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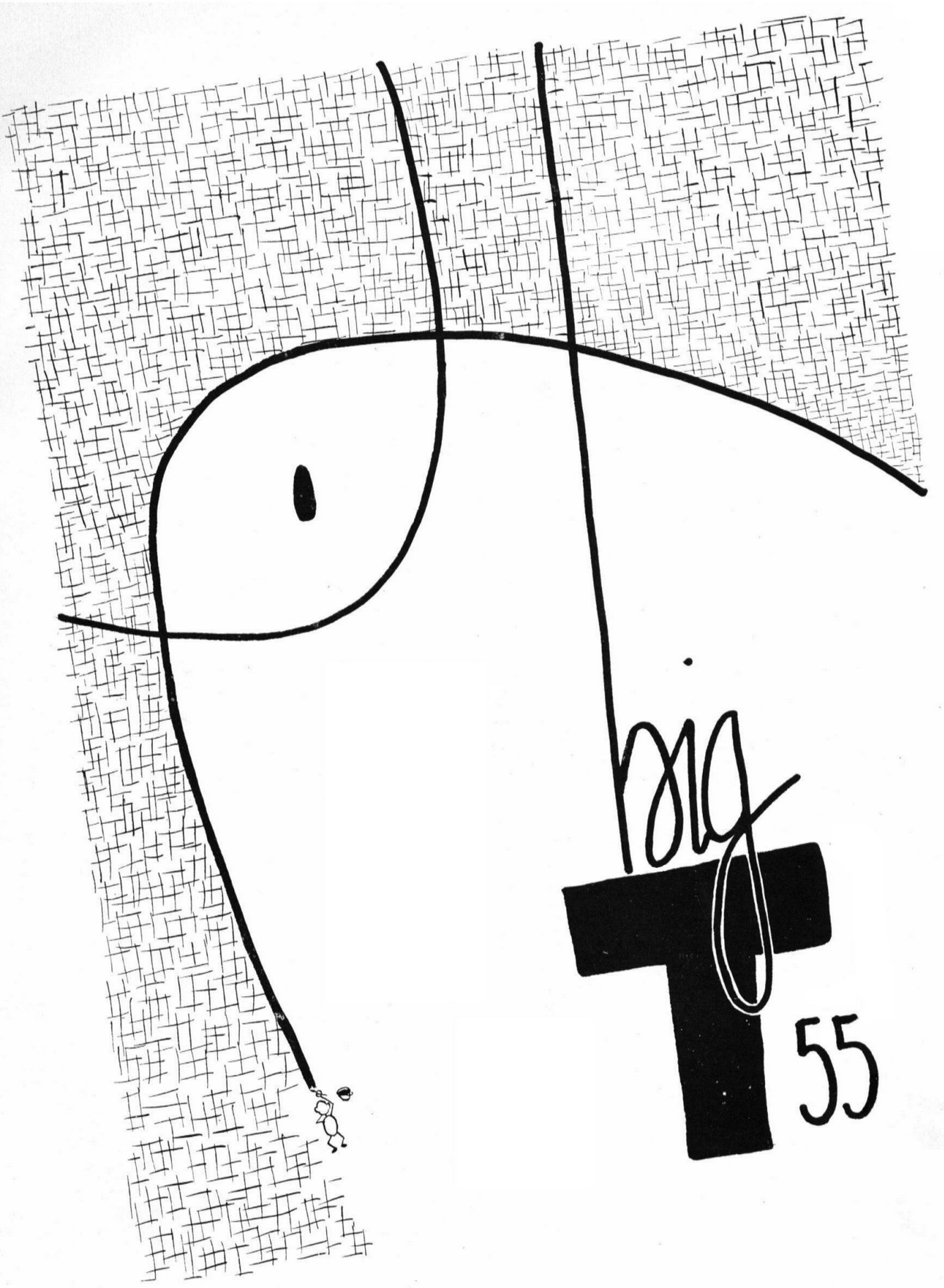
