Genetics Society of America

1991 Records, Proceedings and Reports

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Prepared by The Secretary

Thomas C. Kaufman

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Bloomington, Indiana 47405*

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Nicholas W. Gillham

PAST AND PRESENT OFFICERS OF THE SOCIETY

	<i>President</i>	<i>Vice-President</i>	<i>Secretary-Treasurer</i>	
1932	L. C. Dunn	F. D. Richey	P. W. Whiting	
1933	R. A. Emerson	Sewall Wright	P. W. Whiting	
1934	Sewall Wright	D. F. Jones	P. W. Whiting	
1935	D. F. Jones	P. W. Whiting	M. Demerec	
1936	P. W. Whiting	L. J. Stadler	M. Demerec	
1937	E. M. East	L. J. Cole	M. Demerec	
1938	L. J. Stadler	M. Demerec	E. W. Lindstrom	
1939	M. Demerec	B. McClintock	E. W. Lindstrom	
1940	L. J. Cole	Th. Dobzhansky	E. W. Lindstrom	
1941	Th. Dobzhansky	E. W. Lindstrom	B. P. Kaufmann	
1942	E. W. Lindstrom	M. M. Rhoades	B. P. Kaufmann	
1943	M. M. Rhoades	G. W. Beadle	B. P. Kaufmann	
1944	A. H. Sturtevant	B. P. Kaufmann	L. H. Snyder	
1945	B. McClintock	P. C. Mangelsdorf	L. H. Snyder	
1946	G. W. Beadle	Karl Sax	L. H. Snyder	
1947	H. J. Muller	L. H. Snyder	M. R. Irwin	
1948	L. H. Snyder	T. M. Sonneborn	M. R. Irwin	
1949	T. M. Sonneborn	Curt Steven	M. R. Irwin	
1950	Curt Stern	M. R. Irwin	W. R. Singleton	
		<i>Secretary</i>	<i>Treasurer</i>	
1951	M. R. Irwin	J. W. Gowen	W. R. Singleton	E. W. Caspari
1952	J. W. Gowen	R. E. Clausen	W. R. Singleton	E. W. Caspari
1953	R. E. Clausen	W. R. Singleton	C. P. Oliver	E. W. Caspari
1954	J. T. Patterson	R. A. Brink	C. P. Oliver	N. H. Giles, Jr.
1955	P. C. Mangelsdorf	R. E. Cleland	C. P. Oliver	N. H. Giles, Jr.
1956	R. E. Cleland	J. L. Bush	H. B. Newcombe	N. H. Giles, Jr.
1957	R. A. Brink	C. P. Oliver	H. B. Newcombe	R. D. Owen
1958	C. P. Oliver	J. F. Crow	H. B. Newcombe	R. D. Owen
1959	Karl Sax	J. W. Boyes	W. L. Russell	R. D. Owen
1960	J. F. Crow	H. B. Glass	W. L. Russell	D. Schwartz
1961	B. P. Kaufmann	R. D. Owen	W. L. Russell	D. Schwartz
1962	R. D. Owen	W. L. Russell	E. B. Lewis	D. Schwartz
1963	Jack Schulz	S. Emerson	E. B. Lewis	E. Novitski
1964	S. Emerson	H. L. Roman	E. B. Lewis	E. Novitski
1965	W. L. Russell	E. W. Caspari	R. P. Wagner	E. Novitski
1966	E. W. Caspari	E. B. Lewis	R. P. Wagner	A. H. Sparrow
1967	E. B. Lewis	H. L. Roman	R. P. Wagner	A. H. Sparrow
1968	H. L. Roman	C. Yanofsky	B. Wallace	A. H. Sparrow
1969	C. Yanofsky	N. H. Giles, Jr.	B. Wallace	D. R. Stadler
1970	N. H. Giles, Jr.	R. P. Wagner	B. Wallace	D. R. Stadler
1971	R. P. Wagner	R. D. Hotchkiss	M. W. Shaw	D. R. Stadler
1972	R. D. Hotchkiss	M. M. Green	M. W. Shaw	G. Lefevre
1973	M. M. Green	B. Wallace	M. W. Shaw	G. Lefevre
1974	B. Wallace	O. Smithies	B. H. Judd	G. Lefevre
1975	O. Smithies	E. S. Russell	B. H. Judd	D. Lindsley
1976	E. S. Russell	D. D. Perkins	B. H. Judd	D. Lindsley
1977	D. D. Perkins	M. Shaw	G. R. Fink	D. Lindsley
1978	M. Shaw	E. Sears	G. R. Fink	W. Welshons
1979	E. Sears	W. K. Baker	G. R. Fink	W. Welshons
1980	W. K. Baker	B. H. Judd	D. T. Suzuki	W. Welshons
1981	B. H. Judd	H. L. Carson	D. T. Suzuki	A. Chovnick
1982	H. L. Carson	M. L. Pardue	D. T. Suzuki	A. Chovnick
1983	M. L. Pardue	R. W. Allard	H. W. Lewis	A. Chovnick
1984	R. W. Allard	I. Herskowitz	H. W. Lewis	R. E. Esposito
1985	I. Herskowitz	D. L. Lindsley	H. W. Lewis	R. E. Esposito
1986	D. L. Lindsley	E. W. Jones	A. P. Mahowald	R. E. Esposito
1987	E. W. Jones	G. R. Fink	A. P. Mahowald	A. C. Spradling
1988	G. R. Fink	D. L. Hartl	A. P. Mahowald	A. C. Spradling
1989	D. L. Hartl	R. L. Metzenberg	T. C. Kaufman	A. C. Spradling
1990	R. L. Metzenberg	L. H. Hartwell	T. C. Kaufman	C. S. Newlon
1991	L. H. Hartwell	J. C. Lucchesi	T. C. Kaufman	C. S. Newlon

