

Report of the Committee on Qualifications and Membership for the Year ending June 30, 2001

I. Meeting of the Committee

The Committee met on June 9-10, 2001 in Research Triangle Park, NC. The committee's charge, articulated at the Society's 1996 annual meeting: to develop policy issues and make recommendations to the Executive Director and/or Board, with the objectives of strengthening the Chapters and increasing the Society's membership while maintaining the tradition of honor in science and engineering.

Committee members present at the meeting were: Penny Padgett (Chair), Howard Ceri, Don McGraw, Ron Weinberg, Lynn Lewis, Graham Peaslee. They were joined during the weekend by these staff members: Pam Blondin, Director, Membership and Chapter Programs; Lisa Rhoades, Manager, Chapter Programs; Christine Piggee, International Programs Coordinator; Angie Porter, Project Manager; Julia Reed, Program Coordinator; Rosalind Reid, Editor, American Scientist; Linda Schmalbeck, Special Programs Coordinator.

II. Business and Activities of the Committee

At their 2000 meeting, the committee established a 3-year plan of action. Each of the items is listed here, along with a summary of discussions and actions that have been implemented during FY2001.

1. Identify more succinctly the goals of Sigma Xi members by where they are in their careers.

The committee asked staff to develop surveys for various categories of Sigma Xi members, including: new initiates, student members, inactive members (particularly student members who have dropped), recently reactivated members, emeritus members, and individuals who are in mid-career. The goal of these surveys will be to identify possible services, benefits and programs that address needs and issues relevant to various members. The Committee realizes that it may be difficult to gain statistically-valid data on some of these groups (e.g., inactive members) but important information or trends can be determined in attempting these surveys. To begin the process, staff have developed surveys for student members and attempted (unsuccessfully, due to lack of interest) to host focus groups with student members. Additionally, staff have been researching software packages that support cost-effective surveying.

A survey of 1000 Sigma Xi members in 1999 showed that members place a high level of priority on developing programs that address the needs of young members. To that end, the CQM discussed at length some approaches to identifying and addressing those needs. Under the guidance of the CQM and the Committee on Diversity, staff developed a poster and brochure targeting younger potential members. Since Sigma Xi loses a considerable fraction of every class of student initiates, the CQM will also make a recommendation to the Finance Committee to consider offering bridge dues to help young members manage the financial transition from paying student dues to paying full dues.

2. Identify issue groups of interest to our members and find ways to develop useful programs and services around them (example: diversity, globalization, science literacy). Find ways to connect members through issues.

The committee reviewed the progress of several programmatic initiatives that have been underway over the last few years. Two grants from the NSF have allowed Sigma Xi to offer chapters small amounts of financial support to develop programs in education and in ethics. To date, 17 chapters have engaged in education activities and 6 in ethics activities. This approach appears to have many successful elements: it allows individuals to connect with Sigma Xi through issues that are important to them, it appears to activate (and in some cases RE-activate) chapter activity, it give chapters opportunity to solidify an identity within the institution, and it helps chapters to attract new members (including members of the institutional administration).

Another powerful example of this sort of connection came as a result of an e-mail 'blast' sent to all members in July 2001. One item in the blast offered an opportunity for members to share materials for courses that examine the role of women and/or minorities in science and engineering. Dozens of members shared materials and enthusiasm for this project, and the seeds of a potential network have become evident.

The CQM expressed support for Sigma Xi's attempts to secure external funding to support chapter-based activities in areas that are key to the Society, including: education, ethics, public understanding of science, science advocacy, diversity and international networking.

3. Build or strengthen connections with other organizations, women and minorities.

Staff met with representatives from Shaw University, an Historically Black University, and discussed ways in which Sigma Xi can be a relevant presence on their campus and on campuses of other minority serving institutions. Along with the committee on diversity, the CQM will continue to research these questions on a larger scale.

