

ONE HUNDRED YEARS OF AMERICAN BOTANY: A SHORT HISTORY OF THE BOTANICAL SOCIETY OF AMERICA¹

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This paper offers highlights from the 100 (plus) years of the Botanical Society of America (BSA) and draws extensively on the archives of the BSA. In addition to examining the founding of the society and the attempt to “professionalize” botany in late 19th century America, the paper also explores the complex relations between the BSA and a number of related societies in the United States, the Society’s struggle to create a coherent identity for itself, the place of botany as a whole in the context of the burgeoning biological sciences in the 20th century, and the changing role of the BSA in an international context. The paper assesses both the achievements and the challenges facing the BSA. It closes by offering some historical reflections on the status of “botany” as a science and the historical significance of terms like “plant biology” and “plant science.”

Key words: American botany; Botanical Society of America; history of botany; scientific society.

“... the number of real botanists is increasing in this country by year.”
—F. C. Newcombe to Erwin Frink Smith, 18 August 1895

“‘Botanical’ is good! It fits a downsized world because it has primary producers in its portfolio.”
—Anonymous, comment in favor of retaining name of Botanical Society of America, submitted by David Dilcher to the membership, August 1991

In the history and sociology of science, the founding of a new scientific society is generally considered a critical event, especially in the history of a discipline. Serving as a kind of social apparatus for disciplinary interests, societies organize individual practitioners into a functioning community of workers who generally share common backgrounds, training, methods, institutional bases, along of course, with common aims and goals (Crane, 1972). As in the case of societies like the Botanical Society of America, they may also have a geopolitical focus and a commitment to the scientific study of a group of organisms, such as plants.

In its 100-plus years of history, the Botanical Society of America has had a changing set of aims, played a number of different roles, and has drawn on varying kinds of members in diverse geographical as well as subdisciplinary affiliations. In some respects it has altered itself radically as it has responded to different pressures, while in others it has remained remarkably constant. What it has shown is the ability to adapt

itself to shifting conditions, some of which led to the collapse of other less adaptable societies. It has, in short, demonstrated the kind of evolutionary history well known to students of plant evolutionary biology.

EARLY HISTORY OF AMERICAN BOTANY

The society evolved largely through the efforts of late 19th century American botanists mostly living in the northeast. Their goal was to professionalize the study of plants and to distance it—and themselves—from what they felt were the more amateurish efforts of their predecessors as well as many of their contemporaries. Spurred by developments in instrumentation such as microscopy and methodologies such as sectioning and staining, the study of botany moved from more accessible fieldwork into a technical laboratory setting, rendering it the domain of an elite set of researchers whose goals included experimental rigor combined with technical know-how. This “new botany,” which grew out of mostly European, especially German workers, rapidly made its way to American institutions where it attracted a new generation to new areas such as plant anatomy and cytology, genetics, and plant pathology, as well as to a revived physiology and morphology (Morton, 1981; Overfield, 1993; Campbell et al., 1999). Because of these new methods, understanding of plants themselves was radically transformed in the middle decades of the 19th century, as phenomena such as the alternation of generations and cell theory, along with Darwinian evolution were recognized. As a result of such successes, plants also increasingly began to serve not just as organisms of interest in and of themselves, but also as the preferred tools and model study organisms in burgeoning areas like cytogenetics.

In the United States, additional institutional developments also transformed the map of botanical study. The Morrill Act of 1862 created the land-grant institution system, recognizing the need for and fueling both teaching and research in agricultural sciences; the expansion and reorganization of American universities led to the demand for the study of the life sciences; and the founding and establishment of gardens that promoted botanical research like the New York Botanical Garden and the Missouri Botanical Garden, along with the establishment of a number of natural history museums such as the Smithsonian,

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Note on primary sources: All minutes of the BSA are in the Archives of the BSA and located at the headquarters of the BSA in St. Louis, Missouri. Page numbers to the minutes are included when available.

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and the growth of government agencies like the U.S. Department of Agriculture, alongside private foundations like the Carnegie Institution all provided diverse institutional sites for botanists and for plant research generally (Rodgers, 1944; Ewan, 1969; Oleson and Voss, 1979; Volberg, 1983; Overfield, 1993; Craig, 2005; Kingsland, 2005; Mickulas, in press). The number of people with a serious scientific interest in plants was therefore increasing greatly by the end of the 19th century. They in turn saw themselves as members of an elite group of researchers unlike their amateur counterparts who had no appreciable technical training or held to little if any standard for rigorous experimental methodology. In the wider context of an emerging national identity too (Wiebe, 1967), American botanists also saw themselves as matching the know-how and expertise of their European counterparts, especially in Germany and Britain, who they felt had dominated botany for too long. Gaining some measure of independence from them increasingly became a major goal for the same growing elite.

The BSA thus grew out of a set of shared concerns that began to preoccupy a number of leaders of late 19th century American botany. The major obstacle to the creation of a scientific society specifically organized around something called American botany, would prove to be the persistent problem that the BSA would face for much of its history: how to unify a group divided by subdiscipline, institutional site, geographic region, scientific methodology, as well as the individual wishes of the usual assortment of difficult and intractable personalities.