Editors

G. H. Schull (1916-1925)
D. E. Jones (1926-1935)
L. C. Dunn (1936-1939)
M. M. Rhoades (1940-1946)

C. Stern (1947-1951)
R. A. Brink & J. F. Crow (1952-1956)
C. P. Oliver & W. S. Stone (1957-1962)
D. D. Perkins (1963-1967)

F. W. Caspari (1968-1972)
D. R. Stadler (1973-1976)
G. Lefevre (1977-1981)
J. W. Drake (1982-1991)

BYLAWS OF THE GENETICS SOCIETY OF AMERICA

(Revised August 25, 1988)

The Genetics Society of America is organized to provide facilities for association and conference among students of genetics, to promote the communication and publication of scientific knowledge, to promote education and research in genetics and to encourage interaction between workers in genetics and those in related sciences.

ARTICLE 1. *Membership.*—All persons interested in genetics shall be eligible for active membership. Any person who has been an active member of the Society for 20 years and who has retired is eligible for emeritus membership. Categories of membership shall be established by the Board of Directors.

ARTICLE 2. *Officers and Board of Directors.*—The officers of the Society shall be a President, a Vice-President who is also President-Elect, a Secretary and a Treasurer. They, together with the immediate Past-President, the Editor of *GENETICS* and six other members elected by the Society shall constitute the Board of Directors. Each Board member shall have one vote. The Board shall meet at least once each year. Additional meetings may be called by the President.

Executive Committee: The Executive Committee of the Board of Directors shall consist of the President, Vice-President, Secretary, Treasurer and one of the elected directors selected by the Board at its annual meeting. The Executive Committee shall act by majority vote in matters that require attention between regular Board meetings.

Election and Terms of Office of Officers and Board Members: The officers of the Society shall be elected by a simple majority of ballots cast by members of the Society. Each year the Nominating Committee shall submit the names of at least two nominees for each position to be filled, taking into consideration candidates suggested to the Secretary or the Nominating Committee. The ballot, mailed to all members in good standing, shall list the nominees and also provide spaces for write-in votes. At the end of the first year of service, the Vice-President shall automatically become President and shall serve for one year in that capacity and for one year thereafter as a director. Every third year the ballot shall include nominees for Secretary. The Treasurer shall be elected every third year, but not in the same year as the Secretary.

Members of the Board of Directors who hold no other office shall be elected by the membership. Each year, the Nominating Committee shall submit the

names of at least four nominees, and the two receiving the largest number of votes shall be elected to serve for three years.

Terms of all officers and members of the Board shall begin on January 1 of the year following their election and shall end on December 31 of the year ending their term.

ARTICLE 3. *Meetings.*—An annual meeting open to the entire membership of the Society shall be held at a time and place designated by the Board of Directors. During the annual business meeting of the membership, which shall be held during the annual meeting, the Board of Directors shall make its annual report to the membership, including the results of the election of officers and directors. Special meetings may be called by the Board of Directors. Twenty members shall constitute a quorum for any annual or special business meeting.

The program shall be arranged by the Secretary in accordance with the program rules adopted by the Board of Directors. The Board of Directors may arrange for joint programs with related scientific societies, and for presentation of invited papers.

ARTICLE 4. *Dues.*—Annual dues for the various classes of members shall be fixed by the Board of Directors. Dues shall include a subscription to *GENETICS*. Graduate students who provide evidence of their status are entitled to active membership at approximately half the regular dues for a period not exceeding five years. Husbands and wives both qualifying for membership individually may elect a combined membership entitling them to a single subscription to *GENETICS* while entitling each to be listed as a member and to vote. Emeritus members may elect to continue to receive *GENETICS* by paying approximately half the regular dues, or they may elect not to receive the Journal and be exempt from paying dues. Payment for all classes of membership shall be due January 1. New members shall be billed for dues from the previous January 1 and shall receive *GENETICS* for the entire year. Members whose dues are in arrears shall not receive publications or communications of the Society and shall be ineligible to vote. Members in arrears for one year shall be dropped from the rolls. A member who has been dropped for nonpayment of dues may be reinstated upon payment of dues for the year in which reinstatement is desired.

ARTICLE 5. *Publications.*—The Society shall pub-

lish GENETICS as its official journal. Subscription to GENETICS shall be considered an integral part of active membership. The subscription rate to nonmembers shall be set by the Board of Directors, and shall not be less than the dues for active members of the Society.

GENETICS shall be a periodical record of investigation into heredity and variation. Publication in the Journal shall be open to members and nonmembers alike. Acceptance shall be decided after editorial review solely on merit and suitability.

Editorial Board. An Editorial Board of GENETICS shall be appointed by the Board of Directors. Editorial Board members shall serve three-year terms which may be renewed by the Board of Directors. The Editor shall be appointed by the Board of Directors for a term of five years, but such appointment may be extended or terminated at any time by a two-thirds vote of the Board of Directors. The Editor shall be consulted about the Editor's term of appointment, but shall not vote thereon. The Board of Directors and the Editorial Board shall advise the Editor in matters relating to Journal policy and shall, with the Editor, determine editorial policy for the Journal in all respects not specified by these Bylaws.

The Editor of GENETICS shall carry out policy decisions of the Board of Directors and shall be authorized to act for the Editorial Board in arriving at editorial decisions and in conducting routine business. The Editor shall arrange meetings of the Editorial Board as necessary or upon written request of three members of the Editorial Board. The Editor shall preside over meetings of the Editorial Board and shall cast the deciding vote in case of a tie. The Editor shall, on request, communicate recommendations of the Board of Directors or of Society members to the Editorial Board and shall represent the Editorial Board in dealing with the Board of Directors. The Editor shall submit an annual report to the Society regarding the operation of GENETICS. The Editor shall, in cooperation with the Editorial Board and the Board of Directors, take measures necessary to assure an appropriate income from membership dues and subscriptions.