4. Build a toolkit for chapters to support their planning efforts and their every-day administrative requirements.

The first version of the Chapter Toolkit was distributed to delegates at the November 2000 annual meeting and was extremely well-received. The booklet contains essential information for chapter officers, including resources, contact information, keys to success, important dates, funding opportunities and case studies

from successful chapter programs. During Summer 2001, the volume was updated and expanded, and a new version will be prepared annually for distribution to all chapter officers, Society leaders, annual meeting delegates and other interested members. The information also appears on the Sigma Xi Web site.

5. Build a library of successful chapter programs, complete with enough detail and information that chapters can use as an instruction book.

As part of the Chapter Toolkit project, staff have begun the process of creating case-studies of successful programs. Each case, based on interviews with key chapter officers and program organizers, contains a general description, a timeline, a rough budget, tips for success and contact information. The primary source of cases is the list of chapters that win the Certificates of Excellence and Chapter Program award. Additionally, to increase the visibility of strong chapter programs, the Society annual report and each issue of Sigma Xi Today include descriptions of successful chapter activities.

6. Define and develop criteria for a chapter program award.

The committee has successfully refined the criteria for considering programs for this award. Additionally, the Committee on Diversity has added an award for outstanding chapter program in the area of diversity.

7. Develop and implement the various mentoring programs that have been started.

Modest progress has been realized in this area over the last year. A potential partnership with Discovery, Inc. on a middle school mentoring program is still being explored. The 2001 Forum provided a catalyst for one chapter to experiment with a chapter-based mentoring program for middle school students and results will be reported at the 2001 Annual Meeting.

8. Refine/define a successful annual process for revitalizing chapters.

In conjunction with the 2000 Annual Meeting, the CQM and staff organized activities for approximately 12 chapters in need of reactivation. Chapter representatives worked with staff, committee members and partners from other chapters to develop plans of action for revitalizing their chapters. In addition to regular annual meeting workshops, they attended special discussion groups and sessions to focus on their questions and challenges. Of this group, approximately two-thirds have made a strong effort to revitalize their chapters. Staff reported that the chapters with the greatest success are those that showed signs of slowing down but hadn't yet "hit bottom"-this will be important in flagging chapters for future support activities.

An additional experiment will take place this winter as the chapter staff will travel to at least one metropolitan area to work with chapters in need of support. The visit will feature some workshop activities for representatives from multiple chapters accompanied by personal visits to chapters that request them. Since the Sigma Xi budget does not make individual chapter visits feasible, this approach should allow as many as 8-10 chapters to enjoy the benefits of a personal visit, combined with the strengths of workshop activities from the annual meeting.

9. Re-engage inactive members.

Two mailings in FY2001 were designed to inform inactive members about Society activities and to reengage them in Society activities. The rule of thumb within associations is that such mailings are considered successful if they realize a 1% response rate per mailing. Each of these mailings was sent to approximately 30,000 inactive members and more than 1200 individuals reactivated...a 4.5% response rate (or 2.25% per mailing). The mailings more than paid for themselves, and this successful effort will be repeated in FY2002. Additionally, inactive members will receive occasional e-mails from Sigma Xi, and staff are researching other possible cost-effective approaches for attracting inactive members back to active membership.

10. Encourage a Society-wide re-emphasis on our bedrock programs like GIAR and Distinguished Lectureships.

Both the GIAR committee and the Lectureships committee have discussed ways to broaden the scope and impact of these important programs. New publications will feature the successes, particularly of the GIAR program, and how they relate to membership in Sigma Xi. Both program have the potential for strengthening programmatic offerings to prospective chapters outside of the U.S., particularly in developing countries.

11. Engage the regional and constituency directors as a resources for chapters.

One suggestion from the committee along these lines was to offer to directors the option of having staff help identify speakers, either from chapters or from within the staff, who can address specific issues during regional or constituency group meetings during the Sigma Xi Annual Meeting. Several directors requested such support for the 2001 Annual Meeting.

12. Communicate to the members and Sigma Xi leadership what the committee on qualifications and membership is doing and solicit feedback.