FOUNDING THE SOCIETY

Almost from the start, the informal group of members interested in forming a society engaged in lively debate if not rancorous discussion over issues that included criteria for membership, disciplinary specialization, affiliation, mission statement, timing and location of meetings, dues, and even naming.

Beginning in 1883, botanists associated with the American Association for the Advancement of Science (AAAS; formally organized in 1848) attended the AAAS meeting in Minneapolis, Minnesota, and formed what became known as the American Botanical Club. It later became Section G of the AAAS. Nine years later, at the annual meetings of the AAAS in Rochester, New York, on 22 August 1892, botanists passed a resolution to appoint a committee to consider the founding of a "new society of botanists" that would "more fully unify and subserve the botanical interests of the country" (*Botanical Gazette*, Notice, 1892, p. 289). Cornell's Liberty Hyde Bailey, who appeared to endorse the formation of such a society, was named the chair of the committee. But the society was not off to a good start; Bailey's committee report the following year at the Madison, Wisconsin meetings of the AAAS in 1893 recommended abandoning the project. The negative decision was supported by no less than eight members of the committee. Only one was in favor of founding a new society and that was the University of Wisconsin Professor of Plant Physiology (and bryologist), C. R. Barnes, who filed his own minority report. That minority report must have made a compelling case because it rapidly earned itself a two-thirds majority vote. It is with some justification, therefore, that we might consider

Initial 25 members of the Botanical Society of America

J. C. Arthur	F. V. Coville	C. S. Sargent
G. F. Atkinson	D. C. Eaton*	F. L. Scribner
L. H. Bailey**	W. G. Farlow*	J. Donnell Smith
C. R. Barnes	E. L. Greene	R. Thaxter**
C. E. Bessey	B. D. Halsted	W. Trelease
N. L. Britton	A. Hollick	L. F. Ward*
E. G. Britton	C. MacMillan	W. P. Wilson
D. H. Campbell*	B. L. Robinson	L. M. Underwood
J. M. Coulter		

* Did not accept election

** Resigned in 1898

Charles Reid Barnes (1858–1910) as the "founding father of the Society."

At that meeting, 10 charter members were elected who then elected an additional 15 (see inset). A committee was also formed to draft the constitution of the new society with William Trelease as chair. On 1 November 1893, Trelease sent a draft of the constitution to all charter members and a special flyer and reprint of the *Botanical Gazette*, the primary journal for American botanists at that time, to members of the Botanical Club. Trelease's committee in consultation with charter members discussed the naming of the society and considered three options: American Botanical Society, Botanical Society of America, and Society of American Botanists. After some discussion, the second was chosen for no clearly discernable reason other than how it sounded. The aim of the society was then determined "to be the promotion of botanical research" while membership would "be very rigidly drawn." (1893, Minutes of BSA, p. 1). This meant that only people who were actively contributing to botanical knowledge were to be considered members.

The society with 10 of its charter members met the following year in Brooklyn, New York, on 15 August to adopt the constitution and to elect William Trelease as the first President of the Society, with Nathaniel Lord Britton as Vice President. But right from the start, two of its elected charter members, Daniel Cady Eaton and Lester Frank Ward, declined to accept their election while two others, Roland Thaxter and William Gilson Farlow, demonstrated "expressions of doubt" (1894, Minutes of BSA). This did not bode well for the new society. By 1896, criticism began to grow with charges that the society was too exclusive, while some of the members expressed a preference for winter meetings with the American Society of Naturalists rather than summer meetings with AAAS. In what was to prove a major setback, botanists at the American Society of Naturalists meeting in December regrouped to consider organizing their own Society for Vegetable Morphology and Physiology. The following year, on 27 December, the committee to organize the Society for Vegetable Morphology and Physiology met at Sage College in Ithaca, New York to establish a rival society with the name Society for Plant Morphology and Physiology that would meet with ASN in the winter. William Gilson Farlow was first president. From that point on, the BSA had a serious organizational rival with even charter members like Bailey and Thaxter defecting to the other botanical society.

For the next several years, resignation after resignation was reluctantly accepted as the BSA experienced one of the most

Margaret C. Ferguson at Wellesley College became the first woman president of the society (she was followed by Katherine Esau in 1951). As a number of historians have noted, the subject of botany attracted a large number of women, most of whom failed to gain the equal status of their male peers (Rossiter, 1982; Rudolph, 1982; Stuckey, 1992; Shteir, 1996; Rossiter, 1998).

People of color were entirely absent from similar leadership roles, and their participation in society activities was limited not so much by the intention of botanists, but by prevailing conditions widespread in America at this time that not only did not foster, but that actively undermined their full participation. One glaring demonstration of racial discrimination was seen at the 1931 meetings of the BSA, which took place in New Orleans. According to the minutes of the Society, discussion was had on the "unfortunate difficulties encountered in the attendance of the meetings of the Society and of the AAAS by Dr. Turner, one of our members, because of racial relations" (1931, Minutes of Council, p. 78). The secretary was "instructed to convey personally to Dr. Turner the regrets of the Council that this unfortunate situation has arisen" (1931, Minutes of Council, p. 78). While the specifics of the situation remain unclear, it appears that Dr. Turner was barred from entering the St. Charles Hotel, the site of the annual meetings. However sincere the council members were in expressing their regrets, they did not hesitate to "thank the citizens of new Orleans for the welcome extended to the society" (1931, BSA Minutes, p. 72).

