

## **Chapter 5**

### **Post-Sputnik Boom and Decline, 1963-1985**

It may seem odd that a period of rapid growth by a plant science society should be identified with a small Soviet satellite propelled into space orbit in October 1957. We may overestimate its importance because, following World War II, there was already general appreciation of need for continued support of basic science. However, the orbiting of Sputnik I and its several successors over the next few years, culminating in the orbiting of a manned space vehicle by the Soviets in April 1961, created public anxiety about the adequacy of our nation's science. Danger was perceived "in letting those communists get ahead of us," and there was a demand for intensified efforts in research and development. By the early 1960s a sharp escalation had begun in federal funding for science programs—supported by a rising economy—and in 1969 the nation had the satisfaction of passing the Soviets by placing men on the moon. It had also established a pattern of heavy funding for scientific research.

Although the space program was the chief beneficiary of the drive to catch up and pass, there was increased concern to upgrade science at all levels, beginning in grade school (the "new math," for example). Life sciences benefited as well, especially medicine, which received the bulk of research funding, with agriculture a poor second and fundamental biology a poorer third. Advances in applied research, however, draw heavily on basic science, and this is certainly true of the life sciences where so many intricate processes remain to be explained. Biological questions were increasingly funded, often as basic research underlying applied problems such as food production.

Plant physiological research obtained considerable support in this way for basic studies related to crop growth and reproduction, fertilizer requirements, photosynthesis, plant survival of heat, cold, and drought stress, storage of seeds and fruits, control of plant growth with applied chemicals, response to pollutants, and so forth. Plant physiologists increased in numbers and importance in the plant science departments of universities. As will be seen in the data to follow, the 1960s and 1970s saw a surge of growth in the science and the Society. In the 1960s there was a great demand for Ph.D.s in plant physiology, and the graduate student population rose in response. By the early 1970s, however, the backlog was filled and getting a job became quite competitive, and remains so. Nonetheless, the

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funding of plant physiological research remained substantial and so did the graduate student population (working with plants can be engaging, and students who venture into plant research tend to be trapped by their interest in the problems).

The last five years of this period (1980 to 1985) are puzzling, however. Society membership and journal subscriptions declined, and the publication rate leveled out. At the same time, research funding increased (although not much in constant dollars), and the Society's income and assets reached peak values. Searching through the domestic scene for parallels, the Society seemed to have shared somewhat the industrial malaise of the nation, while its budget fattened like the stock market. The science, however, remained sound and steadily advanced in the increasingly sophisticated hands of the latest generation of plant physiologists.

(The data for 1986-1988 show some recovery in membership, subscriptions, and papers published, indicating that the early 1980s may only be a pause in continued progress. Early on I decided not to extend this history beyond 1985. Recent events, even though of importance, lack sufficient perspective for evaluation or interpretation. However, an epilogue has been added at least to list recent developments.)

Hence, this most recent period in the history of the Society again reflects, in part, the major events and concerns of the nation, but it remains difficult to see in the science itself any significant response to perturbations imposed by society at large. Sometimes an expansion of research can be seen in areas which receive "problem" funding—soil salinity or atmospheric pollution, for example—but such support is not always sustained. Plant physiologists can be drawn into such issues as the teratogenic properties of 2,4,5-trichlorophenoxyacetic acid and associated dioxins (contained in Agent Orange), and hence contribute to the banning of 2,4,5-T as a brush killer. But the basic physiological question remains unaffected—how do the auxin herbicides act to kill plants selectively? The question will not disappear until answered, for it is validated by our need to understand our world quite aside from the practical concerns of society.

### Officers and the Business Office

Table 16 lists the elected and appointed officers for this period.

In 1966 a major change was made in the office of vice-president, following a proposal made by Harry Beevers (1) who suggested that "changing the office of Vice President to President-Elect would permit some sharing of the President's duties and would allow time for the President to become informed before taking office." The motion was approved, and Article VI-1 of the constitution was changed to read, "The duties shall be those usually performed by such officers, the president-elect acting as vice-president." However, the plan for an apprenticeship year to give the incoming president some understanding of his duties was not as effective as conceived. In practice, the presidents-elect learned nothing more about the

**Table 16**  
**Officers of the American Society of Plant Physiologists, 1963-1986**

Year	President	Vice-President	Secretary	Exec. Secy.-Treas.
1963-64	M. Calvin	S. Aronoff	B. B. Stowe	W. H. Klein
1964-65	S. Aronoff	G. G. Laties	B. B. Stowe	W. H. Klein
1965-66	A. C. Leopold	R. S. Bandurski	R. S. Loomis	W. H. Klein
1966-67	R. S. Bandurski	President-Elect	R. S. Loomis	W. H. Klein
1967-68	A. T. Jagendorf	A. T. Jagendorf	H. W. Siegelman	W. H. Klein
1968-69	L. Bogorad	L. Bogorad	H. W. Siegelman	W. H. Klein
1969-70	J. E. Varner	J. E. Varner	W. S. Hillman	W. H. Klein
1970-71	A. Lang	A. Lang	W. S. Hillman	W. H. Klein
1971-72	H. J. Evans	H. J. Evans	R. E. Cleland	W. H. Klein
1972-73	W. S. Hillman	W. S. Hillman	R. E. Cleland	W. H. Klein
1973-74	J. B. Hanson	R. E. Cleland	M. Stiller	Treasurer*
1974-75	R. E. Cleland	W. R. Briggs	M. Stiller	R. W. F. Hardy
1975-76	W. R. Briggs	J. L. Key	C. C. Black, Jr.	R. W. F. Hardy
1976-77	J. L. Key	I. Zelitch	C. C. Black, Jr.	L. G. Nickell
1977-78	I. Zelitch	C. C. Black, Jr.	L. Beever	L. G. Nickell
1978-79	C. C. Black, Jr.	P. K. Stumpf	L. Beever	L. G. Nickell
1979-80	P. K. Stumpf	P. W. Morgan	L. Beever	L. G. Nickell
1980-81	P. W. Morgan	J. S. Boyer	L. Beever	L. G. Nickell
1981-82	J. S. Boyer	L. Beever	J. Cherry	L. G. Nickell
1982-83	L. Beever	N. E. Tolbert	J. Cherry	L. N. Vanderhoef
1983-84	N. E. Tolbert	J. Cherry	L. Schrader	L. N. Vanderhoef
1984-85	J. Cherry	C. J. Amtzen	L. Schrader	L. N. Vanderhoef
1985-86	C. J. Amtzen	E. E. Conn	E. Gantt	L. N. Vanderhoef

\* The office and duties of executive secretary-treasurer were transferred to an appointed treasurer, as indicated, and an employed business executive as follows:  
H. Baker, January 1974-June 1977 (P. Richter, acting business executive, July-December 1977); G. R. Noggle, January 1978-July 1982; R. M. Chasson (position now executive director) August 1982-December 1985.

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presidency than had the vice-presidents, for they had nothing to do but attend the executive committee meetings and wait for their turn in the chair. They were probably more observant, however, knowing that the responsibility soon was coming their way.

A profound change in the business affairs of the Society occurred in 1973, when the office of executive secretary-treasurer was replaced by a professional business office, headed by a salaried business executive. Supervision of the financial transactions was given to an appointed treasurer, who was made an *ex officio* member of the board of trustees. These changes arose from the increased office workload that accompanied the growth of the Society.

In the decade following 1962, the income and resources of the Society rose sixfold, journal publication threefold, and members and subscribers 60 to 70 percent. This threw a great load on executive secretary-treasurer William Klein, who was fully employed at the Smithsonian Radiation Biology Laboratory. Without the devoted help of his wife, Winifred, he would never have been able to handle the ever-growing tasks of collecting and recording dues and subscriptions, preparing the annual directory, managing the business aspects of printing, paying bills, making investments, keeping financial records, writing reports and newsletters, and serving as the central contact for complaints and negotiations. All of this (and more) was initially done from the basement of the Kleins' home in Bethesda, MD. The Society recognized Winifred Klein's contributions by employing her part-time as office secretary and gradually raising her position to that of office manager with part-time secretarial help. (The salaries and social security payments for the executive secretary-treasurer's office increased from \$1800 in FY 1963-1964 to \$20,455 in FY 1972; honorarium for the position increased from \$500 to \$2000.) Recognition of the growing load on the business office was given in the report of the board of trustees at its May 1967 meeting (2).

Our Society is now in the above \$100,000 per year operational category. The volume of work that goes into such an enterprise is too much to be expected at essentially volunteer service rates. This fact was recognized by the Financial Status Committee in 1964 and moves have been underway ever since to develop the Executive-Secretary-Treasurer's and Editor's offices into full time positions.

The job of Executive-Secretary-Treasurer is now occupying part of the time of four individuals—Bill Klein, Winifred Klein, and two secretary-file clerks—at a cost of about \$4650 in salaries and honoraria...it might be mentioned that the Horticultural Society's Executive Director's office presently has a salary budget of \$22,155. Furthermore our Society's files now occupy a good sized office and we can no longer expect free storage of such a volume of material. As we approach the 5,000 member-subscriber mark, we, too, must move in the direction of a full-time, paid Executive-Secretary-Treasurer with an office and a small staff.

Klein had prepared...a proposal for supplementary funds to rent and

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equip an office in Bethesda, Maryland. This would involve only a small additional outlay on the 1966-67 budget —mainly for rent and a start on office equipment. [A supplement to the budget was approved] that would allow for immediate rental of an office and removal of the Society's files from the Klein home to it. Approval was also given for a 1968 budget item sufficient to equip and staff it...Expansion of this office will permit some of the usual duties of the Secretary's office to be transferred to Bethesda.

An office was rented at 7720 Wisconsin Avenue, Bethesda, MD, for \$1500 per year. Klein described the office in his 1968 annual report (3):

The establishment of this office as a professionally staffed, really business-like office has justified itself through this year's operation. We do need, however, more clerical time, more filing cabinet and storage shelf space, and even a couple of extra chairs to sit on...It is quite possible that even if the salary increase proposal is approved, we may not be able to find the kind and number of staff that qualify for the pay proposed. At the present time we employ a 3/4-time secretary...We hope to persuade [her] (whose pay rating is about like that of a GS-5 stenographer) to work full time. Our subscription clerk, who has been employed for a number of years, and who has faithfully performed under most trying work conditions in the past, is an hourly employee, working about 12 hours per week. The Trustees have recommended replacing this clerk position (no typing) with a half-time clerk typist. However, our present employee has not indicated that she wishes to resign. The office manager [Winifred Klein, half-time], who is qualified at a much higher level than the wages indicate, performs supervisory duties, accounting, work scheduling, the preparation of reports, all the routine billing services for page-charges and reprints, in addition to handling the correspondence, contributes at least 3/4-time services. We recommend a new salary level that is still somewhat less than that of a full-time stenographer. We have suggested the purchase of a postage meter (Postitalia) at a cost of \$100 to \$150...At the present time, when mailings are in process, the value of postage stamps and government stamped envelopes exceeds by several times this purchase price, and burglary of the office would be a severe financial loss.

A detailed, four-page description of office operations was given by Klein in his 1969 annual report (4). It makes very clear that there was no leisure time in the office.

The new office helped make the job of executive secretary-treasurer bearable, but over the next few years the Society's business affairs simply outgrew the Kleins' available time, and they finally asked for relief. President Harold J. Evans appointed an *ad hoc* committee consisting of Martin Gibbs (chairman), Aubrey Naylor, and Klein to report on reorganization of the business office. A special executive committee meeting was held April 15, 1972, to deliberate the committee's report (5). The report pointed out that all other societies of equivalent size employed a full-time executive officer. ASPP business affairs also required such a person to "handle the operations currently handled by Klein's office, make

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the necessary arrangements for the annual meeting, handle printing of the abstract supplement, schedule meetings and provide agendas for Executive Committee and Trustees meetings, and (an important job) handle all details of manuscripts for *Plant Physiology* subsequent to their acceptance by the Editor." This description generated discussion of the type of person to be hired—a business-type with no scientific background or an "empire building" scientific type. "It was hoped that someone between these two extremes could be obtained." Moving the office to a location such as the Federation of American Societies for Experimental Biology (FASEB), with headquarters on spacious grounds in Bethesda, was recommended; "Gibbs presented convincing arguments that [ASPP] should stay in Washington." Specifics were not given, but it was generally considered desirable to be near the printer in Baltimore, and to be located, as were many other societies, for ready representation of problems and concerns to congressional committees and federal agencies. Lastly, the constitution would have to be extensively revised to accommodate the reorganized business office, for which an increased budget would be required.

The needed constitutional amendments were prepared by the constitution and bylaws committee, chaired by Jerome A. Schiff, and these were approved by the membership in the spring of 1973. Negotiations with FASEB were successful, and in March 1973 the office was moved into three rooms on the third floor of Beaumont House on the FASEB grounds, 9650 Rockville Pike, Bethesda. For the reorganization, Klein and the board of trustees projected the need for a full-time business manager (or executive), secretary, subscription clerk, membership clerk, and a half-time bookkeeper. With fringe benefits (group life and medical policies purchased through FASEB), the annual office budget would about double to \$65,000, exclusive of rent, which had also doubled. Final action was taken at the executive committee meeting in Calgary, June 17, 1973 (6):

The report from the Search Committee for a Business Manager was presented by Klein. There ensued an extensive discussion of the qualities which are desired in the Business Manager. It was obvious that we need someone who has the necessary business ability to be able to handle the business and financial affairs of the Society with ease, but it would also be desirable to have someone with sufficient scientific and even plant physiological background so that they could handle the non-editorial chores of *Plant Physiology* (such as checking the galleys) and could act as an effective spokesman for the ASPP to other societies and government agencies. In the end, it was decided that the first criterion was the more important. A motion was approved which stated that the ASPP should hire a Business Executive who fits the job description as written by the search committee and who will carry out the duties of his office as outlined by the recently passed constitutional amendments. A committee was appointed consisting of Hanson (chairman), Gibbs, Klein, and Naylor to interview candidates and to hire a person as soon as possible. The Trustees were instructed to provide the Executive Committee with a list of possible candidates for the office of Treasurer. Until such time as

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the Treasurer is appointed the Chairman of the Board of Trustees will act as Treasurer pro tem. The Executive Committee also reappointed W. H. Klein as Executive Secretary-Treasurer until the position of Business Executive is filled...

The desire for an executive who "could act as an effective spokesman for the ASPP to other Societies and to government agencies" arose from a deeper concern than the words indicate. Funding of basic research in plant sciences at this time was probably no more than two or three percent of the total federal expenditure for life sciences, and this was believed due to failure of Congress and the U.S. Department of Agriculture (USDA) to appreciate the value of plant science research to mankind. Although everyone agreed that the most important need in the position was good management, many hoped also for persuasive representation of the Society's interests and needs "on the Hill." Good management comes first, but, please, can't we find a spokesman scientist who is a good manager? The following excerpt from the minutes of the annual business meeting in 1973 in Calgary illustrates the source of concern (6):

Albersheim raised the question as to why the Executive Committee had not taken up the problem of the lack of funding for plant sciences, and proposed possible remedies. In particular he inquired as to why ASPP has not approached USDA with representations that it should increase its level of outside support. Klein pointed out that such a representation had been made a few years ago by Thimann, but that budgetary problems within USDA made it unlikely that they could do much more to support university research. This was affirmed by H. R. Carns who pointed out the present dire straits of the USDA-ARS budget. Bandurski described the efforts of his informal plant society group to get NSF funding so that a study could be made to formulate goals for food and fiber production.

Not everyone agreed on the need for a business executive who could double as an effective spokesman and lobbyist for plant physiology, and this included members of the search committee that William Hillman appointed. Excerpts from Klein's file of letters from the committee follow (7):

*Gibbs:* I shall take an extreme position opting for a Ph.D. or its equivalent in plant physiology experience with a lesser importance placed on his financial background. While the position as defined...is primarily business oriented, nonetheless, I envisage this individual with foresight in leading the Society in other pertinent and timely affairs.

*Purves:* First, I am very strongly of the opinion that the Business Executive must be just that: a business-type. I suppose there is some merit in having him know something about plant physiology...but I can't for the life of me see what that merit would be.

*Myers:* Any sensible candidate must be (1) bright enough to learn what his past experience has not already taught him, (2) with complete intellectual honesty in responding to the [officers], (3) willing to dedicate himself to the job, (4) crisp

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in making decisions at his level and getting things done...

*Hanson:* If we hire an executive director we will also have to hire additional help to do the work while his directorship is out doing great things for the society—and putting pressure on the trustees and executive committee to come up with the money...We can't afford such a person.

In the end the Society did not advertise for a spokesman. (As we shall see, however, a few years later the executive committee charged the business executive with specific tasks in representing the Society to the public and Congress.) The announcement placed in *Science* and circulated through the FASEB placement service simply read (8), "The American Society of Plant Physiologists seeks a person to conduct the business affairs of the society and the non-editorial affairs of the journal *Plant Physiology*. Business experience or training is required and some scientific and editorial background is desired." For many members the desire for a scientist, especially a plant physiologist, was stronger than indicated, and it subtly conditioned the hiring.

The detailed job description prepared by the hiring committee for the applicants runs to four pages, covering the constitutional provisions, the working associations with the officers and editor, and the requirements of the business office (8). For the most part the duties and procedures followed by Klein are described, including the non-editorial tasks of arranging for the printing (in consultation with the editor), paying the printing bills, collecting the page and reprint charges, and maintaining back numbers. In addition, the business executive is now to "handle page, galley and table of contents proofing. Make up volume indices." Section 3 of the revised bylaws (9) directed the bonded business executive to conduct the business affairs of the Society, handle all its financial transactions, handle all non-editorial business, arrange annual meetings, and serve as a non-voting member of the executive committee. The business executive was later appointed secretary of the board of trustees, in effect a non-voting member of the board.

The selection committee recommended, and the executive committee hired, Dr. Houston Baker, an animal physiologist with the blood laboratory of the American Red Cross in Bethesda. Baker had become a member of the Society through his interest in chilling effects on membranes. Baker appeared best to satisfy the requirements for good managerial sense, with the added advantage of being a scientist with some knowledge of the Washington scene. Baker did not, however, relieve Gibbs of the proofing and indexing part of the editorial work as planned. Gibbs explains this as due to Baker's time being fully occupied by business office affairs (personal communication). Until such time as the Society could afford to add a production editor to the business office, Gibbs thought it more practical to continue proofing and indexing in his office with part-time help. The business office never relieved the editorial office of this work during this period.

The new business system under Baker became operative in January 1974. R. U. Byerrum of Michigan State University was appointed chairman of the board



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of trustees, R. W. F. Hardy of the DuPont Central Research Laboratories was appointed treasurer. The bylaws (9) directed the treasurer to "serve as a voting member of the Board of Trustees and be responsible to that body and the executive committee. He shall supervise all ongoing financial transactions of the Society and of the Business Executive." The major work of the treasurer seems to have been in connection with the annual board of trustees meeting. At this meeting, reports from the auditor and the investment counsel were heard, and the annual budget, initiated by the business executive, was examined, modified, and approved for presentation to the executive committee.

Budget planning was not a directed responsibility of the trustees. The constitution and bylaws only charged them with supervision of the investments and the treasurer (9). There were no specific directions for budgeting, however, and the executive committee grew too large, met too seldom, and changed too often to do detailed budget planning. By informal consent the trustees filled this void in the business affairs. One formal move which recognized the board of trustees' contribution was that of an approved amendment to the constitution in 1969 that placed the chairman of the board of trustees on the executive committee (10).

With the impetus of reorganization, and perhaps some inputs from Baker, the trustees held four meetings between November 26, 1974, and June 13, 1975. The following comments and resolutions from the report by chairman Byerrum provide a view of their activities (11):

Current holdings in time certificates of deposit should be reinvested, to the extent prudent in terms of current cash flow, in short term government agency securities that yield the highest available returns.

The Board of Trustees should choose an investment counselor who will exercise discretionary powers of management of funds designated by the Board.

The investment counsel shall be the Loomis-Sayles and Company and they shall be given discretionary management for the funds known as the Endowment Funds, the General Fund Reserve, and the General Fund less approximately two months operating expenses.

Accounting for the endowment funds shall be done at the ASPP office, and details necessary for this accounting will be provided periodically by the investment counsel. Two trust accounts shall be established at a bank. One account shall be for funds invested from the General Fund and General Fund Reserve, and a second account shall be for funds invested from the several Endowment Funds.

The Board recommends to the Executive Committee that funds sufficient to increase the principal of several endowment funds, so that the desired income will be 6% of their assets, be transferred from the accumulated income of the General Endowment Fund.

Again, in response to a motion by the Executive Committee to provide fringe benefits, not to exceed 10% of salaries, for the Business Executive and his staff, the Board examined several alternatives and passed the following resolutions: Employee fringe benefits should be purchased from a commercial

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insurer because TIAA is not available to employees of the Society.

The fringe benefits plan for 1975 shall be the one offered by Edwin Hege, a life insurance underwriter, which plan includes group life insurance without [sic] accidental death benefit, disability and weekly indemnity, major medical, hospital for employees only, dependents optional, retirement annuity, with or without life insurance, at the employee's option.

The retirement annuity shall be fully vesting in the current employees effective 1 January 1975, and fully vesting on the anniversary of the plan following one year of employment for all subsequent employees.

The Business Executive shall be secretary of the Board of Trustees, keep the minutes and present them at the next meeting as the first item of business.

In the attempt to get a favorable determination from the IRS to qualify the Society as a charitable organization under Section 501(c)(3), progress has been made to the point of needing (1) to elect to come under the present corporation act of the District of Columbia, which, in contrast to the law under which the Society is organized, allows amendment of the articles of incorporation; (2) to amend the articles of incorporation to bring them in conformity with the requirements specified in Section 501(c)(3) of the 1954 Internal Revenue Code. Draft statements of election and amendment were presented to the Board. The following resolutions then passed: The Board recommends to the President and the Executive Committee that the matter of changing the articles of incorporation...be pursued vigorously.

Editor-in-Chief Gibbs has requested that the Society take responsibility for one-half of his academic salary, in view of competing demands on his time. These funds would allow Dr. Gibbs' university to hire an assistant professor to take responsibility for one-half of his teaching duties. Thus Dr. Gibbs would be able to continue his very substantial contribution to the journal and the Society. We feel this idea has sufficient merit to justify close study...there are several ways to accomplish the editing and production of a professional journal...They have varying costs, and, presumably, varying degrees of effectiveness. We urge the appointment of a committee to examine the way the journal is managed with thought given to the long range implications of any modifications.

Most of these recommendations were carried out as proposed. The details of reincorporation will be discussed later along with changes in the constitution and bylaws. Brandeis University did not approve the Society paying half of Gibbs' salary. An *ad hoc* publications committee investigating the matter reported, "This request was not granted, and leads to the necessity of cutting down on Gibbs' current work load. The committee endorses very strongly Gibbs' suggestion of appointing an additional Editor..." (12). The interesting point is that the trustees, through budgeting activities, became involved in publication affairs.

Baker resigned to become the executive officer of the American Society for Pharmacology and Experimental Therapeutics (also located at FASEB) with a letter written April 1, 1977, to president Joe L. Key:

Please accept my resignation on 1 July 1977 as Business Executive of the American Society of Plant Physiologists.

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I shall leave with a sense of accomplishment. Some highlights include bringing supervised investment to the Society's reserve assets, defying the trend in publishing by reducing production costs for PLANT PHYSIOLOGY in two successive years, establishing the NEWSLETTER as an effective instrument for communication among members, creating a placement service that has been studied and adopted in part by other societies, and acquiring the long-sought 501c3 status with the Internal Revenue Service.

I appreciate having been the ASPP's first professional executive and believe both the members and I have benefited from our association.

Something of Baker's management style can be communicated by citing the description he gives of persuading the printer to reduce rather than increase the production costs (13):

A FISCAL CRISIS AVERTED, or why the journal may stay within budget in 1977.

