

1995

## Annual Report of the Iowa Academy of Science, 1994-95

Paul E. Rider

*University of Northern Iowa*

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## Annual Report of the Iowa Academy of Science, 1994-95

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### PREFACE

Since 1976, annual reports have served as a continuing record of the activities of the Iowa Academy of Science and an archive for its history. These augment the 100 year IAS history written in the centennial year of 1975.

This report covers the period from July 1, 1994 to June 30, 1995. It is based on the official records of the Academy (committee reports, Board minutes, correspondence) as well as the recollections, impressions and thoughts of the author.

### THE 107th ANNUAL MEETING

Wartburg College in Waverly, Iowa, was the location of the 107th Annual Meeting of the Iowa Academy of Science, held on Friday and Saturday, April 21 and 22, 1995. The registration was held in the lobby of the Student Union as were several of the meetings as well as the Awards Luncheon and the President's Banquet, which was held in the Castle Room.

Rain greeted attendees on Friday but Saturday was a pleasant (but brisk) early spring day in northeastern Iowa. The Wartburg campus was undergoing a transformation with the addition of new buildings in the central campus area. In conjunction with the IAS meeting, the Department of Natural Resources was holding a conference celebrating the 75th anniversary of the establishment of the parks system in Iowa. Dr. Hunter Rawlings, outgoing president of the University of Iowa gave a presentation at the concluding session of the parks conference which coincided with the first general session of the IAS meeting. Dr. Thomas Strazl of the University of Pittsburg Medical Center and a world leader in transplant surgery presented a provocative talk at the second general session in the evening on a paradigm for transplant surgery and recovery. The final general session featured Dr. Steven Anderson from the Department of Neurology at the University of Iowa Medical School who discussed human brain mapping.

Newly elected IAS Board member Dave Hampton, chemistry professor at Wartburg, served as chair for local arrangements.

Gary Downs, Director of Meetings and Programs, called the Annual Meeting Committee together in Waverly in September of 1994 to plan the meeting. The committee consisted of the following individuals:

### ANNUAL MEETING COMMITTEE

Local Arrangements Committee Chair  
Dave Hampton

#### Section Chairs:

Agricultural Sciences  
Allen Wright, Iowa State University

Anthropology  
Lori Stanley, Luther College

Cellular & Molecular Biology  
Dwight Tomes, Pioneer Hi-Bred, Johnston

#### Botany

Carol Jacobs, Ames, Iowa

#### Chemical Education

Jeff Hepburn, Dowling High School, Des Moines

#### Chemistry, Inorganic, Physical, Analytical

Mark Arnold, University of Iowa

#### Chemistry, Organic and Biological

Kirk Manfredi, University of Northern Iowa

#### Conservation

Paul Mayes, Muscatine Community College

#### Earth Science Teaching

Sherman Lundy, Burlington High School

#### Elementary Science Teaching

Susan Ferrell, West Burlington Middle School

#### Engineering

Gary Fisher, University of Iowa

#### Geology

Scott Thieben, Iowa State University

#### Linguistics

(see Psychology)

#### Nursing

(none designated)

#### Physics

Dan Black, Wartburg College

#### Physiology

Darold Wolff, Wartburg College

#### Psychology/Linguistics

Michael O'Boyle, Iowa State University

#### Science Teaching

Mark Brockmeyer, City High School, Iowa City

#### Zoology

Gene Lucas, Drake University

The program was blocked and section chairs were briefed on their responsibilities. Details of implementation leading up to the meeting were handled by the Director of Meetings and Programs, the Executive Director, the Administrative Assistant, and the section chairs.

The meeting was held April 21-22, 1995. The various aspects of the meeting are described in the following sections.

### Iowa Junior Academy of Science Program

Peggy Tilgner, Junior Academy Director, and the Student Programs Committee, under its Chair Walter Reemtsma, planned a program of invited poster papers and oral presentations involving students who had been working on science projects during the year. Section vice chairs and committee members acted as judges for the selection of individuals to participate in the junior academy programs held in conjunction with the AAAS meeting in

Baltimore, in February of 1996. Students and their schools are listed below.

**Christopher Burke**, Marshalltown Senior High School  
**Pete Gulbranson**, West Central High School  
**R. Justin Hanna**, Marshalltown High School  
**Jamie L. Harding**, Davenport West High School  
**Lesley McNaught**, East Union High School  
**Christine Micheel**, Marshalltown Senior High School  
**Sean C. Murphy**, Bettendorf High School  
**Alicia Schiller**, Central Lee High School  
**Cameron Schmitt**, West Central High School  
**Matt Scuffham**, Algona High School, Algona  
**Ryan Verhulst**, Eddyville-Blakesburg High School  
**Matthew Wendling**, Prairie High School  
**Jennifer Yang**, Davenport Central High School

#### Program Summary

There were three general sessions, three symposia, and 13 section meetings involving 103 presentations (poster papers included). There were two formal meals including the Awards Luncheon and the President's Banquet. The Saturday box luncheon was held this year and was well attended. The following gives details of the events on the program.