Still more problems presented themselves to the society in the aftermath of the Great Depression, which led to "exceedingly difficult financial conditions" for the Society (1932, BSA Minutes, p. 83). It weathered that financial crisis along with the collapse of the Genetics and Mycological Sections in the 1930s (they became victims of their own success with members moving to specialized societies) and continued to revitalize itself by the creation of new sections like the Paleobotanical Section in 1936 (it proved to be one of the liveliest sections and a mainstay of the society). Legislation on behalf of nature preservation was actively supported as in the case of the creation of the National Parks System, and national institutions devoted to botanical study, such as the National Botanic Garden, were also similarly supported throughout the 1930s. Increasingly, the BSA introduced permanent institutional structures for the teaching of botany and the never-ending nomenclatorial debates, policies, and other matters like the location of type specimens, which were mediated by the Committee on Nomenclature.

Other pressing matters in the decade of the 1930s included increasing problems with the editing and publication of the journal, with the recommendation being made in 1935 "that the Botanical Society of America as soon as possible assume the responsibility for the management and publication as well as the editorial work of the *American Journal of Botany*" (1935, BSA Minutes). Thus the agreement between the BSA and the Brooklyn Botanic Garden was officially terminated in 1935. As well, working out the relations between the newly formed American Society of Plant Taxonomists (founded in 1935) took a great deal of negotiation so as to avoid competition and to enhance the joint interests of both societies. In only 2 years, the first joint meeting between the two societies took place.

Other major developments were the formal incorporation of the society under the laws of the State of Connecticut as of 9 May 1939, which led to changes in a number of procedures

such as the elections of officers in the society and the move to create a permanent historical record of the society.

Even though they weren't initially involved, the outbreak of the war in Europe shook the membership of the BSA as they resigned themselves to the fact that the International Botanical Congress scheduled for Stockholm was to be indefinitely postponed. More immediately too, the BSA immediately felt the effects of the war as international membership declined precipitously in 1939. The estimated net loss of AJB subscriptions due to the European war was estimated as 25 in Germany, 35 in Russia, with an estimated 30 or so members in locations like China. The total loss due to the war was estimated at about 80 subscriptions (1939, BSA Minutes, p. 9). Perhaps because of the realization of an increasing international presence and because the European theater was engaged in war, the BSA in 1940 began discussions of "possible means of cooperation between botanists of North, Central, and South America" (1940, BSA Minutes, p. 5), and for the first time, exchange rates with foreign countries were discussed and left to the discretion of the Treasurer. But almost as if the BSA knew that it too would be shortly dragged into the war, little activity was noted in the early 1940s, the sole major policy initiative launched being the designation of a new class of member, that of the husband and wife.

Without surprise, no minutes were recorded for 1942–1943 as American botanists were indeed brought into the world war. Not until February 1943 did American botanists meet in what was an "emergency meeting" convened by President M. L. Fernald at Harvard. With only 19 members present, the society voted on the members of the Committee on Nomenclature, the Committee on Botanical Teaching, and a proposal for the Emergency War Committee was presented and accepted. In January 1944, a business meeting was called to order in New York City at the New York Botanical Garden where much of the discussion centered on wartime measures like assigning to the War Emergency Committee the task of recording the wartime activities of botanists. Formal meetings of the society were deemed difficult especially given that the AAAS meetings were cancelled at the request of the Office of Defense Transportation (ODT). Gasoline rationing was in effect and non-essential travel was not encouraged during wartime. Still, botanists wanted some kind of forum for showcasing their research, and regional meetings were planned that would not conflict with the instructions from the ODT.

THE PLACE OF BOTANY IN A UNIFIED SCIENCE OF BIOLOGY

The end of war brought with it a number of alterations in the fabric of American science. Not only had it benefited from the influx of émigrés fleeing war-torn Europe generally, and the Nazi regime in particular, but it had also demonstrated its utility to serve national interests. Resources that had been poured into American science and technology during the wartime years were now redirected to peacetime efforts and in many situations not diminished appreciably. The postwar period thus proved a critical time for American science as even more societies, institutes, and finally funding agencies like the National Science Foundation were established (Appel, 2000).