A Board Information session which precedes the 2001 November Board meeting will be an opportunity for the CQM to illustrate some of the many ways that the committee has examined issues raised by the board, membership, other committees and staff. Additionally, the committee includes reports in each issue of the Intercom. Additional communication devices will be explored in the coming year.

13. Develop a more coherent program of chapter-focused workshops for the annual meeting.

The CQM has worked closely with staff to develop strong workshops for the Sigma Xi Annual Meeting. The goals of the workshops are to educate chapter officers/delegates about: the nuts and bolts of managing a chapter, ideas and opportunities for building chapter programs, other chapters in similar institutions, funding opportunities for chapters and resources available to make their jobs easier. Following the 2000 Annual Meeting, the CQM assessed feedback on workshops and recommended some content changes. Members of the committee often serve on panels and all try to attend the Annual Meeting to help manage and assess chapter workshops.

III. Awards for FY2000

• A. Certificates of Excellence

Certificates of Excellence were awarded to the following chapters for overall outstanding activity during FY2000. Nominees were chosen by the Regional Directors based on Chapter Annual Reports, and winners were selected by the Committee on Qualifications and Membership as Chapters of Excellence.

- **Alaska Chapter**, for a range of activities including research programs for high school, undergraduate and graduate students and numerous programs devoted to public understanding of science including working with the media and elementary schools.
- **Clemson University Chapter**, for working closely with other organizations and departments on campus to provide programs including high school, undergraduate and graduate research awards and a Nobel Laureate address on campus. The chapter also instituted a Young Investigator of the Year Award.
- **Ford Motor Company Chapter**, for hosting a Saturday session on "Invention and Intellectual Property" for approximately 200 local students and their teachers, including 65 minority students from the Detroit area. Ford also provided engineers and scientists to work with area middle school students.
- **National Institute of Standards and Technology Chapter**, for their annual Postdoctoral Poster Presentation, a popular public colloquium series that included nine invited lectures and promotion of research and education through participation in area science fairs.
- **Northern Michigan University Chapter**, for activity including lectures, awards for outstanding science teachers and a poster presentation event for undergraduate or graduate students which included television interviews with two of the students.
- **Northwestern Pennsylvania Chapter**, for their public forum on evolution that attracted an audience of about 70, plus television and newspaper coverage. Panelists covered the topics of archaeology, physics, astronomy, biochemistry and anatomy/theology. The chapter also hosted a panel discussion for high school students on being educationally prepared for careers in science and medicine.
- **Pace University Chapter**, for sponsoring a number of lectures, a workshop for science teachers and a high school science day that included a lecture, "Forensics: The Art and Science of Catching Criminals," student research posters, and its annual bioethics forum.
- **Research Triangle Park Chapter**, for hosted a half-day roundtable on risk assessment with panel members representing government, academia and industry. With three recent major hurricanes hitting North Carolina, the chapter also focused programming on environmental impacts of weather.
- **San Diego Chapter**, for supporting a new chapter in Ensenada, Mexico, launching a chapter newsletter, and raising \$6,000 from a charitable trust to support both middle and high school science fairs and a news bureau.
- **Texas A&M University Chapter**, for promoting science education at both the K-12 and undergraduate levels with an essay and drawing contest for K-12 students and a workshop on alternatives to the traditional teaching of science.
- **University of Calgary Chapter**, for its successful High School Enrichment Program and for running for more than 20 years a thematic lecture series that is widely recognized and attended by the public and chapter members.
- **University of Hawaii-Hilo Chapter**, for co-sponsoring and judging the state science fair in which 180 prizes were awarded to more than 50 students and a science open house on campus for over 250 students and teachers.
- **University of Minnesota at Duluth Chapter**, for organizing organized a science equipment fair that included over 20 scientific suppliers displaying their products to more than 500 attendees. The chapter's annual poster session attracted over 35 posters with more than 150 people attending the opening ceremony.

