

MINUTES OF THE MEETINGS OF THE INDIANA ACADEMY OF SCIENCE 1996

COUNCIL MEETING

DePauw University
7 November 1996

1. President Gammon called the meeting to order at 3:25 PM in the Olin Biology Building at DePauw University, Greencastle.

2. The minutes from the meeting of 12 April 1996 were approved.

3. The agenda was approved.

4. The President commented on his year of learning about the complexities of the organization of the Academy. He focused on the importance of communication among members of the Academy, and noted that both e-mail and the newsletter are avenues which can serve members well.

5. The Treasurer summarized the financial state of the Academy in the attached Account Summary for the Third Quarter of 1996. He noted an increase in the operating budget from the first of the year, as the balance changed from \$16,984.95 to \$25,825.75. He reported the Total Funds on Deposit as \$42,422.73.

6. The Editor reported that the Wetlands Symposium volume is projected for publication by the end of the year. In looking at the Table of Contents for Vol. 105, he noted diversity in the disciplines represented by the articles. He also said that the cost of reprints had increased.

7. The Foundation Report was presented by Frank Guthrie. He reported the total market value of the three funds as \$3,539,360, and the total income from the three as \$106,656.

8. Committee Reports: Gene Kritsky reported on the activities of the National Academies of Science, of which he is President. He noted that the academies of several states have begun a self-study process. He proposes that the IAS similarly organize several focus groups for analysis and future planning.

a. Amendments Committee.—No report.

b. Library Committee.—Holly Oster provided a Library update. She noted that the Academy has a Home Page. She has also been using the Internet to locate missing IAS volumes.

c. Nominations.—Results of elections have been reported as follows: *President-Elect*: Rebecca Dolan; *Treasurer*: Edward Frazier; *Research Grants*: George Mourad; *Bonding*: Edwin Squiers.

d. Publications Committee.—Bill McKnight reported on the State Flower Selection project. The goal was to distribute posters of the state flower candidates to all of the approximately 4000 fourth-grade classes in Indiana. Approximately 26,500 votes have been registered. News releases have been sent to 102 media outlets. There is good progress on the Amphibians and Reptiles book. Work also is proceeding on the special publications about sunflowers and periodical cicadas.

e. Programs and Invitations.—The Spring meeting will be at McCormick's Creek State Park on 18-19 April 1997. There are firm invitations for the Fall 1997 meeting from St. Joseph's College for 30-31 October, and for the Fall 1998 meeting at Anderson University.

f. Research Grants.—Nelson Shaffer reported that during 1996 forty-seven senior grants were awarded which totalled \$34,740. The success rate in obtaining funding was 71%. The committee was able to fund about 50% of the amount requested on each grant. He noted that the committee views these grants as seed money, and that recipients are being asked to report the results of their work to the committee, so there is an accountability system. He expressed a rationale for increasing the amount of funding which the Academy provides in grants. For Junior Grants, the committee made 21 awards for a total of \$3,491.

g. Science and Society.—No report.

h. Youth Activities.—Duvall Jones reported that the Junior Academy, which meets on 8 November, and the Indiana Science Talent Search, slated for a March meeting, are running well. He noted, however, that funding for the Science Talent Search is a continuing concern. He has submitted a proposal to the AAAS for the funding of research grants written by Indiana high school students.

i. Fellows.—This year's nominees are: Kemuel Badger, Clare Chatot, Walter Hasenmueller, and Kenneth Uhlhorn. A motion was made, seconded, and passed to recommend the four nominees to the general membership at the Business Meeting.

j. Emeritus.—Dan Webster moved that Emeritus status be granted to Philip Kinsey. The motion was seconded and carried.

k. Newsletter.—Jim Berry requests that news items be sent to him at berry@butler.edu.

l. Resolutions.—Resolutions were introduced ex-

pressing appreciation to the administration and faculty at DePauw University.

m. Natural Resources.—No report.

n. Speaker of the Year.—George Bodner of Purdue University, whose expertise is Chemistry and Chemistry Education, is Speaker of the Year.

9. Local Arrangements: Announcements were made regarding parking arrangements.

10. Old Business: Special awards will be presented at the Business Meeting to Ed Frazier and Alton Lindsey. These were approved at a previous Council meeting.

11. New Business: The Academy hopes to announce the appointment of a new Executive Director at the Business Meeting. The Budget Committee will meet on 7 December, 9:30 AM, in Gallahue Hall at Butler University.

12. The meeting adjourned at 4:25 PM.

Susan M. Johnson, Secretary

EXECUTIVE COMMITTEE

Butler University
7 December 1996

1. Jim Haddock called the meeting to order at 11:20 AM in Gallahue Hall at Butler University. Academy members in attendance were: Jim Berry, Rebecca Dolan, Gary Dolph, Edward Frazier, James Gammon, Frank Guthrie, Jim Haddock, Susan Johnson, Duvall Jones, Gene Kritsky, Bill Lovell, Bill McKnight, Holly Oster, Victor Riemenschneider, and Nelson Shaffer.

2. A motion was made and seconded to approve minutes of the two meetings of the Executive Committee held on 7 November 1996. The minutes were approved as amended.

3. The agenda was approved with amendments.

4. Bill Lovell, out-going Executive Director, reported that the transfer of records to Nelson Shaffer, the in-coming Executive Director, was in progress. He thanked the Academy for the opportunity to serve. The Committee recognized Bill's contributions and expressed gratitude through a round of applause.

Nelson Shaffer thanked Bill for the orderly transfer of records. He will begin officially on 1 January 1997.

5. President's Report

A. Jim Haddock presented a Progress Report on Committee Assignments for 1997. He asked Jim Gammon and Becky Dolan to help with recruitment to fill open slots. The following committees were mentioned in particular: Research Grants will require an elected replacement for Nelson Shaffer.

After Ed Frazier agreed to serve on Amendments, one more space remained. Becky Dolan is recruiting for the Biological Survey. Gary Dolph is now looking to replace members of the Editorial

Board of the *Proceedings*. Daniel Webster will chair the Emeritus Member Selection Committee. Two other members are needed. Terms of four members of the Fellows Committee expire in 1996. The High School Teacher Fellow Committee has two openings, as does the Indiana Science Talent Search. Gary Dolph added his name to the Publications Committee list, and Bill McKnight is contacting others. Jim Haddock suggested that perhaps the functions served by the Public Relations Committee, which currently has no members, should be within the responsibilities of the Executive Director. Science and Society has positions, including that of committee chair. Jim Haddock wondered if this function might be served in an *ad hoc* manner. The Science Education Advisory Committee and the Speaker of the Year Committee have openings. The *ad hoc* Corporate Relations Committee currently has no members. This may be another area of interest for the Executive Director. The committee which is listed on the books as Research Fellowship appears to be the High School Teacher Fellow Committee.

B. The President's IAS Goals for the Year include making progress on: (1) revising the Membership Directory, (2) updating and publishing a Programs and Invitations Brochure, (3) increasing the IAS financial base, (4) evaluating committee job descriptions, function, and structure, (5) improving the method for filling committees and committee oversight, (6) increasing the level of interaction, moral support, and assistance for the Junior Academy, and (7) increasing the strength of member participation in section meetings.

C. In a written statement, "It's Time for a 'Checkup'," the President underscored some of his goals further. He stated, "What I hope to accomplish as your president for 1997 is to begin (and hopefully complete) the process of thoroughly reviewing, updating and improving some of the processes that we have been doing for a number of years." To this end, he proposed establishment of an *ad hoc* committee drawing its membership from past presidents. Jim Gammon and Becky Dolan will co-chair the committee. Duvall Jones, Frank Guthrie, and Gene Kritsky also agreed to serve.

D. Also, in keeping with the theme of self-study, "Program Requirements for Hosting IAS Meetings," a draft document prepared by Vic Riemenschneider was distributed along with a letter from him to the President. As a veteran planner of the annual meeting, he raised several issues and made a number of suggestions for consideration.

E. Jim Haddock distributed a sample "Indiana Academy Service Volunteers" sheet which could be included in the dues notice mailing to recruit membership for committees.

F. The President introduced discussion on the format of the Membership Directory which includ-

ed issues of condensing, adding e-mail addresses, frequency of distribution, and recipients.

G. In discussing the Academy Homepage, Bill McKnight volunteered his students to take responsibility for the page. Nelson Shaffer will coordinate this effort with Holly Oster.

6. There was no Treasurer's Report.

7. The Secretary presented three possible formats for the Academy stationery. A motion was made, seconded, and passed to have stationery printed which will retain the features of the current model, except for the listing of officers down the left side of the page.

8. Committee Reports

A. Programs and Invitations: Upon the recommendation of Vic Riemenschneider, chair of this committee, it was moved, seconded, and passed that Anderson University be accepted as the site of the Fall 1998 and Spring 1999 meetings. The Spring sessions are to be at Mounds State Park. Interest has been expressed in hosting the Fall 1999 and 2000 meetings by other institutions. Vic brought up the issue that the Academy could facilitate the task of the Local Arrangement Chairs, and the Program and Invitations Committees. He suggested, for example, that the committee appointments be made a minimum of two years, that the Executive Director be on the Local Arrangements Committee, and that the Program Committee prepare the meeting budget. The President suggested that Vic present a specific proposal to the *ad hoc* committee.

The Spring meeting will be April 18-19. The Canyon Inn, in Spencer, Indiana, is holding rooms only until January 18. It is anticipated that field

trips will be held on Saturday morning. The evening program could include self-study discussion groups.

B. Local Arrangements: Duvall Jones reported that plans are progressing for the Fall 1997 meeting at St. Joseph's College. Bill McKnight raised the question of whether there should be an Academy brochure. The issue of a membership brochure was also discussed. Bill volunteered to look into this further.

C. Newsletter: Jim Berry requested that members send him information about events and contacts. The idea of featuring distinguished members in the Newsletter was raised.

9. As Unfinished Business, Jim Gammon asked that the issue of criteria for Fellows selection be placed on the agenda for the next meeting.

10. As New Business, Ed Frazier presented three letters of agreement for Committee approval.

A motion was made, seconded, and passed to appoint Bill McKnight as Managing Editor of Publications and Chair of the Publications Committee for the third year of a three-year term.

A motion was made, seconded, and passed to appoint Gary Dolph as Editor of the *Proceedings* for the 1997 calendar year.

A motion was made, seconded, and passed to appoint Nelson Shaffer as Executive Director for the 1997 calendar year.

11. The next meeting was scheduled for Saturday, 22 February 1997 at 9:30 AM, in Gallahue Hall, on the Butler University campus.

12. The meeting was adjourned at 1:20 PM.

Susan M. Johnson, Secretary

MINUTES OF THE MEETINGS OF THE INDIANA ACADEMY OF SCIENCE 1997

EXECUTIVE COMMITTEE

Butler University
22 February 1997

1. President Haddock called the meeting to order at 9:40 AM in the Garden House in Holcomb Gardens at Butler University. Academy members in attendance were: Gary Dolph, Edward Frazier, James Gammon, Jim Haddock, Susan Johnson, Bill McKnight, Holly Oster, Victor Riemenschneider, and Nelson Shaffer.

2. The agenda was approved.

3. A motion was made, seconded, and passed to approve the minutes of the meeting of 7 December 1996.

4. The Treasurer, Ed Frazier, summarized his report in the attached Account Summary for the Fourth Quarter of 1996. He noted that the balance on hand of \$11,949.97 in the Operating Fund, as of 31 December 1996, represented a deficit of about \$5,000 in relation to the balance on 1 January 1996. The Total Restricted Funds balance was \$61,548.56. The sum of the Funds on Deposit was \$73,498.56. The Treasurer viewed the financial condition of the Academy to be healthy. The report was accepted.

5. The Executive Director, Nelson Shaffer, introduced a number of topics and action items. He reported that as of 21 February 1997, dues had been received from 441 members, including one Life Membership at \$500, two Corporate members at \$250 each, and three Institutional members at \$50 each. This number is not quite half of the total expected membership. He reported receipt of \$12,964.

There have been three deaths since the last directory was published.

The Executive Director would like to prepare three separate brochures to advertise the Academy to industry, institutions, and the public.

