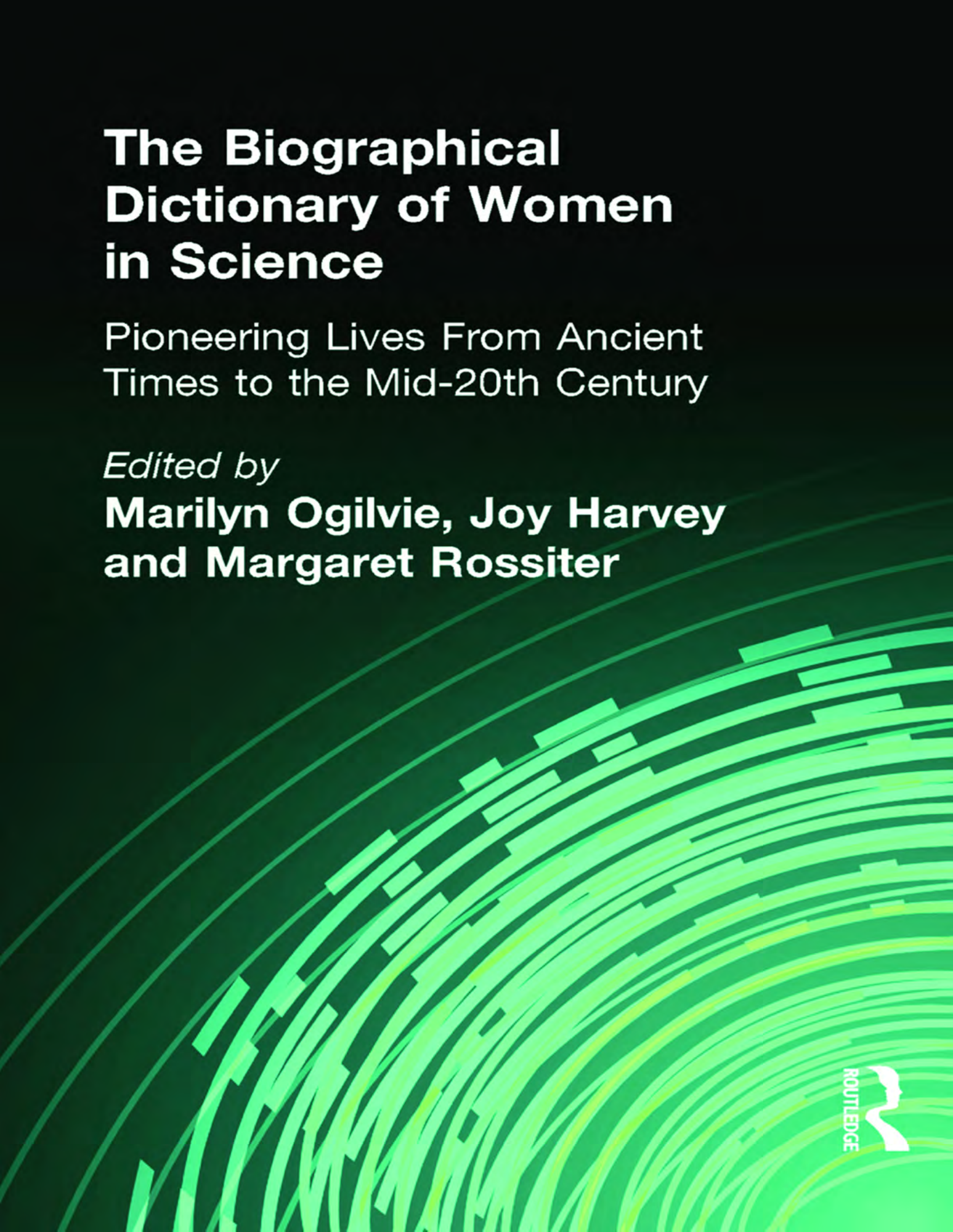
The Biographical Dictionary of Women in Science

Pioneering Lives From Ancient Times to the Mid-20th Century

Edited by

Marilyn Ogilvie, Joy Harvey and Margaret Rossiter



The BIOGRAPHICAL DICTIONARY *of* WOMEN *in* SCIENCE

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Pioneering Lives
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MARILYN OGILVIE
AND JOY HARVEY,
EDITORS

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We dedicate these volumes to the memory of Kerry Meek Whitney, who was an enthusiastic supporter and contributor to this work.

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STANDARD SOURCES

ADELMAN Adelman, Joseph. *Famous Women.* New York: Lonow, 1926.

AINLEY Ainley, Marianne Gosztonyi, ed. *Despite the Odds: Essays on Canadian Women and Science.* Montreal: Vehicule Press, 1990.

ALIC Alic, Margaret. *Hypatia's Heritage: A History of Women in Science from Antiquity through the Nineteenth Century.* Boston: Beacon Press, 1986.

AMERICAN WOMEN American Women. Ed. Durward Howes. Los Angeles: Richard Blank, 1935–1940.

AMERICAN WOMEN 1974 American Women: The Standard Biographical Dictionary of Notable Women. Ed. Durward Howes. Teaneck, N.J.: Zephyrus Press, 1974.

AMS American Men of Science: A Biographical Dictionary. New York: Bowker 1–11th, 1906–1968. Eds. 1–8 published by the Science Press, 9th ed. published by Bowker and Science Press, 10th and 11th ed. published by Jacques Cattell Press. 9th ed. issued in 3 vols.: vol. 1, *Physical Sciences;* vol. 2, *Biological Sciences;* and vol. 3, *Social Sciences.* 10th ed. issued in 5 vols.: vols. 1–4, *Physical and Biological Sciences,* A–Z; vol. 5, *Social and Behavioral Sciences.* 11th ed. issued in 8 vols.: vols. 1–6, *Physical and Biological Sciences;* vols. 7–8, *Social and Behavioral Sciences,* A–Z. Supplements issued between some editions. Continues as *American Men and Women of Science.* Titles of the 12th–19th eds. vary. The abbreviations for all citations, whether *American Men of Science* or *American Men and Women of Science,* will be *AMS.*

ANB American National Biography. New York: Oxford University Press, 1999.

ANNUAL OBITUARY The Annual Obituary (1980–1993). [editor varies with each volume.] 14 vols. New York: St. Martin's Press, 1981–1994.

AOU *BIOGRAPHIES* Palmer, T.S. *Biographies of Members of the American Ornithologists' Union.* Washington, D.C.: American Ornithologists' Union, 1954.

APA DIRECTORY American Psychological Association Directory. Washington, D.C.: American Psychological Association, annual.

APA MEMBERSHIP REGISTER American Psychological Association Membership Register. Washington, D.C.: American Psychological Association, annual.

APPIGNANESI Appignanesi, Lisa, and Forrester, John. *Freud's Women.* New York: Basic Books, 1992.

APPLETON'S CYCLOPAEDIA Appletons' Cyclopaedia of American Biography. Ed. James Grant Wilson and John Fiske. New York: D. Appleton and Co., 1888.

ARNOLD Arnold, Lois Barber. *Four Lives in Science: Women's Education in the Nineteenth Century.* New York: Schocken Books, 1984.

BAILEY Bailey, Martha J. *American Women in Science: A Biographical Dictionary.* Denver, Colo: ABC-CLIO, 1994.

BALLARD Ballard, George. *Memoirs of Several Ladies of Great Britain Who Have Been Celebrated for their Writings or Skill in the Learned Languages, Arts and Sciences.* London: Edwards, 1775.

BARNHART Barnhart, John Hendley. *Biographical Notes upon Botanists in the New York Botanical Garden Library.* Boston: G. K. Hall, 1965.

BARR Barr, Ernest Scott. *Index to Biographical Fragments in Unspecialized Scientific Journals.* University of Alabama Press, 1973.

BAUDOUIN Baudouin, Marce. *Femmes médecins d'autrefois.* Paris: Librairie Médicale et Scientifique Jules Rousset, 1906.

BDAS Elliott, Clark. *Biographical Dictionary of American Science: The Seventeenth Through the Nineteenth Centuries.* Westport, Conn: Greenwood Press, 1979.

BIBLIOGRAPHIE ASTRONOMIQUE Lalande, Jérôme de. *Bibliographie astronomique avec l'histoire de l'astronomie depuis 1781 jusqu'à 1802.* Paris: Imprimerie de la République, 1803.

Biografisch Woordenboek *Biografisch Woordenboek van Nederland.* Ed. by J. Charite. 4 vols. 's-Gravenhage: Nijhoff, 1979–1994.

Biographical Memoirs Royal Society of London. *Biographical Memoirs of Fellows of the Royal Society.* London: Royal Society 1–44, 1955–1998.

Biographie universelle *Biographie universelle, ancienne et moderne.* 85 vols. Paris: L. G. Michaud, 1811–1826.

Boase Boase, Frederic. *Modern English Biography.* 6 vols. London: Truro, Netherton and Worth, for the author, 1892–1921.

Bonner Bonner, Thomas Neville. "Rendezvous in Zürich: Seven Who Made a Revolution in Women's Medical Education, 1864–1874." *Journal of the History of Medicine* 44, no. 1: 7–27.

Bonner 1992 ———. *To the Ends of the Earth: Women's Search for Education in Medicine.* Cambridge, Mass: Harvard University Press, 1992.

Bonta Bonta, Marcia Myers. *Women in the Field: America's Pioneering Women Naturalists.* College Station: Texas A&M University Press, 1991.

Brink Brink, J. R., ed. *Female Scholars: A Tradition of Learned Women before 1800.* Montreal: Eden Press, 1980.

Brooke Bailey Bailey, Brooke. *The Remarkable Lives of 100 Women Healers and Scientists.* Holbrook, Mass: Bob Adams, 1994.

Carr and Carr Carr, D. J. and S. G. M. Carr. *People and Plants in Australia.* Sydney: Academic Press, 1981.

Catalogue Royal Society Royal Society of London. *Catalogue of Scientific Papers (1800– 1900).* London: Royal Society, 1867–1925.

Columbia Encyclopedia *New Columbia Encyclopedia.* NewYork: Viking Press, 1953.

Concise Universal Biography *Concise Universal Biography.* Ed. John Alexander Hammerton. London: Educational Book Company, 1934–1935.

Creative Couples Pycior, Helena M., Nancy G. Slack, and Pnina G. Abir-Am, eds. *Creative Couples in the Sciences.* New Brunswick, N.J.: Rutgers University Press, 1996.

Creese 1991 Creese, Mary R. S. "British Women and Research in the Chemical Sciences." *The British Journal for the History of Science.* 24 (September 1991): 275–305.

Creese Creese, Mary R. S. *Ladies in the Laboratory? American and British Women in Science, 1800–1900.* Lanham, Md.: Scarecrow Press, 1998.

Creese and Creese Creese, Mary R. S., and Creese, Thomas M. "British Women Who Contributed to Research in the Geological Sciences in the Nineteenth Century." *The British Journal for the History of Science* 27 (March 1994): 23–54.

Current Biography *Current Biography.* New York: H. W. Wilson, *1940–*.

Cyclopedia *A Cyclopedia of Female Biography.* Ed. H. G. Adams. Glasgow: Robert Forrester, Stockwell, 1866.

DAB *Dictionary of American Biography.* Ed. by Allen Johnson and Dumas Malone. 11 vols. New York: Scribner, 1964.

Dansk Biografisk *Dansk Biografisk Leksikon.* 16 vols. Engelstoft: Porl, 1876–.

Das Deutsche WW *Wer ist Wer?: Das Deutsche Who's Who.* Berlin: 1954–.

DBE *Deutsche Biographische Enzyclopadie.* Munich: K. G. Sour.

DBF *Dictionnaire de Biographie Française.* Paris: Letouzey, 1933–.

Debus *World Who's Who in Science: A Biographical Dictionary of Notable Scientists from Antiquity to the Present.* Ed. Allen G. Debus. Chicago: Marquis, 1968.

Desmond Desmond, Ray. *Dictionary of British and Irish Botanists and Horticulturists.* London: Taylor and Francis, and the Natural History Museum (London), 1994.

DFC *Dictionnaire des femmes celebres, de tous les temps et de tous les pays.* Ed. Lucienne Mazenod and Ghislain Schoeller. Paris: R. Laffont, 1992.

DIB *Dictionary of International Biography.* Cambridge: International Biographical Centre, 1963–.

Dictionary of Scientific Biography *Dictionary of Scientific Biography.* Ed. Charles Coulston Gillispie. 16 vols. New York: Charles Scribner's Sons, 1970–1980. Supplement II, ed. Frederic L. Holmes. 2 vols. 1990.

Dizionario Italiani *Dizionario biografico degli Italiani.* Ed. by Alberto Mario Ghisalberti. Rome: Instituto della Enciclopedia Italiani, 1964–.

DNB *The Dictionary of National Biography:* London: Oxford University Press, 1882–.

DNB, Missing Persons *The Dictionary of National Biography: Missing Persons.* Oxford: Oxford University Press, 1994.

Dolan Dolan, Josephine A. *Goodnow's History of Nursing.* 10th ed. Philadelphia: W. B. Saunders, 1958.

Dorland Dorland, William Alexander Newman. *The Sum of Feminine Achievement: A Critical and Analytical Study of Woman's Contribution to the Intellectual Progress of the World.* Boston: Stratford, 1917.

Dubreil-Jacotin Dubreil-Jacotin, Marie Louise. "Women Mathematicians." In *Mathematics: Concepts and Development,* 168–180. Vol. 1 of *Great Currents of Mathematical Thought.* Ed. F. LeLionnais. New York: Dover, 1971.

Echols and Williams Echols, Anne and Marty Williams. *Annotated Index of Medieval Women.* New York: Markus Wiener Publishing, 1992.

Eckenstein Eckenstein, Lina. *Woman Under Monasticism.* New York: Russell and Russell, 1963.

ENCYCLOPEDIA BRITTANICA *Encyclopedia Britannica: A Dictionary of Arts, Sciences, Literature and General Information.* 11th ed. 29 vols. Cambridge: Cambridge University Press, 1910.

ENCYCLOPEDIA OF PSYCHOLOGY *Encyclopedia of Psychology.* Ed. Raymond J. Corsini. 4 vols. New York: John Wiley and Sons, 1994.

EUROPA *The Europa Biographical Dictionary of British Women.* Ed. Anne Crawford, et al. London: Europa, and Detroit, Mich.: Gale Research, 1983.

FRS OBITUARY NOTICES Royal Society of London. *Obituary Notices of the Fellows of the Royal Society.* London: Royal Society, 1–9, 1932–1954.

GACS Gacs, Ute, et al., eds. *Women Anthropologists: A Biographical Dictionary.* New York: Greenwood Press, 1988.

GIRTON *Girton College Register* 1869–1946. Cambridge: privately printed for Girton College, 1948.

GREAT SOVIET ENCYCLOPEDIA *Great Soviet Encyclopedia* (Bol'shaia sovetskaia entsiklopediia). Ed. by A. M. Prokhorov, New York: Macmillan, 1973–1983. 31 vols.

GRINSTEIN 1993 Grinstein, Louise S., Rose K. Rose, and Miriam H. Rafailovich, eds. *Women in Chemistry and Physics: A Biobibliographic Sourcebook.* Westport, Conn: Greenwood Press, 1993.

GRINSTEIN 1997 Grinstein, Louise S., Carol A. Biermann, and Rose K. Rose, eds. *Women in the Biological Sciences: A Biobibliographic Sourcebook.* Westport, Conn: Greenwood Press, 1997.

GRINSTEIN AND CAMPBELL Grinstein, Louise S. and Paul J. Campbell, eds. *Women of Mathematics: A Biobibliographic Sourcebook.* New York: Greenwood Press, 1987.

GUNN AND CODD Gunn, Mary, and L. E. W. Codd. *Botanical Exploration of Southern Africa: An Illustrated History of Early Botanical Literature on the Cape Flora: Biographical Accounts of the Leading Plant Collectors and Their Activities in Southern Africa from the Days of the East India Company until Modern Times.* Cape Town: Botanical Research Institute by A.A. Balkema, 1981.

HABER Haber, Louis. *Women Pioneers of Science.* New York: Harcourt Brace Jovanovich, 1979.

HACKER Hacker, Carlotta. *The Indomitable Lady Doctors.* Toronto: Clarke, Irwin & Co., 1974.

HARLESS Harless, Johann Christian Friedrich. *Die Verdienste der Frauen um Naturwissenschaft und Heilkunde.* Göttingen: Vandenhoeck-Ruprechtschen Verlage, 1830.

HELLSTEDT, *AUTOBIOGRAPHIES* Hellstedt, Leone. *Women Physicians of the World: Autobiographies of Medical Pioneers.* Washington, D.C.: Hemisphere Publ., 1978.

HERZENBERG Herzenberg, Caroline. *Women Scientists from Antiquity to the Present: an Index.* West Cornwall, Conn: Locust Hill Press, 1986.

HØYRUP Høyrup, Else. *Women of Science, Technology, and Medicine: A Bibliography.* Roskilde, Denmark: Roskilde University Library, 1987.

HUGHES Hughes, Muriel Joy. *Women Healers in Medieval Life and Literature.* Oxford: Oxford University Press, 1943.

HUNT INSTITUTE Hunt Institute for Botanical Documentation. *Biographical Dictionary of Botanists Represented in the Hunt Institute Portrait Collection.* Boston: G.K. Hall, 1972.

HURD-MEAD 1933 Hurd-Mead, Kate Campbell. *Medical Women of America.* New York: Froben, 1933.

HURD-MEAD 1938 Hurd-Mead, Kate Campbell. *A History of Women in Medicine: From the Earliest Times to the Beginning of the Nineteenth Century.* Haddam, Conn.: The Haddam Press, 1938.

IDA *International Dictionary of Anthropologists.* New York: Garland, 1991.

INTERNATIONAL WW *The International Who's Who of Women.* London: Europa Publications, 1992.

IRELAND Ireland, Norma Olin. *Index to Women of the World from Ancient to Modern Times: Biographies and Portraits.* Boston: Faxon, 1962.

JEWS IN MEDICINE Schreiber, Emanuel. *Jews in Medicine.* Chicago: n.p., 1902.

JONES AND BOYD Jones, Bessie Zaban, and Lyle Gifford Boyd. *The Harvard College Observatory: The First Four Directorships, 1839–1919.* Cambridge, Mass.: Harvard University Press, 1971.

KASS-SIMON AND FARNES Kass-Simon, G., and Patricia Farnes, eds. *Women of Science: Righting the Record.* Bloomington, IN: Indiana University Press, 1990.

KERSEY Kersey, Ethel M. *Women Philosophers: A Bio-Critical Source Book.* New York: Greenwood Press, 1989.

LA GRAN ENCICLOPEDIA DE PUERTO RICO *La Gran Enciclopedia de Puerto Rico.* Madrid: n.p., 1976.

LAROUSSE BIOGRAPHICAL DICTIONARY *Larousse Biographical Dictionary.* New York: Larousse, 1994.

LEXICON DER FRAU *Lexikon der Frau.* 2 vols. Zürich: Encyclios Verlag AG, 1953.

LIPINSKA 1900 Lipinska, Melanie. *Histoire des femmes médecins depuis l'antiquité jusqu'à nos jours.* Paris: Librairie G. Jacques, 1900.

LIPINSKA 1930 Lipinska, Melanie. *Les femmes et le progrès des sciences médicales.* Paris: Masson, 1930.

LKW Golemba, Beverly E. *Lesser Known Women: A Biographical Dictionary.* Boulder, Colo.: Lynne Rienner, 1992.

LOVEJOY Lovejoy, Esther Pohl. *Women Doctors of the World.* New York: Macmillan, 1957.

MALLIS Mallis, Arnold. *American Entomologists.* New Brunswick, N.J.: Rutgers University Press, 1971.

McGrayne McGrayne, Sharon Bertsch. *Nobel Prize Women in Science: Their Lives, Struggles, and Momentous Discoveries.* New York: Birch Lane Press, 1993.

Medical Women Jex-Blake, Sophia. *Medical Women: A Thesis and a History.* 2d ed. Edinburgh: Oliphant, Anderson and Ferrier, 1886.

Ménage Ménage, Gilles. *The History of Women Philosophers.* Trans. Beatrice H. Zedler. Lanham, Md.: University Press of America, 1984.

Meyer Meyer, Gerald Dennis. *The Scientific Lady in England, 1650–1760: An Account of Her Rise, with Emphasis on the Major Roles of the Telescope and Microscope.* Berkeley: University of California Press, 1955.

Meyer and von Schweidler Meyer, Stefan, and Egon von Schweidler. *Radioaktivität.* Leipzig: B. G. Teubner, 1927.

Modern Scientists and Engineers *McGraw-Hill Modern Scientists and Engineers.* New York: McGraw-Hill, 1980.

Mollan and Finucane Mollan, William Davis, and Brandan Finucane, eds. *Some People and Places in Irish Science and Technology.* Dublin: Royal Irish Academy, 1985.

Morantz-Sanchez Morantz-Sanchez, Regina Markell. *Sympathy and Science: Women Physicians in American Medicine.* New York: Oxford University Press, 1985.

Mothers and Daughters Stanley, Autumn. *Mothers and Daughters of Invention: Notes for a Revised History of Technology.* Metuchen, N.J.: Scarecrow Press, 1993.

Mozans Mozans, H. J. *Woman in Science.* Notre Dame: University of Notre Dame Press, 1991.

Munk's Roll *Lives of the Fellows of the Royal Society of Physicians: Continued to 1983* (Munk's Roll). Oxford: IRL Press, 1984.

Nalivkin Nalivkin, D. V. *Nashi Pervye Zhenshchinye-geologi* (Our First Women Geologists). Leningrad: Nauka, 1979.

NBG *Nouvelle biographie générale: Depuis les temps les plus reculés jusqu'à nos jours.* 46 vols. Paris: Firmin Didot Frères, 1856.

NAW James, Edward T., ed. *Notable American Women, 1607–1950: a Biographical Dictionary.* 3 vols. Cambridge, Mass.: Belknap Press of Harvard University Press, 1973.

NAW(M) Sicherman, Barbara, and Carol Hurd Green, eds., *Notable American Women: The Modern Period: A Biographical Dictionary.* Cambridge, Mass.: Belknap Press of Harvard University Press, 1980.

NAW(unused) *Notable American Women: The Modern Period Records, 1975–1980.* Schlesinger Library, Radcliffe Institute. MC 307, IV, series III.

NBAW Smith, Jessie Carney, ed. *Notable Black American Women.* 2 vols. Detroit: Gale, Research, 1992–1996.

NCAB *National Cyclopedia of American Biography.* Clifton, N.J.: J. T. White, 1891–.

NDB *Neue Deutsche Biographie.* Berlin: Duncker and Humblot, 1953–.

Newnham *Newnham College Register.* 3 vols. Cambridge: Newnham College, 1871–1971.

Newnham Roll *Newnham College Roll Letter.* Cambridge: printed for private circulation, 1957.

Notable Mathematicians *Notable Mathematicians from Ancient Times to the Present.* Ed. Robyn V. Young. Detroit: Gale, 1998.

Notable/Notable suppl. *Notable Twentieth-Century Scientists.* Ed. Emily McMurray. 4 vols. New York: Gale Research, 1995. Supplement, ed. K. M. Krapp, 1998.

O'Connell and Russo 1988 O'Connell, Agnes N., and Nancy Felipe Russo. *Models of Achievement.* New York: Columbia University Press, 1983–1988.

O'Connell and Russo 1990 O'Connell, Agnes N., and Nancy Felipe Russo. *Women in Psychology: A Bio-Bibliographic Sourcebook.* New York: Greenwood Press, 1990.

O'Connor O'Connor, W. J. *British Physiologists 1885–1914: A Biographical Dictionary.* Manchester: Manchester University Press, 1991.

Ogilvie 1986 Ogilvie, Marilyn Bailey. *Women in Science: Antiquity through the Nineteenth Century: A Biographical Dictionary with Annotated Bibliography.* Cambridge, Mass.: MIT Press, 1986.

Ogilvie 1996 ———. With Kerry Meek. *Women and Science: An Annotated Bibliography.* New York: Garland, 1996.

O'Hern O'Hern, Elizabeth Moot. *Profiles of Pioneer Woman Scientists.* New York: Acropolis Books: 1985.

O'Neill O'Neill, Lois Decker, ed. *The Women's Book of World Records and Achievements.* Garden City, N.Y.: 1979.

Opfell Opfell, Olga S. *The Lady Laureates: Women Who Have Won the Nobel Prize.* 2d ed. Metuchen, N.J.: Scarecrow Press, 1986.

Osborn Osborn, Herbert. *A Brief History of Entomology.* Columbus, Ohio: Spahr and Glenn Company, 1952.

Pauly-Wissowa Pauly, August Friedrich von. *Paulys Real-Encyclopädie der classichen Altertumswissenschaft.* Ed. G. Wissowa. Stuttgart: J. B. Metzler, 1891–.

Phillips Phillips, Patricia. *The Scientific Lady: A Social History of Women's Scientific Interests, 1520–1918.* New York: St. Martin's, 1990.

Poggendorff Poggendorff, J.C. *Biographisch-literarisches Handworterbuch der Exakten Naturwissenschaften.* 7 vols. Berlin: Akademie-Verlag, 1863–1992.

Praeger Praeger, R. Lloyd. *Some Irish Naturalists: A Biographical Notebook.* Dundalk, W. Tempest: Dundalgen Press, 1949.

Psychological Register *Psychological Register.* Ed. Carl Murchison. Worcester, Mass.: Clark University Press, 1929–.

Rayner-Canham 1997 Rayner-Canham, Marelene F., and Geoffrey W. Rayner-Canham. *A Devotion to Their Science: Pioneer Women of Radioactivity.* Philadelphia, Penn.: Chemical Heritage Foundation, 1997.

RAYNER-CANHAM 1998 Rayner-Canham, Marelene F., and Geoffrey W. Rayner-Canham. *Women in Chemistry.* American Chemical Society and Chemical Heritage Foundation, 1998.

REP *Routledge Encyclopedia of Philosophy.* Ed. Edward Craig. 10 vols. London: Routledge, 1998.

REBIÈRE Rebière, A. *Les femmes dans la Science.* Paris: Nony, 1897.

ROSSITER 1982 Rossiter, Margaret. *Women Scientists in America: Struggles and Strategies to 1948.* Baltimore: Johns Hopkins University Press, 1982.

ROSSITER 1995 Rossiter, Margaret. *Women Scientists in America: Before Affirmative Action, 1940–1972.* Baltimore: Johns Hopkins University Press, 1995.

SARJEANT Sarjeant, William Antony S. *Geologists and the History of Geology: An International Bibliography from the Origins to 1978.* New York: Arno Press, 1980; 1987; 1996.

SCHIEBINGER Schiebinger, Londa. *The Mind Has No Sex? Women in the Origins of Modern Science.* Cambridge, Mass.: Harvard University Press, 1989.

SHEARER AND SHEARER 1996 Shearer, Benjamin F. and Barbara S. Shearer, eds. *Notable Women in the Life Sciences: A Biographical Dictionary.* Westport, Conn.: Greenwood Press, 1996.

SHEARER AND SHEARER 1997 Shearer, Benjamin F., and Barbara S. Shearer, eds. *Notable Women in the Physical Sciences. A Biographical Dictionary.* Westport, Conn.: Greenwood Press, 1997.

SHTEIR Shteir, Ann B. *Cultivating Women Cultivating Science: Flora's Daughters and Botany in England 1760–1860.* Baltimore: Johns Hopkins Press, 1996.

SIEGEL AND FINLEY Siegel Patricia Joan and Kay Thomas Finley. *Women in the Scientific Search: An American Biobibliography, 1724–1979.* Metuchen, N.J.: Scarecrow Press, 1985.

SOUTH AFRICAN DNB Rosenthal, R. *Southern African Dictionary of National Biography.* N.p., 1966.

SOVIET UNION *The Soviet Union: A Biographical Dictionary.* New York: Macmillan, 1990.

SPENDER Spender, Dale, and Janet Todd, eds. *British Women Writers: An Anthology from the Fourteenth Century to the Present.* New York: P. Bedrick Books, 1989.

STAFLEU AND COWAN Stafleu, Frans A, and R.S. Cowan, eds. *Taxonomic Literature: A Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types.* Utrecht: Bohn, Scheltema & Holkema, 1976–1988. Supplement, Ed. F. A. Stafleu and E. A. Mennega. Königstein, Germany: Koeltz Scientific Books, 1992.

STEVENS AND GARDNER Stevens, Gwendolyn, and Sheldon Gardner. *Women of Psychology.* Cambridge, Mass.: Schenkman, 1982.

STROHMEIER Strohmeier, Renate. *Lexikon der Naturwissenschaftlerinnen und naturkundigen Frauen Europas von der Antike bis zum 20. Jahrhundert.* Thun and Frankfurt am Main: Harri Deutsch, 1998.

STUCKEY Stuckey, Ronald. *Women Botanists of Ohio Born Before 1900.* Columbus, Ohio: Ohio State University, 1992.

TURKEVICH AND TURKEVICH Turkevich, John, and Turkevich, Ludmilla, comp. *Prominent Scientists of Continental Europe.* New York: American Elsevier Publishing Co., 1968.

TUVE Tuve, Jeanette E. *The First Russian Women Physicians.* Newtonville, Mass.: Oriental Research Partners, 1984.

UGLOW 1982 Uglow, Jennifer S., ed. *International Dictionary of Women's Biography.* New York: Continuum, 1982; 1989.

UGLOW 1989 Uglow, Jennifer S., ed. *Macmillan Dictionary of Women's Biography.* 2d. ed. New York: Macmillan, 1989.

UNEASY CAREERS Abir-Am, Pnina, and Dorinda Outram, eds. *Uneasy Careers and Intimate Lives: Women in Science, 1787–1979.* New Brunswick: Rutgers University Press, 1987.

VARE AND PTACEK Vare, Ethlie Ann, and Ptacek, Greg. *Mothers of Invention.* New York: Morrow, 1988.

VOGT Vogt, Annette, "The Kaiser-Wilhelm-Gesellschaft and the Career Chances for Female Scientists Between 1911 and 1945." Paper for International Congress for the History of Science, Liége, Belgium, 1997.

WAITHE Waithe, Mary Ellen. *Ancient Women Philosophers, 600 B.C.–500 A.D.* Dordrecht: Kluwer, 1987.

WALSH Walsh, James Joseph. *Medieval Medicine.* London: A. and C. Black, 1920.

WHO'S WHO OF AMERICAN WOMEN *Who's Who of American Women.* Chicago: Marquis Who's Who.

WOMAN'S WHO'S WHO OF AMERICA *Woman's Who's Who of America: A Biographical Dictionary of Contemporary Women of the United States and Canada.* Ed. John William Leonard. New York: American Commonwealth, 1914.

WOMEN PHYSIOLOGISTS Bindman, Lynn, Alison Brading, and Tilli Tansey eds. *Women Physiologists: An Anniversary Celebration of their Contributions to British Physiology.* London: Portland Press, 1992.

WOMEN IN WHITE Marks, Geoffrey, and Beatty, William K. *Women in White.* New York: Scribner, [1972].

WORLD WW OF WOMEN *World Who's Who of Women.* Cambridge: Melrose Press, 1973–.

WW *Who's Who.* London: A. and C. Black, 1849–.

WW IN AMERICA *Who's Who in America.* Chicago: Marquis Who's Who, 1899–.

WW IN AMERICAN EDUCATION *Who's Who in American Education.* Nashville, Tenn.: Who's Who in American Education, 1928–.

WW IN EDUCATION *Who's Who in Education.* Ed. G. E. Bowman and Nellie C. Ryan. Greeley, Colo.: 1927–.

WW IN FRANCE Who's Who in France. Paris: J. LaFitte, 1953–.

WW IN ITALY Who's Who in Italy. London: Eurospan, 1994.

WW IN THE MIDWEST Who's Who in the Midwest. Chicago: Marquis Who's Who, 1949–.

WW IN NEW YORK Who's Who in New York City and State. New York: L.R. Hamersly Co., 1904–.

WW IN SCIENCE IN EUROPE Who's Who in Science in Europe. Vol. 3. London: Francis Hogson, 1967.

WW IN SOVIET SCIENCE Who's Who in Soviet Science. Ed. Ina Telberg. New York: Telberg Book Co., 1960.

WW IN SWITZERLAND Who's Who in Switzerland. Zurich: Central European Times Publishing Co., 1952–.

WWW Who Was Who. Vols. 1–9. London: A. and C. Black, 1920–1996.

WWW(A) *Who Was Who in America.* Chicago, Marquis Who's Who.

WWW(UUSR) *Who Was Who in the USSR: A Biographic Directory Containing Biographies of Prominent Soviet Historical Personalities.* Ed. Heinrich E. Schulz, Paul K. Urban, and Andrew I. Lebed. Metuchen, N.J., Scarecrow Press.

YOST Yost, Edna. *Women of Modern Science.* New York: Dodd, Mead & Co., 1959.

ZUSNE Zusne, L. *Names in the History of Psychology.* Washington, D.C.: Hemisphere, 1975.

ADDITIONAL REFERENCES

Allgemeine deutsche biographie. Ed. Rocus von Liliencron. 56 vols. Leipzig: Verlag von Duncker and Humblot, 1875–1912.

Allibone, S.A. *A Critical Dictionary of English Literature.* Philadelphia: Lippincott, 1872.

Burke's Peerage and Baronetage. 105th ed.; London: Burke's Peerage, 1980.

Crone, John S. *Concise Dictionary of Irish Biography.* Dublin: Talbot Press, 1928,

Cyclopedia of American Medical Biography. Philadelphia: W. B. Saunders, 1912.

Hall, Diana Long. "Academics, Blue Stockings and Biologists: Women at the University of Chicago, 1892–1932." *Annals of the New York Academy of Sciences* 323 (1979).

La Grande Encyclopédie, inventaire raisonné des sciences, des lettres et des arts, par une société de savants et de gens de lettres. Ed. A. Berthelot. 31 vols. Paris: Lamirault et cie; vols. 23–31 published by the Societe anonyme de la grande encyclopédie, [1886–1902].

Leaders in American Science. Ed. Robert C. Cook. Who's Who in American Education, Inc., [1953–].

Larousse Biographical Dictionary of Scientists. Ed. Hazel Muir. New York: Larousse, 1994.

Lovejoy, Esther. *Women Physicians and Surgeons.* Livingston, N.Y.: Livingston Press, 1939.

Magill, Frank N., ed. *Physics,* 831–839. Vol. 2 of *The Nobel Prize Winners.* Pasadena, Calif. and Englewood Cliffs, N.J.: Salem Press, 1989.

National Academy of Sciences. *Biographical Memoirs (National Academy of Sciences).* New York: Columbia University Press, 1960.

National Union Catalog, Pre-1956 Imprints: A Cumulative Author List Representing Library of Congress Printed Cards and Titles Reported By Other American Libraries. Comp. and ed. with the cooperation of the Library of Congress and the National Union Catalog Subcommittee of the Resources and Technical Services Divisions, American Library Association. London: Mansell, 1968–1980.

Osborn, Herbert. *Fragments of Entomological History.: Including Some Personal Recollections of Men and Events.* Columbus, Ohio: privately printed, 1937.

Royal Society of London. 1902–1921. *International Catalogue of Scientific Literature, 1901–1914.* 14 vols. London: Royal Society, n.d. Reprint, 32 vols, New York: Johnson, 1968–1969.

Rudolph, E. D. "Women Who Studied Plants in the Pre-Twentieth Century United States and Canada." *Taxon,* 39, no. 2, 1990: 151–205.

Sammons, Vivian O. *Blacks in Science and Medicine.* New York: Hemisphere, 1990.

Sheehy, Noel, J. Chapman, and Wendy A. Conroy, eds. *Biographical Dictionary of Psychology.* London: Routledge, 1997.

Turkevich, John. *Soviet Men of Science: Academicians and Corresponding Members of the Academy of Sciences of the USSR.* Westport, Conn.: Greenwood, 1963.

Yost, Edna. *American Women of Science.* Philadelphia: Frederick A. Stokes Co., 1943.

ALPHABETICAL LIST OF ENTRIES

Abbott, Maude Elizabeth Seymour
Abel, Mary Hinman
Abel, Theodora Mead
Abella
Aberle, Sophie Bledsoe
Abouchdid, Edna
Abramson, Jadwiga
Abrotelia
Achilles, Edith Mulhall
Acosta-Sison, Honoria
Acton, Frances (Knight)
Adametz, Lotte
Adams, Amy Elizabeth Kemper
Adams, Mildred
Adamson, Joy (Gessner)
Addams, Jane
Adelberger of Lombardy
Adelle of the Saracens
Adelmota of Carrara
Adkins, Dorothy Christina
Aelfleda
Aemilia
Aesara of Lucania
Agamede
Agassiz, Elizabeth Cary
Aglaonike
Agnes of Bohemia
Agnes of Jerusalem
Agnes of Silesia
Agnes, Countess of Aix
Agnesi, Maria Gaetana
Agnodike
Aitken, Janet Kerr
Akeley, Mary Lee (Jobe)
Albertson, Mary
Albrecht, Eleonore
Albrecht, Grete
Alcock, Nora Lilian Leopard
Aldrich-Blake, Louisa Brandreth
Alexander, Annie Montague
Alexander, Frances Elizabeth Somerville (Caldwell)
Alexander, Hattie Elizabeth
Ali, Safieh
Alimen, Henriette
Allan, Mary Eleanor (Mea)
Allen, Doris Twitchell
Allen, Eliza (Stevens)
Allen, Ruth Florence
Alper, Thelma Gorfinkle
Altmann, Margaret
Aluwihare, Florence Kaushalya (Ram)
Amalitskiya, Anna P.
Amalosunta
Ameline
Ames, Blanche (Ames)
Ames, Louise Bates
Ames, Mary E. Pulsifer
Amherst, Sarah (Archer), Countess.
Andersen, Dorothy Hansine
Anderson, Caroline Virginia (Still) Wiley
Anderson, Elda Emma
Anderson, Elizabeth Garrett
Anderson, Evelyn M.
Anderson, Louisa Garrett
Anderson, Rose Gustava
Anderson, Violet Louise
Anderton-Smith, Mrs. W.
Andreas-Salomé, Louise Lelia
Andrews, Eliza Frances
Andrews, Grace
Andromache
Andrus, Ruth
Angst-Horridge, Anita
Anicia or Amyte
Ann Medica of York
Anna of Bohemia
Anna Sophia of Denmark
Anna Sophia of Hesse
Anne, Electress of Denmark
Anning, Mary
Anslow, Gladys Amelia
Antipoff, Helene
Antoine, Lore
Antoinette de Bellegarde
Antonia, Maestra
Apgar, Virginia
Applin, Esther (Richards)
Apsley (Hutchinson), Lady Lucy
Arber, Agnes (Robertson)
Arbuthnot, Isobel Agnes
Arconville, Geneviève Charlotte d'
Arden, Lady Margaret Elizabeth (Spencer Wilson)
Ardinghelli, Maria Angela
Arete of Cyrene
Arignote of Samos
Arkhangel'skaia, Aleksandra Gavriilovna
Arlitt, Ada Hart
Armitage, Eleanora
Armitage, Ella Sophia A. (Bulley)
Armitt, Annie Maria
Armitt, Mary Louisa
Armitt, Sophia
Arnold, Magda Blondiau
Arnstein, Margaret Gene
Arsenjewa, A.
Artemisia of Caria II
Arthur, Mary Grace
Artner, Mathilde
Asclepigenia
Ashby, Winifred Mayer
Aspasia of Miletus
Aspasia the Physician
Astell, Mary
Atkins, Anna
Atkins, Louisa Catherine Fanny
Atkinson, Louisa (later Calvert)
Attersoll, Maria
Atwater, Helen Woodard
Atwood, Martha Maria
Atwood, Martha Maria
Auerbach, Charlotte
Auken, Kirsten
Austin, Mary Lellah
Austin, Rebecca
Axiothea of Phlius
Ayrton, Hertha Marks
Ayrton, Matilda (Chaplin)
Babcock, Harriet
Baber, Zonia
Bachman, Maria Martin
Bacon, Clara (Latimer)
Baetjer, Anna Medora
Bagley, Florence (Winger)
Bagshaw, Elizabeth Catherine
Bahr- Bergius, Eva Vilhelmina Julia von
Bailey, Ethel Zoe
Bailey, Florence Augusta (Merriam)
Baker, Anne Elizabeth
Baker, Sara Josephine

Baker, Sarah Martha
Bakwin, Ruth (Morris)
Balaam, Ellen
Balfour, Margaret Ida
Balk, Christina (Lochman)
Ball, Anne Elizabeth
Ball, Josephine
Ball, Mary
Ballard, Julia Perkins Pratt
Bancroft, Nellie
Bang, Duck-Heung
Banga, Ilona
Banham, Katherine May
Banks, Sarah Sophia
Barbapiccola, Giuseppa Eleonora
Barbarshova, Zoya
Barber, Helen Karen
Barber, Mary Elizabeth (Bowker)
Bari, Nina Karlovna
Barkly, Lady Anna Maria (Pratt)
Barkly, Lady Elizabeth Helen (Timins or Timmins)
Barlett, Helen Blair
Barlow, Lady Emma Nora Darwin
Barnard, Alicia Mildred
Barnard, Edith Ethel
Barnard, Lady Anne (Henslow)
Barnard, Lady Anne (Lindsay)
Barnes (Berners), Juliana
Barney, Ida
Barney, Nora Stanton (Blatch) De Forest
Barnothy, Madeleine (Forro)
Barnum, Charlotte Cynthia
Barrera, Oliva Sabuca de Nantes
Barringer, Emily Dunning
Barrows, Katherine Isabel Hayes Chapin
Barry, James (pseudonym)
Barton, Clara Harlowe
Barton, Lela Viola
Bascom, Florence
Bass, Mary Elizabeth
Bassi, Laura Maria Caterina
Batchelder, Esther Lord
Bate, Dorothea Minola Alice
Bates, Mary E.
Bateson, Anna
Bateson, Beatrice
Battle, Helen Irene
Bauer, Grace M.
Baum, Marie
Baumann, Frieda
Baumgarten-Tramer, Franziska
Baumgartner, Leona
Baxter, Mildred Frances
Bayern, Therese von
Bayley, Nancy
Baynard, Anne
Beanland, Sarah
Beatley, Janice Carson
Beatrice of Savoy, Countess of Provence
Beatrice, Medica of Candia
Beaufort, Countess Margaret
Beaufort, Harriet Henrietta
Beausoleil, Martine de Bertereau
Beauvallet, Marcelle Jeanne
Beck, Sarah Coker (Adams)
Becker, Lydia Ernestine
Becker- Rose, Herta
Beckman, A.
Beckwith, Angie Maria
Beckwith, Cora
Beckwith, Martha Warren
Beecher, Catharine Esther
Beers, Catherine Virginia
Beever, Mary
Beever, Susan
Behn, Aphra
Behre, Ellinor H.
Beilby, Winifred
Belaeva, Elizaveta Ivanovna
Belar, Maria
Bell, Julia
Belota [Johanna Belota]
Belyea, Helen Reynolds
Bender, Hedwig
Bender, Lauretta
Bender, W.
Benedek, Therese F.
Benedict, Ruth (Fulton)
Benett, Etheldred
Bengston, Ida Albertina
Bennett, Alice
Bennett, Dorothea
Benson, Margaret Jane
Bentham, Ethel
Bentham, Lady Mary Sophia (Fordyce)
Bentinck, Margaret Cavendish (Harley), Duchess of Portland
Berger, Emily V.
Berger, Katharina Bertha Charlotte
Berners, Juliana See Barnes, Juliana
Beronice
Berridge, Emily Mary
Bertereau, Martine de, Baroness de Beausoleil
Berthagyta, Abbess
Berthildis of Chelles
Bertile of Chelles
Bertillon, Caroline Schultze
Besant, Annie (Wood)
Beutler, Ruth
Bevier, Isabel
Bhatia, Sharju Pandit
Bibring, Grete Lehner
Bickerdyke, Mary Ann (Ball)
Bidder, Anna McClean
Bidder, Marion Greenwood
Biheron, Marie Catherine
Bilger, Leonora (Neuffer)
Billings, Katharine Stevens (Fowler– Lunn)
Bingham, Millicent (Todd)
Bird, Grace Electa
Bird, Isabella See Bishop, Isabella Bird
Birdsall, Lucy Ellen
Birstein, Vera
Biscot, Jeanne
Bishop, Ann
Bishop, Isabella Lucy Bird
Bishop, Katharine Scott
Bissell, Emily P.
Bitting, Katherine Eliza (Golden)
Black, Florence
Black, Hortensia
Blackburn, Kathleen Bever
Blackburne, Anna
Blacker, Margaret Constance Helen
Blackwell, Antoinette Louise (Brown)
Blackwell, Elizabeth
Blackwell, Elizabeth
Blackwell, Elizabeth Marianne
Blackwell, Emily
Blackwood, Beatrice Mary
Blagg, Mary Adela
Blake, Mary Safford
Blanchan, Neltje (pseud.)
Blanchard, Frieda Cobb
Blanchard, Phyllis
Blanquies, Lucie
Blatchford, Ellen C.
Blau, Marietta
Bledsoe, Lucybelle
Blinova, Ekaterina Nikitichna
Bliss, Dorothy Elizabeth
Bliss, Eleanor, Albert
Bliss, Mary Campbell
Block, Jeanne (Humphrey)
Blodgett, Katharine Burr
Bluhm, Agnes
Bluket, Nina Aleksandrovna
Blunt, Katharine
Bocchi (Bucca), Dorotea
Bochantseva, Zinaida Petrovna
Bodley, Rachel Littler
Bogdanovskaia, Vera Evstaf'evna
Böhm- Wendt, Cäcilia
Boivin, Marie Gillain
Bokova– Sechenova, Mariia Aleksandrovna
Boley, Gertrude Maud
Bolschanina, M. A.
Bolton, Edith
Bolus, Harriet Margaret Louisa (Kensit)
Bomhard, Miriam Lucile
Bonnay, Marchioness du
Bonnevie, Kristine
Boole, Mary (Everest)
Boos, Margaret Bradley (Fuller)
Booth, Mary Ann Allard
Boring, Alice Middleton
Borisova- Bekriasheva, Antoniia Georgievna
Boron, Elizabeth (Riddle) Graves
Borromeo, Clelia Grillo
Borsarelli, Fernanda
Boswell, Katherine Cumming
Bourdel, Léone
Bourgeoise, Louyse
Bouteiller, Marcelle
Bouthilet, Lorraine
Boveri, Marcella Imelda O'Grady
Bowen, Susan
Boyd, Elizabeth Margaret
Boyd, Louise Arner