For biologists, the critical event was the formation of the American Institute of Biological Sciences (AIBS), which would serve as the first "umbrella" organization to unify the

increasingly heterogeneous biological societies; efforts to create a coherent organization had failed until that time (Appel, 1986). At the same time, societies such as the Society for the Study of Evolution, the first international society devoted expressly to the promotion of evolutionary research in the wake of the "new synthesis" of evolution, were founded on American soil. The BSA rapidly lent its support and buttressed itself in the process through its affiliations to even more societies. The executive report of 1946 outlined plans for the formation of an "effective united organization of biologists" (1946, BSA Minutes, p. 55), and members voted unanimously "that the members of the Executive Committee and the Society's representative to the National Research Council constitute a special committee to keep in touch with and represent the Society in the movement afoot to form an effective organization of biologists. It was voted that a committee be appointed by the President to establish close relations and cooperate with the Botanical Section of the International Union of Biological Sciences, the next International Botanical Congress, the UNESCO, and in the rehabilitation of war-damaged libraries" (1946 BSA Minutes, p. 99).

A vote of 1947 on whether or not the society should join the proposed AIBS as a member organization resulted in an overwhelmingly positive recommendation. Some 539 members voted in favor, while only 58 voted against.

As early as 1946 too, the BSA began to see itself as the primary organ of research in "plant science" with the more inclusive rubric gaining popularity in use among members. A new committee titled the Committee for the Cooperation of Plant Science Societies was formed. With the numbers of plant scientists increasing and occupying even more diverse positions (the war effort had fueled the growth of fertilizer and herbicide development along with supporting the pharmaceutical industry), the need was increasingly felt for some sort of "clearing house, placement service, or employment bureau" for American plant scientists. At discussions, the need for a news bulletin, either as part of a journal or as a separate publication was brought up repeatedly in the late 1940s.

As the BSA's activities began to be more and more preoccupied with its relations to larger biological societies like the AIBS, botanists also began to recognize that their self-identification as "biologists" was a double-edged sword. On the institutional front, this was starting to threaten the well-being of something called "botany," as botany departments were being consolidated with zoology units in what were called "biology" departments. As early as 1949, the potential threat to botany began to concern members of the BSA, most of whom retained a primary commitment to "botany." As they noted in their minutes "in view of the growing tendency of colleges and universities to eliminate departments of botany per se or to incorporate them in biology departments, J. Fischer Standfield proposed to the Society that it appoint a committee to study this problem." (1949, BSA Minutes, p. 175). This proposal was unanimously approved. The matter of preserving the existence and integrity of something recognizable as "botany," while at the same time taking the study of plants in all its diversity into the booming biological sciences would prove to be one of the critical problems of the society during its next 50 years.

One thing was clear, if botany were to have a chance at surviving, it would have to provide a united front including the growing numbers of plant scientists. Thus, in 1952 it was

proposed at the annual meetings "that the Botanical Society of America appoint a committee to promote the professional unity among all plant scientists, and to study the problem of an all inclusive plant science society." It was further suggested that "botanists, individually and collectively, encourage the widespread use of botany and plant sciences as synonyms in all publications, in teaching and in all other communication media available" (1952, BSA Minutes, p. 69).

It was no surprise, therefore, that when the society finally approved the creation of a leaflet or newsletter in 1954, which it had been discussing for two decades, the title was chosen as *Plant Science Bulletin*, and it remains so today. The goal was to integrate all the plant sciences. To that end, the editorial board had members of the teaching committee on it. The first newsletter appeared in 1955 under the editorship of Harry J. Fuller.

As the BSA approached its 50th anniversary, however, the society began to reflect on its origins. The actual founding date being subject to definition and debate, the Council decided that the 50th anniversary would be celebrated officially in 1956, the date that saw the merger and union of three societies. In 1955 the Report of the 50th Anniversary Committee suggested the publication of a Golden Jubilee volume that would be comprised of contributions "insofar as possible, stressing the unity of plant science and the contributions of botany to human welfare" (1955, BSA Council Minutes). Edited by William Campbell Steere, the volume titled "Fifty Years of Botany. Golden Jubilee Volume of the Botanical Society of America" appeared in 1958 (Steere, 1958). It included contributions from no less than 40 botanists who reviewed their respective areas of research. It also included a portrait gallery of botanists who were awarded a special "Certificate of Merit."

A MIDDLE-AGED SOCIETY: THE BSA AFTER 50

The society membership in the jubilee year of 1956 stood at 1868. Though it increased in the next couple of decades by about 1000 members, thanks to the intensification of efforts at recruitment, it was to stabilize at about 2500 members. Though it was a workable number, membership continued to concern the leadership of the BSA who repeatedly mediated to maintain representational balance and to maintain a unified front.

Some sections complained more than others. In 1956, William Stern, Chair of the Committee on Membership reported that taxonomists were losing interest in the BSA because of the "alleged impossibility of publishing taxonomic papers in the *American Journal of Botany*" (1956, BSA Council Minutes, p. 3). Dr. Reeder, then Chair of the Systematics Section "corroborated this feeling among taxonomists" (1956, BSA Council Minutes, p. 3). The same concern was echoed by Oswald Tippe, Chair of the Committee on the Relation of the Botanical Society to other Plant Science Societies. H. J. Fuller read excerpts from letters the *Plant Science Bulletin (PSB)* had received from taxonomists who made similar complaints. Not to be outdone over their feelings of exclusion, some physiologists also expressed "dissatisfaction with the Journal and deplored the number of morphologists elected to office" (1956, BSA Council Minutes, p. 3).