### PROGRAM SUMMARY

#### THURSDAY, APRIL 20

Board of Directors Dinner and Meeting

#### FRIDAY, APRIL 21

REGISTRATION

EXHIBITS

IJAS POSTERS

IJAS PRESENTATIONS

GENERAL SESSION I: President Daryl Smith presiding  
*"The Park, The Academy and The People"* Dr. Hunter Rawlings, University of Iowa

The Proposed ISU's Engineering, Teaching, and Research Complex  
 Dr. George Burnet, Iowa State University

AWARDS LUNCHEON: This served luncheon will honor groups and individual students who have performed in an exemplary manner in science activities throughout Iowa. Several teachers will be honored as they receive the Iowa Academy's Excellence in Science Teaching Award.

REGISTRATION

BUSINESS MEETING

General Viewing of Junior Academy Posters

STANDING COMMITTEE MEETINGS

CONCURRENT SYMPOSIA

*"Bioethics in the Life Science Classroom: The Iowa State University Model"*

*"Iowa Science Foundation Update"*

*"Issues facing K-12 Science Education During the 90's"*

SENIOR POSTERS

SOCIAL HOUR/PRESIDENT'S BANQUET

President Daryl Smith presiding

Presentation of Iowa Academy of Science Awards

Installation of new president and remarks by outgoing

President Daryl Smith

Response by President Ross Iverson

GENERAL SESSION II: President Ross Iverson presiding  
*"Why Allographs are Accepted: The Study in Applied Biology"*  
 Dr. Thomas Starzl, University of Pittsburgh Medical Center

#### SATURDAY, APRIL 22

REGISTRATION

EXHIBITS

SECTION MEETINGS/SPECIAL SESSIONS

The Proposed ISU's Engineering, Teaching, and Research Complex  
 Dr. George Burnet, Iowa State University

GENERAL SESSION III: President Ross Iverson presiding  
*"Human Brain Mapping: Advances in the Neuropsychology of Cognition and Emotion"*, Dr. Steven Anderson, Department of Neurology, University of Iowa Hospitals

BOX LUNCH

SECTION MEETINGS/SPECIAL SESSIONS

#### SUNDAY, APRIL 23

THE GEOLOGICAL SOCIETY OF IOWA'S SPRING FIELD TRIP

The Awards Luncheon

The luncheon was held in the Dining Hall of the Student Union. Attending were 120 individuals. Student Program Committee Chair Walter Reemtsma recognized students who had participated in science fairs and other science related activities in Iowa during the past year.

Junior Academy Director Peggy Tilgner presented the two high school scholarship winners and the two representatives who will be a part of the AJAS activities at the AAAS meeting in Baltimore in February of 1996. The scholarship winners were:

**Christopher Burke**, Marshalltown Senior High School

**Nathan Holmes**, Davenport West High School

The AJAS representatives were:

**Matthew Scuffam**, Algona High School

**Matthew Wendling**, Prairie High School

The winners of the Excellence in Science Teaching Awards were also recognized by Roy Unruh, chair of the ESTA Committee and a member of the IAS Board of Directors. This program showcases some of Iowa's finest science teachers. The winners were:

**Christina Schmitt (Biology)**, Dowling High School, Des Moines

**Nancy Goodlove (Elementary Science)**, Central City Community, Central City

**William Desmarais (Environmental Education)**, Washington Senior High School, Cedar Rapids

**Terence Coleman (General/Multiple Science)**, City High School, Iowa City

**Ross L. Iverson (Junior High Science)**, Miller Middle School, Marshalltown

The President's Banquet

The President's Banquet was held in the Castle Room following the social hour which was held in the lobby of the Student Center. Attending were 105 members and guests.

Executive Director Paul Rider introduced the first four winners of the Myrle Burk Ornithology Scholarships. This award was made possible by a \$50,000 bequest to the Academy by long time member Myrle Burk. Four \$750 awards went to four students studying ornithology at Iowa State University. They were Tammy Stafford, Jeannette Schaefer, Laura Myers, and Liesl Kelly.

President Daryl Smith introduced Greg Ludvigson, chair of the Recognition and Awards Committee, who introduced the nominators of IAS award winners, who described the individuals and why they were selected to be recipients of the IAS awards for Distinguished Iowa Scientist, Distinguished Iowa Science Teacher(s), and Distinguished Service.

