus and mainstay. It was his guiding hand at work, when the Circle metamorphosed from a small gathering of friends into a Scientific Commission of the International Union for the History and Philosophy of Science. In his chosen field, he was universally known for his meticulous scholarship, which opened new pathways in the study of Western science in the Pacific, and in the history of natural history in Britain. From his collaboration with others, and from his own pen, flowed four books and many articles in the history of biology, geology, oceanography and exploration. His commitment to *sodalitas* was no less memorable, and with his wife Karen, Fritz made hospitality at the Rehbocks a byword for a visit to Hawaii. Thanks to his tireless efforts, for over a decade, the *Pacific Circle Newsletter* (now *Bulletin*), from its university home in Honolulu, brought distant scholars into close contact. Today, the *Bulletin* continues, in a very real sense, as a memorial to Fritz, and as a tribute to his hard work. It has now safely passed to his successors. But his hand remains ever-present in its structure and style. Fritz is survived by Karen and their daughter Maile. By friends and colleagues throughout the world, he will be sorely missed.”

A fund to honor Fritz's memory and work has been set up by **Keith Benson** (University of Washington) and **Deborah Day** (Scripps Institution of Oceanography) at the University of California, San Diego. Contributions can be sent to: Dyanne Hoffman, Director of Development, Geisel Library Administration, University of California, 9500 Gilman Drive, Depart. 0175G, La Jolla, CA 92093-0175, USA. Tax-deductible contributions to the Fund can be

made in the form of a check payable to the “U.C. San Diego Foundation.” Please indicate on the check or in the accompanying letter that the monies are for the Rehbock Memorial Fund.

Forthcoming Meetings

Rod Home (University of Melbourne) will be delivering a paper entitled “The Rush to Accelerate: Early Australian Attempts to Establish a Research Program in Nuclear Physics” at the History of Science Society annual meeting in Milwaukee, Wisconsin (November 7-10, 2002). The paper is part of a session on “20th-Century Physical Sciences in East Asia and the Pacific Rim,” scheduled for Saturday, November 9. Rod provides the following abstract of his paper:

“From the mid-1930s onwards, Australian physicists, though few in number, sought to join the exciting new field of research then opening up in nuclear physics. Such research was already, however, largely based on the use of particle accelerators, and to acquire one created demands for money and resources on a scale unprecedented in Australian scientific experience. This paper traces the early, largely unsuccessful Australian attempts to build accelerators or to acquire them by other means. It considers the difficulties that Australian physicists faced in this connection and the strategies by which they sought to overcome them. The paper also explores the more general question that emerged at this period, of access by the world’s smaller scientific nations to ‘big science,’ as exemplified by the requirements of high-energy nuclear physics re-search.”

Jim Fleming (Colby College) invites Pacific Circle members and all other interested parties to the “Presidential Symposium on the History of the Atmospheric Sciences: People, Discoveries, and Technologies,” to be held at next year’s 83rd Annual Meeting of the American Meteorological Society in Long Beach, CA. Papers will be delivered during the afternoon on February 11, 2003. The Historians’ Dinner will follow. Program and other information can be found at <http://www.ametsoc.org/AMS/>.

Walter Lenz announces the first call for papers for the VIIth International Congress on the History of Oceanography, to be held in Kaliningrad, Russia, September 8-14, 2003. The conference theme is “International Collaboration in the Research of the World Ocean.” Organizers suggest the following main areas for papers, reports and discussions: International Collaboration in the Research and Exploration of the World Oceans: Free Will or Necessity? Marine Ecological

Problems and Sustainable Development of Humanity; Contribution of the Navy to Ocean Research; Oceanographic Education: Reasons for Changing Priorities; International Marine Law; Problems of the Mediterranean Seas: the Baltic as an Example; and History of Oceanography in Museum Collections and Expositions. The special symposium will focus on the "Bicentenary of the First Russian Round-the-World Expedition (1803-1806)." For further information, please contact the Kaliningrad Museum of the World Ocean, Russian Federation, 236006, Kaliningrad, Naberezhnaya Petra Velikogo, 1. Fax: (+7) 0112-340-211. Email: postmaster@vitiiaz.koenig.su. The web site: <http://www.vitiiaz.ru>.

Recent Meetings

Daniel Headrick (Roosevelt University) reports the following from "Communication Under the Seas: A Twice-Rejuvenated 19th-Century Technology and its Social Implications," a conference devoted to the historical study of submarine cables:

"On April 19-20, 2002, the Dibner Institute for the History of Science and Technology hosted a conference organized by Dr. Bernard Finn of the Smithsonian Institution and Prof. Daqing Yang of George Washington University on the theme of 'Communication Under the Seas.'

The conference included five sessions:

- 1) A Technologic History of Cables, with papers by Bernard Finn, Jonathan Winkler (Yale University), and Jeff Hecht (Independent Scholar);
- 2) Management of Cables, with papers by Jorma Ahvenainen (Jyvaskyla University, Finland), Robert Boyce (London School of Economics), and Kurt Jacobsen (Copenhagen Business School);
- 3) Impact on Diplomacy and Warfare, with papers by Daniel Headrick, David Nickles (U.S. State Department), and Daqing Yang;
- 4) Impact on Business, Press and Culture, with papers by Menachem Blondheim (Hebrew University) and Pascal Griset (Sorbonne); and
- 5) Implications for the Internet, with remarks by Janet Abbate (University of Maryland) and Peter Hugill (Texas A & M University).

Apart from a small number of invited guests, the conference was limited to the participants, most of whom had read one another's papers and were familiar with the general history of cables. The discussions were therefore very focused and informed, making this one of the most interesting and productive conferences. The Dibner Institute plans to publish revised versions of the papers in the near future."

An informal working group held a session on the history of electrification at the recent International Economic History Congress in Buenos Aires. **Jonathan Coopersmith** (Texas A&M University) writes that participants emphasized the roles of financing electrification and multi-national enterprises. For more information, please contact William Hausman (wjhaus@wm.edu).

The Sixth Latin American Congress of the History of Science and Technology recently met in Rosario, Argentina. Please contact Prof. Carlos D. Galles at VICongr@fceia.unr.edu.ar. The Congress web site is: <http://www.fceia.unr.edu.ar/VICongresoSLHCT/>.