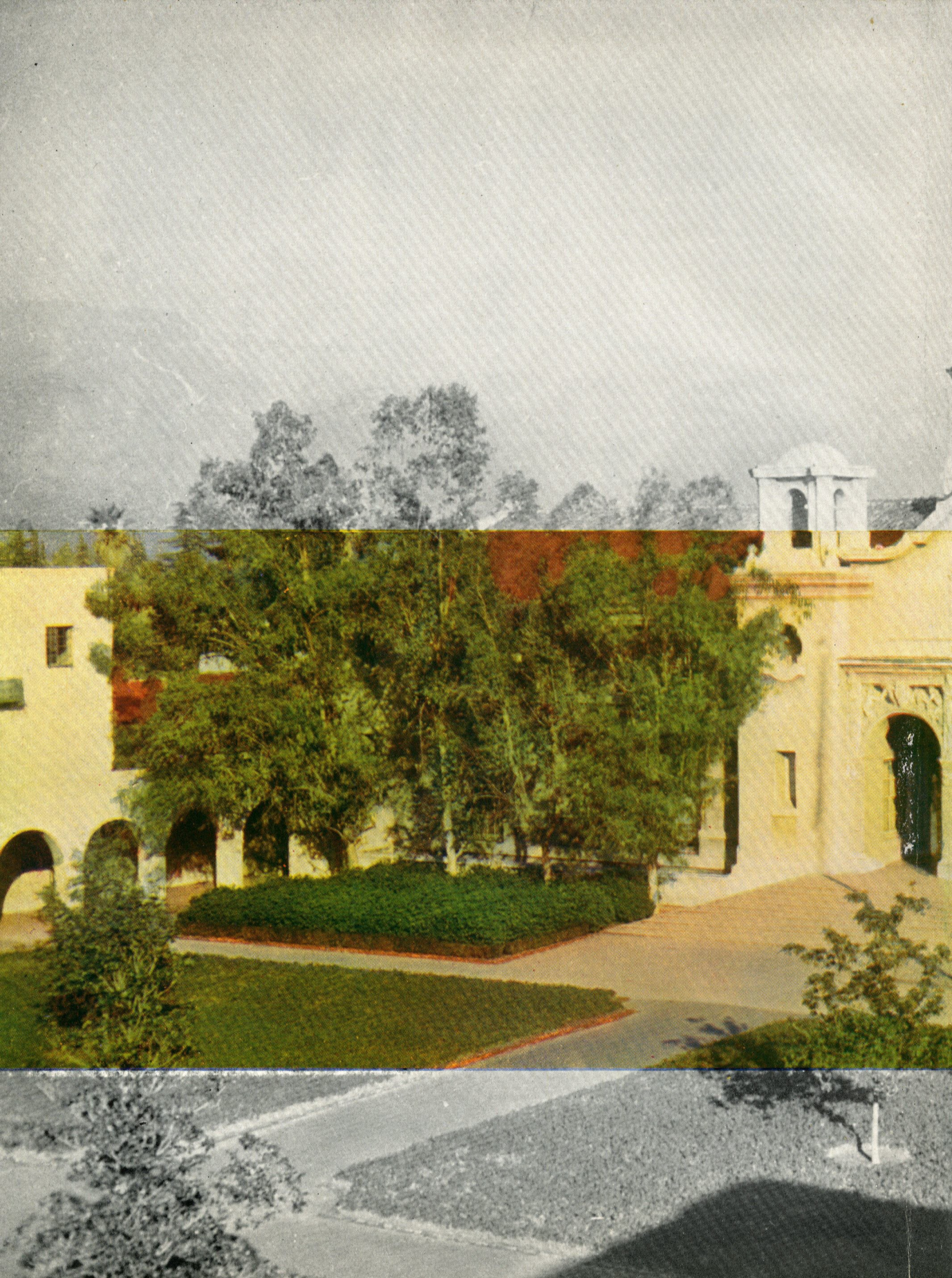
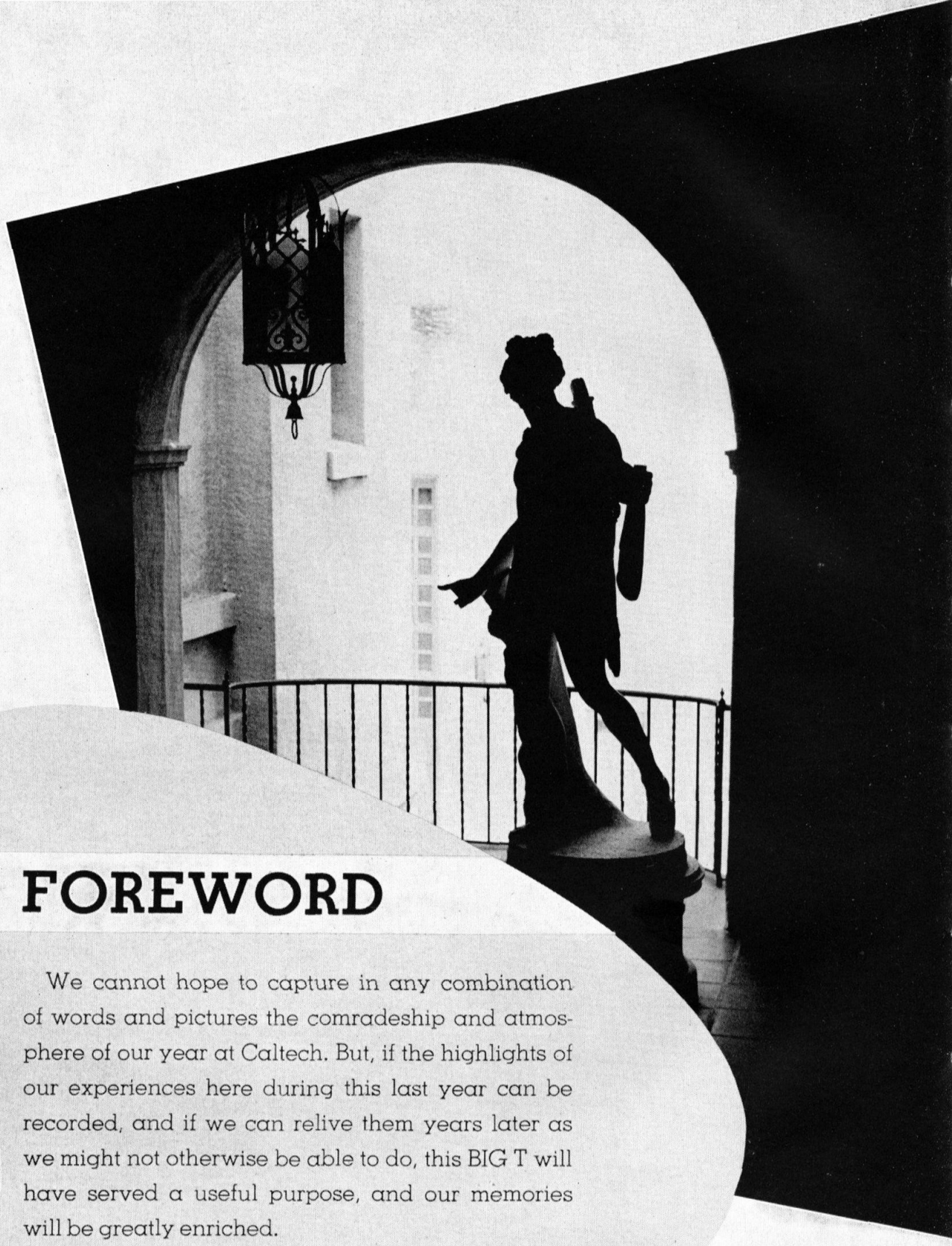