Distinguished Fellow Award

**Dr. George Burnet**, Iowa State University

Distinguished Iowa Scientist Award

(no award)

Distinguished Service Award

**Dr. Harold (Sande) McNabb**, Iowa State University

Distinguished Iowa Science Teacher

**Dr. Gary Downs**, Iowa State University

President Smith presented the year in review for the Academy before presenting the gavel to incoming President Ross Iverson. President Iverson described his goals for the coming year.

The banquet adjourned so that those attending could attend the evening general session featuring **Dr. Thomas Starzl**, a medical doctor originally from Lemars and a leading transplant surgeon.

#### Attendance

Attendance figures for the 1995 meeting were not available at the writing of this report. Approximately 350-400 members and guests attended the two day event. The ratio of attendees to total papers presented was about 3.5, keeping with recent trends in this number (1991-3.1, 1992-3.7, 1993-2.6, 1994-3.2).

Total attendance was less than the 1994 meeting (404) but not significantly less. Credit is due the planning committee and the local arrangements people who plan an interesting program to attract members and others.

The number of papers presented and number attending section meetings as well as other sessions were similar to previous years (figures not available at time of writing). The section meetings were well-attended and continue to be an important part of the function of the IAS in providing an opportunity for the presentation of research results by Iowa scientists and their students.

The 1995-1996 Annual Report will include specific figures for the above items for the 1996 meeting at Simpson College. The data for the 1995 meeting was inadvertently misplaced and was not found to be included in this report.

#### MINUTES OF ANNUAL BUSINESS MEETING

Cafeteria, Student Union, 1:30 p.m., April 21, 1995

President Daryl Smith called the meeting to order, 1:31 p.m.

1. President Smith indicated that things continue to go well for the IAS and that he had enjoyed his work as president during the past year.

2. Jean Prior reported the results of the election. Bill Gilbert was elected as the new President-Elect and new Board members were Carol Thompson and Dave Hampton. Phyllis Kingsbury was elected to fill out two years of Eugenia Farrar's term on the Board. They were introduced to those in attendance.

3. Membership Committee Chair Ruth Swenson gave the report of the membership including deceased members (a moment of silence was observed for Ervin Poduska, Sylvan Runkle, Paul Selz, F.C. Armstrong, Irvin Gerks, and Donald Roiseland). New fellows named were Ken Windom, Gerald Schnepf, and Rick Lampe.

4. Executive Director Paul Rider gave the financial report of the Academy (this information and other items are given later in this annual report).

5. Rider reported the Board had formed an ad hoc committee to study Academy leadership and management concerns, given the uncertainties pertaining to current matters.

6. The meeting adjourned at 1:57 p.m. so that standing committees could hold short meetings starting at 2:00 p.m.

#### REVIEW OF ACADEMY ACTIVITIES 1994-95

This year, the committees of the Academy attempt to fulfill their charges as usual. A summary of activities is presented below. The Board will consider changing the committee structure sometime in the near future as a consequence of discussions at a leadership conference (described later) held in February of 1996 at Mt. Mercy College.

##### Annual Meeting

Chair: Gary Downs

The Annual Meeting Committee met in September 1994 on the campus of Wartburg College, to plan the program for the 107th Annual Meeting. Director of Meetings and Programs, Gary Downs, called the group together after an initial meeting with the local arrangements committee. Several of the section chairs attended, as well as Executive Director Paul Rider.

Blocking of the program sections was discussed and several suggestions were made as to possible topics and speakers. The committee did not meet again and all planning went smoothly up and through the meeting.

##### Committee on Committees

Chair: Ross Iverson

The chair communicated with members by telephone and mail as individuals were identified as possible committee appointees. The committee finalized its selections during the summer of 1995.

##### Conservation and Preserves

Chair: Richard Schultz

The committee did not hold any formal meetings, and no report was available at the time this report was written.

##### Controversial Issues

Chair: David Erkenbrack

The committee continues to be one of the more active ones for the Academy. Issues remain those that have been central to the committee's interests in the past, including the creationism/evolution controversy as well as the issues of scientific validity associated with Maharishi University. The committee also indicated some interest in the matter of wetlands preservation and management, as well as "takings" legislation before the Iowa General Assembly. This committee continues to provide vital discussion for scientists and science in Iowa.