Late in 1976, it became apparent that the budget for 1977 (adopted in May 1976) had significantly underestimated the costs of producing the journal PLANT PHYSIOLOGY. The number of manuscripts submitted had jumped from 523 to 617. Since 1970 we have published  $0.73 \pm 0.03$  of those submitted...Obviously the number of pages printed in 1977 was due for a large increase. In addition, our printer proposed to increase all production prices by 4%.

The calculation looked like this:  $[617 \text{ ms} \times 0.73 \times 5.11 \text{ pages/ms} \times \$112/\text{page} = \$257,600$ . Adding 4% increase = \$267,900. Budgeted = \$223,500].

A conventional solution would have been to quibble about the printer's proposed 4% increase, and to raise subscription prices...

Being a firm believer that invention is the mother of opportunity (and NOT the other way around), I sought to invent an alternative solution.

The printer's annual report disclosed that they have 130 journal accounts which generated gross revenue of \$13,523,000 at a gross cost of \$12,900,000. The latter included \$2,715,000 in fixed costs...These three data points are shown in the graph below [The graph is for number of accounts (abscissa) vs. dollars, and shows two straight lines: one between the origin and the gross revenues for 130 accounts, the other between fixed costs on the ordinate and the gross costs. The lines intersect at 106 accounts.]

Solution of the two equations shows that the printer's break-even point is at 106 accounts. At 130 accounts, their profit equals the difference between the revenue and expense curves, or \$623,000.

Now comes the argument. If our account is to increase from 361 to 450 manuscripts published (+25%), then our account's profitability to the printer would increase not by 25%, but by the 132% increase in spread between the total revenue and total expense curves.

On this basis I proposed and got a 14% reduction, not a 4% increase. What this means in dollars is that instead of costing a projected \$267,900 in 1977, the journal should cost about \$220,800—a savings of \$47,000 for one year.

Morris Lieberman, Executive Committee Member, asked me to share this with you.

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Baker's annual reports frequently included detailed analysis of trends in receipts, disbursements, and investments. He seemed to like working with figures, or making them work for him.

The announcement of Baker's resignation was accompanied by a brief statement on his replacement (13): "Patricia Richter, employed by the Society for the past three years as Executive Assistant, started 1 May 1977 as the Acting Business Executive Designate. She will become Acting Business Executive on 1 July 1977. Joe Key [president] has appointed a Search Committee to seek applicants for the Business Executive position..." In his appointment letter to Richter (14), Key asked that she assume normal management responsibilities and proposes to set up an assistant business manager [executive] position for her in the future (she had been employed as a secretary, not as an executive assistant). Richter was fully familiar with the business office and quite competently assumed its operations, including completion of arrangements for the University of Wisconsin meetings in August, the major task left unfinished at Baker's departure.

G. Ray Noggle, who was remembered as an efficient and conscientious executive secretary-treasurer from 1956 to 1960, was eligible for retirement as head of the Botany Department at North Carolina State University at the time of Baker's resignation and was persuaded to become business executive. He started in the position on a part-time basis in January 1978 while still employed by N. C. State, commuting from home in Raleigh to Bethesda. He took no salary, just expenses. After the annual meeting in Blacksburg, VA, in June 1978, he retired, moved to the Washington area, and began working full time on salary.

By the time Baker resigned, the Society had outgrown its FASEB office space. FASEB could not provide additional space; on the contrary, a member society also with headquarters in Beaumont House wanted to acquire space occupied by ASPP. As Baker reported to the trustees (15), "I have received an 'informal inquiry', to use Hess' words, as to whether or not we would release one room to FASEB. (The answer was that it would be only with great reluctance.)" Office space elsewhere had to be found.

By coincidence, the American Horticultural Society (AHS) and the American Society for Horticultural Science (ASHS) were also looking for headquarters space. AHS had the gift of a valuable piece of property at River Farm, Mount Vernon, VA, on which it proposed to build, giving 99-year leases to ASHS and ASPP for one dollar a year in return for a \$400,000 interest-free loan (16). At the 1977 annual meeting in Madison, WI, W. Gabelman of ASHS described the property and its prospective use. A committee consisting of Israel Zelitch (president-elect), Louis G. Nickell (treasurer), and Pat Richter was appointed to negotiate with AHS and ASHS (12).

The site was remote from the District of Columbia without good public transport, and ASPP would only be a leaseholder. It appeared that alternatives should be explored. The *ad hoc* committee, supplemented by additional appoint-

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ments, met October 15, 1977, and decided to employ the Real Estate Research Corporation "to explore the options with regard to a permanent site for the Society headquarters in the D.C. area (17)." Richter was directed to write ASHS telling them that other options were to be explored and that a decision would be made in about 40 days.

The Real Estate Research Corporation reported unfavorably on the River Farm site (18)—building costs, sewer access, accessibility, tax status, and resale value had negative aspects. Construction of a multitenant building would be beyond the available resources of the Society; the best plan would be "the purchase of land leased to a developer who in turn rents space to the Society." President Zelitch notified AHS and ASHS that "the River Farm project is not suitable for our needs" (19).

As it turned out this report was unneeded. Richter learned from the Society's auditor, Richard Tidler, that the holdings of the Gude nursery on the north side of Rockville, MD, were being sold for residential development, except for the strip along East Gude Drive, which was assigned to commercial development. Between these stood the Gude home, an attractive three-story mansion with extensive grounds, a swimming pool, outbuildings, and a huge barn. The Gude family was said to be interested in seeing the house and grounds preserved as a buffer zone separating the commercial and residential developments and might be willing to give it to a not-for-profit organization. Richter contacted an attorney, Robert Bullard, who specialized in real estate and knew the Gudes. Richter's letter to Bullard of September 23, 1977 (20), expressed the prevalent thought, probably carried over from negotiations with ASHS, that a plant science headquarters complex was needed which would accommodate a number of societies:

Our Society's business office is presently located at 9650 Rockville Pike, Bethesda, Maryland as tenants of the Federation of American Societies for Experimental Biology. However, we are interested in establishing a permanent home in the Washington area. It is our hope that in the future other similar societies may be interested in joining with us to establish a National Center for Plant Sciences. These would encompass societies devoted to horticulture, botany, agronomy, phytopathology, i.e., all the plant sciences.

After our phone conversation of yesterday and with our future objectives in mind, you indicated that perhaps you could assist us in realizing our goals. Our immediate requirements could be served by 2500-5000 square feet of office space on a minimum of 2 acres of land. This would permit us to house at least one or two other societies and provide some room for expansion...The size of our facility would, of course, determine the number of other societies we could accommodate. With the increasing national interest and public concern relating to nutrition and world food supply, we expect all of the plant societies to grow rapidly.

Bullard was a friend of Gilbert Gude, a former congressman from Montgomery County, MD, who was director of the Congressional Research Service

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of the Library of Congress. Through the good offices of Bullard, donation of the buffer property was discussed with the Gude family. Initial negotiations were with the title holder, Adolph Gude, Jr., who died before the donation was completed. Gilbert Gude and his sister, Elizabeth Doonan, completed the transaction (21).

The news of an available large home suitable for an office, possibly with five acres of land, produced prompt action. As reported in the April 1978 *Newsletter* (22):

A special meeting of the Executive Committee and Board of Trustees was held February 4, 1978, in Bethesda to discuss the report prepared by a real estate consulting firm about the future location for the Society's National Headquarters in the Washington DC area.

Shortly before this meeting was held, a family in the Rockville MD area indicated a willingness to donate land and a large dwelling suitable for use by the Society as a National Headquarters.

The Board of Trustees and the Executive Committee visited the site and unanimously voted to proceed with the necessary legal steps to obtain this property.

The building is large enough to accommodate one or more other societies as well as our own. Further details and minutes of this meeting will be available during the annual business meeting in Blacksburg, VA.

The August 1978 *Newsletter* gives the minutes in greater detail (23). Action taken by the executive committee at the annual meeting in Blacksburg, June 25, 1978, was reported as follows (23):

Ray Noggle discussed the status of acquisition of a permanent office site. Negotiations for the Gude property were proceeding satisfactorily but discussions were currently delayed pending a property survey. Structural engineering reports on the property had indicated that the building was structurally sound. New electrical wiring would be needed and the heating contractor had recommended installation of a heat pump in two phases.

Since attorney Bullard had made the original contact with the Gude family, he had been retained as attorney of record for the property transaction...

Resolution 1978-6. a) That the Society retain exclusive title to the Gude property and the Board of Trustees should manage it as a Trust of the Society. b) That the Society shall lease space from the Trust for its business needs. c) That the Society will canvass other societies with similar interests and needs with a view to their becoming co-leasees. Approved unanimously.

The move into the new quarters was announced two years later in the December 1980 *Newsletter* (24):

Mr. Gude died in May 1979 and there was a delay in transfer of title to the Society. The Gude family strongly supported the gift of property to the Society and in April of this year a lease arrangement was worked out so that we could start renovation of the building. Over the summer, painting, plumbing,

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and electrical work was carried out. No major structural changes were made to the interior.

On September 15 [1980] the ASPP office moved...to the Gude Plant Science Center in Rockville, MD...located at 410 East Gude Drive, just off the Rockville Pike...The Shady Grove Metrorail Station...is being constructed adjacent to the nursery and will open in 1983, thereby providing good service to downtown Washington and the National Airport.

An open house was held Thursday, October 23 for members and friends of the Gude family, and for members and friends of the American Society of Plant Physiologists. Dr. Richard U. Byerrum, Chairman of the Board of Trustees, Dr. Louis G. Nickell, Treasurer, and Dr. Tom K. Scott, Member of the Board of Trustees, represented the Society.

An appreciation of the gift by president Page W. Morgan was published in the December 1981 *Newsletter*. In addition, Gilbert and Jane Gude were invited to attend the Quebec meetings to receive a special award from the Society. They declined and suggested that the expense money be used for some other activity. Morgan proposed establishing a new award, the Gude Award (25) (see later).

Ownership was formally deeded to the Society on December 30, 1980. The provisions of the deed are simple, with only one restriction on use of the property (26):

WHEREAS, the said Grantors desire to give the hereinafter described property to the said Grantee, a society dedicated to the encouragement and promotion of plant physiology as a pure and applied phase of botanical science: and

WHEREAS, the said Grantee, by the acceptance of this gift, does covenant to use the said property solely as a Plant Science Park for a period of twenty (20) years from the date of the Deed,

NOW, THEREFORE, in consideration of the premises, the said Grantors grant and convey unto the said Grantee in fee simple all that parcel of land...

"Plant Science Park" discriminates against commercial development, at least for twenty years, but allows development of offices and meeting facilities for plant science societies. The Society named the property "The Gude Plant Science Center." For some unrecorded reason, the planned management as a trust as described in the executive committee resolution (23) was never realized. Perhaps the resolution was forgotten. There are other instances of decisions taken which seem to have been quietly ignored rather than reversed when they proved unnecessary or unwise.

It was estimated that 26 percent of the improved floor space could be rented (25). Additional space was secured by enclosing both levels of the screened porch on the south side of the house, remodeling the second floor, and installing a separate entrance stairway. In 1982 the second floor was rented jointly to the Genetics

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Society of America and the American Society of Human Genetics. Remodeling the barn to create a conference center was informally discussed, but the general conclusion was that the Society was not ready for such a venture. By the end of this period, the Society had adequate and pleasant quarters—elegant in the eyes of most members (a swimming pool!)—an adjacent building for storage of back issues of the journal, and the like, and a renter to help with household expenses, which became a major budget item.

As discussed previously, the business executive's job description did not include duties as spokesman for the Society. A strong opinion remained, however, that someone should be doing something to sell the benefits of funding plant physiological research to the public, to Congress, and to government agencies. In 1974 there was a discussion, hosted by FASEB, on creating a Biology Alliance for Public Affairs to secure recognition and benefits for biological societies. Hanson, representing ASPP, reported to president Robert E. Cleland as follows (27):

In our discussions, as in the proposed working agreement, it has never been clear just what the Alliance would do, or how it would do it. Hence, no enthusiasm. The need for a biological voice in public affairs seems evident, but organizing disparate and sometimes conflicting societies to provide this voice proves difficult...There is much opposition to creating another lobby...

In this connection, may I call to your attention that one individual writing a book (Rachel Carson's "Silent Spring") which was widely reviewed and abstracted in the New Yorker was the key to releasing a log-jam of accumulated concern. I am convinced that individual efforts by committed biologists have much more force than PR efforts by societies. There is a hungry horde of young reporters looking for a cause to belt public administration with, and all that they need are facts. If there are facts establishing the need for biological science—and particularly plant science—we need only gather them. But they do have to be facts since the news media are becoming critical under pressure to be objective.

Another aspect that I now appreciate is the necessity for working in the system...Individual plant physiologists must take the time from their professional work to serve in the bureaucracy and hammer away at inserting plant science programs. It is an uphill effort and sometimes discouraging but at least an enduring message is left behind...

The Biological Alliance for Public Affairs never got beyond the talking stage. Any merit in the idea that individual action was required remained unproven for lack of such action. The dominant thought was that the Society would serve its members best by appointing someone to speak for plant physiology. In an open letter to president Winslow Briggs, Peter Albersheim suggested appointment of a director of research on a half-time, semi-permanent basis to fill this need (28):

We need a strong and seasoned voice in Washington who will argue for increased government funding and who will make suggestions as to where the funding will go. Detailed and clear proposals could influence long-lasting



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decisions...A Director of Research would work to alleviate what I think is the greatest failure of our Society—neglect of our junior members. We have done nothing to promote [their] careers at a time when they first become independent researchers. Financial assistance at that time in particular is of crucial importance...and we have not concerned ourselves with the encouragement of interdisciplinary training of our younger scientists. A Director of Research could develop programs for helping our younger scientists and for establishing collaborative efforts with scientists in other fields...

In conclusion, I would like to see us vote now to establish the office of Director of Research for a three year trial period to be funded by an annual assessment of \$10 per regular member and \$2.50 per student member.

Albersheim's suggestion for a director of research seems not to have been acted upon. However, by 1978 the collective concern produced an executive committee directive at the Blacksburg meeting for Noggle as business executive to start on public relations, the ultimate goal of which was to influence funding authorities, and the president was enjoined to carry the message to Congress. The August 1978 *Newsletter* reported as follows (23):

Increased Responsibilities of Business Office. In light of the difficulties experienced by the USDA Competitive Grants Program, the Executive Committee spent considerable time discussing how the Society might increase its effectiveness in presenting plant physiology to the public. While individual members can be effective in contacting local, state, and national groups about plant physiological concerns—research funds, regulatory activities, research priorities, etc.—there was general agreement that the headquarters staff in Washington should become involved in such activities. As a non-profit organization, the ASPP must abide by certain regulations consistent with its IRS status. However there are many things that can be done to enhance the awareness of the public of what plant physiology is and what plant physiologists do. As they say on Madison Avenue, raise the profile of plant physiology...

Resolution 1978-7. Part I, that the Business Executive be instructed to promote vigorously the educational purposes of the Society by identifying areas where information about Plant Physiology will be required in decision-making and to mobilize those resources in the Society competent to provide this information in the form of white papers, testimony, workshops and other resource materials. Part II, and the Business Executive will provide an annual report on the extent of his activities in regard to Part I. Approved unanimously.

Resolution 1978-8. That it is the obligation of the President to support, in the name of the Society, those efforts in Congress which would provide funds for Plant Physiology. In the event that the President feels that such action would be political in nature or jeopardize our tax status, no action should be taken without approval of the Executive Committee. Approved unanimously.

New Business. - Noggle indicated that the Business Office ought to be reviewed. He recommended the development of a procedural manual to be reviewed by the Executive Committee to see if the Business Office was performing in an operational sense its duties as prescribed in the constitution.

Resolution 1987-11. That the President, President-elect, Secretary

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and Treasurer form a committee to review annually the performance and function of the Business Office and circulate the report to the Executive Committee. Approved unanimously.

**Resolution 1978-12.** That the present Evaluation Committee (Resolution 1978-11) should consider the appropriateness of the title in consideration of present and future duties of the Business Executive. Approved unanimously.

Noggle was thus not only assigned new and demanding duties but he drew on himself a review of his accomplishments. He immediately asked for help in "informing the public what plant physiology is and what plant physiologists do...Plant physiologists have made significant contributions to many [applied] problems and are playing an important role in their solution (23)." He asked for members to prepare position papers on topics where plant physiology had contributed—crop development, pest management, chemical regulation of plant growth, dealing with plant stress, and so forth. His plea seems not to have produced any responses. There is a great deal of work involved in investigating and writing up specific contributions of plant physiology, or any other biological science, to solution of industrial or agricultural problems, and few if any of the fully qualified members had time to contribute. Besides, actual applications often hinge on chemical formulations to elicit biological responses, so the honors are sometimes divided with chemistry.

The following year at the 1979 meeting in Columbus, OH, Noggle summarized his public relations activities (29):

See file kept on these matters. The activities are summarized as follows:

- a. Letters to public information officers at home institutions of new ASPP officers.
- b. Letters to public information officers at home institutions of ASPP award winners.
- c. Letters to AIBS, Bot Soc announcing ASPP award winners and new officers.
- d. Letters to senators and representatives on Competitive Grants Research Program (Eagleton, Whitten, Helms, Proxmire, Bayh, Mathias).
- e. Letters to new members of National Academy of Sciences.
- f. Response to Dr. Councilman Morgan, Executive Director, ALS, National Research Council.
- g. Participation in Career Awareness Week, Univ. North Carolina, Charlotte.
- h. Appeared in public testimony on National Conference on Health Research Principles.
- i. Letter to Daniel S. Greenburg, Editor and Publisher of Science & Government Report on Competitive Grants Research Program.
- j. Presented Stephen Hales Award to Bessel Kok at public meeting, Martin Marietta Laboratories.
- k. Attended public hearing on Pest Management Strategies in Food Production organized by Office of Technology Assessment. Sent comments to Mr. J. B. Cordaro.

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- l. Responded to request from A. R. Bertrand, Director, SEA, USDA for information to be used by USDA in putting together FY 1981 budget (February 9, 1979).
- m. Letter to A. R. Bertrand on lack of peer review system in USDA research programs.
- n. Letter to Dr. Frank Press, Director, Office of Science and Technology, White House on exchange program with China.
- o. Reply to A. R. Bertrand on their use of ASPP suggestions for FY 1981 budget (see l. above).
- p. Responded to request from Dr. Chris Bernabo, on staff of Congressman George E. Brown, Jr., Chairman of Subcommittee on Science, Research and Technology, for information to be used in Congressional hearings on the interactions between agricultural production and environmental quality.
- q. Seminar to Botany Department, Howard University.
- r. Attended AAAS Colloquium on analysis of support for research in FY 1980 budget.
- s. Attended AAAS meeting on Project for the Handicapped in Science.
- t. Attended briefing for new Fulbright scholars to the Soviet Union.
- u. Attended Congressional hearings on Competitive Grants Research Program, FY 1981.
- v. Exchange Newsletter with other Societies.
- w. Participated in Council of Biology Editors panel discussion on nomenclature in plant physiology.
- x. Speaker at award breakfast, Southern Section, ASPP.

No indication is given whether this account satisfied the committee of officers charged with reviewing the performance and function of the business office (Resolution 1978-11). No record of such a review has been found, nor has any record been found that changing the title of Noggle's position was deliberated (the title of executive director, used in some other societies, might have cloaked Noggle with more authority in acting on behalf of the Society). Noggle's report does show the type and level of public relations effort the Society might expect from a busy executive with much else to do. Even this much could be done only because the office routine was being competently handled by the staff. In subsequent years when Noggle was involved in obtaining and occupying the Gude property, and had returned to teaching part time, the public relations reports were shorter.

No account is given of the president's support of congressional acts which would fund plant physiology (Resolution 1978-8), and probably there were none. A small scientific society with no voting constituency lacks the political influence for introducing such acts. Only by presenting an authoritative scientific rationale to a congressional committee with a problem to solve can non-political influence be exerted; Congress listens when it needs help. To be persuasive any proposal made must obviously serve the public, not just the scientists. Proposals which request support for basic research on the grounds that sooner or later something useful will turn up are not so persuasive as proposals which describe basic research essential

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to understanding and perhaps solving an important practical problem. Much research in animal physiology has drawn funding from medical sources in this way, and to a lesser degree plant physiologists have done the same with agriculture; even grant proposals to the National Science Foundation (NSF) usually point out potential benefits from the basic research described. The Society might have exploited this approach—that is, set up committees to identify and explain basic plant physiological research needed to solve specific agricultural problems and then send the president and the business executive out to introduce the proposals. Instead the Society gave them empty-handed instructions to inform and persuade.

A chronic complaint of the members was that USDA did not have a peer-reviewed grant program equivalent to that of the National Institutes of Health (NIH), which funded animal physiology and biochemistry. The few USDA grants to individuals were made in association with specific problems and were decided by USDA staff. An ASPP survey (reported in 1970) disclosed that only 5.7 percent of plant physiological research was directly funded by the USDA and 3.6 percent from Hatch Act funds (30). Most USDA research was “in-house,” conducted by scientists of the Agricultural Research Service (ARS), many of whom were—and are—stationed at land-grant universities. Support for university research was made primarily through block funding of state agricultural experiment stations under the Hatch and Morrill Acts, supervised by the Cooperative States Research Service (CSRS). In the past, when approached about establishing peer-reviewed grant programs, the USDA had justly replied that there was no authorization and no appropriation. Two events are believed to have changed this.

The first was the “Pound Report.” In 1972, the National Research Council published a study of USDA research by a committee chaired by G.S. Pound, Dean of Agriculture at the University of Wisconsin (31) (six members of the Society served on study panels of the committee). This report was highly critical of USDA-supported agricultural research in terms of administration, allocation of funds, and extent and quality of the basic research needed for innovation and progress. Two recommendations of the committee dealt specifically with concerns many plant physiologists had expressed at meetings—and elsewhere:

Recommendation 10. That the USDA seek a greatly increased level of appropriations for a competitive grants program, which should include support of basic research in the sciences (biological, physical, social) that underpin the USDA mission. These appropriations should be without commodity earmarking although they should not exclude commodity related research. They should be available to scientists in the USDA, in land-grant and non land-grant public universities or colleges and in private universities or colleges, institutes, and other research agencies.

The Committee recommends further that this program be administered in such a way that research proposals are subjected to evaluation by peer panels of selected scientists drawn from those eligible for support, and that the

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administration should not be the same as that making allocations for USDA in-house research.

Recommendation 11. That the SAES [State Agricultural Experiment Stations] and the USDA provide greater support in their intramural programs to research in the basic disciplines related to their missions.

The intent of the second recommendation was that experiment station funds should be available to scientists in departments outside the college of agriculture and the experiment station.

The USDA felt much of the criticism was misdirected (probably some of it was), but it disposed the organization to consider corrective measures. The second event was an international conference held at the Boyne Highlands Inn, Harbor Springs, MI, entitled "Crop Production—Research Imperatives" (32). This conference, masterminded by Sylvan H. Wittwer, a plant physiologist, horticulturist, and director of the experiment station at Michigan State University, identified research areas needing attention—nitrogen and carbon metabolism, soil water and mineral inputs, protection from pests and environmental stresses, and plant development processes. Although political influence may have been exercised (President Ford is said to have had an ear for concerns emanating from Michigan), the need to satisfy critics and to deal with specific problems in crop production created the right atmosphere for congressional action in establishing and funding a USDA grants program.