ARTICLE 6. *Administrative Office.*—An administrative office shall be maintained for conducting the business of the Society. It shall attend to such other matters as dictated by the Board of Directors. Supervision of the administrative office shall be the responsibility of the administrative director, who shall implement the policies decided by the Board of Directors. The administrative director shall provide staff support to assist the officers of the Society in carrying out their responsibilities. The President shall have responsibility and ultimate authority for the administrative office and resolution of any conflicts related to it.

ARTICLE 7.—*Duties of Officers and Board of Directors.*—The President shall preside at the meetings of the Society and the Board of Directors. With the advice of the Board of Directors, the President shall appoint such committees and representatives as may be needed. The Vice-President shall preside in the absence of the President. In the event of a vacancy in the office of President, the Vice-President shall become President for the remainder of the unexpired term as well as for the subsequent term. In the event of any other vacancy among the officers or directors, the Board shall appoint an active member to serve for the remainder of the year, and the office shall be filled at the next annual election.

The Secretary, in cooperation with the administrative office, shall: (1) keep the records of the Society; (2) direct the arrangement of meeting plans in accordance with the rules formulated by the Board of Directors and function *ex officio* on the Program Committee; (3) send to all members the date and place of the annual meeting, a call for papers to be presented at that meeting, and a call for suggestions for nomination for all offices to be filled by election. Not later than one month before the annual meeting, the Secretary shall send all members in good standing a ballot bearing the names of nominees for office; (4) The Secretary shall prepare minutes of the annual meeting and shall present an annual report to the members concerning actions of the Board of Directors, activities of the Society and its committees and representatives, and the membership of the Society; and (5) shall deposit those records of the Society no longer needed for current business in the historical collection of the Library of the American Philosophical Society.

The Treasurer shall: (1) have charge of all funds of the Society and be responsible for their investment; (2) be bonded in an appropriate amount fixed by the President; (3) send to all members bills for annual dues; and (4) prepare an annual statement to the members of the financial status of the Society, to be audited by a certified public accountant. (5) The Treasurer shall provide the administrative director and the editor of GENETICS with funds sufficient to operate the administrative office and to publish GENETICS.

ARTICLE 8. *Committees: Nominating Committee.*—A Nominating Committee shall be named each year by the Board of Directors and shall consist of three active Society members who are not members of the Board and who include representatives of different areas of genetics. In addition, the Secretary shall be *ex officio* a non-voting member of the committee. No person shall serve as a voting member on the Nominating Committee more than once during any four-year period.

Other Committees: The President shall create and

appoint members to such other committees as are deemed necessary or advisable by the Board of Directors.

ARTICLE 9. *Amendments.*—Amendments to these Bylaws may be adopted at the annual business meeting by a two-thirds vote of the members present and

voting, provided that any proposed amendment, signed by five members, has been submitted in writing to the Secretary at least three months before the annual meeting and has been communicated to the members of the Society at least two weeks before the annual meeting.

REPORT OF THE TREASURER

The following is the unaudited financial statement for the fiscal year 1990. The audited statement will be available from the Administrative Office.

STATEMENT OF ASSETS, LIABILITIES AND FUND BALANCES ARISING FROM CASH TRANSACTIONS December 31, 1990

Assets		
Editor's Office—Checking/Petty Cash	\$ 2,822.48	
Administrative Office-Checking	147,425.53	
Cash on Hand	50.00	
Bulk Mail Deposit	894.88	
Due from YGM Awards	<u>4,982.55</u>	
Total Current Assets		\$156,175.44
 Merrill Lynch Cash Management Account	 \$ 21,346.35	
Certificates of Deposit:		
Matures 1/18/91; @ 9.25%	50,000.00	
Matures 6/18/91; @ 8.3%	50,000.00	
Matures 7/16/91; @ 7.9%	50,000.00	
Matures 12/16/91; @ 9.1%	50,000.00	
Matures 11/9/92; @ 8.65%	40,000.00	
Matures 12/7/92; @ 9.1%	90,000.00	
Matures 12/28/92; @ 9.15%	20,000.00	
Matures 2/22/93; @ 8.2%	50,000.00	
Matures 6/18/93; @ 8.5%	50,000.00	
Matures 8/23/93; @ 8.05%	50,000.00	
Matures 11/2/93; @ 8.7%	50,000.00	
Matures 2/28/94; @ 8.45%	30,000.00	
Matures 10/31/94; @ 8.45%	15,000.00	
Matures 11/28/94; @ 8.2%	50,000.00	
Matures 12/12/94; @ 8.15%	25,000.00	
Matures 2/14/95; @ 8.45%	50,000.00	
Matures 9/26/95; @ 8.4%	50,000.00	
Matures 12/12/95; @ 8.2%	<u>25,000.00</u>	
Total Investments		816,346.35
 Furniture and Equipment	 \$ 69,244.54	
Less: Accumulated Depreciation	<u>(39,296.91)</u>	
Total Furniture and Equipment		<u>29,947.63</u>
 <u>Total Assets</u>		 <u>\$1,002,469.42</u>
 Liabilities and Fund Balances		
Total Liabilities		\$ 2,163.09
General Fund		
Fund Balance at January 1st	\$738,870.30	
Excess of Cash Receipts over Disbursements	<u>11,436.03</u>	
General Fund Balance at December 31st		750,306.33
 Reserve Fund		
Fund Balance at December 31st		<u>250,000.00</u>
<u>Total Liabilities and Fund Balances</u>		<u>\$1,002,469.42</u>