##### Education

Chair: Ray Anderson

This committee (or some members of it) usually assists in the selection of the Presidential Awards for Excellence in Science and Mathematics Teaching. Tony Heiting (a committee member) of the State Department of Education provided information on nominees who were eventually selected. Those selected were the following individuals:

**Debra Jacobs**, Dallas Center-Grimes School, Grimes  
**Elizabeth Robinson**, Colo-Nesco Elementary School, Colo.  
**Jacque Smith**, Price Laboratory School, Cedar Falls  
**Libby Laughlin**, South Hill Elementary-Grimes Center,  
 Burlington  
**Margaret Sadeghpour-Kramer**, North Cedar Middle School,  
 Mechanicsville  
**Linda Scheuermann**, Roland Story Elementary School,  
 Story City  
**Mary Dilts**, Roosevelt High School, Des Moines  
**Michael J. Link**, Central Campus, Des Moines  
**Joann Stuhr**, Bettendorf High School, Bettendorf  
**Peg Barbour**, Ames Middle School, Ames

**Sharon Fisher**, North High School, Des Moines  
**Karen Riley Sievers**, Callanan Middle School, Des Moines

#### Election

Chair: Jean Prior

The committee met and selected two candidates (Bill Gilbert and James Christiansen) for President-elect and four for the Board of Directors (Carol Thompson, Judith Harrington, Phyllis Kingsbury, David Hampton) from among several nominations for president-elect and for the board positions. Ballots were mailed from the IAS office in March and returned by mid April, 1995. They were tallied and the results were reported on April 21, 1995 at the business meeting at Wartburg College, Waverly. The President-elect was Bill Gilbert of Indianola, and new board members were Dave Hampton from Wartburg College, Carol Thompson from the Iowa DNR Geological Survey (for three year terms) and Phyllis Kingsbury from Drake University (to replace Eugenia Farrar for two years).

#### Finance

Chair: Burton Loupee

This committee did not have a formal agenda during the year. This committee does not usually advise the executive director on budget matters which are regarded as a Board responsibility. The Board believes this committee might be more involved in decisions on investing IAS reserve funds, as well as fund raising.

#### Iowa Science Foundation

Chair: Bruce Menzel

The committee solicited and evaluated proposals for the 1995-96 fiscal year. It met to distribute proposals to committee members for review. A second meeting in May at the Iowa State University Extensions Service location in Toledo, Iowa was held to select awardees.

Award of grants in public understanding of science, in science education, and in research were made. The discussion continued on the emphasis in the three categories.

There were 40 proposals for grants of which the following were awarded a total of \$41,840.00 in state funds. Those receiving grants were:

"An Image Projection System for the Grout Museum Planetarium"	\$3550.00
Aaron J. Spurr, Grout Museum of History & Science, Waterloo	
"Nuclear Science in the Undergraduate Curriculum"	\$4500.00
Mary L. Caffrey, Clarke College, Dubuque	
"Natural Products from Medicinal Plants of the Prairies as Leads to Anti-HIV and Anti-Cancer Compounds"	\$4500.00
Kirk Manfredi, University of Northern Iowa, Cedar Falls	
"The Effects of Ethanol and Membrane Composition on Chick Brain Development"	\$4500.00
Robert R. Miller, Jr., Grandview College, Des Moines	
"Environmental Satellite Telemetry Ground Station"	\$4800.00
Joel Hutchinson, Janesville High School, Janesville	
"Incorporating the Insect Community into Prairie Restoration Efforts: A Case Study of Regal Fritillary Butterfly at Walnut Creek Refuge in Iowa"	\$3000.00
Diane Debinski, Iowa State University, Ames	
"Wickiup Hill Natural Area Archeological Field School Program-Year 2"	\$4500.00
William Green, Office of State Archeologist	
"Iowa's Odonates: What is Here Now vs. What was Here 70-80 Years Ago"	\$3000.00
Robert Cruden, University of Iowa, Iowa City	
"Origin and Composition of Dissolved Organic Carbon in Pleistocene Till and Loess Hill Units in Iowa"	\$4990.00
William Simpkins, Iowa State University, Ames	

"Developing Gender-Equitable Science Activities Through University Based Service Learning" \$4500.00  
 Beverly Marshall-Goodell, University of Iowa, Iowa City

#### Membership

Chair: Ruth Swenson

The committee selected three individuals for Fellow status this year to be recommended to the Board of Directors for approval. They were Ken Windom, Rick Lampe, and Gerald Schnepf. The committee chair reported this as well as other membership matters at the annual business meeting.

#### Parish Farm

Chair: Stephen Barnhart

The committee did not report any meetings being held during the year.

#### Public Information

Chair: Sally Hinz

The committee was very active and met at the Saylorville Dam Visitors Center. The group reviewed activities at the center and expressed some interest in having another committee (Finance?) assume responsibility for the operations there on behalf of the Academy.

The committee is still interested in issues related to making the activities of the IAS more visible (recommended that (1) presenters at the annual meeting consider submitting their abstracts to Charles Wunder for review for possible publicity in local media, (2) the PI committee have a liaison person with the local arrangements committee for the annual meeting, (3) the list of IAS experts should be updated, and (4) the Recognition and Awards Committee work with the PI committee to publicize IAS award winners).