This was the USDA Competitive Research Grants Program referred to earlier, which was activated in 1978. The first director was the immediate past president of the Society, Joe L. Key. There were four areas of support of interest to plant physiologists—nitrogen fixation, photosynthesis, genetic mechanisms, and biological stress. Limiting the areas of research support to these four was resented, not surprisingly, by members with other interests. And members supported by Hatch funds felt the program was instituted at the expense of the experiment stations from which they drew their support. At one time there was concern that the USDA might staff the program with career civil servants, eliminating peer review. These and other details of the program are discussed in a paper by Krogmann and Key (33), but they have only a tenuous connection with the history of the Society.

With respect to that history, however, it must be noted that although the Society was a forum for agitation, the USDA grants program was secured largely by initiatives outside of the Society. It is fair to ask why the Society could not do, or did not do, that which obviously could be done for its members. No ready answer appears. Perhaps scientific societies have their role in providing a place and time for talk; a less cumbersome vehicle seems to be needed for action. And as we shall see, a prominent opinion was that the Society needed a director to manage affairs so as to produce action.

In 1980, Noggle agreed to return to North Carolina State University where

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he was needed for a time to teach courses. He notified the Society that he wanted to be relieved of his position, and he moved back to Raleigh. He continued as business executive part time, commuting to Rockville, while the Society searched for a replacement. Pat Richter had the responsibility for daily operations. This arrangement seemed to work well, and in a letter of October 1980 to Noggle, president Page Morgan considered continuing the executive position on a half-time basis (34):

Your willingness to stay on as Business Executive...beyond your intended resignation date of December 31, 1980 is very much appreciated...you have brought an era of efficient progress and internal peace to the society that were both badly needed...I want to do everything possible during my tenure to make your work as convenient as possible...

I would like for you to make the inquiries necessary to determine the feasibility of remodeling the third floor of the Gude Center into an apartment or placing a mobile home on the grounds. My thinking is that if we do stay with the half-time arrangement, someone from outside the Washington area might find it convenient to take the job if they had a small, but comfortable apartment at the center. Thus they could come into the office every other week...

Replacement for Noggle was preceded by a good deal of deliberation as to the nature of the position. Morgan reported as follows at the June 1981 meeting in Quebec (25):

Ray [Noggle] has answered a call for help from North Carolina State University and he will be teaching two courses there this fall. This will necessitate that he end his present arrangement with ASPP which has included essentially half time duties without pay other than expense.

I have invested considerable time in attempting a solution of this problem...My initial effort was to make the arrangements for Ray Noggle to stay on the job on a month to month basis...Next I rewrote the announcement of the position vacancy in more general terms and had it published in the news letter. I wrote/called a large number of people soliciting nominations...

As this work progressed, the concept of a half-time person began to appear less feasible to me, especially if a candidate had to move into the Washington area, and I began to think predominantly about a full-time person. In conversation with Jack Hanson...an alternate idea came up which was to create a more advisory position and place the person on an honorarium plus expenses...

Based on the work Paul Stumpf did last year, the discussions of the Executive Committee at Pullman, and my experience with the issue this year, it seems clear that we should reorganize the National Office to include an Executive Director (or Executive Officer or Executive Vice President, or etc.), a Business Manager and a supporting staff. My recommendation is that we promote Pat Richter to the Business Manager position, quickly define the nature of the Executive Director Position (part time-honorarium or half time or full time) and then fully describe the duties of the Executive Director and the Business Manager.

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As I see it the Business Manager's duties will be fairly similar regardless of the definition we give the Executive Director position. Basically, in considering the definition of the Executive Director position we will be deciding the level of activity of the national office and the visibility of the Society through its national office for the next few years.

Morgan continued with an analysis of the options for employing a director, the conclusion of which was that to get done all the things that the membership wanted done would require a full time person. The minutes of the executive committee meeting included a decision to hire a full time person (25):

In a detailed analysis...it was clear that the position had evolved considerably from the time of [its] establishment...To a great extent, the original business aspects of the Society are conducted extremely efficiently by Pat Richter. However, there are other needs of the Society beyond those of the Business Executive as originally conceived. 1. The Society now needs a spokesman at the national level. 2. The Gude Plant Science Center needs to be developed to its full potential. 3. There needs to be coordination of publications of monographs, workshops, etc. 4. The Society needs to monitor and have input into governmental policies on education. 5. The Society needs a fund raiser to pursue travel grants for meetings and workshops, procurement of monies to develop the Gude Plant Science Center.

The Executive Committee considers that these new duties necessitate the development of a new position of Executive Director and recommend the following procedural sequence to accomplish this.

Authorization was given for the replacement of Ray Noggle with a full-time Business Executive.

A job description for the position of Executive Director be prepared and the necessary constitutional amendments be made to implement this change.

A job description for the position of Business Manager be prepared and the necessary constitutional amendments be made to outline the procedures to be utilized in hiring such an officer by the Executive Committee.

The constitutional changes were made and approved in 1982 and published in 1983 as Section 3 of the bylaws (Bulletin No. 37): The executive director is to coordinate the activities and policies of the Society, promote the development of the Gude Plant Science Center, coordinate planning of the annual meeting, act as development officer on special projects, and perform other duties as specified and directed by the executive committee. The executive director is made a non-voting member of the executive and publications committees. The business affairs of the Society are to be conducted by a bonded business manager who shall handle all routine financial transactions, all the noneditorial business of the journal and other publications, all matters pertaining to dues and subscriptions, and assist the executive director with administrative and budgetary affairs of the annual meeting.

The advertisement for the executive director read as follows (25). (Note that the 'spokesman' of the above minutes has been neutered—the women's liberation movement had come to the Society's attention.)

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### Executive Director, American Society of Plant Physiologists

Full time position as spokesperson and development officer for the Society. The Director expresses the roles and needs of the Society, serves as contact person for other Societies and Government, and promotes Society Headquarters as a center for Plant Sciences. Duties will include attracting tenants to the Gude Plant Science Center, developing facilities and services at the Center, facilitating publication by the Society of Plant Physiology, workshops, symposia, and monographs, and raising funds as appropriate for these services. The Director shall edit the Society Newsletter and shall prepare an annual report of his activities.

Applicants having a Ph.D. degree in plant physiology are preferred.

Much more was expected of the executive director than of his business executive predecessors in the way of promoting and developing Society affairs, although in compensation the new position of business manager gave the director relief from much detail. But not from the responsibility. A detailed job description published in the October 1982 *Newsletter* (35) gives the executive director authority over the business manager and thus responsibility for business affairs: "For the purpose of coordination of the overall activities of the national office and general policy [of ASPP], the line of authority shall be: Executive Committee, Executive Director, Business Manager, national office staff. The Executive Director will, with the authorization of the Executive Committee, assign new business and service roles to the Business Manager."

There was also an unwritten assignment for the executive director. The chief executive was the president, always a person with full-time employment elsewhere, placed in the job with minimal preparation, and often finding a considerable workload. The executive director, standing just below the chief executive, could provide continuity and guidance in management. Queries or problems could be directed to the director for action, or for passing along to the president with seasoned advice. Much the same relationship existed between the executive director and the board of trustees.

Robert M. Chasson, a plant physiologist living in the Washington area and working for NIH, was hired as executive director in August 1982 (35). Richter continued her job, now as business manager, until April 15, 1983, when she resigned, married, and moved to Indiana. She had served the Society loyally and well in the development of the business office. Catherine Mitter was hired as business manager on May 9, 1983 (36).

Chasson's first annual report (36) was extensive, covering the career brochure, placement service, copying requests, sales of membership lists (\$5,250!), storage and sales of back issues, enlisting corporate memberships (eight), exhibitors at the annual meeting, funds for the Hales gravesite, attendance at conferences on federal funding, leasing space to tenants. His last annual report (37) runs to four pages and provides details on increasing membership, possible development of office and conference facilities, public relations work (letters to members of House-



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Senate Conference on agricultural appropriations; with president Joe Cherry's help getting acquainted with USDA and NSF staff; a reception for Congressional and agency staff in conjunction with the board of trustees meeting, progress with publications, distribution of the journal to embassies and consulates, attendance at meetings, annual meeting arrangements, etc.). Inspection shows that much effort went into putting out informative newsletters. In all, it was necessary work, competently done, but largely related to operations, with little that made plant physiology prominent on the national scene or shook dollars for plant physiology out of the federal budget, which is what many members expected. In addition to being "the spokesperson and development officer" for the Society, the executive director was to "express the roles and needs of the discipline of plant physiology, especially relative to national policies, and will promote the development of a unified voice for the plant sciences in public affairs" (35).

Chasson came under a good deal of pressure on this score for he was not by temperament or training fully comfortable with public relations. The grander aspirations of the Society really required an expert public relations officer and lobbyist—the latter inconsistent with the Society's tax status—not a plant physiologist. In 1984, president N. Edward Tolbert appointed a public affairs committee (38) which recommended "that ASPP develop its public affairs program in conjunction with other organizations which represent biological and plant science, such as AIBS", and "that a part-time Public Affairs Director be obtained to expedite the development of this program in conjunction with the Executive Director" (38), but nothing came of this. After three years of careful management, burdened by less successful striving to develop public affairs to the degree expected, Chasson resigned, leaving in December 1985. President Cherry wrote the executive committee about Chasson's resignation (40):

As the first Executive Director of ASPP, Dr. Chasson has tried very hard to be an effective employee of our Society. To acquaint you with the written duties of the Executive Director, I suggest you read section 3b of the By-Laws (found in the Directory of ASPP) and the enclosed job description contained in the "Operations Manual." It is my understanding, as well as Dr. Chasson's, that several officers, trustees and members of the Executive Committee believe that a major portion of the Executive Director's time should be devoted to the activities indicated in the second and third sentences of the job description of the Operations Manual [reference 35, quoted above]. Dr. Chasson's performance in those areas of national policy and public affairs has been viewed by some as ineffective. Dr. Chasson has indicated to me that the job description cannot be done satisfactorily by one person and he has chosen to do those things that were of highest priority to the headquarters office and the Society. Dr. Chasson has also indicated to me that he has a great deal of concern about being directly involved in issues that deal with national policies. Therefore, I understand that Dr. Chasson has offered his letter of resignation because of a perceived inadequate development of a program in national policies and public affairs.

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...Whether or not we decide to accept Dr. Chasson's resignation, a discussion of the duties of the Executive Director is needed. Furthermore, if we wish to promote national policies and public affairs as related to plant science, we need to discuss the possibilities of other alternatives such as supporting a Congressional Fellow to interact with our Executive Director.

A congressional fellow, Kathryn A. Saterson, was supported jointly by ASPP and AIBS in the 1985-1986 session. Saterson worked with the Subcommittee on Public Lands of the House Committee on Interior and Insular Affairs. She reported at the 1986 annual meeting in Baton Rouge on her work with tropical deforestation, hearings on international conservation and the Greater Yellowstone Ecosystem, and hearings on control of the southern pine beetle in wilderness areas (41). She obviously served the broader policies of AIBS, whereas Cherry must have had something more like agricultural science policies in mind.

In retrospect, this period of explosive growth in the business office reflects an important shift in the way the Society saw itself. A lot of money for research became available, at least for those proficient in research (and grantsmanship). With money came growth—more students, more papers, more meetings, more travel, and much more dependence on federal grants. What went on in Washington became very important. It was especially important that plant physiology should be recognized and funded. Hence, a small organization of scientists, largely devoted to communicating research, started seeing a political dimension and concluded that the business office must become a headquarters with a director to fly the flag and sound the trumpet.

But in practice it could only be a small show. By the end of this period there was growing sentiment to concentrate on business.

### Growth and Money Matters

Tables 17, 18, and 19 present data on growth of the Society during this period in terms of members, subscribers, income and resources, papers given at meetings, and papers published. Figures 1 to 5 place these data in the larger perspective of the Society's existence.

The data substantiate the earlier remarks about this period being one of rapid growth, at least up to 1981. Membership increased at a steady rate from 1963 through 1981; 41 percent of the gain was in foreign membership, which grew to 29 percent of the total. These foreign members contributed up to one-third of the papers in *Plant Physiology*. The American Society had become, in fact, an International Society, although no one seems to have suggested changing the name!

But the domestic membership formed the core of the Society. Where were these members? No study has been made for plant physiologists but a report for plant biologists as a group (Higher Education Panel Report No. 62, American Council on Education), as cited in the February 1985 *ASPP Newsletter* (42), says,

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**Table 17**  
Membership and Subscription Data, 1963-1985

Year	Members <sup>a</sup>		Subscriptions <sup>b</sup>	
	Total	Student	Library	Member
1963	1923 (277)	176	1712 (1105)	
1964	2037 (321)	207	1760 (1132)	
1965	2181 (404)	269	1945 (1212)	
1966	2240 (382)	285	2071 (1284)	
1967	2286 (382)	316	2146 (1308)	
1968	2519 (431)	328	2270 (1356)	
1969	2733 (492)	345	2422 (1440)	
1970	2880 (572)	372	2525 (1516)	
1971	3029 (674)	337	2568 (1559)	
1972	3069 (692)	294	2541 (1564)	
1973	3137 (718)	278	2570 (1603)	
1974	3190 (764)	374	2660 (1687)	2831 (731)
1975	3374 (799)	458	2698 (1713)	2817 (749)
1976	3398 (868)	532	2681 (1704)	2930 (800)
1977	3625 (949)	549	2655 (1670)	2855 (781)
1978	3530 (918)	464	2574 (1615)	2665 (786)
1979	3717 (1014)	530	2659 (1691)	2631 (811)
1980	4117 (1167)	749	2634 (1640)	3021 (924)
1981	4296 (1245)	772	2669 (1665)	3119 (990)
1982	4226 (1234)	657	2563 (1623)	3075 (985)
1983	4158 (1227)	710	2434 (1500)	2792 (909)
1984	4061 (1154)	602	2348 (1407)	2714 (864)
1985	4051 (1145)	529	2080 (1241)	2730 (860)

<sup>a</sup> Figures in parentheses are foreign members. Students are domestic and foreign, and are included as total members.

<sup>b</sup> Figures in parentheses are foreign subscribers.

"Land-grant institutions predominate in all areas of academic plant biology. They account for 83 percent of the research support, 80 percent of the faculty, students, and doctorates, and 72 percent of the postdoctorates." Similar figures probably apply to plant physiologists.

From 1981 through 1985 there was a small but significant decline in membership—4.8 percent domestic, 8.0 percent foreign, and 31.5 percent student (Table 17, Figure 1). Library subscriptions, which essentially had topped out about 1970, had a parallel and even greater decline (Figure 1): 16.4 percent domestic, 25.5 percent foreign (Table 17). Foreign library subscriptions consistently had made up about five-eighths of the total, serving a large body of plant physiologists unable to afford individual subscriptions. Loss of library subscriptions thus had importance beyond the Society's budget.

This falling off after 1981 in prime indicators of the health of the Society is partially reflected in the publication of papers in *Plant Physiology*, which, although

## History of the American Society of Plant Physiologists

**Table 18**  
Financial Data, 1963-1985<sup>a</sup>

Year	Receipts \$	Disbursements \$	Expenses		Resources \$
			Journal <sup>b</sup> % total disbursements	Operational <sup>c</sup>	
1963-64	51,456	49,024	80.7	10.2	92,000 <sup>d</sup>
1964-65	57,007	62,617	—	—	—
1965-66 <sup>e</sup>	103,700	88,060	—	—	—
1966-67	102,071	115,274	84.8	9.8	—
1967-68 <sup>f</sup>	153,939	126,990	81.3	14.5	—
1968-69	184,663	149,349	77.5	15.7	194,024 <sup>g</sup>
1969-70 <sup>h</sup>	245,365	154,304	71.6	17.7	—
1971	272,369	191,604	80.4	14.5	—
1972	284,844	218,913	80.6	17.3	444,395
1973	285,966	231,433	79.3	18.4	616,452
1974 <sup>i</sup>	339,379	289,437	77.4	18.8	675,589
1975 <sup>j</sup>	309,088	346,271	75.8	17.9	625,598
1976 <sup>k</sup>	398,760	370,456	63.7	20.4	672,814
1977 <sup>l</sup>	461,582	428,766	60.4	24.9	697,044
1978 <sup>m</sup>	526,668	471,159	59.0	25.8	774,194
1979	548,372	544,375	58.7	29.8	816,707
1980 <sup>n</sup>	638,351	621,661	57.0	24.9	729,609
1981	651,026	759,977	59.1	28.4	694,293
1982	800,447	921,144	60.2	26.8	830,418
1983 <sup>o</sup>	1,054,805	924,630	56.1	32.1	1,181,446
1984 <sup>p</sup>	1,432,006	1,028,944	52.1	27.6	1,491,816
1985	1,670,080	1,071,482	50.2	32.7	2,152,420

<sup>a</sup> Data are from fiscal year reports. Through June 1970 the fiscal year was July 1 to June 30. Beginning in 1971 the reported data are for the new fiscal year, January 1 to December 31. (The missing six months were accounted for in a separate 18 month fiscal year report not given here.)

<sup>b</sup> Journal expenses include editorial plus printing costs.

<sup>c</sup> Operational expenses include office expense, rent or buildings and grounds upkeep, and general business costs.

<sup>d</sup> Estimate. In the financial reports of this period the total resources (checking and savings accounts plus reserve and endowment investments) as of the end of the fiscal year were not reported as formerly. Beginning with 1972 the resources are given as total assets at the close of the fiscal year as reported by the auditor. These include accounts receivable.

<sup>e</sup> Membership dues to \$15, student dues to \$10, husband-wife membership dues at \$20 (one journal), journal subscriptions to \$25. Emeritus membership free, but costs \$10 if the journal is taken. Life membership to \$250. Page charge of \$25 billed to authors.

<sup>f</sup> Subscriptions to \$35/year.

<sup>g</sup> Includes a \$15,000 grant to establish the Kettering endowment.

<sup>h</sup> Subscriptions to \$70/year (two volumes/year, \$35/volume).

<sup>i</sup> Separate billing for membership dues (\$10 regular, \$3 student) and membership subscription to the journal (\$10). Library subscriptions to \$80/year.

<sup>j</sup> Restructuring of investment portfolio with an investment counselor resulted in losses of \$27,915 in general funds and \$29,398 in endowment funds. Page charges dropped. Library subscriptions to \$90/year.

(Continued on next page.)

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not declining, was no longer advancing (Table 19, Figures 4 and 5). If allowance is made for the attractiveness of Colorado and California as vacation spots, the same can be said for contributed papers at the annual meetings (Table 19, Figure 4).

Paradoxically, the financial indicators of societal health showed no faltering. The annual receipts and total assets soared in 1982-1985 while the number of members and subscribers declined (Table 18, Figures 2 and 3). Are these inverse trends related?

They are, as shown in the footnotes to Table 18 and the receipts and disbursements curves of Figure 2. After years of very close budgeting, just staying ahead of the ever-increasing expenses, there was an exponential rise in expenditures due to a flush of publication in 1978-1982 and the extra expense of opening the Gude Plant Science Center. As a result there were sizeable deficits in 1981-1982. Something had to be done and was done—the annual subscription rate for members and libraries was raised 50 percent in 1983 by publishing three volumes per year, rather than two, but at the same price per volume. (This procedure had been followed before in 1970; the journal went to two volumes per year without changing the price per volume.) Also, a \$100 handling fee for accepted papers was introduced (waived if lack of funds could be established).

Sudden solvency! Increasing the library subscription rates was especially effective, and somewhat intoxicating—there was no need to pinch along when money could be had so easily. And after all, *Plant Physiology* still cost less per page than any comparable journal but one (Chasson, private communication). The library subscription rate was increased again in 1984 to \$330/year. In 1985, library subscriptions furnished \$746,155 of the total revenues (44.7 percent), almost three-fold the amount from membership dues and subscriptions (perhaps not uncommon for scientific societies). The bite was too deep for some libraries, particularly foreign libraries at a time when the value of the dollar was rising. In lesser degree the same was true for members. And hence, the decline in members and subscribers shown graphically in Figure 1. But a 22.1 percent decline in subscribers was easily offset by a 250 percent increase in subscription rate, which yielded a dramatic rise in assets (Figure 3). Past experience, however, is that expenses rise to meet these increases in income (see 1970-1975, Figure 2), and by Parkinson's Law they can be expected to do so again.

(Continued from p. 218.)

\* Membership subscriptions to \$15/year, library to \$100/year.

† Membership subscriptions to \$20/year.

‡ Membership subscriptions to \$25/year, library to \$110/year. Membership dues to \$15 regular, \$5 student.

§ Gift of the Gude property, valued at \$527,850 (not included here under resources). Library subscriptions to \$130/year.

¶ Membership dues USA to \$35, foreign to \$40; student dues USA to \$15, foreign to \$20; life membership to \$450. Membership subscriptions to \$45/year (3 volumes/year at \$15/volume); library subscriptions to \$195/year. Manuscript handling fee of \$100 introduced.

‡ Library subscriptions to \$330/year.

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**Table 19**  
Meetings, Contributed Papers, and Published Papers, 1963-1985

Year	Location	Meetings	Papers	Plant Physiology	
		Affiliation		Pages	Papers
1963	Amherst, MA	AIBS	227	779	117
1964	Boulder, CO	AIBS	252	1095 <sup>a</sup>	182
1965	Urbana, IL	AIBS	285	1326 <sup>b</sup>	217
1966	College Park, MD	AIBS	293	1804 <sup>c</sup>	292
1967	College Station, TX	AIBS	213	1806 <sup>d</sup>	286
1968	Amherst, MA	none	272	2071	325
1969	Seattle, WA	Int. Bot. Congr.	205 <sup>e</sup>	1751	299
1970	Bloomington, IN	AIBS	261	1673 <sup>f</sup>	343
1971	Pacific Grove, CA	none	298	1658	331
1972	Minneapolis, MN	AIBS	371	1822	381
1973	Calgary, Alb.	CSPP <sup>g</sup>	369	1842	367
1974	Ithaca, NY	none	411	1951	374
1975	Corvallis, OR	AIBS	486	1982	403
1976	New Orleans, LA	AIBS	559	1748	361
1977	Madison, WI	CSPP	710	2116	444
1978	Blacksburg, VA	PGRWG	650	2048	438
1979	Columbus, OH	ASHS	905	2343	466
1980	Pullman, WA	Phytochem. Soc.	914	2431	484
1981	Quebec, Que.	CSPP	917	2773	530
1982	Urbana, IL	none	876	3247 <sup>h</sup>	625
1983	Ft. Collins, CO	none	1055	3189	595
1984	Davis, CA	none	1113	3321	637
1985	Providence, RI	none	912	3060	581

<sup>a</sup> Change from Craftsman Press to Business Press.

<sup>b</sup> Change to Conover Press.

<sup>c</sup> Change from 6 bimonthly issues to 10 monthly issues per year.

<sup>d</sup> Change to 12 monthly issues per year.

<sup>e</sup> Papers given at sectional meetings; no paper sessions at Congress.

<sup>f</sup> Change to Waverly Press, with two 6-issue volumes per year and larger format.

<sup>g</sup> Canadian Society of Plant Physiologists.

<sup>h</sup> Change to three 4-issue volumes per year.