Nelson Shaffer and Bill McKnight described the work they have done in preparing the 1997 Academy *Yearbook*. Nelson distributed a sample of pages from the proposed reformatting of the membership roster. Bill distributed a draft of the other sections of the *Yearbook*. The two are striving for a presentation which will be cost-efficient, as up-to-date as possible, and aesthetically pleasing. Following discussion of a target date for publication of the *Yearbook*, a motion was made, seconded, and

carried that 1 March 1997, would be the cut-off date for inclusion of new dues-paying members in the membership directory.

On the issue of including advertising in the *Yearbook*, a motion was made, seconded, and carried to accept advertisements tastefully presented.

It was decided that the cover of the *Yearbook* would be blue this year. The decision was also made to remove the section affiliation, while including an e-mail address, for each person listed. The President thanked Nelson and Bill for their extensive work on this project.

6. In the absence of the President-Elect, the President reported that Becky Dolan is directing attention to a membership brochure and is co-chairing the *ad hoc* Committee on Committees with Jim Gammon. This committee plans to bring suggestions to the Spring meeting.

7. The Secretary distributed stationery to those present.

8. Gary Dolph, Editor of the *Proceedings*, reported that both issues of Vol. 103 are in blue line. He projected the end of March for their arrival date at the State Library, from which they will be shipped to the membership. He also reported that Vol. 105, 1-2, was on disk, and would be produced in Bloomington.

The Editor presented the draft of a document which requests an increase in state funding for the publication of the *Proceedings* from \$8,811 to \$20,000. This would require an amendment to the budget of the Indiana State Library. A motion was made, seconded, and passed that the *ad hoc* Committee on Appropriations move forward with this proposal. The committee consists of Co-chairs Dolph and Shaffer, as well as Becky Dolan, Ed Frazier, and Bill McKnight.

9. In the absence of the Newsletter Editor, the President reported that March 1 was the deadline for receipt of items.

10. President Haddock reported that he was researching the criteria for selection of Academy Fellows.

He recognized the work of Duvall Jones, Chair of the Youth Activities Committee, who obtained \$1500 from AAAS for 1997 for support of high school science research.

He noted that Wayne Mueller, who was appoint-

ed to work on public relations for the Academy, has been quite ill and unable to work in this area.

a. Programs and Invitations (Vic Riemenschneider) reported on the Spring Meeting at McCormick's Creek State Park. Registration information will be in the Newsletter and will be sent to Ed Frazier. The program schedule includes on Friday, 18 April: Executive Committee, Council Meeting, Discussion: Preparing the Academy for the New Millennium, followed by dinner and Leslie Real speaking on "Ecology of Infectious Disease". On Saturday, there are two field trips: Geology of the park, and Natural history.

1998 Meeting.—Anderson University will not be able to host the 1998 Fall Meeting due to scheduling difficulties. Other options are being explored for a host institution.

Composition of the Committee.—Vic proposed a change in the By-laws which would streamline the committee and ensure continuity from year to year. A motion was made, seconded, and passed that this proposal be forwarded to the Amendments Committee for further study.

Summary of Hosting Requirements.—Vic presented a document which details program requirements for hosting academy meetings. The President suggested that Vic make specific recommendations to the Executive Committee and work with the Executive Director so that information can be included in the Operating Manual.

b. Amendments (Ed Frazier)

A document which proposes Constitution and By-law changes in the following areas was presented: Make the Constitution and By-laws conform to current practices; Modify the position of Director of Public Relations; Create the position of Editor of the Newsletter; Make the quorum of the Council more in line with Robert's Rules of Order and clearly define the role of the Council; Redefine the make up and role of the Executive Committee; Give the Youth Activities Committee the responsibility for awarding student research grants; Clearly define which type of membership receives the *Proceedings* and what is being received; Create the position of Historian and eliminate the position of Necrologist; Remove superfluous portions of the Constitution. It is anticipated that the Committee on Committees will suggest additional changes later in the year.

c. Publications (Bill McKnight)

The Executive Committee suggested that 1200 copies of the *Yearbook* be produced. Bill has engaged in discussions with the Chicago Botanical Gardens about the Sunflowers volume. A motion was made, seconded, and passed to authorize the Treasurer to sign a memorandum of agreement on publication of *The Sunflower Family in the Upper Midwest* by Thomas Antonio and Suzanne Mass.

A motion was made, seconded, and passed which

authorizes the Treasurer to sign a letter of agreement between Wadsworth Publishing Co. and the Academy on the publication of *Indiana Amphibians and Reptiles*.

12. Old Business.

The issue of standardizing the name of the *Handbook of Operations* was discussed.

It was noted, in relation to the Index of Vol. 103, that the Academy has taken stands on political issues in the past.

13. New Business.

Holly Oster distributed hard copies of extensive work which she has accomplished on the IAS Home Page. In discussion of the amount of information which should be available on line about individual members, the consensus was that the Academy should be conservative. A suggestion was made that only the names and addresses of key officers be included.

Jim Haddock thanked Holly for the fine job she has done on the Home Page.

Bill McKnight reported on the State Flower Project. More than 27,000 fourth-grade students throughout Indiana have voted for their choice of a new state flower. The winner is the Fire Pink. Bill mailed a news release to 120 newspapers, TV and radio stations.

The need was expressed for public relations that represents the best science and is well-coordinated.

15. The next meeting will be on 18 April 1997 at McCormick's Creek State Park.

16. The meeting was adjourned at 1:12 PM.

Susan M. Johnson, Secretary

EXECUTIVE COMMITTEE AND COUNCIL

McCormick's Creek State Park
18 April 1997

The meeting of the Executive Committee was called to order by President Jim Haddock at 1:10 PM in the Canyon Inn, McCormick's Creek State Park. Academy members in attendance were: James Berry, Rebecca Dolan, Gary Dolph, Edward Frazier, James Gammon, Jim Haddock, Walter Hasenmueller, Susan Johnson, Duvall Jones, Bill Lovell, Bill McKnight, Holly Oster, Victor Riemenschneider, Nelson Shaffer, Edwin Squiers, and Terry West. The Executive Committee meeting concluded at 3:10 PM, and the President called the Council meeting to order at 3:30 PM. The Council adjourned at 4:45 PM. Information disseminated and business transacted by the two bodies is summarized below. The majority of topics were addressed in both meetings. Topics which were considered in only one meeting are so designated.

1. The Executive Committee approved the minutes of its meeting of 22 February 1997, and the

Council approved the minutes of its meeting of 7 November 1996.

2. Treasurer Ed Frazier summarized his report in the attached Account Summary for the First Quarter of 1997. He noted that the Operating Fund balance of \$24,278.47 reflected receipt of dues. The Total Restricted Funds balance was \$58,566.98. The total Funds on Deposit was \$82,845.45. The Treasurer indicated that the finances are in order. His report was accepted.

3. Executive Director Nelson Shaffer reported that he had completed the required paperwork for the IAS to be an affiliate of the AAAS. At this time, about half of the IAS membership has paid dues for the 1997 calendar year. A second notice will be sent to those who have not paid.

4. Editor Gary Dolph reported that Volume 103 (1–2) of the *Proceedings* would be delivered to the State Library during the week of 21 April, and would be sent to members shortly thereafter. Volume 105 (1–2) has gone to the publisher, and Volume 105 (3–4) is in progress.

A motion was made, seconded, and carried that the minutes of the Executive Committee and Council meetings from April 18 be merged as an experiment for the purpose of saving space in the *Proceedings*.

5. Jim Berry, Newsletter Editor, announced that the abstract form for papers for the Fall meeting would be included in the June edition. He requested that members send him information on scheduled events of general interest. Submissions may be sent in the form of an e-mail message to Berry@butler.edu.

6. President Haddock reported that he had been working with a variety of IAS representatives on items such as the Spring Meeting, *Yearbook*, and the site of the 1998 Fall Meeting.

7. Committee Reports:

a. *Ad hoc* Committee on Committees. (Dolan/Gammon)—The co-chairs of this committee led a discussion following the Executive and Council meetings on the organizational structure of the IAS.

b. Academy Foundation.—The President reported that there had been activity with regard to the holdings.

c. Programs and Invitations.—(Riemenschneider) The committee chair moved acceptance of the 1999 invitation of the University of Southern Indiana to hold the Fall meeting on campus early in November and to hold the Spring meeting at New Harmony. Motion carried.

The motion was made, seconded, and carried to accept the invitation of Park Tudor School to hold the Fall 1998 meeting on 30 October at the Indianapolis facility. During discussion interest was expressed in designing the meeting around issues in science education.

At the Executive Committee meeting, the com-

mittee chair reported that he continues to develop the document *Program Requirements for Hosting Indiana Academy of Science Meetings*. The President asked that the Programs and Invitations committee make recommendations with regard to questions raised, such as: Should the Fall and Spring meetings be organized by one institution, or should each meeting be viewed as totally independent? What should the scope of the program for the Spring meeting be? Should host institutions be allowed to obtain sponsorship from industry? Would such industrial sponsors be required to be members of IAS? The motion was made, seconded, and carried authorizing the Treasurer to sign a contract for a meeting at Turkey Run State Park on 17–18 April 1998, and to include a deposit of \$300.

d. Local Arrangements.—(Jones) Progress in planning for the Fall Meeting on Friday, 31 October 1997, at St. Joseph's College was reported. Members should note that the meeting will be held on Central Standard (i.e., Chicago) time. A number of amendments are anticipated.

f. Publications.—(McKnight) The chair projected possible publication dates for several books: *Natural Heritage of Indiana*, 1997; *Amphibians and Reptiles*, 1997; *Sunflowers*, 1998 or 1999.

The chair described work on the 1997 *Yearbook*. A motion was made, seconded, and carried by Executive Committee members to approve the cost of producing the *Yearbook*. The actual cost will reflect the amount of advertising which can be sold to appear on the booklet covers.

g. Auditing.—(Waltz) A motion was made, seconded, and carried to accept the Auditor's Report.

h. Fellows.—(Schmelz) In response to a request from the Fellows Committee for help in clarifying the criteria for selection of Fellows, Council members discussed the question of what it means to be a Fellow of the IAS. The consensus was that the IAS honors a person by awarding the fellow designation, and that the person needs to have achieved recognition in science, as a teacher or researcher, and to have contributed to the operation of the IAS. The criteria for Fellow should include both science and service aspects.

i. IAS Representative to the Indiana Natural Resources Commission.—(Schmelz) The Commission sets general policy. This spring it is considering issues related to sports fisheries.

j. IAS Representative to the NAAS.—(Kritsky) The NAAS has a website which is designed to facilitate communication between state academies. The National Center for Science Education has suggested that each state academy have a local liaison who could be contacted on issues related to "Scientific Creationism." In announcing that he had received a National Service Award from NAAS, Kritsky thanked the IAS for the opportunity to serve.

k. Research Grants.—(Chatot) Twenty-three pro-

posals, requesting a total of \$23,356, were received in the Spring Senior Academy competition. The committee recommended funding for 18 proposals, totaling \$13,720. This represents a 78% success rate and funding of 54% of the monetary request.

l. Nominations and Elections.—(Conklin) Nominations are sought for the following positions: President-Elect, Secretary, Foundation Committee, Research Grants Committee.

m. Emeritus.—(Webster) A motion was made, seconded, and passed that Ernest M. Shull, a 26-year member and author of *Butterflies of Indiana*, be granted emeritus status.

8. Unfinished business

a. Holly Oster continues to update the IAS home page.

b. The question was raised as to whether there would be necrology reports at the Fall business meeting. Bill McKnight will write a note for the newsletter asking friends and colleagues to inform the Academy of the death of members.

9. New business

Bill McKnight suggested that Special Awards be approved at the Spring meeting and awarded at the Fall meeting. The President will consider appointing a Special Awards committee which would develop criteria.

10. The next meeting of the Executive Committee will be on 19 July from 9:30–12:00 at Park Tudor School. The next meeting of the Council will be on Thursday, 30 October at St. Joseph's College.

EXECUTIVE COMMITTEE

Park Tudor School
19 July 1997

1. The meeting was called to order by President Jim Haddock at 9:35 AM in Foster Hall at Park Tudor School. Academy members present included Rebecca Dolan, Gary Dolph, Edward Frazier, Jim Gammon, Jim Haddock, Susan Johnson, Duvall Jones, Bill McKnight, Vic Riemenschneider, and Nelson Shaffer. The Head Master of Park Tudor welcomed the group to campus.