Boyer, Esther Lydia
Bracher, Rose
Bradley, Amy Morris
Bradley, Frances Sage
Brahe, Sophia
Branch, Hazel Elisabeth
Brand, Martha
Brandegee, Mary Katharine Layne
Branham, Sara Elizabeth
Brant, Laura
Braun, (Emma) Lucy
Braun, Annette Frances
Brazier, Mary Agnes Burniston (Brown)
Breckinridge, Mary
Bredikhina, Evgeniia Aleksandrovna
Breed, Mary (Bidwell)
Brenchley, Winifred Elsie
Brenk, Irene
Brès Madeleine (Gébelin)
Breyer, Maria Gerdina (Brandwijk)
Brezina, Maria Aristides
Bridget, Saint, of Ireland
Bridget, Saint, of Scandinavia
Bridgman, Olga Louise
Brière, Nicole-Reine Etable de la.
Brière, Yvonne
Brightwen, Eliza (Elder)
Britten, Lilian Louisa
Britton, Elizabeth Knight
Broadhurst, Jean
Brock, Sylvia (DeAntonis)
Bromley, Helen Jean (Brown)
Bronner, Augusta Fox
Brooke, Winifred
Brooks, Harriet T.
Brooks, Matilda (Moldenhauer)
Brooks, Sarah Theresa
Broomall, Anna Elizabeth
Brousseau, Kate
Brown, Charlotte Amanda Blake
Brown, Dame Edith Mary
Brown, Elizabeth
Brown, Fay Cluff
Brown, Mabel Mary
Brown, Nellie Adalesa
Brown, Rachel Fuller
Browne, Ida Alison (Brown)
Browne, Lady Isabel Mary (Peyronnet)
Browne, Marjorie Lee
Bruce, Catherine Wolfe
Bruce, Eileen Adelaide
Brüch, Hilde
Brückner, Frau Dr.
Brunetta
Brunetti, R.
Brunfels, Frau Otto
Brunswick, Ruth Jane (Mack)
Bryan, Alice Isabel (Bever)
Bryan, Margaret
Bryan, Mary Katherine
Bryant, Louise Stevens
Bryant, Sophie (Willock)
Bucca, Dorotea.
Buchanan, Florence
Buchbinder, Laura G. Ordan
Buckel, Chloe A.
Buckland, Mary Morland
Buckley, Arabella
Buell, Mary Van Rensselaer
Buerk, Minerva (Smith)
Bühler, Charlotte Bertha (Malachowski)
Bülbring, Edith
Bull, Nina Wilcox
Bunch, Cordia
Bunting, Martha
Bunting-Smith, Mary (Ingraham)
Bunzel, Ruth Leah
Burges, Mary Anne
Burgess, May (Ayres)
Burkill, Ethel Maud (Morrison)
Burlingham, Dorothy (Tiffany)
Burlingham, Gertrude Simmons
Burns, Eleanor Irene
Burns, Louisa
Burr, Emily Thorp
Burrell, Anna Porter
Burton, Helen Marie Rousseay (Kannemeyer)
Burtt Davy, Alice (Bolton)
Bury, Elizabeth (Lawrence)
Bury, Priscilla Susan (Falkner)
Bush, Katharine Jeannette
Busk, Lady Marian (Balfour)
Bussecker, Erna
Buttelini, Marchesa
Bykhovskaia, Anna Markovna
Byrd, Mary Emma
Byrnes, Esther Fussell
Byron, Augusta Ada, Countess of Lovelace
Cadbury, Dorothy Adlington
Cadilla de Martínez, María
Cady, Bertha Louise Chapman
Caerellia (Caerelia)
Caetani-Bovatelli, Donna Ersilia
Calderone, Mary S.
Caldwell, Mary Letitia
Cale, F. M.
Calenda, Constanza or Laurea Constantia
Calkins, Mary Whiton
Callcott, Lady Maria Graham
Calvert, Catherine Louisa Waring (Atkinson)
Calvert, Emily Amelia (Adelia)
Cambrière, Clarisse
Campbell, Dame Janet Mary
Campbell, Helen Stuart
Campbell, May Sherwood
Campbell, Persia Crawford
Cannon, Annie Jump
Capen, Bessie
Carlson, Elizabeth
Carlson, Lucille
Carne, Elizabeth Catherine (Thomas)
Carothers, Estrella Eleanor
Carpenter, Esther
Carr, Emma Perry
Carroll, Chris tiane (Mendrez)
Carroll, Dorothy
Carson, Rachel Louise
Carter, Edna
Carter, Elizabeth
Cartwright, Dame Mary Lucy
Carus, Mary Hegeler
Carvajales y Camino, Laura M. de
Castle, Cora (Sutton)
Castra, Anna de
Catani, Giuseppina
Catherine of Bologna, Saint
Catherine of Genoa, Saint
Catherine of Siena, Saint
Catherine Ursula, Countess of Baden
Catherine, Medica of Cracow
Catlow, Maria Agnes
Cattell, Psyche
Cattoi, Noemí Violeta
Cauchois, Yvette
Caughlan, Georgeanne (Robertson)
Cauquil, Germaine Anne
Cavendish, Margaret, Duchess of Newcastle
Cellier, Elizabeth
Cesniece-Freudenfelde, Zelma
Chaix, Paulette Audemard
Chalubinska, Aniela
Chamié, Catherine
Chandler, Elizabeth
Chandler, Marjorie Elizabeth Jane
Chang, Moon Gyung
Chang, Vivian
Charles, Vera Katherine
Charlotte Sophia, Queen
Charsley, Fanny Anne
Chase, Mary Agnes Meara
Chasman, Renate Wiener
Châtelet, Gabrielle-Emilie Le Tonnelier de Breuteuil, Marquise du
Chauchard, B.
Chaudet, Maria Casanova de
Cheesman, Lucy Evelyn
Chenoweth, Alice Drew
Chesser, Elizabeth (Sloan)
Chick, Dame Harriette
Child, Lydia Maria (Francis)
Chinchon, Countess of
Chinn, May Edward
Chisholm, Catherine
Chisholm, Grace Emily
Chmielewska, Irene
Chodak-Gregory, Hazel Haward (Cuthbert)
Christen, Sydney Mary (Thompson)
Christina, Queen of Sweden
Church, Elda Rodman (MacIlvaine)
Chute, Hettie Morse
Cilento, Lady Phyllis
Cinquini, Maria dei Conti Cibrario
Cioranescu-Nenitzescu, Ecaterina
Clapp, Cornelia Maria
Clappe, Louisa Amelia (Smith)
Clara (Clare) of Assisi, Saint
Clarisse of Rotomago (or Clarice of Rouen)

Clark, Bertha
Clark, Frances N.
Clark, Janet Howell
Clark, Jessie Jane
Clark, Lois
Clark, Mamie Katherine (Phipps)
Clark, Nancy Talbot
Clarke, Cora Huidekoper
Clarke, Edith
Clarke, Lilian Jane
Clarke, Louisa (Lane)
Clay-Jolles, Tettje Clasina
Claypole, Agnes Mary
Claypole, Edith Jane
Clea
Cleachma
Clemens, Mary Knapp (Strong)
Clements, Edith Gertrude (Schwartz)
Clements, Margaret
Cleobulina of Rhodes
Cleopatra
Clerke, Agnes Mary
Clerke, Ellen Mary
Cleve-Euler, Astrid
Cleveland, Emeline Horton
Clifford, Lady Anne
Clinch, Phyllis E. M.
Clisby, Harriet Jemima Winifred
Clothilde of Burgundy
Coade, Eleanor
Coates, Sarah J.
Cobb, Margaret Vera
Cobb, Rosalie M. Karapetoff
Cobbe, Anne Phillipa
Cobbe, Frances Power
Cobbe, Margaret
Cochran, Doris Mabel
Cockburn, Catharine (Trotter)
Cockrell, Wilmatte (Porter)
Cohn, Essie White
Coignou, Caroline Pauline Marie
Colby, Martha Guernsey
Colcord, Mabel
Colden, Jane
Cole, Emma J.
Cole, Rebecca J.
Collet, Clara Elizabeth
Collett, Mary Elizabeth
Collins, Katharine Richards
Colvin, Brenda
Comnena (Comnenos), Anna
Comstock, Anna Botsford
Comyns-Lewer, Ethel
Cone, Claribel
Conklin, Marie (Eckhardt)
Conklin, Ruth Emelene
Converse, Jeanne
Conway, Anne
Conway, Elsie (Phillips)
Cook, A. Grace
Cook, Margaret C.
Cooke, Alice Sophia (Smart)
Cookson, Isabel Clifton
Cooley, Jacquelin Smith
Coombs, Helen Copeland
Cooper, Clara Chassell
Cooper, Elizabeth Morgan
Cooper, Susan Fenimore
Cooper, Sybil
Cooper-Ellis, Katharine Murdoch
Copeland, Lennie Phoebe
Cordier, Marguerite Jeanne
Cori, Gerty Theresa Radnitz
Cornaro (Cornero), Elena (Helena) Lucretia
Cornelius-Furlani, Marta
Coryndon, Shirley (Cameron)
Coste Blanche, Marie de
Cotelle, Sonia
Cotter, Brigid M.
Coudreau, Octavie
Cowan, Edwina Abbott
Cox, Gertrude Mary
Cox, Rachel (Dunaway)
Coyle, Elizabeth Eleanor
Cram, Eloise Blaine
Cramer, Catherine Gertrude du Tertre Schraders
Crandall, Ella Phillips
Crane, Agnes
Crane, Jocelyn
Cranwell, Lucy May
Cremer, Erika
Crespin, Irene
Crocker, Lucretia
Croll, Hilda M.
Crosbie, May
Crosby, Elizabeth Caroline
Crosfield, Margaret Chorley
Csepreghyné-Meznerics, Ilona
Cuffe, Lady Charlotte Wheeler (Williams)
Cullis, Winifred
Cumming, Lady Gordon (Eliza Maria Campbell)
Cummings, Clara Eaton
Cummings, Louise Duffield
Cunio, Isabella
Cunitz, Maria
Cunningham, Bess Virginia
Cunningham, Gladys Story
Cunningham, Susan
Curie, Marie (Maria Sklodowska)
Currie, Ethel Dobbie
Curtis, Doris Sarah (Malkin)
Curtis, Natalie
Cushier, Elizabeth
Cushing, Hazel Morton
Cushman, Florence
Cuthbert-Browne, Grace Johnston
Cutler, Catherine
Czaplicka, marie antoinette
Czeczottowa, Hanna (Peretiatkowicza)
Dalai, Maria Jolanda (Tosoni)
Dalby, Mary
Dale, Elizabeth
Dallas, A. E. M. M.
Dalle Donne, Maria
Damo
Dane, Elisabeth
Daniel, Anne Sturges
Daniels, Amy L.
Danti or Dante, Theodora
Darwin, Emma (Wedgwood)
Dashkova, Princess Ekaterina Romanovna
Daulton, Agnes Warner McClelland
Davenport, Gertrude (Crotty)
David, Florence N.
Davidson, Ada D.
Davis, Adelle
Davis, Alice (Rohde)
Davis, Frances (Elliott)
Davis, Grace Evangeline
Davis, Katharine Bement
Davis, Marguerite
Davis, Olive Griffith Stull
Davis, Rose May
Davy, Lady Joanna Charlotte (Flemmich)
Dawson, Maria
Day, Dorothy
Day, Gwendolen Helen
Day, Mary Anna
De Almania, Jacqueline Felicia
De Bréauté, Eléonore-Nell-Suzanne
De Chantal, Mme.
De Fraine, Ethel Louise
De Gorzano, Leonetta
De Graffenried, Mary Clare
De la Cruz, Juana Inés
De la Marche, Marguerite du Tertre
De Laguna, Fredericka Annis Lopez de Leo
De Lange, Cornelia Catharina
De Lebrix, Françoise
De Marillac, Louise, Mlle, Le Gras.
De Milt, Clara Marie
De Mole, Fanny Elizabeth
De Staël Holstein, Anne Louise Germaine Necker
De Valera, Mairin
De Valois, Madame
De Vesian, Dorothy Ellis
De Witt, Lydia Maria Adams
Decker, Jane Cynthia (McLaughlin)
Deflandre-Rigaud, Marthe
Deichmann, Elisabeth
Déjerine-Klumpke, Augusta
Delaney (or Delany), Mary (Granville),
Delap, Maude Jane
Delauney, Marguerite de Staël
Delf-Smith, Ellen Marion
Deloria, Ella Cara
Dembo, Tamara
Dempsey, Sister Mary Joseph
Demud
Dengel, Anna Maria
Denis, Willey Glover
Dennett, Mary Ware
Dennis, Olive Wetzel
Densmore, Frances Theresa
Derick, Carrie M.
Derscheid-Delcourt, Marie
Detmers, Frederica

Deutsch, Helene Rosenback
Dewey, Jane Mary (Clark)
Di Novella, Maria
Diana of Poitiers
Dick, Gladys Rowena Henry
Dickerson, Mary Cynthia
Dietrich, Amalie
Diggs, Ellen Irene
Dimock, Susan
Dimsdale, Helen Easdale (Brown)
Dinnerstein, Dorothy
Diotima of Mantinea
Dix, Dorothea Lynde
Dobrolubova, Tatiana A.
Dobroscky, Irene Dorothy
Dobrowolska, H.
Dobson, Mildred E.
Dock, Lavinia Lloyd
Dodd, Katharine
Dodds, Mary Letitia
Dodgson, Sarah Elizabeth
Dodson, Helen Walter
Doering, Kathleen Clara
Dohan, Edith Haywood Hall
Dokhman, Genrietta Isaakovna
Dolgopol de Saez, Mathilde
Dolley, Sarah Read Adamson
Dombrovskaia, Iuliia Fominichna
Donnay, Gabrielle (Hamburger)
Dooley, Lucile
Dorabialska, Alicja Domenica
Doreck, Hertha (Walburger Doris Sieverts)
Dorenfeldt, Margot
Dorety, Angela
Dormon, Caroline
Doubleday, Neltje Blanchan (De Graff)
Dougal, Margaret Douie
Douglas, Alice Vibert
Dover, Mary Violette
Downey, June Etta
Downey, K. Melvina
Downie, Dorothy G.
Downs, Cornelia Mitchell
Drake, Judith
Drant, Patricia (Hart)
Draper, Mary Anna Palmer
Drebeneva-Ukhova, Varvara Pavlovna
Drew, Kathleen Mary
Drinker, Katherine (Rotan)
Drummond, Margaret
Du Bois, Cora
Du Châtelet, Gabrielle-Emilie Le Tonnelier de Breteuil (Marquise)
Du Coudray, Angelique (Marguerite le Boursier)
Du Luys, Guillemette
Dubuisson-Brouha, Adele
Duffy, Elizabeth
Duges, Marie-Louise
Dumée, Jeanne
Dummer, Ethel (Sturges)
Dunbar, Helen Flanders
Duncan, Catherine (Gross)
Duncan, Helen
Duncan, Ursula Katherine
Dunham, Ethel Collins
Dunlop, Janette Gilchrist
Dunn, Mary Douglas
Dunn, Thelma Brumfield
Dunning, Wilhelmina Frances
Dupré, Marie
Durham, Mary Edith
Durocher, Marie (Josefina Mathilde)
Duryea, Nina
Dutcher, Adelaide
Dutton, Bertha Pauline
Dutton, Loraine Orr
Dye, Marie
Dyer, Helen Marie
Dylazanka, Maria
Earle, Marie Theresa (Villiers)
Eastwood, Alice
Eaves, Elsie
Ebers, Edith (Knote)
Eccello of Lucania
Echecratia the Philiasian
Echols, Dorothy Jung
Eckerson, Sophia Hennion
Eckstorm, Fannie Pearson (Hardy)
Eddy, Bernice Elaine
Edge, Rosalie Barrow
Edgell, Beatrice
Edgerton, Winifred Haring
Edgeworth, Maria
Edinger, Johanna Gabrielle Otellie (Tilly)
Edkins, Nora Tweedy
Edson, Fanny Carter
Edwards, Emma Ward
Edwards, Lena Frances
Edwards-Pilliet, Blanche
Efimenko, Aleksandra Iakovlevna
Eggleton, Marion Grace (Palmer)
Ehrenfest-Afanassjewa, Tatyana Alexeyevna
Eichelberger, Lillian
Eigenmann, Rosa Smith
Eimmart, Marie Claire
Einstein, Elizabeth Roboz
Einstein-Maric, Mileva
Eisele, Carolyn
Elam, Constance Fligg Tipper
Elderton, Ethel
Eleanora, Duchess of Mantua
Eleanora, Duchess of Troppau and Jagerndorf
Elephantis
Elgood, Cornelia Bonté Sheldon (Amos)
Elion, Gertrude Belle
Eliot, Martha May
Elizabeth of Bohemia
Elizabeth of Poland, Queen of Hungary
Elizabeth of Portugal, Saint
Elizabeth of Schönau
Elles, Gertrude Lilian
Elliott, Charlotte
Ellis, Florence Hawley
Ellisor, Alva Christine
Elsom, Katharine (O'Shea)
Emerson, Gladys Ludwina (Anderson)
Eng, Helga
Engelbrecht, Mildred Amanda
Erdmann, Rhoda
Erdmuthe, Sophie
Ermol'eva, Zinaida Vissarionovna
Erxleben, Dorothea Christiana (Leporin)
Esau, Katherine
Esdorn, Ilse
Etheldrida, Queen
Euphemia, Abbess of Wherwell
Evans, Alice Catherine
Evans, Alice Margaret
Everard, Barbara Mary Steyning
Everett, Alice
Evershed, Mary Orr
Eves, Florence
Ewing, Elizabeth Raymond (Burden)
Eyton, Charlotte
Fabiola
Fage, Winifred E.
Farenden, Emma
Farnsworth, Alice
Farnsworth, Vesta J.
Farquharson, Marian Sarah (Ridley)
Farr, Wanda Kirkbride
Farrar, Lillian K. P.
Fátima
Faustina
Favilla
Fawcett, Phillipa Garrett
Fearn, Anne Walter
Fedchenko, Ol'ga Aleksandrovna
Feichtinger, Nora
Felicie, Jacobina
Fell, Honor Bridget, Dame
Fenchel, Käte (Sperling)
Fenwick, Florence
Ferguson, Margaret Clay
Fernald, Grace Maxwell
Fernald, Maria Elizabeth (Smith)
Ferrand, Elizabeth M.
Ferrand, Jacqueline
Ferrero, Gina (Lombroso)
Fielde, Adele Marion
Fielding, Mary Maria (Simpson)
Fiennes, Celia
Fieser, Mary
Figner, Vera
Finch, Louisa (Thynne), Countess of Aylesford
Findlater, Doris
Finkler, Rita V. (Sapiro)
Fischer, Irene Kaminka
Fish, Margery
Fish, Marie Poland
Fishenden, Margaret White
Fisher, Edna Marie
Fisher, Elizabeth Florette
Fisher, Sara Carolyn
Fitton, Sarah Mary
FitzGerald, Mabel Purefoy
Flammel, Perrenelle
Fleming, Amalia Coutsouris, Lady
Fleming, Williamina Paton Stevens

Fletcher, Alice Cunningham
Flock, Eunice Verna
Flood, Margaret Greer
Florendo, Soledad Arcega
Flügge-Lotz, Irmgard
Foley, Mary Cecilia
Folmer, HerminE Jacoba
Fomina-Zhukovskaia, Evdokiia Aleksandrovna
Fonovits-Smereker, H.
Foot, Katharine
Forbes, Helena Madelain Lamond
Forster, Mary
Fossey, Dian
Fossler, Mary Louise
Foster, Josephine Curtis
Foster, Margaret D.
Fouquet, Marie de Maupeou, Vicomtesse de Vaux
Fowler, Lydia Folger
Fowler-Billings, Katharine Stevens
Fox, Ruth
Fraine, Ethel Louise de
Frampton, Mary
Frances of Brittany
Francini, Eleonora Corti
Françoise, Marie-Thérèse
Frank, Margaret
Franklin, Rosalind Elsie
Frantz, Virginia Kneeland
Freeman, Joan Maie
Freidlina, Rakhil' Khatskelevna
Frenkel-Brunswik, Else
Freud, Anna
Freund, Ida
Friant, M.
Friedlander, Kate
Friedmann, Friederike
Friend, Charlotte
Fritz, Madeleine Alberta
Fromm, Erika Oppenheimer
Frostig, Marianne Bellak
Fulford, Margaret Hannah
Fulhame, Elizabeth
Furness, Caroline Ellen
Fuss, Margarita
Gabler, Anna
Gage, Catherine
Gage, Susanna Phelps
Gaige, Helen (Thompson)
Galabert, Renée
Galindo, Beatrix
Galvani, Lucia (Galeazzi)
Gamble, Eleanor Acheson McCulloch
Gantt, Love Rosa
Gaposchkin, Cecilia Payne
Gardiner, Edith Gertrude (Willcock)
Gardiner, Margaret Isabella
Gardner, Elinor Wight
Gardner, Julia Anna
Gardner, Mary Sewall
Garfield, Viola Edmundson
Garlick, Constance
Garnett, Alice
Garnjobst, Laura Flora
Garretson, Mary (Welleck)
Garrett, Elizabeth
Garrod, Dorothy Anne Elizabeth
Gàta, Elena (Stefanescu)
Gates, Fanny Cook
Gatty, Margaret (Scott)
Gaw, Esther Allen
Gaw, Frances Isabel
Geiringer Hilda
Geldart, Alice Mary
Genet-Varcin, Emilienne
Genung, Elizabeth Faith
Gepp, Ethel Sarel (Barton)
Geppert, Maria Pia
Germain, Sophie
Gerould, Elizabeth Wood
Gerry, Eloise B.
Gey, Margaret Lewis
Ghilietta
Giammarino, Pia
Gibbons, E. Joan
Gibbons, Vernette Lois
Gibbs, Lilian Suzette
Gifford, Isabella
Gilbert, Ruth
Gilbreth, Lillian Evelyn Moller
Gilette of Narbonne
Giliani, Alessandra
Gilkey, Helen Margaret
Gill, Jocelyn Ruth
Gillett, Margaret (Clark)
Gilmore, Jane Georgina
Gilroy, Helen (Turnbull)
Giraud, Marthe
Gitelson, Frances H.
Gjellestad, Guro Else
Glagoleva-Arkad'yeva, Aleksandra Andreyevna
Glascott, Louisa S.
Glasgow, Maude
Glass, Jewell Jeanette
Gleason, Josephine Mixer
Gleason, Kate
Gleason, Rachel Brooks
Gleditsch, Ellen
Glueck, Eleanor (Touroff)
Gocholashvili, Mariia Mikievna
Godding, D. W.
Godfery, Hilda Margaret
Goeppert Mayer, Maria Gertrud Käte
Goldfeder, Anna
Goldfrank, Esther Schiff
Goldhaber, Sulamith
Goldman, Hetty
Goldring, Winifred
Goldschmidt, Frieda
Goldsmith, Grace Arabell
Goldsmith, Marie
Goldthwaite, Nellie Esther
Golinevich, Elena Mikhailovna
Goodenough, Florence Laura
Goodrich, Sarah Frances
Goodyear, Edith
Gordon, Kate
Gordon, Maria Matilda Ogilvie
Gorinevskaya, Valentina Valentinovna
Gorizdro-Kulczycka, Zinaida
Gorshkova, Tat'yana Ivanovna
Götz, Irén Julia (Dienes)
Gracheva, Yekaterina Konstantinovna
Graham, Helen (Treadway)
Graham, Maria Dundas (Lady Calcott)
Grainger, Jennie
Gravatt, Annie Evelyn (Rathbun)
Graves, Elizabeth (Riddle)
Gray, Etta
Gray, Maria Emma (Smith)
Gray, Susan Walton
Green, Arda Alden
Green, Mary Letitia
Green, Vera Mae
Greene, Catherine (Littlefield)
Greenwood, Marion
Gregory, Eliza Standerwick (Barnes)
Gregory, Emily Lovira
Gregory, Emily Ray
Gregory, Lady Isabella Augusta (Persse)
Gregory, Louisa Catherine (Allen)
Gregory, Louise Hoyt
Greig, Margaret Elizabeth
Greisheimer, Esther Maud
Griffin, Harriet Madeline
Griffiths, Amelia Elizabeth
Griffiths, Amelia Warren (Rogers)
Griggs, Mary Amerman
Grignan, Françoise Marguerite de Sévigné, Comtesse de
Grinnell, Hilda Wood
Griswold, Grace Hall
Gromova, Vera Isaacovna
Gruhn, Ruth
Grundy, Clara
Grundy, Ellen
Grundy, Maria Ann
Grzigorzewska, Marja
Gsell, Maria Dorothea Henrica (Graf)
Gualco, Sellina
Guarna, Rebecca
Guldberg, Estrid
Gullett, Lucy E.
Gundersen, Herdis
Gunn, Mary Davidson
Gunther, Erna
Guthrie, Mary Jane
Guyton de Morveau, Claudine Poullet Picardet
Gwynne-Vaughan, Dame Helen Charlotte Isabella (Fraser)
Haber-Immerwahr, Clara
Haccius, Barbara
Hagood, Margaret Loyd Jarman
Hahn, Dorothy Anna
Hainault, Countess of
Haldorsen, Inger Alida
Halicka, Antonina (Yaroszewicz)
Halket, Ann Cronin
Halket, Lady Anne (Murray)

Hall, Agnes C.
Hall, Dorothy
Hall, Edith Hayward
Hall, Julia Brainerd
Hall, Kate Marion
Hall, Rosetta Sherwood
Hall-Brown, Lucy
Halliday, Nellie
Hallowell, Susan Maria
Hamburger, Erna
Hamerstrom, Frances (Flint)
Hamilton, Alice
Hamilton, Peggy-Kay
Hammer, Marie Signe
Hanfmann, Eugenia
Hanks, Jane Richardson
Hansen, Hazel D.
Hansen, Julie Marie Vinter
Hanson, Emmeline Jean
Haoys (la meresse)
Hardcastle, Frances
Hardesty, Mary
Harding, Anita
Hardwick, Rose Standish
Hardy, Harriet
Hardy, Thora Marggraff Plitt
Harmon, Élise F.
Harrison, Jane Ellen
Harrison, Janet Mitchell Marr (Dingwall)
Harrower, Molly R.
Hart, Esther Hasting
Hart, Helen
Hart, J. B.
Hartt, Constance Endicott
Harvey, Elizabeth
Harvey, Ethel Nicholson Browne
Harwood, Margaret
Haslett, Dame Caroline
Hassall, Bessie Florence (Cory)
Hastings, Barbara, Marchioness of
Hathaway, Millicent Louise
Hatshepsut, Queen
Hausser, Isolde (Ganswindt)
Hawes, Harriet (Boyd)
Hawkes, Jacquetta (Hopkins)
Hawkins, Kate
Hawkins, Mary Esther (Sibthorp)
Hawn Mirabile, Margaret H.
Hayes, Ellen Amanda
Hayner, Lucy Julia
Hayward, Ida Margaret
Haywood, Charlotte
Hazen, Elizabeth Lee
Hazlett, Olive Clio
Hearst, Phoebe (Apperson)
Heath, Daisy Winifred
Hebb, Catherine Olding
Hebel, Medicienne
Heckter, Maria
Hedges, Florence
Hedwig of Silesia, Saint
Heermann, Margareta
Hefferan, Mary
Heidbreder, Edna Frances
Heim-Vögtlin, Marie
Heimann, Berta
Heimann, Paula
Heinlein, Julia Elizabeth Heil
Hélène, Duchess of Aosta
Hellman, Johanna
Hellstedt, Leone McGregor
Héloise
Henderson, Nellie Frater
Hendricks, Eileen M.
Hennel, Cora Barbara
Henrey, Blanche Elizabeth Edith
Henry, Caroline (Orridge)
Henshaw, Julia Wilmotte
Heppenstall, Caroline A.
Herford, Ethilda B. Meakin
Herrad of Hohenburg
Herrick, Christine (Terhune)
Herrick, Julia Frances
Herrick, Sophia McIlvaine (Bledsoe)
Herschel, Caroline Lucretia
Hersende. Abbess of Fontevrault
Herskovits, Frances S. (Shapiro)
Hertwig, Paula
Hertz, Mathilde
Herwerden, Marianne van
Herwerden, Marianne van
Herxheimer, Franziska
Heslop, Mary Kingdon
Hesse, Fanny
Hetzer, Hildegard
Hevelius, Elisabetha Koopman
Hewer, Dorothy
Hewitt, Dorothy Carleton
Hibbard, Hope
Hickey, Amanda Sanford
Hicks, Beatrice Alice
Higgins, Vera (Cockburn)
Hightower, Ruby Usher
Hildegard of Bingen
Hildreth, Gertrude Howell
Hilgard, Josephine Rohrs
Hill, Dorothy
Hill, Justina Hamilton
Hill, Mary Elliott
Hines, Marion
Hinman, Alice Hamlin
Hinrichs, Marie Agnes
Hirschfeld-Tiburtius, Henriette (Pagelsen)
Hitchcock, Fanny Rysam Mulford
Hitchcock, Orra White
Hitchens, Ada Florence R.
Hitzenberger, Annaliese
Hoare, Sarah
Hobby, Gladys Lounsbury
Hoby, Lady
Hodgkin, Dorothy Mary Crowfoot
Hodgson, Eliza Amy
Hodgson, Elizabeth
Hoffleit, Ellen Dorrit
Hofmann, Elise
Hogg, Helen Sawyer
Hoggan, Ismé Aldyth
Hohl, Leonora Anita
Hoke, Calm ,(Morrison)
Hol, Jacoba Brigitta Louisa
Holley, Mary Austin
Hollingworth, Leta Anna Stetter
Holm, Esther (Aberdeen)
Holmes, Mary Emilee
Holton, Pamela Margaret (Watson-Williams)
Homer, Annie
Hoobler, Icie Gertrude Macy
Hooker, Frances Harriet Henslow
Hooker, Henrietta Edgecomb
Hooker, Marjorie
Hopkins, Esther (Burton)
Hopper, Grace (Brewster Murray)
Horenburg, Anna Elizabeth von
Horney, Karen Clementine (Danielsen)
Horowitz, Stephanie
Hough, Margaret Jean Ringier
Howard Beckman, Ruth Winifred
Howard Wylde, Hildegarde
Howard, Louise Ernestine (Matthaei), Lady
Howe Akeley, Delia Julia Denning
Howes, Ethel Dench Puffer
Howitt, Mary (Botham)
Hroswitha of Gandersheim
Hubbard, Marian Elizabeth
Hubbard, Ruth Marilla
Hubbs, Laura Cornelia (Clark)
Hudson, Hilda Phoebe
Hug-Hellmuth, Hermine von
Huggins, Margaret Lindsay (Murray)
Hughes, Ellen Kent
Hughes, Mary Caroline (Weston)
Hughes-Schrader, Sally Peris
Hugonnai-Wartha, Vilma
Hummel, Katharine Pattee
Hunscher, Helen Alvina
Hunt, Caroline Louisa
Hunt, Eva Verbitsky
Hunt, Harriot Kezia
Hurler, Gertrud (Zach)
Hurlock, Elizabeth Bergner
Hurston, Zora Neale
Hussey, Anna Maria (Reed)
Hussey, Priscilla Butler
Hutchins, Ellen
Hutchinson, Dorothy (Hewitt)
Hutton, Lady Isabel Emilie
Huxley, Henrietta Heathorn
Hyde, Ida Henrietta
Hyman, Libbie Henrietta
Hynes, Sarah
Hypatia of Alexandria
Ianovskaia, Sof'ia Aleksandrovna
Ibbetson, Agnes (Thomson)
Ide, Gladys Genevra
Ilg, Frances Lillian
Inglis, Elsie (Maude)
Irwin, Marian
Isaacs, Susan Sutherland (Fairhurst)
Iusupova, Saradzhan Mikhailovna
Ivanova, Elena Alekseevna

Ives, Margaret
Iwanowska, Wilhelmina
Jacobi, Mary Corinna Putnam
Jacobina Medica of Bologna
Jacobs, Aletta Henrietta
Jacobson, Clara
Jacopa of Passau
Jacson, Maria Elizabeth
Jahoda, Marie
James, Lucy Jones
Janaki Ammal, Edavaleth Kakkat
Janssen, Mme.
Janssen, Mme.
Jeanes, Allene Rosalind
Jekyll, Gertrude
Jensen, Estelle Louise
Jérémine, Elisabeth (Tschernaieff)
Jermoljeva, Zinaida Vissarionovna
Jesson, Enid Mary
Jex-Blake, Sophia
Jězowska-Trzebiatowska, Boguslawa
Jhirad, Jerusha
Johanna (Johanne, Joanna)
Johnson, Dorothy Durfee Montgomery
Johnson, Hildegarde (Binder)
Johnson, Mary
Johnson, Minnie May
Johnston, Mary Sophia
Joliot-Curie, Irène
Jonas, Anna I.
Jones, Amanda Theodosia
Jones, Eva Elizabeth
Jones, Katharine, Viscountess Ranelagh
Jones, Lorella Margaret
Jones, Mary Amanda Dixon
Jones, Mary Cover
Jordan, Louise
Jordan, Sara Claudia (Murray)
Jordan-Lloyd, Dorothy
Joslin, Lulu Broadbent
Josselyn, Irene (Milliken)
Joteyko, Joséphine
Joyce, Margaret Elizabeth
Juhn, Mary
Julian, Hester Forbes (Pengelly)
Justin, Margaret M.
Kaan, Helen Warton
Kaberry, Phyllis Mary
Kablick [Kabliková], Josephine (Ettel)
Kaczorowska, Zofia
Kahn, Ida
Kaltenbeiner, Victorine
Kane, Lady Katherine Sophia (Baily)
Kanouse, Bessie Bernice
Karamihailova, Elizabeth/Elizaveta [Kara-Michailova]
Kardymowiczowa, Irena
Karlik, Berta
Karp, Carol Ruth (Vander Velde)
Karpowicz, Ludmila
Karrer, Annie May Hurd
Kashevarova-Rudneva, Varvara Aleksandrovna
Katherine, la Surgiene (the Surgeon)
Katz, Rosa Heine
Kaye-Smith, A. Dulcie
Keeler, Harriet Louise
Keen, Angeline Myra
Keeney, Dorothea Lilian
Keil, Elizabeth Marbareta
Keil, Elsa Marie
Keith, Marcia Anna
Keldysh, Liudmila Vsevolodovna
Keller, Ida Augusta
Kellerman, Stella Victoria (Dennis)
Kelley, Louise
Kellogg, Louise
Kellor, Frances A.
Kelly, Agnes
Kelly, Isabel Truesdell
Kelly, Margaret G.
Kelly, Margaret W.
Kendall, Claribel
Kendrick, Pearl (Luella)
Kennard, Margaret Alice
Kennedy, Cornelia
Kenny, Elizabeth (Sister Kenny)
Kent, Elizabeth
Kent, Elizabeth Isis Pogson
Kent, Grace Helen
Kent, Kate Peck
Kenyon, Kathleen Mary
Kerling, Louise Catharina Petronella
Keur, Dorothy Louise (Strouse)
Kharuzina, Vera Nikolaevna
Kielan-Jaworowska, Zofia
Kil, Chung-Hee
King, Anastasia Kathleen (Murphy)
King, Georgina
King, Helen Dean
King, Jessie Luella
King, Louisa Boyd (Yeomans)
King, Martha
King, Susan (Raymond)
Kingsley, Louise
Kingsley, Mary Henrietta
Kirby, Elizabeth
Kirch, Christine
Kirch, Margaretha
Kirch, Maria Margaretha Winkelmann
Kirkbride, Mary Butler
Kirkham, Nellie
Kittrell, Flemmie Pansy
Kleegman, Sophia
Klein, Marthe
Klein, Melanie (Reizes)
Kletnova, E. N.
Klieneberger-Nobel, Emmy
Kline, Virginia Harriett
Klosterman, Mary Jo
Kluckhohn, Florence Rockwood
Klumpke, Dorothea
Knake, Else
Knight, Margaret
Knopf, Eleanora Frances (Bliss)
Knott-Ter Meer, Ilse
Knowles, Matilda Cullen
Knowles, Ruth Sheldon
Knull, Dorothy J.
Kobel, Maria
Koch, Helen Lois
Koch, Marie Louise
Kochanowská, Adéla
Kochina, Pelageia Iakovlevna
Kohler, Elsa
Kohn, Hedwig
Kohts, Nadie (Ladychin)
Kolaczkowska, Maria
Komarovsky, Mirra
Koprowska, Irena Grasberg
Korn, Doris Elfriede
Korobeinikova, Iuliia Ivanovna
Korringa, Marjorie K.
Korshunova, Olga Stepanovna
Koshland, Marian (Elliott)
Kovalevskaia, Sofia Vasilyevna
Kovrigina, Mariia Dmitrievna
Kozlova, Ol'ga Grigoriyevna
Krasnosel'skaia, Tat'iana Abramovna
Krasnow, Frances
Kraus Ragins, Ida
Kroeber, Theodora Kracaw
Krogh, Birthe Marie (Jorgensen)
Krupskaia, Nadezhda Konstantinovna
Krutikhovskaia, Zinaida Aleksandrovna
Kunde, Margarethe Meta H.
L'Esperance, Elise Depew Strang
La Chapelle, Marie Louise Dugès
La Mance, Lora Sarah (Nichols)
La Sablière, Marguerite Hessein, Madame de
La Vigne, Anne de
Ladd-Franklin, Christine
Ladygina-Kots, Nadezhda Nikolaevna
Laird, Carobeth (Tucker)
Laird, Elizabeth Rebecca
Laïs
Lalande, Marie Jeanne Amélie Harlay Lefrançais de
Lamarck, Cornelié
Lambin, Suzanne
Lamme, Bertha
LaMonte, Francesca Raimonde
Lampe, Lois
Lampl-de Groot, Jeanne
Lancefield, Rebecca Craighill
Landes, Ruth (Schlossberg)
Lane-Claypon, Janet Elizabeth
Langdon, Fanny E.
Langdon, LaDema M.
Lange, Linda Bartels
Lange, Mathilde Margarethe
Langecker, Hedwig
Langford, Grace
Langsdorff, Toni von
Lankester, Phoebe (Pope)
Lansdell, Kathleen Annie
Lapicque, Marcelle (de Heredia)
Larsson, Elisabeth
Larter, Clara Ethelinda
Laskey, Amelia (Rudolph)
Laski, Gerda

Lassar, Edna Ernestine (Kramer)
Lasthenia of Mantinea
Latham, Vida Annette
Latimer, Caroline Wormeley
Laubenstein, Linda
Laughlin, Emma Eliza
Laurie, Charlotte Louisa
Lavoisier, Marie Anne Pierrette Paulze
Law, Annie
Lawder, Margaret
Lawrence, Barbara
Lawrence, Penelope
Lawrenson, Alice Louisa
Lawton, Elva
Lazarus, Hilda Mary
Le Beau, Désirée
Le Breton, Elaine
Le Maître, Dorothée
Leach, Mary Frances
Leacock, Eleanor Burke
Leakey, Mary Douglas (Nicol)
Leavitt, Henrietta Swan
Lebedeva, Nataliia Ivanova
Lebedeva, Vera Pavlovna
Lebour, Marie Victoire
Leclercq, Suzanne (Céline)
Ledingham, Una Christina (Garvin)
Lee, Julia Southard
Lee, Rebecca
Lee, Rose Hum
Lee, Sarah Wallis Bowdich
Leebody, Mary Elizabeth
Lees, Florence Sarah
Lefroy, Helena (Trench)
Lehmann, Inge
Lehmus, Emilie
Lehr, Marguerite (Anna Marie)
Leighton, Dorothea (Cross)
Leland, Evelyn
Lemmon, Sarah Plummer
Leontium
Leoparda
Lepaute, Nicole-Reine Hortense (Etable de la Brière)
Lepeshinskaia, Ol'ga Borisovna
Lepin, Lidiia Karlovna
Lermontova, Ekaterina Vladimirovna
Lermontova, Iuliia Vsevolodovna
Leschi, Jeanne
Leslie (Burr), May Sybil
Leverton, Ruth Mandeville
Levi, Hilde
Levi-Montalcini, Rita
Levine, Lena
Levyns, Margaret Rutherford Bryan (Michell)
Lewis, Florence Parthenia
Lewis, Graceanna
Lewis, Helen Geneva
Lewis, Isabel (Martin)
Lewis, Lilian (Burwell)
Lewis, Madeline Dorothy (Kneberg)
Lewis, Margaret Adaline Reed
Lewis, Mary Butler
Leyel, Hilda Winifred Ivy (Wauton)
Libby, Leona Woods Marshall
Libert, Marie-Anne
Lieber, Clara Flora
Lieu, K. O. Victoria
Lin Qiaozhi (Lin Chiao-chi)
Lincoln, Almira Hart
Lind-Campbell, Hjördis
Lindsten- Thomasson, Marianne
Lines, Dorolyn (Boyd)
Linton, Laura Alberta
Lipinska, Mélanie
Lisitsian, Srbui Stepanova
Lisovskaia, Sofiya Nikolaievna
Lister, Gulielma
Litchfield Henrietta Emma (Darwin)
Litvinova, Elizaveta Fedorovna
Litzinger, Marie
Lloyd, Dorothy Jordan
Lloyd, Rachel
Lloyd-Green, Lorna
Lochman-Balk, Christina
Loewe, Lotte Luise Friedericke
Logan, Martha Daniell
Logan, Myra Adele
Logsdon, Mayme (Irwin)
Lomax, Elizabeth Anne (Smithson)
Longfield, Cynthia
Longshore, Hannah E. (Myers)
Longstaff, Mary Jane (Donald)
Lonsdale, Kathleen (Yardley)
Losa, Isabella
Löser, Margaret Sibylla von
Loudon, Jane (Webb)
Lovejoy, Esther Pohl
Lovelace, Augusta Ada Byron, Countess of
Loveless, Mary Hewitt
Lowater, Frances
Lowell, Frances Erma
Lozier, Clemence Sophia (Harned)
Lu Gwei Djen
Lubinska, Liliana
Lukanina, Adelaida N.
Lunn, Katharine Fowler
Luomala, Katharine
Lutwak-Mann, Cecelia
Lwoff, Marguerite (Bourdaleix)
Lyell, Katharine Murray (Horner)
Lyell, Mary Elizabeth (Horner)
Lynn, Mary Johnstone
Lyon, Mary
Lyubimova, Yelena Aleksandrovna
Maass, Clara Louise
Macaulay, Catharine (Sawbridge)
MacCallum, Bella Dytes (MacIntosh)
Macdonald, Eleanor Josephine
MacDougall, Mary Stuart
MacGill, Elsie Gregory
MacGillavry, Carolina Henriette
Macintyre, Sheila Scott
Mack, Pauline Beery
Mackay, Helen Marion MacPherson
Macklin, Madge (Thurlow)
Mackowsky, Marie-Therese
MacLaughlin, Florence Edith Carothers
MacLean, Ida (Smedley)
MacLeod, Annie Louise
MacLeod, Grace
Macrina
MacRobert, Rachel (Workman), Lady of Douneside and Cromar
Maddison, Ada Isabel
Mahler, Margaret Schönberger
Mahout, Countess of Artois
Mair, Lucy Philip
Makemson, Maude (Worcester)
Maling, Harriet Florence (Mylander)
Malleson, Elizabeth
Mallory, Edith (Brandt)
Maltby, Margaret Eliza
Man, Evelyn Brower
Mangold, Hilde (Proescholdt)
Mann, Harriet
Manning, Ann B. (Harned)
Manson, Grace Evelyn
Mantell, Mary Ann (Woodhouse)
Manton, Irene
Manton, Sidnie Milana
Manzolini, Anna Morandi
Maracineanu, Stefania
Marcella
Marcet, Jane Haldimand
Marche, Marguerite du Tertre de la
Margery
Margulova, Tereza Kristoforovna
Marianne Plehn
Maric, Mileva
Marillac, Louise de
Marinov, Evelina
Marks, Hertha
Marlatt, Abby Lillian
Marriott, Alice Lee
Marsh, Mary Elizabeth
Marshall, Clara
Marshall, Sheina Macalister
Martin, Ella May
Martin, Emilie Norton
Martin, Lillien Jane
Martineau, Harriet
Martinez-Alvarez, Josefina
Mary the Jewess
Mason, Carol Y.
Mason, Marianne Harriet
Massee, Ivy
Massevitch, Alla Genrikhovna
Massey, Patricia
Massy, Anne L.
Masters, Sybilla (Righton)
Mateer, Florence Edna
Mateyko, Gladys Mary
Mather, Sarah
Mathias, Mildred Esther
Mathisen, Karoline
Matikashvili, Nina
Matilde
Maunder, Annie Scott Dill Russell
Maury, Antonia Caetana de Paiva
Maury, Carlotta Joaquina