PUBLISHED BY THE
ASSOCIATED STUDENTS OF THE
CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CALIFORNIA





FOREWORD

We cannot hope to capture in any combination of words and pictures the comradeship and atmosphere of our year at Caltech. But, if the highlights of our experiences here during this last year can be recorded, and if we can relive them years later as we might not otherwise be able to do, this BIG T will have served a useful purpose, and our memories will be greatly enriched.

To this end, may you enjoy what follows . . . .

STAFF

Editor-in-Chief..... John Lansingh

Assistant Editor.....Rube Moulton

Managing Editor.....Ray Orbach

Photography Editor.....Don Nierlich

Activities Editor.....Bill McDonald

Art Editor.....Chuck Bodeen

Seniors Editor.....Walt Haenggi

Sports Editor.....Arne Kalm

Business Managers.....Louis Fletcher, Bill Purves

Photography Staff: Stu Bowen, Kim Cranney, Ed Hershberger, Dick Jali, Jon Robinson, Luis Soux

Seniors Staff: Carl Bowin, John Howell, Bob Meade, John Myers, Marty Tangora, John Young

CREDITS:

In addition to the staff members, credit for this annual goes to the other students who helped us with their pictures and write-ups. Besides students, credit goes to Elaine Dreessen, who did the portrait photography, and to Ed Hutchings, Editor of **Engineering and Science.**

The **Big T** staff is greatly indebted to Bob Ozias of Lederer, Street & Zeus Co., and Earl Evans of California Art and Engraving Co., for their indispensable advice and their push.