Publications

Please contact Selim Morcos (selimmorx@aol.com) for a report on the preparation of the proceedings of the Sixth International Conference on the History of Oceanography.

Michiko Yajima has forwarded the most recent *Newsletter* (No. 4, April 2002) of JAHIGEO: The Japanese Association for the History of Geology. This issue includes Gerardo J. Soto, "Japanese Geoscientists in Coast Rica in the 1960s and 70s" and Michiko Yajima, "Franz Hilgendorf (1839-1904) and Natural History in Japan." For copies and additional information, please email PXI02070@nifty.ne.jp.

The University of Washington Press announces the publication of: **Keith R. Benson** and **Philip Rehbock**, eds. *Oceanographic History: The Pacific and Beyond* (ISBN 0-295-98239-x) and **Helen Rozwadowski**, *The Sea Knows No Boundaries: A Century of Marine Science Under ICES* (ISBN 0-295-98259-4). Please contact the Press at uwword@u.washington.edu.

Douglas M. Haynes, "Still the Heart of Darkness: The Ebola Virus and the Metanarrative of Disease in the Hot Zone," *Journal of Medical Humanities*, 23:2 (2002), 133-144.

Roy MacLeod, "Strictly for the Birds: Science, the Military and the Smithsonian's Pacific Ocean Biological Program," *Journal of the History of Biology*, 34:4 (2001), 315-352.

Rod Home, A. M. Lucas, Sara Maroske, D. M. Sinkora and J. H. Voigt, eds. *Regardsfully Yours: Selected Correspondence of Ferdinand von Mueller, Volume 2: 1860-1875*, Bern: Peter Lang, 2002.

Rod Home, "Science Publishing," in Martyn Lyons and John Arnold, eds. *A History of the Book in Australia*, Brisbane: University of Queensland Press, 2002, 292-294.

Volume 8 (2001) of *Historisch-Meereskundliches Jahrbuch* contains the following articles: G. Wegner, "Meerestiefen und Kuesten in deutschen meereskundlichen Lehrbuechern seit dem 18. Jahrhundert"; J. D. Hamblin, "Science and North-South Sentiment: International Oceanography in the Pacific and Indian Oceans, 1950-1966"; and D. McGraw, "Claude Zobell and the Foundations of Marine Microbiology, 1940-1946."

Jacob Darwin Hamblin has also published "Environmental Diplomacy in the Cold War: The Disposal of Radioactive Waste at Sea During the 1960s," *International History Review*, 24:2 (2002), 348-375; "The Navy's Sophisticated Pursuit of Science: Undersea Warfare, the Limits of Internationalism, and the Utility of Basic Research, 1945-1956," *Isis*, 93:1 (2002), 1-27; and "La Mer au Centre de la Guerre Froide," *La Recherche, hors Serie 7* (2002), 74-77.

Jonathan Coopersmith published "Humans in Space: Is the Cost Too High?" *AAS Space Times*, July-August, 2002, 3; "Taking up the Garbage," *Ad Astra*, 14:4 (2002), 36-39; and "Membership has its Partisans," *IEEE Annals of the History of Computing*, 24:2 (2002), 103-104.

IUHPS/DHS NEWS

The Division of History of Science and the Division of Logic, Methodology and Philosophy of Science, International Union of History and Philosophy of Science, met jointly in Paris during the first week in October. The conference theme was "New Perspectives on the Relation Between History and Philosophy of Science." Speakers included Stefan Amsterdamski, Marjorie Grene, Helge Kragh, Everett Mendelsohn, and Rashed Roshdi. For information, please contact the conference administrative assistant, Mrs. Laure Cartron, at laure.cartron@ehess.fr.

“The Sciences and Empires” electronic mail list is an unmoderated list operated by the Sciences and Empires Groupe, a Commission of the International Congress of the History of Science. The group was founded at an international meeting held at UNESCO in Paris in April, 1990. The theme of that meeting was “Sciences and Empires: European Expansion and Scientific Development of Asia, Africa, America and Oceania.” The group owes its continued existence to the energy of clusters of scholars in Europe, Asia, North America, and Latin America.

Open to all who are interested in the relationships between science and empire, the electronic mailing list is intended to serve as the major forum for discussions by historians, philo-sophers, and sociologists of science, technology, and medicine who study how these activities intersect with colonialism, imperialism, and postcolonialism. It will also serve as the newsletter distribution list.

To subscribe, please go to: <https://mail.lsit.ucsb.edu/mailman/listinfo.cgi.sciemp>.

Questions? Please contact **Michael Osborne** at osborne@history.ucsb.edu

The new web site of the Division of the History of Science of the IUHPHS is now up and running. The site includes information about the Division, a selection of Internet links, news and a Database of Historians of Science. The address is: <http://ppp.unipv.it/dhs>. The Division encourages scholars to register their names and interests at this site.

The International Commission on History of Meteorology also has a new web address: <http://www.meteohistory.org>.

HSS NEWS

Please mark your calendars: HSS annual meeting to be held November 7-10, 2002 in Milwaukee, WI. This will be a co-located meeting with the Philosophy of Science Association and the Society for the Social Studies of Science. Lorraine Daston will deliver the distinguished lecture. For further information, please visit the HSS web sites at www.hssonline.org. or <http://depts.washington.edu/hsexec>. Next year's meeting is scheduled for November 20-23, 2003, in Cambridge, MA. Contact Peter Hoffenberg at peterh@hawaii.edu if you are interested in proposing a Pacific Circle panel for the 2003 annual meeting.

PSA NEWS

Proceedings of the XIXth Pacific Science Congress (Sydney, Australia) are available. The publication includes the Secretary-General's official report and information about the program and participants. Contact the Pacific Science Association at psa@bishopmuseum.org for copies and additional information.

Please note that the journal *Pacific Science* is now the "Official Journal of the Pacific Science Association" and is received as a benefit by all PSA members.

The Third Announcement for the upcoming 20th Pacific Science Congress ("Science & Technology for Healthy Environments") is now available. The Congress is scheduled for March 17-21, 2003, at the Sofitel Central Plaza Bangkok Hotel. Please contact the organizers at wanasri@20pscbangkok.com for further information.