2. The minutes, which recorded events of the Executive Committee Meeting and the Council Meeting of 18 April 1997, in a single document, were approved.

3. The agenda was approved.

4. Treasurer Ed Frazier presented details of revenue and expenditures and then summarized his report in the attached Account Summary for the Second Quarter of 1997. He reported an operating fund balance of \$20,054.32. The Total Restricted Funds balance was \$22,841.20. The Total Funds on Deposit was \$42,895.52. The Treasurer indicated that the Academy appeared to be in good financial condition. The report was accepted.

5. Executive Director Nelson Shaffer reported

that a second dues notice had been sent out and that 413 regular members had paid to date. He forwarded the bill for membership of IAS in NAAS to the Treasurer to be paid. He received a request from the Physics Department at North Carolina State University for permission to include three papers from the *Proceedings* of 1939, 1940, and 1941, in a volume: *The Cornelius Lanczos Published Collected Papers with Commentaries*. The occasion is the Centenary Celebration of the contributions of this scientist. The Committee supported the idea that permission be granted along with the request that appropriate citations be made. Shaffer has made arrangements to use campus mail at Indiana University for members of IAS who are on the IU campus. This will result in savings for the Academy. He was in the process of sending mailing labels to section chairs. He noted that AAAS has requested a letter of support for the 150th anniversary. He announced that the *Yearbook* had been distributed.

6. Gary Dolph, Editor of the *Proceedings*, reported that Volume 105 (1–2) was anticipated to be distributed in August or September. He presented an overview of the status of manuscripts awaiting publication. Volume 105 (3–4) was to go to the printer on September 1. For Volume 106 (1–2), ten manuscripts were ready and two or three more would be accepted. He listed five manuscripts which were in revision and three in review. Official notification of page charges will appear in Volume 105 (1–2) After that time members will be charged \$10 per page and nonmembers, \$70 per page. *The Bedford Handbook for Writers* is the reference for punctuation and grammar.

7. With regard to the Newsletter, Bill McKnight reported that the next issue would be mailed early in August and would contain information about the Fall meeting. There was discussion about the timetable for selection of the Speaker of the Year and publicizing of the speech.

8. President Haddock reported the death of Wayne Mueller. There was discussion of possible ways to use the \$960 in memorials donated to the Academy. Suggestions included an honorarium for the Speaker of the Year, scholarship for a Junior Academy member, addition to the Past Presidents' Fund. The Treasurer feels the money could be used for a single project.

9. Committee Reports:

a. Ad hoc Committee on Committees.—(Dolan/Gammon) Recommendations were sent to the Amendments Committee.

b. Amendments.—(Hansen/Frazier) Discussion of proposed Constitution and By-law changes occurred. The changes were described under the following categories: (1) Make the Constitution and By-laws conform to current practices. (2) Removing the position and committee of Director of Public Relations and Academy Relations to the State Committee and place

the Director of the Junior Academy of Science on the Executive Committee. (3) Create the position of Editor of the Newsletter. (4) Make the quorum of the Council more in line with Robert's Rules of Order. (5) Clearly define which type of membership receives the *Proceedings* and what is being received. (6) Create the position of Historian and eliminate the position of Necrologist. (7) Remove superfluous portions of the Constitution. (8) Revise Committees and Committee Functions.

The title of the Biological Survey Committee was revised to "Biodiversity and Natural Areas Committee." There was discussion of the elimination of the Science and Society Committee and the Science Education Advisory Committee. The President stated that the work of those groups needed to be carried on, but under a different format.

A motion was made, seconded, and carried that the President would write a letter nominating Duvall Jones to the Advisory Board for the development of a Statewide Assessment Model for K-12 Science Education.

The Constitutional and By-law proposals were to be distributed as appropriate to permit voting by the Council.

c. Programs and Invitations.—(Riemenschneider) Copies were distributed of the document "Program Requirements for Hosting Indiana Academy of Science Meetings." The President thanked the Chair for work on the document.

Turkey Run Inn has been reserved for the Spring meeting, 17 April 1998. Space will be rented for meetings, but rather than providing for a banquet, dinner will be done individually in the dining room. The Fall meeting of 1998 will be at Park Tudor School. The Spring and Fall Meetings for 1999 will be hosted by the University of Southern Indiana.

d. Local Arrangements.—(Jones) Progress was reported. There was discussion of a possible workshop on use of technology for teaching.

Duvall Jones then reported on the arrangement with Cinergy for support of the Indiana Science Talent Search. The one-time grant of \$2500 will include: \$1000 to the winning student; \$1000 to the Academy for operations; \$500 to the winning student's teacher for equipment. The award will apply to research in the areas of environment, energy generation, and pollution prevention. The arrangement may be continued if both parties are satisfied with the outcomes.

Dr. Jones introduced a resolution regarding the inclusion of science in the ISTEP testing program. The item will be discussed at the next Executive Committee meeting.

e. Publications.—(McKnight) The Chair reported on the status of various projects. The Committee is not moving ahead with the *Breeding Bird Atlas* project at this time. The *Natural Heritage* book is expected to be ready this fall. There has been a re-

duction in the State Library holdings of overprinted volumes of the *Proceedings*.

10. Unfinished Business

The President circulated a report on the status of the Academy Foundation. Recent transactions reflect changes in the John S. Wright Fund holdings with a view toward diversification.

11. New Business

a. Recognition will be made of Bill Lovell's gift to the Past Presidents' Fund.

Discussion was held about producing a very attractive certificate of recognition for Special Awards.

b. The issue of having an annual yearbook or a biannual publication with an abbreviated version in the off-year was discussed. Bill McKnight presented an estimate of \$3590 to produce 1000 copies of a 1998 yearbook.

c. Rebecca Dolan expressed interest in reworking the membership brochures.

12. The meeting was adjourned at 11:50 AM. Members toured the Park Tudor Campus with an eye toward use of the facilities for the 1998 Fall meeting. The Committee discussed the role of mass media in science as a possible featured theme for the meeting, and was favorably impressed by the facilities.

Susan M. Johnson, Secretary

EXECUTIVE COMMITTEE

St. Joseph's College

30 October 1997

Note: No official copy of the minutes from this meeting is available. Following is a brief list of some matters discussed at the meeting, taken from a member's personal notes.

1. It was announced that page charges for the *Proceedings* would be assessed for papers submitted after 21 October 1997.

2. A draft of the new membership brochure was passed out.

3. Volume 103, 1-2 of the *Proceedings* has been printed but had to be trashed because of a poor printing job.

4. There was a discussion about reallocation of stock in the endowment to provide for more income to the Academy.

5. A paid Fall meeting registration form must accompany the submitted abstract before it will be accepted and published in the meeting program booklet.

6. The awards to be given by the Academy are: President's award to Bill Lovell; Special Service award to Bill and Faye Daily. These must be approved by the Council.

7. The Academy will have a room at the new State Museum.

8. The next meeting of the Executive Committee will be at Butler University on 13 December.

COUNCIL MEETING

St. Joseph's College
30 October 1997

Note: No official copy of the minutes from this meeting is available. Following is a brief list of some matters discussed at the meeting, taken from a member's personal notes.

1. There is a cost overrun on the printing of the Academy directory.

2. The Executive committee will vote on the membership brochure at the Spring meeting.

3. Cinergy, Inc. is supporting high school research through the IAS Youth Activities Committee.

4. The Council directed the Trustees to look at a better balance between income and growth of the investments in the endowment.

4. Charles E. Wier was approved as an Emeritus member.

5. Abstracts for the Fall meeting must be accompanied by a paid registration for the meeting.

6. Election results are: Marion Jackson, President-Elect; Robert Dale, Secretary; Wendell McBurney, Foundation, and Anne Spacie, Grants committee.

7. There is a new booklet listing the requirements for hosting a meeting. The Spring meeting for 1998 will be at Turkey Run State Park, and the Fall meeting will be at Park-Tudor School.

8. Tom Simon (Indiana Biological Survey) said that they wanted to have a location in northwest Indiana, and needed someone (paid) to run the center until revenue started coming in. He recommended purchasing a building for the center. No action was taken.

9. Academy awards were approved for: Scholar—Charles Heiser; Special Service—Bill and Faye Dailey; Outstanding Contributions—Bill Lovell.

10. Addresses in the Academy Yearbook are for IAS business only. Labels for non-profit organizations may be made available at the discretion of the Executive committee.

EXECUTIVE COMMITTEE

Butler University
13 December 1997

Note: Secretary Susan Johnson was ill. Notes taken by Nelson Shaffer.

Treasurer Ed Frazier reported income of \$24,640, which is about the expected amount. A handout

stated current budget. The operating budget started at \$11,950 and is now \$9,607 with a few bills still anticipated, mainly from Gene Kritsky's trip to the AAAS meetings. Costs for *Proceedings* have gone down but there is a deficit in Publications because that fund paid \$19,000 for support of the *Natural Features of Indiana* book. Research Funds has paid student grants and will be replenished from the Foundation Funds. Other funds are status quo.

Checking account is about \$1000, and we have \$28,000 in a money market fund. The operation budget will show a deficit. Attendance at the St. Joseph's Fall meeting was 292 Senior academy and 128 for Junior academy. The meeting brought in \$7151 and expenses were greater by \$1266. Overall operating budget was about \$2000 over anticipated costs due to special mailing of by-laws and year-book expenses.

Executive Director Nelson Shaffer noted that membership for 1997 was 1001. Dues statements for 1998 were sent in December and about 25% of members have responded to date. Becky Dolan will develop a membership brochure and attempts will be made to attract corporate and institutional members. There was discussion of methods to increase membership and funding for *Proceedings*.

The Foundation Committee report from Frank Guthrie was read by Shaffer. Frank had transferred about \$67,000 from the invested income account. He anticipates that about \$90,000 from that account will be available for current obligations.

Gary Dolph reported that IU will print Volumes 105 and 106 of the *Proceedings*. He expects Volume 106 will be done by mid-January. Any new papers will be assessed page charges.

Becky Dolan is completing committee assignments but still needs a few volunteers. She is trying to increase Junior Academy involvement.

Details of the Spring Meeting were discussed. Concern was expressed about notifying honorees. The Awards Committee will be responsible for this duty. Bill McKnight is having award scrolls made. Executive Director Shaffer will be responsible for resolutions.

Jim Haddock presented a list of contact information for officers and committee chairs and a summary of concerns. He stressed the need for communication with the Junior Academy. A workshop on the role of mass media on high tech communication was discussed. The Fall meeting will be held 29–30 October at Park Tudor School in Indianapolis. Holy Oster reported on the IAS web site. The secondary school science program was awarded \$1700 by AAAS through the efforts of Duvall Jones.

The meeting adjourned at 10:45 AM.

MINUTES OF THE MEETINGS OF THE INDIANA ACADEMY OF SCIENCE 1998

COUNCIL MEETING Turkey Run State Park 17 April 1998

President Dolan called the meeting to order at 1:05 PM. Members present: Rebecca Dolan, Robert Dale, Edward Frazier, Gary Dolph, James Haddock, Nelson Shaffer. Other Council members and guests present: Frank Guthrie, Bill McKnight, Jim Berry, Holly Oster, and Marion Jackson.

Minutes of the IAS Executive Committee meeting of 13 December 1997 (prepared by Nelson Shaffer in Secretary Susan Johnson's absence) were distributed and discussed. Gary Dolph asked that the fifth paragraph be changed to read, "Gary Dolph reported that IU will print Volumes 105 and 106 of the *Proceedings*. Any new papers will be assessed page charges." Minutes of the IAS Budget Committee meeting of December 1997 (also by Nelson Shaffer) were also distributed and discussed. Gary Dolph moved that we accept both executive and budget meeting minutes subject to further checking. Accepted.

Ed Frazier distributed and summarized the Treasurer's report for 1 January–31 March 1998. Accepted.

Executive Director Nelson Shaffer distributed his Section Chair and Committee report (Geology and Geography).

Frank Guthrie distributed his 17 April 1998 IAS Academy Foundation Trustees report of selected assets as of 31 March 1998, with some editorial comments on each of the three accounts: the John S. Wright Fund (\$5,107,311), the Invested Income Account (\$314,652), and the Academy Foundation Fund (\$155,546). After some discussion the report was accepted.