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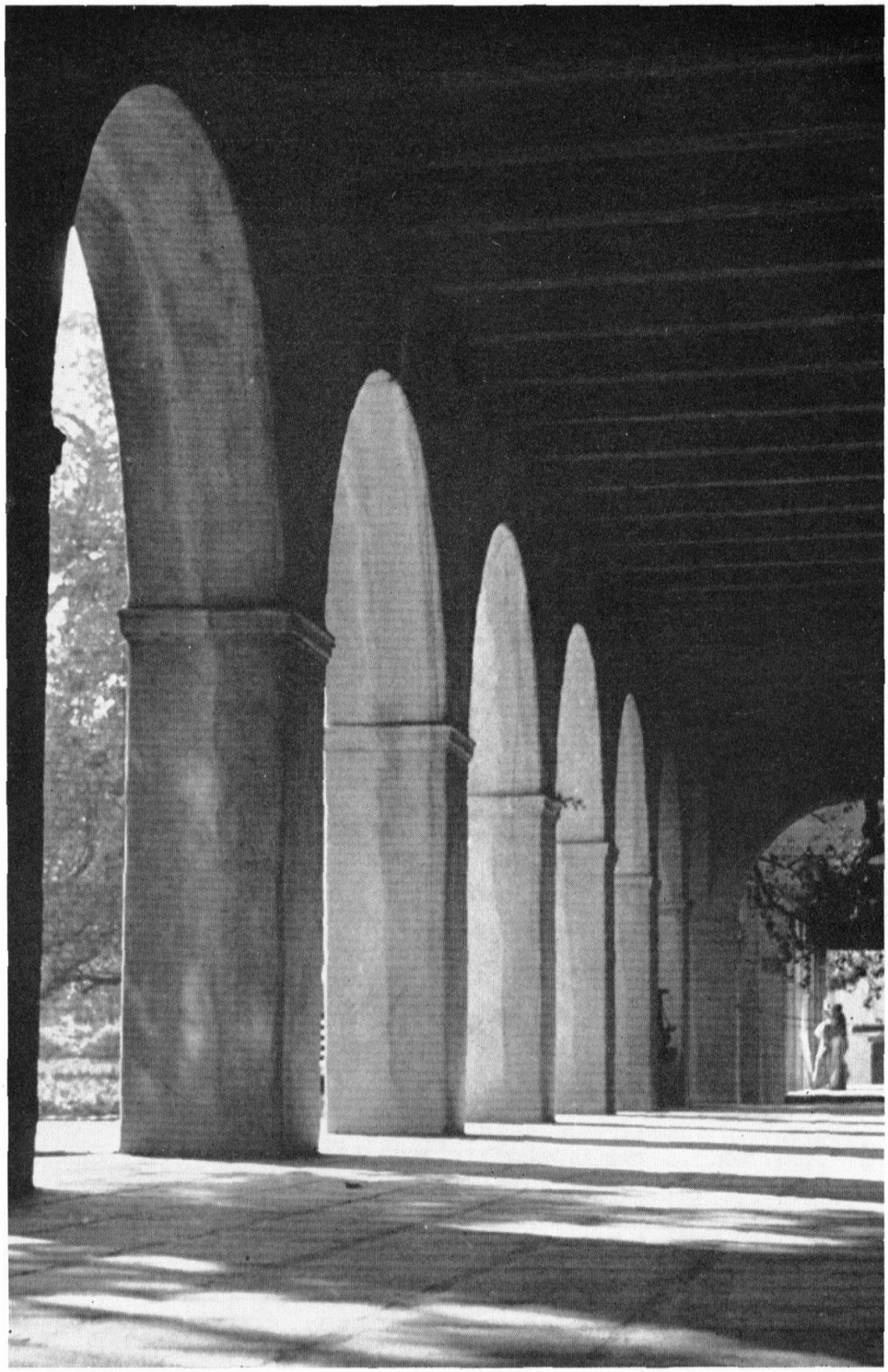