PACIFIC WATCH

The History and Philosophy of Science section of the Pacific Division of the American Association for the Advancement of Science is planning a symposium and paper session for the Division's next meeting, scheduled for June 15-19, 2003, at San Francisco State University. If you are interested in participating, please contact Michele Aldrich, 24 Elm Street, Hatfield, MA 01038, USA. Email: 73061.2420@compuserve.com.

The Anthropology Graduate Program at the Australian National University, Canberra, has launched a Master of Applied Anthropology and Participatory Development. The degree program aims to provide students with an understanding of the ways in which critical social inquiry and method can be applied to design, development, monitoring, and evaluation processes involving community dynamics and participation. For information, please go to the Program's web site: <http://anthropology.anu.edu/MAPPD>.

Prakash Kumar (Georgia Tech) is trying to reach scholars who have published during the past two years in the fields of history and sociology of science, technology and medicine, with a focus on Asia. Please contact Prakash at gte321q@prism.gatech.edu if you have information for him.

Kern Kenyon is searching for the thermal chart of the North Pacific by Matthew Fontain Maury that was in progress at the time he left his job in Washington, D.C. at the start of the American Civil War. It is the first surface

temperature map of the North Pacific constructed. Does it still exist? Please contact Kern at Kernken@aol.com if you have any relevant information about where the map might reside and/or search strategies for finding it.

The current issue of *Tok Blong Pasifik: News and Views on the Pacific Islands* (56:1, Spring 2002) includes a series of articles on the roles of traditional medicine in the conservation of culture and the promotion of health. For further information and copies, please contact the Pacific Peoples' Partnership Association at sppf@sppf.org.

Please note: Pacific Peoples' Partnership sponsored "Governing the Environment: Pan-Pacific Perspectives on Indigenous Governance, Local Resources, and Aid," scheduled for September 19-21, 2002, at the University of Victoria. Several sessions will discuss environmental, marine and mineral issues of interest to some Pacific Circle members. Information is available at www.sppf.org.

Pacific Science, 56:3 (July 2002) is now available and includes the following articles:

John E. Randall, "Aseraggodes bolcomi, a New Sole (Pleuronectiformes: Soleidae) from the Hawaiian Islands";

Christine L. Huffard and R. L. Caldwell, "Inking in a Blue-ringed Octopus, *Hapalchlaena lunulata*, with a Vestigial Ink Sac";

George W. Benz, Kazuya Nagasawa, and Jeremy Wetmore, "New Host and Ocean Records for the Parasitic Copepod *Bobkabata kabatabobbus* (Lernaeosoleidae: Poecilostomatoida)";

Josef Greimler, Patricio Lopex S., Tod F. Stuessy, and Thomas Dirnbock, "The Vegetation of Robinson Crusoe Island (Isla Masatierra), Juan Fernandez Archipelago, Chile";

Elisa Serviere-Zaragoza and Ricardo Scrosati, "Reproductive Phenology of *Pterocliadiella capillacea* (Rhodophyta: Gelidiales) from Southern Baja California, Mexico";

Gretchen Lambert, "Nonindigenous Ascidians in Tropical Waters";

Jennifer E. Smith, Cynthia L. Hunter, and Celia M. Smith, "Distribution and Reproductive Characteristics of Nonindigenous and Invasive Marine Algae in the Hawaiian Islands";

Joel Kyomo Sr. "Timing and Synchronization of the Breeding Period in *Pilumnus vespertilio* (Crustacea: Pilumnidae) in Subtropical Okinawa, Japan";

Francis Parchaso and Janet K. Thompson, "Influence of Hydrologic Processes on Reproduction of the Introduced Bivalve *Potamocorbula amurensis* in Northern San Francisco Bay, California";

J. R. Kimbell, M. J. McFall-Ngai, and G. K. Roderick, "Two Genetically Distinct Populations of Bobtail Squid, *Euprymna scolopes*, Exist on the Island of O'ahu."

For copies of this and other issues, please contact the Journals Department, University of Hawaii Press, 2840 Kolowalu Street, Honolulu, HI 96822, USA.

Laurance E. Carlson has compiled and made available Nos. 20 (1999) and 21 (2001) of the "Bibliography of the History of Australian Science." These were prepared for the *Historical Records of Australian Science* and include scholarship on all parts of Australasia, the South Western Pacific region, and Antarctica. Pacific Circle members are encouraged to notify the editor at laurance@smartchat.net.au about any relevant material for inclusion in future issues.

Deepak Kumar and **G. C. Pal** have just completed *History of Sciences: A Bibliography*, including history of science, technology, environment and medicine. This is the most recent publication in a series of bibliographies prepared by the Zakir Husain Centre for Educational Studies, Department of Special Assistance, Jawaharlal Nehru University, New Delhi. The overall project intends to bring together in the form of a comprehensive bibliography the many printed materials available in India's libraries on the History of Science, Technology, Environment and Medicine. Please contact the Centre for a copy.

Conference and Society Reports

The new British Society for the History of Science Programme Secretary welcomes proposals for meetings and conferences promoted either by BSHS or jointly with other societies. Please contact Dr. Geoff Bunn at g.bunn@nmsi.ac.uk or c/o Science Museum, Exhibition Road, London SW7 2DD, England.

Future Conferences & Calls for Papers

11-13 October 2002. The Thirteenth Europe Pacific Solidarity Seminar meets in Strasbourg, France, to consider “Conflicts in the Pacific, Bringing Together Initiatives and Knowledge,” “European Fishing in the South Pacific Region,” and “Recognition of the Victims of Nuclear Testing in the Pacific.” For information about those workshops and accommodations, please contact the organizers at ecsiep@antenna.nl.

24-25 October 2002. XVIIth Meeting of the History of Medicine, to be held at the Argentine Medical Association, Buenos Aires, Argentina. The event will gather physicians, historians, sociologists, anthropologists, architects, philosophers and members of other communities coming from Argentina and abroad. The subject is “Europa and Argentina in Medicine and Science.” Papers and participants will review the cultural, medical, and scientific relationships between European countries and Argentina. Specific topics include: European Scientists in Argentina, Medical aesthetics, Darwin and Darwinism, and Medicine in the Chronicles of the Spanish Colonies. For further information, please contact Jaime E. Bortz, MD and PhD, President of the Argentine Society of the History of Medicine, Argentine Medical Association. Email addresses: historiadelamedicina@arco-ap.com.ar or gabari@fibertel.com.ar.