Maver, Mary Eugenie
Maxwell, Martha Dartt
May, Caroline Rebecca
Mayer, Maria Goeppert
Mayo, Clara Alexandra (Weiss)
McAvoy, Blanche
McBride, Katharine Elizabeth
McCarthy, Dorothea Agnes
McClintock, Barbara
McConney, Florence
McCracken, Eileen May
McCracken, Elizabeth (Unger)
McCracken, Mary Isabel
McCrea, Adelia
McDonald, Janet
McDowell, Louise Sherwood
McGee, Anita (Newcomb)
McGlamery, Josie Winifred
McGraw, Myrtle Byram
McGuire, Ruth Colvin Starrett
McHale, Kathryn
McKeag, Anna Jane
McKinney, Ruth Alden
McLaren, Agnes
McLean, Helen (Vincent)
McNab, Catherine Mary
McVeigh, Ilda
Mead, Kate Campbell (Hurd)
Mead, Margaret
Measham, Charlotte Elizabeth (Cowper)
Mechthild of Magdeburg
Medaglia, Diamante
Medes, Grace
Medvedeva, Nina Borisovna
Mee, Margaret Ursula (Brown)
Meek, Lois Hayden
Meigler, Marie J.
Meitner, Lise
Melissa
Mellanby, May (Tweedy)
Memmler, Ruth Lundeen
Mendenhall, Dorothy (Reed)
Mendrez-Carroll, Christiane
Menten, Maud L.
Mentuhetep, Queen
Mercuriade
Meredith, Louisa Anne (Twamley)
Mergler, Marie
Merian, Maria Sibylla
Meritt, Lucy Taxis (Shoe)
Merriam, Florence
Merrifield, Mary Philadelphia (Watkins)
Merrill, Helen Abbot
Merrill-James, Maud Amanda
Messina, Angelina Rose
Metchnikova, Olga (Belokopytova)
Metrodora
Metzger, Hélène (Bruhl)
Meurdrac, Marie
Mexia, Ynes
Meyer, Margaret Theodora
Meyer-Bjerrum, Kirstine
Meyling-Hylkema, Elisabeth
Meznevics, Ilona
Michael, Helen Cecilia DeSilver Abbott
Michelet, Athénaïs (Mialaret)
Mildmay, Grace Sherrington
Miles, Catherine Cox
Mill, Harriet Hardy Taylor
Miller, Bessie Irving
Miller, Elizabeth Cavert
Miller, Olive Thorne
Minoka-Hill, Lillie Rosa
Minor, Jessie Elizabeth
Minot, Ann Stone
Mirchink, Maria E.
Mises Geiringer, Hilda von
Missuna, Anna Boleslavovna
Mitchell, Anna Helena
Mitchell, Evelyn Groesbeeck
Mitchell, Helen Swift
Mitchell, Maria
Mitchell, Mildred Bessie
Miyaji, Kunie
Mockeridge, Florence Annie
Moffat, Agnes K.
Mohr, Erna W.
Molesworth, Caroline
Molza, Tarquinia
Monin-Molinier, Madeline
Monson, Lady Anne Vane
Montague, Lady Mary Wortley
Montel, Eliane
Montessori, Maria
Moody, Agnes Claypole
Moody, Mary Blair
Mooney-Slater, Rose Camille LeDieu
Moore, Anne
Moore, Charlotte Emma
Moore, Emmeline
Moore, Lillian Mary
Moore, Mary Mitchell
Moore, Ruth Ella
Morehouse, Kathleen M.
Morgan, Agnes Fay
Morgan, Ann Haven
Morgan, Elizabeth Frances
Morgan, Lilian Vaughan Sampson
Moriarity, Henrietta Maria
Morozova, Valentina Galaktionovna
Morris, Margaretta Hare
Morse, Elizabeth Eaton
Morse, Meroë Marston
Morton, Emily L.
Morton, Rosalie Slaughter
Moser, Fanny
Mosher, Clelia Duel
Mottl, Mária
Moufang, Ruth
Mueller, Kate Heuvner
Muir-Wood, Helen Marguerite
Muller, Marie Claire Eimmart
Murphy, Lois Barclay
Murray, Amelia Matilda
Murray, Lady Charlotte
Murray, Margaret Alice
Murray, Margaret Mary Alberta
Murray, Margaret Ransone
Murrell, Christine Mary
Murtfeldt, Mary
Muszhat, Aniela
Myers, Mabel Adelaide
Myia or Mya
Nance, Nellie Ward
Napper, Diana Margaret
Nasymuth, Dorothea Clara (Maude)
Naumova, Sofiya Nickolaevna
Naylor, Bertha
Neal, Marie Catherine
Necker, Susanne (Curchod)
Needham, Dorothy Mary (Moyle)
Neiburg, Maria Feodorovna
Nelson, Katherine Greacen
Nemcová-Hlobilová, Jindriska
Nemir, Rosa Lee
Netrasiri, Khunying Cherd-Chalong
Neuburg Maria Feodorovna
Neumann, Elsa
Neumann, Hanna (von Caemmerer)
Nevill, Lady Dorothy Frances (Walpole)
Newbigin, Marion Isabel
Newson, Mary Frances Winston
Newton, Margaret
Nice, Margaret Morse
Nicerata, Saint
Nichols, Mary Louise
Nichols, Mary Sargeant Neal Gove
Nicholson, Barbara Evelyn
Nickerson, Dorothy
Nickerson, Margaret (Lewis)
Nicosia, Maria Luisa
Nieh, Chung-en
Nightingale, Dorothy Virginia
Nightingale, Florence
Nihell, Elizabeth
Noddack, Ida Eva Tacke
Noel, Emilia Frances
Noether, Amalie Emmy
Nolde, Hélène Aldegonde de
Nolte, Margarethe
Norsworthy, Naomi
North, Marianne
Northrup, Ann Hero
Novoselova, Aleksandra Vasil'evna
Noyes, Mary Chilton
Nuttall, Gertrude (Clarke)
Nuttall, Zelia Maria Magdalena
Nutting, Mary Adelaide
O'Brien, Charlotte Grace
O'Brien, Ruth
O'Connell, Marjorie
O'Malley, Lady Emma Winifred (Hardcastle)
O'Reilly, Helen
O'Shea, Harriet Eastabrooks
Obrutsheva, A.
Occello of Lucania
Odlum, Doris
Ogilvie, Ida Helen
Ogilvie-Gordon, Dame Maria Matilda
Ogino, G.

Ohnesorge, Lena
Okey, Ruth Eliza
Olympias of Thebes
Onslow, Muriel (Wheldale)
Oppenheimer, Ella Hutzler
Oppenheimer, Jane Marion
Ordan, Laura G.
Orent-Keiles, Elsa
Origenia
Ormerod, Eleanor Anne
Orr, Mary
Osterhaut, Marian Irwin.
Oszast, Janina Celina
Owen, Luella Agnes
Owens, Margaret
Owens-Adair, Bethenia
Pabst, Marie B.
Pacaud, Suzanne
Page, Mary Maud
Page, Winifred Mary
Paget, Dame Mary Rosalind
Paget, Rose Elizabeth
Paine, Mary Esther (Trueblood)
Pajchlowa, Maria Leokadia
Pallis, Marietta
Palmer, Alice W
Palmer, Dorothy Bryant (Kemper)
Palmer, Elizabeth Day
Palmer, Katherine Evangeline Hilton (Van Winkle)
Palmer, Margaretta
Palmer, Miriam Augusta
Palmer, Sophia French
Palmie, Anna Helene
Panajiotatou, Angeliki
Paphnutia the Virgin
Paris, Marie-Louise
Parke, Mary Winifred
Parker, Ivy May
Parkins, Phyllis Virginia
Parloa, Maria
Parmelee, Ruth A.
Parrish, Rebecca
Parry, Angenette
Parsons, Elizabeth Ingersoll
Parsons, Eloise
Parsons, Elsie Worthington (Clews)
Parsons, Emily Elizabeth
Parsons, Helen Tracy
Parsons, Mary, Countess of Rosse
Parthenay, Catherine de (Dame de Rohan)
Pasternak, Lydia
Pasteur, Marie (Laurent)
Pastori, Giuseppina
Pastori, Maria
Patch, Edith Marion
Patrick, Ruth
Patterson, Flora Wambaugh
Pattullo, June Grace
Paula
Paulsen, Alice Elizabeth
Paulucci, Marianna, Marchesa
Pavenstedt, Eleanor
Pavlova, Mariia Vasil'evna
Payne, Nellie Maria de Cottrell
Payne, Rose Marise
Payne, Sylvia May (Moore)
Payne-Gaposchkin, Cecilia Helena
Peak, Helen
Pearce, Louise
Pearl, Maud Dewitt
Pechey-Phipson, Mary Edith
Peckham, Elizabeth (Gifford)
Peebles, Florence
Pell, Anna Johnson
Pelletier, Madeleine
Pendleton, Ellen Fitz
Pennington, Mary Engle
Pensa-Joja, Josipa
Penston, Norah Lilian
Perceval, Anne Mary (Flower)
Pereiaslavtseva, Sof'ia Mikhailovna
Pereira de Queiroz, Carlota
Perette of Rouen
Peretti, Zaffira
Perey, Marguerite Catherine
Perictione
Perlmann, Gertrude Erika
Pernell
Péronelle
Perrette, Berthe
Pertz, Dorothea Frances Matilda
Péter, Rózsa
Petermann, Mary Locke
Peterson, Edith (Runne)
Peterson, Ruth Dixon
Petran, Elizabeth Irene
Petrova, Maria Kapitonovna
Pettersson, Dagmar
Pettit, Hannah Steele
Pettit, Mary Dewitt
Pettracini, Maria
Pfeiffer, Ida (Reyer)
Pfeiffer, Norma Etta
Pfiester, Lois Ann
Phelps, Almira Hart Lincoln
Phelps, Martha Austin
Philip, Anna-Ursula
Phillips, Melba Newell
Philpot, Elizabeth
Philpot, Margaret
Philpot, Mary
Phisalix, Marie (Picot)
Piazolla-Beloch, Margherita
Piccard, Sophie
Pickett, Lucy Weston
Pickford, Grace Evelyn
Pickford, Lilian Mary
Picotte, Susan (La Flesche)
Pierce, Madelene Evans
Pierce, Marion (Armbruster)
Pierry, Louise Elizabeth du
Pilliet, Blanche Edwards
Pinckney, Eliza (Lucas)
Pink, Olive Muriel
Piozzi, Hester Lynch
Pirami, Edmea
Pirie, Antoinette
Pirie, Mary
Pirret, Ruth
Pisan, Christine de
Piscopia, Helena Lucretia Cornaro
Pitt-Rivers, Rosalind Venetia (Henley)
Pittman, Margaret Jane
Platt, Julia Barlow
Plues, Margaret
Plues, Margaret
Plummer, Helen Jeanne (Skewes)
Pockels, Agnes
Pocock, Mary Agard
Pogson, Iris
Pokrovskaia, Irina Mitrofanovna
Pokrovskaia, Mariia Ivanovna
Polenova, Yelena Nikolayevna
Pollack, Flora
Polubarinova-Kochina, Pelageya Yakovelevna
Ponse, Kitty
Pool, Judith Graham
Pope, Clara Maria (Leigh)
Popenoe, Dorothy K. (Hughes)
Porada, Edith
Porter, Gene Stratton
Porter, Helen Kemp Archbold
Porter, Lilian E. (Baker)
Porter, Mary Winearls
Potter, Beatrix
Potter, Edith Louise
Potter, Ellen Culver
Potts, Eliza
Povitsky, Olga Raissa
Powdermaker, Hortense
Pozaryska, Krystyna (Maliszewski)
Prádacová, Marcella
Prankerd, Theodora Lisle
Pratt, Anne
Pressey, Luella (Cole)
Preston, Ann
Preston, Isabella
Prestwich, Grace Anne (Milne) M'Call
Price, Dorothy
Price, Dorothy (Stopford)
Prichard, Marjorie Mabel Lucy
Prince, Helen Walter (Dodson)
Pringle, Elizabeth Waties (Allston)
Pringle, Mia Lilly (Kellmer)
Prins, Ada
Proctor, Mary
Proskouriakoff, Tatiana
Pruette, Lorine Livingston
Prytz, Milda Dorothea
Puffer, Ethel Dench
Pulcheria, Empress
Putnam, Helen Cordelia
Putnam, Marian Cabot
Putnam, Mary Louise (Duncan)
Pye, Edith Mary
Pythias of Assos
Queiroz, Carlotta Pereira de
Quiggle, Dorothy
Quimby, Edith Smaw (Hinckley)
Quirk, Agnes

Quiroga, Margarita Delgado de Solis
Rabinoff, Sophie
Rabinovitch-Kempner, Lydia
Radegonde
Radnitz, Gerty.
Rafatdjah, Safieh
Ragins, Ida.
Raisin, Catherine Alice
Ramart-Lucas, Pauline
Ramirez, Rosita Rivera
Ramsay, Christina (Broun), Countess of Dalhousie
Ramsey, Elizabeth Mapelsden
Ramstedt, Eva Julia Augusta
Rancken, Saima Tawast
Rand, Marie Gertrude
Randoin, Lucie Gabrielle (Fandard)
Randolph, Harriet
Rasskazova, Yelena Stepanovna
Rathbone, Mary May
Rathbun, Mary Jane
Ratnayake, May
Ratner, Sarah
Rauzer-Chernousova, Dagmara M.
Ray, Dixy Lee
Raymond-Schroeder, Aimee J.
Rayner, Mabel Mary Cheveley
Rea, Margaret Williamson
Reames, Eleanor Louise
Reddick, Mary Logan
Reder, Ruth Elizabeth
Redfield, Helen
Reed, Eva M.
Rees, Florence Gwendolen
Rees, Mina Spiegel
Refshauge, Joan Janet
Reichard, Gladys Amanda
Reid, Eleanor Mary (Wynne Edwards)
Reid, Mary Elizabeth
Reimer, Marie
Reinhardt, Anna Barbara
Remond, Sarah Parker
Renooz, Céline
Reynolds, Doris Livesey
Rhine, Louise Ella (Weckesser)
Rhodes, Mary Louise
Rice, Elsie (Garrett)
Rice-Wray, Edris
Rich, Mary Florence
Richards, Audrey Isabel
Richards, Clarice Audrey
Richards, Ellen Henrietta Swallow
Richards, Mary Alice Eleanor (Stokes)
Richards, Mildred Hoge (Albro)
Richter, Emma (Hüther)
Richter, Grete
Riddle, Lumina Cotton
Ridenour, Nina
Rigas, Harriett B.
Ring, Barbara Taylor
Rioch, Margaret J.
Ripley, Martha (Rogers)
Rising, Mary Meda
Risseghem, Hortense van
Ritter, Mary Elizabeth (Bennett)
Riviere, Joan (Verrall)
Rob, Catherine Muriel
Robb, Jane (Sands)
Robb, Mary Anne (Boulton)
Roberts, Charlotte Fitch
Roberts, Dorothea Klumpke
Roberts, Edith Adelaide
Roberts, Lydia Jane
Roberts, Mary
Robertson, Florence
Robertson, Jeannie (Smillie)
Robertson, Muriel
Robeson, Eslanda Cordoza (Goode)
Robinson, Daisy Maude (Orleman)
Robinson, Gertrude Maud (Walsh)
Robinson, Harriet May Skidmore
Robinson, Julia (Bowman)
Robinson, Margaret (King)
Robinson, Pamela Lamplugh
Roboz-Einstein, Elizabeth
Robscheit-Robbins, Frieda Saur
Rockley, Lady Alicia Margaret (Amherst)
Rockwell, Alice Jones
Rockwell, Mabel Macferran
Rodde, Dorothea von (Schlözer)
Roe, Anne
Roe, Josephine Robinson
Roger, Muriel
Rogers, Agnes Lowe
Rogers, Julia Ellen
Rogers, Marguerite Moillet
Rogick, Mary Dora
Rohde, Eleanour Sinclair
Róna, Elisabeth
Ronzoni, Ethel (Bishop)
Roper, Ida Mary
Roper, Margaret
Rose Stoppel
Rose, Flora
Rose, Glenola Behling
Rose, Mary Davies Swartz
Rosenberg, Mary Elizabeth
Rosenfeld, Eva
Ross, Joan Margaret
Ross, Marion Amelia Spence
Ross, Mary G.
Rosse, Mary, Countess of
Rothschild, Miriam
Roupell, Arabella Elizabeth (Piggott)
Royer, Clémence
Rozanova, Mariia Aleksandrovna
Rozovna, Evdokia Aleksandrovna
Rubin, Vera (Dourmashkin)
Rucker, Augusta
Rudnick, Dorothea
Rumbold, Caroline (Thomas)
Russell, Anna (Worsley)
Russell, Annie
Russell, Dorothy
Russell, Jane Anne
Ruth Tunnicliff
Ruys [Ruijs], Anna Charlotte
Ruysch, Rachel
Rydh, Hanna
Sabin, Florence Rena
Sablière, Marguerite (Hessein) de la
Sabuco Banera D'Alcaraz, Olivia
Sackville-West, Victoria Mary
Safford, Mary Jane
Sager, Ruth
Salbach, Hilde
Sale, Rhoda
Salmon, Eleanor Seely
Salpe
Sampson, Kathleen Samuel
Sanborn, Ethel
Sandford-Morgan, Elma (Linton)
Sandhouse, Grace Adelbert
Sandiford, Irene
Sanford, Vera
Sanger, Margaret Higgins
Sara of Saint-Gilles
Sara of Würzburg
Sargant, Ethel
Sargent, Winifred
Satur, Dorothy May
Saunders, Edith Rebecca
Savulescu, Olga
Sawin, Martha
Say, Lucy (Sistare)
Scarpellini, Caterina
Schaffner, Mabel (Brockett)
Schantz, Viola Shelly
Scharlieb, Dame Mary Ann Dacomb (Bird)
Scharrer, Berta (Vogel)
Schiemann, Elisabeth
Schliemann, Sophia (Kastromenos)
Schmid, Elisabeth
Schmideberg, Melitta (Klein)
Schmidt, Johanna Gertrud Alice
Schmidt-Fischer, Hildegard
Schoenfeld, Reba Willits
Schoental, Regina
Schofield, Brenda Muriel
Schraders, Catharina Geertruida
Schubert, Anna
Schulze, Caroline M. (Bertillon)
Schurman, Anna Marie van
Schwidetsky, Ilse
Scotland, Minnie (Brink)
Scott, Charlotte Angas
Scott, Flora Murray
Scott, Henderina Victoria (Klaassen)
Scudder, Ida Sophia
Seaman, Elizabeth Cochrane
Sears, Pauline Snedden
Seegal, Beatrice Carrier
Seibert, Florence Barbara
Seligman, Brenda Zara
Semikhatova, Sofia Viktorovna (Karpova)
Semple, Ellen Churchill
Serment, Louise-Anastasia
Sessions, Kate Olivia
Sewall, Lucy
Seward, Georgene Hoffman
Shabanova, Anna Nikolaevna

Shakespear, Dame Ethel Mary Reader (Wood)
Sharp, Emily Katharine (Dooris)
Sharp, Jane
Sharsmith, Helen Katherine
Shattuck, Lydia White
Shaw, Hester
Sheldon, Jennie Arms
Shepardson, Mary (Thygeson)
Sheps, Mindel (Cherniack)
Sherbourne, Margaret Dorothea (Willis)
Sherif, Carolyn (Wood)
Sherman, Althea Rosina
Sherman, Irene Case
Sherrill, Mary Lura
Shields, Margaret Calderwood
Shinn, Milicent Washburn
Shirley, Mary Margaret
Shishkina, Olga Vasil'yevna
Short, Jessie May
Shove, Rosamund Flora
Shtern, Lina Sol o monovna
Shubnikova, Ol'ga Mikhailovna
Shulga-Nesterenko, Maria I.
Sibelius, Helena
Sichel, Elsa Marie (Keil)
Sidgwick, Eleanor (Balfour)
Siebold, Charlotte Marianne Heidenreich von
Siebold, Josepha (Henning) von
Siegemund, Justine Dittrich
Sieverts, Hertha
Signeux, Jeanne
Silberberg, Ruth Katzenstein
Silliman, Hepsa Ely
Simons, Lao Genevra
Simpson, Anne Roe
Sinclair, Mary Emily
Sinskaia, Evgeniia Nikolaevna
Sitterly, Charlotte Emma (Moore)
Skeat, Ethel Gertrude
Skoczylas-Ciszewska, Kamila
Slater, Ida Lilian
Slater, Jesse Mabel Wilkins
Slavikova, Ludmila (Kaplanova)
Slosson, Annie Trumbull
Slye, Maud
Smart, Helen Edith (Fox)
Smedley, Ida
SmirnovaZamkova, Aleksandra Ivanovna
Smith, Adelia Calvert
Smith, Alice Emily
Smith, Anne Millspaugh (Cooke)
Smith, Annie Lorrain
Smith, Annie Morrill
Smith, Audrey U.
Smith, Clara Eliza
Smith, Elizabeth (Hight)
Smith, Emily Adelia (Pidgen)
Smith, Erma Anita
Smith, Erminnie Adele (Platt)
Smith, Isabel Fothergill
Smith, Isabel Seymour
Smith, Janice Minerva
Smith, Margaret Kiever
Smith, Marian Wesley
Smith, Matilda
Smith, Olive Watkins
Smith, Pleasance (Reeve)
Smith, Winifred
Snelling, Lilian
Snethlage, Emilie
Snow, Julia Warner
Snow, Mary (Pilkington)
Soddy, Winifred Moller (Beilby)
Sokol'skaya, Anna Nikolayevna
Solis Quiroga, Margarita Delgado de
Sollas, Igerna Brünhilda Johnson
Solomko-Sotiriadis, Evgeniia
Somerville, Mary (Fairfax) Greig
Sommer, Anna Louise
Sophia Charlotte, Queen of Prussia
Sophia, Electress of Hanover
Sorokin, Helen Petrovna (Beratynskaiia)
Soshkina, Elizabeth D.
Sotira
Souczek, Helene
South, Lillian Herrald
Sowton, Sarah C. M.
Spalding, Effie Southworth
Spence, Eliza Jane (Edmondson)
Spencer, Adelin Elam
Sperry, Pauline
Spiegel-Adolf, Mona
Sponer-Franck, Hertha Dorothea Elisabeth
Sprague, Mary Letitia (Green)
Spratt, Ethel Rose
Stackhouse, Emily
Stadnichenko, Tasia Maximovna
Stael-Holstein, Anne Louise Germaine Necker
Stanley, Louise
Stanton, Hazel Martha
Staudinger, Magda (Woit)
Stearns, Genevieve
Steed, Gitel Poznanski
Stefanescu, Sabba
Stein, Emmy
Steinhardt, Edna
Stelfox, Margarita Dawson (Mitchell)
Stenhouse, Caroline
Stephens, Jane
Stephens, Joanna
Stephenson, Marjory
Stern, Catherine (Brieger)
Stern, Frances
Stevens, Nettie Maria
Stevenson, Matilda Coxe (Evans)
Stevenson, Sara (Yorke)
Stevenson, Sarah Ann (Hackett)
Stewart, Grace Anne
Stewart, Isabel Maitland
Stewart, Maude
Stewart, Sarah Elizabeth
Stiebeling, Hazel Katherine
Stieglitz, Mary Rising
Stimson, Barbara Bartlett
Stinchfield, Sara Mae
Stokes, Margaret McNair
Stokey, Alma Gracey
Stone, Constance
Stone, Doris Zemurray
Stone, Isabelle
Stopes, Marie Charlotte Carmichael
Stose, Anna Isabel (Jonas)
Stott, Alicia (Boole)
Stovin, Margaret
Stowe, Emily Howard (Jennings)
Strachey, Alix (Sargant-Florence)
Strang, Ruth May
Strassmann-Heckter, Maria Caroline
Stratton Porter, Gene
Strobell, Ella Church
Strong, Harriet Williams (Russell)
Strong, Helen Mabel
Strong, Miriam Carpenter
Strozzi, Lorenza
Stuart, Miranda
Sullivan, Betty Julia
Sullivan, Elizabeth Teresa
Sullivan, Ellen Blythe
Summerskill, Edith Clara
Sundquist, Alma
Sunne, Dagny
Suslova, Nadezhda Prokof'evna
Sutter, Vera LaVerne
Svartz, Nanna Charlotta
Svihla, Ruth Dowell
Swain, Clara A.
Swallow, Ellen
Swanson, Pearl Pauline
Swift, Mary
Swindler, Mary Hamilton
Swope, Helen Gladys
Swope, Henrietta (Hill)
Sykes, Mary Gladys
Syniewska, Janina
Szeminska, Alina
Szeparowicz, Maria
Szmidt, Jadwiga
Szwajger, Adina Blady
Taeuber, Irene Barnes
Taft, Jessie
Takeuchi, Shigeyo
Talbot, Dorothy Amaury
Talbot, Marion
Talbot, Mary
Talbot, Mignon
Taliaferro, Lucy (Graves)
Tammes, Jantine
Tannery, Marie Alexandrine (Prisset)
Taussig, Helen Brooke
Taussky-Todd, Olga
Taylor, Charlotte De Bernier Scarborough
Taylor, Clara Mae
Taylor, Clara Millicent
Taylor, Eva Germaine Rimington
Taylor, Helen
Taylor, Janet
Taylor, Lucy Beaman (Hobbs)
Taylor, Monica
Taylor, Rose H.

Teagarden, Florence Mabel
Tebb, Mary Christine
Telfair, Annabella (Chamberlain)
Telkes, Maria
Tenenbaum, Estera
Terent'eva, Liudmila Nikolaevna
Terry, Ethel Mary
Terzaghi, Ruth Doggett
Tessier, Marguerite
Tetsuo, Tamayo
Theano
Thelander, Hulda Evelin
Thelberg, Elizabeth (Burr)
Thelka, Saint
Theodora, Empress
Theodosia, Saint
Theosebeia
Thiselton-Dyer, Lady Harriet Ann (Hooker)
Thoday, Mary Gladys Sykes
Thomas, Caroline (Bedell)
Thomas, Dorothy Swaine (Thomas)
Thomas, Ethel Nancy Miles
Thomas, Mary Frame (Myers)
Thome, Frances
Thompson, Caroline Burling
Thompson, Clara Mabel
Thompson, Helen
Thompson, Laura
Thompson, Mary Harris
Thompson, Rachel Ford
Thompson, Rose Elizabeth (Paget)
Thompson, Sydney Mary
Thoms, Adah B. (Samuels)
Thomson, Agnes C.
Thomson, Jane Smithson
Thring, Lydia Eliza Dyer (Meredith)
Thurstone, Thelma Gwinn
Tiburtius, Franziska
Tilden, Evelyn Butler
Tilden, Josephine Elizabeth
Timofe'eff-Ressovsky, Elena Aleksandrovna (Fiedler)
Tindall, Isabella Mary
Tinne, Alexandrina Petronella Francina
Tinsley, Beatrice Muriel (Hill)
Tipper, Constance Fligg (Elam)
Tisserand, M.
Todd, Emily Sophia
Todd, Mabel Loomis
Todd, Ruth
Todtmann, Emmy Mercedes
Tolman, Ruth (Sherman)
Tomaszewicz-Dobrska, Anna
Tompkins, Sally Louisa
Tonnelat, Marie-Antoinette (Baudot)
Toops, Laura Chassell (Merrill)
Towara, Hélène
Town, Clara Harrison
Tracy, Martha
Traill, Catharine Parr (Strickland)
Treat, Mary Lua Adelia (Davis)
Trimmer, Sarah (Kirby)
Tristram, Ruth Mary (Cardew)
Trizna, Valentina Borisovna
Trotter, Mildred
Trotula
Trower, Charlotte Georgiana
Tsvetaeva, Maria
Tum-Suden, Caroline
Tumanskaya, Olga G. (Shirokobruhova)
Tunakan, Seniha (Hüsnü)
Turnbull, Priscilla Freudenheim
Turner, Abby Howe
Turner, Mary (Palgrave)
Twining, Elizabeth Mary
Tyler, Leona Elizabeth
Tyler, Martha G.
Tyndall, A. C.
Tyng, Anita E.
Tyska, Maria
Ubisch, Gerta von
Underhill, Ruth Murray
Ushakova, Elizaveta Ivanovna
Uvarova, Countess Praskov'ia Sergeevna
Vachell, Eleanor
Valentine, Lila Hardaway (Meade)
Van Beverwijk, Agathe L.
Van Blarcom, Carolyn (Conant)
Van Deman, Esther Boise
Van Hoosen, Bertha
Van Rensselaer, Martha
Van Wagenen, Gertrude
Varsanof'eva, Vera Aleksandrovna
Vasilevich, Glafira Makar'evna 1895–1971
Vaughan, Dame Janet
Vavrinova, Milada
Veil, Suzanne Zélie Pauline
Veley, Lilian Jane (Nutcombe)
Venning, Eleanor (Hill)
Verder, Ada Elizabeth
Veretennikova, Anna Ivanovna
Vernon, Magdalen Dorothea
Vesian, Dorothy E. de
Vickers, Anna
Vilar, Lola
Vilmorin, Elisa (Bailly)
Vivian, Roxana Hayward
Vogt, Cécile (Mugnier)
Vogt, Marthe Louise
Vold, Marjorie Jean Young
Volkova, Anna Fedorovna
Von Schroeder, Edith
Vyssotsky, Emma T. R. (Williams)
Vytilingam, Kamala Israel
Waelsch, Salome Gluecksohn
Wakefield, Elsie Maud
Wakefield, Priscilla (Bell)
Walcott, Helene B. (Stevens)
Walcott, Mary Morris (Vaux)
Wald, Lillian D.
Walker, Eliza
Walker, Elizabeth
Walker, Harriet Ann
Walker, Helen Mary
Walker, Mary Edward
Walker, Norma (Ford)
Wall, Florence
Wallace, Louise Baird
Wallis, Ruth Sawtell
Walworth, Ellen Hardin
Wang Chi Che
Wang Zhenyi
Ward, Mary (King)
Warga, Mary Elizabeth
Waring, Sister Mary Grace
Warren, Elizabeth Andrew
Warren, Madeleine (Field)
Washburn, Margaret Floy
Washburn, Ruth
Wassell, Helen Erma
Watkins, Della Elizabeth (Ingram)
Watson, Janet Vida
Watt, Helen Winifred Boyd (de Lisle)
Watt, Menie
Watts, Betty (Monaghan)
Way, Katharine
Webb, Jane
Weber, Anne Antoinette (van Bosse)
Webster, Mary McCallum
Wedderburn, Jemima
Wedgwood, Camilla Hildegarde
Wedgwood, Mary Louisa (Bell)
Weeks, Alice Mary (Dowse)
Weeks, Dorothy W.
Weeks, Mary Elvira
Weightman, Mary
Weinzierl, Laura (Lane)
Weishaupt, Clara Gertrude
Weiss, Marie Johanna
Weiss, Mary Catherine (Bishop)
Welch, Betty
Welch, Winona Hazel
Weld, Julia Tiffany
Wellman, Beth Lucy
Wells, Agnes Ermina
Wells, Charlotte Fowler
Wells, Louisa D.
Welser, Philippine
Welsh, Jane Kilby
Welsh, Lilian
Weltfish, Gene
Wertenstein, Mathilde
Wessel, Bessie (Bloom)
West, Ethel
Westall, Mary
Westcott, Cynthia
Westover, Cynthia May
Wharton, Martha Lucille
Whedon, Frances Lovisa
Wheeler, Anna Johnson Pell
Wheeler, Elizabeth Lockwood
Wheeler-Voeglin, Erminie Brooke
White, Edith Grace
White, Eliza Catherine (Quekett)
White, Elizabeth Juanita (Greer)
White, Florence Roy
White, Frances Emily
White, Margaret Pirie
White, Marian Emily
Whitehead, Lilian Elizabeth
Whiteley, Martha Annie

Whiting, Marian Muriel
Whiting, Sarah Frances
Whitney, Mary Watson
Wick, Frances Gertrude
Wickens, Aryness Joy
Widdowson, Elsie May
Wiebusch, Agnes (Townsend)
Wienholz, Eva
Wilder, Inez (Whipple)
Wiley, Grace Olive
Wilkinson, Helen Avina (Hunscher)
Willard, Emma (Hart)
Willard, Mary Louisa
Willcock, Edith Gertrude (Gardiner)
Willcox, Mary Alice
Williams, Anna Wessels
Williams, Cicely Delphine
Williams, Marguerite (Thomas)
Willmott, Ellen Ann
Wilson, Alice Evelyn
Wilson, Aphra Phyllis
Wilson, Edith
Wilson, Fiammetta Worthington
Wilson, Hilda E.
Wilson, Irene Mossom
Wilson, Louise (Palmer)
Wilson, Lucy
Wilson, Lucy Langdon (Williams)
Wilson, Mabel Florey
Wilson, May Georgiana
Wilson, Monica Hunter
Winlock, Anna
Winner, Dame Albertine
Winthrop, Hannah Fayerweather Tolman
Winton, Kate Grace (Barber)
Wipf, Frances Louise
Withers, Augusta Innes (Baker)
Woillard-Roucoux, Geneviève Marie-Aurélie
Woker, Gertrud Jan
Wolf, Katherine
Wollstein, Martha
Wong Ah Mae
Wood, Emily Elizabeth
Wood, Emily Margaret
Wood, Ethel
Wood, Ruth Goulding
Wood-Lorz, Thelma (Rittenhouse)
Woodard, Helen (Quincy)
Woodbridge, Mary Emily
Woods, Elizabeth Lindley
Woods, Ethel Gertrude (Skeat)
Woodward, Gladys Estelle
Wooldridge, Elizabeth (Taylor)
Woolley, Ann
Woolley, Helen Bradford (Thompson)
Woolley, Mildred Thompson
Wootton, Barbara Adam
Wormington, Hannah Marie
Worner, Ruby K.
Worthington, Euphemia R.
Wrangell, Margarethe von
Wreschner, Marie
Wright, Frances May
Wright, Frances Woodworth
Wright, Helena Rosa (Lowenfeld)
Wright, Jean Davies
Wright, Katharine
Wright, Lady Catherine
Wright, Mabel Osgood
Wrinch, Dorothy Maud
Wu Chien-Shiung
Wundt, Nora
Wyckoff, Delaphine Grace (Rosa)
Wyckoff, Dorothy
Wylie, Margaret
Wynne, Frances Elizabeth
Wyttenbach, Jeanne Gallien
Young, Anne Sewell
Young, Grace Emily (Chisholm)
Young, Leona Esther
Young, Mabel Minerva
Young, Mary Sophie
Young, Roger Arliner
Zachry, Caroline Beaumont
Zaklinskaia, Elena Dmitrievna
Zakrzewska, Marie Elizabeth
Zalesskaya-Chirkova, Elena
Zaniewska-Chilpalska, Eugenia
Zeckwer, Isolde Therese
Zenari, Silvia
Zhuze, Anastasiya Panteleyemonovna
Ziegarnik, Bliuma
Zlatarovic, Rely

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LA CHAPELLE, MARIE LOUISE DUGÈS (1769–1821)

French midwife. Born 1 January 1769 in Paris to Marie Jonet and Louis Dugès. Married M. La Chapelle (1792). One child. Educated by mother; studied under obstetrician Franz Carl Naegele in Heidelberg. Professional experience: maternity department, Hôtel Dieu, Paris, director and instructor (1797–1821). Died 4 October 1821.

Marie Louise Dugès was the daughter of an officer of health and a competent midwife. Her midwife mother was the child's constant companion, and taught her all she knew about midwifery.

Dugès assisted at births from an early age. She married a surgeon at the Hôtel St. Louis in 1792, but after his death three years later, she had to support herself and her daughter, so she worked again as a midwife. While her mother was still alive, she had reorganized the maternity ward, and La Chapelle assisted her as associate chief midwife. After her mother's death in 1797, La Chapelle became head of the maternity department of the Hôtel Dieu. In 1797, she was asked to organize a new maternity department to be part of the old Hôtel Dieu but located in a former religious institution at Port Royal de Paris. This new Hospice de la Maternité was organized as a teaching hospital. The surgeon-in-chief and head of obstetrics, Jean-Louis Baudelocque, realized the need for a systematically organized school for midwives. In order to be a part of the reforms, La Chapelle went to Heidelberg to study, and then returned to France to organize the maternity and children's hospital at Port Royal. Baudelocque had great respect for La Chapelle's skills and practical acumen. They worked well together and developed a course of study for training midwives. After a year-long course, the students took a rigorous examination, and, if they passed, received a diploma from the Ecole de Médicine.

La Chapelle published her ideas on midwifery. Her *Pratique des accouchements* went through many editions and represented an important teaching source. In her teaching, she stressed the importance of noninterference with the birth process unless it was absolutely essential. She opposed the use of forceps except in cases of absolute necessity. JH/MBO

PRIMARY SOURCES

La Chapelle, Marie Louise Dugès. "Observations sur divers cas d'accouchements (rupture du vagin; présentation de la face; issue prématurée du cordon; accouchement précédé de convulsions)." *L'Annuaire des médecins et chirurgiens des hôpitaux* (1819):3.

———. *Pratique des accouchements, ou mémoires et observations choisies, sur les points les plus importants de l'art.* Paris: J. B. Ballière, 1821–1825.

SECONDARY SOURCES

Cutter, Irving S., and Henry R. Viets. *A Short History of Midwifery.* Philadelphia: W. B. Saunders, 1964.

Delacoux, Alexis. *Biographie des sage-femmes célèbres, anciennes, modernes et contemporaines.* Paris: Trinquart, 1834.

Jex-Blake, Sophia. *Medical Women: A Thesis and a History.* Edinburgh: Oliphant, Anderson, and Ferrier, 1886. Discusses La Chapelle on page 33.

STANDARD SOURCES

Alic; Hurd-Mead; Lipinska 1930 (includes a portrait); Ogilvie 1986; Shearer and Shearer 1996 (article by Irmgard Wolfe).

LADD-FRANKLIN, CHRISTINE (1847–1930)

U.S. logician and psychologist, known for her work on color vision. Born 1 December 1847 in Windsor, Conn., to Augusta (Niles) and Eliphalet Ladd. Married Fabian Franklin. One surviving daughter. Educated Wesleyan Academy, Wilbraham, Mass. (graduated, 1865); Vassar College (A.B., 1869); Johns Hopkins University (1878–

1882; Ph.D., 1926). Professional experience: Johns Hopkins University, lecturer in psychology and logic (1904–1909); Columbia University, lecturer in psychology and logic (1914–1927). Died 1847 in New York City.

Christine Ladd, the eldest of three children of a New York City merchant, was the product of old New England stock. She spent her early childhood in New York and Connecticut; after the death of her mother when she was twelve, she lived in Portsmouth, New Hampshire, with her paternal grandmother. In 1865 she was graduated from the Wesleyan Academy in Wilbraham, Massachusetts, as class valedictorian.

At Vassar College, where she spent two years (receiving a bachelor's degree in 1869), Ladd concentrated on mathematics. Her real interest, however, was in physics; but knowing that graduate laboratory facilities were unavailable to women, she chose instead a field she could pursue independently. For nine years after leaving Vassar, she taught science at the secondary-school level and published articles on mathematics in the British *Educational Times.*

Drawn to the research facilities at the newly founded Johns Hopkins University, Ladd applied for admission as a graduate student in 1878. Although the school was not open to women, a mathematics professor there, James Sylvester, recognized her name from her publications and prevailed upon the administration to allow her to attend his own lectures only. Upon demonstrating her abilities, she was permitted to attend the lectures of the mathematicians Charles Sanders Pierce and William Story. Ladd studied at Hopkins for four years and fulfilled the requirements for a doctorate, but was not awarded the degree until 1926. Nonetheless she held a lectureship in logic and psychology there from 1904 to 1909. In 1882, after completing her graduate studies, she married Fabian Franklin, a member of the mathematics department. One of the couple's two children, Margaret, survived to maturity.

Ladd-Franklin is remembered for her work in two disparate fields, symbolic logic and the theory of vision. She became interested in the former during her studies under C. S. Pierce, and contributed a paper, "The Algebra of Logic," to Pierce's 1883 volume *Studies in Logic by Members of the Johns Hopkins University.* Her major contributions, however, were in the field of psychology, specifically in the study of color vision.

Ladd-Franklin had been intrigued by visual problems since the mid-1880s. During her husband's sabbatical year in 1891–1892, she accompanied him to Europe and did research in the laboratories of G. E. Müller in Göttingen and Hermann von Helmholtz in Berlin. In Berlin she also attended the lectures of Arthur König. König and Helmholtz held a three-color theory of color vision, whereas Müller posited three opponent-color pairs; Ladd-Franklin developed her own hypothesis, in which the red and green senses are held to have developed out of the more primitive yellow sense. Ladd-Franklin presented her theory at the International Congress of Psychology in London in 1892.

After Fabian Franklin took up journalism in 1895, he was made associate editor of the New York *Evening Post* in 1910. During the couple's years in New York, Christine Ladd-Franklin lectured on psychology and logic at Columbia University. Rossiter has detailed her anger at learning that the Society of Experimental Psychologists, which had rigorously excluded women, would meet at Columbia to discuss color theory in 1914. After unsuccessful attempts to attend, she finally resorted to the tactic of requesting James McKeen Cattell to take her as a guest. None of the men had the courage to throw her out of the "masculine session" on color theory upon which she was an international authority. Ladd-Franklin continued to be active throughout her life in the cause of women's suffrage and in support of women's educational opportunities. She died of pneumonia at age eighty-two. JH/MBO

PRIMARY SOURCES

Ladd-Franklin, Christine. "The Algebra of Logic." In C. S. Pierce, *Studies in Logic.* Boston: Little, Brown, 1883.

———. *Colour and Colour Theories.* London: K. Paul, Trench, Trubner, 1929.

SECONDARY SOURCES

Hawkins, Hugh. *Pioneer: A History of the Johns Hopkins University, 1874–1889.* Ithaca, N.Y.: Cornell University Press, 1960. Discusses Ladd-Franklin's admission to the university.

STANDARD SOURCES

AMS 4; *DAB, NAW* (article by Dorothea Jameson Hurvich); *Notable;* Ogilvie 1986; Rossiter 1982.