As pointed out earlier, this period of rapid growth of the Society was fueled by the post-Sputnik funding of scientific research. Figure 5 illustrates the rise in federal support of life sciences research from all sources, corrected for inflation by the consumer price index, and thus representing constant purchasing power in 1967 dollars. Only a small portion of these funds filtered into plant physiology research, but the amounts were probably proportional. Data furnished by Mary E. Clutter of the National Science Foundation show that in 1985 plant biology received \$135.2 million in research grants, which was 3.3 percent of total federal support of academic basic research (43). In terms of total life science research funding, which includes government agencies, the figure is 2.15 percent. The portion of plant

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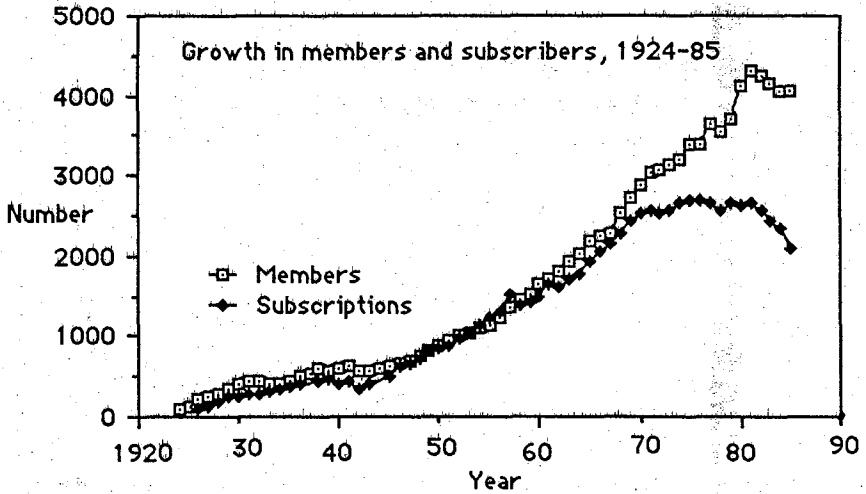


Figure 1. Increase in members and subscribers from 1924-26 to 1985.

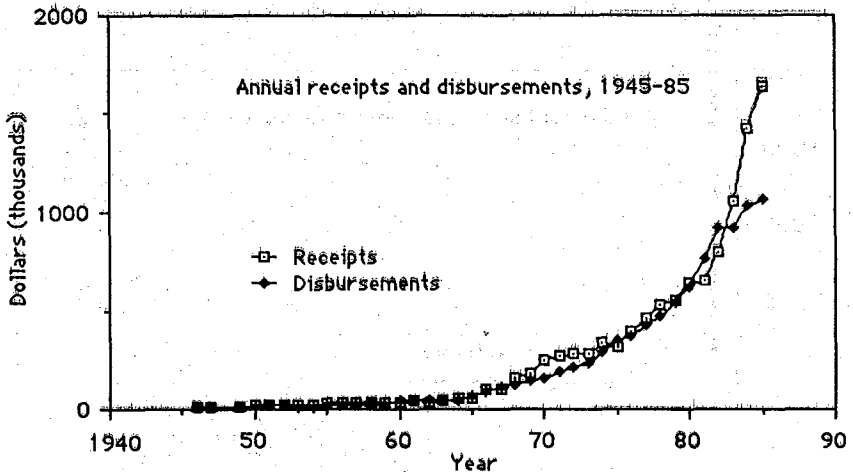
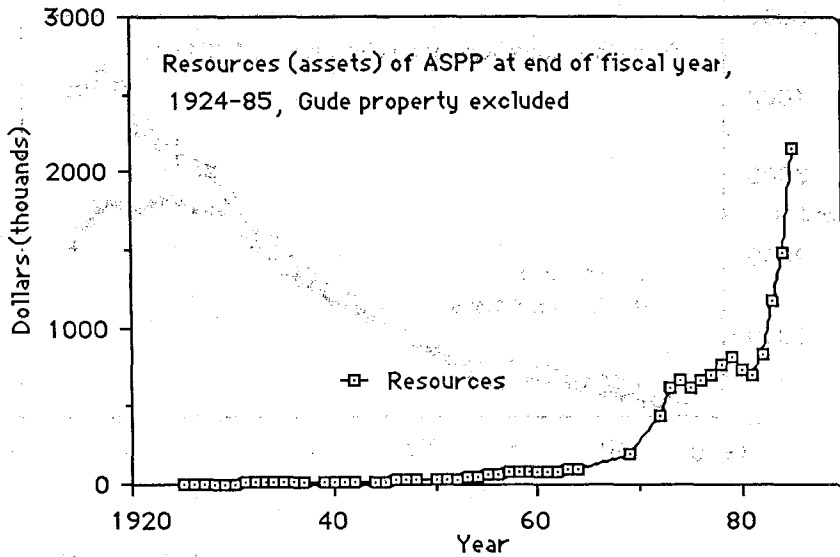


Figure 2. Increase in annual receipts and disbursements, 1945 to 1985.

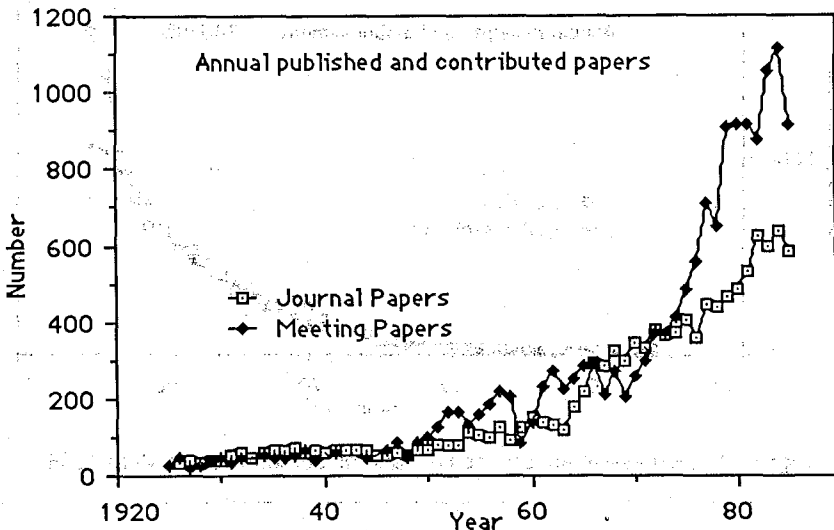
biology funds given to plant physiology is not known. In this period, 1963-1985, the consumer price index rose from 91.7 to 322.2, a 3.5-fold increase (the implicit price deflator based on gross national product gives a 3.4-fold increase). As an indicator of the response to this funding, Figure 5 also shows the number of papers published annually in *Plant Physiology*.

The funding curve divides sharply into two linear portions. Through 1967, funding increased at a rate of \$109.8 million per year, reflecting the "new

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**Figure 3.** Increase in resources (total assets) of ASPP, 1924-1985 (zero-assets 1924), excluding the Gude Plant Science Center.

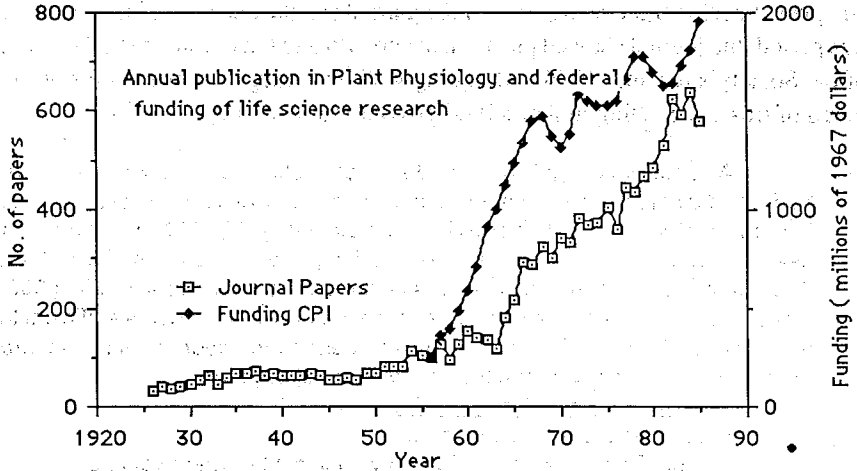


**Figure 4.** Papers published in *Plant Physiology* and contributed to meetings, 1925-26 to 1985.

economics" boom of the Kennedy-Johnson administrations, as well as the post-Sputnik concern to augment our science. But heavy spending and low interest rates brought on inflation, and from 1968 through 1985 the rate of funding increase in 1967 dollars abruptly fell to \$28.1 million per year, a rate characterized by three



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**Figure 5.** Number of papers published annually in *Plant Physiology* and annual federal funding of life science research from all sources (1956-1985 data from Statistical Abstracts of the U.S., Bureau of the Census), adjusted for purchasing power with the Consumer Price Index; 1967=100 (Economic Report of the President, January 1987).

pronounced dips in purchasing power. The dips result from bursts of inflation corresponding to the Vietnam war, the 1973 OPEC oil embargo, and the 1979 OPEC oil price increase. The subsequent recoveries are due to increased congressional appropriations of depreciated dollars—periods of inflation seem not to reverse spontaneously. Probably only the initial rapid rise results from anxiety over our science, helped by an expanding economy. The break in the curve reflects the onset of additional problems not readily disposed of by appropriation bills, primarily increased inflation.

There is only a rough parallel between funding and papers published (Figure 5). Obviously, factors in addition to research grants enter into the publication of research reports. These factors produce a somewhat more stable increase in research than in funding, probably because the facilities and personnel for research are not so subject to the winds of the market place. Notice in Figure 1 that the increase in membership was linear through 1981. The rise in papers published is basically linear as well, but is made "noisy" by the vagaries of research, which tends to advance (and get published) somewhat erratically.

Altogether, the main point to be taken from Figures 1 to 5 is that there was substantially more growth in the Society during these last 23 years than in the preceding 40. The growth was derived indirectly from federal funding of research and the general prosperity of the nation, despite—or at the expense of—an awesome national debt and devalued dollars.

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There were, of course, a number of growing pains, primarily in obtaining an adequate income for the rising costs of the journal and the business office. Early in this period, the journal showed phenomenal growth and took more than 80 percent of the Society's receipts (Table 18), going well over budget. The minutes of the board of trustees meeting in April 1966 give an example of this (44):

A major oversight was made in budgeting for the journal. The budget...did not take into account as many pages as are actually being printed. It is anticipated that the Editor will go approximately \$20,000 over what has been allocated to him...The total amount originally budgeted was \$73,511.18. At present it looks as though total expenditures will actually be about \$93,500. If all sources of income are considered we should have an income sufficient to meet expenditures. But this is heavily dependent upon those who are publishing actually paying the [voluntary] page charge fee.

### Possible Income This Fiscal Year

\$1,000	Miscellaneous Income
28,000	Page charges at 70% paying in a 1120 page volume
30,000	Dues from members
<u>43,000</u>	Subscriptions
102,000	Total Income
<u><del>5,000</del></u>	"Free" reprints
\$97,000	

A great leap in collections will have to occur if we fare so well on the page charge item. We were cheered to learn that there has been general acceptance of the need for page charges...As of April 1, however, less than a tenth of what is anticipated...has actually come in.

Actually, 1966-1967 was a deficit year due to publishing over budget. In consequence, subscription rates had to be increased for the following year. The pattern of increased costs followed by increased subscription rates, dues, or page charges was repeated throughout the period. The higher printing costs of Waverly Press beginning in 1970 could not have been met if going to two volumes a year had not doubled the subscription rate. Page charges were inadequate to cover the expenses; they had been set at \$25 when printing cost \$40 per page, but in 1970 the cost was \$72 per page (10). Constitutional amendments to raise membership dues failed in both 1969 and 1970. However, in 1973 an amendment to the bylaws passed which authorized separation of membership dues and journal subscriptions, and allowed the executive committee to set rates for both without membership approval, which it promptly did (6). In time, the trustees began to anticipate the need for advances in income. Figure 2 shows that receipts and disbursements have been reasonably close except for those instances where subscriptions rates were multiplied by increasing the number of volumes of *Plant Physiology* per year.

Increases in membership were never adequate to supply the needed funds. There were only mild efforts to enlist more members until the decline of the 1980s (Figure 1). As an example, the April 1978 *Newsletter* remarks, "Since Society growth depends heavily on our active members, we ask that you continue to

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encourage your colleagues to join ASPP. Please note that a perforated application is now available in each issue of *Plant Physiology* (22)." Chasson introduced an "Each One Reach One" campaign in 1984-1985 which consisted of a form printed in the *Newsletter* headed by the statement, "I have contacted the individual below and believe that he/she is interested in becoming a member." This was followed by blanks for filling in the name, address, and telephone of the prospect, with instructions to send the form to ASPP headquarters. Chasson reported (37) that 90 prospects had been identified in this way, and after follow-up letters from the president and the executive director about half of these had joined. A little selling could still nudge the membership up, but this did not do much for the budget.

In late 1968, Klein sent out letters trying to sell subscriptions to plant science departments (45), some of which maintained a small office or seminar room library for convenience of students and faculty. He received a good many replies saying that the library took *Plant Physiology*, and this was adequate for their needs.

Page charges were dropped as a source of income after an extensive discussion in the executive committee meeting at Cornell (46), June, 1974.

Hardy presented the proposed budget for 1975: Income \$302,850 and expenses \$290,272, for a net increase of \$12,578. If page charges for PLANT PHYSIOLOGY were to be dropped, income would be only \$269,450, and the Society would have to draw on the reserve fund...

Hardy reported that the Board of Trustees voted 3:1 to retain page charges. Gibbs pointed out that the general membership had split much the same way, but that this probably reflected the proportion of readers vs writers, i.e., those who do not pay vs those who do. Gibbs also indicated that page charges had hurt the growth and international character of the journal, as reflected in a tapering off in the number of manuscripts received, especially from younger and foreign authors. After extensive discussion including the possibility of giving five or six free pages, instituting a reviewer's fee, increasing cost of reprints, operating on a deficit budget, the Committee voted to drop page charges and to increase the price of open subscriptions (to non-members) by \$10 per year (\$5 per volume), both changes to be effective with the January issue...The budget was corrected as follows: Income \$295,450, Expenses \$290,272, for a net increase of \$5,378.

Gibbs, like his predecessor Shull, seldom lost an argument; at least it is difficult to find instances of defeat. His pivotal and continuing role as editor-in-chief, coupled with an evident concern for the Society as well as the journal, gave Gibbs prominence in executive committee affairs throughout this period.

Announcement of the abolishment of page charges was made in the July 1974 issue of the journal (46): members no longer had page charges, but non-members would have to pay \$70 per page, and special illustration pages would cost \$100 for all.

Surprisingly, these special pages charges got the Society into trouble with the U.S. Postal Service. Houston Baker described the affair in the February 1977

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*Newsletter* (47) (he seems to have enjoyed it—a break in routine and a challenge):

**US POSTAL SERVICE VS NON-PROFIT PUBLISHERS OF SCIENTIFIC JOURNALS**—A confrontation over page charges.

The Problem On 5 October 1976 the US Postal Service charged that the journal *PLANT PHYSIOLOGY* contained advertising matter that was not properly identified. Public Law, 39USC4367, reads "Editorial or other reading matter contained in publications entered as second class mail and for the publication of which a valuable consideration is paid, accepted or promised, shall be marked plainly advertisement by the publisher.

Instructions for Contributors *PLANT PHYSIOLOGY* 57, i-vi, 1976 says that authors who request and get higher than usual quality reproduction of material such as electron micrographs would be charged \$100 per page. Also, papers with no author a member of the Society would be charged \$70 per page.

These charges, according to the Postal Service, make micrographs and reports into advertisements which must be so labeled.

Implications for *PLANT PHYSIOLOGY* The ASPP journal would be little affected by an adverse finding by the Postal Service. In 1976, page charges contributed only \$630 to revenues in excess of \$400,000.

Role of ASPP Because ASPP received one of the first notices from the Postal Service, it fell to us to inform the community of non-profit publishers, develop background information, define possible solutions, and seek to implement the best of them.

Possible solutions Four ways of resolving the problem...are apparent.

1. Accede...label reports as advertisements, and pay the consequences;
2. Avoid the conflict by seeking alternative revenue...to replace page charges;
3. Seek legal relief in the courts;
4. Seek legislative relief and change the law.

We chose the last approach as the most promising, although most societies chose instead to work through their lawyers. Our reasoning was that legislation only would provide long term relief while preserving the page charge option.

Congressional Input (indirect) We first gave input to Congress by briefing the staff of the House Committee on Post Office and Civil Service. The meeting was set up and held by representatives from ASPP, the Society of National Association Publications, The Federation of American Societies for Experimental Biology and the National Academy of Science...

ASPP testimony introduced them to the problem (see the statement below). Robert Cleland, representing himself as a scientific researcher, told them that he would refuse to send any manuscripts to a journal that would label his work "advertisement."

The "statement below" is a letter to the Commission on Postal Service in the same format as above. Baker lauds the highly subsidized 2nd class mail service for its value in disseminating science, but opines it is inappropriate to subsidize advertisements. He cites the definition of advertising in the original 1912 law, and notes that an amendment to it provided that it should not apply to scientific publications. The amendment was inexplicably dropped in 1962. He then explains that publication is part of the cost of scientific research and that page charges bear

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part of the cost. He proposes that the statutory definition be modified by addition of the underlined phrase: "Editorial or other reading matter contained in publications entered as second class mail and as a necessary and sufficient condition for the publication of which a valuable consideration is paid, accepted or promised, shall be marked plainly 'advertisement' by the publisher." Baker then shows how the insertion of the underlined words will relieve scientific journals from marking papers as advertisements.

The final resolution of the troublesome ruling is not recorded. Some journals did mark papers as advertisements, followed by a footnote pointing out why this was necessary. *Plant Physiology*, however, simply ignored the matter and was never challenged (Gibbs, personal communication).

At this time (1974), despite the soaring cost of the journal, its percentage of total Society expenses had fallen from 80.7 percent to 77.4 percent (Table 18). But this was more than compensated for by the rising cost of business operations, which increased from 10.2 percent of the budget to 18.8 percent in 1974. By 1985, with an executive director, a business manager, four staff positions, and the Gude property to care for, operations accounted for 32.7 percent of the disbursements; the journal was down to 50.2 percent (the balance largely represents meeting and executive expenses). The Society had embarked on creation of a small bureaucracy.

## Publications

Table 19 gives the number of papers published each year in *Plant Physiology*. Table 20 classifies the papers for the years 1963, 1974, and 1985 in order to trace trends in the subject matter of the papers.

As before, the papers are categorized subjectively on the basis of apparent major interest. For example, most of the papers listed under photosynthesis are heavily biochemical, but the major interest is usually with the structure and activity of chloroplasts, or chloroplast membranes, enzymes, pigments, substrates, and the like. Indeed, a biochemist would recognize his science as included in many of the categories, somewhat flavored by physiological concerns over hormones, tissue culture, survival of freezing, active transport, closure of stomates, and so forth. The publications of the journal over these 23 years showed a broad and steady increase in the application of biochemistry to plant physiological problems. It became difficult to distinguish physiology from biochemistry (a trend noticeable in biochemistry journals as well). In addition, there was increased research on the biochemistry of plants as such, from fewer than 9 percent of the papers in 1963 to almost 21 percent in 1985. Although the editor may have influenced this trend (Gibbs's personal research is biochemically oriented), most of it is based on the fact that advances in biochemistry and biophysics provided rewarding ways of studying physiological questions.

Other pronounced increases show up in transcription-translation research,

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**Table 20**  
Classification of Papers Published in *Plant Physiology*, 1963, 1974, and 1985

Category	Number		
	1963	1974	1985
Biochemistry, metabolism	10	85	121
Nucleic acids, transcription-translation	0	9	16
Photosynthesis, chloroplasts, pigments	13	37	69
Respiration, mitochondria	4	20	19
Hormones, growth substances, phytochrome	15	40	42
Herbicides, growth inhibitors	3	5	12
Growth and development, senescence	5	13	21
Tissue culture	2	4	13
Tropisms	4	3	3
Flowering: photoperiodism, vernalization	3	3	1
Fruit: growth, ripening, storage	0	4	3
Seed: formation, dormancy, germination	3	17	18
Response to environment, stress, pollutants	7	24	58
Water relations, stomates	3	12	32
Membrane transport, bioenergetics	7	27	55
Vascular transport	3	9	11
Mineral nutrition	4	12	20
N <sub>2</sub> fixation, nodules	1	6	13
Pathology, toxins, injuries	1	12	15
Cytology, subcellular physiology	2	14	18
Biological rhythms	2	8	4
Methods and techniques	7	9	12
Miscellaneous	2	1	5
Totals	117	374	581

leading to the present emphasis on molecular biology, tissue culture, photosynthesis, response to environmental factors with emphasis on various stresses, bioenergetics, especially with membrane transport, stomate action, subcellular organelles and their functions, root nodules and dinitrogen fixation. There was even a revival of interest in mineral nutrition, but from a more biochemical viewpoint. In short, over this period plant physiological research became very much more sophisticated. Sophistication was linked to a steady influx of newly trained plant physiologists, most of whom joined the Society (Figure 1), and who produced a great amount of research, largely paid for by federal appropriations.

Gibbs served as editor-in-chief of *Plant Physiology* during this entire period. His appointment was discussed in the previous chapter, including the constitutional changes giving him greater independence in editorial board appointments (there is no record of the executive committee ever challenging his selections). Starting with his first year, 1963, Gibbs faced a 25 percent rise in manuscript

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submissions which greatly increased printing costs and the burden of manuscript reviewing and processing. The growth and financial data discussed in the previous section cover the essentials of paying the bills—they were met with the exception of a few stunning deficit years. Gibbs's approach to the work load is given in his first annual report (48), August 1963:

Our previous editor...was correct in predicting that our Journal is expanding. Fortunately for Allan Brown, the increase came after he left office. A total of 243 manuscripts were submitted which compares with 195 for the previous 12 months...

A 25% increase is welcome and indicates that publication in PLANT PHYSIOLOGY is prized...On the other hand, the increase means an increased load for the editor's small staff. A level of some 200 articles is the breaking point for a half-time editorial assistant and one-third time clerk-typist. I have had to employ temporary help...I have proposed an immediate allocation permitting an increase of editorial assistant time of approximately 8 hours per week...

The process of manuscript reviewing has been altered. While the previous editor called upon a large number of the Society to examine manuscripts, the present procedure demands more effort on the part of the editorial board. Essentially all articles received during the past year have been read by at least one associate editor. A few members of the Board have examined 15 manuscripts this past year.

In this report, Gibbs expressed appreciation to Dr. R. H. Barnes, Dean of the Graduate School of Nutrition, Cornell University, for moral and financial support. "The School of Nutrition provided the Editor with a typewriter, file cabinet and space for his clerk-typist." A penciled note on a copy of this report says, "School of Agric. would not give space nor would it handle funds (so MG has to keep personal bank account)." According to John F. Thompson, who had been appointed assistant editor, Gibbs did not get along with the head of biochemistry, who "put road blocks in the way of Marty's taking the editorial job, but higher administrators in the College of Agriculture helped Marty get the space he needed to run the editorial offices" (49).

The following year (1964) Gibbs moved from Cornell to Brandeis University. Jerome A. Schiff paved the way by making arrangements for setting up a university account, funded by ASPP, from which Gibbs could pay salaries and buy supplies (50). Gibbs's first task at Brandeis was to get more reviewers and change printers (51):

The increased number of manuscripts has placed a heavy burden on the 15 editors. It was primarily for this reason that I recommended to the Society that the Board be increased. In addition, plant physiology has become so splintered that it is difficult for a group of this limited size to represent the various fields...

During the year all Journal issues but one (January) have appeared in the same month as the date of issue. The delay...was brought about by the

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rather sudden closing of Craftsmen, Inc. in November. We lost the dedicated services of Mr. Wylie. The parent company suggested that we move our operation to Business Press, Inc. in Lancaster, Pennsylvania [Printing Corporation of America owned both Craftsmen and Business Press]. The editor is grateful to Mr. John Houck, the plant superintendent, for the relatively smooth transfer. With the transfer of PLANT PHYSIOLOGY to the Lancaster plant the Journal returns to its birth site. In fact, the present plant superintendent's father supervised the operations during the early years of PLANT PHYSIOLOGY...

Following this, Gibbs announced the appointment of eight additional editorial board members as permitted by the revised constitution (Bulletin No. 22). He then took up the costs of publication, and presented a \$54,140 budget for 1964-1965 that "provides for a full-time editorial assistant and a part-time clerk-typist." He ended with, "The upward trend in the costs of the Journal may result in a deficit [it did]. The Editor recommends to the Executive Committee that it is imperative to look into the financial status of *Plant Physiology*."