#### Recognition and Awards

Chair: Greg Ludvigson

The committee met and discussed possible award winners. Those selected this year are mentioned earlier in the report.

#### Student Program

Chair: Walter Reemstma

The committee worked with Peggy Tilgner, Director of the Iowa Junior Academy of Science, in soliciting and evaluating student research grants. Grants were made to the following students:

"Do pesticides affect the sperm count in male rats?"	\$ 95.53
Amy Hanes, Eddyville Blakesburg High School, Eddyville	
"Acid precipitation on agricultural crops"	\$200.00
Alicia Schiller, Central Lee High School, Donnellson	
"The effect of EMF's on seed germination and seedling growth"	\$200.00
Adam Hohl, Central Lee High School, Donnellson	
"Effect of intrinsic layer thickness on the Staebler-Wronski effect in amorphous silicon photovoltaic devices"	\$ 58.00
Justin Wilhelm, West-Central High School, Stuart	
"Using plant propagation to formulate new species of <i>Zea mays</i> "	\$ 16.50
Tammy Petro, West-Central High School, Stuart	
"Will the insecticide methoxychlor E-2 affect the F(n) generations of <i>Drosophila melanogaster</i> ?"	\$200.00
Niki Taylor, West-Central High School, Stuart	
"Cytokine induction of transcription in ableson transformed Pre-B cells in phase 2."	\$200.00
Cameron Schmitt, West-Central High School, Stuart	

The committee was involved in science fair activity throughout the state and several individuals were invited to give papers at the annual meeting. Scholarship awards in the amount of \$500 each were made after these papers were judged which were given to:

**Christopher Burke**, Marshalltown High School  
**Nathan Holmes**, Davenport West High School

Representatives chosen for the AJAS trip to Atlanta in February of 1995 were:

**Nathan Holmes**, West High School  
**Eric O'Brien**, Stuart-Menlo High School

Students selected for the Governor's National Youth Science Camp were:

Delegates:

**Jill Marie Knepper**, Cascade High School  
**Tifne Pals**, Clinton High School

Alternates:

**Eric John Mottet**, Marquette High School  
**Christina Smith**, Norwalk High School

Those selected for National Energy Institutes were:

Fermi National Accelerator Laboratory:

**Lola Deutmeyer**, Maquoketa Valley High School, delegate  
**Suzanne Anderson**, Treynor High School, alternate

Lawrence-Berkeley Laboratory:

**Amy White**, Fort Madison High School, delegate  
**Shana Burton**, MFL MarMac High School, alternate

Sandia National Laboratory

**Jessica Levai-Baird**, Fort Madison High School, delegate  
**Nicole Konrardy**, Marquette High School, alternate

Argonne National Laboratory

**Angella Landis**, Dubuque Senior High School, delegate  
**Denise Lawse**, Newman Catholic High School, alternate

Several students were selected from Iowa high schools to receive the Outstanding Science Student Award and medallion.

The IJAS assisted in the Iowa Physics Olympics and support for student programs came from Pioneer Hi-Bred, Rolscreen Company, and the AAAS.

The committee also awarded three high school teachers and three students cash awards to recognize participation in science related activities.

#### **Excellence in Science Teaching Award**

This program was directed by Dr. Roy Unruh of the University of Northern Iowa. Eight subcommittees reviewed several applicants and selected winners. The awards were made at the Awards Luncheon at the Annual Meeting at Wartburg College. The names are given in the section on the program for the Annual Meeting.

### **SECTION ACTIVITIES**

The sections held sessions as part of the Annual Meeting. The response to calls for papers was similar to last year.

#### **Iowa Science Teachers Fall Conference**

The fall conference of the ISTS was held on October 20, 1994 at the Convention Center in Des Moines, Iowa. The attendance was overwhelmingly good, exceeding 1000 participants.

Convention speaker was NASA Astronaut Mike Mullane who is well known for his talks on the Space Program and its importance for the future of science in our country.

### **ADMINISTRATION**

#### **Personnel**

Administrative Assistant Doris Mitchell completed her 22nd year of service to the Academy. Her half-time position in the University of Northern Iowa Museum was being considered for full-time status, which meant that the Board had to consider future possibilities without her being available.

Executive Director Paul Rider completed his seventh year in his position and the 3rd year of his second 3-year appointment (his initial appointment was for a one-year period only). He indicated his willingness to be re-appointed for another three-year term, with the understanding that he would be willing to serve in the event that Doris Mitchell left her position. This effort would not necessarily cover the three-year period, and would end once a new administrative assistant was trained, and a new director could be found. The Board appointed an ad hoc committee to consider these possibilities, as well as matters associated with the location of the IAS office and its director.