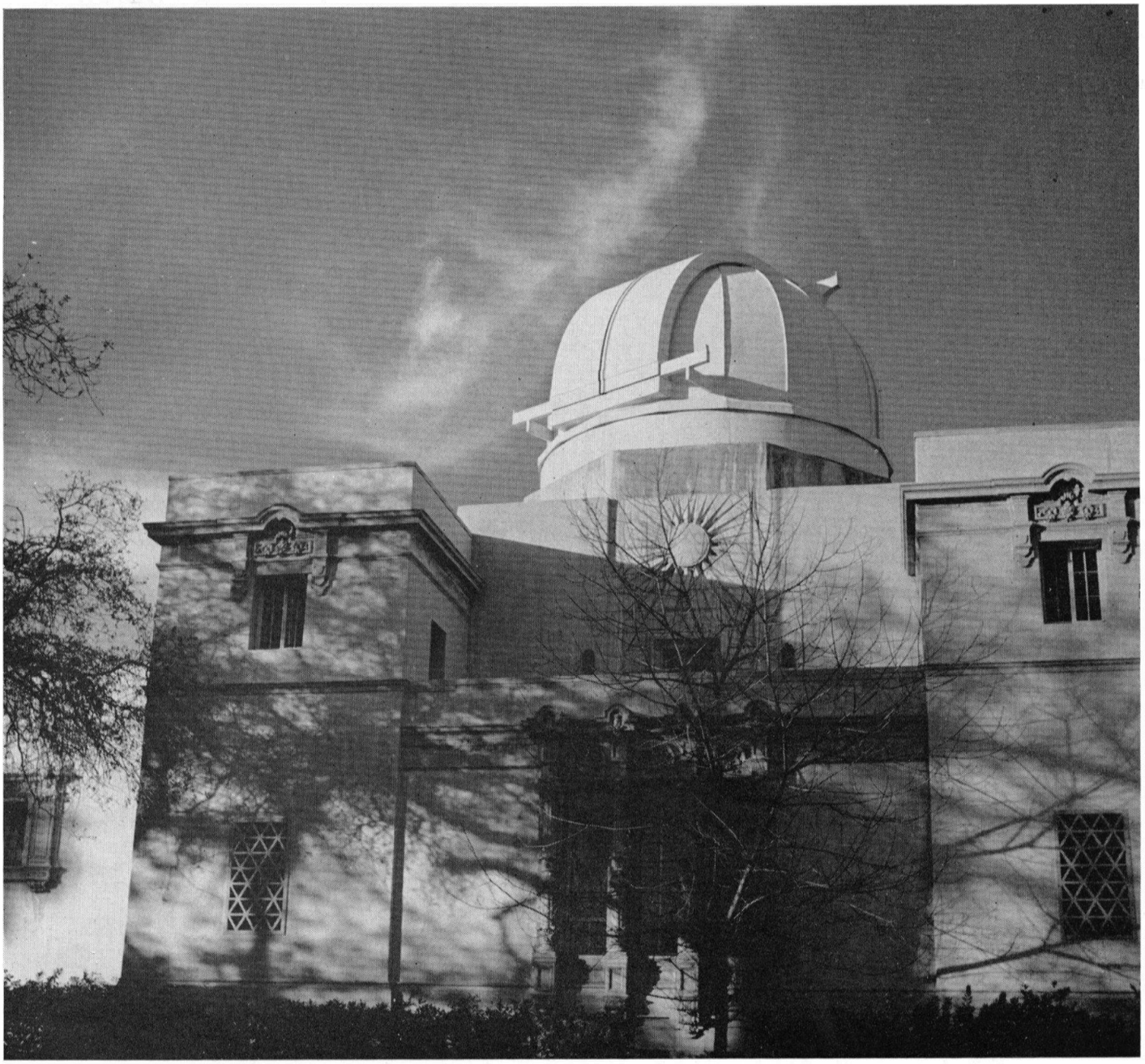
Printed by Lederer, Street & Zeus Co., Berkeley, California