His recommendation got results. A financial status committee that included both Gibbs and Klein, chaired by J. L. Liverman, was appointed by president Melvin Calvin. It recommended increases in dues and subscriptions, and the introduction of page charges (52), all of which were done. The page charge [\$25] was announced and explained in the January 1965 issue of *Plant Physiology*: "Acceptance of the page charge is voluntary...sponsors of research consider payment of a portion of the expense of publishing a report to be part of a project's cost...Whether or not the charge will be accepted will have no bearing on publication."

However, voluntary page charges were not enough to compensate for the continual expansion of the journal, and 1966-1967 was another deficit year. Klein reported in 1967 that "page charges had lagged below 70 percent return," and the executive committee "agreed that the page charges would be considered mandatory" except in hardship cases (53). Subscription rates were increased again. And so it went, a continual, but successful, tussle to meet publishing costs. Gibbs was never reticent about demanding the resources for a quality journal.

To accommodate the greater submissions, Gibbs increased the number of issues and the number of reviewers (he continued the policy of having editorial board members review all manuscripts unless there was need for a specialist not on the board). In 1966 the journal was issued monthly except July and August, and the editorial (review) board was increased to 26 members. Also, after a year with Business Press, Gibbs changed printers to D. H. Conover Press—back to Kutztown, with Nick Wylie—where he was able to obtain redactory services, thus reducing mailing time and the work load in his office (54):

Manuscripts are being published 5 to 6 months after submission...Credit for rapid publication primarily is due to the editorial board for response to duty. The new publishing schedule (10 vs 6 issues) is partly



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responsible. Another possible aid in shortening the time of publication is the moving of the redactory service from the Brandeis campus to the D. H. Conover Press. Erma Bond, a long-time employee of that firm, has replaced Nancy Wolfers as editorial assistant. By having this service located at the press, numerous mailings between my office and the printer have been eliminated. Recent expansion of the D. H. Conover Press is noted and could result in a shaving of the interval between submission and publication. My office is indebted to Mr. H. N. Wylie, superintendent of D. H. Conover Press for his continuous support and deep interest in PLANT PHYSIOLOGY.

It is probably worth noting here that Gibbs had been cautioned about Conover Press by W. L. Conner, president of Business Press. In a letter of February 5, 1965, he wrote Gibbs (55):

John Houck...found you have intentions of going to the shop in Kutztown where Nick Wiley works...Just as you do, we have a lot of real respect for him,—in fact, offered him a job here on the closing down of the Craftsmen plant. But he disliked exceedingly leaving Kutztown, and so stayed there with this Conover firm.

We understand the latter's equipment, however, is very, very limited. But possibility Nick may be getting a local plant to help with the work...

Give Nick the chance (it's fine of you, really, to observe this loyalty). But, if he or his plant do get in difficulties at any future date...please again call upon us.

In 1967 Gibbs went to 12 monthly issues. The January 1967 issue listed J. A. Schiff, Gibbs's colleague at Brandeis, as assistant editor and Erma Bond as editorial assistant. Schiff's principal duty was to distribute manuscripts and look after the office when Gibbs had to be absent (Gibbs, personal communication). There were 32 reviewers listed on the editorial board. Nine months later, following the annual meeting, there was a sudden expansion of the editorial board—four associate editors (L. Bernstein, J. van Overbeek, J. E. Varner, J. A. Schiff) and 42 "assistant editors" (members of the editorial review board) appeared on the masthead. Appointment of the associate editors proceeded from Gibbs's plea at the 1967 annual meeting in College Station, TX. He noted that in a span of five years "there has been a two-fold increase in every criterion for growth," and he went on to introduce a plan for reducing his increased work load (53):

I must point out once again that this rather large increase has created some difficulties in my office. Very soon a reappraisal of the duties of the office of Editor-in-Chief must be considered. One possible solution is a sub-dividing of part of his duties among two and perhaps three Associate Editors. Each of the Associate Editors would submit papers for review and would be responsible for the final decision on manuscripts in a particular field of specialization. By such a procedure, a large share of the submitted manuscripts would be

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completely dealt with by the Associate Editors. All editorial correspondence with the D. H. Conover Company would remain with the Editor-in-Chief.

Appointment of three associate editors was approved, and \$4500 was budgeted for their stipends and expenses (53) (since Schiff was already serving, the total came to four). Budget adjustments were made for extra editorial and business office expenses: "Projected income was increased by changing the subscription price to \$35 and by moving reprint sales from the printer (who has sold at or below cost) to the executive office with the addition of a small overhead."

This report on meeting activities was not published under "News and Notes" in *Plant Physiology* as had been the custom for many years, but in a typed and reproduced newsletter dated November 1967 (53). Newsletters listing job opportunities, to be issued by the secretary in May and November, were authorized at the 1966 meetings (54). The following year the responsibility was transferred to the executive secretary-treasurer (53). Hence, the 1967 journal was cleared of its newsletter functions except for meeting or symposium notices and section reports—and these were gone in 1968. Earlier the obituaries had been reduced to a notice saying, "The Society regretfully reports that the following members are deceased...(1)" These economies saved space in the journal and, as mentioned in the previous chapter, there was a trend toward elimination of Society affairs from the journal.

At the same time that reporting of Society affairs was diminishing, Gibbs undertook two projects which increased the amount of research printed. The first was issuance of a memorial issue of *Plant Physiology* for David P. Hackett, a much respected plant physiologist at the University of California, Berkeley, who had been mysteriously murdered. The thick November 1965 issue had an introductory biography, photograph, and publication list of Hackett, followed by 49 invited papers (314 pages) from his colleagues and researchers with similar interests. These invited papers were reviewed, however, and a few were rejected (Gibbs, personal communication). Gibbs added that the idea of a memorial issue came from several sources, and under the tragic circumstances it seemed appropriate.

As might be expected, the Hackett issue brought forth suggestions for other memorial issues, and these became difficult to handle. When Gibbs did issue them, it was in a subdued fashion. The memorial issue for Bessel Kok consisted of 12 invited papers carried in the back of the April 1980 issue (the issue had a total of 35 papers); that for Noe Higinbotham was 16 invited papers printed in the back of the April 1981 issue (the issue had a total of 51 papers). Neither carried a dedication or eulogy or an identification on the cover; a simple footnote to the title identified the paper as a memorial. (Brief biographies appeared in newsletters.) It was an awkward matter to deal with—who merits recognition and who does not?—and seems to have been quietly dropped.

The other special issue was printed and bound separately as Part B of

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Volume 43, No. 9, 1968. These were papers given at a symposium on leaf abscission held at Fort Detrick, MD, April 8-9, 1968. The printing was paid for by the U. S. Army, which sponsored the symposium. At this time, of course, the Army was interested in defoliating the forests that hid the Viet Cong. Like the memorial issues, this type of ancillary publication by the journal has disappeared. Symposia are now published separately from the journal (see below).

Once authorized to do so, Gibbs steadily increased the editorial staff of the journal. In 1970, when printing was transferred to Waverly Press, there were 65 reviewers on the editorial board, three associate editors, and two advisory editors (Schiff was now one advisory editor, and George M. Cheniae, working in the Baltimore area and functioning as liaison with Waverly Press, was the other). In 1975, there were 79 reviewers, Higinbotham replacing Bernstein as associate editor; in 1980, 121 reviewers and five associate editors (Dainty, Morgan, Nelson, San Pietro, Skoog); in 1985, 199 reviewers and seven associate editors (Black, Chrispeels, Dainty, Daly, Levings, Morgan, Preiss), with Sophie R. Harrison listed as assistant to the editor-in-chief. The journal has not lacked for willing hands. To thank them, Gibbs established a tradition of a Society-sponsored editorial board dinner, complete with preprandial cocktails, as the occasion for the annual board meeting (business was a brief, frequently humorous, talk from the editor-in-chief). Earnest planning for the journal was (and is) done at a January conference with the associate editors, initially held at College Station, TX, but transferred to Riverside, CA, in 1980.

The addition of associate editors worked out well. As an aside, but relevant, this letter from Russell L. Jones to Gibbs is quoted (56):

This letter will probably come as a surprise to you since I imagine that most people write to complain. During the past two years or so I have had many dealings with Page Morgan in his capacity as Associate Editor of Plant Physiology, and in my capacity as Editorial Board Member as well as a contributor. I have been impressed by his work. He is a demanding individual and he insists that both reviewers and authors toe the line! I think Page should be congratulated for his work which will surely improve contributions to Plant Physiology in the growth regulation and development areas.

Beginning around 1967, troubles began to appear at Conover Press. That year Klein reported that "\$21,930 from [the Society's] reserves had to be advanced to the printer towards issues in press, but the rapid expansion of the journal necessitates greatly expanded operating capital for the printer. The [executive] committee authorized future advances up to the costs of two issues" (53). "Expanded operating capital" was a euphemism for cash to meet payrolls and buy paper. Business was not being handled well at Conover Press, but since the printing and redacting were well done and largely on time, Klein and Gibbs decided to help the press get on its feet (Klein, personal communication). By late 1969, however,

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Conover Press was headed into bankruptcy, and if it had not been for a warning from Mr. Wiley the galleys for the last two issues of 1969 would have been locked up with other assets of Conover Press. Klein wrote the following reminiscence of this stirring event in a letter to Gibbs upon Gibbs's 25th anniversary as editor (57):

The plant was adequate, Mr. Wiley well-recommended and experienced, the publisher young and hungry. And so it was that we went to Conover Press. I can still recall the smells of the ink and see the old gas-fired dryer on that big press.

Those were the exciting days. We met every month or so in Kutztown with Mr. Wiley, and occasionally with the Conovers. Mr. and Mrs. Conover were fairly lavish hosts, taking us to lunch at famous Pennsylvania Dutch restaurants (those were the days before ASPP expense accounts) and entertained us a couple of times at their very old, restored country manorhouse. The Journal was back on schedule and coming along very well.

Unfortunately, the Conovers were not. Mr. Wiley, who had always our interests in mind, advised us that Conover credit was no longer good. We had then to buy our own printing paper with cash in advance. There began a search for another printer.

We had investigated a number of printing houses and, after serious consideration, had agreed on Waverly Press in Baltimore. Not only had they offered a reasonable contract for printing and services at their modern plant, but also an unassailable reputation as printers and publishers of medical books and journals.

The day came when Mr. Wiley telephoned to say that not only had Conover employees been tendered bad checks for wages, but also, FICA and perhaps other taxes were in arrears. By that time, I think you were at Brandeis. We all hauled out of bed before dawn and drove to meet in Kutztown before 9 a.m. The Waverly truck, with Mr. Wiley's assistance, loaded the galleys for an issue and a half of the Journal just about thirty minutes ahead of the IRS padlocks on the plant.

I must point out that at the next Annual Meeting, you proposed the modest bonus that was approved for Nick Wiley, who was left with nothing by Conover Press and who had done the Journal exceptional service. This is just one instance of the many times you demonstrated your keen sense of fair play and warm sympathy for those who deserved it...

The galley rescue mission began the very happy association with Waverly that continues on...

The minutes of the 1970 executive committee meeting in Bloomington credit Klein with the motion to give Wiley \$750 in recognition of his services during the transfer of *Plant Physiology* from Conover Press (10), so Klein must have made the motion based on Gibbs's proposal. Gibbs's 1970 annual report includes recognition of Wiley's efforts (10):

Here I must record my warmest appreciation to Mr. Harry N. Wylie of the Conover Press, who was a "friend" to our Journal during the Kutztown years. Without his strong assistance, the last issues of 1969 would still be in limbo.

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Immediately following the Christmas holidays, November and December galley plates (some 4000 pounds) were crated, moved to Baltimore, corrected there and, with supervision by Waverly Press, Volume 44 was completed.

There appear to have been no problems with redactory service or printing at Waverly Press—a very happy association, as Klein put it.

Elimination of page charges, which reduced income, plus a much larger printing bill, caused a deficit in 1975 (Table 18). Costs had to be reduced, and Gibbs introduced a requirement for manuscripts with camera-ready copy of tables. Typesetting tables at the press was a major expense compared to the printing of figures, which, as camera-ready copy, were ready for photo-offset printing. Waverly furnished a detailed set of instructions for typing clear camera-ready tables suitable for single- and double-column reproduction (58). Authors had difficulties meeting these, and even when they did the printed papers looked a bit shoddy. It was not a popular economy, and in August 1979 Gibbs wrote Noggle (59):

Perhaps it would be appropriate to state in a forthcoming issue of the Newsletter that forthwith tables in PLANT PHYSIOLOGY will be typeset. Therefore, it is requested that authors submit all tabular information with double-spacing. I sincerely believe the Newsletter is read more carefully than is the Instructions to Contributors section in PLANT PHYSIOLOGY.

Another innovation was elimination of galley proofing of papers by the author. This is best explained in Gibbs's 1977 report to the executive committee (17).

Hitherto, authors were responsible for reading of galley proof against the redacted manuscript. The cost to authors for alterations either because of faulty proofing or second thoughts between submission of revised text and printing of galley have tended recently to become unreasonable. Unbeknownst to many authors is the high cost of additions or corrections to the galley sheets. Apportioning financial responsibilities to editor, printer and author, at times led to a lively correspondence. Administration became a nuisance to both editorial and business offices. The decision was made in May 1977 to relieve the author of the opportunity to alter the galley proof by having it read in my office. Under the present arrangement with the Press, authors have their final input at the redacted manuscript stage, namely, the step immediately prior to the setting of the galley. Placing the responsibility of proofing galley and pages in the editor's office will result in a financial benefit to author and less drudgery elsewhere.

"Instructions for Contributors" in the July 1977 issue of the journal states, "Authors are responsible for proof reading original redacted manuscripts...The Editor-in-Chief is responsible for reading the galley and page proof." The July 1981 issue reverses this, saying, "Authors are responsible for proofreading original galley...The Editor-in-Chief is responsible for reading page proof." The reasons for the reversal were increased workload in the editorial office, especially after editorial

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assistant Sophie Harrison had to restrict her working hours, plus complaints from members who wanted to do their own proofing, especially after an error had slipped through (Gibbs, personal communication).

Gibbs was always sensitive to any restriction on submission of manuscripts. The October 1984 *Newsletter* (39) on the annual meeting in Davis, CA, reported this item: "Dr. Gibbs questioned whether scientists submitting papers to *Plant Physiology* should be members of the Society. The current policy is about 1 1/2 years old. He would like to delete that requirement from the general information page of *Plant Physiology*. Dr. Gibbs feels that this will attract more papers from developing countries." The executive committee approved on the spot.

The same issue of the *Newsletter* (39) reported that at the trustees meeting Gibbs suggested writing a history of the Society: "Dr. Gibbs proposed funding a manuscript on the history of ASPFP to be published in *Plant Physiology*. Discussion followed on who the best person would be to author this. The Board approved the \$15,000 budgeted figure." With one eventual change—published as you see here, rather than in the journal—this history was also approved.

The February 1979 *Newsletter* informed the membership about how changes in the copyright law would affect their manuscripts (60):

Assignment of copyright - Under the old (1909) law, the submission of a manuscript to the Editor of a journal carried with it the assignment to the publisher of the author's copyright. Under the new law, the assignment must be in writing by each author, or the senior author acting as agent for the other authors. Starting in January 1979 upon receipt of a manuscript, the Editor-in-Chief sends a form, Assignment of Copyright, to the Corresponding and/or Senior Author. This is to be signed and returned to the Editor-in-Chief. If the manuscript is not accepted by *Plant Physiology* the transfer of copyright does not take effect.

Photocopying of articles - The second part of the new law deals with photocopying of articles...Congress has made it clear that it wants to assure adequate access to copyrighted works. Thus, the new law states that supplying a library patron with a single photocopy for his personal use in scientific research is permissible as fair use, but that systematic photocopying is an infringement.

An explanation follows of the printed fee code, and on payment of the fee for multiple photocopies—50 cents for *Plant Physiology* (later \$1)—to the Copyright Clearance Center, which after deduction of a service fee sends the balance to the Society. The publications committee recommended no photocopying charges for the first two years, accepting assignment of copyright by the corresponding author, and authorization of reproduction by the editor-in-chief (23). A few hundred dollars a year were realized from photocopying for distribution to classes and laboratories. Assignment of copyright was not required of manuscripts submitted from foreign authors or federal laboratories.

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Taken as a whole, it is obvious that *Plant Physiology* prospered in this period—and it continues to do so. It is an international journal with up to one third of the submissions from outside the U.S.A. It is an attractive journal: "In the National Composition Association's Annual Typographic Awards competition, the journal *Plant Physiology* has been selected as one of the best publications in existence today for typographic design, layout, clarity and readability" (61). The membership considers it to be the premier journal in its field; even with allowance for bias this seems to be true. At least no journal of its kind has a better reputation, and it has an unexcelled publication rate. While numbers in themselves do not denote quality, authors tend to submit their papers to prestigious journals, and these journals show up with large and growing publication figures. Although the expansion of the journal was sustained by the economic and political milieu of this period, the papers were voluntarily submitted. Gibbs, like Shull, with long tenure as editor, has been influential in Society affairs. Shull was the father of ASPP, taking it and the journal through hard fights, hard times, and the dislocations of war, Gibbs worked at the other end of the scale, elevating and updating an established journal and providing counsel to the Society during a period of rapid expansion in technology, resources, and knowledge. Both individuals were needed.

In recent years, however, there have been some suggestions for improvement of the journal. These were voiced at the 1984 Davis meeting by the future planning committee (39) (Maarten J. Chrispeels, associate editor, chairman; Gibbs an *ex officio* member):

The Journal, under the editorship of Martin Gibbs, is an unqualified success. It gets fatter every year and the papers are generally of high quality. Yet *Plant Physiology* fails to attract the best papers in a number of emerging fields (plant molecular biology, cell biology, plant/microbe interactions, are examples). Reviewers should be asked to make a statement why a particular paper merits to be published in *Plant Physiology*. The emphasis should be on innovation and new approaches rather than on data collection. *Plant Physiology* need not be the New York Times of its field (All the news that's fit to print). The review sheets should be changed to reflect this new policy.

The Journal is urged to experiment with single-topic reviews (similar to the mini-reviews in *Cell* or the articles in *TIBS*). These reviews should be 2-3 pages long, with no more than 10 references, reviewing recent progress. Their purpose is to educate, and to draw in people who don't normally publish in *Plant Physiology*. We suggest that, initially, the associate editors be asked to commission two reviews each year. This will ensure breadth in the topics. Other people may have to be brought in to cover the emerging areas of plant biology in which the Journal is weakest.

The underlying point of these suggestions is that the science, and to some degree its reporting, is changing, and the journal needs to adapt. Present indications are that this is occurring, but that all the news worthy of print will still be printed.

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As noted previously, in 1967 the business office was given the job of publishing a newsletter. The directive arose from two concerns: editors wanted to limit the journal to research papers, and the members wanted an employment service—a periodic listing of job openings. There was also need to memorialize the lives and work of plant physiologists who had died, to record the accomplishments of those receiving awards, to provide details on the annual meeting, to publicize other meetings, opportunities for fellowships, research grants, etc.

Hiring in the early 1960s made use of letters, telephone, and the old-boy network to locate candidates. At one time Gibbs inquired of the Kleins about using blank pages in the journal for listing job openings. Winifred Klein replied that this was not practical; by the time the issues were received the jobs would be filled (62). "And add to that the fact that a good many of the employers who list with us do not wish their job openings published to so many people. We send to prospective employers the material deposited with us by candidates who seem to fulfill qualifications that are specified. No employers names or jobs are sent to candidates." After making alternative suggestions for blank pages, she adds, "In a word, a more permanent sort of material...After all, the journals are bound and kept forever, like immortal, aren't they?"

The Kleins considered that "the business office is the primary communications channel of ASPP in other than scientific areas served by the journal," and they set up a schedule for newsletters to correspond with other required mailings (63): "in October, a brief one with dues billing; in November; in February, with Nominations Ballot; in May, with Election Ballot." As an example of the service provided, in 1969 there were the following distributions to the membership:

1. *February newsletter*. Distribution of nomination ballot. Announcements of ASPP sectional meetings, ASPP and other national meetings, summer courses and seminars, job opportunities.
2. *May newsletter*. Distribution of election ballot. Job opportunities (in the future the office is to act as a clearinghouse, keeping lists for those interested). Plea for returned questionnaire sent out by the ASPP committee on public policy. Notice of services, summer courses, symposia and workshops.
3. *August newsletter*. Annual Report of the Executive Secretary-Treasurer (this may have been distributed at the annual meeting in Seattle, but it is included in the newsletter file). Comments on the growth of the Society with consequent demands on the business office (detailed), adding "we have achieved success to the point where we must adopt business methods and acquire or employ the expertise necessary to continuing." Listing of deaths. Detailed financial statement.
4. *September newsletter*. Notice of fellowships and job opportunities.
5. *December newsletter*. Announcement of national and sectional ASPP meetings, other meetings and symposiums, placement service ("Very few employ-



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ment opportunities have been submitted for circulation among the members. Almost a hundred members have registered for the mailing of the jobs available list"). Reports of ASPP sections. Minutes of the annual meeting in Seattle. An apology—"A routine reexamination of the 1969 mail ballot has shown that the amendment increasing dues to \$20, though favored by 710 out of 1121 voting, failed thereby to receive the necessary two-thirds of the votes cast. Unfortunately, this information came too late to stop the mailing of bills for dues at the new rate...Those who have already paid at the higher rate will have the extra payment credited to their next year's bills."

This is a fair sample of the nature and content of the newsletter throughout this period. Listing of job opportunities was discontinued for few years after this "because a) there were no jobs to list, b) few people seemed to use the service, c) some of the jobs were culled (with permission) from the placement service of another organization, and a large number of the positions listed were already filled before publication time" (64). A placement service was maintained instead. Members looking for jobs filed copies of a resume with ASPP, which sent them out as employer inquiries were received. It was difficult, however, to get prospective employers to register their openings—pleas in the newsletter had no effect.

What did get a response was the requirement under the Fair Employment Practices Act that positions paid by federal funds be broadly advertised. In 1976 the newsletter renewed its no-cost job listings, and has continued to publish them, as many as 48 in an issue.

As the business office expanded, the newsletter became a little thicker and glossier. The issue of May 12, 1976, designated Volume 3, Number 3, was the first issue numbered; extrapolating backward, Volume 1, Number 1 was that of January 1974 (unnumbered) announcing the appointment of Houston Baker as business executive. The formal title, *ASPP Newsletter*, did not appear as a masthead until Volume 5, Number 1, February 1978, and under this title, with small alterations in type size, a second class mailing permit was obtained (23).

There was expansion in news coverage. As an example, the issue for February 1979 contained in addition to the item on copyright (60), articles reporting an invitation from ASHS and ASPP to a Chinese agricultural delegation to attend the Columbus meetings; plant physiologists on the Washington scene; commentaries on the Office of Technological Assessment and the 1980 Federal budget; creation of the Division of Biological Energy Research in the US Department of Energy; news from NSF; a tribute to Johannes van Overbeek on his retirement; the NATO Advanced Study Institute on Plant Regulation and World Agriculture; a memorial to William J. Robbins; announcement of the Fulbright-Hays awards; ASPP section news; annual meeting information; dedication of the Boyce Thompson Institute facilities at Cornell University; ASPP suggestions in response to a UDSA request for identification of important research areas (membrane function

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and control, plant hormone action, disease resistance, environmental stress, cell-cell interaction systems); positions available; recent articles of interest; new book titles of interest; other meetings.