14-15 November 2002. CEPAC 2002 Conference, to be held at Le Havre, France. Papers and participants are invited to consider the theme of “Terre(s) et Territoire(s)”/“Land and Territory/ies,” including more specific Pacific issues such as globalism, regional development, trade and public policy. Email: maryvonne.nedeljkovic@univ-lehavre.fr.

4-7 December 2002. International Conference on the Environmental History of Asia, to be held at Jawarhalal Nehru University, New Delhi, India. The theme of the conference is “The History of Water, Health, Forests, and Commons, and is jointly sponsored by JNU, the University of Sussex and the Australian National University. Organizers encourage participants interested in the environmental history of all Asian areas, from Turkey in the west to the Western Pacific in the east. It is expected that the bulk of papers will be about South Asian and Southeast Asian topics. For further information, please contact the organizers at envhistasia@hotmail.com.

17-23 March, 2003. XXth Pacific Science Congress, to be held in Bangkok, Thailand. Hosted by the National Research Council of Thailand, in collaboration with

the Thai Academy of Science and Technology and the Pacific Science Association, this congress will examine the role of science and technology in promoting sustainable and environmentally sound economic development within the theme of "Science and Technology for Healthy Environments." The three sub themes are: Natural Resource Challenges, Social Challenges, and Science and Technology Challenges. Early registration and abstracts are due no later than October 15, 2002. The meeting will be held at the Sofitel Central Plaza Bangkok Hotel. General information is available at the congress website (<http://www.20pscbangkok.com>) and by email (wanasri@20pscbangkok.com). If you are interested in presenting a paper and/or poster, please contact The Pacific Science Association, 1525 Bernice Street, Honolulu, HI 96817, USA (Email: psa@bishopmuseum.org) or Congress Secretariat, National Research Council of Thailand, c/o Translation and Foreign Relations Division, 196 Phaholyothin Rd., Chatuchak, Bangkok 10900, Thailand (Email: pscbkk@email.nrct.go.th).

26-30 March 2003. American Society for Environmental History Annual Meeting in Providence, Rhode Island. The program committee invites proposals for papers, posters and panels concerning any area or field of environmental history, although preference will be given to those addressing the meeting's theme, "Frontiers in Environmental History: Mainstreaming the 'Marginal'." The committee is specifically soliciting work in previously under-represented world areas and intellectual approaches. To apply, please download the form from the ASEH web site: <http://www2.h-net.msu.edu> and send six copies, along with six copies of the required attachments to: Ravi Rajan, ASEH Program Committee Chair, Department of Environmental Studies, University of California, Santa Cruz, CA 95064, USA.

7-9 July 2003. 17th Summer Conference of the Institute of Contemporary British History, to be held at the Institute of Historical Research at the University of London. The conference theme is "Science, Its Advocates and Adversaries" and organizers encourage papers presenting the finding of new research exploring how changes in scientific practice and expertise came about within the wider context of the production and application of scientific knowledge. Topics might include a consideration of who are scientists, the relationship between science and communications, disease and the environment, or the development and application of particular innovations. The deadline for paper and/or panel proposals is December 31, 2002. For additional information, please contact Dr. Harriet Jones, ICBH, Institute of Historical Research, Senate House, Malet Street, London WC1E 7HU, England. Email: hjones@icbh.ac.uk.

16-20 July 2003. International Society for the History, Philosophy, and Social Studies of Biology Meeting in Vienna, Austria. For further information, please contact Astrid Juette, Chair of the Local Arrangements Committee. Email: astrid.juette@bigfoot.com.

Exhibitions and Museums

The Macleay Museum at the University of Sydney continues its feature display, “Shaping Australia: Tracks & Trade in Pre-Colonial Australia.” This exhibition illustrates and discusses traditional Australian Aboriginal trade connections before European settlement. Routes linked coastal Australia with the inland and Australia’s northern shores with the Indonesian archipelago and New Guinea. “Collected: 150 Years of Aboriginal Art and Artifacts” also continues at the Museum through the end of 2002. This exhibition showcases boomerangs, baskets, bark paintings, spear-throwers and other ethnographic objects, many of which are unique in quality and decoration. For further information about these and other events, please contact the Macleay Museum at macleay@macleay.usyd.edu.au.

Employment, Grants and Prizes

The Royal Society (London) provides grants to support publication of research in the history of science, technology, and medicine. The funds are intended to help defray the costs of publication of scholarly books that are likely to have a limited sale, or which need, for example, to be supported by expensive plates. Grants are also available for limited identifiable research in the above areas and to attend overseas conferences. Application forms and further details are available from Miss J.E.C. Lewis, The Royal Society, 6 Carlton House Terrace, London SW1Y 5AG, England or from the Society’s web site at <http://www.royalsoc.ac.uk>

The Science, Medicine, and Technology in Culture Initiative (SMTC) at Penn State University has been awarded a US\$300,000 National Science Foundation grant for graduate training. The program will be offering graduate fellowships for studies beginning in this fall. SMTC spans departments of History, English, Philosophy, Anthropology, Women’s Studies and several leading departments of life, social and physical sciences. Visit the SMTC web site for additional information: <http://faculty.la.psu.edu/ssps/smtc.html>.

The *Annals of Science* prize is offered each year to the author of an original unpublished essay in the history of science or technology, which is not under consideration for publication elsewhere. The prize is intended for those who have been awarded their doctorate within the past four years, and for doctoral students. Essays should be between 6,000 and 9,500 words in length, including footnotes, and can be in English, French or German. Please contact the *Annals of Science* for further information.

The Center for History of Physics of the American Institute of Physics has a program of grants-in-aid for research in the history of modern physics and allied sciences, including astronomy, geophysics and optics, and their social interactions. Grants can be up to US\$2500 each. They can be used only to reimburse direct expenses connected with the work. Preference given to those who need funds for travel and subsistence to use the resources of the Center's Niels Bohr Library, or to microfilm papers or to tape-record oral history interviews with a copy deposited in the Library. Additionally, applicants should be either working toward a graduate degree in the history of science or show a record of publication in the field. For further information, please contact Spencer Weart, Center for History of Physics, American Institute of Physics, One Physics Ellipse, College Park, MD 20740, USA. Email: sweart@aip.org.