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
For the Year Ending December 31, 1990

Cash Receipts

Membership Income	\$173,250.85	
Journal Sales	596,568.51	
Publications	94,118.03	
1990 Drosophila Conference	97,799.60	
Red Book Income	12,752.98	
GSA/GSC Joint Meeting	68,840.00	
Interest Income-Administrative Office	7,767.19	
Interest Income-Investments	69,797.26	
Dividend Income-Investments	90.00	
Gain on Sale of Securities	936.93	
Miscellaneous Income	<u>3,694.90</u>	
<u>Total Receipts</u>		<u>\$1,125,616.25</u>

Cash Disbursements

Membership Expense	\$ 61,505.56	
Journal Publishing	499,388.02	
Publications Expense	90,651.07	
1990 Drosophila Conference	82,753.11	
Red Book Expense	12,752.98	
GSA/GSC Joint Meeting	92,768.59	
Awards/Contributions	16,497.40	
Other Expense	88,150.61	
Administrative Office	<u>169,712.88</u>	
<u>Total Disbursements</u>		<u>1,114,180.22</u>
Excess of Cash Receipts over Disbursements		<u>\$ 11,436.03</u>

CAROL S. NEWLON, *Treasurer*
1990-1992

PROCEEDINGS OF THE 59TH ANNUAL BUSINESS MEETING

July 20, 1990
San Francisco Hilton Hotel, California

The meeting was called to order at 5:35 PM by Vice President L. H. Hartwell. He thanked the Program Committee for having put together such an excellent scientific offering for the 1990 joint meeting of the Genetics Society of America and the Genetics Society of Canada. S. L. Lindquist chaired the committee. Other members were M. T. Clegg, T. A. Grigliatti, B. Harvey, M. M. Howe, R. J. Rothstein and R. von Borstel. A. J. F. Griffiths, J. A. Heddle, T. C. Kaufman and R. L. Metzenberg served *ex officio*.

Secretary's Report (T. C. Kaufman): The minutes of the July 2, 1989, Business Meeting in Atlanta were approved as published in the June 1990 issue of *GENETICS* (Vol. 125, No. 2). As of May 31, 1990, the GSA had a total of 3,567 members (2,589 Regular, 572 Student, 194 Husband/Wife, 212 Emeritus) and 67 affiliates. There has been a net gain of 107 new members since May of 1989. 977 members cast ballots in the 1990 election, representing 31% of those eligible to vote. The results of the election for Board members whose terms begin January 1, 1991, are as follows: Vice-President, J. C. Lucchesi; Directors D. Bennett¹ and C. Guthrie.

Treasurer's Report (T. C. Kaufman for C. S. Newlon): During 1989, income of \$1,135,713 exceeded expenditures of \$1,115,399 by \$20,314. Net income from *GENETICS* was \$112,610—almost \$27,000 more than anticipated. Investment income remained stable. Certificates of deposit continued to comprise about 95% of long-term investments, with the remaining 5% invested in common stocks. As reported in the 1989 unaudited financial statement that appeared in the June 1990 issue of *GENETICS*, the Society's total liabilities and fund balances at the end of 1989 were \$993,456: \$4,586 in liabilities, \$250,000 in the reserve fund and \$738,870 in the general fund balance. These numbers agree with those reported in the official audit, a copy of which is available from the Administrative Office.

When the draft of the 1989 budget was approved by the Board, it was projected that there would be an overall gain of \$38,580 for the year. Although there were gains in a number of areas and expenditures for

the most part were below budget, the meetings continued to show a deficit. The *Drosophila* meeting had a loss of \$9,707, the GSA Annual Meeting had a loss of \$68,915, and the Yeast meeting had a loss of \$34,915, for a combined loss of \$113,537, which was \$76,617 greater than budgeted. Attendance at the GSA and Yeast meetings was drastically lower than anticipated. This reduced revenue by approximately \$37,000 for each meeting. Moreover the Atlanta Hilton exercised its right to charge for meeting room space because we picked up only 50% of the sleeping rooms for which we had contracted. The \$20,000 meeting space rental thus added to the loss on those two meetings.

In 1990, the Board decided that there would be no increase in the 1991 institutional subscription rate for *GENETICS* because income had increased in 1989. The March *Drosophila* Conference is likely at year end to show a profit for the first time (approximately \$15,000), due largely to the fact that registration at Asilomar exceeded estimates. However, the 1990 GSA Annual Meeting, held jointly with the Genetics Society of Canada's Annual Meeting, is expected to show a substantial loss. One reason is that although the number of advance registrants for the meeting was almost exactly as budgeted, the ratio of faculty to students and the ratio of members to nonmembers were inverted, resulting in approximately \$12,000 less income. Despite the fact that the sleeping room block was almost halved after the experience in Atlanta, it appears that once again the pick-up will be only half of what was contracted for. Thus as of July 1990 it is expected that compensatory payment to the hotel for meeting room space will add to the meeting loss. At this time it appears that 1990 will be a break-even year for the Society, though a small profit may be realized.