While preserving harmony in and between the sections was of some concern, the BSA also took advantage of funding opportunities from the newly created National Science Foundation, especially with respect to promoting and teaching

botanical science. Summer institutes, like those run by Harlan P. Banks for College Teachers of Botany at locations such as Cornell proved to be effective means of promoting the study of botany through education at the college level. Also of relevance to teaching, the BSA began to actively compile a list of films useful for botanical instruction and in 1959, the first of what would be a series of *Careers in Botany* booklets aimed at encouraging young people to enter the field made its appearance. Over 5000 copies were distributed to individuals and institutions.

Other high points in the BSA in the decade of the 1950s included the IX International Botanical Congress, sponsored by Canadian botanists at Montreal, Quebec in 1959, which drew on the participation of American botanists who voted not to meet with the AIBS that year, and the creation of an especially active new section, the Developmental section which underwent "exceptional growth" in membership (1962, BSA Minutes). In 1958 the BSA set into motion the administration of the BSA merit awards in 1958. On Ralph Wetmore's recommendations, a Merit Award Committee of three was established with rotating membership comprised of past recipients.

Financial problems appeared on the horizon in 1958, however, as Lawrence Crockett, the Business Manager, "presented a dismal report with respect to the financial condition of the Journal." With income static, and production costs rising, there seemed no real solution to long-range financial problems other than by raising membership dues and continuing to recruit new members. The following year, an aggressive recruitment campaign involving 1000 applications forms with an accompanying letter led to a "substantial increase in new members" (1959, BSA Council Minutes, p. 3). But while recruiting new members was critical, society members recognized that maintaining a united front was equally important. In 1959, Ralph Wetmore delivered an "excellent" report to the BSA, which was approved by the Council. That report was the first of many exploring the possibility of creating a federation of plant societies within the institutional structure of the AIBS. The "Wetmore Committee" had originally been formed in response to the financial crisis, but as it became apparent that the deeper concern was coordination between the disparate set of plant science societies, it evolved into the committee whose charge was to explore the possibility of creating a special Central Committee for Plant Sciences within AIBS that would serve to unify the plant sciences.

By 1962 however, the AIBS was having problems of its own, thanks in some part to the success of the biological sciences and because member societies were increasingly feeling isolated within the larger group and were mindful of the dues that they paid for membership. Following the organizational structure of the AAAS, the AIBS planned to broaden its base by permitting membership on individual basis rather than centered on participatory societies. Given this reorganization at AIBS, the proposed Federation of Plant Science Societies seemed questionable. Plans for such a central committee were therefore put on hold while the AIBS underwent its reorganization.

In 1963 a new History Section was formed, and the position of "program director" to be held for 3 years was filled and a new membership category, that of "sustaining member" was introduced in the hope of luring in commercial companies. Five companies (Triarch, Geigy, and Agricultural Chemicals among

them) joined the next year. The Council additionally favored the establishment of a National Tropical Garden in Hawaii and sent a resolution urging the passage of the new Bill, S-1991, then before Congress. This was passed the following year by both houses of the Congress and signed by the President.

While botanists felt that they had to increasingly justify their existence in the context of newer areas such as biochemistry and molecular biology increasingly dominating the biological sciences, they also took advantage and benefited from the increasing attention given to the sciences in general, and biology in particular in the wake of the launching of the Soviet satellite Sputnik in 1957. In fear that the Soviets were excelling at basic science and technology, American leaders channeled more and more resources into the teaching and development of basic and applied sciences in the late 1950s and early 1960s. Science education boomed in the early 1960s, with the newer biological sciences featured prominently by groups like the Biological Sciences and Curriculum Study. Mindful of their status, the Education Committee of the BSA began to monitor high school biology textbooks for botanical content. In 1965, the suggestion was made to create a *Guide to Graduate Study in Botany*, which appeared as a 48-page booklet the following year, largely through the efforts of Adolph Hecht. As well, the BSA authorized another revision to the successful *Careers in Botany* pamphlet.

The Historical Section now officially founded in 1963, members of the BSA considered depositing their growing archive in a safe location for future historians. In 1965, the agreement was made with the University of Texas to store the archives of the BSA, making some of the material more easily accessible for consultation by members by having it micro-filmed.

By the end of the decade, the society appeared to be in good financial shape with the journal showing "very excellent financial health" (1967, BSA Minutes), mostly because of the use of publication page charges, and members looked forward to the IBC meetings scheduled in Seattle, Washington, for 1969, to which they had contributed 10 000 dollars. While the society approved the emergence of yet another section, the Phytochemical Section, problems persisted in the Physiological Section of the BSA. In 1968, at President Arthur Galston's urging, Graeme Berlyn agreed to chair the Physiological Section, which had become defunct during the preceding year. The hope was that he would activate the section. A symposium was promptly organized in the hope that the Section "will again be on its feet" (1968, BSA Council Minutes, p. 5). Some problems were also raised with respect to the *PSB*. The report of the editor, William Stern, pointed to "the continuing lack of cooperation on the part of the membership of the Society with respect to the provision of articles and notes for publication" (1968, BSA Minutes). Whatever problems encountered by the *PSB*, they paled in comparison with the even bigger problem of membership in the BSA as a whole. Between the years 1967 and 1968, membership increased by only 12 members. By 1972, it was apparent that membership had been dropping for the past 3 years. This was due "mostly because of the attrition of former members, particularly students, not in decrease in the addition of new members (1972, BSA Minutes of Council, pp. 1, 2). One possibility explored was the hiring of a "PR person" to promote botany and good relations with other societies, but that was dropped because it was thought too difficult to find a person to handle that particular job.