LADYGINA-KOTS, NADEZHDA NIKOLAEVNA (1889–1963)

Russian zoopsychologist. Born 18 May 1889 in Penza. Educated Moscow Higher Women's Courses; Moscow University (doctor of biological sciences). Professional experience: Darwin Museum in Moscow, zoopsychology laboratory, director; Institute of Philosophy of the Soviet Academy of Sciences, senior research officer. Honors and memberships: Honored Scientist of the Russian Soviet Federated Social Republic (RSFSR). Died 3 September 1963 in Moscow.

Nadezhda Nikolaevna Ladygina-Kots's early career was connected with the Darwin Museum in Moscow, founded in 1907 by the biologist A. F. Kots as part of the Higher Women's Courses. (It became an independent institution in 1922.) In 1913, Ladygina-Kots set up a zoopsychology laboratory at the Darwin Museum, which she directed for many

years. In 1916 she graduated from the Women's Higher Courses in Moscow and finished the course at Moscow University a year later. In 1945 she became a senior research assistant at the Institute of Philosophy of the Soviet Academy of Sciences.

Ladygina-Kots's chief object of research was comparative psychology of apes and humans. She studied the psychological activity of primates with particular emphasis on the behavior of chimpanzees. In her published studies, she compared the cognitive abilities, emotions, play behavior, intelligence, and habits of human children with those of young chimpanzees.

Ladygina's work demonstrated differences and similarities in the psychology of humans and animals and added to knowledge of zoopsychology, comparative psychology and anthropology. In 1960, she was named an Honored Scientist of the Russian Soviet Federated Socialist Republic (RSFSR). She was also awarded the Order of Lenin and other medals.

ACH

PRIMARY SOURCES

Ladygina-Kots, Nadezhda Nikolaevna. *Prisposobitel'nye motornye navyki makaka v usloviiakh eksperimenta.* Moscow: Izdanie Gosudarstvennnogo Darvinovskogo Muzeiia (Scientific Memoirs of the Darwin Museum, Moscow), 1928. Treats adaptive behavior of Macacus rhesus monkeys under experimental conditions.

———. *Ditia shimpanze i ditia cheloveka, v ikh instinktakh, emotsiakh, igrakh, privychkakh i vyrazitel'nykh kvizheniiakh s 145 tablitsami.* Moscow: Izvestiva Gosudarstvennogo Darvinskogo Muzei, 1935. On the instinctive and emotional behavior of chimpanzees.

———. *Predposylki chelovecheskogo myshleniia: podrazhatel'noe konstruirovanie obez'ianoi i det'mi.* Moscow: Nauka, 1965. On imitation in children.

SECONDARY SOURCES

Bol'shaia sovetskaia entsiklopediia. 3d. ed. Moscow: Izd-vo "Sovietskaia entsiklopediia," 1973.

LAIRD, CAROBETH (TUCKER) (1895–1983)

U.S. ethnographer and linguist. Born 20 July 1895 in Coleman, Tex. to Emma Cora (Chaddock) and James Tucker. Married (1) John Peabody Harrington (1916; divorced 1923?); (2) George Laird (died 1940). Seven children. Educated: San Diego Normal School, summer school (1915). Professional experience: Bureau of Ethnology field assistant (to Harrington) (1916–1923); Rancher (1924–1940); Christian Science practitioner (1940–1960). Honors and memberships: University of Arizona, Honorary Doctorate (1983). Member Southwestern Anthropological Society. Died 5 August 1983 in Poway, CA.

Carobeth Tucker had an unconventional background for an anthropologist. Raised in Texas as the only child of Methodist parents, she was an early reader with an uncanny ear for languages, encouraged by her father who was a printer. Accompaning her parents to Mexico on a summer trip at the age of fourteen, she met an older man in Mexico City with whom she had a brief romance resulting in the birth of a child. Her parents took over the raising of her daughter, and she moved with them to San Diego when she was seventeen. There, she was unable to finish high school, and instead took summer classes at the San Diego Normal School. There she met an eccentric linguist, John Peabody Harrington, who was delighted in her perfect ear for linguistic subtleties and trained her in his specialty. When the Bureau of Ethnology hired him the following year to record the dying Native American languages, the couple was married and Carobeth accompanied her husband as field assistant, chauffeur, secretary, and unpaid servant. Many years later she wrote extensively about her experiences in her book *Encounter with an Angry God.*

A child was born to the couple, but her husband insisted that this daughter also be left with her parents so that husband and wife could continue their gypsy life in the field. After three years, Harrington sent his wife on linguistic collecting trips by herself. In Parker, Arizona, she met George Laird, twenty years older than she, with whom she began to record materials on the disappearing Chemehuevi language and culture. After four years of working with George Laird as an informant, Carobeth decided to divorce Harrington and marry Laird. They moved to a small ranch in Poway, near San Diego, where they raised five children, and some crops, and George Laird also worked at a number of minor jobs.

Over the next twenty years, Carobeth Laird continued to record Chemehuevi myths in the Chemehuevi language, eventually producing an unusually complete collection. When her husband died suddenly in 1940, she sought work as a Christian Science practitioner, maintaining that position for the next twenty years while completing her manuscript on the Chemehuevis. Her attempts to publish it were frustrated by a dismissive anthropology professor at the University of California, Los Angeles, and for many years the manuscript disappeared from view until it was rediscovered in 1976.

In 1974, almost eighty and discouraged, Laird began to write and publish a few articles on Chemehuevi folklore. Encouraged to write about her life and marriage to Harrington, the book was published the following year. It touched many of those in the anthropologist community because of its frank depiction of field anthropology and there was a growing interest about the author. Laird was rediscovered living in a nursing home where she had been forced to retire because of ill health. Rescued from what she later (in her

book *Limbo*) described as a dehumanizing situation, she found herself an accepted member of the anthropological community for the first time, at the age of eighty.

Laird began to see her work published; her major study on the Chemehuevi was rediscovered, and hailed; she attended and presented papers at anthropological meetings. As evidence of this reemergence, she was awarded an honorary doctorate of humane letters by the University of Arizona in 1983. Although she died that August at age eighty-seven, two other manuscripts were finished before her death: one a more complete look at George Laird's interpretation of Chemehuevi mythology, *Mirror and Pattern,* and the second, her final autobiography, *Pilgrim and Stranger.* Her field notes, tapes, and manuscripts are in the University of California, Riverside. JH/MBO

PRIMARY SOURCES

Laird, Carobeth. "The Buffalo in Chemehuevi Folklore." *Journal of California Anthropology* 1 (1974): 220–224.

———. *Encounter with an Angry God: Recollections of My Life with John Peabody Harrington.* Banning, Calif.: Malki Museum Press, 1975.

———. *Limbo: A Memoir about Life in a Nursing Home by a Survivor.* Novato, Calif.: Chandler & Sharp, 1979.

———. *Mirror and Pattern: George Laird's World of Chemehuevi Mythology.* Banning, Calif.: Malki Museum Press, 1984.

———. *Pilgrim and Stranger.* Novato, Calif.: Chandler & Sharp [1988?].

STANDARD SOURCES

Gacs (article by Ute Gacs).

LAIRD, ELIZABETH REBECCA (1874–1969)

Canadian/U.S. physicist. Born 6 December 1874 in Owen Sound, Ontario, to Rebecca (La Pierre) and John G. Laird, a Methodist minister. At least two siblings. Educated in London, Ontario; University of Toronto (A.B., 1896); University of Berlin (graduate studies, 1898–1899); Bryn Mawr College (Ph.D., 1901); Cambridge University (postdoctoral studies, 1905, 1909); University of Würzburg (1913–1914); University of Chicago (1919); Yale University (1925). Professional experience: Ontario Ladies' College, instructor (1896–1897); Bryn Mawr College, substitute demonstrator in physics (1900); Mount Holyoke College, assistant in physics (1901–1902), instructor (1902–1903), acting head physics department (1903–1904), professor (1904–1940), emerita professor (from 1940). Honors and memberships: Yale University, honorary research fellow (1925); National Research Council of Canada (1941–1945); University of Western Ontario, researcher (1941–1945), honorary professor (1945–1953); Mount Holyoke College, honorary D.Sc. (1927); American Physical Society, Fellow; University of Western Ontario, honorary LL.D. (1954). Died 1969.

Rebecca Laird took the Honors Mathematics and Physics Course at Toronto, selecting the physics option during her fourth year. Up to that time she had preferred mathematics, but during that year new discoveries and teaching demonstrations made physics seem exciting. Because of her sex, Laird was ineligible for the 1851 scholarship, but she received a fellowship from Bryn Mawr the next year, which she used to go to Berlin. Before she left Canada, she spent a year teaching mathematics at the Ontario Ladies' College. By then both her parents were dead, leaving Laird dependent upon financial aid and her own earnings.

Laird's first scientific project, an application of Stokes's mathematical theory to wires vibrating in liquids, won her the Bryn Mawr President's European Fellowship. Laird spent 1898–1899 at the University of Berlin, where she worked on timelag in magnetization under Emil Warburg, and studyed with Max Planck, Jacobus Henricus Van't Hoff, Immanuel Lazarus Fuchs, and Georg Ferdinand Frobenius. Warburg suggested that she present her work as a thesis, but since Laird felt obligated to Bryn Mawr, she returned to the United States. There she began new researches on chlorine's absorption spectrum with Bryn Mawr's state-of-the-art Rowland grating. Laird received her doctorate in physics and mathematics under A. S. MacKenzie in 1901. She then began teaching at Mount Holyoke, where she continued until her retirement in 1940, at which time she became an emerita professor.

Before she returned to Bryn Mawr, Laird had visited J. J. Thomson's former student John C. McLennan at Toronto, who stimulated her interest in ionization, X-rays, and, later, radioactivity. In 1903, Laird heard J. J. Thomson lecture at Yale, and in the summer of 1905 she was able to work in his laboratory in Cambridge. Here Laird was introduced to the mysterious discharge rays, penetrating rays associated with electric sparks, which became the major research subject of her career. Laird continued to study the discharge rays at Mount Holyoke, using thermoluminescence as well as ionization to detect them. She found that celluloid films would transmit the rays, which greatly facilitated experimental work. She also investigated ionization in various gases.

J. J. Thomson had predicted that spark discharges would give rise to soft X-rays. Upon her return to the Cavendish in 1909, Laird's experiments supported the idea that discharge rays were actually soft X-rays. During 1913–1914, she used a Sarah Berliner Fellowship to continue investigating discharge rays at Würzburg under Wien, whom she had met earlier that year in the United States. She found many similarities between discharge rays and X-rays. In 1919, Laird spent nine weeks at Chicago working under Robert

Millikan on transmission of short-wave radiation through celluloid films. Back at Mount Holyoke, she investigated reflection of discharge rays and searched for the minimum energy which would produce them. During a semester at Yale in 1925 (supported by an honorary research fellowship), Laird worked on developing a photographic method for investigating the discharge rays, by then identified as soft X-rays.

Laird supervised student work on the Raman effect and on thermal conductivity. During the war she applied her experience with radiation to radar development. Afterward she consulted for the Ontario Research Foundation on the medical uses of short-wave radiation. This led her to experiments in biophysics, in particular on the effect of keratin's structure on its electrical properties.

Laird was a Fellow of the American Association for the Advancement of Science and the American Physical Society, and a member of the Optical Society of America, the Association of Physics Teachers, the History of Science Society, the Canadian Association of Physicists, and the American Institute of Radio Engineers. MM

PRIMARY SOURCES

Laird, Elizabeth R. "The Absorption Spectrum of Chlorine." *Astrophysical Journal* 14 (1901): 85–115.

———. "Ionization Produced by Entladungsstrahlung and Experiments Bearing on the Nature of the Radiation." *Physical Review* 30 (1910): 293–310.

———. "Entladungsstrahlung at Atmospheric Pressure and at Diminished Pressures." *Physical Review* 33 (1911): 512–527.

———. "Über die Erzeugung von Röntgenstrahlung durch langsame Kathodenstrahlungen." *Annalen der Physik* 46 (1915): 605–622.

———. With Vola P. Barton. *Physical Review* 14 (1919): 234–245.

———. "Note on Article by H. M. Dadourian on 'Soft X-Rays.'" *Physical Review* 15 (April 1920): 293–296.

———. With Vola P. Barton. "Soft X-Rays Produced by Cathode Rays of From 200 to 600 Volts Velocities." *Physical Review* 15 (April 1920): 297–311.

Autobiography in Niels Bohr Library, American Institute of Physics.

SECONDARY SOURCES

Baly, E. C. C. *Spectroscopy.* New York and Bombay: Longmans, Green, and Co., 1905.

Holweck, Fernand. *De la Lumière aux Rayons X.* Paris: Les Presses Universitaires de France, 1927.

Journal of the Optical Society of America 59 (December 1969): 1687. Obituary notice.

Kayser, Heinrich. *Handbuch der Spectroscopy.* Vol. 3. Leipzig: S. Hirzel, 1905.

Rayner-Canham, M. F., and G. W. Rayner-Canham. "Pioneer Women in Nuclear Science." *American Journal of Physics* 58 (1990): 1036–1043.

STANDARD SOURCES

AMS 1–8, P 9, P&B 10; Bailey; Rossiter 1982; Siegel and Finley; *Woman's Who's Who of America.*

LAÏS (1st or 2d century B.C.E.)

Greek midwife and physician.

In his *Natural History,* Pliny describes Laïs as a midwife who often opposed Elephantis regarding the use of drugs. Laïs, along with Salpe, he reports, devised a treatment for rabies and intermittent fevers: these maladies were "cured by the flux on wool from a black ram enclosed in a silver bracelet." Laïs and Elephantis, wrote Pliny, "do not agree in their statements about abortives, the burning root of cabbage, myrtle, or tamarisk extinguished by the menstrual blood, about asses not conceiving for as many years as they have eaten grains of barley contaminated with it, or in their other portentous or contradictory pronouncements, one saying that fertility, the other that barrenness is caused by the same measures. It is better not to believe them." If credulous Pliny was skeptical about the medical achievements of Laïs, it is likely that suspicion is warranted. Pliny is the only source available, and there is nothing in his report to indicate anything scientific about her medicine. JH/MBO

SECONDARY SOURCES

Pliny, the Elder. *Natural History.* Vol. 8, Book 28. Ed. W.H.S. Jones. Loeb Classical Libray. Cambridge, Mass.: Harvard University Press, 1938–1963. See pages 23, 80–82.

STANDARD SOURCES

Ogilvie 1986; Pauly-Wissowa, vol. 11.

LALANDE, MARIE JEANNE AMÉLIE HARLAY LEFRANÇAIS DE (1760–1832)

French astronomer. Born 1760 in Harlay. Married Michel Jean Jérôme Lefrançais de Lalande. Two children: Caroline and Isaac.

Little is known of Lalande's early life. Her husband, Michel (1776–1839), was the younger cousin and protégé of astronomer Joseph Jérôme Lefrançais de Lalande (1732–1807), who always referred to Michel and Amélie as his nephew and niece and who instructed them both in astronomy. The names of their children reflect the family saturation with astronomy. Since their daughter was born on 20 January 1790, the day on which a comet discovered by CAROLINE HERSCHEL

was first visible in Paris, she was named Caroline; their son was named after Sir Isaac Newton.

Lalande assisted the two men, especially in the calculation of astronomical tables. She constructed the tables appended to Jérôme's *Albrégé de navigation* (1793), designed to help navigators calculate the time at sea by the altitude of the sun and stars; her calculations and reductions are included in an astronomical almanac, *Connaissance des temps,* edited by Jérôme de Lalande. Because her work was so closely tied with that of her husband and cousin, it is difficult to evaluate her achievements. At the very least, however, it is evident that she was a competent calculator and observer—one who made astronomical data more accessible. JH/MBO

SECONDARY SOURCES

Du Deffand, Marquise Marie de Vichy Chamrond. *Correspondence complète de la marquise du Deffand avec ses amis le président Iténault, Montesquieu, d'Alembert, Voltaire, Horace Walpole.* Paris: H. Plon, 1865. Includes information about Lalande.

Lalande, Jérôme de. *Bibliographie astronomique avec l'histoire de l'astronomie depuis 1781 jusqu'à 1802.* Paris: Imprimerie de la République, 1803.

STANDARD SOURCES

DSB (under Lalande, Jérôme); *DFC;* Ogilvie 1986; Rebière.

LA MANCE, LORA SARAH (NICHOLS) (1857–?)

U.S. horticulturist. Born 1857. Death date unknown.

Lora La Mance was a horticulturist who published books on gardening in New York. JH/MBO

PRIMARY SOURCES

La Mance, Lora S. *Beautiful Home Surroundings: A Book of Practical Information Regarding the Garden and Lawn.* Floral Park, N.Y.: J. L. Childs, 1892.

———. *House Plants: A Book of Practical Information Regarding the Culture of House and Greenhouse Plants.* Floral Park, NY: J. L. Childs, 1892.

LAMARCK, CORNELIÉ (fl. 1820)

U.S. naturalist. Flourished 1820s. Father J. B. Lamarck.

Cornelié Lamarck was the daughter of J. B. Lamarck, and worked with him for many years at the Muséum d'Histoire Naturelle after he became blind. She is mentioned by Etienne Geoffroy Saint-Hilaire, his colleague at the museum, in *Fragments Biographiques.* JH/MBO

SECONDARY SOURCES

Geoffroy Saint-Hilaire, Etienne. *Fragments Biographiques.* Paris: F. D. Pillot, 1838. Cornelié Lamarck is mentioned on page 81.

STANDARD SOURCES

Rebière.

LAMBIN, SUZANNE (1902–)

French microbiologist. Born 1 August 1902 in Nantes, France, to Valentine (Perthuy) and René Lambin. Educated University of Nantes, School of Medicine and Pharmacology; University of Paris (Ph.D.). Professional experience: University of Nantes, School of Medicine and Pharmacology, assistant in physics; University of Paris, pharmacist (1925–1928), assistant in microbiology (1928–1945), department head (chef de travail) (1945), lecturer (agregé) in natural sciences; University of Paris, Faculty of Pharmacy, professor of microbiology (1951–post-1968). Honors and memberships: French Association of Microbiologists, Académie de Pharmacie, Société de Biologie. Honors: Order of Public Health.

Suzanne Lambin was a French microbiologist who studied the evolution of bacterial cultures and the effects of different antiseptic agents. She was born in Brittany, in Nantes, and studied first at the University of Nantes, where she served as an assistant in physiology. In her early twenties, she went to Paris, where she studied microbiology and worked as pharmacist at the University of Paris, receiving her doctorate in microbiology (in 1928?). She served as an assistant in microbiology until she finished her agregé thesis, entitling her to lecture in the university in natural sciences. At that point, she was made a department head (chef de travail) (which permitted her to run her own laboratory). In 1951, she became a professor of microbiology in the Paris Faculty of Pharmacy, where she remained until her retirement. Her research on bacterial evolution and antiseptic agents was recognized by a decoration, the Order of Public Health. She was also elected to the prestigious Academy of Pharmacy and was a member of the French Association of Microbiologists and the Société de Biologie. JH/MBO

STANDARD SOURCES

Debus.

LAMME, BERTHA (1864–1943)

U.S. electrical engineer. Born 1864 in Springfield, Ohio. At least one brother. Married Russell S. Feicht. One daughter (1910). Educated Ohio State University (B.S. in mechanical engineering, 1893). Professional experience: Westinghouse, Pittsburgh, Pa., researcher (1893–?).

Bertha Lamme was the second U.S. woman to receive an engineering degree. She worked in Westinghouse's East Pittsburgh plant in the engineering department, where she designed motors and generators. In 1905 she married her supervisor, Russell S. Feicht. After she married, she gave up her profession. Her engineer brother lived with the couple. Her husband had designed the 2,000 horsepower induction motors for the 1904 St. Louis World's Fair, and her brother rose to the position of chief engineer at Westinghouse and designed the turbo generators at Niagra Falls. The couple had a daughter who displayed considerable mathematical abilities at an early age and who went on to become a physicist. JH/MBO

SECONDARY SOURCES

Ohio State University Monthly 35 (December 1943): 13. Obituary notice, under Bertha Lamme Feicht.

Trescott, Martha. In *Women in Science and Engineering Professions*, ed. Violet B. Haas and Carolyn C. Perrucci. Ann Arbor: University of Michigan Press, 1984.

———. "Women in the Intellectual Development of Engineering." In Kass-Simon and Farnes.

STANDARD SOURCES

Rebière.

LAMONTE, FRANCESCA RAIMONDE (1895–?)

U.S. ichthyologist. Born 1895. Educated Wellesley College (B.A. and certificate of music). Professional experience: American Museum of Natural History, Department of Fishes and Aquatic Biology, associate curator (1947?–1968), curator emerita (1968). American Association for the Advancement of Science, Fellow. Honors and memberships: New York Zoological Society; Society for Systematic Zoology; Society of Icthyology and Herpetology. Death date unknown.

Francesca Raimonde LaMonte was trained in music as well as science. After receiving her bachelor's degree from Wellesley College, she became interested in folk legends and in her early thirties she published a book of folk legends about the Dolomite Alps with Karl Felix Wolff: *The Pale Mountains: Folk Tales from the Dolomites* (1927). Preserving wilderness areas was one of her early concerns.

LaMonte's work interest in ichthyology began later in her life. LaMonte participated in the World's Fair in 1939–1940 as a member of the Fisheries Commission. She was a delegate to the Eleventh International Congress of Zoologists in Padua, Italy, and attended other world congresses as her fame grew. Interested in writing for the public as well as producing scientific works, she wrote field guides and popular books on freshwater fish and on marine game fish. An associate curator of ichthyology at the American Museum of Natural History, she produced a guide to its collections in the 1940s in association with William K. Gregory. JH/MBO

PRIMARY SOURCES

LaMonte, Francesca. *The Pale Mountains: Folk Tales from the Dolomites.* New York: Minton, Balch, 1927.

———. With M. R. Welch. *Vanishing Wilderness.* New York: Liveright Pub. Corp., 1934.

———. *North American Game Fishes.* New York: Doubleday, 1945.

———. With Brian S. Vesey-FitzGerald. *Game Fish of the World.* New York: Harper, 1949.

———. With William K. Gregory. *The World of Fishes: A Survey of the Habits, Relationships and History, and a Guide to the Fish Collection of the American Museum of Natural History.* New York: American Museum of Natural History, 1949.

———. With I. Gabrielson. *The Fisherman's Encyclopedia.* Harrisburg, Pa.: Stackpole and Heck, 1950.

———. *Marine Game Fishes of the World.* Garden City, N.Y.: Doubleday, 1952.

———. *Giant Fishes of the Ocean.* N.p., 1966.

STANDARD SOURCES

Bailey (as F. Raimond LaMonte); Debus (as F. Reymond La Monte); Hollis (as F. Raimonde LaMonte).

LAMPE, LOIS (1896–1978)

U.S. botanist, educator. Born 29 March 1896 to Gertrude Leslie (Hays) and Frederick Christian Lampe. Married Brenton C. Zimmerman, 1928(?). Educated Ohio State University (A.B.; B.S., 1919; M.S., 1922; Ph.D., 1927). Professional experience: Ohio State University, graduate teaching asistant (1920–1923); instructor (1923–1924, 1926–1940), assistant professor (1940–1966). Died 6 January 1978 in London, Ohio.

Although Lois Lampe's teaching career at Ohio State covered the years 1917 (when she was a student assistant) to 1966, the highest level that she reached was assistant professor. Since she held a doctoral degree and maintained a reputation for teaching excellence, it is difficult to understand her lack of promotion. Possible explanations may be her own diffidence and her sparse publication record. After forty-two years of service, she became assistant professor emerita in 1966. In her retirement, she married Brenton C. Zimmerman.

Lampe received a certificate of commendation in the field of science and education by a state representative to the Ohio House of Representatives. She was also a member of many scientific and honor societies, some of which she served as an officer. She was a Fellow and member of the

council (1939–1940) of the American Association for the Advancement of Science. She was a member of the American Genetic Association, American Institute of Biological Sciences, Botanical Society of America, National Society of Arts and Letters, and the Ohio Academy of Science. She also belonged to several honorary societies such as Phi Epsilon Phi (National Honorary Botanical Fraternity); Phi Upsilon Omicron Honorary Society in Home Economics; Sigma Delta Epsilon Graduate Women's Scientific Fraternity (national president, 1940); and Sigma Xi.

Her research interests focused on the developmental anatomy of vascular plants. For her master's thesis, Lampe worked on twig abscission in cottonwood, and for her doctoral dissertation, the development of the endosperm of corn. She later became interested in cytology, studying the chromosome structure of *Trilium* and *Podophyllum*. She also studied the heritable variation in vascular plants as a basis for classification of the larger groups of flower plants. She was a disciple of John H. Schaffner and sought to preserve his ideas on phylogenetic taxonomy. An excellent artist, she contributed scientific illustrations for publications of her colleagues and also exhibited her art. JH/MBO

PRIMARY SOURCES

Lampe, Lois. With Marion T. Meyers. "Carbohydrate Storage in the Endosperm of Sweet Corn." *Science* 61 (1925): 290–291.

———. "A Microchemical and Morphological Study of the Developing Endosperm of Maize." *Botanical Gazette* 91 (1931): 337–376.

SECONDARY SOURCES

Paddock, Elion F. "Lois Lampe (1896–1978)." *Genetics* 110, no. 3, pt. 2 (1985): 123.

Stuckey, Ronald L. "Lois Lampe." Unpublished notes. From the collection of Ronald L. Stuckey.

STANDARD SOURCES

AMS 5–8, B 9, P&B 10–12; Barnhart; Stuckey (with portrait).

LAMPL-DE GROOT, JEANNE (1895–1987)

Dutch psychiatrist. Born 16 October 1895 in Schiedam, Netherlands, to Henriette (Dupont) and M. C. M. De Groot. Third of four children. Married Hans Lampl, psychiatrist, on 7 April 1925 (he died in 1957). Two daughters, Henriette and Edith. Educated University of Leiden; University of Amsterdam (M.D., 1921); psychoanalytic training with Sigmund Freud (1922–1925). Professional experience: Wagner von Jauregg clinic, psychiatrist in training; Berlin Institute, psychiatrist, psychoanalyst (1925–1933); Institute of Psychoanalysis, Vienna, psychoanalyst and training analyst (1933–1938); Dutch Psychoanalytic Institute, Amsterdam, founder (with Hans Lampl). Honors and memberships: International Psychoanalytical Association, honorary vice-president (1963–?); Netherlands Society of Psychiatry and Neurology, honorary member (1971); University of Amsterdam (honorary doctorate, 1970). Died 1987.

Psychiatrist and psychoanalyst Jeanne de Groot received her medical education in the Netherlands. At age twenty-six, she approached Sigmund Freud for a training analysis, and thus began a long professional and social relationship with the renowned analyst and with his daughter Anna Freud. Her correspondence with Freud is extensive and filled with personal exchanges and gossip. Following her analysis, at Freud's suggestion, de Groot went to Berlin to work at the Berlin Institute before beginning her own analytic practice. In Berlin, she met and married Hans Lampl, a psychoanalyst from Freud's circle in Vienna and previously a suitor of Anna Freud. Their two daughters were born in Berlin.

The couple returned to Vienna when the National Socialist Party came to power under Adolf Hitler in the early 1930s. De Groot renewed her association with the Freuds, working to develop child analytic treatment and training with Anna Freud. In 1938, the political situation again forced the family to move; they settled finally in Amsterdam, where Lampl-de Groot became an important figure in Dutch psychoanalysis. She taught at psychoanalytic institutes in Berlin, Vienna, Amsterdam, and Frankfurt. She and Hans Lampl cofounded the Dutch Psychoanalytic Institute and established formal training procedures for analysts and psychotherapists.

Lampl-de Groot's early work was largely concerned with female sexuality. Her first paper read in Vienna was "The Oedupus Complex in Women" (1927), which Freud referred to in his own 1932 paper "Female Sexuality." In 1933, she published a second paper, "Problems of Femininity," which she reprinted in a collection in 1985. Her later research involved theoretical and practical problems of psychoanalysis, and its interaction with other branches of science. She was the author of numerous papers and publications, many of which have been collected in book form, first in *The Development of the Mind* (1965). Twenty years later, a second collection appeared as *Mind and Man: Collected Papers.* JH/MBO

PRIMARY SOURCES

Lampl-de Groot, Jeanne. [Autobiographical memoir] in Hellstedt, *Autobiographies.*

———. *The Development of the Mind; Psychoanalytic Papers on Clinical and Theoretical Problems.* Foreword by Anna Freud. New York: International Universities Press, 1965.

———. *Mind and Man: Collected Papers.* New York: International Universities Press, 1985.

STANDARD SOURCES
Appignanesi; Debus.

LANCEFIELD, REBECCA CRAIGHILL (1895–1981)

U.S. bacteriologist. Born 1895 on Staten Island, N.Y., to Mary Wortley Montague Byram and William Edward Craighill. Married Donald Lancefield. One child. Educated Wellesley College (B.A., 1916); Columbia University (M.A., 1918; Ph.D., 1925). Professional experience: Rockefeller Institute, researcher (1922–mid-1960s). Honors and memberships: T. Duckett Jones Memorial Award (1960); American Heart Association Achievement Award (1964); member, National Academy of Sciences (1970); New York Academy of Medicine medal (1973); Research Achievement Award from the journal Medicine *(1973); Research Achievement Award, Wellesley College (1973); Rockefeller University, honorary D.Sc. (1973); D.Sc. honoris causa, Wellesley College, honorary D.Sc. (1976); Royal College of Pathologists, honorary fellowship (1976). Died 3 March 1981.*

Rebecca Price Craighill majored in zoology at Wellesley College, though she had first intended to major in English and French. After graduation, she accepted a job teaching physical geography; she soon left that job, having received a graduate scholarship at Columbia University Teachers College. She decided to study bacteriology, and since she could not do so at Teachers College, she pursued her degree at Columbia. There she met Donald Lancefield, a fellow graduate student at Columbia. After she received her master's degree, she was offered a job as a technician on a streptococcus study proposed by O. T. Avery and A. R. Dochez. Lancefield, now her husband, finished his doctoral requirements in 1921 and was offered a position at the University of Oregon.

Rebecca Lancefield went with her husband, but returned to Columbia after a year to complete her doctoral degree there. Her advisor, Hans Zinsser, suggested that she accept a position at the Rockefeller Institute to study rheumatic fever with Homer Swift. She remained at that institution for the rest of her career. She spent the next three years working on *Streptococcus viridans,* a bacterium had been incorrectly linked with rheumatic fever. She finished her doctoral work on this organism and documented that it was not a causative agent of rheumatic fever in several publications.

Before she finished her doctoral degree, her early work as a technician was important enough that Avery and Dochez made her a coauthor of their 1919 paper. In this paper they presented the first documented evidence to indicate that specific streptococci caused specific infections. Lancefield later was able to show that the dominant strains of streptococci that cause infections vary from year to year.

Lancefield found evidence that countered the accepted belief that type-specific virulences were carbohydrates of polysaccharides. She challenged this theory, proposing that a specific protein, which she named the M protein, was responsible for virulence.

She published a major paper in 1933 on a method that she had devised that allowed her to classify more than sixty distinct strains of hemolytic streptococci. She continued her research on streptococcal antigens, using her classification system as a tool. She and Swift collaborated on a paper for the Second International Conference for Microbiology in London in 1936.

Lancefield preferred laboratory work to other duties. Her laboratory flourished and became the world source for the identification of streptococcus strains and for antisera. After Swift retired, Maclyn McCarty joined Lancefield's lab to continue the study of rheumatic fever. She took time out from her laboratory work to participate in professional activities. She was president of the Society of American Bacteriologists and the American Association of Immunologists.

Although Lancefield officially retired in the mid-1960s, she continued to participate in laboratory research. Lancefield found time to enjoy herself outside of the laboratory, as she, her husband, and daughter spent their summers at Cape Cod.

JH/MBO

PRIMARY SOURCES

Lancefield, Rebecca. With A. R. Dochez and O. T. Avery. "Antigenic Relationship Between Strains of *Streptococcus hemolyticus.*" *Transactions of the Association of American Physicians* 34 (1919): 63–67.

———. With J. H. Quastel. "A Note on the Antigenicity of Crystalline Egg Albumin." *Journal of Pathology and Bacteriology* 32 (1919): 771–773.

———. "Studies on the Biology of Streptococcus. I. Antigenic Relationship Between Strains of *Streptococcus haemolyticus.*" *Journal of Experimental Medicine* 30 (1919): 179–213.

———. "The Immunological Relationships of *Streptococcus viridans* and Certain of Its Chemical Fractions. I. Serological Reactions Obtained with Antibacterial Sera." *Journal of Experimental Medicine* 42 (1925): 377–395. Contains the results from her Ph.D. dissertation research.

———. "The Immunological Relationships of *Streptococcus viridans* and Certain of Its Chemical Fractions. II. Serological Reactions Obtained with Antinucleoprotein Sera." *Journal of Experimental Medicine* 42 (1925): 397–412. Contains the results from her Ph.D. dissertation research.

———. "Note on the Susceptibility of Certain Strains of Hemolytic Streptococcus to a Streptococcus Bacteriophage." *Proceedings of the Society of Experimental Biology and Medicine* 30 (1932): 169–171.

———. "A Serological Differentiation of Human and Other Groups of Hemolytic Streptococci." *Journal of Experimental Medicine* 57 (1933): 571–595.

———. "Specific Relationship of Cell Composition to Biological Activity of Hemolytic Streptococci." *Harvey Lectures* 36 (1941): 251–290.

SECONDARY SOURCES

McCarty, M. *Biographical Memoirs of the National Academy of Sciences* 57 (1987): 227–246.

O'Hern, Elizabeth Moot. "Rebecca Craighill Lancefield: Pioneer Microbiologist." *American Society for Microbiolgy News* 41 (1985): 805–810.

Wannamaker, Lewis W. "Obituary: Rebecca Craighill Lancefield." *American Society for Microbiology News* 47 (1981): 555–559.

STANDARD SOURCES

Annual Obituary 1981; Grinstein 1997 (article by Teresa T. Antony); *Notable;* Shearer and Shearer 1996 (article by Barbara I. Bond).

LANDES, RUTH (SCHLOSSBERG) (1908–1991)

U.S.-born Canadian cultural and linguistic anthropologist. Born in New York City 1908 to Anna (Grossman) and Joseph Schlossberg. Married (1) Landes (1929; divorced); (2) [?] Educated New York public schools. New York University (B.S., 1928); New York School of Social Work (certification, 1929); Columbia University (Ph.D. in anthropology, 1937). Field work: Harlem, New York; Objiwa tribe, Ontario (1933–1936); Bahia, Brazil (1938–1940). Professional experience: New York Children's Service Bureau (1929–1931); Fisk University, instructor in anthropology (1937–1938); Carnegie Corporation, research associate (with Gunnar Myrdal) (1939–1940); U.S. Office of Inter-American Affairs, research director (1941); U.S. Fair Employment Practices Commission (FEPC), President's Committee, field representative (1941–1945); American Jewish Committee, study director (1945–1959?); McMaster University, Ontario, Canada, professor of anthropology (1965–1978?). Honors and memberships: American Anthropological Association (AAA), Fellow. Died 1991.

Ruth Schlossberg Landes had a long and respected career in anthropology, but a difficult one, due to the political hysteria of the prewar period. She grew up in a secular Jewish household. Her father was a brillant man who had immigrated from Russia when he was in his teens, become an active union man, and then won and subsequently lost a graduate fellowship at Columbia because of his leftist and union sympathies. Schlossberg took an undergraduate degree from New York University and spent a year acquiring a certificate from the New York School of Social Work.

Not yet an anthropologist, but fascinated by the Garvey movement in Harlem that resulted in a black Jewry, she began to do research while working for the Children's Bureau as a social worker. Her resulting study would not be published for thirty-five years. Her investigations brought her into contact with RUTH BENEDICT and the aging Franz Boas, who encouraged her to study anthropology at Columbia. Her brief marriage foundered when her husband, a medical student, objected to her new work. Funded by a University Council Research Grant, Ruth Schlossberg Landes began her formal field work among the Objiwa tribe in Ontario resulting in her Columbia dissertation from which she produced two classic books as well as articles on Objiwa society and Objiwa women. Although she had by this point gained wide recognition from the anthropological community, her interest extended to sociology, and especially inherent problems in race relations. She was befriended by Robert E. Park, who was a founder of the Chicago School of Sociology. He invited her to teach anthropology for a year at Fisk University in Tennessee in order to understand the problems experienced by blacks in the United States while learning from Fisk about the different kinds of problems encountered by the poor black community in Brazil.

Again supported by a research grant, Ruth Landes went to Bahia to study the Afro-Brazilian candomble cults, following the successful work of another student of Fisk. As a woman, Landes found her position very difficult, requiring her to be escorted at all times in the evening. She fortunately was aided by an excellent scholar (more recently a renowned folklorist), Edison Caneiro, who helped her, encouraged her, and introduced her to places that would have been forbidden to her.

Perhaps the fact that her associate was a mulatto angered another Brazilian anthropologist, Arturo Ramos, who saw the cults as his own territory. Whatever the cause, he began to spread vehement accusations about Landes's sexual morals and left-wing politics. The result was that although her work was excellent, her professional career as an academic was for many years blocked by anthropologists such as Melville Herskovits and others who had received letters from Ramos. Landes herself wrote up this sad story in an autobiographical account in 1970. Her experiences bear some comparison with the experience of another woman anthropologist, GENE WELTFISH, whose studies on race resulted in accusations against her before the House Un-American Committee in the 1950s, blacklisting her from academic positions for nine years.

With the start of World War II, Landes began to work for the government, first as a director of research in the Office of Inter-American Affairs and soon after as a field representative for the President's Committee of the Fair Employment Practices Commission. After the war, Landes took a position as the study director of the American Jewish Committee, a position she held for some years. She began to publish her Brazilian studies. Her book *The City of Women* appeared first

in 1947 and twenty years later in Brazil in a Portuguese translation. She went to California, married again, this time to a man of Spanish-American background, but again the marriage foundered.

Until 1965, Landes worked in California on issues involving race relations and school counseling. She helped develop an anthropology of education. In 1965, then fifty-four, she was finally offered a suitable position in an anthropological department when McMasters University invited her to Ontario. There she remained until her retirement in 1978, publishing an impressive series of books on the Latin Americans in the Southwest and on the American Indian tribes of the Ontario and Midwestern United States areas. JH/MBO

PRIMARY SOURCES

Landes, Ruth. *The Objiwa Woman.* New York: Columbia University Press, 1938.

———. *The City of Women.* New York: Macmillan, 1947.

———. "Negro Slavery and Female Status." *Afro-Americains Mémoires de l'Institut Français d'Afrique Noire* (Dakar) 27 (1953): 265–268.

———. *Culture in American Education.* New York: Wiley, 1965.

———. *The Latin-Americans of the Southwest.* St. Louis: McGraw Hill, 1965.

———. "Negro Jews in Harlem." *Jewish Journal of Sociology* (London) 1967.

———. *Objiwa Religion and the Midewiwin.* Madison: University of Wisconsin Press, 1968.

———. "A Woman Anthropologist in Brazil." In *Women in the Field: Anthropological Experiences,* ed. Peggy Golde, 117–139. Chicago: Aldine Pub. Co., 1970. Autobiographical account. Includes portrait.

STANDARD SOURCES

AMS 8, S&B 11, 12, P&B 13; Gacs (article by George and Alice Park).

LANE-CLAYPON, JANET ELIZABETH (1877–1967)

British epidemiologist and physiologist. Born 3 February 1877 in Boston, Lincolnshire. Married Sir Edward Rodolph Forber in 1929. Educated by private tutors; University College, London University (B.Sc., 1903; D.Sc., 1905); London School of Medicine for Women (M.B., 1907; M.D., 1910). Professional experience: University College, research assistant (1898–1905); Lister Institute for Preventative Medicine, research fellow (1908–1912); Ministry of Health, London Local Government Board, assistant health inspector; King's College, Dean of Women, lecturer in health (1916–1923); Ministry of Health, epidemiologist (1923–1931). Honors and memberships: British Medical Association Scholarship (1902–1903); Lister Institute, Jenner Research Scholar (1909–1911); University College, first-class honors in physiology and materia medica (1907); London School of Medicine for Women, exhibition and gold medals (1903). Died 17 July 1967 in Seaford, Sussex.

Janet Lane-Claypon was educated privately at home until she entered University College in 1898. She proved to be a brilliant student, studying physiology in the laboratory of Ernest H. Starling. Graduating with first-class honors, she also was awarded the exhibition and gold medals for her research on the rabbit ovary. Two years later, she received her doctorate of science following a thesis and the publication of further research with Starling and E. A. Sharper-Schafer on the rat ovary and on mammalian tissue. She then entered the London School of Medicine for Women, where she obtained a bachelor of medicine degree, and worked toward her doctor of medicine degree (which in England requires a thesis) while she was a fellow at the Lister Institute.

At the Lister Institute, Lane-Claypon began to do epidemiological studies of milk, indicating the presence of hemolytic factors in milk, and revealing the effects of heating on bacterial contamination. She wrote a paper that laid to rest the claim that heating destroyed the nutritional value of milk. Much of this work was later brought together in book form. She also investigated the effects of Poor Law legislation on the health of children, comparing British with German infant mortality. After touring facilities in Berlin, she recommended the adoption of the Berlin methods of "Kindersyl" or foster infant care linked with a first-class hospital for children. She was from this point on identified as a public advocate for child care reform. Subsequent papers dealt with infant welfare in England, its administrative organization, the biological properties of human and animal milk, and the economic aspects of midwifery.

Lane-Claypon's work on hygiene appears to have led to her selection as dean at King's College for Women in 1916 and her appointment as lecturer in household and social science. She produced two further books on hygiene during this period, one on the child welfare movement that emphasized the preventative nature of the work. Her next book on the hygiene of women and children emphasized an individual rather than public health approach, probably reflecting her teaching during this period. She resigned her position in 1923 and returned to scientific work.

In 1923, the Ministry of Health established a Departmental Committee on Cancer. One of the scientists with whom Lane-Claypon worked at the Lister Institute, Major Greenwood, subsequently professor of epidemiology and biostatistics at the London School of Hygiene and Tropical Medicine, was then a member of the ministry. At Greenwood's request and as part of a sequence of reports on cancer for the ministry, Lane-Claypon did a review of the literature on the surgical treatment of breast cancer the following year.

This was the beginning a series of classic epidemiological studies of cancer and its treatment that were regularly cited until the 1960s. In 1926, Lane-Claypon produced an important study of 367 pathologically confirmed primary cancers of the breast followed over ten years, the first to take into account competing risks and life-table survival analyses in an "end-results" study of cancer therapy.

Lane-Claypon later performed a careful world literature review on cancer of the uterus, analyzing the survival rates of cervical versus uterine cancer. She also produced a joint paper with Greenwood comparing breast and uterine cancer rate survival. This led to a further study of the success rate of surgical treatment of uterine cancer at one of the major cancer hospitals in London, the Samaritan Free Hospital, over a twenty-year period. She performed a similar analysis on surgical treatment of the breast in eight hospitals in England and Scotland. By 1930, she expanded her analysis to lip, tongue, and skin cancers, with a discussion of the descriptive epidemiology of the site-specific cancer and the antecedent conditions, as well as the success of various methods of treatment.

Lane-Claypon's final study was on incurable cancers studied in London hospitals. By this time, Lane-Claypon had married Sir Edward Rodolph Forber, and this final paper was published under her married name. There are some indications that her marriage to Forber followed a long-term relationship. Shortly after her marriage, although she was only in her fifties, her independent scientific life came to an end, not an uncommon consequence of marriage at this period. She died more than thirty years later in her nineties.

JH/MBO

PRIMARY SOURCES

Lane-Claypon, Janet Elizabeth. "On the Origin and Life History of the Interstitial Cells of the Ovary in the Rabbit." *Proceedings Royal Society* (London) 77, ser. B (1906): 32–52.

———. "Poor-Law Babies in London and Berlin." *Nineteenth Century and After* 68 (1910): 450–466.

———. *Milk and Its Hygienic Relations.* London and New York: Longmans Green and Co., 1916.

———. "Report on the Late Results of Operations for Cancer of the Breast." Reports on Public Health and Medical Subjects, no. 51. London: Ministry of Health, 1928.

———. "Report on Cancer of the Lip, Tongue and Skin: An Analysis of the Literature from a Statistical Standpoint with Special Reference to the Results of Treatment." Reports of Public Health and Medical Subjects no. 59. London: Ministry of Health, 1930.