A preview of the 1991 budget will be reviewed by the Board of Directors on July 21, 1990, and will be revised after 1990 has been closed out. A slight increase in membership dues income is anticipated even without an increase in 1992 dues (the majority of which will be collected at the end of 1991), reflecting the expectation that membership will continue to grow. Net Journal income is expected to be about the same as in 1990. Net income to the Society for the discounted journals offered to members is expected to almost double (from \$11,200 net in 1990 to \$22,400 net in 1991) as the volume of business increases and another journal, *CHROMOSOMA*, is added. Other income (largely in-

¹ We regret to report that Dorothea Bennett died before assuming office. The Board of Directors voted to appoint B. S. Ganetzky to fill her position until such time as a successor can be chosen via the 1991 election.

vestments) is expected to remain stable. However, a number of significant variables on the expense side make an accurate bottom-line estimate impossible at this time. One is GSA's share of 1991 Administrative Office expenses, which must be proposed by the Office Management Committee in December of 1990 and then approved by both the GSA and ASHG Board of Directors. In general, a 10% increase is anticipated due to one additional staff person, raises and continued increases in taxes and the cost of benefits. The *Drosophila* and Yeast meetings are other major variables. Two of the reasons it is so difficult to prepare accurate meeting budgets is the change of venue, which may dramatically affect registration, and the inability to predict member:nonmember and faculty:student registration ratios. The current preview for 1991, including guesses regarding the Administrative Office budget, the meeting budgets, and a contribution to the International Congress of Human Genetics, shows a net of approximately \$50,000.

Editor's Report (J. W. Drake): There are no major growth or decay trends at the moment, although production costs for *GENETICS* are a little lower because of the switch to a lighter text paper. Waverly Press seems to have solved its problems with deadlines. The January 1991 issue will mark the 75th anniversary of *GENETICS*, which will be commemorated by a special essay.

GSA Meetings: The 1991 GSA meeting will be subsumed in the 8th International Congress of Human Genetics, to be held October 6–11 in Washington, DC. Copies of the first announcement have been distributed. The second announcement and call for abstracts will be mailed in November. A. D. Kaiser is the GSA representative on the Congress Program Committee. The GSA Board of Directors has reviewed the proposed program and is satisfied that there is enough basic science for the Congress to be appealing to GSA members.

Although opinion was not unanimous, the majority of the Board of Directors decided to move the GSA meeting to hotels starting in 1987 because campus meetings were deemed not to work. The quality of the programs varied, attendance was not as large as the Board wished, and the Administrative Office (and sometimes Program Committee chairs) experienced inordinate difficulties in dealing with campus meetings personnel. Since then it has become obvious that holding a GSA meeting with about 200 registrants in hotels is not tenable either, and a small standing committee dedicated to the idea of campus meetings, headed by

Bill Dove and Adelaide Carpenter, is exploring campus sites for GSA meetings after 1991. Other options are to meet with other groups such as AIBS or meet consistently at one popular and inexpensive site such as Asilomar.

There was objection to the announcement that the 1993 GSA meeting would be subsumed in the International Congress of Genetics in Birmingham, England. In the past when the International Congress was held abroad, the GSA has held its own meeting in the United States. Kaufman said he would bring the issue to the Board of Directors.² Dave Perkins suggested the Board also reconsider its decision to save approximately \$12,000 per year by ceasing to publish the program and abstracts volume of the GSA meeting as a supplement to *GENETICS*. If the volume is provided only for meeting registrants and not for all subscribers to *GENETICS*, then only 200–300 copies need be printed instead of 5,000. Perkins argued that this is a false economy that will damage the GSA meeting. Submitting abstracts will be less attractive if they are not archival, and the visibility of the meeting will be diminished.

GSA-Sponsored Organismic Meetings: The third GSA-sponsored *Drosophila* meeting was held at Asilomar in March of 1990. It was a very successful meeting and attracted more than 850 registrants. The 1991 *Drosophila* conference will be held March 20–24 at the Chicago Hilton. The 1992 meeting will be held March 10–15 at the Wyndham Franklin Plaza Hotel in Philadelphia. The 1993 meeting will again be held at Asilomar in March. The GSA also continues to manage the Yeast Genetics and Molecular Biology Meeting. The next meeting will be held May 23–27, 1991, at the San Francisco Marriott. Word about the successful GSA management of these two organismic meetings has spread throughout the genetics community. Consequently, organizers of other organismic meetings that are becoming too large to be handled comfortably on a volunteer basis are now requesting GSA sponsorship. These include but are not limited to the Chlamydomonas, maize and nematode meetings.

The meeting was adjourned at 6:20 PM.

Respectfully submitted,
GERRY GURVITCH, *Executive Director*

² At their meeting on July 21, 1990, the Board decided that the standing Program Committee should consider holding a 1993 GSA meeting, and plans are under way.

REPORT OF THE COMMITTEE ON HONORS AND AWARDS

The Society makes two awards annually to honor members who have made outstanding contributions to the science of genetics. The Thomas Hunt Morgan Medal recognizes a lifetime contribution to genetics. The Genetics Society of America Medal recognizes particularly outstanding contributions to genetics within the past fifteen years. We are pleased to report

1991 Thomas Hunt Morgan Medal: Dale Kaiser

If the Thomas Hunt Morgan medal reflects the production of continuously superb genetic science over the course of a career, Dale Kaiser must be the nearly perfect recipient. As will be delineated in the following paragraphs, Dale's work has spanned four decades, during which time contributions from his laboratory have never faltered from the vanguard of molecular genetics. His work has always started from novel genetic observations, and he has followed these genetic leads to obtain direct physical support of the ideas thus generated. The term "molecular genetics" describes his work well.

Dale's work began in the early 1950s when he joined Max Delbrück's group of bacteriophage visionaries at Caltech as a graduate student, where he worked closely with Jean Weigle. He later continued bacteriophage work as a postdoctoral student at the Pasteur Institute with François Jacob and others in the French phage group. In those early days he began the study of the developmental switch that allows bacteriophage λ to "decide" whether to lyse or lysogenize its *E. coli* host. In attacking this problem he found that three types of mutations, defining three different functions, caused λ to become unable to lysogenize the *E. coli* host. Two were required only for the establishment of the lysogeny, while one was required for maintenance and establishment of the lysogenic state (the now famous λ repressor). These prophetic studies showed the power of bacteriophage genetics and set the stage for all of the elegant work on lysogeny that followed in his laboratory and many others.