An even bigger indicator of the status of botany was the fact that in 1970 AAAS dissolved Section G, on botany, and Section F on zoology to create a section on life or biological sciences, called Section FG, Biological Sciences. With that reorganization, the original home of American botany, had been subsumed by the biological sciences.

As the women's movement was taking effect, some members of the society began to question the dominance of the society by men. During the elections of 1973, several of the ballots had anonymous written comments "questioning the absence of any women candidates in this year." Writing to Barbara Palser, Kenton Chambers noted, "May I make the personal suggestion to next years Election Committee that they make a more conscientious effort than we did this year to include qualified women nominees on the ballot for the Society's election" (Letter from Kenton Chambers to Barbara Palser, 2 June 1973; 1973, BSA Minutes). In 1975, then President Peter Raven read a statement that was circulated after the Congress in Leningrad and signed by 21 persons deploring "the fact that so few women were involved in the organization of the Congress or served in the administration of scientific meetings" (1975, BSA Minutes of Council, p. 11).

Other political involvements were gender-neutral, but environment friendly. The passage of the Endangered Species Act of 1973 placed new demands to the society, and the Conservation Committee had to determine formally if "legislative activity" was allowed for such organizations under the Internal Revenue Code. The BSA was consulted from the start to assist in providing lists of endangered plant species.

THE BSA ENTERS THE GLOBAL THEATER

By far the major development of the BSA in the middle years of the 1970s was its entry into the global theater of botanical activity. Members of the BSA attended the Botanical Congress in Leningrad in 1974 through the efforts of the Charter Flight Committee and orchestrated a number of important exchange programs at the peak of the Cold War. Even more exciting, the BSA took advantage of new formal relations with the People's Republic of China to launch one of the first exchange programs with botanists in the PRC. Beginning in 1975, the Committee on Scholarly Communication with the People's Republic of China solicited ideas and proposals from interested organizations. President Peter Raven said he would appoint a committee to develop a "significant and coordinated response from the Society" (1975, Minutes of the Society, p. 6). It took a couple of years of organizational efforts led by him to set in motion the exchange program, but in 1978, delegates selected by a special committee went to China from 18 May until 20 June. The exchange was deemed so successful that it was hoped to institute a program of such exchanges. As stated in the minutes, "one of the eventual objectives of the program is to exchange scientific publications, seeds and post-doctorals" (1978, BSA Minutes, p. 11). In 1981, Peter Raven himself went to China to engage discussion in the Flora of China project. Continuing into the 1980s, the BSA's relations with the PRC continued to showcase the international nature of the society, as well as leading to a number of critical publications.

Other events in the late 1970s echoed developments like the Endangered Species Act. A new Ecological Section was suggested, which "should be useful in scheduling ecological

symposia and sessions at meetings, attracting more ecological papers to the Journal and perhaps bringing more ecologists into the Society" (1976, BSA Minutes, p. 1976). It was founded formally in 1977 with a total membership of 334 people. For similar reasons, discussions to found an Economic Botany section followed, and it was agreed that the Society for Economic Botany would be approached formally. Members also introduced the possibility of founding another Genetics section, long disbanded.

Also in 1977 some of the most active members of the society in the Paleobotanical Section entered into discussions with the Department of the Interior and the Society of Vertebrate Paleontologists with regard to sorting out the status of fossil plant remains in the Antiquities Act. The minutes of 1977 justified it thus: "because of increased leasing of the Bureau of Land Management land for coal mining in the west, some coordinated effort seems prudent to ensure the collection and preservation of the fossil plant record before it is destroyed" (1977, BSA Minutes of Council, p. 8). Records show that the Paleobotanical section was especially active at this time. Not only did the section help guide policies for the Department of the Interior for protection of plant fossils, but a new group called The International Organization of Angiosperm Paleobotanists (with their own newsletter) was also founded. The other active section at this time was the new Ecological Section, which worked with the Conservation Committee. As they noted, "realistic conservation policies depend on realistic biological appraisals of the specific organisms and habitats concerned" (1978, BSA Minutes of Council, p. 90).

The attempts to lure in new members made members of the BSA think more generally in terms of the age distribution of the society. It targeted college and university seniors and tried to lure juniors by the awarding of the Young Botanist Recognition Award. Administered by John Romberger as member of the Membership Committee, the targeting of undergraduate students as members had the potential for enormous payback if those members continued to involve themselves in the society. The first group of awardees was chosen in spring 1979. Even an attempt to create a new "logo" to advertise the society was made in 1978, but it took another decade to design the new logo; see the 12 proposed designs in "A Logo for the Botanical Society" in *Plant Science Bulletin* (December 1978, p. 38).