Gary Dolph distributed draft Contents pages for *Proceedings* Volume 105, No. 3–4 (1996) and tentative contents for Vol. 106, No. 1–2 (1997). He may have to add two papers to Vol. 106, but both are approved. Should finish this by the end of May. Papers since March have had page charges.

Bill McKnight, Publications Chair, distributed copies of his 6 April 1998 memo and enclosures to the Publication and Executive Committees updating publications issues. After discussion of his misunderstanding with John Gallman of the IU Press and the followup with the Kron-Bolden and Associates'

botched production of Vol. 103 of the IAS *Proceedings*, decision was made to "ride it out" on both.

Jim Berry, Newsletter Editor, asked about discontinuing the blue abstract form with the call for papers in the Newsletter, since most everyone now has e-mail and should submit electronically. Discussion showed a continued need for mailed abstracts and that the blue abstract form should be continued in the Newsletter. We print about 1000 copies of each of four issues per year. William Gommel is in charge of obituaries.

Marion Jackson, President-Elect, distributed a list of suggestions on how IAS can become more effective in its mission. Perhaps a speakers' bureau? IAS reviews all papers and rejects some.

Rebecca Dolan distributed lists of her 1998 IAS Committee appointments and the elected Section Chairs. She also provided copies of a new flier on The Indiana Academy of Science with an enclosed application for new memberships, encouraging active use of the flier. Additional copies can be obtained from Nelson Shaffer. She reported Junior Academy things are in good order. To save mailing costs, she also suggested we renew memberships at the Fall meeting.

Gary Dolph moved that the Executive Committee meeting adjourn. Adjourned at 3 PM with IAS Council meeting to begin in 10 minutes.

COUNCIL MEETING Turkey Run State Park 17 April 1998

President Dolan opened meeting at 3:20 PM. She asked for a rising roll call of members. Council members present: those listed in the Executive Committee meeting minutes, plus Dick Conklin, Jim Curry, William Gommel, Ellen Jacquart, Nils Johansen, Damian Schmelz, and Dan Webster.

After distributing tentative agenda for the Council meeting, Dolan announced the last Council meeting was held at St. Joseph's College, and no minutes are available. Dan Webster moved that agenda be approved. Seconded and passed. Treasurer Frazier summarized budget for 1 January–31 March 1998. Bill McKnight suggested we determine what group determines use of funds. Gary Dolph reported as in Executive committee minutes,

but added page charges \$10 for members, \$35 for non-members. Jim Berry reported 1000 copies of newsletter were being prepared at a cost of \$700–800, with the next issue in June including blue line call for papers. Marion Jackson distributed his report, as in Executive Committee minutes. President Dolan distributed the new IAS Brochure which has been mailed to all colleges and departments in Indiana. Dan Webster, Chair of Awards Committee, needs recommendations for new IAS Fellows. Emeritus members were discussed, but don't push this. Ellen Jacquart heads the new Biodiversity/Natural Areas Committee, and was to have a meeting 18 April. Ed Squires, Finance Committee, gave audit report and indicated that it was not clear as to who is bonded. Bill McKnight moved that audit report be accepted. Passed. Holly Oster, Chair, Library, distributed the address of the IAS Homepage as: [HTTP://WWW.STATELIB.LIB.IN.US/WWW/IAS/IAS.HTML](http://www.statelib.lib.in.us/www/ias/ias.html).

Bill McKnight, Chair of Local Arrangements for the IAS fall meeting at Park Tudor School in Indianapolis, distributed a list of the work to be done for the 29–30 October 1998 meeting. The absolute deadline for receipt of abstracts is Sept. 20, and meal deadline is Oct. 10. They can seat 350 people at a time. He needs referees for the Junior Academy. Any suggestions for enhancing the Fall 1998 meeting at Park Tudor School in Indianapolis should be sent to Bill McKnight.

Richard Conklin, Chair, Nominations Committee, has had no response to the request for nominations included in the March newsletter.

Bill McKnight distributed the IAS Publications list and prices (12/97), and briefly described new books sent to his committee for recommendations: Ferns, Dragonflies, Lake Calumet, and Anatomy of a Woodchuck. The Grants committee will meet in May.

Old Business: Bill McKnight reported present IAS web site is under State control and is not current. We need to have our own web site to show the public what IAS is about and to advertise our books. His students are planning a web site demonstration, but it is not yet available. It is not housed at any one place and there are several places to edit—40–50 a month. Recommend that IAS control our own web site. President Dolan appointed an *ad hoc* committee on web site: Bruce Kingsberry, Holly Oster, Gary Dolph, and Nelson Shaffer.

New Business: Need to be able to renew membership at Fall meeting. See Executive Committee minutes.

There was some discussion of increasing research grants and asking grantees for better accountability, e.g., submitting final report. The grantee does have to send a financial report to Treasurer, but there may not be a final scientific report.

Executive Director announcements: Eric Kavale

of the Indiana Geological Survey will give the talk tonight at 8:00 PM on how diurnal lunar tidal action can be read in sedimentary rocks. He will also lead the geology field trip Saturday morning at 9:00 AM to demonstrate his talk tonight. Mike Homoya, Biologist with DNR, will lead the wild flower tour at the same time.

Bill Gommel, IAS Historian and also Necrologist, asked members to let him know of any deaths of IAS members, and also send him obituary clippings.

Nils Johannsen, Chair, Local Arrangements for the Fall 1999 IAS meeting at the University of Southern Indiana, Evansville, announced that the Spring 1999 meeting will be in New Harmony, Indiana.

Damian Schmelz, IAS Coordinator with DNR, said one goal of DNR is to have a State Park within a one-hour drive for anyone in Indiana, and reviewed the progress on the Prophetstown State Park.

Bill Gommel moved that the meeting be adjourned at 5:20 PM.

Robert F. Dale, Secretary

EXECUTIVE COMMITTEE

Park Tudor School (Indianapolis)

18 July 1998

President Dolan called the meeting to order at 9:45 AM. Members present: Rebecca Dolan, President, Robert Dale, Secretary, Gary Dolph, Marion Jackson, Bill McKnight, and Nelson Shaffer.

McKnight started the meeting with an impressive demonstration by two of his Park Tudor students, Yah Anokwa (sophomore) and Mike Mulcahy (senior) on preliminary work on a web page for the IAS.

Dolph moved that we allocate \$1,000 from Publications Marketing to set up a web page for IAS. Seconded by Jackson and passed unanimously. This will be demonstrated at the Fall meeting.

Minutes of the 17 April 1998 Executive and Council meetings were accepted with the following corrections and amendments: Page 1, paragraph beginning "Frank Guthrie . . .": Add at end of paragraph "The Executive Committee directed the Finance Committee to reallocate assets to generate more spendible income."; Page 3, top paragraph: Replace "new books" with "prospective manuscripts." Agenda were approved.

Treasurer's report was distributed, but Ed Frazier could not attend meeting and there were no additional comments or questions.

Shaffer handed out breakdown of IAS members as of this date, totalling 827 in all categories. The 1998 *Yearbook* is ready for printing, awaiting bids, two so far of \$1538 and \$1590. We have sold no

advertising so IAS will assume whole cost. Discussion of late dues and inclusion of the respective member's name in the *Yearbook*. Have two new Section Chairs, William Cook in History of Science, and Peter E. Scott in Ecology. Shaffer has sent out IAS member mailing lists to the respective Section Chairs.

Dolph reported Vol. 105 of the *Proceedings* ready, waiting for the index. Vol. 106 (1–2) about ready. He received a thank you letter from Faye Daily, enclosing an obituary for her husband, William Daily, who died 6 July 1998. McKnight attended funeral and will send obituary to Bill Gommel.

Dolan reported on a letter she had received from the Dean of Arts and Sciences at Indiana University. Because of a fund shortage or reallocation, it will be necessary for IU to cancel several programs impacting heavily on IAS affairs. The cancelled programs are the Advance Placement Teachers Workshops in calculus, English, and biology, the annual Science and Math Conference, Science Olympiad State Tournament, the Indiana Junior Academy of Science Symposium, Exploration of Careers in Science, and the South Central Indiana Regional Science and Energy Fair. President Dolan has written the Dean regretting this action. Linda Airey, Franklin College, and Shireen DeSouza, Ball State, will have the Fall Junior Academy of Science program.

Dolan reported Kron-Bolden will pursue \$6,000 in small claims court from IAS (because of their botched production of Vol. 103 *Proceedings*). She has contacted a lawyer and the court date of 30 June was postponed. Dolph will send botched copy of Vol. 103 of *Proceedings* to Dolan to give to lawyers. Do we need to retain a lawyer for IAS? Tabled for the Fall meeting.

Dolan is working on an improved IAS award process. There are grants from AAAS for an annual AAAS membership for two high school students (male and female) and two college students (male and female) on presentations at the Fall meeting. She asked Past President and President-Elect to judge. She also distributed a newsletter of the Academy of Science Youth Activities, *Scientific Notations*, which needs a new editor.

McKnight needs by the first week in September the needs for each Section. He is also getting the Speaker of the Year, and will appreciate any help he can get for the Fall meeting.

Dolph moved for adjournment at 11:30, thanking Bill McKnight for the coffee, juice, fruit and doughnuts. Passed unanimously.

Robert F. Dale, Secretary

EXECUTIVE COMMITTEE MEETING

Park Tudor School (Indianapolis)
29 October 1998

President Dolan opened the meeting at 1:10 PM and distributed tentative agenda. Members and guests present: James Berry, Rebecca Dolan, Robert Dale, Gary Dolph, James Haddock, Marion Jackson, Duvall Jones, Bill McKnight, and Nelson Shaffer.

Shaffer distributed copies of minutes he had reconstructed from his tape of the proceedings of the 30 October 1997 IAS Executive Committee and Council meetings at St. Joseph's College, (Rensselaer) and the 31 October 1997 IAS General Business meeting, as well as the minutes by Secretary Dale of the IAS Executive Committee meeting 18 July 1998 at Park Tudor School. Haddock moved acceptance of the 1997 minutes pending further reading, second by Dolph. Jackson moved acceptance of the 18 July 1998 minutes with the correction of the History of Science Section Chair's name from William to Donald J. Cook. Seconded by Dolph.

McKnight distributed copies of the Treasurer's report and said Treasurer Frazier will be here tomorrow. McKnight read the Treasurer's account summary comments on the back of page 1 of his report.

Shaffer distributed copies of IAS Membership numbers, totalling 855 in October 1998 compared to 838 in 1997. He also distributed copies of a 28 Sept 1998 letter from Lynn Elfner, CEO of the Ohio Academy of Science, asking IAS endorsement of a \$1 million proposal to the National Science Foundation on Project Parent S.O.U.P.—Science Opportunities Unlimited for Parents. The preliminary proposal is available on the Academy's website: <http://www.ohiosci.org/soup.htm> or by FAX or mail. Dolph moved that the Executive Director draft a letter supporting the request. Second by Jackson. Jackson asked about the decrease in Emeritus members (56 to 50) with discussion following.

Dolph distributed copies of tentative content pages of IAS *Proceedings*, Vol. 106, No. 1–2 (1997) and No. 3–4 (1997) and Vol. 107, No. 1–2 (1998) with comments.

Berry asked members to send something to print in the newsletter. Discussion and suggestions followed.

Jackson asked if there were written instructions to Section Chairs on encouraging members to present papers and on the preparation of abstracts for the meeting program. McKnight, on the basis of many problems encountered organizing the program for this year's meeting, had prepared a page of instructions for the authors, section chairs, and compilers (this year McKnight) to decrease the nightmare—use E-mail or disc and obey deadlines!

Jackson also asked about a letter to potential IAS members. Dolan has flier (distributed at Spring meeting) which Shaffer will send to Science Department Chairs and Librarians.

President Dolan has received a letter from the Ohio Academy of Science asking for support for a National Institute for the Environment. The Indianapolis Public Schools are interested in the Junior Academy. Committee updates will be discussed in the following Council meeting. On unfinished business, Dolan reported that since there have been embarrassing occasions of no followup on notifying recipients of the awards given by the IAS, she is sending them out. She also wants our web-site developed and will appoint an *ad-hoc* committee for this. Kron-Bolden filed a law suit for \$7,000 (for low quality proofs of a *Proceedings* volume in 1994) with a court date of 27 September 1998. We hired a lawyer and supplied him with discarded copies of the volume for evidence. Kron-Bolden cancelled the court date.