As a faculty member at Stanford, he clearly realized the enormous value of the study of bacteriophages, especially λ , as a model system for learning about many aspects of the nature of genes and the consequences of their actions. Over the following decade and a half, Dale and his coworkers delved into many aspects of the molecular genetics of this interesting organism, contributing heavily to the body of knowledge which by the early 1970s made λ perhaps the most well-understood organism in our biosphere. This work varied from the study of chromosome structure

that the 1991 Thomas Hunt Morgan Medal will be awarded to Armin Dale Kaiser and the 1991 GSA Medal will be awarded to Bruce S. Baker. The awards will be announced during the 1991 International Congress of Human Genetics, but will not be presented until the 1992 GSA meeting in Minneapolis.

to regulation of gene expression to virion morphogenesis.

A few specific contributions from Dale's lab during this period will be reviewed. His early work on the structure of the λ chromosome led to the first nucleotide nearest neighbor analysis, correlation of the λ genetic and physical maps, and what we believe was the first *direct* determination of a DNA sequence, that of the λ cohesive ends. The work on control of lysogeny yielded an understanding of one of the first regulatory systems where multiple genes (*cII*, *cIII*, *cro*) are involved in the complex control of a single gene (the prophage repressor gene, *cI*). Included in this now classic work was one of the first unequivocal documentations of autoregulation of a gene (in this case, *cI*), a phenomenon now known in many situations. Genetic analysis of the interaction between λ and its *E. coli* host led to the first genetic identification and initial characterization of the class of proteins that are now collectively called "molecular chaperones." This observation was almost two decades ahead of its time, as judged by the current "trendy" appellation and flurry of activity surrounding the chaperone proteins.

Work in Dale's laboratory had practical as well as theoretical importance for everyone in the field of genetics. Work on the genetics of the structure and assembly of the λ virion in Dale's lab allowed him to be the first to show that λ DNA can be packaged in vitro. This finding had important theoretical ramifications for virus assembly, since it led directly to the unequivocal demonstration, also in Dale's lab, that dsDNA bacteriophages assemble protein shells which are subsequently filled with DNA. In addition, the ability to package λ DNA in vitro has become one of the technological cornerstones of genetic engineering.

Even more important to the development of genetic engineering is the crystallization of the idea, proposed in Dale's laboratory in 1968, that "we now have the tools to combine DNA sequences in the test tube." It was Dale's doctoral student, Peter Lobban, who first set out to clone a DNA fragment. His success formed the underlying ground work for the modern revolu-

tion in the field of genetics. The rest is history: a hundred important technical improvements and embellishments have made the technology easy and available, and it is the methodological basis of much of current genetic research.

In the early 1970s, Dale was drawn to the mystery of multicellular development. At a time when there was mass migration of scientists from prokaryotic to eukaryotic systems, Dale moved against the current and began an analysis of multicellularity in the prokaryotic myxobacteria. Although myxobacteria had long been loved by microbiologists for their beautiful fruiting bodies and amazing behaviors, the broader biological community was largely unaware of them. Dale recognized that the myxobacteria were an ideal simple model for the genetic analysis of cell-cell interactions in development.

Dale and his coworkers are responsible for making sophisticated genetic manipulations possible with myxobacteria. During his sabbatical leave with Marty Dworkin at the University of Minnesota in 1972–1973, they discovered that phage P1 could inject its DNA into *M. xanthus*. This work established the first genetic link between myxobacteria and enteric bacteria such as *Escherichia coli*. Dale's lab also developed methods for gene transfer between myxobacteria by

transduction (using a phage isolated from a collection of soil samples from around the world sent to Stanford in the "Dirt for Dale" crusade) for the use of transposon Tn5 as a tool in *M. xanthus*, and for genetic complementation analysis using partial duplications of the chromosome.

The analysis of mutants defective in *M. xanthus* multicellular behavior led to the discovery of a novel type of extracellular complementation due to the transfer among cells of signaling molecules. One of the signals functioning in fruiting body development has been purified and found to be a small protein. Studies of the developmental program revealed that most genes whose transcription is increased during fruiting body formation are not actually required for the development to occur, and that cell alignment can control developmental gene expression.

In addition to these lofty accomplishments; Dale's unassuming attitude, amazing clarity of thought and his never ending search for the *direct* and *unequivocal* experiment have endeared him to all who have come in contact with him. It is this sense of elegance and artistry in science that his students and acquaintances emulate.

SHERWOOD CASJENS
COLIN MANOIL

1991 Genetics Society of America Medal: Bruce S. Baker

The designation of Bruce S. Baker as the 1991 recipient of the Genetics Society of America medal is highly appropriate. Bruce has been acquainted with fly genetics from an early age, because his father, W. K. Baker, is also a fly geneticist of considerable stature. Despite early attempts to become a phage geneticist, Bruce was inevitably drawn to *Drosophila* and the laboratory of Larry Sandler at the University of Washington. The field of *Drosophila* genetics has profited immensely from that decision.

Bruce's academic career began as an undergraduate at Reed College, where he graduated in 1966. He received his Ph.D. from the Department of Genetics at the University of Washington in 1971. After a one-year postdoc at the University of Washington, he moved to a two-year postdoctoral stint at the University of Wisconsin. Subsequently he was on the faculty at the University of North Carolina from 1974 to 1976, at the University of California, San Diego, from 1976 to 1986 and in the Department of Biological Sciences at Stanford from 1986 to the present time.