The Society for the History of Natural History announces the establishment of the annual Alwyne Wheeler Bursary to support travel by scholars under the age of 30 to annual meetings of the SHNH, normally held in the spring. Preference will be for applicants who contribute a paper or other presentation at the meeting. Information and applications are available from the SHNH Secretary, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, England. Email: kmw@nhm.ac.uk.

The Singer Prize is awarded by the BSHS every two years to the writer of an unpublished essay based in original research into any aspect of the history of science, technology, or medicine. This Prize is intended for younger scholars or recent entrants into the profession. It may be awarded to the writer of one outstanding essay, or divided between two or more entrants. The Prize will be presented at a BSHS meeting and publication in the *British Journal for the History of Science* will be at the discretion of the Editor. Essays on offer or in press elsewhere will not be eligible. General rules: candidates must be registered for a postgraduate degree or have been awarded such in the two years prior to the closing date. Entry is not limited to British nationals. Essays must not exceed 8,000 words (including footnotes following the style guidelines in the *BJHS*),

must be fully documented, typewritten with double-line spacing, and submitted in English. Use of published and unpublished primary material is strongly encouraged, and full and correct use of scholarly apparatus (eg. footnotes) is expected. Entries (3 copies, stating the number of words) should be sent to arrive no later than October 31, 2002. Essays must not bear any reference to the author, either by name or department; candidates should send a covering letter with documentation of their status and details of any publications. Please send entries to BSHS Secretary, Dr. Sally Horrocks, Department of Economic and Social History, Leicester University, Leicester, LE1 7RH, England. Enquiries only by email to smh4@le.ac.uk. Do not send essays as email attachments.

Research, Archives and Collections: Print and Electronic.

A new web site provides most of the writings of Charles Darwin in a form that allows for accurate and complete citation. Edition and page numbers are clearly noted for reference. In addition, many of the texts are fully illustrated with images never before offered on the internet. The site currently offers fifteen different texts and two collections of letters.

The address is: <http://pages.britishlibrary.net/charles.darwin/>.

The Earth and Environment Forum's mission is to: "Promote studies on the environmental history of science and on the history of environmental sciences, including, among others, agricultural sciences, conservation biology, earth sciences, ecology, as well as research on resource management and environmental protection; encourage the study of the environment across disciplines and fields of research such as environmental history, agricultural history, colonial history, history of science and environmental studies; define the relevance of the history of science for understanding contemporary debates and governmental policies related to environmental issues."

The Forum's web site is: <http://www.cieq.uqtr.ca:591/EEF.htm>.

"The Navigational Aids for the History of Science, Technology & the Environment" is a new, free, online resource for scholars. This is a web-based index of archival materials newly catalogued in the University of Edinburgh, Heriot Watt University, and the University of Glasgow, brought together with funding from the UK Research Support Libraries Programme. The site is: <http://www.nahste.ac.uk>. Questions or comments? Please contact Dr. Duncan Fisher at Duncan.Fisher@ed.ac.uk.

The American Association for the Advancement of Science has launched a new AAAS History and Archives web site at <http://archives.aaas.org>. The site uses a relational database, created with open source tools, to generate response to queries concerning the history of the Association. The database includes information about presidents and officers, meetings, governing documents, resolutions, and collections.

The National Library of Australia in Canberra now offers an online exhibition of Captain Cook and Omai, the Tahitian taken to Britain. The site offers an extensive text and dozens of images of Tahiti, New Zealand and Hawaii by the various artists that accompanied Cook.

The URL is: <http://www.nla.gov.au/exhibitions/omai/>.

The National Library of Australia has also embarked on a major digitization project of possible interest to Pacific Circle members. Among the selected items from its collections are images from 18th- and 19th-century voyages of exploration, Joseph Banks's letters and photographs taken by Frank Hurley in Antarctica. The Library intends to digitize about 6,000 images a year and make those available for use in publications with limited constraints. An overview of the material can be seen at www.nla.gov.au/digital.program.html.

"The Alfred Wallace Page" contains materials by and about the naturalist and social critic, including bibliographies, news items, commentaries and the full-text of nearly 200 of his writings. Those include books and interviews. The URL is: <http://www.wku.edu/~smithch/index1.htm>

Book and Journal News

The book reviews editor for *Science & Public Policy* is looking for scholars to review books touching on science and technology. The reviews are generally 1000 words long and there is a two-month deadline from receipt of the book. If interested in reviewing a particular book or in the list of books currently available for review, please contact Dr. Paul Rosen, Science & Technology Studies Unit, Department of Sociology, University of York, Heslington, York, England YO10 5DD. Email: pjr8@york.ac.uk.

The Society for the History of Natural History has published a cumulative index to the *Archives of Natural History*, formerly *Journal of the Society for the Bibliography of Natural History*. The index covers the period 1936 to 2001. For information about purchasing a copy, please contact The Society for the History of Natural History, c/o The Natural History Museum, Cromwell Road, London SW7 5BD, England. Email: shnh@zetnet.co.uk.

Book Reviews

Laura Hostetler. *Qing Colonial Enterprise: Ethnography and Cartography in Early Modern China*. Chicago: University of Chicago Press, 2001. Pp. 257+xx. B/W photos, color plates, bibliography, notes, index. Cloth: US\$35.00 and ISBN 0-226-35420-2.

For many scholars, China's late imperial history unfolded in almost complete isolation. The Ming (1368-1644) Chinese contributed to this perception with an actual isolation policy that they imposed upon themselves during the fifteenth century. This separation from the rest of the world grew only worse, these scholars contend, during the ensuing Qing dynasty (1644-1911). Laura Hostetler challenges this interpretation in her fascinating look at the cultural history of the seventeenth and eighteenth centuries. Hostetler argues that China was an active participant in a larger early modern world (p. 2). To prove her thesis, she looks at two areas of cultural and scientific activity: cartography and ethnography. Ultimately, she shows how China's engagement with the early modern world shaped the cultural and geographic contours of contemporary China, namely, the People's Republic (p. 80).