Under new business, Jones distributed a memo proposing an Education Symposium in December 1999 and recommending that IAS allocate \$2,000 for related expenses. The program would be similar to "Science Education at the Crossroads" in 1988. The Indiana State Board of Education is developing a consensus on this. Haddock moved development of steering committee to help plan this symposium.

Haddock moved adjournment at 3:00 PM.

COUNCIL MEETING

Park Tudor School (Indianapolis)
29 October 1998

President Dolan called the meeting to order at 3:15 PM and distributed tentative agenda. Members and guests present: Linda Airey, James Bandoli, James Berry, Richard Conklin, Robert Dale, David Daniel, Gary Dolph, William Gommel, Frank Guthrie, James Haddock, Ellen Jacquart, Marion Jackson, Duvall Jones, Bill McKnight, Holly Oster, Damian Schmelz, Peter Scott, Nelson Shaffer, Daniel Webster, Terry West, and Robert Wolf.

The minutes of the Council (and Executive Committee) Meeting on 17 April 1998 at Turkey Run State Park had been mailed to Council members earlier. Webster moved approval of the minutes. Passed. Agenda approved by acclaim.

Treasurer's report was distributed by Shaffer, who pointed out that 75% of the research proposals were funded.

Reports by Executive Director Shaffer, *Proceedings* Editor Dolph, and Newsletter Editor Berry similar to those in Executive committee minutes.

Jackson stressed membership and informed the Council there would be a Budget meeting at Butler University on 5 December 1998 to determine the

1999 budget. Budget requests should be sent to Jackson or Dolan.

Dolan reviewed the Kron-Bolden suit and asked if IAS should retain a lawyer. (McKnight, at the IAS Publications Committee meeting at 10:30 AM this morning, had distributed the Kron-Bolden Chronology report as a part of his agenda and provided copies to interested Council members.) Gommel asked if the Indiana State Attorney General could help on such occasional problems. Dolan will appoint an *ad hoc* committee to study and make recommendation on IAS retaining a lawyer.

Damian Schmelz distributed copies of his Natural Resources Commission report of 29 October 1998.

Gene Kritsky did not attend meeting but provided copies of his report on the meeting of the National Association of Academies of Science (NAAS) in Philadelphia on 10–14 February 1998 in association with the AAAS meetings. His report included a note that he will complete his 3-year appointment as IAS Representative to the AAAS at next year's meeting at Anaheim, California, and will not be asking for a third appointment to this post. He also included a proposal for the appointment of an Academy Liaison to the National Council for Science Education. Dolan asked anyone interested in being the IAS representative to the NAAS meetings, beginning in 2000, to let her or Jackson know.

Gommel, Historian, suggested IAS members send a copy of their histories to either himself or Holly Oster, Archivist, to have on file, and also to send obituaries of any friend or associate known to have been a member of IAS. He also read a tentative list of member deaths reported since the last annual meeting for confirmation and reading at the annual meeting tomorrow.

Guthrie distributed copies of the Academy Foundation Report 28 October 1998 showing a total market value for all funds of \$6,030,754 with an estimated annual income of \$135,865. They will continue to monitor assets and income to ensure that the IAS can maintain growth prospects while increasing support for research projects.

Oster distributed a 1998 report on changes and holdings in the John Sheppard Wright Memorial Library. This included an increase of 120 volumes to 12,473 as well as the respective numbers of pamphlets, maps, microfiche, data disks, and posters. There were 503 inter-library loans, 1100 copies of *Proceedings* Vol. 105 (3–4) received from the printer and 640 mailed to eligible Academy members. State funds for printing Vol. 107 were received and forwarded the IAS Treasurer. The IAS state budget request for \$17,622 in the 1999–2000 biennium was prepared by the State Library and submitted to the State Budget Agency.

Airey reported a decrease in Junior Academy participation.

Jones distributed a 24 October 1998 report from

the IAS Youth Activities Committee, including minutes from their 28 May 1998 meeting. The number of students and mentors receiving support for secondary student science research grants has increased from 21 students receiving a total of \$1961 from IAS and \$1700 from AAAS in 1997 to \$3500 from IAS and an expected \$1700 again from AAAS in 1998. Funding and the number of mentors has not kept up with the increase in grant requests.

Daniell confirmed that the Spring 1999 meeting will be at New Harmony and the Fall 1999 meeting at the University of Southern Indiana, but the sites for 2000 have not yet been determined.

Jacqart reported the Biodiversity and Natural Areas Committee was surveying the available data being monitored in the state by DNR, IAS and other organizations, with a committee meeting tonight from 7:00–9:00 PM.

Conklin presented election results: Ruth Howes for President-Elect, Robert Howe for Research Committee, and, to correct an omission on the ballot (and in the 1998 Yearbook), Stanley Burden on the Academy Foundation. Approved. Conklin also reported there were fewer ballots returned this year, only 167, compared to 207 last year and 300 two years ago.

Webster distributed the 24 October 1998 report of the Awards Committee, electing for Distinguished Scholar, Ernest Roy Davidson, for Fellow, John Castrale and Edward Frazier, and for Emeritus Member, Frank Guthrie. Webster moved that these recommended members be approved for the indicated awards, second by Haddock and passed unanimously by Council. Fellows and Emeritus member have to be approved by the total membership at the Annual Meeting tomorrow.

A resolution to be introduced at the annual meeting was drafted and read by Shaffer, thanking Bill McKnight and Headmaster Bruce Galbraith for the excellent facilities and many courtesies extended to IAS at Park Tudor School. Unanimously approved on motion by Shaffer and second by Gommel.

Jones distributed his 27 October 1998 proposal for a 1999 Education Symposium to Council members. See Executive Committee minutes.

McKnight distributed copies of his corrected "Rules for Submission of Abstracts" to Council members and indicated that these would be published in the newsletter and also provided to Section Chairs tomorrow morning.

Gommel moved for adjournment at 5:05 PM.

GENERAL BUSINESS MEETING

Park Tudor School
30 October 1998

President Rebecca Dolan opened the 114th IAS Annual Meeting at 1:01 PM. She introduced Bruce W. Galbraith, Headmaster of Park Tudor School,

who welcomed the Indiana Academy of Science members to the campus and gave a brief background of the private school which educates students from three years of age through high school. Most classes had been dismissed, and the students and faculty were also in attendance. President Dolan read a Resolution thanking Park Tudor School officials, and especially Bill McKnight, for hosting this 114th IAS annual meeting. Resolution passed unanimously.

William Gommel, Historian/Necrologist, read the names of the following IAS members with year of death: Frank N. Young, 1998; George B. Craig, 1887; William A. Daily, 1998; Robert C. Pittenger, 1998; Newton G. Sprague, 1998; Joseph S. Ingraham, 1997; Raymond E. Girton, 1997; James R. Rees, 1998; James P. Holland, 1998. Members then stood for a moment of silence in honor of the departed members for their services to the Academy and the world of science. Gommel then encouraged members to send their resumes to him, Holly Oster, or Executive Director Shaffer for file, and also any obituaries for departed members to him, Shaffer or Newsletter Editor Berry.

Dan Webster read the recommendations of the Awards Committee: Ernest Roy Davidson for Distinguished Scholar. Webster moved, second by Haddock, passed unanimously. For IAS Fellow: John Castrale and Edward L. Frazier. For Emeritus member: Frank A. Guthrie. Webster moved, second by Haddock, passed unanimously.

Gary Dolph, *Proceedings* Editor, reported he has enough papers for Vol. 106 (1997) and has some for Vol. 107 (1998) and called for more papers. While problems with printer have caused delays in the past, don't worry about time-sensitive papers, we'll rush them into Vol. 107 (1–2) (1998).

Richard Conklin announced election results: Ruth Howes for President-Elect, Robert Howe for Research Committee. Also, Stanley Burden was omitted from the ballot (and the 1998 Yearbook) as a Trustee on the Academy Foundation, which requires a vote from the membership. Passed unanimously.

On behalf of the Indiana Academy of Science Executive Committee, Executive Director Shaffer thanked President Rebecca Dolan for her excellent stewardship the past year, which included preparation of a membership brochure among many other enlightened activities.

President Dolan passed the gavel over to incoming President Marion Jackson, who adjourned the meeting at 1:25 PM.

After a five minute break, John Schutt introduced Uwe Hansen, Speaker of the Year, who gave an inspiring talk and demonstration on the use of physics (frequency) in music, applicable to almost any education level.

Robert F. Dale, Secretary

EXECUTIVE COMMITTEE

Butler University
5 December 1998

President Rebecca Dolan opened the Executive Committee meeting at 9:45 AM. Members present: Linda Airey, Clare Chatot, Robert Dale, David Daniell, Shireen DeSouza, Rebecca Dolan, Gary Dolph, Frank Guthrie, Ruth Howes, Marion Jackson, Ellen Jacquart, Nils Johansen, Duvall Jones, Bill McKnight, Holly Oster, and Nelson Shaffer. President Dolan indicated we had one piece of unfinished business to handle before turning the meeting over to incoming President Jackson for the Budget Committee meeting. She moved that the IAS Treasurer be authorized to sign 1999 Letters of Agreement for the Editor of the *Proceedings*, Gary Dolph; for the Executive Director, Nelson Shaffer; and Publications Managing Editor, Bill McKnight. Jackson seconded and motion passed unanimously.

Jackson read a thank you letter he had written to Rebecca Dolan for her excellent stewardship as President IAS the past year. He will give letter to Jim Berry for publication in the IAS newsletter.

Shaffer reported he had sent out dues notices to members and had closed the books on 1998.

Dolph moved for adjournment of the Executive Committee meeting. Shaffer seconded at 9:54 AM.

BUDGET COMMITTEE

Butler University
5 December 1998

President Marion Jackson opened the meeting at 9:55 AM. Members present: Same as above.

Shaffer moved to accept budget as submitted by Ed Frazier, Treasurer, showing \$35,610 projected income for 1999 budget with rundown of expenses, restricted fund revenues and expenses, and foundation invested income account. Seconded by Dolan. (Budget passed after the following discussions and modifications.)

On a question from President-Elect Howes to Oster on the \$3000 request for binding in the Library Operations expenses, Oster reviewed some of her activities with the State Library, including that they receive not only the Indiana Academy of Science *Proceedings*, but also those from all other states and many foreign countries. Chatot asked Jacquart about the \$150 request in the operating fund expenses for the data base collection. Jacquart moved to delete the \$150 request and will investigate seek-

ing IAS research funds for this. Second by Chatot and passed unanimously. Jacquart then moved that \$1000 be included in the Biological Survey for an education publication on non-native invasive plants. Second by Chatot and approved on a 9-2 vote.

Jones pointed out the Indiana Junior Academy of Science proposed 1999 budget in the honorarium for sponsoring teachers should be \$200, not \$100, so that the Junior Academy total should be \$6575, not \$6475. This brings total operating fund expenses to \$45,100 and the revenues over expenses to \$9,490.

McKnight brought up (apparently for the third year) the lack of a policy on how the Past President and Life Member funds should be used. Jackson appointed McKnight, Jones, Guthrie, Howes, and Treasurer Frazier as an *ad hoc* committee to make such policy recommendation.

Dolph indicated that 1999 is the first year we will have page charges for the *Proceedings*, and that these will bring in about \$2,000 more than shown in the budget. This brings the total income from the *Proceedings* to \$10,200 (instead of \$8,200), and accordingly the total restricted funds revenues to \$128,250 and the revenues over expenses to \$30,450, respectively.

McKnight discussed the need for our own IAS home page, as demonstrated at the 18 July 1998 Executive Committee meeting (see 18 December 1998 minutes). The present home page at the State Library just is not adequate and cannot be kept up-to-date. Without close monitoring of an IAS home page Howes fears material may appear on the website which could reflect badly on IAS. McKnight needs website for sales of publications. Shaffer, representing Treasurer Frazier, indicated he was reluctant to add a separate item on this at this time.

Chatot moved that the restricted fund revenues and expenses be approved. Seconded by Dolph and passed as corrected.

Chatot moved to accept entire budget. Second by Howes and passed unanimously.

Academy membership brochures were distributed to members present, and Shaffer will send them to College Science Departments and Libraries.