• B. Chapter Program Awards

Chapter Program Awards were given to the following chapters for organizing and/or hosting a single, outstanding program during the last year. Winners were selected by the Committee on Qualifications and Membership during the Certificates of Excellence review process and detailed descriptions of the programs will be included on the Sigma Xi Web site.

- **Louisiana State University Chapter**, for a scientific writing prize awarded to undergraduate and graduate students to encourage and recognize high quality writing in the sciences with the goal of better communicating scientific discovery to scientists and the public.
- **Middle Tennessee State University Chapter**, for sponsoring its annual Expanding Your Horizons in Math and Science program, a daylong conference designed to introduce more than 250 middle school girls to careers in science, math, engineering and technology.
- **Pace College Chapter**, for an annual ethics forum to encourage students to become critical thinkers as they confront cutting edge issues in research. The forum also acknowledges the importance of these issues and the fact that university campuses are the best, most logical places for these discussions to happen.
- **San Diego Chapter**, for initiating eight full members associated with various scientific research institutions in Ensenada and hopes they will form the nucleus to found Sigma Xi's second chapter in Mexico.
- **University of Calgary Chapter**, for its High School Enrichment Program, through which 40 academically advanced seniors spent one school day a week, for up to five months, in university labs working side-by-side with professors and/or graduate students on individual or group projects.
- **University of New Mexico Chapter**, for hosting 10 Sigma Xi Distinguished Lecturers (one per month) from all over the country for its Public Talks in Science and Society series, which has been rated the best program on campus for the past 11 years.
- **Whitman College-Walla Walla College Chapter**, for starting a science book club last year and also developed an e-mail distribution list to which anyone interested can subscribe. Notices were sent out to area doctors, teachers, friends and the entire Whitman College faculty, which resulted in a good cross-section of people interested in science.

• **C. Certificates of Recognition**

Certificates of Recognition were awarded in to the following 15 chapters which initiated the most new members last year.

- Brown University
- Carnegie Mellon-University
- Claremont Colleges
- Colorado State University
- Georgetown University
- Massachusetts Institute of Technology
- Mount Holyoke College
- Princeton
- Smith College
- Southern Maine
- Swarthmore College
- Texas A&M University
- University of Texas Medical Branch
- Washington University
- Williams College

IV. Approved New Chapters and Name Changes

Between July 1, 2000 and June 30, 2001, the following chapters were installed:

- Washington College Chapter, chapter number 831
- Fairfield University Chapter, chapter number 830

Between July 1, 2000 and June 30, 2001, the following name changes were approved by the Executive Director:

- McGill University became the McGill - Montreal Chapter
- Uniroyal Chemical became the Crompton Corporation Chapter
- Texaco Research merged with the Vassar Chapter

V. Membership of the Committee

For the year ending June 30, 2001, the Committee on Qualifications and Membership consisted of the following members:

Chair: Penelope Padgett, University of North Carolina at Chapel Hill

Howard Ceri, University of Calgary
Meredith Mason Garcia, Tulane University
Lynn O. Lewis, Mary Washington College
Virginia Lyons, Trinity College of Vermont
Jeanne Trinko Mechler, IBM Microelectronics
Graham Peaslee, Hope College
Daniel Rubenstein, Princeton University
Ronald Weinberg, Lawrence Livermore National Lab

Staff Liaisons:

Pam Blondin, Director of Membership and Chapter Programs
Lisa Rhoades, Chapter Programs Manager

VI. Acknowledgments

In addition to the two staff liaisons, the committee wishes to thank the staff for their hard work and dedication to membership, chapters and programs. Particular thanks go to these members of the department of membership and chapter programs:

- Kevin Bowen, data services coordinator
- Sharon Davis, members services manager
- Angela Douglas, customer service representative
- Paulette Harmon, data services manager
- Marvin Hill, customer service representative
- Kathy Massenburg, Administrator, Chapter Services and Membership
- Christine Piggee, international program coordinator
- Julia Reed, student program coordinator
- Linda Schmalbeck, education programs manager
- Eric Tolliver, data entry specialist
- Dee Windley, meetings manager