Botanical Society of America  
Education Committee  
Report to the Council  
August 12, 2001

The committee continued work on several major projects:

**Improvement of Pre-College Science Education**

**GOAL:** To support the improvement of science education through participation at conventions of science teachers.

**STATUS:** Again this year, the Education Committee and the Teaching Section cooperated in representing the BSA at the annual meeting of the National Science Teachers Association in St. Louis, MO (April 6-9, 2000).

**NABT:** Met this year in Orlando but **BSA was not represented.** Our budget request for 2000-2001 (for $10,400) was approved at only $7,000--not enough to cover both conventions. We feel we can reach more teachers, including elementary teachers, at NSTA (by far the larger of the two conventions) but we need to make more efforts to assist high school and community college biology teachers and our presence at NABT would be a good way to reach that goal. We’re asking that funding be restored this year.

**NSTA:** **Rob Reinsvold** and **Dan “Tim” Gerber** staffed the BSA booth. They were assisted by **Jason Yusten**, **Meghan Buck**, **Megan Thomas**, and **Eric Reinsvold**. Drs. Reinsvold and Gerber also presented a workshop on “Spice Rack Botany” to a standing-room-only crowd. Conference attendance totaled approximately 20,000 teachers (of all the sciences) and we had direct contact with at least 1,500 of them. We propose having a BSA presence at the 2002 national NSTA conference in San Diego, CA, and have submitted proposals for 2 workshops in addition to the booth.

The success of this outreach attests to the need for expansion of these efforts. We encourage BSA members to attend **regional** conferences of NSTA. We also need to expand our commitment to presenting workshops at these conferences.

**Motion:** That the Council approves a sum, not to exceed $10,400 (for travel, lodging, registration fees, booth rental and handout materials) for selected BSA members to attend national, regional, or state meetings of organizations like the National Association of Biology Teachers and National Science Teachers Association for the purpose of presenting workshops on plant biology in the K-16 and community college curriculum and distributing educational materials in support of expanding the quantity and quality of plant biology. The proposed budget is on the next page:
2001-2002 PROPOSED BUDGET

NABT: Booth $1500
BSA Volunteers (3 X $1000) $3000
Handout Materials $  500
Sub-Total $5000

NSTA*: Booth $1700
BSA Volunteers (3 X $1000) $3000
Handout Materials $  700
Sub-Total $5400

TOTAL $10,400

*Expenses at NSTA are higher because it is a much larger conference (more attendees) and, therefore, tends to be in venues that charge more for exhibit space.

If the Council approves the expenditure, the Education Committee, as in the past, will select members to represent BSA in these activities and will authorize payments upon proof that the workshops and other outreach activities were performed as proposed.

Discussion Session at the Albuquerque BSA Meeting

GOAL: To support BSA members as their institutions modify curricula in the direction of eliminating or drastically reducing studies of plant biology.

STATUS: Gordon Uno has organized a discussion for this meeting, “The future of botany at the undergraduate level” (Tuesday, 3:30-4:30 pm, Session D3 - ACC, 201-La Cienega). As stated in Dr. Uno’s abstract,

BSA members report, with increasing frequency, attempts across the country to eliminate or reduce the number of botany courses taught at the undergraduate level, to reduce college/university resources directed toward plant science activities, to replace retiring botanists with scientists from other disciplines, as well as attempts to eliminate entire botany departments and programs. These events have had and will continue to have a major impact on graduate programs and the future of the botanical sciences at the undergraduate level. This roundtable discussion will include members of the Education Committee of BSA, but is open to all interested members.

We hope to hear from BSA members who may have experienced "assaults" on botany at their home institution or from members who have had success in convincing colleagues and administrators of the importance of botany to the life sciences and to their college or university.
We will generate a "vision statement" in the defense of botanical sciences that focuses on the importance of keeping botany in the undergraduate curriculum. We also hope to develop a list of useful methods and strategies to include plants in the study of modern biology at the undergraduate level and a list of the best practices to attract and keep undergraduate majors and minors in botany.