President Jackson ended by asking for input on any IAS activity not voiced here.

Dolan moved for adjournment at 12:40 PM, seconded by Shaffer and passed unanimously.

Robert F. Dale, Secretary

**MINUTES OF THE MEETINGS
OF THE
INDIANA ACADEMY OF SCIENCE
1999**

EXECUTIVE COMMITTEE

New Harmony, Indiana
16 April 1999

President Marion Jackson opened the Executive Committee meeting at 1:15 PM in the New Harmony Inn.

Members present: James Berry, Robert Dale, Rebecca Dolan, Edward Frazier, Ruth Howes, Marion Jackson, Holly Oster, and Nelson Shaffer.

Howes moved that the 5 December 1998 Executive Committee meeting minutes be approved as printed. Passed.

Jackson moved that the 29 October 1998 Executive Committee meeting minutes be approved as printed. Passed.

Frazier distributed and reviewed the budget and account summary from 1 January to 31 March 1999, suggesting that we think about the use of the Welch funds on plant research.

Dolan informed the committee that the Kron-Bolden case has been settled for \$3000.

After some discussion on determining future IAS meeting dates well in advance, Howes moved that we establish next year's budget meeting on 4 December 1999. Passed.

Shaffer said Frank Guthrie could not attend this meeting but had informed him that, with the merger of Bank One and NBD it may be necessary to diversify the IAS portfolio of about \$5 million. No action is required at this time.

Shaffer distributed his report on the number of IAS members in each category, totaling 824 as of 14 April 1999. He is cutting off membership and starting on the Yearbook. He has had problems getting Section Chairs and Committee Chairs established. The *Proceedings* editor could not be here, but Vol. 106, No. 1-2 (1997) are printed. However, Oster does not yet have them for mailing. Shaffer distributed the contents page for Vol. 106, No. 3-4 (1997) with progress indicated on each paper. Dolph hopes to mail this issue to the printer at Bloomington by 15 May.

Berry reported it is still difficult to get information for the newsletter, and asked if it were still necessary to use the blue line page for abstracts, which has to be printed separately at a cost of \$200-300. Committee agreed to no blue line insert in newsletter.

Jackson reported for Bill Gommel, IAS Historian, that three long-term IAS members, Lois Burton, Alan Horowitz, and Howard Michaud, have died since the Fall 1998 meeting.

Marion Jackson reported that *The Natural Heritage of Indiana*, first printing, is sold out of stock at IU Press. However, Bill McKnight, Publications Chair of IAS, currently has about 175 copies remaining. McKnight recently sold *circa* 50 copies to Purdue University NW for use as a college text. Jackson also reported that IU Press and educators around Indiana have shown interest in modifying *The Natural Heritage of Indiana* for use as a high school text.

Jackson also reported for McKnight that Dr. Sherman Minton's *Amphibians and Reptiles of Indiana* is scheduled for publication as soon as minor details are corrected. Jim Curry's *Dragonflies of Indiana* should be completed by this fall. There is interest in a possible publication of correspondence between Dr. Charles Dean and Floyd Swink and others regarding botanical lore of Indiana.

Rebecca Dolan distributed a report from David Daniell for the Programs and Invitations Committee that Indiana University East at Richmond had invited the IAS to have their Spring and Fall 2000 meetings there. After some discussion Frazier moved that we recommend this to the Council. Howe seconded and passed.

Shaffer read a 15 April 1999 letter from Ellen Jacquart, Chair of the Biodiversity and Natural Areas Committee, providing the agenda for their meeting, unfortunately being held today in Indianapolis.

Jackson reported that the Indianapolis Parks and Recreation Dept. had asked for approval to use our IAS logo on some of their publications in which they have used information or materials from IAS. Permission was granted. He also reported on a letter received from Alton Lindsey.

The *ad hoc* committee concerning the IAS Web Site will be convened by Bill McKnight this summer. Dr. Tim Mulkey of ISU has been added to this committee to take advantage of his computer expertise.

Dolan circulated several special science articles from the *Sun Sentinel* of Fort Lauderdale, Florida suggesting that IAS consider preparing something similar for local newspapers.

Meeting adjourned at 3:05 PM, Council Meeting in 10 minutes.

COUNCIL MEETING
New Harmony, Indiana
16 April 1999

President Jackson opened the IAS Council meeting at 3:20 PM.

Members and guests present: James Bandoli, James Berry, Richard Conklin, Robert Dale, Rebecca Dolan, Edward Frazier, Ruth Howes, Marion Jackson, Blake Janutolo, Nils Johansen, Duvall Jones, Holly Oster, Damian Schmelz, Nelson Shaffer, Dan Webster, and Howard Youse.

Shaffer distributed minutes of the 29 October 1998 Council meeting. Minutes were approved on motion by Webster and second by Schmelz.

Agenda were approved, and Frazier distributed and discussed budget. He also distributed the report of the Finance Committee, Robert Waltz, Chair, which showed the 1998 Year End Financial Report to be a fair and accurate record. Frazier moved, Youse seconded, to accept report. Unanimously approved.

Shaffer presented the IAS member count, indicating that a number of committee members have not paid 1999 dues. He also presented Dolph's report (See Executive Committee minutes).

Berry reported next newsletter in June 1999 will be on candidates for 2000, and will not include the blue line abstract form for the Fall meeting.

Howes informed Council that the Budget Committee will meet 4 December 1999 to approve 2000 budget.

Jackson reported for Gommel and Indiana Parks and Recreation Dept., as in the Executive Committee minutes.

Schmelz reported on plans of Indiana Natural Resources Commission which has hired the firm that built the Holocaust building in Washington, D.C. to build IMAX theatre to show history of geology, including a limestone quarry. There will also be field trips to Lake Michigan in May, to Pokagan to study aftermath of deer hunt, and concern that the Gypsy moth is moving south from Michigan and west from Ohio.

Jackson reported Gene Kritsky has asked to be relieved of his appointed position as IAS Representative to AAAS, and that Richard Kjonaas has agreed to serve in this position.

Jackson gave McKnight's report, as in the Executive Committee minutes.

Jones reported for youth activities. They have had one application for a High School Research Grant and are going ahead with the Symposium on Science Education in cooperation with the Hoosier Association of Science Teachers, Inc. (HASTI) convention to be held 9-11 February 2000. They are looking for a speaker on involving students in bi-

ology K-12, and will have three programs: Assessment at the state level, Teacher performance, and Student assessment. IAS will have a booth (3000-4000 attendance expected).

Conklin reported no nominees yet, need input.

Webster needs recommendations for awards: Distinguished Scholar, Special Service to Academy, and Fellows.

Dolan brought the IU East invitation for the 2000 IAS meetings to the floor and indicated that the Executive Committee recommends approval. She moved, and Webster seconded, that the Council approve IU East at Richmond for the IAS meeting in 2000. Passed.

Jackson said the Budget Committee meeting will be on 4 December 1999, and that Bill McKnight is on the *ad hoc* web site committee.

Shaffer reported for Frank Guthrie (see Executive Committee minutes) and for Claire Chatot: one research grant given for high schools and 30 for universities.

Under New Business, Webster asked that papers submitted to the annual meeting should be assigned to the proper section. He had surveyed the papers presented the past few years and believes that many papers submitted to Section Chairs should be in another Section, e.g., many papers in Ecology should be in either Zoology or Botany. After considerable discussion, the Local Arrangements Committee of the University of Southern Indiana (Bandoli and Johansen present) offered to receive the abstracts directly for the advantage of more timely receipt of abstracts. Howes moved that the Local Arrangements Committee be authorized to solicit and handle this year's abstracts directly and arrange the program, clearing instructions with Shaffer and Berry (June newsletter) to ensure that Section Heads and authors are properly informed of the procedures. Second by Youse and passed.

Shaffer thanked the Local Arrangements Committee for the excellent facilities provided for this Spring meeting.

Meeting adjourned at 5:10 PM.

Respectfully submitted,
Robert F. Dale, Secretary

EXECUTIVE COMMITTEE

Butler University
24 July 1999

President Marion Jackson opened meeting in Room 300 of Gallahue Hall at 9:15 AM.

Members present: James Berry, Robert Dale, Rebecca Dolan, Gary Dolph, Edward Frazier, Ruth Howes, Marion Jackson, Nils Johansen, Bill McKnight, and Nelson Shaffer.

Howes moved that the minutes be approved. Seconded by Dolan and motion passed.

Shaffer reported that CINERGY wants to be a corporate member of IAS and asked if copies of the History of the Indiana Academy of Science were available for supplying copies to corporate members. McKnight said he has about 500 copies, but that we provide more benefits to corporate members than the membership dues warrant. This led to a discussion of corporate members versus sponsors, which would require a change in our constitution. Howes moved that Shaffer be authorized to look into the legal questions required for corporate sponsors or redefine corporate member. Seconded by Dolan. In following discussion Howes suggested this would require a 5-year plan as to what we would do with sponsor donations, recognizing that IAS is the only state voice for science. Motion passed unanimously.

Shaffer reported there are now 886 members, including life members. The 1999 Yearbook cost \$500 more than budgeted. We need to line up meeting dates beyond 2000.

McKnight reported we may collaborate with the Shirley Hinds Environmental Fund on the Charles Dean-Swink publication.

Curry's *Dragonflies of Indiana* is out for review and he hopes to get reviews back by October. We do not have the Walsworth Printing report yet on Minton's *Amphibians and Reptiles of Indiana*. *Plants of Chicago* (4 years ago) by Swink has been well received.

Dolph reported Vol. 106, Nos. 3-4 galley proofs should be out to authors before October. He described problems with manuscripts and only has about half enough papers for Vol. 107, Nos. 1-2.

Berry suggested that the Section Chairs should have been listed in the last newsletter, but he couldn't find a complete list. The third issue of the newsletter will be out in August with election and registration materials, and the fourth issue will be mailed after the Fall meeting.

Johansen reported that the Bandoli June 1999 e-mail letter on IAS new abstract procedures, sent to Section Chairmen, has been reproduced by them for their section members and seems to be working well, abstracts to be sent to jhbandol@usi.edu which has a positive website.

McKnight asked what to do about the IAS website. All he wants to do with the website is to advertise and sell publications, i.e., if we want a Jr. IAS page someone else can do this. He said that "IAS" is taken but "inacadsci" is available. Howes moved to authorize Bill to get this name. Seconded by Dolan and passed.

Jackson passed around a description of the Indiana State History Museum and discussed the need for space in it for IAS. In the discussion it was suggested we have a display in a 5 x 5 kiosk, and that we would have to keep it current. More than

half of the ISHM board members are either IAS members or sympathizers.

Dolan had talked with Ellen Jacquart, Chairman of the Biological Survey Committee (now called Biodiversity and Natural Areas, BNA), who indicated that they would like to meet with the Executive Committee before the Fall meeting with regard to getting more support for their work. They would need about three hours to brief the Executive Committee. After some discussion, Dolan will propose to Jacquart that the BNA and Executive Committees meet at Butler at 9:00 AM on 7 October 1999.

Frazier distributed and discussed the IAS Budget Comparison 1 January to 31 March 1999 and the IAS Account Summary for the year (1999) to date.

Dolan pointed out that the bulk of the money in the Wright Fund is controlled by the Trustees and is earning only 1.4%. What are the constraints on getting more research funds? McKnight said that the Wright Fund has grown from about \$2 million in 1991 to \$6 million in 1998, but that in the same period the research funds available for IAS to distribute to researchers in Indiana have only grown from \$80,000 to \$90,000 (probably less than the Bank One fee for managing the Wright Fund). After discussion on getting more real money for research purposes, the Executive Committee agreed to meet again with the Trustees and, if possible, a Bank One representative at 9:00 AM on 26 August 1999 to determine what changes can be made to get more research funds now, President Jackson to issue invitation to Trustees and Bank One.

McKnight moved to adjourn meeting at 12:30 PM. Passed.

Respectfully Submitted,
Robert F. Dale, Secretary

EXECUTIVE COMMITTEE with Trustees of the IAS

Butler University
21 September 1999

President Marion Jackson opened meeting in Room 300 of Gallahue Hall at 9:35 AM, indicating the main reason for this meeting was to discuss with the Trustees the potential for getting more resources from the Trustees for support of science research grants.

