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The Status of Women in the Geosciences

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Data Points

The Status of Women in the Geosciences:

[Women at Educational and Research Institutions](#)
[Persons at Degree-Granting Institutions](#)

[Mary Anne Holmes, Connie Frey, Suzanne O’Connell and Lois K. Ongley](#)

Most geoscientists agree that gender equity is a worthy goal for our field, but there is disagreement as to how to measure gender equity and what it actually means. Will the geosciences achieve gender equity when the proportion of women on our faculty and in professional positions accurately reflects the proportion in our undergraduate classes? Or is gender equity 50 percent of all positions in all fields, including undergraduate enrollment? By any of these measures, we are not yet there. Women earned 40 percent of the undergraduate degrees in geoscience (geology, oceanography, atmospheric sciences, geophysics) in 2001, and 38 percent of all the master’s degrees — both an all-time high. The proportion of women receiving Ph.D.s and filling professional positions listed in the American Geological Institute’s *Directory of Geoscience Departments*, however, is far behind these percentages, indicating some rather large leaks in the pipeline for women.

Women at Educational and Research Institutions

Women comprise 13.6 percent of all 12,941 entries (exclusive of administrative assistants) in the 2001 *AGI Directory*, with about 3 percent of entries of unknown gender. The proportion of women varies by the type of institution, as shown here. There is a higher proportion (but a low number) of women in museums (17.5 percent), at bachelor’s-granting academic institutions (17.4 percent),

Grand Totals	female	male	unknown	% female	% male	% unknown	% female in titled positions*
All Positions at BS through PhD Degree-Granting Institutions	1,306	8,481	194	13.9%	84.2%	1.9%	13.0%
1a. PhD Degree-Granting Institutions, total	888	5,935	113	12.8%	85.6%	1.6%	11.6%
2a. MS Degree-Granting Institutions, total	240	1,332	30	15.1%	82.6%	2.4%	14.5%
3. BS/BA Degree-Granting Institutions, total	265	1,214	43	17.4%	79.8%	2.8%	16.2%
4. AA-Granting Institutions	70	343	41	15.4%	75.6%	9.0%	-----
5. Non Degree-Granting Academic Programs	33	119	17	19.5%	70.4%	10.1%	-----
6. State Geologic Surveys	184	859	84	16.3%	77.0%	7.4%	12.6%
7. Research Centers	140	704	76	15.2%	75.5%	8.3%	14.3%
8. Museums	35	151	14	17.5%	75.5%	7.0%	14.0%
Total:	1,858	10,657	426	14.4%	82.4%	3.3%	13.6%

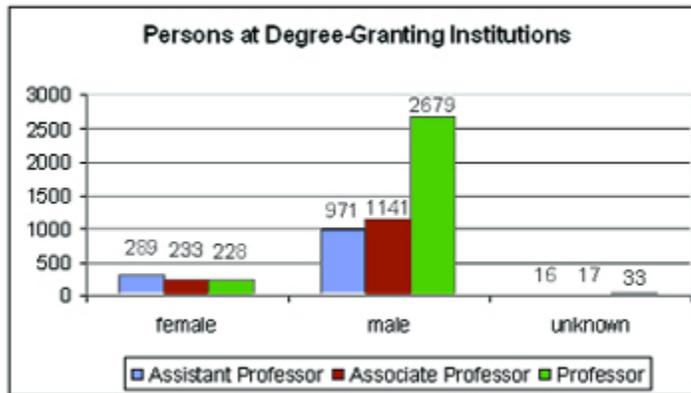
and at non-degree-granting institutions (19.5 percent, including community colleges, non-degree-granting programs in non-geoscience departments, etc.).

Breakdown by gender. [*Excludes “Cooperating Faculty,” “Adjunct,” “Other,” “Lecturer,” “Related,” “Instructor,” “Research Associate,” and “Senior Scientist.”] Courtesy of the authors.

However, when positions such as “cooperating faculty,” “adjunct professor,” “lecturer” and “research associate” are omitted, the proportion of women at every type of institution drops, reflecting the relative concentration of women in non-tenure track positions. These proportions have not changed significantly from data compiled by Dr. Lois Ongley four years ago (from the 1996-1997 *AGI Directory*). More than half, 51 percent, of all tenure-track positions at academic institutions in the United States are held by men in “full professor” and/or “chair/head” positions.

One possible cause for women holding so many “cooperating” and “other” positions at state surveys and museums is that many women at these institutions do not have a Ph.D. degree. At museums, 43 percent of women (in all positions) have a Ph.D. degree, while 83 percent of the men have a Ph.D. degree. Nearly one-third of men working at state surveys hold a Ph.D. degree, while only 9 percent of women do. Twenty-one percent of men working at state surveys have a bachelor’s degree; 38 percent of women working at state surveys have a bachelor’s degree. Fifty-three percent of women and 59 percent of men at Ph.D.-degree-granting institutions have tenure-track positions. A higher proportion of women work in non-tenure leading positions than in tenure-track positions.

Persons at Degree-Granting Institutions



At degree-granting institutions, the proportion of women in faculty positions varies by rank. Most women are in “assistant professor” positions (39 percent), and next “associate professor” positions (31 percent). There is a slightly higher proportion of women in administrative positions than in “full professor” positions (7.8 percent). Almost 60 percent of men are in “full professor” or “chair/head” positions. Only 30 women professors in the

geosciences in the United States have emeritus status, while 1062 males hold emeritus status.

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