Forber, Janet Elizabeth. "Incurable Cancer: An Investigation of Hospital Patients in Eastern London." Reports of Public Health and Medical Subjects no. 66. London: Ministry of Health, 1931.

SECONDARY SOURCES

Winkelstein, Warren. "Janet Elizabeth Lane-Claypon: Pioneer Epidemiologist and Protagonist for Women's and Children's Health." Unpublished paper presented at the American Epidemiological Society, 69th Annual Meeting, Atlanta, Ga., 21–22 March 1996. This paper includes a detailed critical bibliography that points out the important epidemiological conclusions of many of her reports.

STANDARD SOURCES

Creese 1991.

LANGDON, FANNY E. (fl. 1895)

U.S. invertebrate zoologist. Professional experience: studied the sense organs and nervous system of worms and other invertebrates.

Invertebrate zoologist Fanny E. Langdon probably worked with HARRIET RANDOLPH at Bryn Mawr. She published on the nervous system and sensory organs of the earthworm *Lumbricus.*

JH/MBO

PRIMARY SOURCES

Langdon, Fanny E. "The Sense Organs of *Lumbricus agricola,*" *Anatomische Anzeiger* (Jena) 10 (1895): 114–117.

———. "The Sense Organs of *Lumbricus.*" *Journal of Morphology* 11 (1895): 193–234.

———. "The Peripheral Nervous System of *Nereis virens.*" *Science* 5 (1897): 427–438.

STANDARD SOURCES

Mozans; *Catalogue Royal Society,* vol. 16, 1918.

LANGDON, LADEMA M. (1893–?)

U.S. botanist. Born 5 January 1893 in Arcade, N.Y. Educated Oberlin College College (A.B., 1916); University of Chicago (M.S., 1917; fellow, 1918–1919; Ph.D., 1919). Professional experience: Illinois public high school teacher (1920); Goucher College, instructor in biology (1920–1923), assistant professor (1923–1934), associate professor (1934–1944), professor (1944–1958), chair of chemistry department (1955–1957), emerita professor (from 1958); Baltimore Junior College, lecturer (1960–1964). Death date unknown.

After receiving her doctorate from the University of Chicago, LaDema M. Langdon spent most of her professional career at Goucher College, where she advanced to full professor after two years as instructor, eleven years as assistant professor, and ten years as associate. She was chair of the chemistry department for two years. Langdon held grants

from the National Research Council and the American Philosophical Society. She did research on the stem anatomy of *Cycas* and of *Dioon spinulosum*. She also worked on the floral anatomy and embryology of the family Juglandaceae and the comparative morphology and taxonomy of the Fagaceae. She was a member of the Botanical Society, the Torrey Botanical Club, and the American Association for the Advancement of Science. JH/MBO

STANDARD SOURCES
AMS 4–8, B 9, P&B 10–11; Rossiter 1982.

LANGE, LINDA BARTELS (1882–?)

U.S. bacteriologist. Born 15 January 1882 in New York City. Educated Bryn Mawr College (A.B., 1903); Goucher College (1906–1907); Johns Hopkins University Medical School (M.D., 1911). Professional experience: Bryn Mawr School, Baltimore, assistant (1905–1907); New York Infirmary for Women and Children, intern (1911–1912); Rockefeller Institute, fellow in pathology and bacteriology (1912–1914); H. A. Kelly Hospital, Baltimore, pathologist and director (1914–1915); University of Wisconsin Medical School, instructor in pathology (1915–1916); Johns Hopkins Medical School, assistant and instructor (1916–1919), school of hygiene and public health, fellow, instructor, and associate in bacteriology (1919–1927), associate professor (1927–1937); Woman's Medical College of Pennsylvania, professor of bacteriology and immunology (1937–1940). Retired 1940. Death date unknown.

Linda Bartels Lange earned a medical degree from Johns Hopkins and then went into research. She worked in pathology and bacteriology, never practicing privately. Her research was on infectious diseases, bacteriology, malignant tumors, tuberculosis, and spirochetes. JH/MBO

STANDARD SOURCES
AMS 5–7.

LANGE, MATHILDE MARGARETHE (1888–?)

U.S. biologist. Born 14 March 1888 in New York City, N.Y. Educated University of Zurich (Ph.D., 1920). Professional experience: U.S. Department of Agriculture, researcher (1920–1921); Wheaton College (Mass.), professor of zoology (1921–1950), emerita professor (from 1950). Death date unknown.

After Mathilde Lange earned her doctoral degree from the University of Zurich, she worked for the U.S. Department of Agriculture for a year before she got a job at Wheaton College. She spent the rest of her career at Wheaton. Her research was on experimental embryology. She was a member of the Genetic Association and the New York Academy of Growth. JH/MBO

STANDARD SOURCES
AMS 3–8, B 9, P&B 10.

LANGECKER, HEDWIG (1894–1989)

Bohemian/Czech/German pharmacologist. Born 29 January 1894 in Schluckenau, Bohemia. Father Leo Langecker, a merchant. Educated German University, Prague (Doctor of Medicine, 1920; additional doctorate, 1923), habilitated (1926). Professional experience: German university, Prague, assistant (1920–1930), extraordinary professor (1930–1934), professor (1934–1945); Freien Universität Berlin, professor (1945–1959); Schering-Werke company, scientific staff (1946); professor emerita (1959–1989). Honors and memberships: Freien Universität Berlin, honorary doctorate (1964); German Academy of Endocrinology, honorary member; Berlin Medical Society, member. Died 31 January 1989.

Hedwig Langecker was born in Bohemia and educated at the German University in Prague. Her father was a merchant. She spent the early part of her academic career at the German university in Prague, where she was an assistant, extraordinary professor, and professor. She habilitated in 1926 with her dissertation "Die Pharmakognosie des Polygonatum officinale und Polygonatum multiflorum." She left Prague in 1945 to become a professor in Berlin, where she remained until she retired. From 1946 she was also on the scientific staff of the Scherinug-Werke company. Her major research interst was in the field of the biochemistry of steroid hormones. She wrote over two hundred scientific articles. She was a contributor and coauthor of several textbooks in medicine and pharmacology. JH/MBO

STANDARD SOURCES
Strohmeier; *WW in Science in Europe.*

LANGFORD, GRACE (1871–?)

U S. physicist. Born 27 June 1871 in Plymouth, Mass. Educated Massachusetts Institute of Technology (B.S., 1900); Columbia University (graduate study). Professional experience: Wellesley College, instructor in physics (1894–1905); Barnard College, Columbia University, instructor in physics (1908–?). Death date unknown.

Born in Plymouth, Massachusetts, Grace Langford studied physics first at Wellesley and then at MIT, where she received a bachelor of science degree. She taught as an instructor at Wellesley College even before she completed her degree and remained an instructor until 1905. She then

began to study at Barnard College, Columbia University, in New York, where she did research on the selective reflection of phosphates in the infrared spectrum. She served as an instructor in physics at Barnard as well, but never completed her doctorate. JH/MBO

STANDARD SOURCES
AMS 3; Rossiter 1982.

LANGSDORFF, TONI VON (1884–post-1976)

German obstetrician and gynecologist. Born 30 September 1884 in Prussia. Father Prussian army officer. Two siblings. Never married. Educated Cologne girl's high school (additional preparation for Abitur*); University of Marburg, (preliminary medical exams, 1908) University of Heidelberg (M.D., 1910). Professional experience: medical clinic, Essen, physician (1910–1911); Essen Gynecological Clinic, physician (1911–1918); private obstetrics and gynecology practice (1918–1964). Honors and memberships: University of Heidelberg, Internal Medicine prize essay (1909); Medical Women's International Association, pioneer member. Died after her ninetieth year.*

Toni von Langsdorff became a physician against significant opposition. Her father was a Prussian officer who himself had few objections but found his daughter's decision derided by his fellow officers. Her mother supported higher education for women. For von Langsdorff, the presence of a constant doctor in the house for her chronically ill mother and her sister with severe spinal tuberculosis made a medical career seem the path to an independent life.

In order to enter the university, girls had to take special preparation to qualify them for the Abitur, or matriculation examination. An organization in Cologne, where von Langsdorff was living at the time, encouraged and financially supported girls who wanted to prepare for and take the examination. In spite of some unpleasant opposition from teachers and examiners, von Langsdorff entered Bonn University to take courses in anatomy. She found Bonn difficult, since all women were treated as visiting students, and had to specially request treatment in advance.

After completing her first year, she moved to southern Germany, to the University of Heidelberg, where women were considered equal students with men. Fortunately, Germany had always supported the free movement of students between universities. She decided to attend the University of Marburg when she found that the Prussian government had given full matriculation rights to women. There she took her preliminary medical examinations in basic sciences in 1908, but returned to Heidelberg, where the interaction between men and women students was open and friendly. At Heidelberg, she won an essay prize in internal medicine, but the essay itself, which she hoped to use as the basis for her doctoral thesis, was mislaid. Again she encountered some unpleasantness in her final examinations from one of her professors, an opthalmologist who opposed women's medical education, but she passed and was awarded her degree.

Von Langsdorff again experienced problems when she sought a hospital appointment, the last requirement for her medical licence. With the strong recommendation of her thesis advisor, she obtained a year's placement at the municipal clinic in Essen as a gynecologist. She obtained her licence and continued for seven years at the Essen gynecological clinic. When an opening for a permanent post at a hospital fell open, the hospital board supported her application, but the surgeon adamantly refused to work with a woman.

Von Langsdorff went into private practice in obstetrics and gynecology in Essen. There she remained until she was eighty. She is recalled today outside her country for her participation in the International Medical Women's Association as a pioneer member. KM

PRIMARY SOURCES
Langsdorff, Toni von. In Hellstedt, *Autobiographies.*

LANKESTER, PHOEBE (POPE) (1825–1900)

British botanist. Born 10 April 1825. Father Samuel Pope of Highbury. At least one brother. Married Edwin Lankester, Fellow of the Royal Society (1814–1874) in 1845. Eight children. Died 9 April 1900 in London.

Phoebe Pope was probably born in Highbury. Her father had been a Manchester mill owner. In 1845 she married the physician and scientist Edwin Lankester. In spite of the fact she had eight children (the eldest of whom was the noted biologist E. Ray Lankester [1847–1929]), she wrote a number of popular books on wildflowers, ferns, and parasitic plants. The Lankester family lived for many years in London, where her husband was professor at New College. Although early in Edwin Lankester's career he had been an active scientist and Fellow of the Royal Society, and editor for many years of the Royal Microscopic Society's journal, at the end of his life he turned to issues of public health. In the last ten years of his life he became a coroner for the city of London. The Lankesters received many famous scientists including Charles Darwin, Thomas Henry Huxley, and others at their home. JH/MBO

PRIMARY SOURCES
Boswell, J. T. I. *English Botany.* 3d. ed. 1863–1872. Lankester contributed the popular portion.
Lankester, Phoebe. *Plain and Easy Account of British Ferns.* London: R. Hardwicke, 1860; 1881.

———. "The Misteltoe and Parasitic Plants." *Popular Science Review* 2 (1863): 196–204.

———. *Talks about Plants.* London: Griffith and Farran, 1879.

SECONDARY SOURCES

Times, 14 April 1900. Obituary notice.

LANSDELL, KATHLEEN ANNIE (1888–1967)

South African botanical artist. Born 1888 in Durban, Natal, South Africa. Educated Government Art School, Durban; Royal College of Arts and Crafts, South Kensington, London. Professional experience: Natal Herbarium, illustrator (1915?–1917?); Division of Botany and Plant Pathology, Pretoria, illustrator (1917–1943). Died 1967 in Pietermaritzburg, Natal.

Kathleen Lansdell was born in Durban, South Africa. She was educated as an artist, and, after attending the Royal College of Arts and Crafts in London, was appointed to the Natal Herbarium. She completed a number of unfinished plates of natal plants that were being prepared for volume seven of Medley Wood's *Natal Plants.* She also worked on a number of watercolors of plants that hang in the Natal Herbarium. Beginning in 1917 until her retirement, she worked in the Division of Botany and Plant Pathology in Pretoria. She contributed numerous plates to the first few volumes of *Flowering Plants of South Africa.* Volume 35 of this set is dedicated to her. She also contributed plates to J. W. Bews's *Plant Forms and Their Evolution in South Africa.* In addition she both wrote the text and illustrated twenty-four plates for a series entitled "Weeds of South Africa," which appeared in the *Journal of Agriculture,* Pretoria. One of her major job-related tasks was to provide illustrations in black and white and color for official publications. Not only did she draw and paint plants, but she also made models in wax of healthy and diseased fruits and vegetables.

After she retired, Lansdell lived in Durban and continued to paint Natal plants. In 1962, she presented a folio of seventy-six plates to the Killie Campbell Library. JH/MBO

PRIMARY SOURCES

Woods, Medley. *Natal Plants.* Durban: Bennett and Davis, 1899. Lansdell completed the plates.

Evans, Lllytd Buller Pole. *Flowering Plants of South Africa.* London: L. Reeve & Co., 1921–. Lansdell contributed illustrations to the first volumes.

Bews, J. W. *Plant Forms and Their Evolution in South Africa.* London: Longmans, Green, 1925. Lansdell contributed illustrations.

STANDARD SOURCES

Gunn and Codd.

LAPICQUE, MARCELLE (DE HEREDIA) (1873–ca. 1962)

French neurophysiologist. Born 17 July 1873 in Paris to Henriette (Hanaire) and Severiano de Heredia. Married Louis Edouard Lapicque, 14 May 1902. One son, Charles, born before marriage, 6 October 1898 in Theizé (Rhône). Educated French schools and University of Paris (D.Sc., 1903). Professional experience: Laboratoire de Physiologie, Ecole Pratique des Hautes Etudes, associate director (1904–1952); Laboratoire de Physiologie Générale, Ecole Pratique des Hautes Etudes, director (1952–?). Died around 1962.

Marcelle de Heredia Lapicque was the daughter of a landowner who was also a Paris municipal councilor. Her father believed in the education of women, and she studied science at the University of Paris, where she was a fellow student of Louis Lapicque. The two had a son, Charles, born out of wedlock in 1898. He was recognized by Lapicque before their marriage in 1902. Marcelle Lapicque did her dissertation under her husband in 1903 on the nerve impulse, and her later studies furthered her interest in the question of the electrical excitation of the nerve and the study of it as a wave form over time, which she and her husband termed "chronaxie" and investigated with their students for forty or more years. She worked closely with her husband, supervising his experimental physiology laboratory at the Sorbonne, publishing over eighty articles with him and with his students, often as first author.

When Louis Lapicque retired from the University of Paris, Sorbonne, in 1938, he continued to work with his wife on physiological problems, still working in his laboratory of general physiology. He was imprisoned by the Gestapo for a period of time during World War II for supporting the resistance, and, while in prison, wrote his last book, *La Machine Nerveuse* (1943). In this, his most accessible and popular book, he credited his wife with a collaboration of forty years "rich in important initiatives." At various points in the text, he cited their initial studies of chronaxie together in 1903, as well as her independent investigations in 1907 on the effect of poisons and other inhibiting substances on chronaxie (130–131; 167).

Their son, Charles René, trained in sciences as an engineer. Charles solidified the link between the Lapicques and the Paris scientific community when he married Aline Elise Thérèse Perrin, the daughter of the atomic scientist Jean Perrin. He became a painter in the 1920s and gave up engineering for art by the 1940s.

Marcelle and Louis Lapicque lived most of their lives in Paris but spent long periods after World War II vacationing in the Côtes du Nord. Husband and wife enjoyed sailing and more than once crossed the English Channel to attend neurophysiology conferences in their yacht, the *Axon.* They kept up a regular series of studies and publications until Louis

Lapicque's death in 1952. From the late 1930s, young physiologists, especially those in England working under A. V. Hill, sucessfully challenged the Lapicques's concept of chronaxie and by the mid-fifties the French had turned away from their increasingly unpopular theories.

Marcelle Lapicque has dropped out of history, and is not even mentioned in A. Monnier's biographical article on his teacher Louis Lapicque for the *DSB,* doubtless because her position in Lapicque's laboratory depended upon her husband in the same manner as MARGUERITE LWOFF depended upon her husband for her position in science. Unlike Lwoff, Marcelle Lapicque, by surviving her husband, continued to run the Laboratory of General Physiology as one of the Laboratoires des Hautes Etudes until her death around 1962. She was a member of the Société de Biologie and many of her individual publications, as well as those written with her husband and their students, appeared in the society's bulletins between 1907 and 1951. JH

PRIMARY SOURCES

Lapicque, Marcelle. "Action de la strychinine sur l'éxcitibilité du nerf moteur." *Comptes Rendus des Seances, Société de Biologie* 62 (1907): 1062–1064.

———. "Chronaxies des principaux muscles striés de la Grenouille." *Comptes Rendus des Seances, Société de Biologie* 79 (1927): 933–934.

———. With M. Nattan-Larrier. "Influence du suc d'*Amanita muscaris* sur l'excitabilité du muscle et son imbibition." *Comptes Rendus des Seances, Société de Biologie* 79 (1927): 934–935.

———. With Louis Lapicque. "Sur la chronaxie des muscles squelettiques de la Tortue." *Comptes Rendus des Seances, Société de Biologie* 1 (1927): 1368–1376.

———. "Role des centres dans l'action periphique de la strychnine." *Comptes Rendus des Seances, Société de Biologie* 84 (1932): 957–959.

———. With Louis Lapicque. "Aptitude au galvanotonus dans les nerfs motrices de Batraciens sous l'influence des certaines actions experimentales." *Comptes Rendus des Seances, Société de Biologie* 145 (1951): 947–950.

SECONDARY SOURCES

Lapicque, Louis. *La machine nerveuse.* Paris: Flammarion, 1943. Mentions the importance of his wife's work.

"Louis Lapicque." Obituary articles 10 March 1953 at the Academie de Médécine by A. Giroudin, *Archives Biographiques Françaises.* These articles include a brief biography of Marcelle Lapicque.

STANDARD SOURCES

DSB (under Louis Lapicque).

LARSSON, ELISABETH (1895–?)

Swedish-U.S. obstetrician and gynecologist. Born 5 November 1895 in Grönviken, Bräcke, northern Sweden, to Erika and (?) Larsson. Eleven siblings. Educated: Adventist Academy at Nyhyttan, Järnboås (1920); Broadville College (1920–1926); College of Medical Evangelists (now Loma Linda), Calif. (M.D., 1931.) Professional experience: Los Angeles County Hospital, intern (1931–1932), resident (1932–1936); Loma Linda University assistant professor, (1935–1952); clinical professor of obstetrics and gynecology (1952–1963); emerita professor (1963). Concurrent experience: private practice (1952–1971). Honors and memberships: Fellow, American College of Obstetricians and Gynecologists (1952–1963); Fellow, American College of Surgeons; Fellow, American College of Obstetricians, Gynecologists; Swedish Medical Society (Hon. 1958); Swedish Gynecological Society (1965); Senior Citizen's Clinic, East Los Angeles, award (1971–1976); Medical Women's International Association, pioneer member. Death date unknown.

Elisabeth Larsson was a Swedish-born American physician, raised on a farm in Grönviken, northern Sweden. Elisabeth was the fourth child and first girl. Four of her siblings died before maturity, something that led Elisabeth to study medicine. She remained on the farm until after her father's death, when she began to study for her high school work first by correspondence and then at the Adventist Academy at Nyhyttan, Järnboås.

The family were strongly religious Lutherans, and Larsson determined to study in America, where she was able to obtain support for her high school, college, and premedical education from evangelical sources. She went on to the medical school at the College of Medical Evangelists (later Loma Linda College) where she would later teach obstetrics and gynecology.

Her placement in the Los Angeles County General Hospital for her internship in obstetrics and gynecology led to the rare opportunity for a woman to obtain a three-year residency in the hospital. She soon opened a private practice and took up a teaching position in medicine at Loma Linda College. She passed her boards in both surgery and obstetrics and gynecology. She remained at Loma Linda until she was made emerita professor at the age of sixty-eight. During that period she contributed a number of medical articles on prevention of cancer of the cervix, the premature infant, and the need for more women physicians.

Larsson continued in private practice until she was seventy-five. She calculated that she had delivered about sixteen thousand babies by the time she retired. At her last delivery she found she had delivered, years earlier, both the father and the mother as well as the anesthetist. She had a number of prestigious memberships in medical societies as well as her position as a pioneer member of the Medical Women's International Association. KM

PRIMARY SOURCES.
Larsson, Elisabeth. In Hellestedt, *Autobiographies.*

LARTER, CLARA ETHELINDA (1847–1936)

British botanist. Born 27 June 1847 in Leeds, Yorkshire. Professional experience: Flora of Devon, *editor in chief (1930–1936). Honors and memberships: Fellow of the Linnaean Society in 1912. Died 13 May 1936 in Torquay, Devon.*

Clara Larter began to write seriously about the flora of North Devon in 1897. Following her second book, a manual on the Flora of Torquay, she was elected a Fellow of the Linnaean Society. Toward the end of her life, she was made the editor in chief of the *Flora of Devon,* which appeared only after her death. Her herbarium is at the Torquay Natural History Museum, and her plant collection is at Oxford.

JH/MBO

PRIMARY SOURCES
Larter, Clara. *Notes on the Botany of North Devon.* N.p., 1897.
———. *Manual of Flora of Torquay.* N.p., 1900.
———, ed. *Flora of Devon.* Arbroath: T. Buncle and Co., 1939.

SECONDARY SOURCES
"Clara Ethelinda Larter." *Botanical Society Exchange Club British Isles Reports* (1936): 212–213. Obituary notice.
"Clara Ethelinda Larter." *Proceedings Linnean Society* (1936–1937): 200–202. Obituary notice.
Martin, W. Keble, and Gordon T. Fraser. *Flora of Devon.* Arbroath: T. Buncle and Co., 1939. Discussion of Larter on pages 777–778.

STANDARD SOURCES
Desmond.

LA SABLIÈRE, MARGUERITE HESSEIN, MADAME DE (1640?–1693)

French student of natural philosophy. Probably born in 1640. Married Antoine de Rambouillet, Sieur de La Sablière. Three children. Died 1693 in Paris.

Little is known about Mme. de la Sablière's early life. She was a patron of artists, men of letters, and scientists. She found science especially interesting. Two members of the French Academy of Sciences, Joseph Sauveur (1653–1716) and Giles Persone de Roberval (1602–1675), taught her mathematics, physics, and astronomy; and the poet La Fontaine taught her natural history and philosophy. La Sablière and her husband, the financier and poet Antoine de Rambouillet, Sieur de La Sablière, had three children. Although Marguerite did not engage in scientific research or writing herself, she maintained a popular salon frequented by many savants. She typifies the "scientific lady" in France on the eve of the Enlightenment.

The poet Boileau was annoyed by the intellectual pretensions of the women of La Sablière's circle, and in his *Satire contre les femmes,* portrayed her, astrolabe in hand, observing Jupiter and in the process weakening her sight and ruining her complexion. Charles Perrault defended her against Boileau's attacks. In his *Apologie des femmes* he claimed that she was not only very talented but sufficiently modest not to flaunt her abilities.

JH/MBO

SECONDARY SOURCES
Boileau-Despréaux, Nicolas. *Satire contre les femmes.* Includes the *Satire contre les maris* of Jean-François Regnard. Paris: George Birffaut, 1927. Satirizes learned women, including Mme. de La Sablière.

STANDARD SOURCES
NGB, vol. 29.

LASKEY, AMELIA (RUDOLPH) (1885–1973)

U.S. naturalist; ornithologist. Born 12 December 1885 in Bloomington, Ind., to Susan and Frank Rudolph. Married Frederick C. Laskey (1911). Educated elementary and secondary schools, Chicago. Honors and memberships: American Ornithologists' Union, Fellow; Tennessee Ornithological Society, member. Died 19 December 1973 in Nashville, Tenn.

Amelia Laskey's life indicates how an amateur can be an important contributor to science. Never formally educated in science, she, nevertheless, made important contributions. The daughter of German immigrants, Rudolph attended primary and secondary school in Chicago. She worked as a stenographer for the Oliver Typewriter Company before she met and married Frederick C. Laskey. The couple did not have any children. In 1921 they moved to a house outside of Nashville, Tennessee, where Amelia Laskey spent the remainder of her life. Like her mother, Amelia was an avid gardener. At first she created a wild garden in her back yard as a hobby. She was obsessively meticulous about both her house and garden, and the residence, named Blossomdell, thrived. Laskey was active in a garden club and read papers before members of a literary society. At one of her social events a friend suggested that she attend a Bird Club. She attended her first meeting of the Tennessee Ornithological Society in 1928 and immediately became fascinated with bird behavior. She obtained a bird-banding license and began a study of the migratory habits of several species, including the chimney swift, cowbird, and mockingbird. She

was able to locate the swift's winter home, when one of her banded birds appeared in Peru. She caught a rare Gambel's sparrow, which had never before been recorded in Tennessee. She also studied the behavior of cowbirds and mockingbirds. For her research she set up hundreds of nesting boxes in a park where she was able to observe the nesting habits of bluebirds.

From 1933 to 1973, Laskey published papers on more than ten species of birds in different ornithological journals, *The Migrant* (104 papers), *Bird-Banding* (19 papers), *The Wilson Bulletin* (12 papers), the *Auk* (12 papers), *Bird Lore* (1 paper), *Journal of the Tennessee Academy of Science* (2 papers), *Inland News* (1 paper), the *Chicago Naturalist* (1 paper), and *The Volunteer Garden* (1). There is no doubt that she made important contributions to research on the development of song, defense of territory, and longevity in the cardinal. From 1931 to 1943, Laskey studied 1621 banded cardinals. The results of her research appeared in *The Wilson Bulletin* (1944). However, even more vital was her work on the mockingbird. She reported on the development of song, a seven-egg clutch, a nine-year-old wild bird and his five mates, the defense of territory, and mating behavior. Much of her information was gained from a captive bird, "Honeychile," a bird that lived for fifteen years and four months. She published three papers in the *Auk*, the last of which was a summary of her thirty-year study of this species. In another major study, Laskey noted only monogamous behavior in her study of numerous pairs of color-banded brown-headed Cowbirds. She did not observe defense of territory in the usual interpretation, but recorded other interesting displays that were part of the intimidation display of male cowbirds and to a lesser degree, females. Her study on cowbird behavior was published in *The Wilson Bulletin*.

Laskey corresponded with MARGARET MORSE NICE, who became her mentor through letters. Nice encouraged Laskey to publish her articles. Generous to her friends, Laskey shared her knowledge with others. She cared for wounded birds in her home, keeping a red-tailed hawk for over ten years and an albino Great Horned Owl for twenty-two years.

JH/MBO

PRIMARY SOURCES

Laskey, Amelia R. "The 1939 Nesting Season of Bluebirds at Nashville, Tennessee." *The Wilson Bulletin* 52 (September 1940): 183–190.

———. "Cowbird Behavior." *The Wilson Bulletin* 62 (1950): 157–174.

———. "Breeding Biology of Mockingbirds." *The Auk* 79 (October 1962): 596–605.

SECONDARY SOURCES

Goodpasture, Katharine A. "In Memoriam: Amelia Rudolph Laskey." *Auk* 92 (1975): 252–259.

STANDARD SOURCES

Bailey; Bonta.

LASKI, GERDA (1893–1928)

Austrian/German physicist. Educated University of Vienna (doctorate, 1917). Professional experience: Kaiser Wilhelm Institute for Fibers Research, researcher, Department of Infrared Radiation Research, director (1924–1928); Physikalisch-Technische Reichsanstalt (PTR), department head. Died 24 November 1928 in Berlin.

Originally from Austria, Gerda Laski was educated at the University of Vienna, and received her doctorate in 1917. She went to the Kaiser Wilhelm Institute for Fibers Research as the director of the Department of Infrared Radiation Research. In 1928, she went to the Physikalisch-Technische Reichsanstalt to build a new department of infrared radiation research.

JH/MBO

SECONDARY SOURCES

Tobies, Renate, ed. *Aller Männer-kultur zum Trotz*. Frankfurt: Campus Verlag, 1997.

STANDARD SOURCES

Vogt.

LASSAR, EDNA ERNESTINE (KRAMER) (1902–1984)

U.S. mathematician. Born 11 May 1902 to Sabine (Elowitch) and Joseph Kramer. Two siblings. Married Benedict Taxier Lassar. Educated Wadleigh High School, Manhattan; Hunter College (B.A. summa cum laude); Columbia University (M.A., 1925; Ph.D., 1930); New York University (postgraduate work, 1939–1940; 1965–1969); University of Chicago (postgraduate work, 1941). Professional experience: DeWitt Clinton High School, Bronx, N.Y., teacher (1922–1923); Wadleigh High School, teacher (1923–1929); New Jersey State Teachers College in Montclair, N.J., instructor (1929), assistant professor (1932). Thomas Jefferson High School, Brooklyn, N.Y., teacher (1933–1956); Brooklyn College, graduate instructor of methods courses (1935–1938); Brooklyn Polytechnic, instructor through professor (1948–1965). Died 9 July 1984 in Manhattan.

Antisemitism and the Depression affected the course of Edna Kramer's career. Her parents were Jewish immigrants from Rima-Sombad, Austria-Hungary, and encouraged

their three children's intellectual interests. Her younger sister, Martha, and brother, Herbert, were all prize-winning students, all were elected to Phi Beta Kappa, and all became teachers. Kramer was somewhat of a prodigy, and when she arrived at Wadleigh High School in Manhattan, her high school mathematics teacher John A. Swenson encouraged her mathematical interests. Therefore when she went to Hunter College, she majored in mathematics. Her mathematical interests continued, and she earned master's and doctoral degrees.

Her first teaching jobs were in high schools; at her second school, Wadleigh High School, her former teacher, Swenson, arranged her teaching schedule so that she could continue her work at Columbia. After she received her degree, Swenson again helped her by recommending her strongly for a job as instructor of mathematics at the New Jersey State College in Montclair. She acquired the rank of assistant professor in 1932. The Depression was deepening and college positions were scarce, particularly for married women and Jews. Being both, Kramer was concerned about the stability of her job, especially because of the hostility of the prospective chairman of Montclair College. Therefore, she resigned her job and went back to public school teaching. While teaching at Thomas Jefferson High School, she also taught courses in the graduate division of Brooklyn College and at Columbia as a statistical consultant to the university's Division of War Research. From 1954 Kramer was affiliated with the New York Polytechnic Institute (then Brooklyn Polytechnic), where she began as adjunct instructor in 1948 and rose to adjunct professor in 1953. Kramer retired from the New York City school system in 1956 and from New York Polytechnic Institute in 1965. Kramer suffered from Parkinson's disease for the last ten years of her life and died of pneumonia at her home in Manhattan in 1984.

Kramer's dissertation, discussing the geometric properties of polygenic functions, extended the work of her thesis advisor, Edward Kasner, Georg Scheffers, and Edmond Laguerre. After this important theoretical work, she left pure mathematics and turned toward pedagogy and the history of mathematics. Her earliest pedagogical publication reflects the influence of her mentor John A. Swenson, and shows how prospective teachers can learn both content and method simultaneously. She recommends bringing appropriate college-level textbooks to the high school level and stresses the importance of concepts over memorization of facts. Some of her research was in statistics. She had taught educational statistics at Montclair College and from this knowledge she published her only textbook. This book described statistics in such a way that nonmathematicians could understand it. As a mathematician interested in history, she included many historical personages in her publications. She was especially interested in women in mathematics and wrote articles in *Scripta Mathematica* describing the lives of women mathematicians. She also wrote the lives of several women in science for the *Dictionary of Scientific Biography.* Kramer's decision to teach in the public schools changed the direction of her research. When she first got her doctorate she had intended to do research in pure mathematics; however, after she had decided to make teaching her career, she modified her research to consider topics of importance to high school teaching. JH/MBO

PRIMARY SOURCES

Lassar, Edna Ernestine Kramer. "Polygenic Functions of the Dual Variable w = u + jv." *American Journal of Mathematics* 52 (1930): 370–376. Part 1 of Kramer's doctoral dissertation.

———. *Polygenic Functions of the Dual Variable w and the Laguerre Group.* Hamburg: Lütcke and Wulff, 1930. Part II of Kramer's doctoral dissertation combined with a reprint of Part I.

———. "Some Methods in Professionalized Subject Matter Courses in Mathematics for Teachers College." *Mathematics Teacher* 24 (1931): 429–435.

———. *A First Course in Educational Statistics.* New York: John Wiley and Sons, 1935.

———. "Six More Female Mathematicians." *Scripta Mathematica* 23 (1957): 83–95.

SECONDARY SOURCES

Lipsey, Sally Irene. "Edna Ernestine Kramer Lassar (1902–1984)." *Publishers Weekly* 226 (27 July 1984): 78. Obituary notice.

Robinson, D. "Women in Math Count for More Today." *Eugene* (Oregon) *Register-Guard,* 7 July 1963. Reprinted in Grinstein and Campbell. Includes bibliography.

LASTHENIA OF MANTINEA (5th century B.C.E.)

Greek student of philosophy. Born in Mantinea. Educated Plato's Academy.

Next to nothing is known about the life and work of Lasthenia. Until recently it was assumed that Lasthenia of Arcadia, mentioned by Iamblichus among the most famous of the female Pythagoreans, was identical with the Lasthenia of Mantinea, who, along with Axiothea, purportedly was a student of Plato. Although evidence from the available sources is inconclusive, it now appears likely that they were two different individuals. Lasthenia is remembered for her near uniqueness as a female student of Plato and Speusippus, rather than for any known intellectual accomplishments. If she did make any personal contributions to science or mathematics, the records are not available. JH/MBO

SECONDARY SOURCES

Athenaeus. *The Deipnosophists.* London: Bohn, 1907. Mentions the relationship between Speusippus and Lasthenia at 7.279e.

Diogenes Laertius. *Lives of Eminent Philosophers.* Trans. R. D. Hicks. 2 vols. Cambridge, Mass.: Harvard University Press, 1980. Reference to Lasthenia 3:46.

Jamblichus of Chalcis (Iamblichus). *De vita Pythagorica liber.* Ed. Ludwig Deubner. Leipzig: Teubner, 1937.

STANDARD SOURCES

Ogilvie 1986; Pauly-Wissowa.

LATHAM, VIDA ANNETTE (fl. 1887)

British/U.S. microscopist. Born in Lancashire, England. Educated University of London (M.Sc., 1889); University of Michigan (D.D.S., 1892); Northwestern University (M.D., 1895); Paris; Berlin; Hamburg. Professional experience: University of Michigan, demonstrator in pathological bacteriology and comparative dental anatomy and curator museum (1889–1892); Northwestern University, assistant secretary and registrar, medical school lecturer in stomatology and dental surgery (1892–1896); College of Pharmacy, lecturer (1892); College of Physicians and Surgeons, Chicago, extension lecturer (1893); Women's and Children's Hospital, oral surgeon (1892–1897); American Dental College, faculty member (1892–1898); College of Physicians and Surgeons, Milwaukee (1902); Edgewater Hospital, attending physician (1929–1931); practicing physician and microanalyst (from 1929). Honors and memberships: Stomatological Society; American Medical Association, Fellow; American Dental Association; Microscopical Society (vice-president and public health secretary, 1905); Society of Parasitology; Illinois Microscopic Society (secretary, 1893; president, 1932); New York Academy; Women's Medical Club, Chicago (vice-president, 1931; president, 1933); Women's Dental Association (past president); Royal Microscopical Society, Fellow; Manchester Microscopic Society, corresponding member; Quekett Microscopic Club, London, Fellow; Victoria Microscopical Society, Australia; and the International Stomatological Association.

Vida Annette Latham was both a dentist and a medical doctor. Born in London where she earned a master of science from the University of London, she moved to the United States, where she received medical degrees. She edited or coedited numerous publications, including the dental research section of the *Medical Woman's Journal*, the *Polk Dental Directory* (associate editor), and the *Standard Medical Dictionary.* For the Century of Progress Exposition in Chicago in 1933, she worked on the chemical exhibits. This very versatile woman published extensively and was an active member of an incredible number of organizations. Latham's dental research was on oral surgery, operative dentistry, and the nerve supply of the pulp, teeth, and jaw. She worked on the pathology of tumors of the palate, cysts of the oral cavity, lead poisoning and fractures of the face. In addition she did research on aniline dyes and tissue reaction, tests for diabetic blood, the vasomotor system in teeth, and neoplasm in the pulp of teeth. JH/MBO

PRIMARY SOURCES

Latham, Vida A. "Mounting Mosses." *Microscopical Society Journal* (1887): 843–844.

———. "Short Notes in Practical Biology: Amoeba." *American Microscopical Journal* 10 (1889): 151–155.

———. "The Use of Stains Especially with Reference to Their Value for Differential Diagnosis." *Proceedings American Society Microscopy* 13 (1891): 95–100.

———. "Reaction of Diabetic Blood to Some of the Aniline Dyes." *Transactions American Microscopical Society* 81 (1900): 31–40.

STANDARD SOURCES

AMS 5–8, B 9.

LATIMER, CAROLINE WORMELEY (1860–1930?)

U.S. physiologist. Born 28 March 1860 in Baltimore, Md. Educated Woman's Medical College of Baltimore (1890); Bryn Mawr (A.B.; A.M., 1896). Professional experience: Goucher College, instructor in biology (1897–1898); Maryland Medical and Chirurgical Faculty (1899?–1906?); Appleton's Medical Dictionary, *associate editor (from 1915). Died ca. 1930.*

Physiologist Caroline Latimer first trained in medicine in the 1880s, at the Woman's Medical College of Baltimore, a school that did not then require a bachelor's degree for matriculation. Feeling that her training in science was inadequate, she chose to study for both an undergraduate and graduate degree in biology at Bryn Mawr, publishing two articles on physiology in the year she completed her master's degree, one on the effect of muscle fatigue on rigor mortis in cold-blooded animals and the other on the salivary glands. She taught biology at Goucher and physiology at the Maryland Medical and Chirurgical Faculty. During this period, she wrote a number of popular books, including one on practical physiology for women and girls. In 1915, she became the associate editor of *Appleton's Medical Dictionary.* JH/MBO

PRIMARY SOURCES

Latimer, Caroline Wormeley. "On the Modification of Rigor Mortis Resulting from Previous Fatigue of the Muscle in

Cold Blooded Animals." *American Journal of Physiology* 2 (1897): 29–46.

———. With Joseph W. Warren. "On the Presence of the Amylolytic Ferment and Its Synogen in the Salivary Glands." *Journal of Experimental Medicine* 2 (1897).

———. *Girl and Woman: A Book for Mothers and Daughters.* New York and London: D. Appleton & Co., 1910.

———, ed. *Appleton's Medical Dictionary.* New York: D. Appleton & Co., 1915.

STANDARD SOURCES

AMS 1–2, Bailey.

LAUBENSTEIN, LINDA (1947–1992)

U.S. physician noted for AIDS research. Born Boston, Mass., 21 May 1947 to Priscilla and George Laubenstein. Educated Barnard College (A.B.); New York University Medical School. Professional experience: New York University Medical Center, clinical professor; private physician (1982?–1992). Concurrent experience: first medical conference on AIDS, New York City, organizer (1983); Karposi's Sarcoma Research Fund, cofounder (1983); Multitasking (AIDS organization), founded with Jeffrey R. Greene (1989). Died 11 August 1992 in Chatham, Mass.

Linda Laubenstein became noted for her pioneer work in AIDS detection and treatment. She grew up in Rhode Island. In spite of the fact that she had polio as a child of five, which left her paraplegic, she went on to study at Barnard College, Columbia University. From there, in spite of asthma and being confined to a wheelchair, she went to medical school at the New York University School of Medicine, qualifying herself as a hematologist and oncologist. Working as a private physician in New York City, she was struck by the sudden rise in cases of the rare cancer Karposi's sarcoma among well-nourished young gay men whose immune systems had collapsed. In 1981, she coauthored the first paper on these patients, soon recognized as having symptoms of advanced AIDS at a period when AIDS sufferers could be numbered in the hundreds. One year later, she had treated sixty-two such cases of Karposi's sarcoma at a time when this represented one fourth of the then-known cases.

In 1983, Laubenstein organized the first national conference on AIDS at New York University with Alvin Friedman-Kien, with whom she had published her first cases. The same year she helped to found a research fund, Karposi's Sarcoma Research Fund to extend knowledge of this disease. She left the university to devote herself to the treatment of patients with AIDS, understanding that there was a need to establish a wide support system to those afflicted with this new and frightening disease. For this reason, she founded, with Jeffrey B. Greene (who later termed her "the ultimate AIDS physician"), Multitasking, a nonprofit organization that employed AIDS patients. After she called for the closing of gay bathhouses as focal areas of infection due to unsafe sex, she was criticized by militant gay groups. Nevertheless, the playwright Larry Kramer, an AIDS activist himself, saw in her the model for his very sympathetic character Dr. Emma Brookner in his Broadway play *The Normal Heart.* She died of undisclosed causes in 1992. JH/MBO

PRIMARY SOURCES

Laubenstein, Linda J. With Alvin Friedman-Kien. *AIDS: The Epidemic of Kaposi's Sarcoma and Opportunistic Infections.* New York: Masson, 1984.

———. Papers, 1947–1993 (inclusive). Schlesinger Library, Radcliffe College. Collection includes photographs; autobiographical essays; a diary, 1969; and biographical information, correspondence, writings, videotapes, and audiotapes.

SECONDARY SOURCES

Kramer, Larry. *The Normal Heart.* New York: Plume, 1985. Play on the topic of AIDS. The character Dr. Emma Brookner based on Linda Laubenstein.

STANDARD SOURCES

Annual Obituary 1992.

LAUGHLIN, EMMA ELIZA (1866–1962)

U.S. educator, botanist, and librarian. Born 27 August 1866 in Guernsey County, Ohio, to Margaret J. (Cowden) and John Wilson Laughlin. Nine siblings. Educated Barnesville High School (graduated 1884); Steubenville Seminary. Professional experience: Barnesville High School, teacher; Sumerton High School, teacher. Died 5 June 1962 in Barnesville, Ohio.

Emma Eliza Laughlin was the oldest of ten children. She did not have a college degree or a position in a university, but spent most of her life as a botany teacher and as founder of the Barnesville Public Library. She was an amateur botanical collector and, without much formal training, published numerous papers on her plants. Her botanical collecting began as a project for her class. They collected many plants from Belmont County, which she sent to Professor William Kellerman for the State Herbarium at The Ohio State University. She began acquiring plants in 1904 and continued until 1942. Her large personal herbarium was given to Ohio State by one of her brothers. She published on the rare plants of Barnesville (1910) and the mustards of Ohio (1917). She was a founder of the Barnesville Public Library and served until 1948 with very little remuneration.

Her life had an important impact on the people of her small Ohio town, as well as on a larger population, because

of the deposition of her herbarium at The Ohio State University. JH/MBO

PRIMARY SOURCES
Laughlin, Emma Eliza. "Twenty-five Rare Plants at Barnesville, Ohio." *Ohio Naturalist* 10 (1910): 160–162.
———. "The Brassicaceae of Ohio." *Ohio Journal of Science* 17 (1917): 308–331.

SECONDARY SOURCES
Stuckey, Ronald L. "Emma Eliza Laughlin." Unpublished notes. From the collection of Ronald L. Stuckey.

STANDARD SOURCES
Stuckey.

LAURIE, CHARLOTTE LOUISA (d. 1933)

British botanist, teacher, and writer of botanical textbooks. Born in West Indies. Professional experience: Cheltenham Ladies College, teacher of botany (1880–1910). Died 1933.

Little is known about the life and education of the botanist and teacher Charlotte Louisa Laurie. She taught botany for thirty years at the Cheltenham Ladies College and served as secretary of the Cheltenham Science Society. Between 1903 and 1910 she published three textbooks on botany. She was mentioned in the *Flora of Gloucestershire* as a contributor.

JH/MBO

PRIMARY SOURCES
Laurie, Charlotte Louisa. *Flowering Plants.* London: Allman and Son, 1903.
———. *Introduction to Elementary Botany.* London: Allman and Son, 1907.
———. *Textbook of Elementary Botany.* London: Allman and Son, 1910.

SECONDARY SOURCES
Riddlesdell, H. J. *Flora of Gloucestershire.* N.p., 1948. Laurie mentioned pages cxxxv–cxxxvi.

STANDARD SOURCES
Desmond.

LA VIGNE, ANNE DE (1684–?)

French student of natural philosophy. Born 1684 in Normandy. Father a physician. Death date unknown.