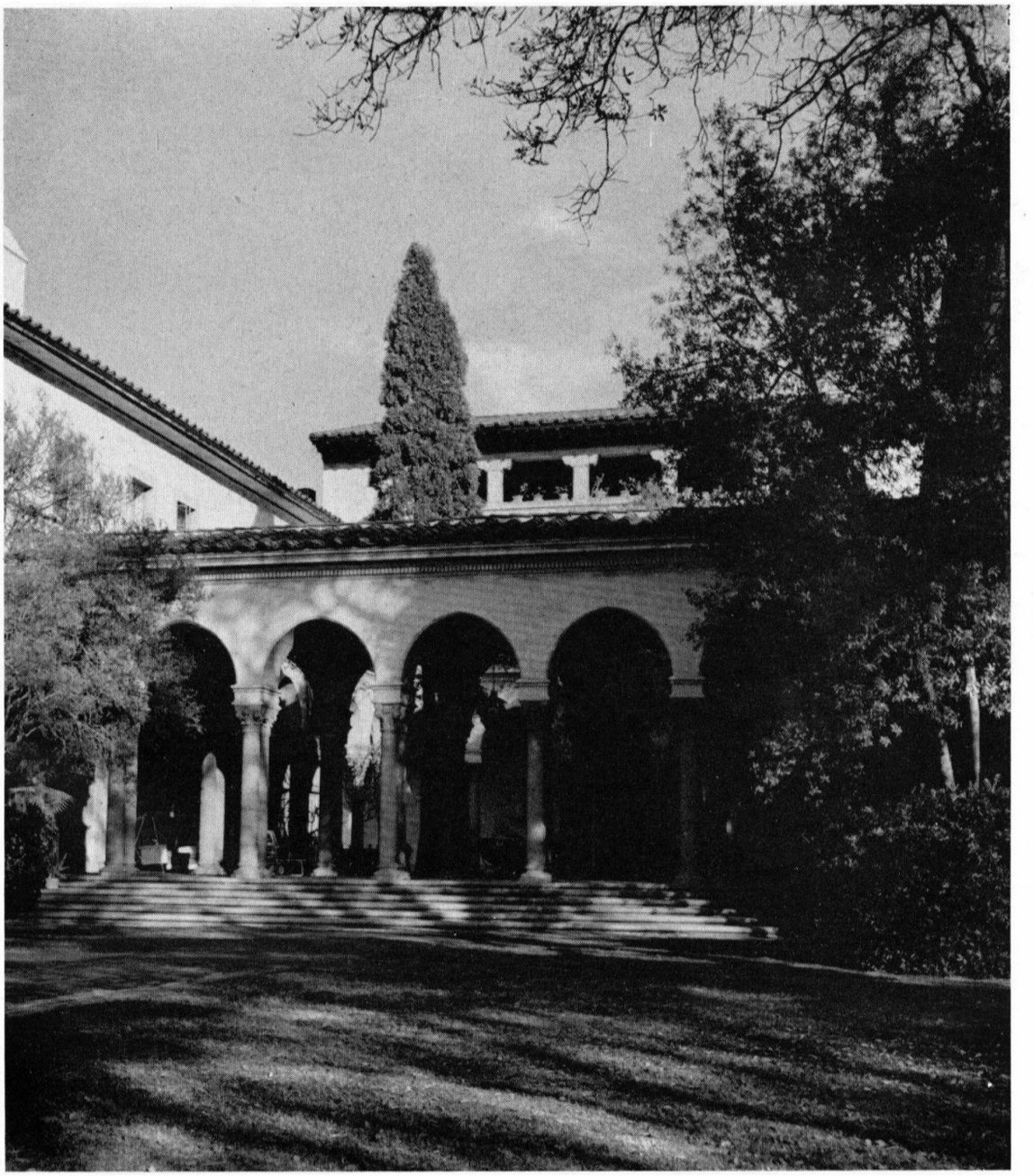
DR. LINUS PAULING

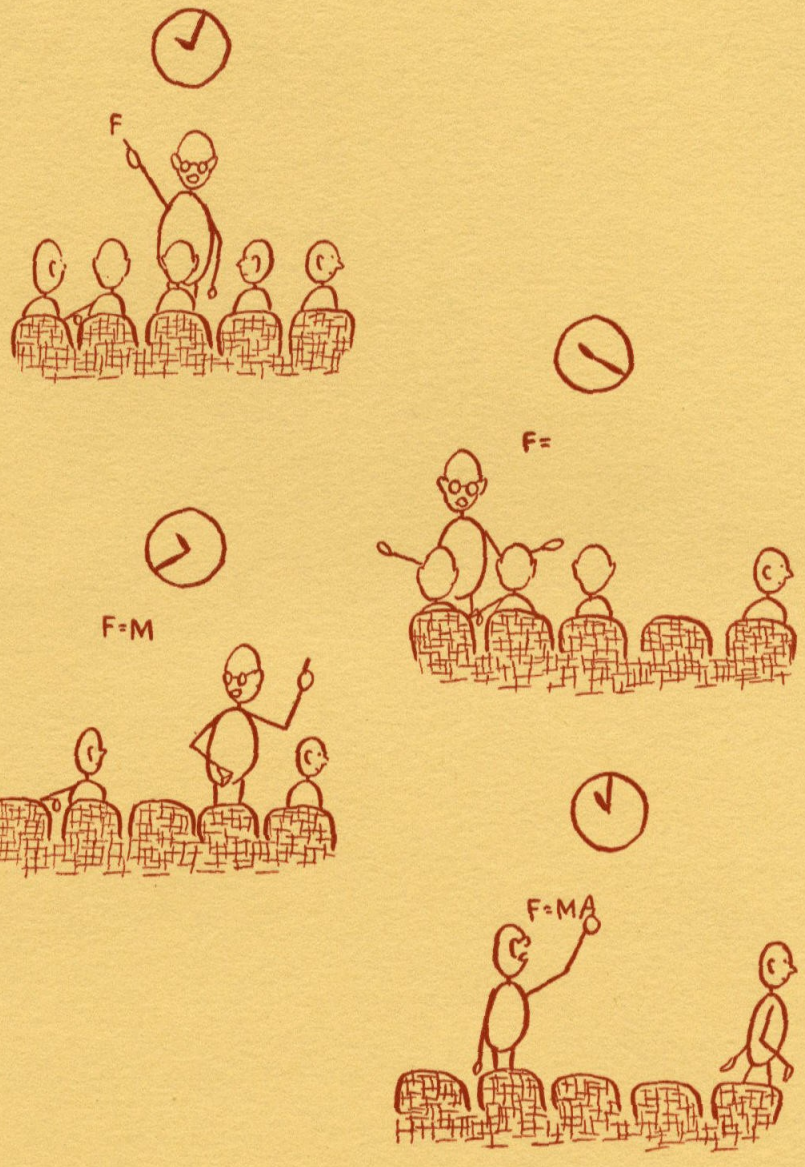
Winner of the 1954 Nobel Prize in Chemistry

In Memoriam . . .

HARVEY S. MUDD

JOHN P. BUWALDA





Faculty

Francis Maxstadt, John Lansingh, Foster Strong, Tom Bergeman, Lyman Fretwell, Harvey Eagleson (chairman), Herschel Mitchell, Jim Lewis, Vince Marinkovich, Wes Hershey (secretary), Winchester Jones, Jon Harford, Dick Johnson, Hunter Mead, Jim Adams, Don Roberts, Donald Clark, Bob Kausen, George Mayhew (acting secretary), Paul Eaton (acting chairman), Louis Fletcher, Norman Davidson, Howard Berg, Dick Kirk.

STUDENT-FACULTY RELATIONS COMMITTEE

Established as a general sounding board for all problems concerning students and faculty, the Committee serves a most important purpose of providing an opportunity for student leaders and faculty to get together and discuss an endless variety of problems. Student members of the Committee include the ASCIT Board of Directors, class presidents, house presidents, **California Tech** Editor, and **Big T** Editor. Faculty representatives include the Deans, the Registrar, the Master of Student Houses, the Y Executive Secretary, Superintendent of Buildings and Grounds, and a representative of each department. Chairman of the Committee is Dr. Harvey Eagleson.

The Committee meets at least once each month, and any member may place any problem before the group for discussion. Typical problems concern course scheduling, grading, instruction, graduate and faculty recognition of the Honor System, and general gripes on the part of students or faculty. The recommendations of the Committee are given careful consideration and usually find their way into school policy. A notable example was the formation this year of the Faculty Committee on Educational Policy, the so-called "Gripe Committee," as a result of a discussion of school policies in Student-Faculty Relations Committee.

The Committee constantly strives toward better student-faculty relations and understandings, and attempts to reach solutions satisfactory to both students and faculty.