Bruce is a molecular geneticist par excellence, with the emphasis on geneticist. As a graduate student and in his first postdoctoral year, he trained with Larry Sandler in the realm of classical genetic analysis. His masterful analyses of the mutants *paternal loss*, a mutant causing postmeiotic chromosome instability, and *cinnamon*, a conditional maternal-effect lethal, attest

to his talents and contributions in this area. In addition, together with Adelaide Carpenter, he identified and characterized a number of X-linked meiotic mutants, which in collaboration with Pedro Ripoll, they were able to demonstrate also had mitotic effects. During his sojourn at Wisconsin in James Crow's laboratory, he demonstrated the linearity of the incidence of *Minute* mutations (a class of dominant mutations resulting from insufficiency of only one wild type copy of the loci) with X-ray dose, thus providing a simple F_1 metric for assessing radiation damage. Bruce was among the first to recognize that *Minute* loci probably encode ribosomal proteins. He provided experimental evidence for this postulate by showing that homozygous *Minute* larvae are characterized by an imbalance in the quantities of large and small ribosomal subunits, whereas stoichiometry obtains in the wild type.

Since becoming an independent investigator, Bruce's main interests have been in the genetic control of chromosomal behavior and in the control of somatic sexual differentiation and dosage compensation. The work on chromosome behavior has largely been in collaboration with Maurizio Gatti of the University of Rome. Bruce and Maurizio have analyzed the mitotic chromosomal phenotypes of a large number of meiotic and mutagen-sensitive mutants and late-larval and pupal lethals. From the great enrichment

of abnormal chromosomal phenotypes in the mitotic cells of many of these mutations, they have been able to identify a number of genes that function in assuring proper chromosome behavior. In addition, they recognized from the observation that many such mutants survive until the late larval stage that many of the functions required for the cell divisions of embryogenesis can be provided via the maternally produced products of these genes.

Bruce's best known contributions are in providing an understanding of the genetic cascade that functions in somatic sexual differentiation. The magnitude of this work, begun in the late 1970s, first became apparent with the publication in 1980 of a paper entitled "Sex and the Single Cell," which tells (nearly) everything you always wanted to know about sex via genetic analysis. This paper shows that the genes *transformer*, *transformer-2* and *doublesex* all function in a cell-autonomous manner and that they are required until relatively late in development. It also analyzes the epistatic interactions among these genes and infers the structure of the regulatory hierarchy containing these genes, as well as predicting that the function of *transformer* and *transformer-2* is to switch *doublesex* from an active male form to an active female form of expression. All of these genetic inferences have since been verified by molecular analysis.

At this point, Bruce made the critical decision that he must become a molecular biologist as well as a geneticist. Many other geneticists have made this same decision, but few have been as successful in the execution. Bruce not only talked molecular biology, he learned to do it well himself. This is evidenced by the fact that work in his lab led to the molecular isolation and characterization of the *transformer*, *transformer-2* and *doublesex* genes, and to the combination of genetics and molecular biology to extend the experiments of epistatic interactions to the molecular level.

Since this award recognizes outstanding contributions to genetics, it is important to recognize the significant contribution that Bruce makes to training the molecular biologists who come to his lab in the genetics of *Drosophila*. This training, which is similar to some of the training that Bruce received from Larry Sandler, is not always pleasant, but it is thorough and effective.

By all criteria—commitment to genetics, significance and breadth of contribution, ability to integrate genetic analysis with other techniques and a commitment to training others in the techniques of genetics—Bruce Baker is a propitious choice for the GSA Medal.

DAN L. LINDSLEY
MICHAEL MCKEOWN

Recipients of GSA Honors

Thomas Hunt Morgan Medal

1981 Barbara McClintock, Marcus M. Rhoades
1982 Sewall Wright
1983 Edward B. Lewis
1984 George W. Beadle, R. Alexander Brink
1985 Herschel L. Roman
1986 Seymour Benzer
1987 James F. Crow
1988 Norman H. Giles
1989 Dan L. Lindsley
1990 Charles Yanofsky
1991 Armin Dale Kaiser

Genetics Society of America Medal

1981 Beatrice Mintz
1982 Gerald R. Fink
1983 Charles Yanofsky
1984 David S. Hogness
1985 Philip Leder
1986 Gerald M. Rubin
1987 Sydney Brenner
1988 David Botstein, Ira Herskowitz
1989 Allan C. Spradling
1990 Nancy Kleckner
1991 Bruce S. Baker

REPORT ON THE GENETICS SOCIETY OF CANADA AWARDS

The Awards Committee of the Genetics Society of Canada selected the following individuals for the 1990

Society Awards, presented at the 1990 joint GSA/GSC meeting in San Francisco, California.

1990 Genetics Society of Canada Award of Excellence: Lap-Chee Tsui

Lap-Chee Tsui of the Genetics Department, Hospital for Sick Children, Toronto, was the 1990 recipient. This award was made in recognition of Dr. Tsui's major contributions to medical genetics, specifically through his work on the molecular biology of cystic fibrosis. This work culminated in 1989 with his publication of two papers in *Science* reporting the identification and characterization of the cystic fibrosis gene. Cystic fibro-

sis affects 1 out of every 1600 births in North America. Dr. Tsui's discoveries will have considerable impact on the diagnosis and screening of this disease and on its cell biology and physiology. His work represents a major achievement of Canadian science, and we take great pride in having made this award to one of our Society members.