Dr. Peggy Tilgner of the Biology Department of Wartburg College attended the American Junior Academy of Science in San Francisco and accompanied our two young scientists who presented papers.

#### **Facilities**

The suite of offices in Baker Hall at UNI continue to serve the Academy well. The conference room was reassigned by UNI to another department and is no longer available for IAS use. Other conference areas are available that can be used, if needed (although these are not under IAS control).

#### **Grants**

The Academy received a \$1000 grant from AAAS for IJAS activities. Pioneer Hi-Bred also supplied \$2500 for these activities, which was half the amount they originally provided during the middle 1980s.

The Iowa Science Foundation grant from the state continues to be administered through the University of Northern Iowa. The amount of funds continue to be \$40,000 per year.

#### **Publications**

The Journal of the Iowa Academy of Science was edited by Carol Jacobs of Ames. Issues for the last two quarters of 1994 and first two quarters of 1995 were not published.

The Iowa Science Teachers Journal was not published, and a committee under Daryl Smith continued to study its future as an IAS publication.

The publication of the IAS Bulletin did not occur during the year. The ISTS Newsletter was published with the SPARKS newsletter for the Elementary Science Teaching Section being included in it.

#### **National Activities**

Executive Director Paul Rider represented the Iowa Academy of Science at the AAAS Meeting in February in Atlanta. He attended meetings of the National Association of Academies of Science and Section Y of the AAAS. He served his year as the Secretary of the NAAS and did not seek re-election, owing to uncertainties associated with Doris Mitchell's situation and the possible increase in responsibilities, should she leave the Academy.

### **MEMBERSHIP**

The membership remains fairly strong at around 2000 members, but examination of the files indicated a large number of members being behind on their dues payments for the past two years.

The current membership figures for selections were not available at the time this report was written.

### **FINANCIAL REPORT**

A new bookkeeping system will be installed for the 1995-96 fiscal year and will result in a different style of reporting, in regard to the financial tables that have characterized these reports for the past several years.

Table 1. Balance Sheet June 30, 1995

CATEGORY	Balance Sheet	
	IAS Assets	COMBINED Assets
Checking	\$15,720.16	\$37,560.47
Savings	29,999.80	29,999.80
Office Equipment	18,445.15	18,445.15
Accumulated Depreciation	(17,142.55)	(17,142.55)
Heritage Book Inventory	879.00	879.00
State Appropriation	0.00	0.00
Sweatshirt Inventory	369.50	369.50
Certificates, ISTS, promotional inventory		2,845.56
Saylorville Gift Shop Inventory/Cash Box		2,398.02
Parish Farm		
Deferred Coop Dividend		37,243.92
PIK Certificate Inventory		0.00
240 Acre Farm		66,550.00
Burk Fund (Pershing Money Mark.)		59,017.03
<b>TOTAL ASSETS</b>	<b>\$48,271.06</b>	<b>\$238,165.90</b>
	IAS Liabilities	COMBINED Liabilities
Taxes Payable	\$2,744.85	\$2,744.85
State Appropriations	0.00	0.00
<b>TOTAL LIABILITIES</b>	<b>\$2,744.85</b>	<b>\$2,744.85</b>
	IAS Fund Balances	COMBINED Fund Balances
Restricted Fund Balance	\$31,495.54	\$149,183.67
Unrestricted Fund Balance	18,238.94	36,002.37
Farm Transfer to IAS	35,000.00	35,000.00
Farm Transfer from Farm		
ISTS Fund Balance		8,350.70
WEHOS (Carver) Project		4,643.91
<b>TOTAL FUND BALANCE</b>	<b>\$84,734.48</b>	<b>\$233,180.65</b>
	IAS	COMBINED
Total Fund Balance	\$84,734.48	\$233,180.65
Net Income (Loss)	(39,208.26)	(2,240.46)
Total Equity	45,526.22	235,421.11
<b>TOTAL EQUITY &amp; LIABILITIES</b>	<b>\$48,271.07</b>	<b>\$238,165.96</b>

## Balance Sheet

The balance sheet for the Iowa Academy of Science as a comprehensive organization (combined) as well as an operational unit (IAS) within that comprehensive organization is given in Table 1.

The net income loss for the IAS, discounting the built-in deficit, which was \$35,000 this year, which is actually a transfer of farm funds, becomes an actual loss of \$4,208.26. This is the difference between the built-in \$35,000 farm transfer and the actual \$39,208.26 deficit.

Total IAS assets remain strong for the IAS and the combined companies.