Despite the efforts to recruit new members, the membership dropped a staggering 39% in 1978 and that increased to a 45% drop by 1979. Nevertheless, attendance at the annual meetings did not go down and the "Botany 80" meeting in Vancouver, British Columbia, was "the largest botanical meeting held on the continent in recent years" (Charles Heimsch, 1980, BSA Minutes, p. 3).

The decade of the 1970s, which continued to mirror some of the social and political upheaval of the 1960s, also brought the BSA more intimately into the fold of wider political culture. As science itself became increasingly politicized in America, so too did the BSA follow suit. In the late 1970s, the society took positions on the teaching of evolution in American high schools, was concerned with issues like defense spending, pollution, as well of course as keeping abreast of environmental and conservation issues generally. One letter from Randolph Hanke, pointed out that industrial sciences were having more of an impact on the direction of plant science research than some federal funding agencies like the National Science Foundation (NSF). As an example, he noted that Monsanto

had given more money to finance research in the life sciences than had the NSF. While the BSA demonstrated concern with these wider issues, it also approached the matter of lobbying with some caution. In 1982, a prolonged and lively discussion was led by David Dilcher, on whether or not the society could lobby to support a piece of legislation. Its IRS tax status stated explicitly that "no substantial part" of an organization's activities may consist of "carrying on propaganda or otherwise attempting to influence legislation." But as BSA members also quickly noted, the language was vague and never fully defined, and most nonprofit organizations of its kind stayed within the 5 to 15% range of their total activities when it came to such political activism. Discussions continued over the years about the extent and nature of the BSA's political involvement, with a consensus emerging that the society should ally itself more with educational rather than political concerns. The fact of the matter was that they were increasingly linked. To that end, the *PSB* increasingly served as the vehicle to inform its readership of such matters that were considered "educational" and informative rather than activist in nature.

CRISIS OF IDENTITY IN THE SOCIETY

As the Society moved into the 1980s, it became apparent that something drastic had to be done to revitalize it. It clearly was failing to attract sufficient numbers of new members. The field of botany in general was not helped by the continued dissolution of botany departments around the country. Robert Lloyd brought the matter to the attention of the Committee on Education in 1983. Samuel N. Postlethwait, a member of the committee noted "... that he wanted students to read *AJB* and be exposed to experimental design." He urged that students be properly informed that botany continued to be exciting and "on the cutting edge." He urged that the BSA should "overhaul the stodgy image of the *AJB* by publishing more exciting and experimental research." Too many of the papers, he noted, were "purely descriptive" (1983, BSA Minutes of Council, p. 7). Suggestions the following year from the education committee included inviting "exciting botanists" to speak to college students as a recruitment device (1984, BSA Minutes of Council, p. 8) and even that the *AJB* consider publishing special papers by "rising stars" (1985, BSA Minutes of Council). Whether the "stodgy" image was true or not, the BSA leadership knew that the society was facing a pending crisis in its history if it did not somehow recruit new members. In what was an ironic but mature "about face," the BSA originally founded by an elite to distance itself from amateurs, now began to consider drawing on amateur botanists to preserve its existence. More traditional recruitment tools such as information pamphlets and booklets, like the *Guide to Graduate Study* continued to be revised and made available, while the *Careers in Botany* pamphlet was entirely revised in 1986 and distributed widely.

The official "logo" to represent the society was finally produced in 1989 and rapidly made its way to paraphernalia like canvas tote bags and "Hanes beefy-T's" (proceeds from the sales went to the BSA Endowment Fund). The design of the logo printed in green against a cream-colored background included a sequence of six plant groups that represented the diversity of plant life and the diversity of member's interests. The design of the logo was by a Davis, California artist, originally solicited by Judy Jemstedt. The logo underwent 2-3

years of a "trial run," and the BSA council finally voted to adopt it officially in 1991 at the San Antonio meetings, with one change at the request of officers and other members. The daffodil in the right corner panel in the original logo representing angiosperms and located above the word "America" was thought inappropriate. It was subsequently replaced with a columbine, a native plant (see *PSB*, vol. 37, no. 3, 1991, p. 4).

Up to 1989, the minutes and documents of the society were sorted, catalogued, and bound in a series of volumes for historical use by archivists at the University of Texas. After that point, critical documents have remained until recently in the hands of the officers of the society. The transition between 1989 and 1990 might thus serve as a kind of demarcation point for what we might consider the current or living history of the Society, especially since a number of issues remain alive for BSA members. Among these is the naming of the society itself.