1990 Genetics Society of Canada Young Scientist Award: Linda Bonen

The 1990 recipient was Linda Bonen of the Biology Department, University of Ottawa. The award acknowledges Dr. Bonen's important contributions to our knowledge of mitochondrial gene structure and function. Her current work focuses on the mitochondrial genomes of plants. Dr. Bonen is one of the success

stories arising from the NSERC University Research Fellow (URF) program. She is also an Associate in the Canadian Institute for Advanced Research Program in Evolutionary Biology.

ANTHONY GRIFFITHS, *Chair, Awards Committee*

REPORT OF THE EDITOR

During 1990, the number of pages for articles was 3,022 and for the Records, Proceedings and Reports was 16 for a total of 3,038. Pages for articles increased by 8.5% over 1989. The number of submitted manuscripts increased by 2.8% to 403 while the number of printed articles increased by 6.2% to 275; note, how-

ever, that printed articles reflect submissions over a different and more diffuse interval. Paid circulation increased by 0.6% to 5,043.

JOHN W. DRAKE, *Editor*

REPORT OF THE SECRETARY

The Board of Directors met twice during 1990: at the Baltimore-Washington International Airport on February 24 and in San Francisco on July 21.

On December 31, 1990, GSA had a total of 3,362 paid members (2,474 regular, 475 student, 180 husband/wife, 233 emeritus) and 55 paid affiliates. This represents a reduction of less than 1% from December 31, 1989, when paid members numbered 3,391 and paid affiliates numbered 58.

I am pleased to announce that John C. Lucchesi was chosen as the Vice-President in the 1990 election. Christine Guthrie and Dorothea Bennett were elected to serve as Directors from 1991 through 1993. I am sorry to record that Dr. Bennett passed away before assuming office. The Board appointed Barry S. Ganetzky to fill her position until such time as members voted for a successor in the 1991 election.

The 1991 Annual Meeting of the Genetics Society of America will be subsumed in the 8th International Congress of Human Genetics, scheduled for October 6-11 in Washington, DC. GSA members have routinely been sent information about the Congress, but if you require further details, please contact the Administrative Office at 9650 Rockville Pike, Bethesda, MD 20814. The deadline for submission of abstracts was April 1. The deadline for advance registration is August 12.

After 1991, the Board has agreed to return to campus-style meetings for the GSA. A standing committee will be responsible for quality control of the scientific program and continuity from year to year. Local hosts, who will serve on the Program Committee for that year's meeting, will also be responsible for logistics. The GSA will provide up to \$15,000 in support of each meeting, which sum the organizers hope to repay while

still keeping registration fees low and affordable. The Administrative Office will assist with publicity and provide mailing labels.

Plans for the 1992 GSA meeting, to be held June 18-21 at the University of Minnesota, Minneapolis, are well under way. The "national" members of the Program Committee are Robert Herman (Chair), William Dove, Christine Guthrie, Sandy Parkinson and Jasper Rine. Irwin Rubenstein heads the local organizers, who include Carolyn Silflow, Mike Simmons, Harry Orr and Ron Phillips.

Plans to hold the 1993 meeting at Asilomar are under consideration. Several members from the San Francisco area are willing to serve on the Program Committee including Jasper Rine (Chair), Jerry Feldman and Minx Fuller. Jerry Feldman will head the local group.

The 1991 *Drosophila* meeting was held March 20-24 at the Chicago Hilton and was a scientific and popular success, with over 1,000 registrants. Thom Kaufman chaired the Program Committee. The 1992 *Drosophila* meeting is scheduled for March 10-15 at the Wyndham Franklin Plaza Hotel in Philadelphia, with William Gelbart chairing the Program Committee.

The 1991 Yeast Genetics and Molecular Biology meeting is scheduled for May 23-27 at the San Francisco Marriott. John Woolford and George Sprague have co-chaired the Program Committee. Plans for future Yeast meetings are under way.

GSA management of these two organismic meetings has been very successful, and the Board of Directors looks forward to welcoming other groups under the GSA umbrella in the near future.

THOMAS C. KAUFMAN, *Secretary*

REPORT OF THE GENETIC STOCK CENTERS COMMITTEE

The Genetic Stock Centers Committee has had a quiet year. We have provided general information about stock centers, directed more specific inquiries to the curators of individual collections, and explored some alternative funding routes for living collections.

The NIH remains reluctant to provide funding for stock centers. We were hopeful that the Howard Hughes Medical Institute would become an important new source of support for living collections, but the HHMI administration has no plans to expand funding into areas that do not involve the direct conduct of research.

It is important to note that NSF has made a strong commitment to the support of major living collections and is doing an excellent job with the resources avail-

able. NSF understands the important role stock centers play in the support of basic research, and has taken an active role in maintaining and developing stock centers.

In addition, the USDA provides significant support for plant collections, and may branch into insects in the future. Nevertheless, the scope of USDA support can be expected to remain limited, and the demand for NSF funding exceeds the available resources. We in the research community need to be thinking of creative funding mechanisms that both provide stable support for our stock centers and better distribute the burden of genetic stock collection support.

KATHLEEN A. MATTHEWS, *Chair*

OBITUARY

Ronald A. Cross, 1938–1990

On April 18, 1990, Ronald A. Cross died in Santa Monica, California, of a brain tumor. Since 1967, Ron Cross, had been on the faculty of the Department of Microbiology at the University of Southern California School of Medicine. He received A.B., M. A. and Ph.D. degrees from the University of California, Los Angeles; his thesis work was on mutation in *Clamydomonas*. He subsequently published several papers on gene regulation in bacteriophage lambda in collaboration with

Margaret Lieb. Ron Cross was very active in the teaching programs of the Medical School, and also acted as advisor and counsellor to many medical students. In tribute, the classes of 1991 and 1992 named the student lounge in his honor, and the Microbiology Department has established a Memorial Fund.

MARGARET LIEB