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# Women and Minorities Continue to Grow in Workplace

The size and composition of the professional work force is changing, according to a report prepared by the Scientific Manpower Commission. The report, *Professional Women and Minorities*, chronicles the increasing participation of women and minorities in the science, engineering, and professional populations, calling particular attention to the gains made by women.

Among the changing trends noted in the Scientific Manpower Commission report are:

- In 1970, women earned 41.5 percent of the bachelor's, 39.7 percent of the master's, and 13.3 percent of the doctorate degrees awarded. However, by 1982, women were earning more than half of the bachelor's and master's degrees and 32 percent of the doctorates.
- Despite the entry of record numbers of women, growth of the professional labor force has slowed down since the 1960's. This is particularly evident in science and engineering where the total number of bachelor's graduates rose less than 1 percent between 1974 and 1982 despite a 21 percent increase in the number of women earning these degrees.
- Except for Asian/Pacific Islanders, minorities continue to be underrepresented in the physical and mathematical sciences, where they earned 9.6 percent of the bachelor's, 7.4 percent of the master's, and 5.3 percent of the doctorate degrees awarded in 1982. However, a significant percentage of these degree awards, especially at the graduate level, are earned by Asian Americans.
- Particularly at the graduate level, the proportions of graduates who are foreign nationals on temporary visas has grown significantly over the decade. In engineering, for example, foreign students earned 3.3 percent of the bachelor's, 11.9 percent of the master's, and 12.1 percent of the Ph.D.'s awarded by U.S. schools in 1969. By 1983, their share had risen to 8.5 percent, 25.8 percent, and 39.4 percent, respectively.

- Although women's proportion of scientists in the labor force is still below their proportion in recent graduating classes, women are now 41 percent of life scientists, 18 percent of geological scientists, 30 percent of mathematicians and computer specialists, and 57 percent of psychologists. Their proportions are less in the doctoral population, but growing.
- Employment of women and minorities in higher education has grown slowly over the 1970's and women's progress up the academic ladder still lags far behind that of men. Women continue to be disproportionately overrepresented among nonfaculty researchers in higher education, while men are disproportionately overrepresented in the tenured professoriate. Only 51 percent of women faculty in all higher education institutions have tenure in 1983, compared with 70 percent of men.
- Women's proportion among scientists and engineers at academic institutions has increased slowly. Between 1974 and 1983, women moved from 13.4 to 17.6 percent of mathematicians and from 19.7 to 24.8 percent of biologists employed at academic institutions. More than half of college teachers in English, foreign languages, health specialties, and home economics are women, but they are less than 5 percent of the total in engineering and physics.

These statistical parameters are among many available in the new 288-page fifth edition of *Professional Women and Minorities—A Manpower Data Resource Service*, which provides a comprehensive statistical picture of yesterday's, today's, and tomorrow's professional work force. Data from more than 200 sources are detailed by sex and/or minority status. The volume includes annotated recruitment resources, both for specialized fields and for general recruitment of professional women and minorities, and a detailed bibliography and cross index of the 250 tables. Both

historical and current data on enrollments, degrees, and the general, academic, and federal work forces are presented by field and subfield.

Professional Women and Minorities—A Manpower Data Resource Service, fifth edition, by Betty M. Vetter and Eleanor L. Babco is available for \$70 from the Scientific Manpower Commission, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.

BETTY M. VETTER ELEANOR L. BABCO

Scientific Manpower Commission

#### "Report on Science" Honored

"Report on Science," the daily 90second radio news feature program produced by the AAAS Office of Communications and the CBS Radio Stations News Service, has been awarded an honorable mention in the 1984 National Psychology Awards for Excellence in the Media by the American Psychological Association (APA).

The program, which began production in 1981, now airs on many radio stations across the country (see *Science*, 2 September 1983, page 942).

Allen L. Hammond, editor of *Science* 84, is the on-air reporter/editor; Carol L. Rogers, head of the Office of Communications, is the AAAS project director/executive producer; and Terence Monmaney is the writer.

The APA did not award a first prize in the radio category this year.

#### AAAS Fellows End Summer Assignments

Two groups of AAAS Fellows have completed their summer assignments. The Association-sponsored programs placed six Environmental Science and Engineering Fellows at the U.S. Environmental Protection Agency (EPA) for 10 weeks while 15 Mass Media Science and Engineering Fellows spent the summer at newspaper, magazine, and television and radio sites around the country.