Members present: Stan Burden (Trustee), Robert Dale, Rebecca Dolan, Gary Dolph, Edward Frazier (*ex officio* Trustee), Frank Guthrie (Chair Trustee), Ruth Howes, Marion Jackson, Duvall Jones, Holly Oster, and Nelson Shaffer.

Frank Guthrie summarized his letter of 1 September 1999, sent out with Jackson's 3 September 1999 memo announcement of this meeting, indicating that, while Bank One had indicated there would be

a 35% fee discount, the trust maintenance fee actually has increased \$3400 to \$25,100. The Trustees are considering moving the IAS Academy Foundation account to Merrill-Lynch where the annual fee will be \$8000–10,000. Guthrie distributed a listing of the three accounts in the Trust Funds of the Indiana Academy of Science, which as of 31 July 1999 totaled \$6,087,559.72. The Wright Fund comprises \$5,508,197.74 of this total. We can't spend the principal in the Wright Fund but we can use the earnings to support research grants, publication of *Proceedings* of the IAS, and in the past, monographs.

Dolan distributed copies of selected pages of *History of the Indiana Academy of Science, 1885–1984* (Daily and Daily, 1984), calling attention to Fig. 38, p. 145, with excerpts from the John S. Wright will on supporting IAS research.

Howes asked who makes decisions on use of earnings? Burden said McKnight got funding for the butterflies book publication. Dolan asked how McKnight got the money for the publication? Guthrie stated the Trustees have responsibility for safeguarding the trust funds and feel they have to reserve some of the income. The Council determines policy, the Chairman of the committees (including Research Grants) contacts his members on needs and brings these to the Executive Committee. This does not include the operational funds budget of about \$35,000 from dues.

Nelson indicated we're holding steady with membership so there is not much change in the operational budget.

Dolan reported science research projects supported by IAS are usually limited to \$2000. How can we increase this?

Howes distributed a two-page statement she had prepared on Projects for the Indiana Academy of Science, including several Possible Actions under each of three headings, Research, Science Education, and Science and the State. She pointed out that IAS has the responsibility to guide science research and education in Indiana, grades K-16.

Dolan distributed a memo from Clare Chatot (Chair, Research Grants Committee, not present) 9 September 1999, listing the numbers and dollar amounts for IAS research grants funded and received from 1992 to Spring 1999. Generally between 40–50 research grants are funded each year at a total of \$35–40,000. Chatot believes a reasonable amount which could be consistently awarded would be \$50–60,000, which may not increase the percentage of grants funded but would increase the funds per grant for proposals of appropriate quality.

Jones passed out a page with Table I showing the Membership and Funding for the Precollege Research Program, from 1989 to 1999. While the number of student grants increased from 11 in 1989 to 24 in 1997-98 the number of school-based re-

search mentors showed little change with a nucleus of 6–8 persons with long term commitments. Funds have ranged from about \$1800–4000 a year with \$1500 of this coming from AAAS. (See Science Education in Howes 21 September 1999 report).

Dolan reminded members that the Biodiversity and Natural Areas Committee will inform the Executive Committee about its needs for a data base at 9:00 AM on 7 October 1999 here at Butler.

Guthrie asked if research grant proposals are reviewed for quality and promise? Howes said "yes, we have an elected committee to review research grant proposals." Jackson asked what we can expect in the way of financial support for science research the next three years? Guthrie indicated that the Trustees are not sitting on \$6,000,000, only the invested income of about \$400,000.

Dolan asked if we have a policy on how much more the corpus grows, \$10 million? Guthrie replied that we cannot spend the Wright Fund account, only the income, so yes, it could grow to \$10 million. Burden asked if the Executive Committee could put together a 5-year plan as to what the research people have in mind? Following discussion showed the need for more accountability on what has been supported to convince Trustees of the need to increase financial support, e.g., support of undergraduate research, especially with credit given to Academy for partial support for published research. Shaffer indicated that recently we have had fewer people coming to IAS for research support, and that we should be concerned with this discouragement of research rather than encouraging it. Howes suggested a letter to committee chairs asking for written report on monetary support needs and justification for Executive Committee meeting at the Fall meeting at Evansville. Since we already have a full plate at the Fall meeting Nelson suggested we have it after the Budget meeting at Butler University on 4 December 1999.

Jackson and Howes will compose a letter calling for a retreat at a state park all day on 19 February 2000, and Dolan will order lunch.

Jackson commended the Trustees for their copies of e-mails informing us of the change from Bank One to Merrill-Lynch, thanked them and the members for attending this important discussion, and closed the meeting at 11:50 AM.

Respectfully submitted,
Robert F. Dale, Secretary

EXECUTIVE COMMITTEE
meeting with
Committee on Biodiversity
and Natural Areas
Butler University
7 October 1999

President Marion Jackson opened the meeting at 9:08 AM in Room 300 of Gallahue Hall, asked

members to introduce themselves, and briefly described the reason for this meeting—to learn what the BNA committee is proposing—and our 21 September meeting with the IAS Trustees regarding the potential for getting more resources for support of science research grants in Indiana.

Members present: Robert Dale, Rebecca Dolan, Gary Dolph, Ruth Howes, and Marion Jackson of IAS Executive Committee, and Ron Hellenthal, Michael Homoya, Ellen Jacquart (Chair), Paul Rothrock, Donald Ruch, Thomas Simon, and Robert Waltz of the IAS Biodiversity and Natural Areas Committee.

Jackson noted that we had not approved the minutes of our Executive Committee meetings of 24 July and 21 September 1999, and asked if there were any corrections or additions to either. There being none the minutes were approved.

Jackson then distributed a letter that he and Howes had drafted to the Executive Committee and committee chairs regarding the retreat planned for 19 February 2000. He also read a letter from Damian Schmelz referring to the 13 September 1999 e-mail from Alicia Stewart of the Indiana State Museum, asking for suggestions of the Indiana scientists who have made significant contributions to the state for the history museum. One suggestion was David Starr Jordan.

Jacquart introduced the reason for this briefing by the BNA Committee and distributed a flier they had prepared on *Invasive Plants in Indiana*.

Hellenthal (entomologist at Notre Dame) led off the BNA briefing by distributing copies of the slides discussed in his following presentation and his report to the Biodiversity and Natural Area Committee on *A Proposed Information Model for the Indiana Biological Survey*. There is little or no transfer of biological survey data between disciplines, and often these survey data have been gathered at tremendous cost. A number of meetings have been held, starting in 1989, to discuss natural history data standards with the final draft of the information model (distributed above) prepared in April 1999 and adopted by the IAS BNA committee.

Simon continued the briefing, describing the history of the Indiana Biological Survey starting with David Starr Jordan in the late 1800's. It was a rather sad commentary on administrative handling of the various biological collections in Indiana, ending with a suggestion for a Board of the Indiana Biological Survey, overseeing a requested budget of \$12,000 for infra-structure competitive grants, \$2000 for for data base support, \$5000 for publication of a newsletter, and \$1000 for logo, printing, web page and miscellaneous. Considerable discussion.

Howes questioned advisability of IBS going it alone without associating with IAS, and the impos-

sibility of the \$20,000 budget this year. Also, this does not include support for the model described by Hellenthal. But BNA should come to the budget meeting with a \$5000 request and a 2–3 page justification and we will consider it.

Jacquart said the biological sections of IAS will come to a summary presentation of these two BNA presentations at 11:00 AM Friday, 5 November (Fall meeting) to drum up support, and that they will come to the budget meeting 4 December 1999. Dale asked why the Geology and Geography section was not included in the joint BNA presentation at 11 AM since this now includes the former Soil and Atmospheric Science section, and these environmental sections are certainly involved with the suggested information model. Ruch indicated that the Fall program is undoubtedly printed by now but he will contact the local arrangements committee to see what can be done. Ecology also is involved but that section already has too many papers to be presented to include that section in the 11 AM joint session.

In response to BNA criticism of *Proceedings* lag in publication, Dolph said that although the volumes are behind (Vol. 106 (1997) will be out later this month or November 1999), the publication of the research papers is fairly current and mainly controlled by the condition of the original manuscript and the promptness of the two reviews. In fact, he has not published any IAS minutes in the last volumes of the *Proceedings*, trying to get the publication of research manuscripts up-to-date. He has about 60 pages of Minutes to publish which may take almost a volume, and this may be something to discuss at our February retreat.

Howes asked how the BNA documents that this proposed information model is good research, through reviews? Jacquart indicated BNA would work on this.

Howes closed the meeting at 11:35 AM, since Jackson had to leave earlier.

Respectfully submitted,
Robert F. Dale, Secretary

EXECUTIVE COMMITTEE

University of Southern Indiana
4 November 1999

President Marion Jackson opened the meeting at 1:05 PM in Room 206 University Center, USI.

Members present: Jim Berry, Robert Dale, Rebecca Dolan, Edward Frazier, Frank Guthrie, Ruth Howes, Marion Jackson, Duvall Jones, Bill McKnight, Holly Oster, John Robert Schutt, and Nelson Shaffer.

The minutes of the Executive Committee meeting with the IAS Biodiversity and Natural Areas

(BNA) Committee on 7 October 1999 at Butler University were approved.

The tentative agenda for this meeting were approved.

Frazier distributed the IAS Budget Comparison and Account Summary for 1 January–31 October 1999. He reviewed the budget, reported that there were 167 members preregistered for the Fall meeting, and that IAS funds in the money market were bringing a 4.5% return.

Shaffer distributed a report on the number of IAS members in the various categories for each of the years, 1996–1999, totaling 908 in 1999, up from 855 in 1998 but down from 1046 in 1996. He also reported the deaths of five active members, but there may be others recognized in the necrology service tomorrow.

McKnight reported that Gary Dolph does not want to continue his editorship of the *Proceedings* of the IAS, and that an announcement will be prepared for the newsletter indicating the vacancy. McKnight said Gary had done a great job with the *Proceedings* for the last nine years.

Shaffer asked that Gary prepare a budget request for the 4 December meeting at Butler.

Howes asked committee chairpersons to contact her on members they would like appointed to their committees.

Jackson briefly reviewed the progress made in the special Executive Committee meetings on 21 September with the Trustees and on 7 October with the BNA committee, both at Butler. He reported that Richard A. Kjonaas, Dept. of Chemistry, Indiana State University, is now the IAS representative to AAAS, succeeding Gene Kritsky. He also will recommend Gary Dolph for the service award.

McKnight reported on progress in publications, the galley proof of *Amphibians and Reptiles in Indiana* may be ready in early December 1999.

Jones distributed the 1999 IAS Report of Youth Activities Committee, which contained the number of research clubs, student grants, and mentors, as well as funds requested and provided from 1989 to 1999. A major problem is the decrease of high school mentors to encourage student research science projects. The maximum given a student is \$250, and total grants usually range between \$2000–4000, with \$1500 of this coming from the AAAS. He is working on recognition of presenters at the annual meeting and handed out score sheets to be used tomorrow, one for each section. Howes said we need more aggressive programs to encourage recruitment of students into science. Jones replied that NSF cut off funds for high school student research several years ago. Dolan believes that raising the individual awards might encourage both students and mentors.

Guthrie reported on progress changing the three Academy Trust accounts from Bank One to Merrill-

Lynch. Forms from Merrill-Lynch have been signed by the Trustees, but Bank One wants a letter signed by Guthrie.

Jackson reminded members of the 18–19 February 2000 retreat at St. Mary of the Woods College, and distributed the agreement form between the college and IAS, following up on the Howes and Jackson 7 October 1999 letter to the Executive Committee. Academy Committee Chairs are also invited and encouraged to contact their members for suggestions on topics to be considered at the retreat to develop a 5-year plan. Howes asked Guthrie for a ball-park figure on IAS research funds available. Guthrie replied \$100,000 per year unless we go for higher amount.

Under new business Jones brought up the proposed IAS resolution (mailed earlier to members) on the teaching of evolution, indicating a State Representative in northeastern Indiana may bring a Kansas-like bill before the legislature. After some modifications to the resolution, Frazier moved we accept resolution, seconded by Howes, and unanimously approved.

Jackson read a letter from Al Lindsey, thanking him for mailing a 1967 IAS Program to him, the year Al was President.

Shaffer read a resolution thanking the University of Southern Indiana for hosting the 1999 Spring and Fall IAS meetings. Frazier moved approval and Howes seconded. Unanimous.