Volume 12, 1985, had six issues, each of which carried a list of positions available. Among other items Volume 12 contained a memorial for C. B. van Niel, restoration of the Stephen Hales gravesite, the program for the annual meeting at Brown University in Providence, RI, comprehensive minutes and reports of that meeting, election results, the auctioning off of the old barn, the resignation of Catherine Mitter as business manager, and the appointment of her replacement, Helga Broer. The October issue carried a final and encouraging message from Chasson on the state of the business office and the Society—progress had been made in major areas, all signs were good. The December issue advertised for his replacement as executive director, whose primary functions were to include “coordination of the Society’s annual meeting, publication activities, and Society committees: administration of the national headquarters; liaison with Society members, other societies, government agencies, industry and the public.”

As discussed in Chapter 4, the monograph board became inactive, and in the revised constitution of 1964 it was no longer carried as a standing committee. There remained, however, an undercurrent of feeling that the Society should publish monographs on physiological topics, and this led to appointment of a committee to investigate what could be done. For the 1971 Asilomar meeting, committee chairman Israel Zelitch reported (65) that “if the Society arranges for suitable manuscripts, publishers would be willing, in addition to the usual royalties to the authors, to make an arrangement by which members could purchase these volumes at a reduced price; and the Society would receive a fee for each volume sold.” Cleland proposed appointment of a standing monograph committee to negotiate a contract with a publisher and then solicit and review manuscripts; the proposal was approved.

The following year the committee reported (66) that a three-year contract (67) had been signed with Academic Press. The committee was to “recommend authors to the publisher, who will then commission manuscripts deemed suitable.” The authors were to receive the usual royalties and rights, but the Society was to receive an honorarium equal to 10 percent of the royalty. Members, ordering through the Society, would receive a prepublication discount of 30 percent, and 25 percent after publication. “One book has already been proposed to the publisher...which if accepted, as is likely, should be finished in the summer of 1973.”

It was not. Getting books written turned out to be the difficult part. The committee could negotiate an agreement for a monograph, but it could not enforce it. Authors-to-be were busy with teaching, research, or administration, with some time for the family. Time for writing could not be found—it had to be made, and the commitment was not always adequate for the task. And for those who were

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committed there was strong competition from commercial publishers. Years went by and no monograph appeared.

Meanwhile, in 1977 a constitutional amendment established a publications committee to "advise" on all non-editorial matters of Society publications (17). The 1977-1978 constitution (Bulletin No. 32 ) reads:

Article IX-6. The Publications Committee shall consist of three members appointed by the Executive Committee. Appointments shall be for three years with annual retirement of one member; the senior appointee shall be chairman; no appointee shall be an editor or a member of the editorial board of any Society publication. The committee shall advise the Society on all non-editorial aspects of publication, and in consultation with the Editor-in-Chief and the Business Executive shall submit the annual publishing budget. The committee is also responsible for nomination and review of appointment of the Editor-in-Chief of Plant Physiology and of any other Society publications.

The chairman of the publications committee was made a member of the executive committee and sat with the board of trustees at its annual budget meeting. However, it does not appear that the committee had the dominant voice in planning the publications budget. Gibbs, with some input from the business office, still determined what the budget request for *Plant Physiology* would be. "It [the budget] was prepared after consultations with the Editor-in-Chief and the Business Office... The details of the actual preparation were very efficiently handled by Ray Noggle and Pat Richter" (24). There is no record that the appointment of the editor-in-chief of *Plant Physiology* was ever reviewed. Some reports show how the charge to "advise the Society on all non-editorial aspects of publication" was interpreted. In 1980, the committee advised the board of trustees that it was "unenthusiastic about publication of symposia, one reason being that a large number of symposia volumes are already being continuously published, but was strongly in favor of workshops and their publication" (24). The committee recommended that the Society sponsor workshops (up to \$5000 each) as a means of stimulating and assisting progress in plant physiology, and presented information on options for publication. (At the executive committee meeting the committee was asked to get additional information on possible topics and similar activities elsewhere. Later a workshop committee was formed, but the Society did not initiate any workshops.)

Under miscellaneous advice given was approval of memorial papers in *Plant Physiology* for Bessel Kok and Noe Higinbotham and for reproduction of journal papers in *Potash Reviews*, and disapproval of printing condensed versions of journal papers in *BioScience* (24).

Details are lacking, but in the early 1980s the publications committee seems to have incorporated monographs as a subcommittee. This is shown in the altered composition of the publications committee as described in the 1984 constitution (Bulletin No. 38):

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Article IX-6. The Publications Committee shall consist of a chairman, an associate chairman, and the chairman of each committee concerned with professional publications by the Society. These committees shall be considered subcommittees of the Publications Committee. The Chairman and associate chairman shall each have two year terms of office, at the end of which the associate chairman shall succeed to the chairmanship. The new associate chairman shall be appointed by the Executive Committee, and the members of the subcommittees of the Publication Committee will be appointed by the President...

The balance of the article restates the previously described advising, budgeting, and editor reviewing responsibilities. The important point is that the publications committee now had ultimate responsibility for the monographs. This action was taken just as the first monograph appeared, with a second definitely underway (Table 21).

The publications committee found a useful role in arranging for rapid publication by the Society of the proceedings of symposiums and workshops. Of growing importance in plant physiology, as in other disciplines, were conferences held on topics of current interest. These were arranged by universities, institutes, or agencies to bring together specialists for a few days of intense discussion of research in rapidly advancing areas or to explore a promising field. The participants prepared papers for the meeting (symposium), or they carried on impromptu discussions of a topic introduced by an informal presentation (workshop). Proceedings of such meetings usually have short lives, soon superseded by journal papers and formal reviews, but for a few years they are valuable as guides to current thought in a problem area. What is needed to exploit their value is rapid publication in an inexpensive form—quick and cheap paperbacks or softcovers. Commercial publishers sometimes sponsor publication of proceedings, but their books are priced like enduring references, which they seldom are.

For one or a few individuals to gather materials and write a monograph requires enormous labor. As the monographs committee had learned, few plant physiologists are prepared to make the sacrifice. A symposium contribution, on the other hand, is short, is taken from current research, must be prepared for the conference anyway, and provides an opportunity to establish priority: no problems, except for laggards in delivering manuscripts.

In August 1985 the publications committee put the following statement in the *Newsletter* (68):

Recently several members of the Society have inquired about the policies and operation of the ASPP publishing efforts for symposia, workshops, and other conferences. The intent of the Publications Committee... is to provide a vehicle for the published record of significant meetings for the membership, and others, at an affordable price. The time scale the Publications Committee insists on is six months between the date of the meeting and receipt of material

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Table 21

Books Published by American Society of Plant Physiologists

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- Plant Peroxisomes*, by A. H. C. Huang, R. N. Trelease, T. S. Moore, Jr. ASPP Monograph Series, Academic Press, New York, 1983.
- Mitochondria in Higher Plants: Structure, Function, and Biogenesis*, by R. Douce. ASPP Monograph Series, Academic Press, New York, 1985.
- Partitioning of Assimilates*, Summary Reports of a Workshop. H. J. Kende, J. A. D. Zeevaart, eds. 1980, 23 pp.
- The Energetics of Biological Nitrogen Fixation*, Summary Reports of a Workshop. K. R. Schubert, ed., 1982, 32 pp.
- Crassulacean Acid Metabolism*, Proceedings of the Fifth Annual Symposium in Botany, University of California, Riverside. I. P. Ting, M. Gibbs, eds., 1982, 316 pp.
- Biosynthesis and Function of Plant Lipids*, Proceedings of the Sixth Annual Symposium in Botany, University of California, Riverside. W. W. Thompson, J. B. Mudd, M. Gibbs, eds., 1983, 296 pp.
- Structure, Function and Biosynthesis of Plant Cell Walls*, Proceedings of the Seventh Annual Symposium in Plant Physiology, University of California, Riverside. W. M. Dugger, S. Bartnicki-Garcia, eds., 1984.
- The Biology of Desert Plants: Opportunities and Needs for Basic Research*, Conference Report. J. A. Berry, I. P. Ting, E. Zeiger, eds., 1984, 35 pp.
- The Molecular Biology of Plant Hormone Action: Research Directions for the Future*, Workshop. L. N. Vanderhoef, T. Kosuge, eds., 1984, 40 pp.
- Inorganic Carbon Uptake by Aquatic Photosynthetic Organisms*, Proceedings of an International Workshop on Bicarbonate Use in Photosynthesis. University of California, Davis. W. J. Lucas, J. A. Berry, eds., 1985, 495 pp.
- Exploitation of Physiological and Genetic Variability to Enhance Crop Productivity*, Proceedings from Symposium Honoring Dr. Richard H. Hageman, University of Illinois, Urbana. J. E. Harper, R. W. Howell, L. E. Schrader, eds., 1985, 92 pp.
- Regulation of Carbon Partitioning in Photosynthetic Tissue*, Proceedings of the Eight Annual Symposium in Plant Physiology, University of California, Riverside. J. Preiss, R. Heath, eds. 1985, 396 pp.
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for publication...These publications...are to be regarded as current state of the art in their respective topic areas...and would in the natural course of development be superseded by research developments. Hence the effort at rapidity of publication and affordability.

[It was decided] that all publications covered in this category would have to be self-sufficient. This is accomplished by two kinds of subsidies. The first is the contribution of time and effort by the authors, the editors and members of the Publications Committee in bringing the material to a publishable state. The second is a provision of funding for publication in connection with the support of the meeting by host institutions, federal agencies and industry. The Society...has supported the publications by lending its name and staff time in arranging for publication and providing the distribution mechanism.

The sales of some of these publications (some are distributed gratis) have accrued a balance...the intent has been to plough those funds back into

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the partial support of future workshops...The membership has not responded as actively as anticipated in proposing new meetings, but this may be a matter of lack of awareness.

In the same issue of the *Newsletter*, the publications committee reported on the publication of monographs:

The Publications Committee reviewed the Memorandum of Agreement between Academic Press and the Society. This was signed in December 1971, and has resulted in two monographs, one of which is in the final stages of publication. It was decided that the need for a monograph series as originally conceived is no longer required, and that the agreement be terminated. The Monograph Committee was consulted and the response from the chairman of the committee is available separately.

Activity has been increasing in the publication of symposia proceedings and workshop proceedings...Since last August two workshop summaries have been distributed and three symposium proceedings are being completed. It should be noted that the requests have been made to the Society and were not initiated by the Committee, nor have any been initiated by activities of the Workshop Committee...

To provide a more uniform format and more legible print, it was decided that the symposia publications be printed and not be reproduced from photoready copy, and that the pages not exceed 250. The Society, and not the editor, is now being billed by Waverly Press for the printing and handling costs.

With respect to the decision that the monograph series as initially conceived was no longer required, Jack C. Shannon, chairman of the monographs committee, reported that eight monographs were in various stages of preparation, and a second monograph had just been published (68). "Ms. Jean Thompson Black, Senior Editor with Academic Press, would like to see the Series continued. However, she would like for us to consider replacing the Monograph Committee with a Series Editor who would serve for an indefinite period." (Looking beyond 1985, this was done. Also the workshop committee was disbanded. ASPP did not have to organize workshops and symposiums—organizers came to the Society.)

Once the publications committee found useful work to do, the Society publication list started growing. Table 21 lists the two monographs produced through Academic Press, and the symposium/workshop publications edited by participants and printed by Waverly Press.

A recent development in the problem of getting authoritative reviews, monographs, and commentaries to inform the non-specialist has been to fragment the subject matter into very specific topics—almost specific questions—which can be reviewed in four or five pages. These are called "minireviews," and generally deal with the research of only a few laboratories. At the 1985 annual meeting in Providence (68), the future planning committee recommended the publication of minireviews, as it had the previous year (39). The executive committee decided that

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*Plant Physiology* should begin publishing four-page minireviews, with the authors paying the usual costs. Whether the minireviews will have any effect on the writing of monographs is yet to be seen.

As discussed at length in chapter 4, the Society had constant requests for a career bulletin, a minor publication but of importance in establishing a public image. These pamphlets were written for prospective students and their advisors, and they reveal much about how plant physiologists saw themselves and their profession.

In February 1968, president Andre T. Jagendorf wrote to Carl A. Price, chairman of the committee on professional status and training—and on sabbatical leave in Switzerland—inquiring about the progress in writing a new career pamphlet (69):

As far as the career pamphlet is concerned, everybody is terribly interested. I presume you are waiting for the results of the last questionnaire to be tabulated, so that some statistics can be put in...[Since you are in Switzerland] I would hope the rest of the committee can take over the job of tabulation immediately, in order to speed up the process of creating the Career Pamphlet...Certainly all of the current and recent officers of the society, and I am sure a major fraction of the membership, are very anxious to have an attractive and up to date pamphlet available in the very near future.

The questionnaire asked universities giving graduate training in plant physiology to give their areas of specialization within the field. Data also were collected on numbers of graduate students, their courses of study, their support, faculty numbers, and faculty salaries. Responses were received from 113 institutions, most of those offering M.S. or Ph.D. degrees or both in the field.

With Price out of the country, Jagendorf turned to Lawrence H. Weinstein of the Boyce Thompson Institute, a committee member, to get the work under way. Jagendorf wrote Price (70) in April 1968, "I wrote to Weinstein and Stout; Weinstein has never heard of any work that he was ever supposed to do, nor what is happening now; Stout simply hasn't answered yet...Weinstein has agreed to do whatever is possible, but felt he needed some local help; so I have [asked] Alva App to join the committee..." Later he adds, "would it be possible to authorize your secretary to start tabulating the results of the job questionnaire; or have her send the returns to the Boyce Thompson Institute for further processing...?" And then what seems an odd question: "Do you have any idea at all when you were first appointed to this committee, and how long the appointment was for? The only record I have ever been able to find is a simple listing of your three names. Also, if you know how long the other two members were appointed for I'd appreciate hearing about that also."

(These letters point up a problem of wider scope than writing a career pamphlet. Committee members were appointed from widely separate locations [Price in New Jersey and Switzerland, Stout in California], sometimes without

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evidence for any interest or experience in the task of the committee, frequently without a specific written charge. Further, no central record was kept of the appointment or charge. Communication had to be by letter or telephone, and seems at times to have been nonexistent. Not all members knew what they should be doing, and incoming officers did not always know either. Although there were notable exceptions, much committee work was not efficient.)

Details are missing, but after Price returned the pamphlet was written. In July 1969, Klein received a copy and wrote to Price:

I appreciated receiving the copy that you sent, and it now occurs to me that perhaps you are awaiting feedback before sending it off to the printer...I do not have any serious objections, of course, and you have done a fine job. Our stocks of the old pamphlet ran out some weeks ago, and [we] are keeping a card file of requests...

The material you have included is informative and comprehensive, and it is directed to the college level person. I am disappointed that there is not an exciting use of colors and that there are no illustrations, but it is understandable that costs were prohibitive. I am also well aware that I am in the minority regarding the "pitch." A thousand or so requests a year are received here in our office, almost exclusively from individual high school students and guidance counselors in high schools. Only rarely does there appear an inquiry from a college student, much less from a graduate student. The enclosed "Consider...PHYSIOLOGY" [apparently a pamphlet of another society] seems to me to be eminently appropriate from the angle of the kind of requests we receive. It contains several amusing and entertaining photographs and illustrations...

The minutes of the May meetings state that 12,000 copies of the brochure may be printed, and the approved budget allocation is \$2,500. We expect to send one copy to each member of ASPP...

The pamphlet, *Career Guide in Plant Physiology* (72), was letter-size (8.5 x 11 inches) with three pages of text incorporating two figures and one small table, plus five pages of a table giving data on graduate programs in plant physiology. As indicated in Klein's letter, it was clearly aimed at college students planning graduate work. The first line in the large table, for example, told one the graduate program in plant physiology at the University of Alabama was located in the biology department, and offered work in molecular, cell, organism-oriented, and environmental biology, with specialization in biochemistry, genetics, growth regulation, plant nutrition, photosynthesis, photobiology, developmental biology, algal physiology, marine biology, physiological ecology, and water relations. The small table gave average values of support for graduate students of plant physiology (26.2 percent were supported as research assistants at \$2,648 per academic year, 25.6 percent as teaching assistants at \$2,499, 18.4 percent had university fellowships at \$2,615, and the remaining 29.8 percent had outside resources.) One figure was a map showing the geographical distribution of plant physiologists in the USA



(largest number in the Pacific coast states, followed by the Midwest and Middle Atlantic states). The other figure was a bar graph displaying the annual incomes of plant physiologists (about 50 percent earned \$11,000-15,000, about 25 percent earned \$16,000-20,000).

The text was divided into five topics: (1) What is Plant Physiology? ("concerns the way plants create living matter from light, air, water and a few minerals..."); (2) Who and Where are Plant Physiologists? (serve to link basic biological research and agriculture, and are found in all major universities [two-thirds], agricultural laboratories [one-fifth], industry and private research institutes; 95 percent have a Ph.D.); (3) Training for Plant Physiology (for entry into graduate study take math through calculus, chemistry through organic, courses in plant biology and physiology; physics not mentioned); (4) Financial Support for Graduate Students (through the university or a foundation); (5) How to Apply for Graduate Training (look for excellence and a program of interest to you).

This pamphlet was in striking contrast to its predecessors in that it addressed college students, providing them with data that would help in choosing a profession. These are the students of primary interest to plant physiologists, for plant physiology is studied in graduate school; usually, no more than an introductory course in plant physiology is taken as an undergraduate. But as Klein pointed out, the pamphlet was not written or illustrated to capture the interest of high school students probing around for a career, yet it was high school students who wrote for information. Unfortunately, nothing has been found to indicate how the pamphlet was received or how useful it proved.

In 1983, a committee chaired by Frank B. Salisbury published a new *Careers in Plant Physiology* (73) pamphlet, 6 x 9 inches on glossy paper. It had the features that Klein wanted—colored pictures of plants and plant physiologists with plants, simple but informative explication, quotations from plant physiologists about the science—all easily understood and appreciated by a college-bound high school student. But there are no hard data, and a prospective graduate student will find little help beyond a list of universities employing plant physiologists.

The text is divided into eight short sections: (1) The Challenges ("Plant physiology offers the individual with this pioneering spirit an opportunity to experience the thrill of discovery"); (2) What is Plant Physiology? ("Physiology is the study of how living organisms function...The goal of plant physiology is to understand how plants work"); (3) Subfields of Plant Physiology (plant metabolism [biochemistry], water relations, mineral nutrition, growth and development, environmental physiology, genetic engineering); (4) What Does a Plant Physiologist Do? (teaches or transmits information and/or does research, receives a respectable salary); (5) Plant Physiology in Today's World (provides agriculture with valuable information); (6) Intangible Rewards (satisfaction with work, students, colleagues, travel, surroundings); (7) What Training is Required? (long list of essential science courses, foreign languages recommended [but no mention of the need for written

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English skills]; (8) Further Information (textbooks, pamphlets, plant physiologists, list of universities).

As with the other pamphlets, information is lacking on how useful this one has been. Pamphlets have always been in demand, and obviously fill some need, but there seems not to have been a study of what information is needed by the high school counselor and the student, and in what detail. The recruitment of able undergraduates obviously requires more factual matter. It is not certain that recruitment is desirable (since about 1970, openings in plant physiology have been limited) but detailed information is still needed for those attracted to the profession.

One other publication needs to be discussed, the biennial bulletin, and this is best done by quoting the Kleins' 1969 annual report (74):

Perhaps the biggest job of all is preparation of the Bulletins of the Society, more frequently called directories. The Directory is compiled biennially and contains lists of officers, representatives, committees and award winners; the complete Constitution...; an alphabetical listing of all members, with positions and addresses; a geographical listing of members; and on occasion, historical material about the Society. The Directory has traditionally been printed in the same size and format [and cover] as the journal, since some copies are bound with the journal.

A new edition is due in 1970, and present plans are to issue it in the early spring. Although our members seem to move and migrate like the birds and the fishes, there is a brief interval between the beginning of the winter semester and the close of the academic year when the movement slows. It is our hope this year to have an edition in the mail while at least 75% of the membership is at rest. We would like to have permission to change the format—the size and cover, at least, and perhaps, if the cost is not excessive, to have it printed by one of the photographic reproduction processes...It may be possible, with a little increase in cost, to produce an edition each year...

They got permission. Bulletin No. 25 (1970) was issued as a 6 x 9-inch light green booklet suitable for keeping by the telephone. Annual publication was instituted, with content as described by Klein. It remains a burden to prepare, not helped by members who are late in renewing their membership—how long does one hold up the directory waiting to learn if so-and-so still wants to be included as a member?

## Meetings

Table 19 lists for this period the meeting sites, affiliation with other societies in conducting the meetings, and the number of papers submitted for presentation at the meeting.

Meeting sites are identified as cities, but in all instances save one the specific location was a major university. A meeting site committee carried out the primary negotiations if these were not done by AIBS or some other meeting affiliate. The

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secretary and the business office made, or checked on, the detailed housing and program arrangements with the help of a local committee. As pointed out earlier, the membership when polled favored meeting at universities—less expensive, a familiar environment, and a chance to explore another campus. One exception was the 1971 meeting at the Asilomar Conference Grounds, Asilomar State Beach, Pacific Grove, CA. Asilomar was chosen over the University of California at Santa Barbara or La Jolla at the 1969 meeting, but the report (75) gives no basis for the decision, nor anything on the negotiations for the conference facilities. Obviously, a decision to meet in California had previously been made.

The minutes of this 1969 business meeting also reported (75), "Wayne McIlrath served as parliamentarian for the meeting. Jerome Schiff donated a copy of Roberts Rules of Order to the Society." As Schiff remembers it (personal communication), there may have been some dispute for which a parliamentarian and rules of order were needed. This appears to have been the first time in 45 years that a parliamentarian was appointed, indicating the *pro forma* nature of most business meetings (the previous year, 1968, there was a proposal for a parliamentarian, but no recorded action). By the 1974 meeting (46) it was established that "in general, all procedures not specifically outlined in the Society's constitution and by laws are governed by Roberts Rules." The inherent formality of the business meeting lead in 1976 to a call for a period of free discussion before the meeting (28): "A resolution was passed to schedule a one hour period preceding each annual Business Meeting to be set aside to discuss matters of general concern to the Society membership." Any activity here in subsequent meetings left no tracks.

More typical of the type of business conducted at business meetings is the following from the 1969 minutes (75): "A motion by S. French was moved, seconded and passed strongly urging that name badges be printed in type no smaller than 18 point Times Roman Bold (about 1/2")...that badges may be visible from a distance of 2 meters, or roughly 6 feet". It was customary to have name-and-place tags handed out at registration as an aid to remembering so-and-so from the last meeting. But names were often typed in pica, at the best, and recognition depended on standing close and quickly scanning the left lapel, which was a bit embarrassing. In practice this resolution was sometimes ignored; the secretary had hundreds of cards to prepare and only a typewriter with which to prepare them—this was before the days of word processors and laser printers.

For the first five years of this period, meetings were held under the auspices of AIBS, but in 1968 the Society in an experimental mood met independently at the University of Massachusetts, Amherst. The following was recorded from a joint meeting of the officers and trustees in May 1967 (2);

Results of the Society wide poll on future meetings were discussed. An AIBS sponsored meeting separate from the August meetings was agreed upon. A hotel meeting was ruled out and the following sites were agreed upon in order of preference for 1968: 1) Amherst, 2) Wellesley, 3) University of Maine, 4)

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Wesleyan. AIBS will investigate these sites for us...

In 1969, the International Botanical Congress will be held in Seattle. Societies have been specifically asked not to hold their meetings in Seattle preceding, during or following the Congress. AIBS will be meeting at Pullman, Washington that year. According to our constitution, however, a meeting of the full society must be held each year.

The November 1968 newsletter (76) reported a registration of 701 at Amherst, and "the returns from the survey sent out with the October dues billing indicate that [the meeting was] highly successful from almost every point of view. We owe much appreciation to Mrs. Ann Kulbach and Annie Laurie Adams of the Meetings Coordinator's Office of AIBS..." It was not an AIBS meeting, but it was AIBS-assisted and led eventually to ASPP breaking away from AIBS meetings.

