

Personals

1932

R. E. FOSS has been elected president of Sunray DX Oil Company in Tulsa, Okla. Formerly vice president, he has been with the company since 1935.

1933

EVAN G. BOWER, assistant district engineer for operations of the California State Division of Highways, was killed on April 29 when his car struck a taut steel cable stretched between two road graders working on the new U.S. 91 freeway east of Yermo. He was 53. Bower had been with the Division of Highways since 1934, except for three and a half years when he served as Lt. Commander in the U.S. Navy. He is survived by his wife and a brother.

1935

CHARLES M. BLAIR, PhD, has been named vice chancellor for finance and treasurer of Washington University in St. Louis. He was formerly president of the Petrolite Corporation of St. Louis, and had worked for them since earning

his doctorate at Caltech. The Blairs live in Ladue, and have two children — Charles Jr., who is a graduate student at Caltech in chemistry; and a daughter, Mrs. J. T. Evans of Abilene, Texas.

RICHARD H. JAHNS, PhD '43, has been named dean of Stanford University's School of Earth Sciences. He will assume his post in July 1965.

Dr. Jahns joined the Caltech faculty in 1946, and became professor of geology in 1949. He left Caltech in 1960 to accept the position of chairman of the Division of Earth Sciences at The Pennsylvania State University. In April 1962 he was also named associate dean of the College of Mineral Industries.

LOUIS T. RADER, MS, PhD, '38, is now vice president and general manager of the industrial electronics division of the General Electric Company. He was formerly president of the Univac division of the Sperry Rand Corporation. This is the third time Rader has worked for G.E. He was with the company from 1937 to 1945, and again from 1947 to 1959.

1936

GLENN R. CARLEY, former head of the weapons planning group at the Naval Ordnance Test Station in Pasadena, has taken a new position with the Secretary of the Navy in the Office of Program Appraisal. In September he started a two-year assignment with the NATO (SAC-LANT) ASW Research Center in La Spezia, Italy.

1937

RALPH S. BENTON, JR., died in London, England, of a heart attack on July 10. He had been with Ingersoll-Rand, Ltd., since 1937, and had served in the London Sales Department since 1958. During the war he was a salvage officer in the U.S. Navy. He is survived by his wife.

ALBERT H. ZIMMERMAN died on August 11 of peritonitis, after a short illness. He was 50. He was senior plant engineer for the American Pipe and Construction Company in Southgate, California. He is survived by his wife, Betty, and a daughter, Alice, who is a junior at UCLA.

1963-1964 CALTECH ALUMNI FUND REPORT

	NUMBER OF DONORS	AMOUNT	CORPORATE MATCHING	TOTAL
Use Where Most Needed:	1490	\$45,362.72	\$4,227.00	\$49,589.72
Athletic Facilities:	22	463.00	- 0 -	463.00
Endowment:	50	2,886.50	140.00	3,026.50
Faculty Salaries:	64	1,607.32	515.00	2,122.32
Scholarships:	71	1,800.00	- 0 -	1,800.00
Student Loans:	75	2,263.00	10.00	2,273.00
All Other:	111	4,082.91	1,344.04	5,426.95
Total:	1883	\$58,465.45	\$6,236.04	\$64,701.49
Alumni gifts credited to, but not solicited by, Alumni Fund action:	22	24,452.39	- 0 -	24,452.39
Grand Total:	1891*	\$82,917.84	\$6,236.04	\$89,153.88

*Does not tally due to duplication of donors.

To the nearly 1900 alumni who supported the California Institute of Technology through gifts to the Alumni Fund; *Thank you.*

—G. Russell Nance and David L. Hanna
Co-Directors of the Caltech Alumni Fund 1963-64

1938

ORAN A. GRAYBEAL is now administrative assistant to the president of the Sunray DX Oil Company in Tulsa, Okla. He served as chief reservoir engineer, district production superintendent, and division manager for the Company's Western Division in Los Angeles and Denver prior to his promotion.

1939

RICHARD A. FISCHER, acting as secretary for the Class of 1939, reports on the 25th reunion of the class on June 10:

"After somewhat of a hassle the Class of '39 managed an early start on cocktails the afternoon of the Alumni Banquet.