Poster: McIntosh Apple Growth and Development

GOAL: To provide attractive, accurate, inexpensive educational materials for teachers of plant biology at all levels.

STATUS: With approval of Council, the Education Committee’s major project this year was the publication of a four-color poster showing 20 stages in the growth and development of a McIntosh apple. David Kramer, chair of the Education Committee, organized the project. Design and printing was done at the Ohio State University Printing Facility. McGraw-Hill Publishers (thanks to sponsoring editor Marge Kemp) provided $2800 to cover printing costs for 8,000 posters and another $250 to partially support the honorarium ($750) for the photographer/artist, Brent Seabrook of Lakewood, OH. Steve Rice and Amy Russell at Union College created hands-on activities related to the poster. Their carefully conceived pioneering work can serve as a model for additional learning activities which can be added in the months ahead. Finally, our overworked and underpaid web master, Scott Russell, contributed many hours of work to take material from several contributors and mold it into a unified design on the BSA web site [http://mcintosh.botany.org/]. The Education Committee of the Botanical Society is indebted to each of these people, members and non-members, for their support in our effort to improve the quality of plant science education. We have received many compliments from teachers who are using the poster and activities. The poster is an excellent handout for teachers at the BSA booth at their conventions. Copies are available at this meeting at the BSA booth.

It should be noted that in addition to the poster as a single artistic work, BSA also has permission from the photographer/artist to publish the individual images on our web site for free downloading for educational purposes. The copyright agreements behind this project were new to us and are on file as models for future projects.

There have been some questions about the method of funding this project and whether the inclusion of the McGraw-Hill logo on the poster is any kind of BSA endorsement for their company or publications. The request for approval and funding of this project was brought before the Council at the August 6, 2000 meeting in Portland. The concept of the proposal was approved (including the use of a sponsor’s logo) but the Council, regretfully, could not fund it. The chair was encouraged to seek outside funding. McGraw-Hill was the first publisher approached and they eagerly agreed to support the project. This kind of “creative financing” perhaps should be pursued for future BSA projects. This approach has been taken by ASPP and other societies who have projects much larger than our own. The widespread practice is not seen as an endorsement by the vendors but merely as an expression of appreciation to the scientists...
Future Possibilities for Education Committee Projects

Note: Many of these have been on this list for several years but are still viable projects.

- To publish hands-on, discovery-type plant biology exercises for use in schools as well as at colleges and universities. We now have a model for publishing these on our website and/or in hard copy (but web publication is less expensive and more easily edited and expanded).

- To publish additional educational posters and accompanying materials (see above).

- To publish a white paper about the role of plant biology in the undergraduate curriculum. This idea will be explored in a discussion here at the Albuquerque meeting.

- To offer assistance to publishers who are seeking professional review of manuscripts for plant biology and general biology books. We want to make sure the plant biology content is correct before it is published. A national review of science textbooks used in the schools strongly criticized the inaccurate science content and the boring pedagogical approach of most of these textbooks.

- To publish instructions for growing plants in the classroom with a list of easy-to-grow plants that illustrate various morphological and/or taxonomic principles. This idea grew out of discussions with representatives of the American Horticultural Society but has not been pursued.

- To add images to our online plant image data base and also to improve the captions on many of the images.

- To work with Program Chair Jeff Osborn to develop his outstanding suggestion for a new format for the 2002 meeting scheduled for the University of Wisconsin. The facilities at UW support workshops and presentations using the latest in educational technology. We want to take advantage of that. Plans for educational meetings prior to the traditional conference will be developed at this meeting.

Final Comment

In addition to its appointed members, the Education Committee has a number of volunteers who help with various projects. Any member who wants to be actively involved with any of the committee projects should contact the chair.

The chair thanks all members and volunteers of the committee for their support and especially thanks the officers of BSA for supporting the work of this committee and encouraging the BSA to be more active in educational outreach. My 5-year term as member and
chair of the Education Committee comes to a close at this meeting and I shall always cherish the friendships made through the committee’s activities.

Respectfully submitted,

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