Hostetler notes that the development of accurate, to-scale maps made their appearance in China at nearly the same time as in Europe. The standard assumption, she observes, reduces their appearance to the beginning of technological borrowing from the more advanced countries of Europe. While the Europeans, the French especially, created such maps before the Chinese did, she argues that this relates only a very small part of Chinese cartographic history. Hostetler is interested in the cultural and political impulses behind the creation of such maps. The Qing, as well as their European counterparts, were motivated to generate accurate maps to facilitate their expansionist ambitions (p. 3). The seventeenth and eighteenth centuries represent the epoch of European expansion abroad; this is also true for China. Scholars do not usually interpret the Qing in this way because the Qing did not acquire overseas possessions like the Europeans; the Qing were con-

tent to acquire territories that bordered the traditional home provinces of China. Hostetler insists that the lack of overseas possessions should not mislead scholars into thinking that the Qing were not a colonial power (p. 97).

Even though the Europeans developed accurate maps before the Qing, Hostetler is not satisfied with their reduction to the status of a technological borrowing from a superior Europe (p. 21). She tries to overcome the binary of a superior West and an inferior non-West by introducing three new categories: indigenous, early modern, and modern (p. 21). The Qing became part of the early modern world via cultural developments in China, rather than pressures from abroad. One area that she emphasizes in support of this argument is the development of *kaozhengxue* (evidential studies) during the sixteenth century (p. 17). The drive to obtain accurate firsthand information was already a part of intellectual life in China before the advent of to-scale maps from Europe. Indeed, in the *kaozhengxue* movement, geography was one of the main areas of inquiry, along with phonology, paleography, and epigraphy.

The second half of the book is devoted to developments in ethnography. Like cartography, ethnographic works grew out of the same *kaozhengxue* movement. Prior to the Qing, the information contained in ethnographic texts was anecdotal; beginning with the eighteenth century, the Qing dispatched scholars into its frontier regions to observe the activities of the various peoples there, most of whom were not ethnic Chinese (they were non-Han). Ethnography was one of the key ways in which the Qing brought these non-Chinese frontier peoples under their control. Hostetler focuses on the illustrated albums that depicted a people called the *miao*, and those works function as her main sources of Qing ethnography. The Qing tried to portray their state as a multiethnic one, and Hostetler notes that in the PRC today there are ongoing efforts to assert China's multiethnic identity that are strikingly similar to what the Qing did during the eighteenth century (p. 179).

Qing Colonial Enterprise is an important work and a significant contribution to the literature on Qing history. Hostetler's efforts to overcome the West/non-West, superior/inferior binaries are admirable. To a certain extent, those efforts are also the greatest weaknesses of the book. It is not clear how her assertion of the categories of indigenous, early modern, and modern divert us away from the issue of cultural influence. Moreover, if those categories are valid for China as a non-Western culture, then they must apply to other non-Western participants in the early modern world. These observations notwithstanding, this book will

help scholars to re-conceptualize China's place in world history and the history of science.

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Rudolph Mrazek, *Engineers of Happy Land: Technology and Nationalism in a Colony*. Princeton: Princeton University Press, 2002. Pp. 311. Notes, bibliography, index, illustrations. Paper: US\$24.95 and ISBN 0-691-09162-5.

This book is not what you would expect from the title, even less from the sub-title. To his credit, Rudolph Mrazek has looked into sources that other historians have largely neglected, namely magazines, novels, and memoirs published by the Dutch in the East Indies and, to a lesser extent, by Indonesians from the 1880s to the 1940s. Some are popular magazines, and others are aimed at special interest groups, such as motorcyclists or railway workers. The sources, or rather what the author has extracted from them, deal very little with politics or with technical subjects. Instead of technology or nationalism in the usual sense, what the author emphasizes is the daily life of the colonial Dutch.

Thus we learn a great deal about motorcycles and their headlights; about interior decoration of homes, clubs, hotels, and passenger ships; about clothing styles, costumes, and dolls; about electric lights and appliances; about radios and radio programs; about movies and popular music; and about bathrooms and bathroom fixtures, among other things. This is colonialism after work, and through the eyes of housewives and children.

The presentation of all this data is kaleidoscopic and very post-modern. Chapter One is called "Language as Asphalt," and indeed it discusses both road paving and language, using each as a metaphor for the other. Almost everything is a metaphor for something else, and the reader must often proceed with caution through semantic minefields.

Yet beneath the data and the language lies a theme: modernity and the clash of cultures. The Dutch were clearly uncomfortable in the East Indies, especially from the late nineteenth century on, when families began arriving. The Indies, in their eyes, were a chaotic land swarming with strange people and even stranger, and more frightening, forms of life. They strove not just to rule and exploit the colony, but to bring it some of the qualities of life they had grown up with in the

Netherlands: neatness, cleanliness, order and security. If they could not transform all of the Indies, or even Java, into a tropical replica of Holland, then they at least tried to live in carefully maintained enclaves: the suburban house, the club, the passenger liner reserved for whites and the very few Indonesians willing and able to adopt Western ways.

Modernity was a tool, eagerly grasped. This is the modernity of flush toilets and fingerprinting, of radio broadcasts from home; in other words, the modern consumer lifestyle. Modernity widened the gap between Western dreams and tropical realities. It segregated, and so it was valued.

The author often plays havoc with chronology, jumping back and forth in time. Nonetheless, there is a feeling of history unfolding. For the Dutch, modernity was not just a consumer item; it was also the source of great anxieties that reached its peak just as the Depression descended on the colony, damaging not only the economy, but also the European self-confidence that had so long propped up their colonial rule.

As the 1940s approach, anxiety turns to foreboding, and the author endows the protagonists with a sense of doom. In 1940, the Netherlands are invaded by Nazi Germany, and the Dutch East Indies are cut off. For a short time, the colonial Dutch continue to live in their artificial enclaves, ignoring the warning signs of Japanese ambition. When the end comes, the superficial modernity of the colonial lifestyle has not protected them from the onslaught of a much more dangerous modernity.