"It seems that it all started with CHARLIE CARSTARPHEN, MS '40, calling CARL PAUL to see if anything special was going to come off for the 25th reunion. Carl called DICK FISCHER and all agreed it would be a great idea to do something. Result: 22 loyal '39 alumni showed up. Some had not seen each other since graduation, some would not have recognized each other if they had . . . how time changes!

"CHARLIE CARSTARPHEN came from Cincinnati, CARL PAUL from Phoenix, HERMAN ENGLANDER from San Diego, FRED HOFF from Sacra-

mento, and the rest from around L. A.

"Everyone looked prosperous. Twenty two reported a total of 61 children and PAUL SMITH and BILL NORTON are both grandfathers. Only BOB KIMBALL and CARL PAUL reported sons at Caltech - Tech must be getting tougher!

"Trying to get statistics on top of a few Martinis can produce errors; however, the latest dope is that DUANE BECK, MS '40, is managing research and development for Hughes Aircraft; PERRY BROWN is vice president of Johnston Pump; CHARLIE CARSTARPHEN is running the food business for Procter & Gamble in Cincinnati; HOWARD CRAFT is a metallurgical consultant at Magnaflux; VIRGIL CRAWFORD runs the materials and processes department at AirResearch; GEORGE CROZIER is engineering things at Lockheed; HERMAN ENGLANDER is project scientist at the Naval Electronic Lab in San Diego; DICK FISCHER is managing outer space and cryogenics at AiResearch; JACK GOODELL is engineering manager for Bechtel; ED CRISWOLD has an underwater business of his own; ANDY HANNON is still successfully operating Hannon Engineering; FRED HOFF is in the vegetable business, directing engineering for Basic Vegetable Pro-

duce, Inc. in Sacramento; DAVE HOYT is executive vice president at the O.K. Earl Corporation of architectural engineers and builders; BOB KIMBALL is principal sales engineer for the utility companies at General Electric; DON LAWRIE is pricing administrator at Autonetics (North American Aviation); HAL FISCHER, MS '39, AE '40, is assistant vice chairman of research at UCLA in the department of engineering; CURT LEE is at AiResearch doing some exotic heat transfer engineering; BILL NORTON takes care of the Seafarer Restaurant in Manhattan Beach; HERB STRONG is the technical facilities manager at JPL; CARL PAUL is assistant chief engineer of Garrett's AiResearch division in Phoenix; JIM RITCHEY is manager of industrial engineering at Firestone; PAUL SMITH is manager of marketing analysis for advanced programs at the Douglas Missile and Space Division."

1941

FRED W. BILLMEYER, JR, is now professor of chemistry at Rensselaer Polytechnic Institute in Troy, N.Y. His duties include teaching and research in both polymer science and the science of color measurement. From 1945 to 1964 he was in the plastics department of E. I. du

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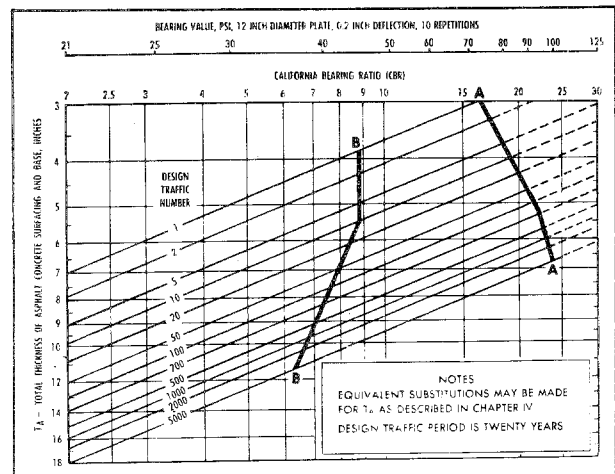
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Personals . . . continued

Pont de Nemours and Company in Wilmington, Del. He was also a lecturer in high polymers in the department of chemistry at the University of Delaware from 1951 to 1964. The Billmeyers have three children and live in Schenectady.

1942

MELVIN J. SKINNER, a partner in the structural engineering firm of Stacy & Skinner in Los Angeles, died on May 2 at his home in Arcadia, after a lingering illness. He was 44. After graduation from Caltech, he served in the Navy as a Seabee officer in the Admiralty Islands in the South Pacific. In 1946 he joined the Los Angeles firm of Murray Erick Associates and in 1952 he became a partner and the name of the firm was changed to Stacy & Skinner. He is survived by his wife and two sons, Michael and Stephen.