Shaffer reminded the Committee that his term of office as Executive Director ends at the end of December and left the meeting. Jackson pointed out that the office of the Executive Director was established about eight years ago, and Nelson is the fourth Director, the previous three being Winslow, Melhorn, and Lovell. After discussion, Frazier moved, and Howes seconded, that we reappoint Shaffer as Executive Director, subject to review. Unanimous.

Jackson closed meeting at 3:00 PM.

COUNCIL MEETING University of Southern Indiana 4 November 1999

President Marion Jackson opened the meeting at 3:10 PM in the University Center, and asked members for a standing introduction. Members present, in addition to those listed for the Executive Committee meeting, were: James Bandoli, Clare Chatot, Dick Conklin, David Daniell, Kris Dhawale, William Gommel, Ellen Jacquart, Blake Janutolo, Nils Johansen, Jim Mitchell, Damian Schmelz, Robert Waltz, Melissa Warden, and Dan Webster.

Jackson asked if there were any additions or corrections to the minutes for the 16 April 1999 Council meeting. Minutes were approved.

Frazier distributed and reviewed the budget for 1 January–31 October 1999.

McKnight reported that Gary Dolph will not continue editorship of the *Proceedings*. He has done a lot of work the last nine years and will be sorely missed.

Berry reported that the next issue of the newsletter will be in late December or early January. Deadline for articles is 15 December.

Howes needs input for appointments to committees. If you need money, 20 November is the deadline for requests to be considered at the 4 December 1999 budget meeting.

Jackson reviewed the two special Executive meetings (as in Executive Committee meeting minutes) and invited committee chairpersons to attend the retreat at St. Mary of the Woods College 18–19 February 2000.

Shaffer distributed the membership summary, read the thank you resolution to be read at the annual meeting, and asked for suggestions of Indiana outstanding scientists for the state museum.

Schmelz distributed a report on activities of the Natural Resources Commission and also asked for suggestions on the IAS museum display.

Gommel reported nine deaths of IAS members and former members whose names would be read at the necrology service at the annual meeting, and asked that all members send resumes to Shaffer or himself to create a file for future use.

Guthrie reported that the Trustees are moving the three trust accounts from Bank One to Merrill-Lynch for a saving of about \$17,000.

Chatot distributed the 1999 Annual Report of the IAS Research Grants Committee, and pointed out that her term as Chair ends this December and that a new committee chair will be appointed for next year. The guidelines for research proposals were published in the 1999 IAS Yearbook, and she will talk to teachers attending the Junior Academy meeting tomorrow about some of the committee concerns about better definition of the Junior research proposals. The following discussions involved raising the dollar limit on research proposals and getting more detailed final reports on the research, such as abstracts. This will definitely be discussed at the retreat.

Webster distributed the recommendations of the awards committee: Special Service Award, Holly Oster; Fellows, Rebecca Dolan and Melissa Warden; and Emeritus Member, Benjamin Moulton. Approved.

Jacquot distributed a flier on “Invasive Plants in Indiana” with alternative native plants to replace them, now ready for printing (with IAS funds approved at last year’s budget meeting). She had arranged for the biological sections of IAS to have a joint session on establishing the Indiana Biological Survey: Purpose, Scope and Mission at 11:00 AM tomorrow, with John Whittaker leading off with the

history, Thomas Simon with the plans, and Ron Hellenthal with the database model to tie all biological collections together. Jacquot will meet the 20 November deadline for budget proposals.

Oster distributed her 1999 annual report on the holdings of the IAS Wright Memorial Library and other activities, including state funds of \$17,622 received for publishing Vols. 108 and 109 of the IAS *Proceedings*, and that there were 899 file transfers from the IAS webpage in September 1999.

Conklin advised that the winning candidates for next year’s IAS officers were Edwin Squiers for President-Elect, Edward Frazier as Treasurer, and Tracy Branam on Research Grants. Only 20% of the IAS members voted.

The 2000 IAS meeting sites will be at Indiana University East at Richmond, and the 2001 meetings at IU-Purdue at Fort Wayne.

McKnight reported on the status of publications.

Jones distributed his handout to members not at the Executive meeting, reviewed it briefly, and announced that Linda Airey was quitting as Director of the Junior Academy.

Shutt asked for suggestions for Speaker of the Year for 2000.

The proposed resolution for the continued teaching of evolution in the schools of Indiana, and not “creation science” was discussed and further edited. Schmelz moved that the resolution be read at the annual meeting, seconded by Chatot, and passed unanimously.

McKnight distributed a summary of IAS attendance and abstracts presented at the fall meeting for each of the sections (16) by years 1985–1999 for future planning. Chemistry and Ecology had the highest average number of abstracts at 21, History of Science the lowest at 4.

Jackson closed the meeting at 5:25 PM.

115th ANNUAL MEMBER’S MEETING 5 November 1999

After Dr. H. Ray Hoops, President of the University of Southern Indiana, welcomed the members of the IAS to the campus, the Speaker of the Year, Dr. James O. Farlow, gave an interesting talk on dinosaur footprints. President Marion Jackson then opened the 115th Annual Meeting in Carter Hall, University Center at 1:15 PM by reading the following resolution:

Whereas; the members of the Indiana Academy of Science are deeply grateful for the invitation to hold the 115th annual meeting of the Academy on the campus of the University of Southern Indiana, at Evansville; and

Whereas; the administration, faculty, staff, and students of the University of Southern Indiana have cooperated admirably in providing their facilities, resources, and support for this

115th annual meeting of the Indiana Academy of Science; be it

Resolved; that the Academy members here assembled express their sincere appreciation to Dr. H. Ray Hoops, President, and Dr. Jerome R. Cain, Dean of Science of the Pott School of Science and Engineering Technology, for all the courtesies that have been extended to the Academy during this meeting. We are especially grateful to Dr. James H. Bandoli and Dr. Nils I. Johansen, chairpersons of the local planning committee, to all the members of the committee, and to other facilitators for the arrangements of the entire program and for the comfort and conveniences provided Academy members and guests. We also express our sincere thanks to all Academy members who organized and participated in activities associated with this 115th annual meeting of the Indiana Academy of Science.

Respectfully submitted,
Marion T. Jackson, President, IAS

Jackson then introduced Richard Conklin, Chair of Nominations and Elections, who presented the election results: Edwin Squiers, President-Elect; Edward Frazier, Treasurer; Academy Foundation Trustee, Frank Guthrie; and Research Grants, Tracy Branam.

Jackson announced that Nelson Shaffer has been reappointed as Executive Director. Gary Dolph is resigning the editorship of the *Proceedings* of the IAS, and anyone interested in this position should contact him, Howes, or McKnight.

Webster moved that Ben Moulton be named Emeritus Member. The vote for was unanimous. He also moved that Rebecca Dolan and Melissa Warden be named Fellows of the IAS. Unanimous approval. Holly Oster has been given the Special Service Award.

Gommel, as Historian, encouraged all IAS members to send their resumes to him or Shaffer and, as necrologist, also any obituaries they see for other members to him, Jim Berry for newsletter, or Shaffer. He then read the names of IAS members who have died since the last annual meeting: Lois Burton, Robert Ferris Duncan, Howard Michaud, R. Vincent Cash, Alan Horowitz, Sherman Minton, Thomas A. Cole, May Kolmer Schaefer Iske, and Raymond J. Russo. Members then stood for a moment of silence to honor these, our departed colleagues, for their contributions to the IAS and the scientific community.

Jackson then read the following resolution, which had been passed by the Executive Committee and Council yesterday: Recognizing that efforts exist in the State of Indiana to remove any emphasis on, and references to, evolution and cosmology from its state education programs, the following Reso-

lution is proposed for adoption by the Indiana Academy of Science at its annual Fall Meeting – 5 November 1999.

Whereas evolution is a major scientific principle based upon much factual evidence, it should continue to be taught in schools, colleges, and universities of Indiana, just as major concepts of cells, atoms, and stars are taught; and

Whereas neither creationism nor “Creation Science” should be taught as science because both are based, at least partially, upon beliefs which are not supported by observed facts; and

Whereas, learning and inquiry are severely inhibited if teachers are placed in a position where they may feel pressured to alter their teaching of the fundamental concepts of science in response to demands external to scientific disciplines,

Therefore, be it resolved that the Indiana Academy of Science, as a part of its commitment to educational excellence in science instruction, opposes any restriction on the teaching of biological and cosmic evolution in the curricula of Indiana’s educational institutions.

The above resolution was adopted unanimously. In response to a question on what will be done with this resolution, Jackson responded that this will be one of the items discussed at the IAS Executive Committee and Committee Chairperson retreat to be held 18–19 February 2000. Jackson also informed the membership that the Executive Committee had two special meetings this year, one with the Trustees of the Academy Foundation on getting more IAS research funding and one with the Biodiversity and Natural Areas Committee on rejuvenation of the biological survey, both of which led to the need for a winter retreat to develop a five-year plan for the Academy.

The Spring (14–15 April) and Fall (2–3 November) 2000 IAS meetings will be held at Indiana University East in Richmond.

For the continuity of the IAS, President Jackson then passed the gavel over to President-Elect Ruth Howes, who again thanked the University and the Local Arrangements Committee of Nils Johansen, Jim Bandoli, Linda Airey, Duvall Jones, and Bill McKnight for the exciting annual meeting. She also thanked President Marion Jackson for his excellent leadership this past year and adjourned the meeting at 1:50 PM.

Respectfully submitted,
Robert F. Dale Secretary, IAS

BUDGET COMMITTEE MEETING
 Butler University
 4 December 1999

President Ruth Howes opened the meeting at 9:30 AM in Gallahue Hall, by asking members to

introduce themselves. Members present: Linda Airy, Stan Burden, Clare Chatot, Robert Dale, David Daniell, Rebecca Dolan, Edward Frazier, Frank Guthrie, Ruth Howes, Marion Jackson, Ellen Jacquart, Duvall Jones, Bill McKnight, George Mourad, Holly Oster, Donald Ruch, and Nelson Shaffer.

Howes appointed a committee to review the minutes of the Executive and Council meetings on 4 November 1999 and the Annual meeting on 5 November 1999.

Frazier moved acceptance of the year 2000 budget sent to the Budget Committee with Howes' memo of 22 November 1999. Seconded by Jacquart. Frazier then reviewed the budget, calling on Dolan for Website, Jones for Junior Academy, Howes for increasing research stipends and decreasing number of proposals funded, and Jacquart for IBS data base support. After considerable discussion and volunteered budget reductions to reduce expenditures to within about \$9000 of expected revenues, Howes reminded members of the motion on the floor. Passed unanimously.

Howes asked that retreat participants think about what real science research and education services IAS can and should do in the next five years, and Jackson indicated that registration materials for the 18–19 February 2000 retreat should be out soon. McKnight reported the newsletter should be finished next week, and Jacquart distributed copies of the completed fliers on *Invasive Plants in Indiana* and *Landscaping with Plants Native to Indiana*.

Howes closed the IAS Budget meeting at 11:55 AM.

EXECUTIVE COMMITTEE
Butler University
4 December 1999

Howes opened the meeting outside Room 300 of Gallahue Hall at 12:00 noon. Members present: Robert Dale, Rebecca Dolan, Edward Frazier, Ruth Howes, Marion Jackson, Duvall Jones, and Nelson Shaffer.

Frazier moved that he be authorized to sign letters to Executive Director Shaffer, Publications Chairman McKnight, and *Proceedings* Editor Dolph for continuation of funding for 2000. Gary Dolph has agreed to continue as Editor until a successor has been found. Seconded by Dolan. Passed.

Dale read a question from a legislative survey questionnaire he had received from State Representative Sue Scholer on the teaching of evolution:

“8. The State of Kansas recently removed evolution from a required list of topics on the state's science curriculum. Do you (1) support a ban on the teaching of evolution (2) Feel only evolution should be taught in public schools (3) Feel both creationism and evolution should be introduced and discussed equally in the classroom.”

Jackson distributed a draft letter (29 November 1999) to the Governor and State Senators and Legislators about the IAS resolution on the teaching of evolution. Approved with minor editing. This letter and the resolution will be included in the IAS Newsletter.

Meeting closed at 12:20 PM.

Respectfully submitted,
Robert F. Dale, Secretary