Breaking away was by stages, beginning by meeting alternate years with AIBS. With 700 registrants, the Society had adequate numbers for independent meetings. A few physiologists still attended sessions of the Botanical Society and other organizations at AIBS meetings, but it was clear that most members were satisfied with a smaller meeting devoted to plant physiology. And working through a third party was not always the easiest way to set up a program.

The Society decided to meet in 1969 with the XI International Botanical Congress in Seattle, and contributed \$10,000 to its expenses (3), largely through contributions from members. The announcement said (77), "No ASPP contributed paper sessions; business meeting and banquet only." The abstracts published in the supplement to Volume 44 are papers given at sectional meetings.

The Society returned to AIBS for the 1970 and 1972 meetings. For the Bloomington meeting, secretary William Hillman wrote (30) "Dr. Williams [local ASPP representative] and I together are responsible for most aspects of the meeting within ASPP control...but for those things which go wrong we will blame, first, AIBS and, second, each other. One thing that is genuinely the responsibility of AIBS is the insistence on 2 x 2 slides only."

After the successful independent meeting at Asilomar, there was a tendency to be impatient with any flaws in AIBS programs. Secretary R. E. Cleland was not pleased with the way things were being handled for the 1972 Minneapolis meeting (64):

It appears that the early deadline set by AIBS will do little toward providing you with information about the program. Their preliminary program is a farce, giving almost no information except the fact that there will be a meeting. Their final program won't be mailed out ahead of time—you have to wait until you get there to see the whole program. Our abstract volume, due to appear by mid-July, will contain a complete ASPP program this time, including times and places (if AIBS lets us know about places in time). But if you are in a hurry to know when you are performing, send me a self-addressed card and I'll let you know...

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The abstract volume mentioned had by this time evolved into a booklet the same dimensions as the journal and suitable for binding with it. Members typed their abstracts within blue-lined borders in a prescribed fashion, and sent them to the secretary who organized them into sessions and delivered them to the printer for reduction and printing by photo-offset. Beginning in 1975, a preliminary program giving the sessions with papers by title and author was issued as part of a spring newsletter; the abstracts appeared later.

The 1973 meeting with the Canadian plant physiologists in Calgary was a pronounced success, and as shown in Table 19, meeting with the Canadians was twice repeated.

The independent meeting held at Ithaca the following year celebrated the 50th anniversary of the Society with a symposium entitled "Conceptual Developments in Plant Physiology, 1924-74"; the eight talks were published in a special gold-covered issue of *Plant Physiology*, October 1984.

The Ithaca meeting is remembered for a banquet that turned out to be a "carpet picnic"—fine food and wine, prepared by the hotel school at the Cornell Statler Inn, but with no tables and no chairs, just a carpeted hall. Registration had exceeded the capacity of the hall to seat people, so a buffet was planned, with people expected to stand about with a plate of food, talking and eating. But there were more plates, glasses, cups, and utensils than could be readily handled and, unlike most buffets, no table to carry them to. People solved the problem by sitting down on the carpet and spreading dishes about them. This sharpened the realization that the meetings were becoming too large for the traditional banquet. Banquets were dropped in 1978, and a social hour with drinks and snacks was substituted (23). The Hales or Shull award address, usually given at the banquet, was given separately.

At the Corvallis meeting with AIBS in 1975 two innovations in presenting contributed papers were introduced (78):

Presentation by Abstract Only. The Executive Committee voted at its last meeting to allow authors to submit for inclusion in the program, abstracts of papers which will not be presented orally...[they] will be grouped at the end of the program in which they most logically belong, and will enable authors...to bring their work to the attention of the membership.

Poster Sessions have been growing in popularity and in many instances may represent a better way to communicate science. Instead of preparing an oral report and slide presentation to be given in a specific 15-minute interval during the meeting, the participant in a poster session fastens up his graphs, charts and other data in a display area where those who are interested may examine them at their leisure. For a specific interval as printed in the program, the author stands by his poster to explain or discuss the data and their interpretation. The situation is informal, and allows leisurely discussion - in contrast to the strict time limit imposed on formal reports.

From this beginning, both poster sessions and abstract-only presentations have grown in popularity. In 1985 at Brown University there were 483 posters and

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118 abstracts-only out of 912 papers. The number of abstract-only papers has worried some members—since they can be cited they can be abused by claiming priority on research for which no one has seen the data, unlike oral and poster sessions. On the other hand, they do give those who cannot attend an opportunity to notify others of what they are discovering. Since abuse is potential rather than proved, the abstract-only category survives.

A letter from John W. Radin published in the July 1976 *Newsletter* provides an evaluation of the meeting abstracts (28):

I surveyed the entire program for good and bad abstracts. Of the abstracts for oral and poster reports, fully 19% used phrases like "...data will be presented" or "...significance will be discussed." In fact, three abstracts, all from fairly well-known labs, presented absolutely no data or findings whatsoever! In contrast, every one of the abstract-only reports was written properly, i.e., contained a premise, methods, findings, and conclusion (to the extent a conclusion was possible).

It is undeniable that early deadlines for submission aggravate the problem; however, the abstract-only reports were subject to the same deadlines. I ask you to remind the members of the ASPP that the Annual Meeting Supplement is a published document, distributed world-wide, and frequently referenced (see any issue of *Plant Physiology*). If an author treats his abstract as simply a "teaser" to attract listeners at the meeting, then he seriously dilutes the worldwide impact of the work.

Occasionally, there have been suggestions for having only poster sessions, but the more formal oral presentations are preferred by many members, and they provide excellent training for graduate and postdoctoral students.

The last meeting under AIBS auspices was in New Orleans, hosted jointly by Loyola and Tulane Universities. There were enough difficulties with meeting arrangements that at the business meeting a resolution was passed "that the ASPP not meet with AIBS in the future" (28). Despite a subsequent modification of this insensitive resolution, there were no more meetings with AIBS. At the same meeting, however, R. William Breidenbach, chairman of the meeting site committee, reported progress in arranging meetings with the Canadian Society of Plant Physiologists at the University of Wisconsin for 1977, with the Plant Growth Regulator Working Group at the Virginia Polytechnic Institute for 1978, with ASHS at Ohio State University for 1979, with the Phytochemical Society of America at Washington State University for 1980. So the Society was not being isolationist. The unusual antagonism which existed toward AIBS is difficult to explain. After all, ASPP was a member society of AIBS. There appeared to be a general lack of respect for AIBS. The report of Winslow R. Briggs, ASPP representative to the governing board of AIBS, at the 1978 Blacksburg meeting probably transmits the attitude of more objective members (23):

As far as the Society is concerned, the substance of [my] report is that AIBS is making strong headway in the public responsibilities field, is trying to

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reform its unwieldy governance mechanism to make it more responsive to society needs, and is generally a viable and functioning organization that is doing things in Washington for us...I strongly recommend that [ASPP] retain their membership in AIBS, and that the new Executive Director be instructed by the Executive Committee to get into and stay in closer touch with the AIBS Public Responsibilities Department than his predecessor did...It is also my feeling that the action of the Society in voting in New Orleans "never to meet with AIBS again" was rash and gratuitous and should be rescinded—not that I am recommending that we meet with them again, only that it removes a rather petty and insulting action from our books.

In response to this report the executive committee resolved, "The decision not to meet with AIBS is a recommendation and not binding" (23). A year later at the 1979 Columbus meeting it was resolved, "With the exception of our occasional meetings with other societies, the ASPP should hold its annual meetings alone" (29). And it has done so.

A feature introduced at the Blacksburg meeting (which actually involved a number of plant science societies) were workshops where six specific subjects were discussed. "The workshops were well attended and plans are under way to select topics for future meetings" (23).

Starting with the Columbus meeting in 1979, the number of papers given leveled off at about 900, with extra submissions when the meetings were held in Colorado and California. This leveling, like that in membership, suggests a maturing Society. As of 1985, a nation of 240 million supported about 2400 professional plant physiologists (students excluded), and one third to one half of these actively participated in the annual meeting of their society. (Registration in 1985 was 1445 including 210 family members; there were five symposiums, three minisymposiums, eight evening workshops, thirteen committees meeting [68].) Unless there is an unforeseen demand for plant physiology, these figures are not likely to change much.

There could, however, be a significant change in gender. For the first time, at the 1984 Davis meeting, there was a meeting scheduled specifically for women in plant physiology (79):

Well over 100 women attended. The women present were unanimous in desiring that the meeting be established as a permanent part of the yearly conference program and extending the meeting to two hours in order to provide a social time for women to get to know one another. A number of issues were aired (by women and men), including the need for on-site child care, the hardship of high membership dues, and the paucity of professional recognition and benefits for university senior research associates and part-time faculty...

Dr. Kathryn Edwards presented a summary report of the meeting of women at the ASPP business meeting. The request for a yearly meeting of women at the national conference was acknowledged. The society also agreed to help establish a Committee for Women in ASPP which would set the agenda for and facilitate the yearly meeting and which could assist the Conference

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Program Committee. Nomination requests and election ballots will appear in the ASPP Newsletter.

This report in the December 1984 *Newsletter* was followed by a nomination ballot for three coordinators for the 1985 Women in Plant Physiology (WPP) meeting.

Even the least observant attendee at the annual meetings of this period could see that women were increasingly represented among the nation's plant physiologists. Judging by given names, only 6 percent of the membership listed in Bulletin No. 22 (1964) were women. Twenty years later this figure was 16 percent (80), and, judging by the graduate students standing by the poster boards, increasing. With numbers come strength and confidence, and for the first time one of the "minority" voices so prevalent in the nation generally was introduced into plant physiology. Intrinsic to WPP is the belief (shared by some men) that gender unfairly restricts professional recognition and advancement of women in science, largely as a carryover from the male-dominated societies of the past. Some concerns requiring attention were given in the report of the 1985 meeting (80):

Women in Plant Physiology (WPP) met for 2 hours Monday, August 24, 5-7 pm, over dinner. More than 40 persons attended...

A motion to submit to the ASPP Executive Committee a request for the establish[ment] of WPP as an official committee of ASPP on the status of women in plant physiology was passed unanimously. This committee would serve as a vehicle between the women in plant physiology and the Society's Executive Committee. WPP will submit a formal request [at the 1986] meeting.

The age limitation for Society travel awards and the Shull Award was considered. The consensus was that the travel awards should be intended for up-and-coming plant physiologists, but that a specified time following the PhD rather than an age limitation be used to designate qualified persons.

Dr. Ellen Weaver presented a report on the status of women in the Society, noting that only two women have served on the Executive Committee since 1924, with Dr. Gantt [secretary] presently serving. Dr. Mary Helen Goldsmith was recently elected to serve on the committee...The Editorial Board presently boasts 23 females and 182 males, an 11% representation which nears the estimated 16% female membership in the Society. Approximately 5/31 session leaders have been women (16%) if one looks at 5 year intervals since 1975. Other areas of professional reward show a dearth of women. For example, only 1 woman, Dr. Birgit Vennesland, has received a Society award [Hales 1950], and... no women have been symposium leaders.

Dr. Beth Gantt discussed the Society's system for nominations to the Executive Committee and how women could serve as a network to encourage and promote women on this committee.

Dr. Jaleh Daie presented some ideas that WPP might wish to sponsor...For example, a Mentor-of-the-Year Award, which would honor men or women who have been important mentors to women graduate students and/or postdocs...

Other topics raised included a) childcare at the conference site, b)



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survival [professional employment, largely], c) travel monies to ASPP meetings for award on a sliding scale basis for unemployed women in plant physiology (e.g. it is an embarrassment to WPP and the Society that Dr. Carolyn Akers, who has voluntarily performed a sociological survey of women and men in the society...is unable to attend our meetings), and d) setting up a network system for women and possibly creating a newsletter.

Clearly, a new and potent influence has entered into planning for the annual meetings—childcare at the conference site is an issue that is not likely to disappear.

## Constitution and Bylaws and Incorporation

As discussed in Chapter 4, the constitution and bylaws have been constantly amended to bring them into line with current needs and practice. Hence the constitution, initially conceived as a firm guide to the organization and operation of the Society, gradually became a product of the experience of the Society, amended to authorize what the Society found had to be done. Troublesome and binding details were eliminated. However, some record of procedures was still needed. Each incoming president and secretary had duties, but what were they? Where were instructions to be found—in the constitution and bylaws? If not, was there an operations manual based upon the constitution and bylaws? How is one to know what to do, and what is or is not permissible?

Instructive documents on this subject are a four-page letter from president Andre T. Jagendorf to Klein (81), posing 22 questions on duties and procedures, and Klein's four-page reply (82). A few representative items are abstracted and paraphrased below:

[Q] Where can I find a copy of the Constitution and By-Laws?

[A] In Bulletin No. 23, 1966, pages 10-12.

[Q] In making appointments to committees, and as representatives to other societies, I deduce that I am supposed to either submit names to the Executive Committee, or receive their recommendations. Can this be done at any time by mail, or only at meetings? Am I first to see if the person will serve, then get Executive Committee approval, or get approval for a 1st and 2nd choice, then go appoint directly?

[A] The practice has been to solicit suggestions, present selections to the Executive Committee for approval, either by mail or at the annual meetings. For regular term appointments (October 1-September 30), nominations are made in advance and approved at the annual meeting. The constitution needs tidying up on appointments—contrast Article IX on Executive Committee making appointments with Section 1a of the By-Laws, "It shall be the duty of the president to appoint all committees..." Persons should agree to serve before they are officially nominated, but it has never been written down whether approval comes first or later.

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[Q] I want to appoint new standing committees on Awards and Honors, and on Preprofessional Education. Does this require a change in the By-Laws?

[A] No. Article IX-1: "The Executive Committee shall have the right to appoint new standing committees when needed."

[Q] Do you have a list of organizations that our Society is a member of, and do we pay annual dues?

[A] AIBS (\$750, based on number of members), AAAS (\$20, including 2 Science subscriptions), IAPP (\$20 quadrennial), Am. Forage and Grassland Council (\$10).

[Q] What is the term of appointment to the Committee on Professional Status and Training? When should present appointees be replaced?

[A] No record, but there has been much informal discussion of replacing the incumbents if action is not forthcoming on the career pamphlet. It would be consistent with other committees if appointments were made for 3-year terms with eligibility for reappointment. Do-nothings could be phased out.

[Q] What about the Shull award—may I appoint a committee to formulate plans and make an award? Are there funds for it?

[A] The Executive Committee on August 27, 1967 authorized the Charles A Shull award, to be made alternately with the Hales award. It will first be awarded in 1969, so there is time for committee appointment and action. No provision has been made for funding, or for the amount of award. These matters should be resolved at the 1968 annual meeting.

[Q] I would like to see a super-Manual for operations and procedures, with a permanent copy maintained up to date in the ASPP office, and second and third copies for presidents and secretaries. It would improve communications and bring the next president in out of the fog ever so much more quickly.

[A] Very good! But be brief. First, a calendar indicating deadlines for appointments, newsletters, ballots, abstracts, and meetings. Attached, a job description for each officer, with duties described in detail.

These and other concerns on rules and procedures, if acute enough, eventually came to rest in some form in the constitution and bylaws, if only by instructions assigning responsibility.

At the beginning of this period (Bulletin No. 22, 1964) the setting of dues had been moved from the constitution to the bylaws; amendments to the bylaws could be proposed by any member; executive committee approval for placing amendments to the constitution on the ballot had been reduced from unanimous to two thirds; passage of any amendment required two thirds of those voting; a board of trustees was established; the monograph committee was dropped; additional standing committees could be appointed by the executive committee; corresponding members were given the journal for life; and the editor-in-chief of the journal was given more authority in appointing the editorial board. And a sustaining subscription was described, \$300 per year for 10 years (it attracted no takers).

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The 1966 constitution and bylaws (Bulletin No. 23) records the change from vice-president to president-elect (discussed previously), defines emeritus membership (65 and a member for 20 years, no dues but a charge for subscription to the journal if they choose to subscribe), and denies any distributive share of ASPP assets to members (in the case of dissolution, the assets are to be distributed under conditions described by Section 501(c)(3) of the Internal Revenue Code for charitable organizations). This last amendment was needed to maintain the not-for-profit status. Klein wrote a letter to the executive committee October 22, 1964, explaining this (83):

We are and have been tax exempt for 28 years. A.S.P.P. was officially granted exemption on December 24, 1936, under the provisions of Section 101(7) of the Internal Revenue Act of 1936, and the corresponding provisions of the Revenue Acts of 1932 and 1934. In 1942 the status was reviewed and a letter of October 21, 1942, confirmed the previous ruling, stating that the case was closed. We file annual returns on this basis, and they continue to be accepted each year.

At the annual meetings in Boulder I conferred with Mr. David A. Fegan, AIBS counsel. He gave me some publications on the subject of association taxes and specifically recommended that a "disbandment clause" be incorporated into our constitution. Bruce Stowe sent me last spring a communication from the Society of General Physiologists that contains an appropriate clause, drawn up by the attorney engaged to help that society with their application for a tax exempt ruling. The proposal purposes to satisfy the requirement that nonprofit status must be defined explicitly in the constitution of an organization. I include below their amendment and recommend that the Secretary poll the Executive Committee for approval, and provided there be 2/3 concurring, place it as a proposed amendment on the next annual ballot...

In August I received a questionnaire from IRS concerning the nature and business of the Society, which I promptly completed and returned. To date we have had no further communication from IRS... In general, it appears to me that we are in a sound and strong position to maintain our exempt status...

Let us hope that the reward of the poor and virtuous is tax exemption.

Bulletin No. 24 (1968) records no changes from Bulletin No. 23.

Article VIII of the constitution required tie nominations and tie votes to be "resubmitted to the Society," a procedure introduced in 1947. Earlier, decisions on tie nominations had been by lot, and on tie votes by the executive committee. In 1969 an effort was made to return to a random selection procedure—time and expense made repolling prohibitive (in practice it seems to have been ignored). The executive committee voted to place an amendment on the 1969 ballot, but it was not done. (What did go on the ballot, and was approved, placed the chairman of the board of trustees on the executive committee, and established a Charles A. Shull award and endowment fund.) Winifred Klein explained this to Harold W. Siegelman (84), who had asked for information from the minutes:

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The proposal you outline as item #2, which would amend Article VIII: Election of Officers, was presented on the Executive Committee Poll last May 1969. The vote was: For, 10; Against, 2; Abstain, 2. It was, therefore, approved by 2/3 of the Executive Committee plus an extra vote in favor. It should have gone on the June 1969 ballot. However, Bogorad and Gibbs requested that it wait (they were the abstaining voters), for some reason. At any rate the thing is obviously back again, and...it should automatically be placed on the June 1970 ballot.

It was placed on the ballot, but secretary W. Hillman repolled the executive committee before doing so (no delaying action this time; the authority for withholding an approved amendment from the ballot is not known, and probably does not exist). Hillman also repolled on the amendment for raising the dues that had failed the previous year; and he added the amendment to change the fiscal year from July 1-June 30 to January 1-December 31. The membership approved all except raising the dues (Bulletin No. 26, 1971).

As discussed earlier, the dues problem was resolved in the major constitution revision given in Bulletin No. 28 (1973), which introduced the changes needed for employment of the business executive and for separation of membership dues and subscriptions. Section 4 of the bylaws was changed to, "The Executive Committee shall set the subscription prices for *Plant Physiology*", and Section 12 read, "The schedule of membership fees (or dues) shall be determined by the Executive Committee. There shall be no dues for emeritus members." Similarly, Section 13 simply said that sustaining subscriptions would be determined by the executive committee. Passage of amendments to the bylaws required only a simple majority of the executive committee and the membership. It took 46 years, but hands of those who had to make ends meet were finally untied!

Another major change at this time was in establishing a nominating committee composed of the sectional representatives to the executive committee. With a slate of four, as few as four or five nominations were putting people on the ballot. Thus, if it so wished any large university could field a candidate whose primary virtue was "he's ours," rather than "he's good." A nominating committee composed of the regional section representatives would secure more thoughtful nominations, it was believed. The opposing view was that politicking or coercion would be more likely to prevail in a small nominating committee. But the source of nomination was not indicated on the ballots, and as far as one can tell the two nominating systems produced comparable candidates. And those elected have served the Society conscientiously and well, albeit with different style and intensity.

These changes to Article VIII (election of officers), provide examples of why additional small changes were introduced year after year. Needed detail got overlooked. Bulletin No. 28 reads, "If an individual is named for more than one office, the name shall appear but once, for the highest office for which he was nominated." Four years later, Bulletin No. 32 has an amended version: "...the name

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shall appear only for the highest position, according to the order: president-elect, secretary, executive committee, and editorial board member." It had been decided that "highest position" should be defined. Also in Bulletin No. 28 is the statement, "No person may be declared nominated for an office in which he holds an unexpiring term, either elective or appointive." Bulletin No. 32 reads, "A person already holding an office, by election or appointment, may not be declared nominated for that same office." Bulletin No. 35 (1981) adds a preface: "With the exception of Secretary position, a person already holding an office..." Someone had noticed that ever since 1929 the constitution (Article VI) had said, "The secretary shall be elected for a term of two years and shall be eligible for re-election."

Note that the sentences in Bulletin No. 28 have been rewritten in Bulletin No. 32 to eliminate the pronoun "he." This resulted from a February 1976 letter from William K. Purves to president Winslow Briggs (85):

I formally request that the executive committee of the ASPP take the necessary steps to desex the constitution and bylaws. The most blatant booboo occurs in Section 10.g of the By-Laws ("...[the Charles Reid Barnes committee] shall select MEN above the age of sixty years.") Similarly, By-Laws Section 11.d refers to the winner of the Charles Albert Shull Award as "he". A quick perusal of the constitution and bylaws reveals use of "he", "his", or "man" in the following places...Also the word "chairman" appears here and there. Personally, I think that's okay. However, I suspect that many members would prefer "chairperson", "chair", or some other unattractive term. Finally, the Executive Committee should discover whether current affirmative action laws may not require the insertion, somewhere in the Constitution or By-Laws, of the following statement:

"The American Society of Plant Physiologists does not discriminate against any person on the basis of race, color, religion, national origin, sex, age, or physical disability."

I realize that many members may find this inconsequential, a nuisance, or ludicrous. However, enough will feel that this is a significant matter that the Executive Committee must act...

Briggs made this an agenda item at the 1976 annual meeting, and Joe Key, the incoming president, charged the constitution and bylaws committee (86) to "1) desex the constitution and 2) to prepare a constitutional amendment to set up a permanent publications committee." Which was done (Bulletin No. 32), although the committee did not insert a disclaimer of discrimination, nor give up the word "chairman." Jack Hanson, the committee chairman, explained this to secretary Clanton Black (87):

The amendments to remove inappropriate use of the male gender in the terminology of the constitution are reasonably straightforward. It was decided, however, to retain the word "chairman". Until recent years it has been used as a neuter, generic noun with sex indicated by mode of address (e.g., Mister Chairman, Madam Chairman). It seems inappropriate to redefine it as a purely

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masculine noun, and to substitute one of the awkward euphemisms which have been coined as replacements.

Section 12 of Bulletin No. 30 (1975-1976) authorized the Charles F. Kettering Award supported by an endowment of the Kettering Foundation.

The minutes of the executive committee meeting at Asilomar in 1971 record, "It was proposed and passed unanimously that we should retain Mr. Herskovitz [tax lawyer] to seek a change in our status to 501(c)(3) [charitable, scientific, educational organization] (88)." Nothing much seems to have happened here, however, until Houston Baker became business executive (he took great interest in the formal structure of the Society). Baker found that it would be necessary (a) to reincorporate in order to meet a provision that the articles of incorporation must permit amendment, and (b) to meet the IRS requirements for a charitable organization (89). The board of trustees brought the proposal before the executive committee meeting at Corvallis in August 1975, and secured these two resolutions (11):

The Committee approved a resolution that the Society accept the current District of Columbia corporation act. (This law permits the amendment of the Articles of Incorporation.)