## Income Statement

Tables 2 and 3 show the income and expenses for the IAS portion of the combined organization. Dues and state aid provide the largest amounts of income for the organization. The state aid is primarily used to fund grants for the Iowa Science Foundation. Some of those funds (less than \$10,000) are used for publication costs and other programs. The state aid remained at \$50,000 of which \$40,000 went to the Iowa Science Foundation grants with the rest covering printing and administrative costs. The annual dues received from members were down from the budget expectation of \$40,000 by almost \$9,000. It is hoped that these can be recovered in the coming year through members paying owed back dues.

The Annual Meeting again is almost paying for itself. Some discussion of a raise in registration fees in the near future may be necessary. The Board left the registration fees at their previous level. Registration fees will remain the same for the meeting at Simpson College.

The University of Northern Iowa continues to contribute a subsidy to Academy operations through released time for the executive director and facilities.

Tables 4 and 5 show the combined income and expenses for the organization. The accounting procedures recognize "companies" in the combined organization. These include the IAS operations, the Parish Farm, the Iowa Science Teaching Section (ISTS), and grant income.

The net incomes of the Parish Farm and ISTS were positive while that for IAS was negative. As mentioned previously, some of the farm funds are transferred to the IAS budget, which produces a deficit. These combined companies experienced a total income which was less

Table 2. Income Allocation 1994-95

INCOME	ALLOCATION OF INCOME				
	Amount	Publications	Programs	Meetings	Administration
Corporate Gifts	\$ 3,800.00		\$ 3,800.00		
Dues	31,579.00	\$ 0.00		\$ 139.10	\$31,439.90
Individual Contributions	340.00		340.00		
Interest/Dividends	3,060.12				3,060.12
Miscellaneous	1,140.39				1,140.39
Other Fees	1,671.75	525.00		1,146.75	
Publication Sales	6,854.16	6,854.16			
Registration Fees	4,898.48		74.48	4,824.00	
Reimbursements	623.74				623.74
Reprint Sales	56.00	56.00			
State Aid	50,602.23	9,533.00	41,069.23		
<b>TOTAL</b>	<b>\$104,625.87</b>	<b>\$16,968.16</b>	<b>\$45,283.71</b>	<b>\$6,109.85</b>	<b>\$36,264.15</b>
UNI Subsidy	16,740.84				16,740.84
<b>TOTAL INCOME</b>	<b>\$121,366.71</b>	<b>\$16,968.16</b>	<b>\$45,283.71</b>	<b>\$6,109.85</b>	<b>\$53,004.99</b>

Table 3. IAS Expense Allocation 1994-95

EXPENSE	ALLOCATION OF EXPENSES				
	Amount	Publications	Programs	Meetings	Administration
Accounting/Ins.	\$ 2,934.25				\$ 2,934.25
Banquet/Meals	1,718.00		\$ 1,718.00	\$ 0.00	
Clerical	15,741.59				15,741.59
Equipment	7,374.00	\$ 7,374.00			
Equipment Service	1,974.92				1,974.92
Grants	41,953.02		41,703.02		250.00
Honoraria	30,595.58	1,666.68	1,000.00	1,500.00	26,428.92
Misc. Expenses	2,238.36				2,238.36
Postage & Shipping	6,342.08	257.41	770.47	354.86	4,959.34
Printing	18,738.92	7,392.44	1,966.71	1,748.89	7,630.88
Special Projects	0.00		0.00		
Supplies	3,512.53		2,165.18	350.91	996.44
Taxes	2,141.00				2,141.00
Telephone	755.86				755.86
Travel	7,814.52		3,199.94	2,155.19	2,459.39
<b>TOTAL</b>	<b>\$143,834.63</b>	<b>\$16,690.53</b>	<b>\$52,523.32</b>	<b>\$6,109.85</b>	<b>\$68,510.95</b>
UNI Subsidy	16,740.84				16,740.84
<b>TOTAL EXPENSES</b>	<b>\$160,575.47</b>	<b>\$16,690.53</b>	<b>\$52,523.32</b>	<b>\$6,109.85</b>	<b>\$85,251.79</b>
<b>TOTAL INCOME</b>	<b>\$121,366.71</b>				
<b>NET IAS INCOME (LOSS)</b>	<b>\$ (39,208.76)</b>				