Anne de La Vigne was the daughter of a respected physician in Normandy. Better known for her poetry than for her science, she was nevertheless interested in and knowledgeable about current developments in natural philosophy; she was particularly concerned with the work of Descartes and was representative of the coterie of informed women who were his disciples. She died when she was a very young woman.

JH/MBO

STANDARD SOURCES
NBG, vol. 29.

LAVOISIER, MARIE ANNE PIERRETTE PAULZE (1758–1836)

French illustrator, editor, and assistant to chemist Antoine Laurent Lavoisier. Born 1758 to Claudine (Thoynet) and Jacques Paulze. Educated in a convent. Married (1) Antoine Laurent Lavoisier (he died in 1794); (2) Count Rumford. Died 1836 in Paris.

Marie Paulze's father, Jacques, a parliamentary lawyer and financier, was at one time the director of the French East India Company. He became a member of the Ferme Générale, a private consortium that collected taxes for the government. His wife was the niece of the Abbé Terray, who became France's controller general of finance in 1771. Paulze was educated in a convent, remaining there until 1771, when, at the age of thirteen, she was married to the twenty-eight-year-old Antoine Laurent Lavoisier (1743–1794), who had already achieved fame as a chemist and had been elected to the Academy of Sciences in 1768. The Lavoisiers had no children.

Both intelligent and interested in science, Marie Lavoisier quickly became involved in her husband's scientific pursuits. During the early years of their marriage, their home became a gathering place for members of the French intellectual community. When the revolution's fury overtook those who had held power in the days of the Old Regime, Lavoisier, who, like Marie's father, had been a member of the Ferme Générale, was especially vulnerable. He was arrested and imprisoned, and his property confiscated. During his imprisonment, Marie Lavoisier worked tirelessly but futilely to obtain her husband's release. Antoine Lavoisier was executed on 8 May 1794, during the last days of the Reign of Terror; Marie Lavoisier's father and many of her friends were also victims. Because certain incriminating documents had been found during a search of the Lavoisiers' home, Marie too was arrested, but she was released after a short period. With the execution of Robespierre in July 1794, the most violent of the revolutionary excesses came to an end. Eventually most of Lavoisier's confiscated property was returned to his widow.

In 1792 Lavoisier had begun work on his memoirs. At the time of his death only two volumes and part of a third, out

of a projected eight, were completed. Lavoisier edited the finished portions and had them privately printed in 1805. As life in Paris became normalized under the directory and then Napoleon, Lavoisier again hosted a salon frequented by scientific leaders. Among her guests was the physicist Sir Benjamin Thompson, Count Rumford (1753–1814), whom she married in 1805. After the marriage, she insisted on being called the Countess Lavoisier-Rumford. However, the success of her first marriage to a scientist was not repeated, and after four years the mutually dissatisfied couple separated. Lavoisier died in Paris at the age of seventy-six.

Because Lavoisier's scientific work was so thoroughly interwoven with that of her husband, it is difficult to assess its originality. Nevertheless, certain achievements can be ascribed to her. Marie's artistic talent was especially useful to Lavoisier. She had learned to paint under the direction of Jacques Louis David and used her skill to make sketches of experiments and experimental apparatus. She drew the diagrams for Antoine Lavoisier's treatise *The Elements of Chemistry* (1789). Her husband's laboratory notebooks also included her contributions: numerous entries written by Marie Lavoisier are scattered throughout the books. Marie Lavoisier further contributed to science through her translations of English scientific works into French. Her translation of Richard Kirwan's 1787 *Essay on Phlogiston,* with a commentary by Antoine Lavoisier and his associates, was of particular significance. Through her drawings, translations, interpretations of notes, and skillful editing of Lavoisier's memoirs, she made some important additions to the body of scientific knowledge. Although there are indications that she made some theoretical contributions, the evidence is still uncertain. MBO

PRIMARY SOURCES

Kirwan, Richard. *Essay on Phlogiston (Essai sur le phlogistique).* Trans. and ed. Marie Lavoisier. Paris: Rue et hôtel Serpente, 1788.

———. "Strength of Acids and the Proportion of Ingredients in Neutral Salts." *Annales de chimie* 14 (1792): 152, 211, 238–286.

Lavoisier, Antoine Laurent. *Traité élèmentaire de chimie.* Paris, 1789. Marie Lavoisier produced thirteen copperplate illustrations for this book.

———. *Mémoires de chimie.* Ed. Marie Lavoisier. Paris, 1805.

SECONDARY SOURCES

Aykroyd, W. R. *Three Philosophers.* Westport, Conn.: Greenwood Press, 1970. Concerns the lives of Lavoisier, Priestley, and Cavendish. Contains information on Marie.

Brody, Judit. "Behind Every Great Scientist—Madame Lavoisier Was Not Just the Wife of the Famous Chemist." *New Scientist* 116 (1987): 19–21. Discusses Marie Lavoisier's roles as translator, collaborator, illustrator-engraver, and salon hostess. Continues with her life after Lavoisier's execution and her short marriage to Benjamin Thompson, Count Rumford.

Duveen, Denis I. "Madame Lavoisier." *Chymia: Annual Studies in the History of Chemistry* 4 (1953): 13–29. Brings to light previously ignored facts regarding Marie Lavoisier as a competent and contributing scientist in her own right.

McKie, Douglas. *Antoine Lavoisier: Scientist, Economist, Social Reformer.* London: Constable, 1952. Marie Lavoisier discussed on pages 67–71, 108, 138–139, 142, 162–163, 175, 184, 290–291, 298–299, 310, 313–320, and 322–326.

Rayner-Canham, G. W., and H. Frenette. "Some French Women Chemists." *Education in Chemistry* 22 (1985): 176–178.

Scheluer, Lucien. "Deux lettres inedité." In *Revue d'Histoire des Sciences* 38 (1985): 121–130.

Smeaton, William A. "Madame Lavoisier, P. S. and E. I. DuPont de Nemours and the Publication of Lavoisier's Memoires de Chemie." *Ambix: Journal of the Society for the History of Alchemy and Chemistry* 36 (1989): 22–30. Acknowledges the extensive help that Antoine Lavoisier received from his wife.

———. "Monsieur and Madame Lavoisier in 1798: The Chemical Revolution and the French Revolution." *Ambix: Journal of the Society for the History of Alchemy and Chemistry* 36 (1989): 1–4.

STANDARD SOURCES

DSB (under A. Lavoisier); Grinstein 1993; Ogilvie 1986.

LAW, ANNIE (d. 1889)

U.S. conchologist. Born in Carlisle, England. Father, John Law. Two siblings. Died in 1889.

Annie Law, the eldest of three children, was born in England but emigrated with her family to Tennessee about 1851. After spending much of her life in that area, she moved to California in 1874. Law collected mollusks in the mountains of Tennessee and North Carolina. Although she neither described new species nor wrote articles, she contributed to the field of conchology by providing material for the publications of others. Her work drew attention to a rich molluscan fauna that had previously been unknown; she discovered eleven new species and one new genus. JH/MBO

SECONDARY SOURCES

"Law, Annie." *American Journal of Science.* 3d. ser. 37 (1889): 422. Obituary notice.

LAWDER, MARGARET (1900–1983)

Irish/South African botanist. Born 1900 in Ireland. Went to the Cape, South Africa, 1922. Professional experience: plant collector for National Botanic Gardens, South Africa. Died in South Africa, 1983.

Margaret Lawder was born and raised in Ireland. She left for the Cape of Good Hope in South Africa when she was twenty-two. There she began to collect plants for the National Botanic Gardens and to cultivate plants for conservation. She died at the age of eighty-three. JH/MBO

SECONDARY SOURCES

"Margaret Lawder." *Veld and Flora* 69, no. 3 (1983): 126. Includes portrait. Obituary notice.

STANDARD SOURCES

Desmond.

LAWRENCE, BARBARA (1909–)

U.S. zoologist and mammalogist. Born 30 July 1909 in Boston, Mass., to Theodora (Eldredge) and Harris Hooper Lawrence. Married William Edward Schevill (23 December 1938). Two children. Educated Vassar (B.A., 1931). Professional experience: Harvard University Museum of Comparative Zoology, staff (from 1931); associate and acting curator of mammals (1942–1952); curator of mammals (1952–1975?).

Barbara Lawrence was born in Boston and went to Vassar College. After she received her bachelor's degree she joined the staff of the Museum of Comparative Zoology at Harvard, where she began to do research in mammalian systematics, traveling to East Africa to study the howler monkey. Lawrence returned three years later as part of the expedition led by Glover Morrill Allen, who died a few years later. She married the scientist William Edward Schevill in the late 1930s and raised two children. In the late forties, the two scientists published a study of underwater communication by porpoises in *Science* and later the two did a study of the musculature of the porpoise. During World War II, she was appointed acting curator of mammals and then, by 1952, curator of mammals at the Concord Field Station of the museum.

In the 1950s, she formed part of the fifth Harvard expedition to study the mammals of Nyasaland and published on the results. JH/MBO

PRIMARY SOURCES

Lawrence, Barbara. "Howler Monkeys of the Palliata Group." *Bulletin of the Museum of Comparative Zoology, Harvard College* 75, no. 8 (1933): 315–354.

———. With Glover Morrill Allen. "Scientific Results of an Expedition to Rain Forest Regions in Eastern Africa." *Bulletin of the Museum of Comparative Zoology, Harvard College* 79, no. 3 (1936): 31–126.

———. With William Edward Schevill. "Underwater Listening to the White Porpoise (*Delphinapterus leucas*)." *Science* 109 (1949): 143.

———. With Arthur Loveridge. "Mammals from Nyasaland and Tete, with Notes on the Genus Otomys." *Bulletin of the Museum of Comparative Zoology, at Harvard College* 110, no. 1 (1953): 1–80. Zoological results of a fifth expedition to East Africa.

———. "The Functional Anatomy of the Delphinid Nose." *Bulletin of the Museum of Comparative Zoology, Harvard College* 114, no. 4 (1956): 104–151. Thirty pages of plates.

———. With William Edward Schevill. "Gular Musculature in Delphinids." *Bulletin of the Museum of Comparative Zoology, Harvard College* 135, no. 1 (1965): 1–65. On dolphin musculature.

———. With Charles Pierson Lyman. *List of Mammals of Eastern Massachusetts.* Bedford, Mass.: Concord Field Station, Museum of Comparative Zoology, Harvard University, 1974. Guide to resources, Concord Field Station, no. 7.

STANDARD SOURCES

AMS 8, P&B 12–13; Debus.

LAWRENCE, PENELOPE (1856–1932)

British scientist and educator. Born 1876 to Charlotte (Bailey) and Philip Henry Lawrence. Educated Kohler's Institute in Gotha (Froebel Certificate, 1873); Newnham College, Cambridge (Natural Science Tripos, 1878). Professional experience: Newnham College, demonstrator (1879–1881); Tavistock Place, principal of the kindergarten college (later the Maria Grey Training College) (1881–1883); Fearegg school and Wimbledon High School, teacher (1883–1897); Roedean School, Brighton, founder and first headmistress (1897–1925). Died 3 July 1932.

Lawrence's father, Philip Henry Lawrence, belonged to an old Nonconformist family, and was descended from the Reverend Philip Henry, one of the clergy who left the established church on the passing of the Act of Uniformity in 1662. Philip Henry and his brother, Tertius, lost their parents when they were children and were raised by two maiden aunts who had a school for girls near Liverpool. They were friends of MARIA EDGEWORTH, and their upbringing probably influenced not only the boys but also their two daughters, Penelope and Susan. Penelope was raised by a stepmother, for her own mother died when Penelope was an infant. Her stepfamily was a loving one and she got along well with her sisters, Dorothy and Millicent.

Although Penelope Lawrence passed the Natural Science Tripos and was a demonstrator at Newnham for several years, her major importance was in founding an important girls' school, based on the idea that girls should have the same opportunities that their brothers had enjoyed for so long.

Lawrence was the third Newnham student to pass the Tripos. Once she had been appointed demonstrator, she had the responsibility of caring for the new chemical laboratory in the garden of the Old Hall. Since women could not use the Cambridge University laboratory facilities, they were forced to construct their own. Thus, what is now known as "The Old Laboratory" (now a structure for the performing arts) was then the "new" laboratory. Since the womens' college, Girton, had its own chemical laboratory, its students did not use this facility for chemistry. However, it soon served for practical work in biology, zoology, and physiology for both colleges. Material for dissection, and so on, was sent to Newnham from the men's laboratories after each lecture. Lawrence was known as an effective teacher.

Lawrence left Cambridge in 1881 and was principal of the kindergarten college in Tavistock Place for two years and taught at other schools for several years before she founded Roedean with her sisters. As headmistress, Lawrence's personality had a great impact on her students. One of her students recalled a current story that "the Misses Lawrence always vaulted over gates instead of opening them, or that we all played football in knickerbockers before breakfast, an incredible notion in the nineties!" (Gaskell). The same student noted that Lawrence's contention that games and hard work made for successful students was born out. JH/MBO

SECONDARY SOURCES

Newnham Roll (Gaskell, C. S. "Penelope Lawrence.").

Newnham Roll (Sharpe, Julia. "Penelope Lawrence.").

LAWRENSON, ALICE LOUISA (d. 1900)

Irish botanical writer and gardener. Regular contributor to Gardener's Chronicle *and other journals. Died 14 March 1900 in Killiney, County Dublin.*

Alice Louisa Lawrenson was an Irish gardener who contributed articles on flower gardens under the pseudonym St. Brigid to the important journal *Gardener's Chronicle* and to *Garden*. She was a friend of Frederick W. Burbidge, the curator of the Trinity College garden, and himself a regular contributor to the journal *Garden* under the name of Veronica. An anemone variety (*Anemone coronaria* "St. Brigid") was named in honor of Lawrenson. JH/MBO

SECONDARY SOURCES

"Alice Louisa Lawrenson" *Gardener's Chronicle* 1 (1900): 189.

Nelson, E. C. *Irish Flower Gardens* 1984, 150–151.

Walsh, W. and E. C. Nelson. *Irish Florilegium*, vol. 2. New York: Thames and Hudson, 1987. Laurenson mentioned on 14, 134, 136.

STANDARD SOURCES

Desmond.

LAWTON, ELVA (1896–1993)

U.S. botanist and bryologist. Born 3 April 1896 in West Middleton, Pa. Father, Ira Lawton. Educated: University of Pittsburgh (B.A., 1923; M.A., 1925); University of Michigan (Ph.D., 1932). Professional experience: Pennsylvania Public Schools, elementary school teacher (1915–1919); Crafton (Pa.) High School, teacher (1923–1925); University of Michigan, department of botany, laboratory assistant, Whittier Research Fellow (1925–1928); Hunter College, biology department, instructor (1928–1932), assistant professor through associate professor (1932–1959); University of Washington Herbarium, research associate and curator of bryophytes (1959–1979), lecturer on bryophytes (1959–1980). Field research: Cold Spring Harbor (1928–1932); Michigan Biological Station Summer Research (1949); University of Iowa, Lakeside Laboratory (summers, 1950–1953). Honors and memberships: Torrey Botanical Club (officer, 1947–1954; president, 1955). Commemorated by Rhacometrium lawtonae *Ireland and* Bryolawtonia. *Died in Seattle, Wash., 3 February 1993.*

Elva Lawton was an internationally recognized botanist and bryologist, teacher, taxonomist, and field biologist. She was born in West Middletown, Pennsylvania, and went to local schools. After graduating from high school in Washington, Pennsylvania, she followed the pattern of a number of other women from her state, teaching in rural elementary schools before she began her undergraduate education. When she was about twenty-three, she went to the University of Pittsburgh, obtaining first her bachelor's and then her master's in biology, becoming fascinated by the "alternation of generations" in the reproduction of nonvascular plants. For two years while pursuing her master's degree, she returned to teach biology and Latin at the high school level. Her master's thesis was on fern identification, and she continued her interest in ferns at the doctoral level when she went to the University of Michigan to continue her education. There she worked as laboratory assistant and was awarded a Whittier research fellowship for three years, working under the direction of Carl LaRue. While finishing her dissertation research, Lawton began to teach as an instructor at Hunter College in 1928. Four years later, she completed her dissertation on regeneration and induced polyploidy in ferns, published

the same year in the *Journal of Botany.* She was made assistant and then associate professor at Hunter College, where she remained for about thirty-one years. She began to make a name for herself, working in the summers at Cold Spring Harbor, the University of Michigan Biological Station, and the Iowa Lakeside Laboratory, making good use of the New York Botanical Garden, and publishing regularly in the *Bulletin* of the Torrey Botanical Club, of which she was an active member. By the forties, she was an officer and she was elected president of the botanical society in 1955.

In the late fifties, Lawton was invited to study unidentified mosses from the western states at the University of Washington herbarium. Lawton and her colleague Grace Howard made an important field trip to Nevada to collect bryophytes and mosses, supported by a Washington University research grant.

Now almost sixty, Lawton decided to leave Hunter College and move to the Washington University Herbarium in order to work with the bryologist Theodore C. Frye, at his urging. Encouraged as well by the chair of the botany department, C. L. Hitchcock, she accepted the position of research associate and curator of bryophytes.

Between 1962 and 1971, Lawton regularly received grants from the National Science Foundation to study full time the bryophytes of the western states. At the end of this period, she published what she considered her crowning achievement, *Moss Flora of the Western States,* published by the Hattori Botanical Laboratory in Japan as part of its twenty-fifth anniversary. Lawton also regularly taught bryology at the University of Washington during the sixties and seventies, and supervised one graduate dissertation. She continued to be a presence at the herbarium until she was almost ninety. At ninety-five she went into a retirement home, and died little over a year later. JH/MBO

PRIMARY SOURCES

Lawton, Elva, "Regeneration and Induced Polyploidy in Ferns." Ph.D. diss., University of Michigan, 1932. Papers from the Department of Botany of the University of Michigan no. 365. Reprinted from the *American Journal of Botany,* 19, no. 4 (April 1932): 303–333.

———. "Regeneration and Induced Polyploidy in *Osmunda regalis* and *Cystopteris fragilis.*" *American Journal of Botany* 23 (1936): 107–114.

———. "A Revision of the Genus *Lescuraea* in Europe and North America." *Bulletin of the Torrey Botanical Club* 84 (1957): 281–307; 337–355.

———. "Mosses of Nevada." *The Bryologist* 61 (1958): 314–334.

———. *Moss Flora of the Pacific Northwest.* Nichinan, Miyazaki, Japan: The Hattori Botanical Laboratory, 1971. Suppl. no. 1, *Journal of the Hattori Botanical Laboratory.*

———. "Keys for the Identification of the Mosses of the Pacific Northwest." Nichinan, Miyazaki, Japan: The Hattori Botanical Laboratory, 1971. Suppl. no. 2, *Journal of the Hattori Botanical Laboratory.*

SECONDARY SOURCES

Denton, Melinda F. "Elva Lawton (1896–1993): Bryologist and Teacher." *Bulletin Torrey Botanical Club* 121 (1994): 84–86.

STANDARD SOURCES

AMS 6–8, B 9, P&B 10–12.

LAZARUS, HILDA MARY (1890–?)

Indian physician. Born 1890 in South India. Father school principal in Visakhapatnam. Eleven siblings. Educated London Mission High School and College, Visakhapatnam; Presidency College, Madras (A.B., 1912?); Andhra Medical College?, Visakhapatnam (M.D., 1917). Professional experience: Women's Medical Service, various posts (1917–1943), chief medical officer (1943–1947); Lady Hardinge Medical College Hospital, New Delhi, assistant in obstetrics and gynecology (1917); Dufferin Hospital, Calcutta, resident (1917–1918); Surat Hospital, Bombay, physician (1918–1922); Visakhapatnam Hospital, physician (1922–1927; 1933); Lady Willingdon Medical School, Madras, physician (1928–1932; 1935–1940), principal, superintendent of hospital (1940–1943); Christian Medical College, Vellore, principal (1947–1950); Andhra Medical College, Institute of Obstetrics and Gynecology, physician. Honors: Visakhapatnam, honorary director and professor (1950–1962). Legislative Council, Visakhapatnam (1962–1975). Death date unknown.

Born and brought up in Visakhapatnam, South India, Hilda Mary Lazarus was next to the youngest of twelve children, only nine of whom survived into adulthood. Her grandfather was a Brahmin who had converted to Christianity, to the anger of his community. Both her mother and her father had strong beliefs about education and had received excellent educations. One of her mother's sisters was a director of education in the principality of Madras and another had trained in medicine in Edinburgh. Her father was principal of the London Mission High School, which he had redesigned using the Montessori system of education. As a child, she was an excellent student, although she was always one of the few girls in her classes.

Lazarus went to a local college to prepare herself for medicine, but also decided to take a bachelor's degree in biology and botany should she decide to teach science. Her excellent performance in medical school meant that she was chosen to be appointed to the Women's Medical Service in India. As a member of the medical service, she was sent wherever she was needed for varying lengths of time, from New Delhi to

Calcutta and from there to Surat. In these hospitals, she found she had to expand her three languages to seven, including English and all the major Indian languages to deal with patients, midwives, and hospital staff of various backgrounds.

In many of the hospitals to which she was assigned, Lazarus was required to train midwives. In some cases, she found the caste system a hindrance in treating untouchables, and was able to obtain the cooperation of her staff only by setting an example. She also managed to expand teaching of nurses and midwives in regional languages, which markedly increased their competence, and introduced training of mothers in domestic hygiene and child-rearing skills in maternity and child-welfare centers with the cooperation of local governmental bodies.

For some years after she had worked throughout India, Lazarus was able to obtain a posting in her own city, at the Visakhapatnam hospital. There she remained until transferred to Madras, where she taught at Lady Hardinge Medical College, rising to principal by 1940. She also supervised the attached hospital. Three years later, she was made chief medical officer of the Medical Women's Service of India, where she remained until her retirement from the service in 1947.

At this point, Lazarus chose to become principal of the Christian Medical College in Vellore and then superintendent until she retired formally at the age of sixty. Her retirement did not affect her active work in medical education, since she took a position as professor of the Andrha Medical College in Visakhapatnam and honorary directory of the Institute of Obstetrics and Gynecology. She reorganized the institute, obtaining new clinical laboratories, library, lecture halls, living quarters and outpatient clinics for obstetrics and gynecology, as well as setting up an infertility clinic.

In her seventy-second year, Lazarus resigned, partly to give younger phsyicians a chance, but retained her tie to rural medicine until well past her eighty-fifth year by serving on the legislative council and sitting on the advisory staff of five hospitals. KM

PRIMARY SOURCES
Lazarus, Hilda Mary. In Hellstedt, *Autobiographies.*

LEACH, MARY FRANCES (1858–1939)

U.S. chemist. Born 22 March 1858 in Payson, Ill. Educated: Mount Holyoke College (A.B., 1880); University of Michigan (B.S., 1893; fellow 1901–1905; Ph.D., 1903); University of Göttingen (postgraduate studies, 1897–1898); University of Zurich (postgraduate studies 1898–1900). Professional experience: Massachusetts public school teacher (1878–1879); Michigan public school teacher (1881–1885); Sedia(?), Mich., high school teacher (1885–1889); Detroit, teacher (1889–1891); Mount Holyoke College, professor of chemistry (1893–1900); Western College of Women, assistant professor of hygiene (1906–1907), professor of chemistry and hygiene (1907–1921?). Died 1939.

Mary Frances Leach began her professional life like many American women who were born in the mid-nineteenth century, by teaching elementary school before she completed her undergraduate studies. She went on to Mount Holyoke College, but after obtaining her bachelor's degree, she moved to Michigan, where she taught elementary and then high school for ten years while she studied chemistry at the University of Michigan. When she completed her bachelor of science degree in chemistry, she returned to Mount Holyoke, where she taught chemistry for seven years while working on her doctorate at Michigan.

Again following the pattern of highly motivated American women scientists, Leach spent a period of postgraduate study in Germany, at the University of Göttingen, and then at the University of Zurich. Upon her return to the United States, she was appointed assistant professor of hygiene at Western College for Women, and then became professor of chemistry and hygiene by 1807. She remained in that position until her retirement. JH/MBO

STANDARD SOURCES
AMS 1–6; Bailey.

LEACOCK, ELEANOR BURKE (1922–1987)

U.S. cultural anthropologist. Born 2 July 1922 in Weehawken, N.J., to Lilly Batterham and Kenneth Burke. Married (1) Richard Leacock, 27 December 1941 (divorced 1962), four children; (2) James Haughton, August 1966. Educated Barnard College (B.A., 1944); Columbia University (M.A., 1946; Ph.D., 1952). Professional positions: Cornell University Medical School, department of psychiatry, research assistant (1952–1955); Queen's College, lecturer (1955–1956); City College New York, lecturer (1956–1960); U.S. Department of Health, Education and Welfare, special consultant, behavioral sciences (1957–1958); Bank St. College of Education, faculty member (1958–1965); Washington Square College, lecturer (1960–1961); Polytechnic Institute, Brooklyn, associate professor of anthropology (1963–1967), professor (from 1967). Concurrent experience: research and publication on property relations among Eastern Canadian Indians; interracial neighborhoods; ethnicity and epidemiology of mental illness; anthropology. Honors and memberships: American Anthropological Association, Fellow; Ethnological Society, secretary-treasurer. Died 1987.

Eleanor Leacock made significant contributions on gender and society, ethnic factors in nutrition, and on epidemiology in mental illness. Born in the late twenties, she went to

Columbia University, studying first at Barnard, and then receiving her advanced degrees in anthropology at Columbia, even in the fifties an important training ground for women anthropologists. Although she studied an American Indian group for her doctorate, her later work was centered first on problems experienced by children of diverse ethnic background in the New York public schools, and later on women in colonial and developing societies.

Leacock married twice, first as an undergraduate to Richard Leacock, with whom she had four children, and next in her forties to James Haughton. By the time of her death in 1990, she was seen as a seminal figure in anthropological feminist scholarship. JH/MBO

PRIMARY SOURCES

Leacock, Eleanor Burke. "The Montagnais 'Hunting Territory' and the Fur Trade." *American Anthropologist* 56, no. 5 (1954): 50–59.

———. *Teaching and Learning in City Schools: A Comparative Study.* New York: Basic Books, 1969.

———. With Nancy Oestreich Lurie, eds. *North American Indians in Historical Perspective.* New York: Random House, 1971.

———. With Mona Etienne. *Women and Colonization: Anthropological Perspectives.* New York: Praeger, 1980.

———. With Leela Dube and Shirley Ardener. *Visibility and Power: Essays on Women in Society and Development.* Delhi and New York: Oxford University Press, 1986.

———. With Helen Icken Safen, eds. *Women's Work: Development and the Division of Labor by Gender.* South Hadley, Mass.: Bergin and Garvey, 1986.

SECONDARY SOURCES

American Anthropologist 92 (1990): 201–205. Obituary notice.

Sutton, Constance R., ed. *From Labrador to Samoa: The Theory and Practice of Eleanor Burke Leacock.* Arlington, Va.: Association for Feminist Anthropology/American Anthropological Association in Collaboration with the International Women's Anthropology Conference, 1993. These articles derive from presentations made at the 86th meeting of the American Anthropological Association, Chicago, 1987, and at the International Congress of Anthropological and Ethnological Sciences, held in Zagreb in 1988. Includes a bibliography of Eleanor Burke Leacock's published work (141–149).

STANDARD SOURCES

Debus.

LEAKEY, MARY DOUGLAS (NICOL) (1913–1996)

U.S. archeologist and anthropologist. Born 6 February 1913 in London to Cecilia Marion (Frere) and Erskine Edward Nicol. Married Louis Seymour Bazett Leakey, 1936 (d. 1972). Three sons. Educated private schools; University of Witwatersrand (D.Sc. with honors, 1968); University of Western Michigan (1980); University of Chicago (1981); Yale University (D.Sc., 1976); Oxford University (D.Litt., 1981). Professional experience: Early excavations in Kenya at the Olorgesailie and Rusinga Island in Lake Victoria sites (1937–1942); Olduvai Gorge Excavations, director. Honors and memberships: Geological Society of London, Prestwick Medal; National Geographic Society, Hubbard Medal; Society of Women Geographers, Gold Medal; Stockholm, Linnaeus Medal (1978); Geological Association, Stopes Medal (1980); Elizabeth Blackwell Award, Hobart and Smith College (1980); Royal Swedish Academy, honorary member; American Association for the Advancement of Science, Fellow. Died 10 December 1996.

Mary Leakey became interested in prehistory from childhood, when she visited prehistoric sites in southwestern France. She collected stone tools and visited the caves with paintings around Les Eyzies. She first met her future husband when she was illustrating his book, *Adam's Ancestors.* Mary was Louis's second wife. Shortly after they married, they left for Kenya, where she did ethnological and archeological research. She discovered *Proconsul africanus,* a fossil ape, in an island in Lake Victoria. This discovery brought the Leakeys to international attention and also brought them financial support. Mary Leakey worked at Olduvai Gorge in Tanzania from 1951. Beginning on a modest scale, the Leakeys expanded the scope of the excavation when they discovered the 1.75-million-year-old *Zinjanthropus* in 1959. Their funding increased when they found *Homo habilis* in 1960, a species contemporary with, but more advanced than *Zinjanthropus.* The description was published in 1964 amid considerable controversy. At Laetoli, thirty miles south of Olduvai, Mary discovered three trails of fossilized hominid footprints that demonstrated that human ancestors walked upright as long ago as 3.6 million years. Mary Leakey published numerous articles with Louis Leakey on their discoveries, while maintaining her own work on the ancient artifacts and art of the region. Many of the honors and awards listed for Mary Leakey were given to both Leakeys. JH/MBO

PRIMARY SOURCES

Leakey, Mary Douglas. With Walter Edwin Owen and L. S. B. Leakey. *Dimple-based Pottery from Central Kavirondo, Kenya Colony.* Nairobi, Kenya: Coryndon Memorial Museum, 1948. Cambridge: Cambridge University Press, 1948.

———. With L. S. B. Leakey. *Excavation in Beds I and II.* N.p., 1971.

———. *Olduvai Gorge: My Search for Early Man.* London: Collins, 1979. An account of her work with Leakey and others to find early fossil hominids.
———. *Africa's Vanishing Art: The Rock Paintings of Tanzania.* London: Hamish Hamilton/Rainbird, 1983.
———. *Disclosing the Past.* London: Weidenfeld and Nicolson, 1984. One of Mary Leakey's autobiographical accounts.

SECONDARY SOURCES

"Leakey, Mary Douglas, née Nicol." Chambers Harrap Ltd. 1993.

STANDARD SOURCES

Gacs; *Notable; WW in America,* vol. 136, 1984–1985.

LEAVITT, HENRIETTA SWAN (1868–1921)

U.S. astronomer. Born 4 July in Lancaster, Mass., to Henrietta (Kendrick) and George Leavitt. Six siblings. Never married. Educated public school, Cambridge, Mass.; Oberlin College (1885–1888); Society for the Collegiate Instruction of Women (later Radcliffe College) (1888–1892). Professional experience: staff member, Harvard Observatory (1902–1921). Died 12 December 1921 of cancer in Cambridge, Mass.

Henrietta Leavitt was one of seven children of a Congregationalist minister, who had a parish in Cambridge, Massachusetts, during most of Henrietta's childhood. She attended public school in Cambridge and, after the family moved to Cleveland, Ohio, studied at Oberlin College (1885–1888). Although her hearing was seriously impaired, this handicap did not impede her progress at school. In 1892, Leavitt completed her undergraduate education at Radcliffe College, then known as the Society for the Collegiate Instruction of Women.

Leavitt took a course in astronomy during her senior year at Radcliffe and developed an interest in the subject. After graduation, she took another course and then spent some time traveling before volunteering her services to the Harvard Observatory in 1895. Appointed to the permanent staff in 1902, she soon attained the position of chief of the photographic photometry department. She worked at the observatory until her death, of cancer, at age fifty-two.

Much of Leavitt's scientific work involved the accurate measurement of the brightnesses—and hence the magnitudes—of stars. During the first years of the century, visual photometry was superseded by photographic methods, because the photographic plate is more sensitive to light of certain wavelengths than the human eye. Edward Pickering, director of the Harvard Observatory, appointed Leavitt to execute his plan to establish a "north polar sequence" of magnitudes that would serve as a standard for the entire sky. In 1913, the system of the north polar sequence was adopted by the International Committee on Photographic magnitudes for its projected astrographic map of the sky. Leavitt worked on this project until her death, at which time she had established sequences for 108 areas.

In the course of her observations, Leavitt made the important discovery that the fainter stars of a sequence were usually redder than the brighter stars. This phenomenon raised the question of whether the stars were actually more red or whether their light appeared red because of the effects of interstellar adsorption. Since Leavitt's discovery, photoelectric techniques have been developed that can distinguish between the two cases.

Leavitt's most important theoretical contribution was the establishment of the period-luminosity relation of the cepheid variable stars—stars that brighten and dim in a highly regular fashion. In her study of these stars, she noted that the longer the period of pulsation, the brighter the star. This relation was used by subsequent astronomers for determining the distances from the earth of similar stars within our own galaxy and in distant galaxies. MBO

PRIMARY SOURCES

Leavitt, Henrietta. "Ten Variable Stars of the Algol Type." *Annals of the Harvard College Observatory* 60, no. 5 (1908): 109–146.
———. "1,777 Variables in the Magellanic Clouds." *Annals of the Harvard College Observatory* 60, no. 4 (1908): 87–108.
The records of astronomical work of Leavitt from 1912 to 1919 are held in the Harvard Archives for Harvard College Observatory under her name.

SECONDARY SOURCES

Krupp, E. C. "Astronomical Musings." *Griffith Observer* 39 (May 1975): 8–18. Includes information on Leavitt.

STANDARD SOURCES

DAB; Debus; *DSB;* Jones and Boyd; *NAW*(M); Ogilvie 1986; *Notable.*

LE BEAU, DÉSIRÉE (1907–1993)

Austro-Hungarian/U.S. chemist and inventor. Born 14 February 1907 in Teschen, Austria-Hungary (now Poland). Married Henry W. Meyer (1955). Educated University of Vienna (undergraduate degree); University of Graz, Austria (Ph.D., 1931). Professional experience: Austro-American Rubber Works, Vienna, researcher (1932–1935); Sociétè de Progrès Technique, consultant in Paris; Dewey and Alma Chemical Company, Massachusetts, research chemist (1936?–1940); MIT, Department of Chemical Engineering and Division of Industrial Cooperation, research associate (1940–1945); Midwest Rubber Reclaiming Company, Illinois

(1945–1950?); Pennsylvania State College, Currie lecturer (from 1950). Died 1993.

Born in Austria-Hungary, Désirée Le Beau earned an undergraduate degree from the University of Vienna and a doctorate in chemistry from the University of Graz, where she majored in chemistry and minored in physics and mathematics. She left Austria for Paris in 1935, and moved to the United States in 1936. In the United States, she first became a research chemist with a company in Massachusetts and then, during World War II, served as a research associate at MIT's department of chemical engineering. Le Beau was a colloid chemist who developed methods of reclaiming natural and synthetic rubbers. She mainly used old tires to produce new products. After the war, she was appointed director of research at the world's largest independent rubber reclaiming company, where she studied the structures of natural and synthetic rubbers and clays. She developed a tie pad for railroads using reclaimed rubber and patented this process. She held other patents for producing reclaimed rubber.

JH/MBO

PRIMARY SOURCES

Le Beau, Désirée. "Basic Reactions Occurring during Reclaiming of Rubber I." *Rubber Chemistry and Technology* 21 (1948): 895.

———. "Reclaiming Agents for Rubber: Solvent Naphtha I." *Rubber Age* (October 1950).

———. "Reclaiming of Elastomers." In *Colloid Chemistry,* vol. 7, ed. Jerome Alexander, 569–597. N.p.: Reinhold, 1950.

SECONDARY SOURCES

Society of Women Engineers Newsletter (June 1959): 1, 3.

STANDARD SOURCES

Notable (article by Karen Withem).

LEBEDEVA, NATALIIA IVANOVA (1894–1978)

Russian anthropologist and ethnographer. Born 19 July 1894 in Riazan' (Russia). Died 19 May 1978 in Riazan'.

Nataliia Lebedeva studied the material culture of East Slavic peoples. She was particularly interested in the spinning, weaving, and typology of the dress of Russians, Ukranians, and Belorussians. Her studies extended to an analysis of dwelling and work buildings of these ethnic groups. She was considered to be in the forefront of those using material culture as a source of information on the evolution of these people and their ethnic history. She worked extensively in the museums of Moscow and Raisan'. JH/MBO

PRIMARY SOURCES

Lebedeva, Nataliia Ivanova. "Vostochnoslavianskii etnograficheskii sbornik: ocherki narodnoi material'noi kul'tury russkikh, ukraninisev i belorusov v XIX–nachale XX v." *Trudy Instituta etnografii AN SSSR* 31 (1956): 461–540.

———. With G. N. Maslova. "Ruskaiia krest'ianskaiia odeshda XIX—nache XX v." In *Russkie: Istoriko-Etnographicheskii atlas,* ed. P. I. Kushner, 193–267. Moscow, 1967.

SECONDARY SOURCES

Maslova, G. S., and M. N. Morosova, "Vydaiushciishia sovetski etnograf, N. I. Lebedeva." *Sovetskaia etnografiia* 6 (1979): 90–94.

STANDARD SOURCES

IDA (article by A. M. Reshetov).

LEBEDEVA, VERA PAVLOVNA (1881–1968)

Russian physician. Born 18 September 1881 in Nizhni-Novgorod. Father Pavel Livodonov. Six siblings. Married I. Lebedev-Polianskii. Educated at local gymnasium; Women's Medical Institute. Professional experience: Geneva, obstetrics and gynecology clinic, physician; Central Institute for Maternity and Child Protection, director; People's Commissariat of Social Security, deputy; People's Commissariat of Public Health in the Russian Republic, state inspector; Central Institute of Advanced Training for Physicians in Moscow, director. Died in 1968.

Vera Pavlovna Lebedeva was born in Nizhnii Novgorod (later Gorkii), daughter of Pavel Livadonov, a cook. In 1892, Livadonov died of cholera, leaving seven young children. The family was forced to take refuge in an almshouse, and the children went out to work. A charitable society found Vera a place in the gymnasium, from which she graduated with a gold medal. She then worked for two years as a rural schoolteacher.

In 1901, having saved up some money, she enrolled in the Women's Medical Institute. However, she soon became caught up in the political activity of the period and was twice expelled from the institute. She posed as the wife of the Bolshevik Lebedev-Polianskii in order to be able to visit him in prison and when he was released, she married him and went to Finland. Later Lebedev had to escape to Geneva, but Lebedeva returned to St. Petersburg to the Women's Medical Institute, from which she graduated in 1910.

She began work as a zemstvo (district) physician in Vladimir province, but was soon fired, again for political activity. In 1912, she went to Geneva, a haven for young people with revolutionary sympathies. There she worked in an obstetrics and gynecology clinic and engaged in underground revolu-

tionary activity. In 1917, Lebedeva returned to Russia, where she joined the Bolsheviks.

After the Bolshevik coup of November 1917, Lebedeva found herself at last in a strong position. She had all the qualifications for a leadership position in the new society: she was of proletarian origin, she was a dedicated revolutionary personally acquainted with leading Bolsheviks, and a trained physician. She was appointed director of the Central Institute for Maternity and Child Protection with the responsibility for organizing a national system of maternal and child care.

Later, from 1931 to 1934, as deputy of the People's Commissariat of Social Security, Lebedeva was involved in research on the question of disability. From 1934 to 1938, she was a state inspector for the People's Commissariat of Public Health for the Russian Republic, and from 1938 to 1950, she was director of the Central Institute of Advanced Training for Physicians in Moscow. Lebedeva was awarded three Orders of Lenin and the Order of the Red Flag of Labor. She died in 1968.

Lebedeva was one of the first women appointed to high office in the newly created Soviet state and, over the years, she occupied a series of important positions in the health administration of the country.

Her most significant work was the creation of a network of creches (*iasli*) for children up to four years old and preschool nurseries (*detskie sady*) for children four to seven (seven being the age when children started school). In connection with the day nurseries, she set up consultation centers with resident pediatricians. These centers, besides looking after the health of the children, disseminated advice and information to their parents. The infant mortality rate dropped significantly. Reliable child care also made it possible for mothers to enter the labor force in the enormous numbers that rapid industrialization demanded.

The Soviet Union was the first nation to provide such services, and Lebedeva had no model to follow. Although implementation of the project involved many hundreds of people, its success was owing largely to her energy and dedication.

The medical relief program of the American Women's Hospitals Committee of the American Medical Women's Association, which was active in the 1920s in the Caucasus and other areas, was also under her authority. In 1924, Lebedeva took part in a Congress of the Medical Women's International Association in London. ACH

SECONDARY SOURCES

Kovrigina, Mariia D. *V neoplatnom dolgu*. Moscow: Politizdat, 1985.

STANDARD SOURCES

Tuve.

LEBOUR, MARIE VICTOIRE (1876–1971)

British marine biologist. Born 20 August 1876 in Goodburn, Northumberland, to Emily Nora (Hodding) and George Alexander Louis Labour. Educated Armstrong College (in art). Durham University (A.Sc. in zoology, 1903; B.Sc., 1904; M.Sc., 1907; D.Sc., 1917). Professional experience: Durham University, staff (1904–1906). University of Leeds, Department of Zoology, junior demonstrator (1906–1908), demonstrator (1908–1909), assistant lecturer and demonstrator (1909–1915); Marine Biological Laboratory, Plymouth, research staff and marine biologist (1915–1946); honorary staff member (1946–1964). Honors and memberships: Linnaean Society, Fellow; Zoological Society, life Fellow; Marine Biological Association, United Kingdom, member. Died 2 October 1971.

As a young woman, Marie Lebour accompanied her father, a professor of geology at Durham College of Science, on his geological excusions. It was only in her late twenties that she began her formal education in science, having first studied art at Armstrong College. She received her bachelor of science in zoology at Durham University in 1904. Even before she formally turned to science, she had already begun to make an extensive collection of land and freshwater molluscs and had published her first paper on that topic in 1900. She continued on for a master's degree that she earned three years later (1907), by which time she had begun to publish on the larval stages of trematodes, parasites on molluscs, as well as investigating the larval stages of molluscs, on which she eventually published more than one hundred papers.

Although she was on the staff at Durham University until she received her master's degree, Lebour then took up an appointment as demonstrator and then assistant lecturer at Leeds University under Walter Garstang until the beginning of World War I. Through an arrangement with her department, she went to Plymouth to work with E. J. Allen at the Plymouth Marine Biological Laboratory at the start of the war to supplement the depleted staff. She found the situation so congenial to her work and interests that she chose to remain there for the rest of her scientific career. She received her doctorate of science shortly after she joined the staff in Plymouth.

Lebour began to investigate microplankton in Plymouth, soon after her arrival, and published two classical papers on this topic in 1917. Her subsequent work on taxonomy of plankton species resulted in her first book, *Dinoflagellates of the Northern Seas,* and in a subsequent volume in 1930. She identified no fewer than twenty-eight new species.

Her interest in the larva of Crustacea led her to develop the use of the plunger jar to study the euphausiid larvae of the North Atlantic in the early twenties, contributing heavily to the research done in this field by Robert Gurney, with whom she also published. In the late twenties, her work included a study of the Antarctic species. Later, after her retirement, she extended her research to include studies of the species found around Bermuda.

Lebour also made some important contributions to the study of eggs and larvae of fish species, especially sprat, pilchard, and herring, considered to be among the most accurate and detailed descriptions. As she had in studying the larvae of Crustacea, she employed the plunger jar to research the feeding of young fish. In this as in all her researches, her detailed and artistic sketches enhanced her publications. The marine biologist MIRIAM ROTHSCHILD remembered that her first impression was of the sound of the creaks and tinkles of Marie Lebour's plunger jars and the miniature world that these contained, not to speak of the happy expressions of those who left her laboratory, owing in part to her kindness and her infectious love of nature.

When Lebour's father died in 1918, her mother and one of her sisters came to live with her in Plymouth. Although her mother's subsequent illness meant that Lebour could not continue to spend a full day at the laboratory, she managed to turn out an enormous number of publications and research over the subsequent fifteen years, until she was able to return to full-time work following her mother's death. Only at this time was she able to travel to Bermuda, West Africa, and other locations to expand the geographical range of her research. Although she retired in 1946, her love of science kept her in her laboratory for almost twenty more years. At the age of eighty-eight, she began to find the travel into the laboratory too difficult and her increasingly poor vision made microscopical work impossible. She died at the age of ninety-five, having produced more than 175 publications, the last one when she was in her mid-eighties. JH

PRIMARY SOURCES

Lebour, Marie Victoire. "Larval Trematodes of the Northumbrian Coast." *Transactions of the Natural History Society, Northumberland* 1 (1907): 437–453.