The Committee approved a resolution that the Articles of Incorporation be amended to make them compatible with Section 501c3 of the Internal Revenue Code of 1954 (reproduced in Appendix C). (The reason for changing the Society's tax classification from 501c6 [Trade Association] to 501c3 [Scientific, Educational, Charitable Organization] are to gain 1) lower postal rates on 3rd and 4th class mail, 2) acquire Federal and State tax exemptions, 3) allow contributions to the Society to become tax deductible, 4) gain Societal eligibility grants—which many foundations make available only to 501c3 organizations, 5) gain access to TIAA-CREF employee plans.)

Appendix C is a page of fine print entitled "Articles of Amendment to the Articles of Incorporation of the American Society of Plant Physiologists" (11). In essence, it retains the corporate name, identifies the "Board of Directors" of the corporation as the executive committee, deletes the previous articles of incorporation, and presents eleven statements defining the organization and objectives of the corporation. Excerpts of statements that relate to the 501(c)(3) status are as follows:

"...it is organized exclusively for charitable, educational, and scientific purposes, including for such purposes, the making of distributions to organizations under section 501(c)(3) of the Internal Revenue Code of 1954..."

No part of the net earnings of the corporation shall inure to the benefit of, or be distributable to, its members, trustees, directors, officers, or other private persons...No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office...

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A resolution recommending that the corporation accept the District of Columbia Non-profit Corporation Act, was adopted in the following manner: The resolution was adopted at a meeting of the Board of Directors held on August 17, 1975 and received the vote of a majority of the Directors in office, there being no members having voting rights in respect thereof, since such power was delegated to the Board of Directors.

Baker served the Society well in getting this not-for-profit status firmly established. He did not foresee the gift of the Gude property, but the status smoothed the way for the gift by allowing the Gude family to take a tax credit and the Society to hold the property tax exempt.

The caution of some members about mounting a strong public relations program, and especially one to increase appropriations for plant physiology research, stems from the disclaimer of attempts to influence legislation. They did not want to jeopardize the tax-exempt status. An example of this concern can be found in a January 1985 letter from president Tolbert to Chasson (90), chiding him for an item in the December 1984 *Newsletter* (79). Chasson had quoted, without comment, from an article by Gordon Berg in *Ag Consultant and Fieldman* entitled "Jamie Whitten: Our first line of defense." Whitten, a congressman from Mississippi, chaired the House committee in the House-Senate conference bill on USDA funding. The essence of the passage was in statements such as, "I talked to him the other day about the competitive grants program which is cutting into our applied research budgets...Whitten sees what is happening to our once great land grant institutions...And every time a proposal for a competitive grants program in biotechnology or some other 'far out' research comes across his desk, he slashes it by several million—then tacks on a few million for applied research!" Obviously, this item would interest plant physiologists, and by making no comment on the article, Chasson believed he had not engaged in political controversy. Tolbert saw it differently: "We are primarily a research society...The newsletter should not be used to take sides on legislation, to lobby, to make fun of people or organizations, etc. I would play it safe by not running such articles."

The next major change in the constitution and bylaws occurred in the transformation of the business office into a national headquarters, identified as the Gude Plant Science Center, with an executive director and a business manager (Bulletin No. 37, 1983). The duties of the executive director have been discussed, including responsibility for headquarters operations, which although not specified in the bylaws, are covered by the general directive, "Other duties and activities of the Executive Director are as specified and authorized by the Executive Committee." Section 3c of the bylaws said, "The business affairs of the Society originating from the activities of the President, Treasurer, Secretary, Editors, the Executive Committee, the Executive Director, and the Board of Trustees are conducted by the bonded Business Manager under the direction of the Treasurer and the Board of Trustees." Section 3d added that the business manager handles all non-editorial

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business of *Plant Physiology* and other publications and all matters pertaining to dues and subscriptions and assists the executive director with the annual meeting. The business manager is to be responsible to the executive committee through the executive director.

Following a proposal of Boyer (35), there was a revision of Section 14 from the old, inactive Sustaining Subscriptions to Sustaining and Patron Memberships (Bulletin No. 37). As noted earlier, Chasson enlisted a good number of these memberships, and the section merits quoting for purposes of definition:

Any organization or institution in sympathy with the purposes of the Society may provide support by enrolling as a sustaining member or a Patron member. Sustaining membership entitles the organization to receive a subscription to the Journal, the Newsletter and any new editions of the Bulletin as they are published. The annual fee for Sustaining membership shall be determined by the Executive Committee. Patron membership is available to individuals and organizations that give single unrestricted contributions to the Society. Society benefits for Patron members shall be determined by the Executive Committee. The income from Sustaining membership fees and Patron memberships shall be maintained as separate funds to be used as directed by the Executive Committee except that these funds shall not be used to support activities which might cause a conflict of the interests of the Society with those of Sustaining or Patron members.

Bulletin No. 38 (1984) introduces a new Section 13: The Gude Award, which as mentioned earlier had been suggested by Morgan and the board of trustees (25). The award is to be made "to a scientist or lay person residing in North America in recognition of outstanding service to the science of plant physiology."

In summary, the constitution and bylaws have undergone constant change to accommodate concepts, developments, or exigencies as they arose—with some lag time—and there is no reason to expect that the amending process is finished.

### Awards

Table 22 lists the awards for this period. Awarding of the older established prizes was carried out routinely by the annually appointed committees. As already reported in connection with the annual meetings, the traditional lecture by the Hales—and later, on alternate years, Shull—awardee at the annual banquet was moved to a lecture hall when banquets were discontinued.

Introduction of the Shull award seems to have had two motivations. First, after Shull died in 1962, there was strong sentiment to do something in his memory. Second, the existing awards tended to go to senior scientists with the advantage of years of research in which to establish their reputations—for balance and encouragement, an award limited to the accomplishments of younger people was needed. The endowment was finally set up out of cash reserves (4): "The Executive



**Table 22**  
Awards of the American Society of Plant Physiologists, 1963-1985

Year	Barnes	Hales	Shull	Kettering	Corresponding
1963	M. Thomas			W. A. Arnold	M. Kh. Chailakhian
1964	W. Z. Hassid	F. C. Steward		L. N. M. Duysens	R. Hill, A. Kursonov
1965	F. W. Went			H. Gaffron	
1966	K. V. Thimann	D. I. Arnon		C. B. van Niel	
1967	P. J. Kramer			E. I. Rabinowitch	
1968	K. Mothes	R. H. Burris		M. D. Kamen	
1969	S. B. Hendricks				
1970	F. K. Skoog	H. Beevers		P. Joliot	
1971	C. S. French		P. M. Ray	B. Kok	
1972	J. van Overbeek	A. A. Benson			N. K. Boardman, P. W. Brian, E. Bunning, L. M. N. Duysens, M. Evannari, R. J. Gautheret, A. A. Krasnovski, R. O. Slatyer, I. Uritani, P. F. Wareing
1973	E. Bunning		P. Albersheim		M. Avron, P.-S. Tang
1974	J. E. Myers	P. K. Stumpf		J. E. Myers	K. Mothes
1975	W. A. Arnold		T. K. Hodges		S.-I. Imamura, A. A. Nichiporovich
1976	A. Lang	A. Lang		H. T. Witt	J. MacMillan
1977	R. H. Burris		J. S. Boyer		L. T. Evans
1978	P. F. Wareing	B. Kok		A. T. Jagendorf	D. A. Walker
1979	S. G. Wildman		C. J. Arntzen		T. W. Goodwin, P. deT. Alvim
1980	J. B. Hanson	N. E. Tolbert		M. D. Hatch, C. R. Slack	
				H. Kortschak	
1981	A. W. Naylor		L. H. Pratt		J. Dainty, L. Fowden
1982	D. I. Arnon	L. Bogorad			P. Matile, N. Kamiya
1983 <sup>a</sup>	E. Marre		B. A. Larkins		E. A. C. MacRobbie, M. Neskovic
1984	M. Gibbs	B. Phinney		D. I. Arnon	A. Tanaka, M. Wilkins
1985 <sup>b</sup>	H. J. Evans		R. T. Giaquinta		M. Tazawa

<sup>a</sup> In 1983, the newly established Gude award was given to William A. Klein and Winifred Klein for service to plant physiology and the Society.

<sup>b</sup> In 1985, R. H. Hageman was given the newly established Hoagland award for plant physiological research contributing to resolution of agricultural problems.

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Secretary-Treasurer has retained in the checking account sufficient funds for such endowment as may be approved." The award was made biennial, alternating with the Hales award.

The Kettering award also became biennial beginning in 1968. Klein explained in his August 1968 newsletter (3), "The Kettering Foundation annual grant of \$1000 for the Kettering Award terminated with last year's contribution. The Foundation has made a grant to ASPP in the amount of \$15,000 as a "permanent grant." It is hoped that an endowment can be set up from this sum." It was (76); the endowment was adequate for the biennial award, and after long delay was formally recognized in the bylaws (Bulletin No. 30, 1975-1976).

From 1965 to 1972, inclusive, there was an odd lapse in awarding corresponding memberships for which no explanation has been found. Then in 1973, a flush of 10 corresponding memberships was awarded, as if to make up for an eight-year lapse of memory. The constitution permitted corresponding memberships up to two percent of the dues-paying membership, and in 1972 there were only 16 living corresponding members. At the beginning of this period the constitution had been changed to give corresponding members the journal (Bulletin No. 22, 1964), thus adding a little substance to the honor.

As mentioned before, when the Gudes declined a personal award, Morgan had suggested that the Society might set up an award for research leading to practical benefits, and he told the executive committee (91), "I have made a counter suggestion of a major Society award named for the Gude family. This is all very tentative, but I have asked an ad hoc special awards committee to look at this specific proposal along with the entire award program of ASPP. That committee is chaired by Paul Stumpf." The letter of charge to the committee (92) shows that Morgan had additional concerns:

At the Quebec meeting I will ask the Executive Committee to authorize the establishment of this ad hoc committee as a standing committee. This committee would handle special awards such as the National Medal of Honor, Browning Award, etc. For national and international awards you would either make a nomination for the award or receive nominations and select the ASPP representative.

The Society now gives special awards, the most recent to Marty Gibbs. One is currently being considered by the Executive Committee for the Gude family. I would like for you to take the responsibility for future special awards. There is no schedule or quota for this award, but your oversight of it would be helpful. The Executive Committee will want to retain the option to make recommendations for the award to you.

Finally, as a committee I would like for you to review the total award and recognition activities of the Society. In contrast to larger organizations...we give relatively few awards...essentially all that we give are for research. It may well be that [this] is quite desirable...On the other hand, some of our members make their major career contributions in teaching, creatively synthesizing other

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scientists' research into useful books, training graduate students, administering research programs and other types of public service. Should the special award be used more frequently for these kinds of activities? Are new awards needed?...I think it would be [advantageous] to establish an award for research that has significant economic or social impact. It could be named after some distinguished member who made such a contribution...or after the Gude family...Perhaps a few commercial firms would donate sufficient funds to establish the endowment for such an award...it would document or highlight the eventual practical benefit that some of our work has. Finally, I would like for you to consider the status of our graduate student awards program, which is now an optional function of the Sections.

The minutes of the the 1980 Pullman annual meetings (24) recorded the special award for Gibbs: "The Society Special Citation award was presented to Martin Gibbs in recognition of his role as Editor-in-Chief." They also recorded another highly deserved award: "President Stumpf presented a special award to Ray Noggle in recognition of service to the Society as Business Executive." The year before, Eli Romanoff, Director of the NSF Metabolic Biology Program, was given a special award by the Society at a meeting of the Washington area section for his willingness to support good plant research (93).

Stumpf reported in 1981 for the special awards committee (25) that "discussion has been conducted concerning the development of a Gude award comparable to the Stephen Hales but for excellence of research discoveries leading to advances in horticulture and applied agriculture." The following year the special awards committee, with Morgan as chairman, was made a standing committee with specific charges. The committee drafted a Gude award rather broadly defined for rewarding special services, and created a new award for research with practical applications (35):

The Committee will function in the following capacity: 1) To provide a nominee to outside organizations that are soliciting candidates for special awards, 2) To serve as the selection committee for the proposed Gude award and the Hoagland award, 3) To advise the President and the Executive Committee on the development of further procedures for the recognition of distinguished services in the area of plant physiology in North America. This duty will include the frequent review of the total awards and honors program...to insure its adequacy. The established...awards will not come under the jurisdiction of the Special Awards Committee.

### Guidelines for the Special Awards Committee

1) Gude Award for Exceptional Service to the Science of Plant Physiology.

This award is to be made in honor of the Gude family who, in 1981, made possible the establishment of the Gude Plant Science Center. The Adolph E. Gude, Jr. Award is to be made at least triennially and not more than once annually to a scientist or lay person residing in North America in recognition of outstanding service to the science of plant physiology.

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Candidates for the award will be nominated by any of the five sections of [ASPP] or by the Executive Committee. The Special Awards Committee will then select one of the nominees as the awardee. The recipient of the award shall be announced by the President at the appropriate annual meeting and the award or certificate designating the award will be presented to the recipient at that time.

2) The Dennis Robert Hoagland Award for Distinguished Research in the application of plant physiology to agricultural science.

This award is to be made in honor of the first recipient of the Stephen Hales Award in 1929. A pioneer in the area of plant nutrition, a distinguished member of ASPP, he was a leader in the application of basic knowledge of plant physiology to agriculture.

This award is to be made every five years in recognition of outstanding investigation in the field of plant physiology which contributed to the resolution of problems in the field of agriculture to a resident of North America.

Candidates for the award... [identical to above for Gude award].

3) Special awards.

From time to time, the [ASPP] is asked to recommend an outstanding individual from the field of plant physiology as a candidate for a national or international award...Candidates for the award will be nominated by any of the five sections of [ASPP] and by the Executive Committee. The Special Awards Committee will then select one of the nominees and forward [the selection to the President for transmittal].

4) Graduate Student Award System.

We would recommend that each section continue its own unique award procedures with sufficient financial backing from the national office to make the procedure possible.

Awards for graduate student papers at annual meetings had been considered occasionally for some years, but never gained support. When the sections began giving graduate student awards, the executive committee recognized a happy compromise and in 1979 readily voted \$200 annually to each section for the awards, the sections being responsible for the rules and regulations to be followed in making them (29).

The first Gude award was given to William and Winifred Klein in 1983 for their dedicated service (36): "Between 1960 and 1974, Bill served as Executive Secretary-Treasurer, and Winifred served as the office 'staff'. The Kleins worked unselfishly and faithfully to keep the Society functioning, and used their home as the national office..." In 1984 the Gude award was adopted into the bylaws (Bulletin No. 38) as written above.

The first Hoagland award was given to R. H. Hageman at the 1985 meeting in Providence for "formulation of the concept, early in his career, that rate-limiting enzymes could be identified and used as a basis to select for specific traits which lead to higher crop yields (68)."

Nothing was said about the kind or amount of these awards or the money to support them, this being left to the executive committee (39). The Gude award

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seems to have been made from the general fund. Chasson took on the job of canvassing for \$5000 to start the Hoagland award (personal communication). He had little luck with the fertilizer industry, where he expected support, but was pleasantly surprised to have Monsanto Agricultural Products Co. volunteer the entire amount (39).

As a memorial to Morris Lieberman, a much respected investigator of ethylene as a plant hormone (he died of leukemia in 1982), his family started a fund "to support travel of younger American scientists in ASPP to attend international scientific meetings...travel awards will be made on a competitive basis from applications solicited and judged by a standing committee" (94). Only interest on the fund was to be used. Contributions to the fund were invited (94).

Unlike the existing award funds, the Lieberman fund was not designed to honor achievement or service, but to assist up-and-coming young researchers with travel expense that they might profit from the stimulus of international meetings. This type of assistance was not new. The Society had for many years secured grants for travel to international conferences (primarily from NSF on the basis of proposals written by one or a few members) and had distributed these by committee on the basis of need and merit. The Lieberman memorial funds differed by initiating an endowment to assure some travel grant money, rather than depend wholly on granting agencies. The Society treated the funds like those for achievement awards, and by 1985 the constitution and bylaws committee was preparing a formal description for the Lieberman Travel Endowment to be entered in the bylaws (68). At the same meeting, the travel committee reported that in addition to 17 travel awards for the International Plant Growth Conference made from a NSF grant, one \$500 travel award had been made from the Lieberman fund (68).

Occasionally suggestions were made for an additional type of recognition, one used by some other societies. Andrew J. Hiatt, chairman of the honors and awards committee in 1973, made such a suggestion to his colleague on the committee, Paul J. Kramer (95):

I feel that the Society has not given adequate attention to the recognition and honoring of its membership. It seems to me that the Society should have a program whereby 0.3 to 0.5 percent of the membership are elected annually as Fellows of the American Society of Plant Physiologists to recognize contributions to science and service to the Society. I suggest that the committee consider making such a recommendation to the Executive Committee.

Although president Hillman approved the suggestion, nothing came of it.

## Sections

There is not much to be added to the discussion of sections in Chapter 4. As noted, the five regional sections were functioning well by 1963 and most of them

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continued to do so throughout this period. Their meeting announcements and annual reports were published in the newsletters. However, increased ease of travel and an abundance of meetings to attend competed with participation in section meetings. Major research reported at regional meetings had to be reported again at the annual meetings if it was to be recorded (in abstract) and have proper impact. Busy senior scientists tended to concentrate on the major meetings. The section meetings gained more importance for intimate symposiums, informal discussions, and training graduate students in paper presentation. One evaluation of the sections was given in the minutes of the 1979 executive committee meeting (29):

News from the Sectional societies indicated that the Northeastern, Washington, D.C. and Southern sections had successful years with well attended meetings and sustained membership. Concern was expressed at the declining participation in the Western and Midwestern sectional meetings. It was recommended that officers in the sectional societies actively canvass for senior level participation in the meetings with a view of sustaining and revitalizing these sessions.

However, each section evolved its own type of meeting, which can be best transmitted by quoting from its reports.

The Southern Section was probably the most active, running the equivalent of a cellular ASPP meeting each year. As an illustration of this, their meeting at Louisiana State University in 1985 reported (68):

Sixty papers and posters were presented and a symposium entitled "Recent Advances in Photosynthesis Research" highlighted the meeting...The symposium was made possible by generous contributions from ICI-Americas, Inc., Monsanto Agricultural Products Co., and Pioneer Hi-Bred International, Inc. Proceedings of the symposium should be available later this year.

The 1984 symposium, "Biochemical and physiological mechanisms of herbicide action" is available for \$5.00..."

Recipients of the graduate student paper awards were James R. Ault from Louisiana State University for his presentation entitled "In vitro plant regeneration from somatic embryos of Hibiscus acetosella" and Robert W. Wise from Duke University for his presentation entitled "Light-induced lipid peroxidation during chilling in cucumber and pea."

Robert T. Powell was awarded the Distinguished Service Award by John T. Barber...The 1986 meeting will be held March 9-11 at Charleston College...and the 1987 meeting will be held at Texas A&M University...

Although membership in the Association of Southern Agricultural Workers (Chapter 4) had been dropped, participation of members interested in agriculture and teaching was maintained, and this probably helped secure grants to support symposiums, etc.

The Washington Area Section report in the same *Newsletter* said (68):

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The Washington Section of ASPP met three times during the year. On October 2, 1984, 70 people attended the annual Fall Crab Fest at the Gude Plant Science Center...

On February 13, 1985, 110 people attended the winter meeting at George Washington University. The meeting featured a very successful symposium on "Recent Topics in Chloroplast Research"...

The spring meeting took place on April 23 at the National Arboretum with 64 people in attendance. Thirteen papers were presented during the day, and in the evening, following the banquet, Roy Morris, Oregon State University, presented a very interesting talk on "Gene specifying cytokinin biosynthesis in bacteria." The first prize of \$250 for the best student presentation went to Cindy Goldstein for her paper on "Effect of far-red light on stomatal circadian rhythms in Hordeum vulgare L." Second prize of \$125 went to Mary Pingitore for her paper on "Analysis of organelle genomes of Daucus carota with male sterile and male fertile cytoplasms." A \$100 prize for the top postdoctoral presentation was made to Dan Bush for his paper on "Calcium transport in membrane vesicles isolated from cultured cells"...

The Northeastern Section reported as follows (68):

The Forty-Ninth Annual Meeting of the Northeastern Section was held at Saint Michael's College, Winooske, VT, April 26-27, 1985. Dr. Deana Klein and her colleagues hosted a well-run and enjoyable meeting. Thirty-five contributed papers were grouped into one poster and four platform sessions. The invited speaker was Dr. Richard M. Klein...who spoke on "Acidic Deposition: Opportunities for Plant Physiological Research." The speaker after a delightful buffet banquet was David Marvin...who presented a slide illustrated talk on sugaring and maple farming in Vermont. Five students who presented papers received Hillman-Granick travel awards with funds provided by ASPP and the Section's membership...In 1986 the Section will hold its 50th Annual Meeting at the Marine Biological Laboratory, Woods Hole, MA, April 25-26.

The meeting of the Midwest Section was reported in the following issue of the *Newsletter* (96):

The Midwest Section held its annual meeting at Turkey Run State Park, Marshall, Indiana, September 21-22, 1985. Chairman-elect Ronald C. Coolbaugh organized a symposium on Water Stress...Twenty-nine contributed papers were presented. R. Stahlhut, University of Illinois at Urbana-Champaign and W. E. Dyer, Purdue University, tied for first place in the graduate student paper competition. Each received a \$250 award.

The Western Section reported this meeting in 1984 (61):

There are 790 members of ASPP in our western section (13 states). Of these 238 paid sectional dues (30%). This is somewhat higher than in the past probably due to the checkoff on the national dues mailing. Elections were held with 176 mail ballots returned...The Western Section did not hold a separate

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meeting this year since the national ASPP meeting was at Davis. Next year...the Western Section will meet at Missoula, Montana, with the Pacific Division of AAAS on June 16-21, 1985...Financially we are in excellent shape with a current balance of \$748.

The minutes of the 1969 annual meeting (75) made the simple report that, "A Latin American Section of ASPP was established." Bulletin No. 25 (1970) lists the Latin American Section with J. F. Carvajal of the University of Costa Rica as chairman. However, Bulletin No. 34 (1979-1980) no longer lists the Latin American Section. Israel Zelitch (personal communication) reports that when he was president (1977-1978) Paulo Alvim, a prominent Brazilian plant physiologist, asked on behalf of a number of colleagues that the Latin American Section be quietly disbanded. They felt that their section was being viewed as part of the U.S. and placed in a subservient position. They preferred to remain individual members listed by country in the directory. Zelitch passed this request on to the executive committee, and the request was approved.

### A Backward Look

Something should be said to tidy-up and wind-up this rather long discourse on the doings of a small scientific society. The doings can hardly be unique; there are many such societies, all with histories to be examined, provided the needed documents can be found. But are they worth examining? What does one get for the effort?

From the viewpoint of a professional historian, probably not very much. Some of the trends derived from hard data might add a little to a general account of the growth of our science enterprise. But Shull's hardheaded rejection of the two-column format, and the rescue of the galleys just ahead of the padlocks on Conover Press, are hardly proper history. If anything, they are anecdote, the stuff of folklore, part of the trials of living and dealing. So why bother to include such detail here? Does it really matter whether a career bulletin is to be written for high school or for college students? Or whether tables of data are to be typeset?

It matters to many plant physiologists, in the same way the events of a family history would matter. Such concerns are part of life as we live it, professionally as well as personally. And what you read here is just one plant physiologist telling another about life in our Society over the past sixty-odd years. Family history, of a sort. Not as complete as it should be, but within the restrictions of time and materials, about what can be done for the present. Remember it that way.



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