Where are the Indonesians in all this? Ordinary people hardly appear in this book, and there are only passing mentions of political leaders, even Sukarno, engineer though he was. Instead, the few Indonesians who figure prominently are writers: Kartini, at the turn of the century, who loved train travel and photography; Mas Marco, journalist and commentator, whose ironic cleverness landed him in a colonial jail; and, most incongruously of all, Pramoedya, the most famous of all post-colonial Indonesian writers, who spent most of the Sukarno and Suharto years in a prison camp. Yet it is not their writings that are analyzed here, but their comments on daily life. Pramoedya gets an entire chapter devoted to his letters to his children about conditions in the camp. Interesting, perhaps, but how does it fit in with the rest of the book?

In the end, this book is not easy to place. It is crammed full of anecdotes and fragments of data; some are interesting, but others fail the “so what?” test. Thick description, alas, is no substitute for analytical rigor.

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Roy M. MacLeod, ed. *Nature and Empire: Science and the Colonial Enterprise*. Chicago: The University of Chicago Press, 2000. Pp. 323. Cloth: US\$100.00 and ISBN 0-2265-0078-0.

This thematic collection of essays examines the relationship of western science to colonialism from the sixteenth to the twentieth century. It is a measure of the international scope of the collection and indeed of the field that the contributors include scholars from Argentina, Australia, Brazil, Canada, England, France, India, South Africa, Spain, Sweden, and the United States. Edited by Roy M. MacLeod (University of Sydney), the essays are divided into four thematic parts: 1) Imperial Legacies; 2) Milieux and Metaphor; 3) Science, Culture and the Colonial Project; and 4) Colonial Science and the New World System. At first sight, the organization of the text, from western Europe to the Americas, Asia and Africa, resembles the diffusionist model of the “Spread of Western Science” in the world that George Basalla first articulated in 1967. MacLeod’s sensibility acknowledges the heuristic value of Basalla’s formation while recognizing the flawed explanatory power of an unabashedly Eurocentric paradigm. As MacLeod points out in his magisterial introduction, scholars of science since the 1980s have complicated, if not altogether discredited, the underlying linearity and progressive conception of western science as a vehicle and symbol of modernization.

The contributors engage the projection of the west without falling into the trap of historical teleology. While engendering asymmetrical power relationships between colonizer and the colonized, imperialism and colonialism fostered a set of dialectical relationships that promoted centrifugal and centripetal courses for science in the metropole and periphery. John McClallan and Francois Regourd illuminate the highly bureaucratized participation of French scientific institutions in the colonizing efforts of the Old Regime, including among others the Academie Royale des Sciences and the Academie Royale de Marine. These and other institutions facilitated French colonization and domesticated imperial sci-

ence in France. This dialectic continued as Michael Osborne documents in his study of acclimatization in Europe and its empires since the nineteenth century. The shift from the search for ideal settlement colonies to new ways to exploit the resources of colonial possessions reflected the decline of the theory of the inheritability of acclimatization in response to new biological paradigms, the evolving priorities of settlers themselves, and the domestication of the “exotic” in metropolitan zoos and gardens as a part of the imperial cultures of France and Britain.

A particularly welcomed feature of this rich collection is the nuanced analysis of the place of science (and medicine) within the colonial regimes of power and authority. This is indeed the case in Harriet Deacon’s compelling analysis of the trajectory of racism in colonial South Africa. Deacon rejects racism as simply reaching its fullest expression “where whites and black indigenes meet.” Instead, Deacon illuminates medical racism; that is, the “application of racially discriminatory practices in medicine, the institution of discriminatory practices in medicine based on broader social discrimination.” Using these distinctions as analytical templates, she reveals the dynamism of racism in Western medicine over the nineteenth century. It was manifested in the racialization of the profession as white through the exclusion of non-whites. The class of black patients and the institutional context of their treatment shaped the nature of discrimination in medical practice. Deacon also suggests that medical racism (as expressed in theories about insanity and leprosy) on the whole tended to reflect pre-existing settler stereotypes about blacks and justified “differential treatment based on race and the creation of separate asylums for black and white mental patients,” rather than affecting the timing of racial discrimination in society at large.

Christopher Bonneuil provides a penetrating look at the role of science in the making of the developmentalist state in colonial and post-colonial Africa in the twentieth century. By developmentalist state, Bonneuil refers to the decision of French colonial authorities in the wake of inter-war challenges, such as the Depression, to intervene more directly and vigorously in colonial society and economy. Within this framework African agrarian societies became objects of state intervention and expert knowledge. The settlement scheme, which ranged from public health sanitation projects to large scale primary production, represented a key modality for managing the African environment and crafting knowledge about African societies. Such schemes frequently involved the relocation of communities and deskilling of indigenous farmers, so as to render Africans “more compliant to development: more productive, commensurable to expert knowledge, and amendable to state intervention.” While the benefits to the indigenous

populace was and remains a subject of debate, there is no question that the participation of western experts enhanced their status and that of science more generally. In the service of the colonial state, they were placed in positions of power and authority. Collectively, the expansion of state intervention not only increased the number and presence of experts as measured by the proliferation of regional and pan-African scientific institutions, conferences and surveys. Their expertise also served to de-politicize colonialism. As Bonneuil notes, the very problems associated with development, such as social erosion, deforestation, and malnutrition, that were ascribed to the effects of colonialism, were now recast “as mere technical problems to be solved with appropriate expertise.”

The logic of science as a site for the production of uneven power relationships locally and globally continued in the wake of decolonization. Hoping to enter the global economy, African leaders of successor states appropriated the very policies and practices of what Bonneuil appropriately describes as “authoritarian social engineering”—originally pioneered by colonial rulers—to achieve economic autonomy and independence, and promote social progress. Yet, within the international division of labor of global capital, technical education and import substitution programs did not narrow the gap between the “developed” and “developing” countries. If anything, import substitution left little opportunity for innovation and tended to confine post-colonial economies to the role of primary producers.

In a study of the 1993 United Nations Convention on Biodiversity, James Merson thoughtfully documents how even well-meaning efforts to facilitate the movement from neo-colonial dependence to participation in corporate-sponsored bio-technology research networks has produced decidedly mixed results. The Convention on Biodiversity created a framework that extended to states genetic and biological property rights to the fauna and flora within their borders. As Merson shows with telling case studies from India and Australia, the underlying definition of property rights—based on European conceptions—did not necessarily protect property held collectively, such as communal knowledge and/or practices for accessing the resources of the environment. Further, extending the state ownership of biological and genetic resources reinforced the historical dispossession of aboriginal peoples in at least two ways: 1) devaluing indigenous management of the natural world before European settlement; and 2) encouraging pharmaceutical companies to consult collections amassed during the age of imperialism in order to establish an uncontested proprietary right to the active ingredients of the flora from previously colonial outposts.