———. "The Larval and Post-larval Stages of the Pilchard, Sprat and Herring from Plymouth District." *Journal of the Marine Biological Association, United Kingdom* 12 (1921): 427–457.

———. *The Dinoflagellates of Northern Seas.* Plymouth: The Marine Biological Association of the United Kingdom, 1925.

———. "The Larval Stages of the Plymouth Brachyura." *Proceedings of the Zoological Society, London* (1928): 473–560, pls. 1–16.

———. Studies of the Plymouth Brachyura. I, II. *Journal of the Marine Biological Association* 14 (1927): 795–821; 15 (1928): 109–123.

———. *The Planktonic Diatoms of Northern Seas.* London: The Ray Society, 1930. Publication no. 116 of the Ray Society.

———. "The Larval Stages of Caridion, with a Description of a New Species, *C. Steveni.*" *Proceedings of the Zoological Society, London* (1930): 181–194.

———. *The Planktonic Decapod Crustacea and Stomatopoda of the Benguela Current.* Part 1, first survey, R.R.S. 'William Scoresby,' March 1950. Cambridge: Cambridge University Press, 1954. Series of discovery reports issued by the National Institute of Oceanography.

SECONDARY SOURCES

Russel, F. S. "Marie Victoria Lebour." *Journal of the Marine Biological Association, United Kingdom* 52 (1972): 777–788. Obituary notice with two portraits. This also includes her bibliography and an extensive tribute from Miriam Rothschild.

LE BRETON, ELAINE (1897–?)

French physiologist. Born 18 March 1897. Death date unknown.

Although Elaine Le Breton's degrees are not listed in the available biographical source, we do know that she worked on cellular nutrition and the mechanisms of transformation of a normal cell into a cancerous cell. She worked at the Faculté des Sciences in Paris and Rennes as well as the University of Strasbourg, as a member of the Faculté de Médecin and director of research. JH/MBO

PRIMARY SOURCES

Le Breton, Elaine. *Variations biochimiques du rapport nucleoplasmatique au cours du developpement embryonnaire . . .* Paris: Masson, 1923. Published as part of the publications of the Institute of Physiology, Faculty of Medicine of the University of Strasbourg.

———. With Georges Schaeffer. *L'action dynamique specifique des protides; theories anciennes, theorie nouvelle.* Paris: Hermann, 1938.

———. With G. Popjak, eds. *Biochemical Problems of Lipids; Proceedings of the Second International Conference on the Biochemistry of Lipids.* New York: Interscience Publishers, 1956. International Conference held at the University of Ghent, 27–30 July 1955, organized with the collaboration of the Vlaamse Chemische Vereniging of Belgium, under the presidency of Professor R. Ruyssen.

STANDARD SOURCES

Turkevich and Turkevich.

LECLERCQ, SUZANNE (CÉLINE) (1901–)

Belgian paleobotanist and paleontologist. Born 28 March 1901. Educated University of Liège (Ph.D.); visits to University College, London; the British Museum (Natural History); the Geological Survey, London; Cambridge University; Glasgow University; Manchester University. Professional experience: University of Liège (Belgium), professor of paleophytology and stratigraphy (1928); Société d'Anthropologie, foreign member (1930s). Honors and memberships: Botanical Society of America, corresponding member (1952); Paleobotanical Society of India, foreign honorary member (1957); Geological Society of Belgium (president 1953–1954).

Suzanne Céline was a paleobotanist who worked on the Devonian flora preserved by petrification and the formation of impression and petrifaction. She got her doctorate from the University of Liège and made numerous trips to English universities and museums to study their collections. She belonged to many scientific societies in different parts of the world. JH/MBO

PRIMARY SOURCES

Céline, Suzanne. With Henry N. Andrews, Jr. "Calamophyton bicephalum: A New Species from the Middle Devonian of Belgium." *Annals of the Missouri Botanical Garden* 47 (1960): 1–23.

———. With H. Banks. "Pseudosporocchnus Nodosus sp. Nov., a Middle Devonian Plant with Cladoxylalean Affinities." *Palaeontographie* 110, issue B (1962).

STANDARD SOURCES

Turkevich and Turkevich.

LEDINGHAM, UNA CHRISTINA (GARVIN) (1900–1965)

British physician. Born 2 January 1900 to Christina (Wilson) and James Louis Garvin. Married John Ledingham (1925). One son; one daughter. Educated South Hampstead High School; University of London (M.B.; B.S., 1923); London School of Medicine for Women (later the Royal Free Hospital of Medicine) (M.D., 1927). Professional experience: Brompton, the Royal Free and Royal Northern Hospitals, house posts (to 1925); London School of Medicine for Women, medical registrar (1925–1931; staff room physician, 1931); Hampstead General Hospital, staff; Marie Curie Hospital, staff (from 1931). Honors and memberships: London University, senior examiner; Royal Free Hospital, board of governors (1957–1960); Fellow of the Royal College of Physicians (1942). Died 19 November 1965.

Una Ledingham was a brilliant, opinionated woman who was feared as well as respected by her students. Her hard exterior concealed the real sympathy she felt for her patients. While she was at the Hampstead General Hospital and the Marie Curie Hospital, she developed an interest in diabetes and became an expert on the problems of the pregnant diabetic woman. During World War II, she managed her husband's medical practice while keeping up with her own medical work. The Ledinghams had two children. Their son became a physician to Westminster Hospital. JH/MBO

SECONDARY SOURCES

British Medical Journal 2 (1965): 1314. Obituary notice.

Lancet 2 (1965): 1136–1137. Obituary notice; includes portrait.

STANDARD SOURCES

Europa; Munks Roll.

LEE, JULIA SOUTHARD (1897–?)

U.S. textile chemist. Born 29 September 1897 in Southard, Mo. Married 1937. Educated University of Missouri (B.S., 1926); Kansas State University (M.S., 1929); University of Chicago (Ph.D., 1936). Professional experience: Purdue University, instructor in textiles and clothing (1934–1937); Iowa State University, associate professor (1939–1946); Washington State University, associate professor of home economics, chair of textiles and clothing department (1946–1950); New Mexico State University, professor of home economics (from 1953). Death date unknown.

Julia Southard Lee was twenty-nine years old when she earned her bachelor of science degree at the University of Missouri. She continued at Kansas State University, where she got a master's degree and then went to the University of Chicago, where she began work on a doctorate. Between 1929 and 1933 she had an ELLEN H. RICHARDS fellowship from the American Home Economics Association (1930–1931) and another from the University of Chicago (1931–1933). During the time that she was completing her doctorate, she took a position at Purdue University as an instructor in textiles and clothing. After she received her doctorate, she took a position as associate professor at Iowa State University, where she remained for seven years. She became chair of the textile and clothing department at Washington State University, where she remained for five years. At that point she went to New Mexico State University as professor of home economics.

Lee's research involved protein fibers, X-ray studies on cellulose, and service qualities of textile materials. She was a member of the Chemical Society, the Association of Textile Chemists and Colorists, and the American Home Economics Association. JH/MBO

STANDARD SOURCES

AMS 7–8, B 9, P&B 10–11; Bailey.

LEE, REBECCA (1840–1881)

U.S. physician. Born in 1840. First African-American woman to obtain a university medical degree. Educated New England Female Medical College, Boston (M.D., 1864). Professional positions: Richmond, Va., private practice (1865?–1881). Died in 1881.

Rebecca Lee was the first African-American woman to obtain a university medical degree, but nothing is known of her early life. She attended the New England Female Medical College during the period that MARIE ZAKRZEWSKA, brought from the New York Infirmary for Women and Children as professor of obstetrics and diseases of women and children, became dissatisfied with the level of teaching there and threw her energy into the newly founded New England Hospital for Women and Children. We have no information whether Lee followed her there. Soon after, Lee went to Richmond, Virginia, where she practiced privately until her death at the young age of forty-one. Lee has been confused recently with Rebecca Lee Crumpler, who published a book on women's diseases in Boston in 1883. Crumpler's birthdate, 1858, makes the identification highly unlikely.

KM

SECONDARY SOURCES

Sammons, Vivian. *Blacks in Science and Related Disciplines.* Washington, D.C.: Science Reference Section, Science and Technology Division, Library of Congress, 1990.

STANDARD SOURCES

LKW; Lovejoy; O'Neill.

LEE, ROSE HUM (1904–1964)

U.S. sociologist. First Chinese-American university chair. Born 20 August 1904 in Butte, Mont., to Lin (Fong) and Wah-Lung Hum. Married (1) Ku Yong Lee (1923?, later divorced); (2) Glenn Ginn (1951). One adopted daughter. Educated Butte High School; Carnegie Institute of Technology (B.S., 1942); University of Chicago (A.M., 1943; Ph.D., 1947). Professional experience: Chinese government secretary (1928–1937); Roosevelt University, assistant professor (from 1945), chair (1956), professor (1959–1964); Phoenix College, visiting professor (1962–1963). Died 25 March 1964 in Phoenix, Ariz.

Rose Hum Lee was born in Butte, Montana, to an energetic Chinese father who immigrated from Kwangtung Province, China, to California. He then worked in Montana as a ranch hand, miner, and laundry worker. Her mother, also from Kwangtung, continued her husband's business after his death despite the fact that she was illiterate. She also encouraged her children to get an education. Rose was the second oldest of seven and attended the local high school, training as a secretary. She married a young Chinese student in Philadelphia whom she met while working, and the two went to China to work both for the new republican government and for American corporations stationed there.

During the Japanese invasion of China in 1937, Rose Hum Lee helped the government organize emergency social services for widows and children. She was to adopt one of these children as her one daughter. She returned to the United States just before the beginning of World War II with her daughter.

Lee then began to study for an undergraduate degree at Carnegie Institute of Technology, financing herself with the help of her mother and by lectures and freelance writing about the situation in China. She continued on for graduate degrees at the University of Chicago in sociology, finishing her doctorate two years after the end of the war. She drew upon her own knowledge of the Chinese-American communities in the West for her thesis, "The Growth and Decline of Chinese Communities in the Rocky Mountain Region." During this period, she also wrote children's plays, including one about a little Chinatown detective, produced by the well-known Chicago children's theater, Goodman Theatre.

Upon graduation, Rose Hum Lee was appointed to the sociology department of the newly formed Roosevelt University in Chicago, where she remained for the rest of her professional career. She continued to write on issues of urbanization and the Chinese-American. She was appointed chair of the department in 1956 and was made full professor of sociology three years later.

Lee was married for the second time in 1951 to Glenn Ginn, a Chinese-American lawyer from Phoenix, Arizona. Although she continued to go back and forth between Chicago and Phoenix, she decided to take a year as a visiting professor at Phoenix College in the early sixties. The following year she died from a stroke while visiting Phoenix. There is a file on her with a portrait at Roosevelt University.

JH/MBO

PRIMARY SOURCES

Lee, Rose Hum. *The City: Urbanism and Urbanization in Major World Regions.* Chicago: Lippincott, [1955?].

———. *The Chinese in the United States of America.* [Hong Kong]: Hong Kong University Press, 1960.

———. *The Growth and Decline of Chinese Communities in the Rocky Mountain Region.* New York: Arno Press, 1978. Reprint of the author's thesis, University of Chicago, 1947.

SECONDARY SOURCES

Chicago Sun Times, 26 March 1964. Obituary notice.

New York Times, 27 March 1964. Obituary notice.

STANDARD SOURCES
AMS 8, S&B 9–10; *NAW*(M) (article by William Burr).

LEE, SARAH WALLIS BOWDICH (1791–1856)

British popularizer, amateur geologist, author, and artist. Born 10 September 1791 in Colchester. Father John Wallis. Married (1) Thomas Edward Bowdich (1812, he died in 1824); (2) Robert Lee (1829). Died 22 September 1856 at Erith.

Sarah Wallis married naturalist Thomas Edward Bowdich when she was twenty-two years old. She shared his interests and accompanied him on field trips to Africa. Armed with a letter of introduction to Baron Cuvier in 1817, she and her husband went to visit Cuvier at the Museum d'Historie Naturelle. He received both husband and wife kindly and allowed them to study his collections. They remained in Paris until 1823, when they set off on a second trip to Africa. Bowdich, however, died on the Gambia River on 10 January 1824. His account of that expedition was completed by his wife, who published it along with a natural history appendix. Sarah continued her researches aided by Cuvier. In 1829, she married Robert Lee, and subsequently devoted much of the rest of her life to popularizing natural science, illustrating many of her books herself. Her manual on taxidermy went through multiple editions, as did her best-known book on freshwater fish, beautifully illustrated by herself. She wrote a paper on paleontology in 1831, and published her recollections of Cuvier in a biographical work, the *Memoirs of Baron Cuvier,* in 1833. At the end of her life, she produced a literary romance describing adventures in West Africa based on her own experiences. JH/MBO

PRIMARY SOURCES

Bowdich, Sarah Wallis. *Taxidermy: or the Art of Collecting, Preparing, and Mounting Objects of Natural History. For the Use of Museums and Travelers.* London: Longman, Hurst, Rees, Orme, and Brown, 1820. This manual went through six editions.

Bowdich, Thomas Edward. *Excursions in Madeira and Porto Santo. During the Autumn of 1823, While on His Third Voyage to Africa.* London: G. B. Whittaker, 1825. "To which is added, by Mrs. [Sarah] Bowdich, 1. A narrative of the continuance of the voyage to its completion . . . 2. A description of the English settlements on the river Gambia. 3. Appendix: containing zoological and botanical descriptions, and translations from the Arabic."

Bowdich, Sarah Wallis. *The Freshwater Fishes of Great Britain.* London: Printed for the authoress and R. Ackermann, 1828–1838. This may be her most important work. It was published in eleven parts, although a twelfth part was planned but was not published because of insufficient funds. The fish were caught for Lee who was able to reproduce their exact colors before they faded.

Lee, Mrs. R. [Sarah Wallis Bowdich]. *Memoirs of Baron Cuvier.* London: Longman, 1833. Published simultaneously in Paris and New York.

———. *The African Wanderers, or The Adventures of Carlos and Antonio. Embracing Interesting Descriptions of the Manners and Customs of the Western Tribes and the Natural Productions of the Country.* London, Grant and Griffith, 1847.

———. *Adventures in Australia; or, The Wanderings of Captain Spencer in the Bush and the Wilds. Containing Accurate Descriptions of the Habits of the Natives, and the Natural Productions and Features of the Country.* London: Grant and Griffith, 1851.

———. *Anecdotes of the Habits and Instincts of Birds, Reptiles, and Fishes.* London, Grant and Griffith, 1853.

———. *Trees, Plants, and Flowers: Their Beauties, Uses, and Influences.* London: Grant and Griffith, 1854. Continued through a number of editions, even after Lee's death.

STANDARD SOURCES
Creese and Creese; *DNB.*

LEEBODY, MARY ELIZABETH (d. 1911)

Irish botanist. Born at Portaferry in County Down. Married Professor J. R. Leebody of Foyle College, Londonderry. Died 1911.

Field biologist Mary Elizabeth Leebody added greatly to botanical knowledge of two Irish counties, Derry and Donegal. She added to the range of the American orchid *Spiranthes romanzoffiana* (Kilrea), and discovered, among others, *Dryas octopetala* on Muckish, and *Teesdalia nudicaulis* on Lough Neagh, and *Malaxis* on Slieve Snacht. JH/MBO

PRIMARY SOURCES

Leebody, Mary. "*Spirathes Romanzoviana* in County Londonderry." *Irish Naturalist* 2 (1893): 228.

———. "Stachys betanica *in Donegal.*" *Journal of Botany* 87 (1899): 273.

SECONDARY SOURCES

Britten, James, and George Simonds Boulger, ed. *A Biographical Index of British and Irish Botanists.* Vol. 2. London: West Newman, 1893.

Irish Naturalist 20 (1911): 218. Obituary notice.

STANDARD SOURCES
Desmond; Praeger.

LEES, FLORENCE SARAH (1840–1922)

British nurse, pioneer of district nursing. Born 31 March 1840 in Blandford, Dorset to Mathilda and Henry Lees (a physician). Married Dacre Craven in 1879. Two sons. Educated Secondary School, London; St. Thomas' Nursing School (1866); Kaiserwerth Institute on the Rhine (Germany) (1867); King's College Hospital School of Nursing (1868); Paris Hospital (1869–1870). Professional experience: Royal Reserve Hospital, Hamburg, Germany, superintendant of nurses (1870–1871); Metropolitan and National Nursing Association, superintendent-general (1874–1887); Queen's Nursing Institute, council member and advisor on training (1889–1918). Honors and memberships: Prussian war medal; Prussian Ordre de la Merité (1871). Jubilee medal. Cross of St. John of Jerusalem. Died 24 October 1922 at Walton-on-the-Naze, England.

Florence Lees was the only daughter of a physician in Dorset who deserted his family when she was a child. She went to school in London and then began to study nursing in both London and Germany. After studying at King's Hospital, she went to study nursing in the great hospitals in Paris when the Franco-Prussian war broke out. Her loyalty was to the Prussian side, and after volunteering her skills as a nurse, was sent by Crown Princess Fredericka of Prussia (the eldest daughter of Queen Victoria) to serve as the superintendent of nurses at the Royal Reserve Hospital, Hamburg.

When Lees returned to London, she embarked on a tour of American nursing education, where she was influenced by the American ideas that nurses needed to be trained in the same manner as medical students. FLORENCE NIGHTINGALE and William Rathbone then asked her to survey the nursing needs of London, a request that resulted in her review of nursing in 1874. Subsequently she was appointed superintendent-general of nurses at the newly formed Metropolitan and National Nursing Association. She pursuaded her board to develop a district nursing system.

She married Reverend Dacre Craven, a supporter of her work, and had two sons. Craven later became secretary to the Home for District Nurses in London. With the cooperation of Florence Nightingale, both Cravens successfully pursuaded Queen Victoria to create a new nursing school in her jubilee year, the Queen's Nursing Institute. Lees, writing under her married name, then produced an important *Guide to District Nurses.* Even in retirement, she continued to have an influence on the development of district nursing as a consultant to the Nursing Institute. JH/MBO

PRIMARY SOURCES

Lees, Florence S. *Handbook for Hospital Sisters.* London: Isbister, 1874.

———. [as Craven, Mrs. Dacre]. *A Guide to District Nurses and Home Nursing.* New York: Macmillan, 1889.

SECONDARY SOURCES

Baly, Monica. *A History of Queen's Nursing Institite.* London: Croom Helm, 1987.

Stocks, Mary. *A Hundred Years of District Nursing.* London: Allen & Unwin, 1960.

STANDARD SOURCES

DNB Missing Persons.

LEFROY, HELENA (TRENCH) (1820–1908)

Irish botanist. Born 1820. Died 1908.

Helena Lefroy is known for a single discovery at Garraris Cove near Tramore in Waterford in 1839. There she found the last survivor of a native colony of the southern spurge, *Euphorbia peplis.* This specimen was the only one found in Ireland. JH/MBO

SECONDARY SOURCES

Colgan, Nathaniel, and Reginald W. Scully. *Cybele hibernica,* 2nd ed. Dublin: Edward Personby, 1898. Lefroy mentioned on page 52.

Mackay, James Townsend. *Proceedings of the Dublin University Zoological and Botanical Association* 1 (1859).

Natural History Review (1859): 6.

STANDARD SOURCES

Desmond; Praeger.

LEHMANN, INGE (1888–1993)

Danish seismologist and geologist. Born 13 May 1888 in Copenhagen to Ida (Torsleff) Lehmann and Alfred Georg Ludvig Lehman. One sibling. Never married. Educated Newnham College, Cambridge (1910–1911, no Tripos); University of Copenhagen (master's in mathematics and physics, 1920; M.S. in geodesy, 1928; D. Phil., 1968); Columbia University (Sc.D., 1964). Professional experience: Danish Geodetic Institute, staff member (1925); state geodesist (1928); chief of the seismological department (1928–1953). Died 21 February 1993 in Copenhagen.

Inge Lehmann's father was a psychology professor at the University of Copenhagen. Inge attended the school of Hanna Adler, Niels Bohr's aunt, where boys and girls did the same lessons and played the same games. She entered Newnham College during the Michelmas term of 1910 and stayed for four terms. She attended mathematical lectures but did not take her Tripos. She graduated from the University of Copenhagen with a degree in mathematics and physics. Much later, after she began working for the Danish Geodetic Institute, she returned and received a master of science de-

gree in geodesy; after retirement, she earned additional degrees at Copenhagen and Columbia. After a brief stint as an actuarial scientist, Lehmann obtained a position with the Danish Geodetic Institute, where she remained for her entire career. As a staff member in 1925, she accidentally became interested in seismology when she and three young men, none of whom had previously encountered a seismograph, were given the task of installing it. Her success in this undertaking led her to read in this area, and in 1927 she took a leave of absence to study with leading European seismologists. After her return (with a master's degree from Copenhagen), she was made chief of the seismological department of the institute, a post she retained for the rest of her career.

Lehmann was a member of a number of learned societies and received some important honors. She was a founding member of the Danish Geophysical Association and president of that organization from 1941 to 1944, an associate of the Royal Astronomical Society (1957), an honorary Fellow of the Royal Society of Edinburgh (1959), a foreign member of the Royal Society of London (1969), an honorary member of the European Geophysical Society (1973), and an honorary member of the Seismological Society of America (1973). Her honors include the Emil Wiechert Medal of the Deutsche Geophysikalische Gesellschaft (1964), the Gold Medal of the Royal Danish Academy of Science and Letters (1965), the Harry Oscar Wood Award in Seismology (1960), and the William Bowie Medal of the American Geophysical Union (1971).

Lehmann visited a number of remote outposts to supervise the installation of seismograph stations. During this time she published prolifically, including a paper that added a new discontinuity, which divided the core into inner and outer parts. After she was no longer responsible for the routine operation of the seismological stations, she continued to publish, particularly emphasizing the upper mantle of the earth's crust. She published over fifty-six papers on geophysical subjects, mainly in Danish periodicals from 1926 to 1970.

JH/MBO

PRIMARY SOURCES

Lehmann, Inge. "'P' Waves." *Union Géodésique et Géophysique Internationale, Série A, Travaux Scientifiques* 14 (1936): 87–115.

SECONDARY SOURCES

Birch, Francis. "Thirty-third Presentation, William Bowie Medal to Inge Lehmann: EOS." *American Geophysical Union Transactions* 52 (1971): 537–538.

Elder, Eleanor S. "Women in Early Geology." *Journal of Geological Education* 30, no. 5 (1982): 287–293.

STANDARD SOURCES

Current Biography 1962; *Newnham,* vol. 1.

LEHMUS, EMILIE (1841–1932)

German physician. Born 30 August 1841 in Fürth to mother (with a maiden name of Heinlein) and pastor and church administrator Eduard Lehmus. Five sisters. Never married. Educated Paris, teacher education; Zurich, studied medicine (M.D., 1874). Professional experience: Marienstift in Fürth, teacher; University birthing clinic, Prague, volunteer under Professor Weber; Königlich Sächsischen Entbindungsanstalt in Dresden (birthing center), intern under Professor Franz V. Winckel; Berlin, physician for women and children (1876); Polyclinic for women, Berlin, founder with FRANZISKA TIBURTIUS *(later the "Klinik weiblicher Ärte") (1878). Died 17 October 1932 in Gräfenberg/Erlangen.*

Emilie Lehmus was the first German woman to receive a medical degree in a Swiss university. Two years later, she was followed by the better known FRANZISKA TIBURTIUS, with whom she later joined for thirty-one years in her practice.

The Lehmus family originally came from Silesia and later settled in southern Germany in Rothenburg an der Tauber. Lehmus's ancestors for several generations were churchmen. Her father, Eduard Lehmus, was a church official. He became a minister in Fürth and married a woman from this city from the merchant family Heinlein. Since they had no sons, Lehmus's parents decided to give their six daughters a superior education, and one that catered to their individual talents, a most unusual decision for those times. The gifted Emilie was sent to Paris for her education. Back in Fürth she found employement as a teacher at the Marienstift. Four of her sisters were already married to theologians. After a long visit with her older sister in Berlin, Lehmus came to the conclusion that she wanted to study medicine. Her sister introduced her to the first German female dentist in Berlin, HENRIETTE HIRSCHFELD-TIBURTIUS. The latter convinced her on the occasion of an excursion to the Spreewald to study medicine in Switzerland, an adventurous idea at that time. Her father agreed, and immediately started to teach his ambitious daughter Latin.

In October 1870 she matriculated in the medical school at Zurich. Since 1864, women had attended medical lectures there. At first it was Russians. In 1868–1869 there were eight female medical students. Discounting the United States, the first decision to allow women to study in scientific disciplines occurred in Zurich in 1868–1869. A female foreigner first asked to be allowed to matriculate into natural history and medical lectures at Zurich University. After the door was opened for female students, the openminded Swiss continued to offer places for those who were qualified. There were still problems related to the proper role of women. It was necessary to register for matriculation, for this was the only way that a student could be promoted. However, registration was only available for men and not for women. The directorate took a more or less "wait and see" stance on this question.

The then rector of the university interpreted the university rules, which neither forbade nor permitted female study, in favor of women. Thus in 1867 the first female doctor of medicine could leave the university after finishing her studies with the blessing of the administration.

This success inspired others to try as well. In 1870–1871 there were nineteen students who registered, and in the summer semester of 1872 there were sixty-three women students, of whom only two came from Switzerland, four from Germany, two from Austria, one from the United States, and fifty-four from Russia. Of these sixty-three women students, fifty-one were registered for medicine and the others in the philosophical faculty. The fact that the women preferred medical studies was based not only on the role of women as nurturer of the healthy and the sick. Women considered it a necessity to educate women about gynecological problems. Women were hesitant to seek help from male doctors because of embarrassment. There were numerous young women who during puberty started to have problems in the lower abdomen and knowingly or unknowingly suffered the consequences because they were afraid to be examined by a male doctor. When they subjected themselves to medical examinations after they married it was often too late. After marriage, men often infected their mostly virgin wives with sexually transmitted diseases.

The Würzburg faculty in 1870 asked what complications flowed from the admission of females to medical school. They especially questioned the presence of women in coeducational lectures that could prove difficult because of female modesty. However, the experience of Zurich University with female students was good. Not even in physiology or anatomy did embarrassing situations arise. The medical faculty of Zurich University replied to Würzburg that the presence of female students in the theoretical and practical courses had not resulted in any problems and lectures were given without regard to the ladies present.

In Germany they decided the study by females was dangerous and against nature. Even twenty years later, a scientifically talented school principal at the Friedrich-Wilhelms-Universität in Berlin was prevented by a privatdoztin (assistant professor) of dermatology from attending his lecture "Prostitution in Ethical, Legal, and Health Issues." In 1903 when the German women's movement association submitted to the Reichstag a petition to allow women to study bearing sixty thousand signatures they were ignored. Therefore, there was a great increase of female students in Switzerland which culminated in the years 1905–1909. Later the numbers were steadily reduced, because in the middle of the 1890s the universities in all countries began to grapple with the question of admitting women and girls.

At the beginning of her third semester in Zurich, Lehmus met Franziska Tiburtius, from Berlin, who had already corresponded with her. Lehmus graduated in Zurich *summa cum laude* in her ninth semester. Her dissertation was "Erkrankung der Macula lutea bei progressiver Paralyse" (Illness of the Macula Lutea with Progressive Paralysis). After her studies, she found a job with Professor Weber at the University Lying-In Hospital in Prague. Afterward, she accepted a ten-month position as "interne Ärtzin" (intern) with the gynecologist Franz V. Winckel at the Königlich Sächsischen Entbindungsanstalt (Royal Saxon birthing center) of the Dresden women's clinic. Franziska Tiburtius followed her to this clinic. It was extremely difficult even for a graduate woman to be able to further her education after her initial studies in a German clinic. When Lehmus and Tiburtius moved to Berlin in 1876, they were refused recognition as women doctors and could not take the state medical examination. They were not even allowed to take the midwife examination. According to the law, they could practice but they were looked upon as "charlatans."

Lehmus established herself as a doctor for women and children. She and Tiburtius were for more than fifteen years the only female doctors in Berlin and held their place in the fight against colleagues and prejudice. In the 1880s, they both established their practices despite all resistance. They were denounced several times because they allegedly used the title "Doctor" without being entitled to it. Their prescriptions had to be signed by male colleagues. Their joint goal, because of their experiences in Zurich and Dresden, was to found a clinic for working women. Aided by a grant and with active help from Henriette Hirschfeld-Tiburtius, who was the first female dentist in Germany and sister-in-law of Franzisca Tiburtius, they opened the Poliklinik für Frauen in 1887 in the Alten Schönhauser Strasse. The treatment cost only ten pfennig. Women who were not insured and could not afford this amount were treated for free. In no time at all, the two medical doctors had more patients than they could handle. Soon a small hospital was opened which later developed into the Klinik weiblicher Ärzte (Clinic of Female Physicians) in Karl-Schrader-Strasse.

Around the turn of the century, Lehmus gave up her practice because of illness. She suffered twice from influenza-caused pneumonia, which she had trouble shaking off. It forced her to change climate. She went to southern Germany, where she spent the rest of her life close to her family.

In contrast to the gregarious nature of Tiburtius, Lehmus was not very sociable. She was in and out of the home of her sister's family in Berlin. All of the sisters played excellent piano and played music daily, but very rarely did Emilie participate in the Tiburtius household's Saturday open house (*offenen Sonnabenden*). Emilie Lehmus pretended to be harsh, so that the outside world would not cause her hurt. Her reluctance to openly assert herself reflects a deep religious feeling that came from generations of clergymen in the Lehmus

family. All of her life, Lehmus was interested in theological questions. She loved to discuss theology with her brother-in-law, who was unable to follow her ideas.

Though she was a pioneer of German female medical education, Lehmus's contributions have been largely forgotten.

GVL

PRIMARY SOURCES

Lehmus, Emilie. *Die Erkrankung der Macula lutea bei progressiver Paralyse.* Zurich: Zürcher and Furrer, 1875. A reprinted version of her 1874 dissertation.

SECONDARY SOURCES

Bluhm, Agnes. "Ein Gedenktag der deutschen Medizinerinnen." *Die Ärztin* 17 (1941): 337–339. This article was written on the occasion of Lehmus' hundredth birthday "the first female doctor of the Second Reich." The woman doctor Agnes Bluhm, who studied medicine in Zurich a little later, described the life path of Emilie Lehmus and her personal encounters with Lehmus and Tiburtius. She explained why Tiburtius is better known than Lehmus, "her director."

Heischkel, Edith. "Die Frau als Ärztin in der Vergangenheit." *Die Ärztin 16 (1940): 59–61.*

STANDARD SOURCES

Lexikon der Frau.

LEHR, MARGUERITE (ANNA MARIE) (1898–?)

U.S. mathematician. Born 22 October 1898 in Baltimore, Md. to Margaret Kreuter and George Lehr. Educated Goucher College (A.B., 1919); University of Rome (1923–1924); Bryn Mawr College (Ph.D., 1925). Professional experience: Bryn Mawr College, faculty (1924–1955; professor, 1955–retirement); Johns Hopkins, honorary Fellow (1931–1932); Swarthmore College, lecturer (1944); Institut Poincaré, Paris, researcher (1950); Princeton University, visiting Fellow (1956–1957). Death date unknown.

After mathematican Marguerite Lehr received her bachelor's degree at Goucher College, she received an American Association of University Women Fellowship to attend the University of Rome. She also was the recipient of the M. Carey Thomas European Fellowship during 1923–1924. Obtaining her doctoral degree from Bryn Mawr, she became a part of its faculty until she was made professor in 1955. During this period, she also had associations with other universities, including the Institut Poincaré in Paris. Toward the end of her career she spent a year as a Fellow at Princeton University and served as a member of the Woodrow Wilson Fellowship Award Committee for ten years (1956–1965). Her undergraduate college, Goucher, gave her a distinguished citation for her work in mathematics in 1954. She was a member of both French and American mathematics associations and a Fellow of the American Association for the Advancement of Science. She was a consultant on curriculum and the teaching of mathematics for state and private organizations. Lehr was a Protestant.

Lehr published on algebraic geometry and the humanistic aspects of mathematics. She was the author of articles in algebraic geometry in numerous mathematical journals.

JH/MBO

PRIMARY SOURCES

Lehr, Marguerite. *The Plane Quintic with Five Cusps . . .* Baltimore: N.p., 1927. First written as her 1925 doctoral dissertation, Bryn Mawr College.

STANDARD SOURCES

American Women; AMS 4–8, P 9, P&B 10–11; Debus.

LEIGHTON, DOROTHEA (CROSS) (1908–1989)

U.S. social psychiatrist and medical anthropologist. Born 2 September 1908 in Lunenberg, Mass., to Dorothea (Farquhar) and Frederick Cushing Cross. Married Alexander Leighton, 1937 (divorced 1965). Two children. Educated Bryn Mawr College (A.B., 1930); Johns Hopkins University (M.D., 1936); Columbia University, anthropology course work (1939). Professional positions: Johns Hopkins Hospital, chemistry technician (1930–1932); Phipps Clinic, Baltimore, Md., psychiatric residency; field work, Navajo tribe, Ariz. (1940); U.S. Bureau of Indian Affairs (with University of Chicago), Indian Personality Research Project, special physician (1942–1945); Yoruba tribes, Nigeria, Africa, fieldwork (1960?); Cornell University, professor of child development and family relations (1949–1952); University of North Carolina, professor of mental health (1965–1974); University of California, San Francisco, lecturer (1977) University of California, Berkeley, visiting professor (1981–1982); Society for Medical Anthropology, founder. Died 15 August 1989 in Fresno, Calif.

Dorothea Cross Leighton was one of the founders of medical anthropology. Her mother encouraged her, as a young woman from a small town in Massachusetts, to enter her alma mater, Bryn Mawr College. Like her father, who had attended MIT, she was interested in science and majored in chemistry and biology. Upon graduation, she worked for two years as a chemical technician at Johns Hopkins Hospital, where she decided to enter medical school. At Johns Hopkins Medical School, she met her future husband, Alexander Leighton, and began a collaboration that lasted for many years. They both decided to study psychiatry, and went as residents to the Phipps Clinic in Baltimore. Here they were encouraged by the head of the clinic to adopt

anthropological interviewing techniques for which purpose they attended seminars at Columbia University. From there they went to do field work among the Navajo in New Mexico and then went to Alaska.

When the couple returned to Johns Hopkins, only Alexander Leighton received a staff appointment. In the fall of 1942, the Bureau of Indian Affairs (BIA) invited the Leightons to work with the Navajo to study concepts of illness and treatment. This task fell mainly to Dorothea since her husband was in the United States Navy. The result of her study was a book, *The Navaho Door,* which contrasted Anglo and Navajo concepts of health and disease. As research physician she began to collect data for the personality project sponsored by the BIA. As a part of a team, her work led to important publications with leading anthropologists such as Clyde Kluckhohn and John Adair.

After World War II, the Leightons moved from Washington, D.C., to Cornell with their two small children. There Dorothea Leighton held a part-time position. Nevertheless, the couple continued their research together and developed a multi-year study of Stirling County in Nova Scotia intended to examine psychiatric disorders in a rural population. This research was considered a classic study, and the Leightons were asked to develop comparative studies in Sweden and Nigeria modeled on their Stirling County studies. These large research projects required a great deal of supervision and preparation by Dorothea Leighton, involving a staff of forty people in the first Stirling County studies.

When the Leightons' marriage broke up in 1965, the divorce enabled her to accept her first full-time appointment in anthropology and public health at the University of North Carolina. She held this position for the following ten years, during which time she founded the Society for Medical Anthropology. She served as chair of her department for the final two years of her tenure, retiring in 1974. Subsequently, she moved to Berkeley and then to Fresno, as she followed her daughter who had settled in California. She taught briefly at the California universities in her mid-seventies, and died in Fresno at the age of eighty-one.

JH/MBO

PRIMARY SOURCES

Leighton, Dorothea. With Alexander H. Leighton. *The Navaho Door: An Introduction to Navaho Life.* Cambridge, Mass.: Harvard University Press, 1940.

———. With Clyde Kluckhohn. *The Navaho.* Cambridge, Mass.: Harvard University Press, 1946.

———. With Clyde Kluckhohn. *Children of the People.* Cambridge, Mass.: Harvard University Press, 1947.

———. With Alexander Leighton. *Gregorio, the Hand Trembler.* Cambridge, Mass.: Harvard University Press, 1949.

———. With Alexander Leighton, et al. *The Character of Danger: Psychiatric Disorder among the Yoruba.* New York: Basic Books, 1963.

———. With others. "Psychiatric Findings of the Sterling County Study." *American Journal of Psychiatry* 119 (1966): 1021–1026.

The Leighton papers on the Navajo personality research project are in the National Anthropological Archives, Smithsonian.

STANDARD SOURCES

AMS P&B 10–14; Gacs (article by Joyce Griffin); *IDA.*

LELAND, EVELYN (ca. 1870–ca. 1930)

U.S. astronomer. Born circa 1870. Staff member, Harvard College Observatory (1889–1925). Died circa 1930.

Evelyn Leland was one of the low-paid female assistants ("computers") who worked for Edward Pickering at the Harvard College Observatory. As part of the observatory's work on stellar spectra, numerous photographs were shipped from the Arequipa Station in Peru to Cambridge, Massachusetts. Leland was at the observatory from 1889 to 1925, and was one of those who examined the plates and studied the spectra in detail, in the course of this examination discovering new variable stars and other objects with peculiar spectra. Although not a theorist, Leland was a competent observer. She was representative of Pickering's group of women assistants and was involved in the publications of the observatory.

JH/MBO

STANDARD SOURCES

Jones and Boyd; Mozans.

LE MAÎTRE, DOROTHÉE (1896–1990)

French paleontologist. Born 1896 in Angers(?). Educated Angers Free University; Catholic Univeristy of Lille (graduated 1926; Ph.D., 1934). University of Lille, free faculty of sciences, assistant to the laboratory of geology (from 1926). Honors and memberships: Prix Fontannes (1941); Grand Prix Bonnet from the Académie des Sciences (1959); Kuhlmann Prize (1956). Died 26 January 1990 at Loudéac (Côtes-du-Nord).

Dorothée Le Maître was devoted throughout her life to her native Angers and the area around Lille, in the north of France. Her first paper was published in 1926 in the *Annales de la Société géologique du Nord* and twenty-three years later she became president of the society.

Her scientific interests centered around the Devonian in France and the geology of North Africa. Her thesis was on

the Devonian fauna of the basin of Ancenis. Between 1935 and 1937, she did original research on the Spongiomorphides. Since she was known as an expert on the Devonian, the Service des Mines sent her on two missions to northern Africa (1938–1939) and the center of Saharan research sent her on three other missions, this time to the Valley of Saoura in 1947, 1949, and 1952.

From 1946 Le Maître was a "collaborateur" to the Geological Service of Algeria. She published numerous papers on North African and sub-Saharan Devonian fauna. Between 1954 and 1956 she was called to Algeria three times to help identify paleontological specimens for petroleum research. She compared the Devonian fauna of Africa to that of the Ardenne, the Massif, Asturia, Bohemia, and Austria, which underlined the originality of certain African fauna. She was the first to establish affinities between Devonian fauna of North Africa, the Sahara, and faunas of North America. By preference, she studied the area of the Massif armoricain around the area of her birth. She was named adjunct "collaborateur" of the Service de la carte (1946). From 1950 she was appointed head of research of the Centre National de la Recherche Scientifique, and later became a scientific director.

Among her honors were the Prix Fontannes in 1941 and the Grand Prix Bonnet in 1959 from the Académie des Sciences. She was awarded the Kuhlmann prize in 1956.

JH/MBO

PRIMARY SOURCES

Le Maître, Dorothée. "La faune des couches à *Spirifer cultrijugatus* à Fourmies." *Annales Société Géologique du Nord* 54 (1929): 27–74.

———. "La faune des calcaires dévoniens du Bassin d'Ancenis." *Comptes rendus Société Géologique de France* (1931): 188–190.

———. "Etude sur la faune des calcaires dévoniens du Bassin d'Ancenis. Calcaire de Chaudefons et Calcaire de Chalonnes (Maine et Loire)." *Memoires Société Géologique du Nord* 12 (1934): 1–261.

———. "Nouveaux éléments communs avec l'Amé dans la faune de l'Afrique du Nord." *Comptes rendus Académie des Sciences* (1950): 253–256.

SECONDARY SOURCES

Brice, Denise. "L'oeuvre de Dorothée Le Maître (1896–1990)." *Annales de la Société du Nord* 1, no. 1 (1991): 15–18.

LEMMON, SARAH PLUMMER (1836–1923)

U.S. botanist. Born 1836 in New Gloucester, Maine. Married John Gill Lemmon. Educated Female College, Worcester, Mass.; Cooper Union, New York City. Died in Stockton, Calif., 1923.

Although now known as a botanist, during the Civil War, Sarah Plummer served as a hospital nurse. In 1869, she moved to California, where in 1880 she married botanist John Gill Lemmon (1832–1909). Through her husband, Lemmon became interested in botany. She produced watercolor paintings of the flora of the Pacific slope; her collection of more than eighty sketches of flowers made in the field took a prize at the World's Exposition in New Orleans in 1884–1885. She discovered a new genus of plants in 1882, named *Plummera floribunda* by Asa Gray (1810–1888) in her honor. Lemmon published three scientific papers and was a skilled collector and painter of plants. JH/MBO

PRIMARY SOURCES

Lemmon, Sarah Plummer. *A Record of the Red Cross Work on the Pacific Slope, including California, Nevada, Oregon, Washington with Their Auxiliaries.* Oakland, Calif.: Pacific Press Publishing, 1902. The preface is signed "Mrs. J. G. Plummer, Chairman." It also includes reprots from Nebraska, Tennessee, and "far-away Japan."

Lemmon, John Gill. *How to Tell the Trees and Forest Endowment of the Pacific Slope . . . and Also Some Elements of Forestry with Suggestions by Mrs. Lemmon. The Cone-Bearers,* 1st ser. Oakland, Calif., 1902.

SECONDARY SOURCES

Barnhart, John Hendley, comp. *Biographical Notes upon Botanists.* 3 vols. G. K. Hall, 1965.

Ewan, Joseph. "Bibliographical Miscellany—V. Sara Allen Plummer Lemmon and her Ferns of the Pacific Coast." *American Midland Naturalist* 33 (September 1944): 513–518.

STANDARD SOURCES

Appleton's Cyclopaedia; Bailey.

LEONTIUM (4th and 3d century B.C.E.)

Greek Epicurean philosopher. Either the wife or concubine of Metrodorus. One son and one daughter. Follower of Epicurus.

The place of Leontium in history is very unclear. She was a hetaera or courtesan. Athenian citizens often found their lawful wives boring and uninterested in ideas. Since they could not leave their wives, they often turned to the well-educated hetaerae who were seldom from Athens and most often from a city-state where the women had a better chance of getting an education. Many of the salons were presided over by the well-educated, interesting hetaerae.

The sources are unclear about Leontium's place. Ménage alleges that she was Epicurus's courtesan. As Epicurus's mistress and presumably his pupil, she apparently was acquainted

with Epicureanism. According to Castner, Epicurus made her president of his school for a day. Castner also reported that Leontium married Metrodorus and that they had a son and daughter. However, Diogenes Laertius reported that Metrodorus took Leontium as his concubine. The problem is further complicated by a painting by Aristides of Thebes that led biographers to assume that she was involved in philosophical thinking, for she was pictured in a pose of meditation. Recently a statue in the Vatican Library has been identified as female, and one researcher is convinced that it is Leontium, whereas another argues that it is Themista.

JH/MBO

SECONDARY SOURCES

Castner, Catherine J. "Epicurean Hetairai as Dedicants to Healing Deities?" *Greek, Roman and Byzantine Studies* 23 (1982): 51–57.

Diogenes Laertius. *Lives of Eminent Philosophers.* Trans. R. D. Hicks. Cambridge, Mass.: Harvard University Press, 1925. Leontium mentioned in book 10, 4 ff.

STANDARD SOURCES

Alic; Ménage; Mozans; Rébière.

LEOPARDA (ca. 340 C.E.)

Roman physician. Professional experience: Court of Gratian (359–383).