1943

J. H. LAWS, MS, is now manager of operations in the industrial chemicals division of the Shell Chemical Company in New York. He was formerly superintendent of the company's Houston plant.

1944

WARREN H. AMSTER, MS '47, AE '48, is now senior staff engineer at Aerospace Corporation's El Segundo technical operations.

1948

JOHN P. DAVIS, MS, was killed on August 1 when his glider crashed after being caught in a downdraft near Apple Valley. He was 38. He had been director of electronics for Capitol Records since 1960. He was formerly on the technical staff of the air defense laboratories at the Hughes Aircraft Company. He held a commercial pilot's license and was a member of the Sky Roamers Club.

HOWARD B. LEWIS, JR., MS '51, is now director of advanced engineering for the Transducer Division of Consolidated Electrodynamics Corporation in Pasadena. He has been with the company for 12 years.

JAMES C. ELMS, vice president and general manager of Raytheon Company's space and information systems division, received a special award of appreciation from NASA for his work in "reorganizing and managing the Manned Spacecraft Center during the period of its rapid growth from Project Mercury to Gemini and Apollo projects." The Elms' and their three daughters live in Wellesley Hills, Mass., and their son, Chris, is a Caltech sophomore this year.

1949

PAUL D. SALTMAN, PhD '53, professor of biochemistry at USC, received an

award of \$1000 from the university last spring for excellence of teaching. He has been at USC since 1953. He is also a Career Development Awardee of the National Institutes of Health, and has done research in Paris and Copenhagen on human disease at the molecular level, and transport mechanisms in cells.

WILLIAM M. McCARDELL, MS, is now marketing manager for Humble Oil & Refining Company's central region in Tulsa, Okla. He was formerly Chicago area manager, and has been with the company since 1949.

FRED ORDWAY, PhD, consultant in the inorganic solids division of the National Bureau of Standards in Washington, D.C., is now a Fellow of the American Ceramic Society.

JOHN F. WIREN is now director of sales for the guidance and control systems division of Litton Industries in Los Angeles. He joined the company after 14 years with Honeywell, where he was director of marketing for the aeronautical division.

1950

WILSON BRADLEY, JR., now president of the Endeveco Corporation in Pasadena, and DONALD W. STILLMAN, president of Applied Components, Inc., in Los Angeles, are included in the 1965 edition of *Outstanding Young Men of America*, an annual compilation of about 10,000 young men of outstanding rank throughout the country. Nominations are made by Junior Chamber of Commerce Chapters and College Alumni Associations.

FLOYD B. HUMPHREY and his wife announced the birth of their third child (and third daughter), Nancy, on September 9. Floyd, who had been dividing his time between JPL and Caltech, has now been appointed associate professor of electrical engineering at the Institute.

JAMES R. ALLDER is now manager of the advanced systems section in the electronics division of the Aerospace Corporation in Los Angeles. He has been with the corporation since 1960.

HOWARD E. REINECKE, president of Febco, Inc., in Sun Valley, is the GOP candidate for Congress in the 27th District of L.A. County this fall. He lives in Tujunga, serves on the national and state boards of several trade organizations, including the Water Resources Board of the State Chamber of Commerce.

PAUL H. JACKSON, JR., MS, an engineer with General Dynamics Pomona, died suddenly on July 7. He was 38. He had contracted polio when he was 4 years old, and had spent most of his life

in a wheel chair. Despite his handicap, he graduated from the University of Kansas in 1944, and received his MS from Caltech in 1950. He stayed at Caltech for two years as a research engineer in the hypersonic wind tunnel, then joined General Dynamics in 1952.

1951

ROBERT J. DIAMOND, PhD, has been promoted from associate to full professor of mathematics in the School of Letters and Science at California State College in Los Angeles. He has been on the faculty there since 1958.

FRANK C. BUMB, JR., MS '52, is included in the 1965 edition of *Outstanding Young Men of America*. He is vice president of engineering at American Concertone, Inc., in Los Angeles.

KENNETH R. BERG is now manager of engineering at Fairchild's Precision Metal Products Division in El Cajon, Calif. He was formerly manager of the systems support activity at the Northrup Corporation in Anaheim.