These essays and others in the volume make this collection a compelling resource for scholars interested in the place of science and medical science in relation to imperialism, colonialism and globalization. The contributors amply demonstrate the critical importance of historical analysis in understanding and confronting the contradictions of our present world.

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Gyan Prakash. *Another Reason: Science and the Imagination of Modern India*. Princeton: Princeton University Press, 1999. Pp. xiii + 304. Illus, notes, bibliography, index. Paper: US\$18.95 and ISBN 0-691-00453-6. Cloth: US\$57.50 and ISBN 0-6891-00452-8.

Gyan Prakash, a member of the Subaltern Studies Collective in India, examines in his latest book the dynamics and effects of the transplantation of western science in colonial South Asia in the nineteenth and twentieth centuries. This transplantation generated vigorous debate in South Asia that ran across the colonizer-colonized divide. It also led to the colonial state's use of Western science to delineate and govern the space of India, that ultimately was taken over by India's nationalist elite. The book is divided in two parts.

In the first part, Prakash looks at the manner in which Western science went "native" in colonial South Asia. Initially, Western science rode the waves of colonial power to win the awe and admiration of the colonized. Never a one-way process of sheer colonial domination, the arrival of Western science also generated vigorous debate. Colonial officials and indigenous westernized elites quickly used the discourse of science to raise a range of issues about the supremacy of Western science and civilization and the need for preservation of indigenous scientific traditions. Of particular interest is Prakash's mapping of contemporary intellectual debates on these questions by examining pamphlets, speeches, articles, books, and everyday print culture that embraced scientific associations, professionals, teachers, students, and layfolk. Early Indian nationalists arrived at a variety of positions ranging from rejection, to selective adoption, to wholesale appropriation of Western and indigenous sciences as they went about imagining the space of the Indian nation. By the end of the nineteenth century, the insertion of Western science in the imagination of the middle class elite was complete and best attested to the emergence of numerous scientific associations, societies and

organizations, such as the Bethune Society (1851), Burra Bazar Family Literary Society (1857), Behar Scientific Society (1868), Aligarh Scientific Society (1864), and the Indian Association for the Cultivation of Science (1876).

In the second part, Prakash examines the relationships between science and state power. The colonial state used western science to gain control over the health, resources and productivity of its subjects in India. Here colonial science was transformed from being a bearer of civilization to the medium for the technological reconfiguration of the space of India. Through the medium of railways, telegraphs, public works departments, geological and cartographic surveys, census reports, discourses on medicine, and statistics, "India" was brought into existence as a concept, and ultimately as a nation. Both the colonizer and India's new middle class nationalist elite compete to control this objectified India and its state with the latter finally wresting power from the former. Prakash points to the negotiated quality of these engagement, invoking the joint participation, albeit unequal, of the colonized and the colonizer. Indian middle class elites responded in various ways, often developing critiques of colonial rule that drew from a range of Western and indigenous discourses on science, religion, economics and politics. In the end, this new elite succeeded in securing the independence of India from British rule and imposed its visions for modern India. However, for Prakash, this modern India was Janus faced: although designed in the image of Europe, it was crafted in the workshop of colonial power.

Prakash's book should be interesting for those readers interested in the cultural studies of science, examining the historically specific contexts, meanings and practices within which modern science has been produced and reproduced in different parts of the world. He rightly endeavors to depict this as an ill-coordinated, complex, uneven, and even contradictory process. Prakash's examination of nineteenth- and twentieth-century print culture gives suggestive glimpses into the relationship between western science and the project of nation building in colonial South Asia. His discussions of public debates on western and indigenous science merits further investigation of the reception of Western science in the everyday lives of middle-class intellectuals in colonies.

However, this book may not speak equally to all. Methodological concerns present themselves when Prakash couples the weight of his (postcolonial?) theory with the historical evidence. Simply put, the book is too heavy in its theoretical architecture to allow a fine balance between the supple theory that is continually dissolved by the evidence on the ground. The result is an account that is

ethnographically thin and theoretically thick. Writing a densely crafted account of discrete historical encounters is not evident in this book. Actors march to the constant ominous drumbeats of colonial governmentality, technics, and transgressions; “subalterns” strain against power/knowledge grids as they attempt to rescript their lives. A battery of concepts is deployed to convey these arguments. Colonial science’s negotiations of the social terrain of the colonized are described in terms of (interlinear) “translation,” “dissemination,” “enunciation,” “paradoxical legitimization,” and “hybridization.” Although Prakash’s choice of such terms is amply justified within the limits of postcolonial discourse, it often conveys the erroneous impression that these concepts are superior insofar as they are able to capture meanings and nuances other concepts developed in other disciplines cannot convey.

For instance, “translation” is viewed as a better term than “adaptation,” because the latter “does not capture the contention and contingency of ‘translation’; it fails to recognize the renegotiation of knowledge and power forced upon Western science because its hegemony could not be established through imposition” (p. 83). It needs to be pointed out that similar insights into the production of social life have for long been accepted wisdom in disciplines such as anthropology, historical sociology, cultural geography, and cultural studies. Consequently, the broad brush strokes of Prakash’s postcolonial theory and its lack of regional focus quickly hide from view other critical variables such as class, caste, kinship, and political economy and their negotiations with colonial science in South Asia. For example, Prakash’s discussion of Gandhi and Nehru’s distinct visions of India’s modernity in chapter 7 gives excessive weight to their rhetoric without examining how such visions were invariably blunted by regional and local agents. Finally, Prakash’s use of the terms “modernity,” “colonialism,” and Indian “nationalists” are in need of further unpacking to expose the complexities that often underlay them. Nevertheless, given these methodological restraints, this book is still worth a read if one wants to consider a theoretically vigorous study of the engagements of Western science, colonialism, and nation-building in colonial South Asia.

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