During the summer each of the Envi-

ronmental Science and Engineering Fellows produced a written assessment and gave a seminar on an area of particular importance to the Agency. The Fellow's areas of research included hazardous waste disposal, control of viruses in drinking water, anaerobic sludge disposal, and indirect health effects of acid deposition.

The 1984 Fellows and their affiliations are: Karen Ekelman, University of Maryland; Eden Fisher, Carnegie–Mellon University; Charles Gerba, University of Arizona; Charles Haas, Illinois of Technology; Michael McDonald, University of Wisconsin; and Robert Stack, University of California, Davis.

The Environmental Science and Engineering Fellows Program began 4 years ago to assist the EPA's research and development planning and policy-making. A major emphasis of the program is to help identify and assess future environmental problems and opportunities. The fellows, postdoctoral to career scientists and engineering, also provide the Agency with a link to the academic community.

Further information about the program, and copies of the 1984 fellows' reports are available from Patricia S. Curlin, Environmental Science and Engineering Fellows Program, at the AAAS address.

Mass Media Science and Engineering Fellows were at such diverse locations at CBS' "Nightwatch" television program, *Business Week* magazine, the *Detroit Free Press*, and radio station KUNC-FM in Greeley, Colorado.

The Mass Media Science and Engineering Fellows Program, begun in 1974, aims to increase both the media's and the public's interest in and appreciation of science and engineering. The program is supported by grants from private corporations and foundations as well as AAAS funds

### SWARM Division Annual Meeting to Be in Tucson

The 61st Annual Meeting of the Southwestern and Rocky Mountain (SWARM) Division, AAAS, will take place in Tucson, Arizona, 19 to 23 March 1985. The

Meeting will coincide with the Carl S. Marvel Symposium in Chemistry and the Centennial Celebration of the University of Arizona

David A. Hamburg, AAAS president, will deliver the opening address, and Peter Raven, director of the Missouri Botanical Garden, will give the John Wesley Powell Memorial Lecture.

Among the symposia arranged for the meeting are those on Quaternary Extinctions, Macromolecules of Biological Interest, Interactions Among Plants and Animals in the Western Deserts, Biotechnology—Interaction of Disciplines, and Hazardous/Nuclear Waste Management.

For more information and/or a copy of the preliminary announcement and call for papers, please contact M. Michelle Balcomb, SWARM/AAAS, Colorado Mountain College, 3000 County Road 114, Glenwood Springs, Colorado 81601, or call 303-945-5516.

### Science 84 Book Explains Science of Sports

Newton at the Bat answers such questions as why curve balls curve, boomerangs return, and golf balls have dimples.

The book is drawn from Science 84's sports column and explains the physics of flight as it affects different balls, wings, sails, and other moving objects: the technology of various tools used by athletes from a vaulter's pole to a runner's shoe: and the construction of the human body.

Newton at the Bat is published by Charles Scribner's Sons in cooperation with the AAAS. The book's editors are Eric Schrier, managing editor of Science 84, and William Allman, a staff writer at the magazine.

The 192-page hardcover book is available in bookstores for \$14.95 or directly from the *Science 84* Book Service for \$14.95 plus \$1.75 postage and handling. To order write to Book Service, *Science 84*, 1101 Vermont Avenue, NW, Washington, D.C. 20005. Please allow 4 to 6 weeks for delivery.

## Arid Lands Conference Issues Call for Papers

"Arid Lands: Today and Tomorrow," an international research and development conference, is announcing its call for papers. The conference, scheduled for 20 to 25 October 1985, will be held in Tucson, Arizona.

Papers on all topics relating to arid lands water use and conservation; agricultural systems and genetic resources; natural resource management; conservation and reclamation; and human adaptations, migrations, and habitations are welcomed. Papers should present new research data gathered by the authors themselves. Abstracts of 200 words or less must be received by 1 January 1985.

Co-sponsors of "Arid Lands: Today and Tomorrow" are AAAS, Unesco, U.S. Agency for International Development, U.S. Man and the Biosphere Program, and the University of Arizona.

For further information, and to submit abstracts, contact G. P. Nabham, Office of Arid Lands Studies, University of Arizona, Tucson, Arizona 85721.

### List of Women's Science Groups Available

With support from the National Science Foundation, the Office of Opportunities in Science has compiled and published a descriptive list of more than 75 associations, committees, and caucuses that work with women in science, engineering, mathematics, and medicine.

Information for each group includes address, phone, dues, number of members, publications, services, and current and future activities. Single copies are available free from Data Scott, Office of Opportunities in Science at the AAAS address.

For more information about the activities and publications described in "AAAS News," write to the appropriate office, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036, unless otherwise indicated.