1952

SULLIVAN CAMPBELL, MS, is now assistant vice president in charge of technical planning at the Xerox Corporation in Rochester, N.Y.

DAVID L. HANNA, administration manager at Booz, Allen & Hamilton, Inc., and ROBERT E. STANAWAY, president of Montronics, Inc., in Bozeman, Montana, are two of six Caltech alumni chosen for inclusion in the 1965 edition of *Outstanding Young Men of America*. Selections are made by Junior Chamber of Commerce Chapters and College Alumni Associations of young men who have "distinguished themselves in one or more fields of endeavor to the point of being outstanding."

JAMES N. SHOOLERY, PhD, research chemist at Varian Associates in Palo Alto, is the winner of a \$1,000 American Chemical Society Award in Chemical Instrumentation. He pioneered in the development of nuclear magnetic resonance spectroscopy, which is now an indispensable tool in unraveling the structures of steroids, alkaloids, and other organic compounds.

RICHARD R. DICKINSON is now chief process engineer at Texaco's Casper, Wyoming, refinery. He was formerly senior project engineer at Texaco's Rockport, Illinois, refinery. The Dickinsons have two children.

1953

KOICHI SADASHIGE, MS, is now group leader of scientific instruments (electron microscopes) design engineering in the broadcast and communications products division of RCA in Camden,

N.J. He was formerly senior engineer in the television camera advanced development group. He has been with RCA since he left Caltech.

The Sadashiges have two children — Ernest, 6, and Jacqueline, 9 months.

1957

MARTIN C. TANGORA, who is working for his PhD in mathematics at Northwestern University in Evanston, Ill., spent June and July in Paris on his vacation. He was waiting for a break in the traffic there one day when he realized that he knew the man alongside him who was also waiting to cross. It turned out to be BAIRD BRANDOW, who was in Paris attending a scientific congress on nuclear physics at UNESCO. Baird is now in Copenhagen at the Niels Bohr Institute.

CAPT. ROBERT E. AYERS, MS, graduated from the associate course at the U.S. Army Command and General Staff College in Fort Leavenworth, Kansas, in May, and is now assigned to the Office of the Chief of Engineers, Department of the Army, Washington, D.C.

1958

ROGER D. SUMNER, MS, has been awarded a Carnegie Institution Fellowship which will enable him to continue to work at the Carnegie Institution's Department of Terrestrial Magnetism in Washington, D.C., on tape-recorded seismologic data he has collected in the Andes since November 1963.

DALE R. SIMPSON, MS, PhD, '60, is now associate professor of geology at Lehigh University in Bethlehem, Pa.

NORMAN T. ELLETT is now organization and general services consultant for George Fry & Associates in Los Angeles. He has served as assistant to the president and manager of cost estimating and pricing for the semiconductor division of Hoffman Electronics Corporation for the past four years.

1959

BERNARD M. MALOFSKY is now a research chemist at the Carothers Research Laboratory of the Du Pont Company's textile fibers department near Wilmington, Del.

ANDREW D. BAUER, AE, is now principal scientist for the Ford Motor Company's aeronautic division in Los Angeles. The Bauers have a five-year-old son, Kenneth.

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Contact Mr. Farrar, EX 9-5277, on Thursday morning for reservations.

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Meetings: University Club, 1319 "K" St.
Luncheon first Friday of each month at noon.
Visiting alumni cordially invited—no reservation.

Personals *continued*

1960

LANNES S. PURNELL received his master's degree in electrical engineering from the University of Colorado in June.

STEPHEN V. STEPHENS is now working on a fellowship for predoctoral research on "Resource-Allocating Decisions in Federal Support of Scientific Research" at the Brookings Center for Advanced Study in Washington, D.C.

DONALD W. ANDERSON has been awarded an NAS-NRC postdoctoral research fellowship to study algebraic topology at Harvard University and at the Mathematics Institute of Oxford University in England.

JOHN C. NICKEL, MS, PhD '64, is acting assistant professor of physics at the University of California, Riverside.

1961

MANUEL PANAR, PhD, is now on the staff of the Du Pont Company's central research department, after two years of postdoctoral work at Harvard.

LELAND H. HARTWELL is now doing research on the control of nucleic acid metabolism in animal cells at the Salk Institute for Biological Studies in San Diego, Calif., on an NAS-NRC postdoctoral research fellowship. He received his PhD in June from MIT. The Hartwells have two children.