Our information about Leoparda's medicine comes through Priscian, the emperor Gratian's physician. He wrote a book for women doctors that contained quotations from Soranus, Cleopatria, and Aspasia. Some of it was in rhyme so that the women could remember it. He dedicated the book to three woman physicians, Leoparda, Salvina, and Victoria. In this book he noted that Leoparda was a respected gynecologist, but that her remedies were no more scientific than those of the Greek Dioscorides.

JH/MBO

SECONDARY SOURCES

Priscianus Theodorus. *Ad Timotheum fratrem. Book 3: Gynaecea ad Slavinam.* Basel: In Officina Frobeniana, 1532. Book 3 discusses Leoparda.

STANDARD SOURCES

Dorland; Hurd-Mead 1938; Mozans.

LEPAUTE, NICOLE-REINE HORTENSE (ETABLE DE LA BRIÈRE) (1723–1788)

French astronomer. Born 5 January 1723 in Paris. Married Jean André Lepaute (27 August 1748). Died 6 December 1788 at Saint-Cloud.

According to the astronomer Joseph Jérôme Lalande (1732–1807), Nicole-Reine (called Hortense) Lepaute was the most distinguished female astronomer France had produced. She was born in the Luxembourg Palace in Paris, where her father, Etable de la Brière, was a member of the entourage of Elizabeth d'Orléans, the queen of Spain. As a child she gained a reputation for intelligence and "spirit." Although she devoured all available books and attended a variety of lectures, she was also known for her social gifts. This agreeable young woman was married in 1748 to Jean André Lepaute (1720–1789), who became the royal clockmaker of France. Through helping her husband and through her association with his friends, Hortense Lepaute became interested in mathematics and astronomy. Much of her adult life was spent in perfecting her skills in these areas. Although Lepaute had no children of her own, she encouraged and assisted in the education of two young men from her husband's family. His poor health and her own failing eyesight cut short her career in astronomy. Her death in 1788 was a great loss to Lalande, who wrote, "Cette femme intéressante est souvent présente à ma pensée, toujours chère à mon coeur" (This interesting woman has been often in my thoughts and always dear to my heart) (Lalande, 681).

Lepaute made several important scientific contributions. In 1757 the mathematician and astronomer Alexis Claude Clairaunt (1713–1765) enlisted the help of Lalande and Lepaute in determining the exact time when Halley's comet would reappear in 1759. The chief problem was to assess the influence of the gravitational attraction of Jupiter and of Saturn on the movement of the comet. Lepaute was, according to Lalande, an essential link in the entire operation, performing most of the laborious calculations. Her abilities were tested again in 1762, when an annular eclipse of the sun was predicted for France in two years' time. She calculated the time and percentage of eclipse for all of Europe and published a map showing the progress of the eclipse at quarter-hour intervals. From these calculations, she compiled a table for the *Connaissance des temps* of 1763. During the years 1760 to 1776, while Lalande was editor of the *Connaissance des temps* (an almanac published by the Academy of Sciences for the use of astronomers and navigators), Lepaute helped him with the production of ephemerides—tables listing the positions of various celestial bodies for each day of the year—for that publication. She was also interested in her husband's work on pendulums, joining him and Lalande in writing a *Traité d'horlogerie* (1775). For this book, published

under her husband's name, Lepaute calculated a table of the number of oscillations per unit of time made by pendulums of various lengths.

Although only one of Lepaute's publications is cited in the catalogue of the French Bibliothèque Nationale, she was more productive than this single entry indicates. Most of her work consisted of tables that formed part of the published work of other scientists. MBO

PRIMARY SOURCES

Lepaute, Nicole-Reine. *Explications de la carte qui représente le passage de l'ombre de la lune au travers de l'Europe dans l'eclipse du soleil centrale et annulaire du I Avril 1764, présenté au Roi, le 12 aoü 1762, par Mme Le Paute.*

SECONDARY SOURCES

Krupp, E. C. "Astronomical Musings." *Griffith Observer* 39 (May 1975): 8–18.

STANDARD SOURCES

Bibliographie astronomique; Biographie universelle, vol. 24; *DSB; DFC;* Ogilvie 1986; Rebière (includes portrait).

LEPESHINSKAIA, OL'GA BORISOVNA (1871–1963)

Russian biologist and revolutionary. Born 18 August 1871 in Perm, daughter of Boris Protopopov. Married Panteleimon N. Lepeshinskii. One daughter, Ol'ga. Educated in St. Petersburg; University of Lausanne, Switzerland; Moscow University (M.D., 1915). Professional experience: Tashkent and Moscow, teacher, researcher; Timiriazev Biological Institute, staff; All-Union Institute of Experimental Medicine, research staff; Institute of Experimental Biology, researcher. Stalin Prize 1950. Died 2 October 1963 in Moscow.

Ol'ga Borisovna Lepeshinskaia was born into a wealthy family. Accounts vary as to her education as, although enrolled in various institutions, her political activities seem to have been more important to her than her studies. She first became involved in the revolutionary struggle as a medical student in St. Petersburg. In 1894, she participated in the work of the St. Petersburg Union for the struggle to emancipate the working class, and in 1898, she joined the Social Democratic Party. Her revolutionary pseudonym was Galia. In 1897, Lepeshinskaia followed her husband into exile in Siberia, where she worked for a time as a feldsher or surgeon's assistant (something akin to a nurse practitioner). In this period she was among those exiles who signed Lenin's protest against the manifesto (known as the Credo) put out by the Economists (a revolutionary faction that supported the struggle for better labor conditions and social improvements within the framework of the existing order). Later she took part in efforts to organize a group in Pskov to cooperate with Lenin's Iskra group. She was thus associated with the Bolshevik wing of the revolutionary movement from the beginning.

Lepeshinskaia then went to Switzerland to continue her medical education at the University of Lausanne. In 1902 she returned briefly to Russia to organize her husband's flight from Siberia, before returning again to Switzerland. In 1906, she came back to Russia and worked as a physician in Moscow and the Crimea, at the same time playing an active role in Communist Party work. At the time of the Revolution of 1917, she was a member of the Revolutionary Committee of the Podmoskovnaia station.

After the revolution, Lepeshinskaia worked as a teacher and researcher in Tashkent and then Moscow. In 1926, she joined the staff of the histological laboratory at the Timiriazev Biological Institute. In 1936, she was on the staff of the cytology laboratory of the All-Union Institute of Experimental Medicine of the Soviet Academy of Medical Sciences, and in 1949 she became associated with the Institute of Experimental Biology of the Soviet Academy of Medical Sciences.

Although her higher education was deficient, her status as an Old Bolshevik and friend of Lenin helped her to find research work in scientific institutions. In 1931, Lepeshinskaia reported that she had discovered animal cell membranes that differed from those previously described, and in 1934, she reported a process by which nonliving matter turned into living matter. Her work was criticized by a number of specialists and would undoubtedly have died a natural death if Lepeshinskaia had not managed to use her revolutionary connections to get Stalin's approval of the manuscript in which she described her experiments. In 1945, the Academy of Sciences published a book in which these experiments were described in detail. This book, which was highly praised by the agronomist Trofim D. Lysenko, the promoter of an obscurantist pseudoscience known as, among other things, "Michurinist biology," was submitted to the Stalin Prize Committee, but was almost unanimously voted down. A year or two later, Lepeshinskaia published another similar book which was again criticized by the scientific community.

By now, however, Lysenko, who had gained the support of the political establishment, had seen the usefulness of Lepeshinskaia's work as support for his own theories. If, as she claimed, cells could arise from noncellular matter, perhaps one species could turn into another by passing through a stage of this "cell-free" material. Lysenko and his supporters began to promote Lepeshinskaia. Her book was resubmitted for the Stalin Prize, which she was awarded in 1950.

Lepeshinskaia was celebrated and glorified in various ways: a film, *Court of Honor* and a play, *Taking Up the Cudgels,* were written in her honor. Her eightieth birthday in 1951 was marked by many celebrations. She became a deputy of

the Supreme Soviet and was appointed to many scientific commissions.

By the early 1950s, the foundations of Lysenko's "Michurinist biology" were beginning to crumble, and Lepeshinskaia's theories became increasingly challenged. One of her more fantastic notions was the idea that bicarbonate of soda taken internally or in the form of baths would promote longevity and cure many ailments. Unfortunately for Lepeshinskaia, this venture into practical medicine was too easily tested and popular disillusionment set in.

On 5 March 1953, Stalin died, and with his death, criticism of Lepeshinskaia and Lysenko became increasingly vocal. Within a few years, references to her theories quietly disappeared.

It is difficult to know to what extent Lepeshinskaia believed in her own pseudo discoveries in which wishful thinking probably played a part. There is no doubt that she and her daughter, Ol'ga Panteleimonovna, who assisted her, were careless, sloppy experimenters, but she was also ambitious and had no hesitation denouncing her critics. To her, even such a revered scientist as Louis Pasteur was a reactionary and a bourgeois idealist. In support of the new "science," textbooks were rewritten, scientists were persecuted and disastrous agricultural experiments were undertaken. Lepeshinskaia's fatuous egotism made her a perfect tool in the hands of Lysenko, who, for his own personal ends, had no hesitation in destroying genuine scientists and setting Soviet life sciences back thirty years.

Ol'ga Borisovna Lepeshinskaia's name is inextricably linked to this shameful and tragic episode in the history of Russian science. ACH

PRIMARY SOURCES

Lepeshinskaia, Ol'ga Borisovna. *Proiskhozhdenie kletok iz zhivogo veshchestva i rol' zhivogo veshchestva v organizme.* Moscow: Izd-vo Akademii nauk SSSR, 1945.

———. *Vnekletochnye formy zhizny.* Moscow: Izd-vo Akademii pedagogicheskikh nauk RSFSR, 1952.

SECONDARY SOURCES

Bol'shaia sovetskaia entsiklopediia. 3d. ed. Moscow: Izd-vo "Sovetskaia entsiklopediia," 1973.

Medvedev, Zhores A. *The Rise and Fall of T. D. Lysenko.* Trans. I. Michael Lerner. New York: Columbia University Press, 1969.

Soyfer, Valery N. *Lysenko and the Tragedy of Soviet Science.* Trans. Leo and Rebecca Gruliow. New Brunswick, N.J.: Rutgers University Press, 1994.

Wieczynski, Joseph L., ed. *The Modern Encyclopedia of Russian and Soviet History.* Gulf Breeze, Fla.: Academic International Press, 1976–1994.

STANDARD SOURCES

Debus; Grinstein 1997 (article by John Konopak); *Great Soviet Encyclopedia,* vol. 14; *WWW (USSR).*

LEPIN, LIDIIA KARLOVNA (1891–?)

Russian physical chemist. Born 4 April 1891. Educated Moscow Higher Women's Courses. Professional experience: Plekhanov Institute of Popular Economy, staff (1917–1930); Moscow Higher Technical School, researcher (1920–1932); Voroshilov Academy of Chemical Defense, researcher (1932–1941); Moscow University, researcher (1920–1930; 1942–1946); Latvian University and Chemistry Institute of Latvian Academy of Sciences, researcher. Death date unknown.

Lidiia Karlovna Lepin (or Liepinia) graduated from the Higher Women's Courses in Moscow in 1917. From 1917 to 1930, she worked at the Plekhanov Institute of Popular Economy. She was also on the staff of Moscow University (1920–1930) and at the Moscow Higher Technical School (1920–1932). From 1932 to 1941, Lepin was on the staff of the Voroshilov Academy of Chemical Defense. In 1942 she returned to Moscow University where she remained until 1946.

In 1946 Lepin moved to Riga in Latvia, where she was on the staff of the Latvian University and the Chemistry Institute of the Latvian Academy of Sciences.

Lepin's principal research has been in the field of physical and colloidal chemistry, particularly on the action of chemical colloids in retarding corrosion, on hydride formation, absorption in solids, surface reactions, and dispersion of solutes. JH/MBO

PRIMARY SOURCES

Lepin, Lidiia Karlovna. With coauthor. *Inorganic Chemistry: An Introduction to Preparative Inorganic Chemistry.* N.p., 1932.

———. *Surface Compounds and Surface Chemical Reactions.* N.p., 1940.

STANDARD SOURCES

Debus.

LERMONTOVA, EKATERINA VLADIMIROVNA (1899–1942)

Russian paleontologist. Born 11 February 1899 in St. Petersburg. Educated Women's Pedagogical Institute; University of St. Petersburg. Professional experience: Geological Committee; All-Union Scientific Research Institute of Geology. Died 9 January 1942 in Leningrad.

Ekaterina Vladimirovna Lermontova was born in St. Petersburg in 1899. She was a member, on her father's side, of the Lermontov family, which included the poet Mikhail I. Lermontov and the chemist IULIIA VSEVOLODOVNA LERMONTOVA. Lermontova graduated from the Women's Pedagogical Institute in 1910 and from the University of St. Petersburg in 1912.

Beginning in 1921, Lermontova worked on the Geological Committee and later in the All-Union Scientific Research Institute of Geology. She died in the blockade of Leningrad in the terrible winter of 1942.

Lermontova was the first researcher of Cambrian trilobite fauna on the territory of the USSR and the creator of the first Cambrian stratigraphic scheme of Siberia.

Her main area of research was the trilobites of the southern Urals, Siberia, Middle Asia, and Kazakhstan. Several fossil animals, algae, and biostratigraphic divisions of the Cambrian have been named after her. ACH

PRIMARY SOURCES

Lermontova, Ekaterina Vladimirovna. *Kembriiskaia sistema.* Moscow: N.p., 1965.

SECONDARY SOURCES

Bol'shaia sovetskaia entsiklopediia. 3d ed. Moscow: Izd-vo "Sovetskaia entsiklopediia," 1973.

LERMONTOVA, IULIIA VSEVOLODOVNA (1847–1919)

Russian chemist. Born 2 January 1847 in St. Petersburg, daughter of a general. One sister. Educated Heidelberg University; Berlin University; Göttingen University (Ph.D., 1874). Professional experience: worked in Moscow with V. V. Markovnikov; St. Petersburg with A. M. Butlerov. Died December 1919 in Petrograd.

Iuliia Vsevolodovna Lermontova came of a distinguished family: her father, a general and director of the Moscow Cadet Corps, was a second cousin of Mikhail I. Lermontov, the poet. Her family was enlightened and although puzzled by Lermontova's early interest in chemistry, did not discourage it, and even engaged private tutors for her. At first she thought of studying medicine, but the sight of corpses and the sufferings of the patients horrified her. Instead she applied to the Petrovskaia Agricultural Academy (later the Timiriazev Academy), which had an excellent chemistry program. Although she had the support of several professors, her application was turned down, and she decided to go abroad.

Through her cousin Anna Evreinova (later to become Russia's first woman doctor of laws), Lermontova made the acquaintance of the mathematician SOFIA KOVALEVSKAIA, who was also planning to study abroad. Kovalevskaia came to Moscow, where she persuaded Lermontova's reluctant parents to allow her to leave. In the autumn of 1869, Lermontova arrived in Heidelberg, and took up residence with the Kovalevskis. With typical forcefulness, Kovalevskaia intervened with the university authorities to overcome obstacles and Lermontova was allowed to attend some lectures and to work in the laboratory of the German chemist R. W. Bunsen. They were joined by Anna Evreinova who, unable to obtain her parents' permission to leave Russia, had simply walked over the border, under fire from the border patrol.

In 1871, Lermontova and Kovalevskaia left Heidelberg for Berlin. There Lermontova worked in the laboratory of August W. Hofman and published her first research paper. By the beginning of 1874, Lermontova had completed her dissertation, which she successfully defended in Göttingen.

Returning to Russia in 1874, Lermontova was greeted cordially by Dmitri I. Mendeleev and other chemists. For a time she worked in the laboratory of V. V. Markovnikov in Moscow, but later returned to St. Petersburg, where she worked in the university laboratory with A. M. Butlerov and M. D. L'vov.

In 1877, Lermontova's father died and family business kept her in Moscow. Butlerov tried to persuade her to return to St. Petersburg to teach at the recently opened Higher Women's Courses, but she hesitated: she feared the minister of education would not approve the appointment and she also cited other personal reasons. Butlerov was not satisfied and he put the blame, not without reason, on Kovalevskaia, whom he accused of exploiting Lermontova, leaving her daughter in Lermontova's care while she went gadding abroad (as he put it).

In 1880, still in Moscow, Lermontova was asked to take part in a study of petroleum. This fuel, which had been discovered in large quantities in the Baku area, was beginning to be exploited in Russia at this time, and there had been little native research on the subject. Lermontova joined the Russian Technical Society and until 1888 worked in its chemical-technical group.

Lermontova had inherited the family estate, Semenkovo, and was in the habit of passing a few summer months there. Ultimately she took up permanent residence there and, abandoning chemistry, turned her attention to scientific agriculture. Her cheeses achieved great success and were sold in Moscow and the Ukraine.

Lermontova never married but she had the nearest thing to a daughter in her goddaughter, "Fufa" Kovalevskaia, to whom she was "Mama Iulia."

After the October Revolution of 1917, there was an attempt to dispossess Lermontova from her estate, but A. B.

Lunacharskii, the Commissar of Education, intervened, and she was left in peace. She died in 1919.

Lermontova never held an official post. Her working life was devoted to research and can be divided into roughly three periods, in all of which she made valuable contributions to chemistry. Her earliest research was done at Heidelberg in Bunsen's laboratory. There she investigated methods of separating the platinum metals.

More important work was done by Lermontova in the field of organic chemistry. This research was conducted in Hofman's laboratory in Berlin and later in Moscow and St. Petersburg. She was the first to study the alkylation of olefins by halogen derivatives and the first to obtain 1,3-dibromobutane and dimethylacetylene and to demonstrate the structure of 4,4-diaminohydrazobenzene.

Lermontova's last period of research was devoted to her work for the petroleum industry. In the 1870s and 1880s, this was a rapidly expanding field in which many of the foremost chemists of the day were involved. She was the first woman to undertake research in this area. At Markovnikov's suggestion, Lermontova studied catalytic cracking and the pyrolysis of petroleum. In 1883, she presented a report to the Moscow division of the Russian Technical Society on this subject. Much of her work had a practical character: she developed an original apparatus for the continuous distillation of petroleum, which was highly praised by her contemporaries. In the period before her voluntary retirement, she was considered one of the foremost chemists of the day. ACH

PRIMARY SOURCES

Lermontova, Iuliia Vsevolodovna. "Über die Zusammensetzung des Diphenins." *Berichte* 5 (1872): 231–235.

———. "O poluchenii normal'nogo bromistogo propilena trimetilenbromida." *Zhurnal Russkogo khimicheskogo obshchestva* 8 (1876): 281–283.

———. "Poluchenie krotonilena." *Zhurnal Russkogo khimicheskogo obshchestva* (1881): 13.

SECONDARY SOURCES

Bol'shaia sovetskaia entsiklopedia. 3d ed. Moscow: Izd-vo "Sovetskaia entsiklopedia," 1973.

Musabekov, Iusuf S. *Iuliia Vsevolodovna Lermontova, 1846–1919.* Moscow: Izd-vo "Nauka," 1967.

LESCHI, JEANNE (fl. 1958)

French physical anthropologist. Never married. Educated University of Paris (licenciée en sciences). Professional experience: Museum National d'Histoire Naturelle, Laboratoire de Physiologie. Centre National Recherches Scientifique, chargée de recherches (1956). Memberships: Société d'Anthropologie (1945).

Jeanne Leschi, who obtained her doctorate in science, first worked in the Physiology Laboratory at the Museum National d'Histoire Naturelle, the great natural history museum in Paris, later supported by her position with Centres Nationales Recherches Scientifiques. She published articles on fingerprints of West African peoples in 1948; on the stature of the Ouolof of West Africa (1948); and on skull measurements of members of the Dogon tribe in 1958 and 1959.

JH/MBO

PRIMARY SOURCES

Leschi, Jeanne. *Pigmentation and Fonctionnement Cortico-Surrenalien.* Paris: Masson, 1952.

———. "Fingerprints of West African People." *Bulletin et Memoires Société d'Anthropologie de Paris* 48.

———. "Stature of the Ouolof." *Bulletin et Memoires Société d'Anthropologie de Paris* 48.

———. "Craniometry of the Dogon." *Bulletin et Memoires Société Anthropologie de Paris* (1958; 1959).

LESLIE (BURR), MAY SYBIL (ca. 1887–1937)

British chemist. Possibly from Glasgow. Married Alfred Hamilton Burr (1922?). Educated University of Leeds, Britain (B.Sc., 1908; M.Sc., 1909; D.Sc., 1918). Professional experience: Radium Institute, Paris, researcher (1909–1911); University of Manchester, researcher (1911–1912); University of Leeds, honorary demonstrator, department of physical chemistry (1909, and summer 1910); Municipal High School for Girls, West Hartlepool, science mistress (1912–1914); University College of North Wales, Bangor, junior assistant lecturer and demonstrator (1914–1915); H. M. Factory, Messrs. Brotherton's, Ltd., Liverpool, research chemist (1916–1917); director of laboratory (1916–1918); University of Leeds, demonstrator in chemistry (1918–1919); assistant lecturer and demonstrator in chemistry (1919–1924); assistant lecturer and demonstrator in physical chemistry (1926–1927). Probably remained on the Leeds faculty until her death. Died in Bardsey, England, near Leeds, 3 July 1937.

May Sybil Leslie registered at the University of Leeds in October 1905 at age eighteen with the intent of becoming a teacher. An excellent student in all her courses, she graduated with first-class honors in chemistry. After receiving a university research scholarship in physical chemistry, Leslie studied the reaction mechanism between iodine and acetone under Harry M. Dawson. She also investigated abnormal ionization phenomena in organic media, including the anomalous electrical conductivity of solutions of iodine in nitrobenzene.

Leslie was awarded the 1851 Exhibition Science Scholarship for 1909–1910, and with her master of science work completed, she went to Paris to work in MARIE CURIE's labo-

ratory. There she searched (unsuccessfully) for new radioactive elements in the mineral thorite. She then investigated thorium and its decay products, and used diffusion to find the molecular weight of thorium emanation (later known as radon). Leslie enjoyed Paris and her work, and succeeded in obtaining a second year on the scholarship. During the summer of 1910, she returned briefly to England and served as honorary demonstrator for her former chemistry professor Arthur Smithell's domestic science class, held at Scarborough.

During 1911–1912, Leslie continued working with radioactive gases in Rutherford's laboratory at Manchester. She found that the emanations from actinium and thorium diffused at about the same rate. This meant that their atomic weights must be similar, as predicted by Rutherford and Soddy's theory of radioactivity.

For the next three years, Leslie taught at University College of North Wales, where she installed a physical chemistry laboratory and organized a course in physical chemistry for honors students. In 1915 she began work as an industrial research chemist for the war effort. Leslie received a doctorate of science in 1918 for her researches, particularly those on radioactive substances and on production of explosives and use of their by-products.

Leslie returned to Leeds, where she apparently spent the rest of her career. During this time, she married and became known as Dr. Burr. Her husband died a few years after the marriage. Leslie seems to have enjoyed literature, such as the works of Jane Austen and Charlotte Brontë. JH/MBO

PRIMARY SOURCES

Leslie, May Sybil. With Harry M. Dawson. "Dynamics of the Reaction between Iodine and Acetone." *Transactions of the Chemical Society* 95 (1909): 1860–1870.

———. With Harry M. Dawson. "Ionization in Non-aqueous Solvents." *Transactions of the Chemical Society* 99 (1911): 1601.

———. "Sur le poids moléculaire de l'émanation du thorium." *Comptes rendus* 153 (1911): 328–330.

———. "Le thoriun et ses produits de désagrétion." *Le radium* 8 (1911): 356–363.

———. "Sur la période du radiothorium et le nombre des particules α données par le thorium et ses produits." *Le radium* 9 (1912): 276–277.

———. "A Comparison of the Coefficients of Diffusion of Thorium and Actinium Emanations, with a Note on their Periods of Transformation." *Philosophical Magazine* 24 (1912): 637–647.

Letters from Leslie to Arthur Smithells, 1909–1911. Leeds University Library.

SECONDARY SOURCES

Badash, Lawrence. *Radioactivity in America*. Baltimore and London: Johns Hopkins University Press, 1983.

Davis, J. L., "The Research School of Marie Curie in the Paris Faculty, 1907–14." *Annals of Science* 52 (1995): 321–355.

Rutherford, Ernest. *Radioactive Substances and Their Radiations*. Cambridge: Cambridge University Press, 1913.

STANDARD SOURCES

Rayner-Canham 1997.

L'ESPERANCE, ELISE DEPEW STRANG (1878–1959)

U.S. pathologist. Born 1878 (1879?) in Yorktown, N.Y., to Kate (Depew) and Albert Strang. One sister. Married David L'Esperance, lawyer. Educated St. Agnes Episcopal School in Albany; Woman's Medical College of the New York Infirmary for Women and Children (M.D., 1899); Babies Hospital, N.Y., resident (1900–1902). Professional experience: private practice in pediatrics (1900–1908); Cornell Medical College, assistant in pathology (1910–1912), instructor in pathology (1912–1920), assistant professor (1920–1932), professor of preventive medicine (1950–1959); New York Infirmary for Women and Children, New York, pathologist and laboratory director (1910–1936); Strang Cancer Prevention Clinic, director (1932–1959); Memorial Hospital for Cancer, assistant pathologist; New York Hospital, assistant pathologist; Pathological Institute, Munich, Mary Putman Jacobi Fellow (1914); Bellevue Hospital, instructor in surgical pathology (1918–1932). Honors and memberships: American Woman's Association Friendship Award for Eminent Achievement (1946); New York City Cancer Committee Clement Cleveland Medal (1948); Elizabeth Blackwell Citation (1950), New York Academy of Medicine, Fellow. Died 21 January 1959.

Elise Strang and her sister grew up in the home of a physician, Albert Strang. Their mother, Kate Depew Strang, died of cancer, and Elise decided early in her life to follow her father's career. She entered the Woman's Medical College of the New York Infirmary at age sixteen, just after graduating from St. Agnes Episcopal School. After receiving her medical degree, she practiced for several years in pediatrics before becoming interested in tuberculosis research. She became a member of the Tuberculosis Research Commission of the research laboratory of New York City, directed by William H. Park. This, plus bacteriology work for the New York City Department of Health, drew her increasingly into pathology as a specialty. In 1910, she was accepted as an assistant to James Ewing, cancer specialist at Cornell University Medical School, who had previously refused to hire women assistants. From this introduction, she remained at Cornell forty years, retiring as full professor—the first woman in this position in preventive medicine.

When an uncle, Chauncey Depew, left a sizable inheritance to L'Esperance and her sister, they established the Kate

Depew Strang Tumor Clinic at the New York Infirmary for Women and Children, in honor of their mother (1932). They eventually assisted with the establishment of two additional preventive and treatment clinics, which became the models for similar centers elsewhere in the United States. L'Esperance's interest in tumor pathology led her to Munich, Germany, and to years of cancer research at Cornell, out of which came several important papers. In 1948, she added services for the detection of diabetes to those for early detection of cancer at her clinics. She was also interested in early detection of tuberculosis and Hodgkin's disease. L'Esperance published around thirty peer-reviewed papers.

As an alternative to her intense professional work, L'Esperance made a home with her sister in suburban Westchester County, raising horses and cats and racing harness ponies. She was known for the unusual hats she wore on every possible occasion. JH/MBO

PRIMARY SOURCES

L'Esperance, Elise. "Primary Atypical Malignant Hepatomia." *Journal of Medical Research* (1915).

———. "Early Carcinoma of the Cervix." *American Journal of Obstetrics and Gynecology* (October 1924).

———. "Influence of the New York Infirmary on Women in Medicine." *Journal of the American Medical Women's Association* (1949).

STANDARD SOURCES

AMS 5–8, B 9; Bailey; *Current Biography* 1950, 1959;*NAW*(M) (article by Deborah Dwork); Shearer and Shearer 1996; *WW in America,* vol. 26, 1950–1951.

LEVERTON, RUTH MANDEVILLE (1908–)

U.S. nutritionist. Born 23 March 1908 in Minneapolis. Educated University of Nebraska (B.S., 1928); University of Arizona (M.S. 1932); University of Chicago (Ph.D., 1937). Professional experience: Nebraska high school, teacher (1928–1930); University of Arizona Experimental Station, assistant (1932–1934); University of Nebraska, assistant professor (1937–1940), associate professor (1941–1949), professor (1949–1954); United States Department of Agriculture, Bureau of Home Economics (1940–1941); Oklahoma Agricultural and Mechanical College, professor of home economics and assistant director, agricultural experimental station (1954–1958); Agricultural Research Service, associate director, institute of home economics (1958–1961), assistant department administrator (1961–1971), science advisor (1971–1974). Retired 1974. Concurrent experience: University of the Philippines, Fulbright Professor (1949–1950). Honors and memberships: Bordon Award (1953); University of Nebraska honorary degree (1961); University of Nebraska Institute for Nutritional Research; American Dietetic Association; American Home Economic Association; American Public Health Association.

Ruth Leverton received her bachelor's degree from the University of Nebraska and returned to that institution to teach after she earned her doctoral degree. She took a year off from Nebraska and worked at the United States Department of Agriculture, but returned to Nebraska, where she climbed the academic ranks to professor. She moved to Stillwater, Oklahoma, in 1954, where she remained for four years, after which she returned to the USDA for a position in the human research division and the institute of home economics. She remained in this position until she retired. According to Rossiter, the home economics units were reduced in size and some were eliminated. The three remaining divisions were combined to form an institute of home economics under HAZEL STIEBELING and Ruth Leverton. She was a member of many societies and published papers on human metabolism, mineral requirements, the nutritive value of Nebraska food products, and blood regeneration and prevention of anemia. JH/MBO

PRIMARY SOURCES

Leverton, Ruth. *Food Becomes You.* Lincoln: University of Nebraska Press, 1952.

———. With Floyd Leslie Rogers. *Your Diabetes and How to Live with It.* Lincoln: University of Nebraska Press, 1953.

STANDARD SOURCES

AMS 8, B 9, P&B 10–13; Bailey; Rossiter 1995.

LEVI, HILDE (1909–)

German-born Danish physicist. Born 1909 in Frankfurt am Main, Germany to Claire Reis and Adolf Levi. Educated Victoria School in Frankfurt; University of Munich; University of Berlin (D.Phil., 1934). Professional experience: Kaiser Wilhelm Institute for Physical Chemistry (under Hans Beutler), researcher (1932–1934); Danish Institute for Theoretical Physics (Niels Bohr), researcher (1934–1939?). Stockholm Wennergren Institute for Experimental Biology, researcher (1939?–1946); University of Copenhagen? Laboratory of Zoological Physics, researcher (1946–1954), amanuensis (1954–1960), docent (1960–1979), professor emerita (from 1979). Honors and memberships: Tagea Brandts award (1955); George Hevesy Foundation Gold Medal (1975).

Hilde Levi was born and raised in Frankfurt am Main in Germany. She attended the Victoria School and studied physics at the universities of Munich and Berlin. She obtained her doctorate from the University of Berlin in 1934, working at the Kaiser Wilhelm Institute for Physical Chem-

istry under Hans Beutler. With the anti-Jewish laws, she was forced to emigrate and went first to Denmark where she worked with August Krogh and Niels Bohr on radioactive isotopes and, most important, with George (Gyorgy) Hevesy. In 1936, Hevesy and Levi together published a significant article detailing a method of neutron activation analysis, now one of the most important microanalytic procedures. They also worked on isotope tracer techniques. Hevesy would receive the Nobel Prize for this and earlier work in 1946.

As the Nazi army approached Copenhagen, Levi and Hevesy fled to Stockholm, where Levi worked in the Wennergren Institute for Experimental Biology, while Hevesy was at the university. After the war, she continued to work in the field of radioactive physics in the University of Copenhagen[?] Laboratory of Zoological Physics, retiring as an emerita professor in 1979.

In 1947–1948, Levi came briefly to the United States to work with Willard F. Libby at the University of Chicago on methods of carbon 14 dating. In the 1950s, she helped develop the use of artificial radioactive isotopes for biology and medicine. She was a consultant on radioactivity from 1954 to 1971. She was awarded the George Hevesy Foundation's gold medal in 1975, and wrote biographical accounts of Hevesy's life and work. JH/MBO

PRIMARY SOURCES

Levi, Hilde. "Die Spektren der Alkalihalogenide." D.Phil. diss., University of Berlin, 1934.

———. "George de Hevesy". *International Journal of Applied Radiation and Isotopes* 16 (1965): 512–524.

———. *George de Hevesy, Life and Work: A Biography.* Copenhagen: Rhodos, 1985.

SECONDARY SOURCES

Schmidt-Nielson, Bodil. *August and Marie Krogh.* New York: American Physiological Society, 1995. This biography of Schmidt-Nielson's parents includes some discussion of Hilde Levi's work in the late 1930s.

STANDARD SOURCES

Dansk Biografisk, vol 9.

LEVI-MONTALCINI, RITA (1908–)

Italian/U.S. neuroscientist. Born 22 April 1908 in Torino (Turin), Italy to Adele Montalcini and Adamo Levi. Three siblings. Educated public elementary school in Turin; Girls' High School, Turin; tutored privately for university entrance examinations; University of Turin (M.D. 1936). Professional experience: Institute of Anatomy, University of Turin, research assistant (1936–); Turin Clinic for Nervous and Mental Disorders, medical practitioner (1936–1938); Neurology Institute, Brussels, researcher (1939); Washington University, St. Louis, researcher and eventually full professor (1946–1979); Center for Neurobiology, Rome, director of research concomitantly (1961–1979). Honors and memberships: Elected member of National Academy of Sciences (1968); William Thompson Wakeman Award of the National Paraplegic Foundation (1974); Lewis S. Rosenstiel Award of Brandeis University for Distinguished Work in Medical Research (1982); Louisa Gross Horowitz Prize of Columbia University (1983); Nobel Prize in medicine and physiology (1986); with Stanley Cohen, the Albert Lasker Medical Research Award (1987); National Medal of Science (1987); honorary doctorates from University of Uppsala (Sweden), the Weizmann Institute (Israel), St. Mary's College, and Washington University School of Medicine.

Rita Levi-Montalcini's Sephardic Jewish parents' families had settled in the Piedmont region of Italy for many generations. Both her mother's and father's families had a strong tradition of education, particularly for the boys. Although the family was Jewish, they were "free-thinkers." Nevertheless, Levi-Montalcini later became a victim of antisemitism and left Italy.

One of four children (one older brother, Gino, an older sister, Anna, and a fraternal twin sister, Paola), Rita Levi-Montalcini showed an early interest in intellectual subjects. Although Adamo Levi stressed the importance of education for his sons, he believed that too much education for the girls would make them unhappy. Despite the fact that she showed ability in mathematics and science, Levi attended a middle school and high school that lacked courses in mathematics, science, and the classics. Thus, though she graduated from the girls' high school in Turin with an excellent record, Levi-Montalcini was not prepared to attend the university. After graduation, she remained at home and spent much of her time reading. The death of her former governess, Giovanna Bruatto, from stomach cancer, made her determined to study medicine. Although her mother supported her, her father was skeptical. Eventually, he was convinced, and provided the tutors necessary to prepare her to sit for the university entrance examinations.

Levi-Montalcini and her cousin, Eugenia, prepared for the examinations together for eight months; at the end of that time, they made the highest scores on the entrance examination for the University of Turin. In 1930, they both entered the faculty of medicine. Levi-Montalcini was fortunate to come under the tutelage of Professor Guiseppe Levi at the Institute of Anatomy of the Turin Medical School. Although notorious for his outrage at incompetent students, he was a fine role model for the bright and hard-working ones. Levi-Montalcini fell into the latter category, and after passing her first-year examinations with honors was invited

to be an intern in his laboratory. This experience led to her life-long study of the nervous system.

After she received her medical degree in 1936, Levi-Montalcini worked for two years as a research assistant for Professor Levi and began practice at the Turin Clinic for Nervous and Mental Disorders. Antisemitism in Italy caused Jews to be dismissed from their positions, and both she and Professor Levi lost theirs. During her last years in medical school, she met and became engaged to a young student who graduated with her. Germano R. Raising, her fiancé, was in poor health; he died in 1939 of tuberculosis.

Levi-Montalcini left Turin for Brussels, where she continued her research at the laboratory of Professor L. Laruelle. She worked there for less than a year and then returned to Turin. In Turin, she clandestinely helped those who were ill and could not afford a physician. However, she was unable to write prescriptions and the situation became more restrictive as Italy entered the war in 1940. During the war years, she worked out of her house using histologic techniques she had gleaned from the work of Santiago Ramon y Cajal for studying the nervous system. Turin became too dangerous for her to keep up the research, so she and her mother and sister moved to a farmhouse in Asti, where she again set up a makeshift laboratory. After the resignation of Benito Mussolini and the invasion of the German army in 1943, the family fled to Florence, where they lived under assumed identities until the end of the war. After the British entered Florence, Levi-Montalcini volunteered her service to the Red Cross. The helplessness she felt when faced with impossible conditions served to stimulate her to return to research.

During the summer of 1945, she returned to work in Levi's laboratory at the Institute of Anatomy in Turin, and enrolled in a course of biological studies, an area she had not yet studied. Late in this same year, she received an invitation from Victor Hamburger through Levi to come to Washington University, St. Louis, to continue work on spinal cord and ganglion development. Her first position at Washington University was as a visiting research associate, but her importance was recognized and she was made a full professor in the zoology department. She returned to Italy many times during her time at Washington University, keeping in close contact with her family. She also established a Center for Neurobiology in Rome that originally was supported by the National Science Foundation and later by institutes in Italy. After the establishment of the center, she spent six months of each year directing the center and the other six months doing research at Washington University. She retired from active teaching in 1979.

Levi-Montalcini's primary interest was in the development of the nervous system, neurogenesis. A major question was whether neurogenesis was genetically programmed or environmentally driven. The project assigned to Levi-Montalcini by Victor Hamburger prepared her to work on this question and others, which drove her research through her career. The first problem involved a tedious task of counting the number of neurons in the spinal ganglia of mice. The goal was to find out if all mice from the same litter had the same number of ganglia and if the number varied with mice from different litters. In other words, did all mice have the same number of neurons in their spinal ganglia. The second project was not a success, but the third one became the subject of her doctoral dissertation. She developed a new technique of tissue culture that made it possible to grow tissues *in vitro.* Thus, her two successful early projects introduced her to the two dominant facets of her research, neurogenesis and tissue culture.

Her experience at the Clinic for Nervous and Mental Disorders in Turin produced what she considered to be one of her most rewarding projects. There she worked with Fabio Visintini, who implanted electrodes into chick embryos. Through this technique he could stimulate specific neural centers of the embryos at different developmental stages. By using histological techniques, Levi-Montalcini studied the experimentally manipulated nervous system. Using Visintini's results, Levi-Montalcini could correlate specific stages of neurological development with the initiation of specific types of neurological responses. The paper that resulted from this research was published in 1939 in Switzerland, after being refused publication in Italy for political reasons.

During the time that Levi-Montalcini was working at home, she read Victor Hamburger's 1934 paper on the degeneration of ganglia and nerve columns in chick embryos whose limbs had been removed. Hamburger postulated that the cause of the degeneration was "induction" from a signal, probably chemical, sent from the peripheral tissues. Of course, if there was not peripheral tissue, then no outgrowth of nerves from the spinal cord and neural crest going into the tissues would occur. After extensive experimentation, Levi-Montalcini postulated an alternative hypothesis. She observed that the neurons actually do grow toward the stump of the amputated limb. However, the limb cannot be innervated because it is missing, and the nerve fibers and cell bodies then degenerate. She replaced Hamburger's idea of induction with a new postulate. She presumed that the peripheral tissue supplied a "trophic" factor that was necessary to keep the neuron from degenerating. She concluded that the relationship between the neuron and the innervated cells was one of mutual dependency. Although the neuron allows the peripheral cell to function, if it is not supplied with the "trophic" factor by the peripheral cell, then the neuron will die. Professor Levi, also without a job in 1942, worked with Levi-Montalcini on this project and published several papers on this research. Hamburger was intrigued by their papers and this

interest caused him to invite Levi-Montalcini to Washington University.

At Washington University, Levi-Montalcini continued her tedious work on chick embryos, work that shed light on the relationship between genetics and the environment in the development of the nervous system. She noticed a pattern in the migration of the neurons in developing spinal cords that was the same in animals of the same species, thus indicating the importance of genetic programming. However, she also had demonstrated that environmental factors played a role in the development of the central nervous system. Using chick embryos was extremely time-consuming, so as she considered other models for her research, she thought about her earlier research on tissue culture. After a series of *in vitro* experiments, she and her collaborator, Stanley Cohen, identified a nerve growth factor (NGF). NGF demonstrated that the earlier ideas of both Hamburger and Levi-Montalcini were important. Both induction and trophic relationships are involved in neurogenesis and NGF chemically signalled both effects. In 1986, the partnership of Cohen and Levi-Montalcini shared the $290,000 Nobel Prize for medicine and physiology.

The importance of this work cannot be overemphasized. Scientists now had the tools to investigate and manipulate the development of the nervous system. The discovery of NGF and the development of antibodies to it opened up the whole area of neurosciences. JH/MBO

PRIMARY SOURCES

Levi-Montalcini, Rita. With F. Visintini. "Relationship between the Functional and Structural Differentiation of the Nerve Centers and Pathways in the Chick Embryo." (In Italian and French). *Archives Suisses de Neurologie et de Psychiatrie* 43 (1939): 381–393; 44 (1939): 119–150.

———. With G. Levi. "The Consequences of Destruction of a Peripheral Innervation Territory on Development of Corresponding Central Nervous System Neurons in the Chick Embryo." (In French). *Archives de Biologie* 53 (1942): 537–545.

———. With G. Levi. "Developmental Correlations between the Parts of the Nervous System. The Consequences of Destruction of a Limb Bud on Development of the Corresponding Region of the Central Nervous System in the Chick Embryo." (In Italian). *Commentaries, Pontifical Academy of Science* 8 (1944): 527–568.

———. With V. Hamburger. "Proliferation, Differentiation, in the Spinal Ganglia of the Chick Embryo under Normal and Experimental Conditions." *Journal of Experimental Zoology* 3 (1949): 457–501.

———. With S. Cohen. "Purification and Properties of a Nerve-Growth-Promoting Factor Isolated from Mouse Sarcoma 180." *Cancer Research* 17 (1957): 15–20.

———. "The Nerve Growth Factor 35 Years Later." In *Les Prix Nobel, 1986,* 276–299. Stockholm: Nobel Foundation, 1987.

———. *In Praise of Imperfection: My Life and Work.* Trans. Luigi Attardi. New York: Basic Books, 1988.

SECONDARY SOURCES

"Collaborators Cohen and Levi-Montalcini Win the Medicine Nobel Prize." *Science News* 130 (1986): 244.

STANDARD SOURCES

Grinstein 1997 (article by Mary Clarke Miksic); *Notable.*

LEVINE, LENA (1903–1965)

U.S. gynecologist; psychiatrist. Born 17 May 1903 in Brooklyn, N.Y., to Sophie and Morris H. Levine. Six siblings. Married Louis Ferber (1929). Two children. Educated Girls High School Brooklyn; Hunter College (A.B., 1923); University and Bellevue Hospital Medical College (M.D., 1927). Professional experience: Private practice (1930–1965). Died 9 January 1965 in New York City of a stroke.

Lena Levine's career evolved from obstetrics and gynecology to gynecology and psychiatry and finally to marriage counseling and planned parenthood issues. After she received her medical degree she married Louis Ferber, a fellow student, and they did their residencies together at Brooklyn Jewish Hospital. Levine retained her maiden name. The couple started a practice together in Brooklyn, with Ferber serving as a general practitioner and Levine, as gynecologist and obstetrician. They had two children, a daughter, Ellen Louise (born 1939), and a son, Michael Allen (born 1942), who became severely retarded after a bout with viral encephalitis when he was an infant. Ferber died suddenly of a heart attack in 1943, causing Levine to change her lifestyle. She limited her practice to gynecology because of the irregular hours that were involved in obstetrics. She retrained as a Freudian psychologist, undergoing analysis at the Columbia Psychoanalytic Institute. This experience prompted her to place new emphasis on women's psychological health and freedom. She opened a separate psychiatric practice on Fifth Avenue while maintaing a small gynecological practice at her home. After her daughter left for college, she moved her practice to Greenwich Village.

While her children were growing up, Levine had been working for legalized birth control. She worked for the Birth Control Federation of America in both the U.S. organization and later as the medical secretary for the international organization. She also did marriage counseling and organized group counseling programs on sexual problems and contraception. Both on the individual and on the organizational