In this transitional period, the BSA witnessed one of its most acrimonious debates in its 100 years of history. Concerned with the lack of success at recruitment and because a number of members felt that the society was too conservative or stodgy, the suggestion was made to change the name of the society and journal and to adopt the name of plant biology. The debate overlapped with the long-standing concern over the health of botany departments across the nation as they were consolidated into larger units such as "biology" (Smocovitis, 1992). The debate over the naming and identity of the BSA seared the pages of the *PSB* and can be followed with some precision (see volume 35, issues numbering 1 to 4); it ended with the decision to retain the word botany. Put to a vote, some 536 members, a staggering 93% of the voters, favored the retention of the name of the Botanical Society of America (only 42 members voted to change the name of the society) (Papers of Christopher Haufler, BSA Archives). The occasion of the identity crisis and the debate over naming, galvanized at least one member to additionally reconsider the "a" word in the title, America. Writing from the University of the West Indies, in Bridgetown, Barbados, Louis Chinnery wrote that he wanted to see a name change that had "little to do with the debate between "Botany" and "Plant Science" but everything to do with being more inclusive and recruiting new members. His proposal was to amend the name from the Botanical Society of America to the "Botanical Society of the Americas" and to include abstracts in *AJB* in Spanish. Members of the BSA were tired with the debate over the "b" name change so that few followed up on Chinnery's proposal (see Louis Chinner, "Botanical Society of the Americas?" *PSB*, 1991, vol.37, no. 2, p. 6).

The decade of the 1990s also witnessed major structural and administrative changes in the society as it recognized that it was concluding not only the first hundred years of its existence but also entering the new millennium. In 1992 the BSA began to organize itself for the next century and millennium through its "Botany for the New Millennium" project to identify "research and educational goals, priorities, and opportunities" as the society approached the 21st century (*PSB*, 1992, vol. 38, no. 3, p. 10). The report was published as "Botany for the Next Millennium" in 1995. On the more local front, a permanent office with a full-time business office manager was voted on and approved in 1991. It was established on 1 December 1992 in the Department of Plant Biology at Ohio State University (this was one of "four excellent offers" (*PSB*, 1992, vol. 38, no. 3, p. 10) with Kim Hiser as the first business office manager. Yet another change involved a kind of face-lift for

the society in 1992 by the adoption of a new format for the *AJB* that included a new size, a new cover with glossy photographs, and a new organization for the table of contents listed by topic. The decision had come by way of an Ad Hoc Committee chaired by Darlene de Mason, while Nels Lersten was editor. The "bold new design" appeared to please the members (see *PSB*, 1992, vol. 38, no. 2, p. 3).

Yet another major change was a break with the AIBS. From its inception in 1947 as the first "umbrella-like" organization for American biologists, the AIBS had relied heavily on the BSA and other societies that formed its core supporters. The BSA had in turn bolstered the organization at a number of critical points in its history, providing funds and other support when required. Matters pertaining to the relationship between the two organizations came to a head in the 1990s when BSA members grew increasingly unhappy with the growing size of the annual meetings held in conjunction with AIBS, and with the less than perfect organization of those meetings run out of the AIBS office and with some expense. Following some discussion, the BSA "broke" from the AIBS in 2000 and has since held its annual meetings in less expensive locales with a smaller number of participants and concurrent sessions.

Although the break with AIBS and other developments changed things permanently for the BSA, no other development was to have a greater impact on the society, however, than its adoption of electronic communication technology and its entry into the World Wide Web. Orchestrated by Scott Russell, the BSA moved quickly to adopt this tool as a way of not only communicating with each other, but also especially as a way of promoting the study of botany and the society effectively—and inexpensively—on an international scale. Proposals were submitted in 1998 for the publication of the *American Journal of Botany* in electronic format, and eventually its website and the BSA's home website would prove critical in maintaining the cohesion and unity that the society had so desperately sought to cultivate throughout its history.

As with a number of other scientific societies in the 1990s and early years of the 21st century, more and more time was devoted to discussing policy issues, especially in vital areas like biodiversity loss, climate change, and the teaching of evolution in American high schools. Officers of the BSA in the late 1990s and the early years of the 21st century devoted more effort to such concerns than at any other time in the history of the BSA. As a sign of the increasing role that the BSA was asked to play in policy issues, a number of documents deposited in the archives dealt specifically with media and developing good media relations. Educational outreach programs that connected the society to other groups, some of which had amateur membership or included high school students and young people generally, flourished as the society entered the new millennium. At the same time that a more diverse group of Americans were actively included in the activities of the society, the Society also extended itself to activities the world over, especially and increasingly in Latin America. Like the plants that they studied, botanists did not always and still do not, adhere strictly to human-created national or political boundaries. Ironically enough, what began as a society of elite northeastern American (mostly male) botanists gave way to an international society that only loosely adheres to conventional definitions of "botany" and "America" and that now depends on amateurs, students, and ordinary citizens for its audience. Closing this short history of an old scientific society, this historian concludes that the history of the

BSA is more than just the history of a group of people with shared commitments to the scientific study of plants whose membership happens to reside within a geopolitical category, namely "America." The history of the BSA is simultaneously, the history of biology, the history of science, and the history of a nation making its way in the period of globalization. If it is to survive and flourish in the new millennium, the BSA will do so only if it can continue to successfully envision itself as a vital part of some larger whole. The challenge will be to preserve enough of its integrity and original goals of the scientific study of plants, while at the same time demonstrating flexibility and adaptability to an ever-changing world.

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