LAWRENCE D. BROWN is doing research in statistical decision theory at Birkbeck College, London University, England, on an NAS-NRC postdoctoral research fellowship. He received his PhD from Cornell last month.

ELI CHERNOW graduated magna cum laude from Harvard Law School last June and has received a Frederick Sheldon Traveling Fellowship from Harvard. He plans to tour the Far East and Europe.

1962

ROBERT L. ROSENFELD, PhD, is now on the staff of the process research and development laboratory of RCA Laboratories at the David Sarnoff Research Center in Princeton, N.J.

JOHN GOLDEN is now working in the applied mathematics group at the David Sarnoff Research Center of the RCA Laboratories in Princeton, N.J. John was married in December, 1962, to Jean Lenhart. He served as assistant instructor of mathematics at Kansas University from 1962 until last June.

1964

N. NORBY NIELSEN, PhD, is now assistant professor of civil engineering at the University of Illinois in Urbana.

ALUMNI ASSOCIATION
CALIFORNIA INSTITUTE OF TECHNOLOGY

Pasadena, California

BALANCE SHEET

June 30, 1964

ASSETS			
Cash in Bank			\$ 466.41
Investments:			
Share in C.I.T. Consolidated Portfolio	\$ 88,372.79		
Deposits in Savings Accounts	<u>22,039.36</u>		110,412.15
Investment Income Receivable from C.I.T.		4,752.76	
Postage Deposit, etc.		29.26	
Furniture and Fixtures, at nominal value		<u>1.00</u>	
Total Assets			<u>\$115,661.58</u>
LIABILITIES, RESERVES AND SURPLUS			
Accounts Payable			\$ 637.25
Deferred Income:			
Membership Dues for 1964-65 paid in advance	\$ 10,597.50		
Investment Income for 1964-65 from C.I.T. Consolidated Portfolio (earned during 1963-64)	<u>4,752.76</u>		15,350.26
Life Membership Reserve			63,100.00
Reserve for Directory:			
Balance, July 1, 1963	\$ 345.52		
1963-64 Appropriation	<u>2,500.00</u>	\$ 2,845.52	
1963-64 Directory Expense		<u>168.13</u>	2,677.39
Surplus:			
Balance, July 1, 1963		\$ 28,649.35	
Share of Profit on Disposal of Investments of C.I.T. Consolidated Portfolio for 1963-64		5,281.36	
Excess of Expenses over Income for 1963-64		<u>(34.03)</u>	33,896.68
Total Liabilities, Reserves and Surplus			<u>\$115,661.58</u>

STATEMENT OF INCOME AND EXPENSES

For the Year Ended June 30, 1964

INCOME			
Dues of Annual Members			\$ 17,765.00
Investment Income:			
Share from C.I.T. Consolidated Portfolio	\$ 4,362.26		
Interest on Deposits in Savings Accounts	<u>997.92</u>		5,360.18
Annual Seminar			6,005.05
Program and Social Functions			2,946.60
Miscellaneous			59.10
Total Income			<u>\$ 32,135.93</u>
EXPENSES			
Subscriptions to Engineering and Science Magazine:			
Annual Members	\$ 12,453.00		
Life Members	<u>3,094.00</u>		\$ 15,547.00
Annual Seminar			5,375.35
Program and Social Functions			3,259.30
Directory Appropriation			2,500.00
Fund Solicitation			2,152.33
Administration (Directors' Expenses, Postage, Supplies, etc.)			1,939.45
ASCIT Assistance			700.00
Membership Committee			696.53
Total Expenses			<u>\$ 32,169.96</u>
Excess of Expenses over Income			<u>\$ 34.03</u>

AUDITOR'S REPORT

Board of Directors, Alumni Association, California Institute of Technology
Pasadena, California

I have examined the Balance Sheet of the Alumni Association, California Institute of Technology, as of June 30, 1964, and the related Statement of Income and Expenses for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as I considered necessary in the circumstances.

In my opinion, the accompanying Balance Sheet and Statement of Income and Expenses present fairly the financial position of the Alumni Association, California Institute of Technology, at June 30, 1964, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

CALVIN A. AMES, Certified Public Accountant
1602 West Thelborn St., West Covina, California

September 22, 1964