Table 4. Combined Income Allocation 1994-95

INCOME	ALLOCATION OF INCOME				
	Amount	IAS	ISTS	Parish Farm	Grants
Corporate Gifts	\$ 3,800.00	\$ 3,800.00			
Dues	31,579.00	31,579.00			
Parish Farm	85,074.02			\$85,074.02	
Grants	0.00				\$ 0.00
Individual Contributions	340.00	340.00			
Interest/Dividends	10,342.95	3,060.12	\$ 315.47	699.94	6,267.42
Miscellaneous	6,772.08	1,140.39	5,593.37	0.00	
Other Fees	1,763.75	1,671.75	92.00		
Publications Sales	9,364.90	6,854.16	0.00		2510.74
Registration Fees	45,731.48	4,898.48	40,833.00		
Reimbursements	623.34	623.74			
Reprint Sales	56.00	56.00			
State Aid	50,602.23	50,602.23			
<b>TOTAL</b>	<b>\$246,049.75</b>	<b>\$104,625.87</b>	<b>\$46,833.84</b>	<b>\$85,773.96</b>	<b>\$8,778.16</b>
UNI Subsidy	16,740.84	16,740.84			
<b>TOTAL INCOME</b>	<b>\$262,790.59</b>	<b>\$121,366.71</b>	<b>\$46,833.84</b>	<b>\$85,773.96</b>	<b>\$8,778.16</b>

than total expenses. The amount was fairly small, and was related to the Carver grant money that remained to be spent. The Parish Farm experienced a good crop year, due to wetness and poor growing conditions. Government supports and careful planning by Hertz Farm Management and the Schildroths resulted in a good income year.

The goal of the Annual Meeting paying for itself is close to realization through careful planning and the cooperation of the host institution. Registration fees for the meeting will remain at their present level for the time being, although these may require an increase in the near future.



Table 5. Combined Expense Allocation 1994-95

EXPENSES	ALLOCATION OF EXPENSES				
	Amount	IAS	ISTS	Parish Farm	Grants
Accounting	\$ 2,940.55	\$ 2,934.25			\$ 6.30
Banquet/Meals	15,869.72	1,718.00	\$14,151.72		0.00
Clerical	15,741.59	15,741.59			
Contract Services	6,195.02	0.00	6,195.02		
Equipment	7,374.00	7,374.00			
Equipment Service	1,974.92	1,974.92			
Parish Farm	54,692.70			\$54,692.70	
Grants	44,953.02	41,953.02	0.00		3,000.00
Honoraria	34,920.58	30,595.58	4,325.00		0.00
Misc. Expenses	5,412.20	2,238.36	605.61		2,568.23
Postage & Shipping	7,596.07	6,342.08	1,253.99		
Printing	23,389.07	18,738.92	4,650.15		
Special Projects	4,117.18	0.00	4,117.18		
Supplies	6,875.87	3,512.53	3,363.34		0.00
Taxes	2,141.00	2,141.00			
Telephone	1,863.09	755.86	1,107.23		
Travel	10,721.69	7,814.52	2,907.17		0.00
Regional Prog., ISTS	0.00		0.00		
<b>TOTAL</b>	<b>\$246,778.27</b>	<b>\$143,834.63</b>	<b>\$42,676.41</b>	<b>\$54,692.70</b>	<b>\$5,574.53</b>
UNI Subsidy	16,740.84	16,740.84			
<b>TOTAL EXPENSES</b>	<b>\$263,519.11</b>	<b>\$160,575.47</b>	<b>\$42,676.41</b>	<b>\$54,692.70</b>	<b>\$5,574.53</b>
<b>TOTAL INCOME</b>	<b>\$262,790.59</b>	<b>\$121,366.71</b>	<b>\$46,833.84</b>	<b>\$85,773.96</b>	<b>\$8,778.16</b>
<b>NET INCOME (LOSS)</b>	<b>\$ (728.52)</b>	<b>\$ (39,208.76)</b>	<b>\$ 4,157.43</b>	<b>\$31,081.26</b>	<b>\$3,203.63</b>

### Restricted Assets

Table 6 shows the restricted assets of the Academy. These are distributed among four funds. The life Member Fund is in a different investment program (Merrill-Lynch Capital Fund) that provides ongoing operating income for the IAS budget as well as reinvestment of income to make the fund grow.

The Savings listed are in reserve funds to be used in emergencies associated with possible drops in farm income or other unanticipated situations. There is also a Merrill-Lynch cash management fund that allows the office to respond to cash flow needs (in addition to a local checking account at Norwest Bank in Cedar Falls). The CMA fund usually has \$5000 to \$10,000 in it. The Burk Scholarship fund has been invested in bonds associated with Pershing, Colonial Utilities, and Putnam. Wayne Jacobsen, of Cedar Falls, has been the financial adviser relative to these investments.

Table 6. Restricted Assets

	Investment
Life Member Fund	\$ 9,799.93
Hanson Publication Fund	4,181.68
Savings	17,431.22
Burk Scholarship Fund	53,222.07
<b>TOTAL</b>	<b>\$84,634.90</b>

The amounts listed are based on the market value of the Merrill-Lynch funds, as well as the bond investments, in which the money is invested, as of June, 1995. These amounts may shift as the market experiences change.

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**Contributed Papers**

All abstracts of contributed papers received on time for the 1995 meeting were printed in an abstract booklet which is available from the IAS Office upon request.