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 annual meetings of the National Association of Biology Teachers in Ft. Worth, TX (October 27-30, 1999) and the National Science Teachers Association in Orlando, FL (April 6-9, 2000).

**NABT:** BSA did not have a booth because we did not have sufficient funds at the time the booth had to be reserved (it was prior to the 1999 Council meeting). However, Rob Reinsvold and Ethel Stanley presented a workshop as part of the program. We will be represented at the 2000 meeting in Orlando.

**NSTA:** Rob Reinsvold and Ted Gerber staffed the BSA booth. Again this year the booth was strategically located adjacent to booths sponsored by ASPP, American Phytopathological Society, Wisconsin Fast Plants, and C-Fern. This area was dubbed “The Plant Place” by convention participants and was very popular. Conference attendance totaled 20,000 teachers (of all the sciences) and we had direct contact with approximately 1,000 of them. Visitors to our booth received a handout describing activities with “15-bean soup!”

This outreach was supported by a $10,400 appropriation to our committee by last year’s Council. The success of this outreach effort attests to the need for expansion of these efforts. If we can find BSA members who are willing to attend regional conferences of these organizations, we want to encourage that. Those who have been directly involved with this outreach are convinced that it is a very effective means of reaching teachers and that we need to continue this level of involvement. We also need to expand our commitment to presenting workshops and we need to develop hands-on activities and other inexpensive teaching materials (e.g., posters) that can be distributed from our booths.

**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-12 curriculum and distributing educational materials in support of expanding the quantity and quality of plant biology. The proposed budget is on the next page:
### 2000-2001 PROPOSED BUDGET

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>NABT: Booth</td>
<td>$1500</td>
</tr>
<tr>
<td>BSA Volunteers (3 X $1000)</td>
<td>$3000</td>
</tr>
<tr>
<td>Handout Materials</td>
<td>$ 500</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>$5000</td>
</tr>
<tr>
<td>NSTA*: Booth</td>
<td>$1700</td>
</tr>
<tr>
<td>BSA Volunteers (3 X $1000)</td>
<td>$3000</td>
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<tr>
<td>Handout Materials</td>
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</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>$5400</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$10,400</strong></td>
</tr>
</tbody>
</table>

*Expenses at NSTA are higher because it is a much larger conference (more attendees) and, therefore, tends to be in places 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.

### Digitized Botanical Images

**GOAL:** To digitize the BSA's collection of 35mm slides, then to make the images available through a web page or CD-ROM or both.

**STATUS:** The images went online on August 1, 1999 so have been on our web site for one year. The web address is: [http://images.botany.org/](http://images.botany.org/) If you haven’t visited this site, you should! We have received many compliments on making this valuable resource available to teachers and researchers around the globe.

From August 1, 1999 to July 21, 2000 (almost one year of publication) there have been 24,324 hits on this site! That’s an average of 68 hits per day. We haven’t done much to “advertise” the site beyond our own membership.

The Education Committee wants to expand this collection and we will repeat the request that appeared in Plant Science Bulletin asking members to donate their best slides to this project. Scott Russell expertly maintains this web site and is prepared to digitize and add additional slides to the collection.

### Participation in Workshops of Project Kaleidoscope (PKAL)

**GOAL:** The Botanical Society should cooperate with other professional societies in plant biology to improve undergraduate education in the life sciences.

**STATUS:** David Kramer and Robert Reinsvold will attend a 4-day PKAL workshop, “The Future of Plant Biology,” at Keystone, Colorado. David will present a description of BSA educational outreach activities as part of a panel discussion on the role of professional societies in improving plant biology education. Rob will lead field trips, not so much to show us the Colorado flora but to demonstrate field trip techniques that encourage students to make their own discoveries when we take them into the field. [Note: The workshop is July 23-26 so I will be presenting a more complete report at Council meeting.]

### Calling Attention to the Pedagogical Literature in Plant Biology
David Hershey, not a member of BSA but a long-time contributor to the pedagogical literature of botany, published an e-mail list of recent publications in botanical pedagogy. We asked him to publish this bibliography in Plant Science Bulletin but he refused! However, Kramer persuaded him to allow the Education Committee to publish his list and attribute it to him! It was published as Kramer, David W. 1999. Report: The literature of plant science education. Plant Science Bulletin Vol. 45 (2) Summer 1999, pp. 35-36.

Symposium at the International Botanical Congress

Of course we met last year with the IBC and Peter Hoch asked BSA to organize a symposium on botanical pedagogy. We did! Members of the Education Committee and other BSA members developed the plan and David Kramer was the organizer. “Botanical Literacy for the Next Millennium: What to Know and How to Know It,” was the only one of the more than 200 symposia dealing with education. It was well received. We had financial and logistical support from a loyal sponsor, Addison Wesley Longman Publishing Company.

Symposium at the Portland BSA Meeting

Don Buckley (Chair of the Teaching Section) and David Kramer have organized a symposium for this meeting, “Using Educational Technology to Foster Learning Centered Pedagogies.” It will emphasize that our use of technology in teaching must not simply dazzle students but should be designed to actually improve the learning of plant biology. Six presenters (Wednesday morning) will explain how this can be done giving concrete examples from their own teaching. We were successful in getting McGraw-Hill publishers to sponsor this year’s symposium, covering some of the expenses and helping with logistics and marketing.

Poster(s)

As noted above, teachers need inexpensive materials for their classrooms. We are currently negotiating with an Ohio artist/photographer to get the rights to several of his works (serial photos of plant development). Our plan is that the posters will be printed with the BSA logo and will be accompanied by printed materials that will explain the content of the poster and then suggest a number of hands-on activities related to plant development that can be carried out at several grade levels from K through the university.

Future Goals

- To publish hands-on, discovery-type plant biology exercises for use in schools as well as at colleges and universities. These could be published on our web site and/or in hard copy.

- To publish an educational poster and accompanying materials (see above).

- To publish web-based case studies in plant biology. This idea will be explored here at the Portland 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 recently released 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 2001 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. These planning talks are just beginning here in Portland.

**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.

Respectfully submitted,

Dr. David W. Kramer, Chair

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