DR. LEE A. DU BRIDGE
President
California Institute of Technology

ADMINISTRATION

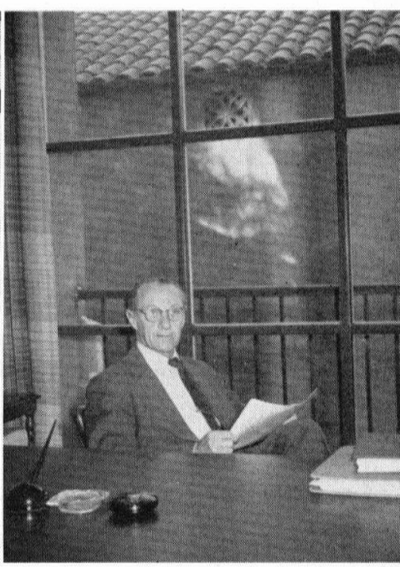
FOSTER STRONG
Dean of Freshmen

PAUL EATON
Dean of Students

WILLIAM LACEY
Dean of Graduate Studies

EARNEST WATSON
Dean of Faculty

WINCHESTER JONES
Dean of Admissions

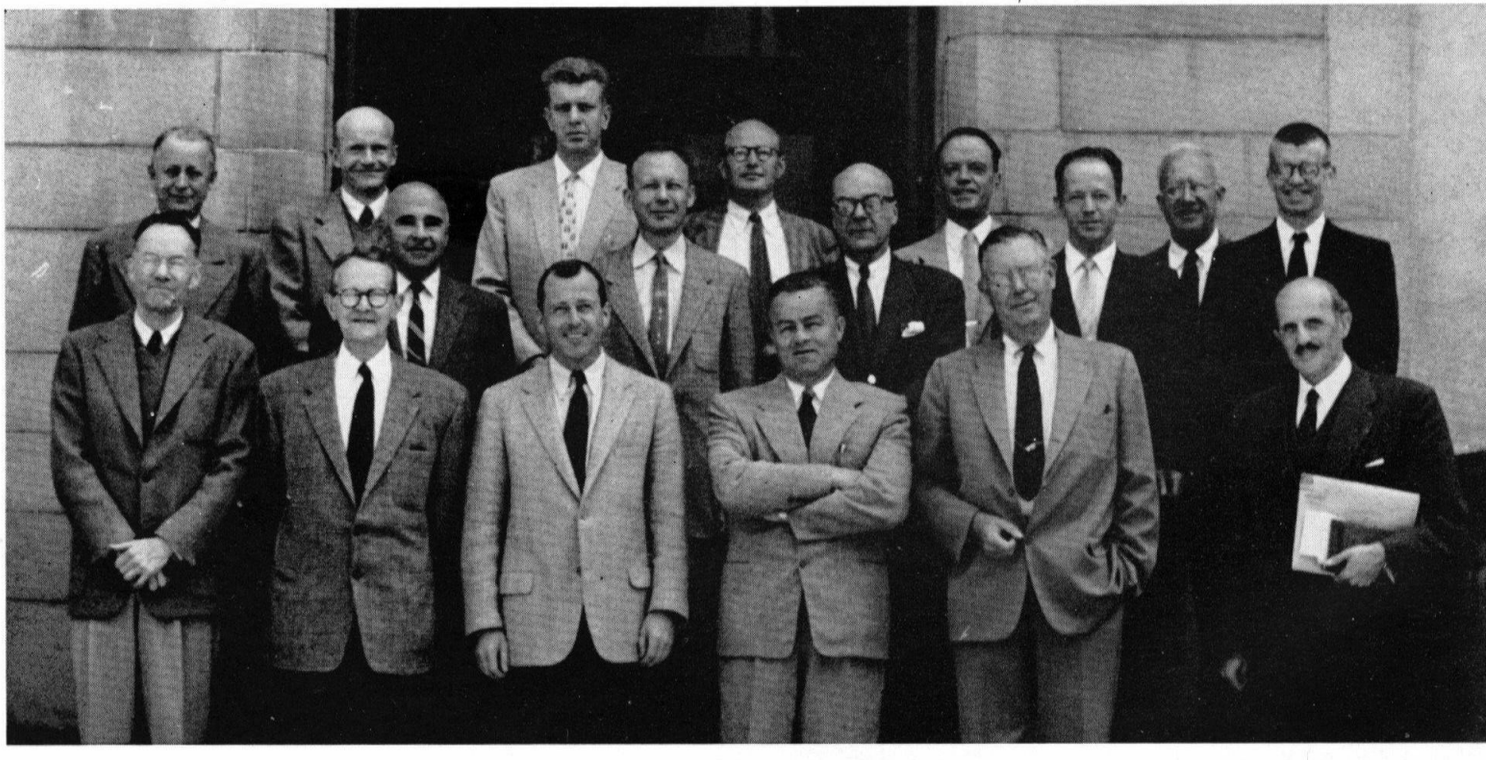


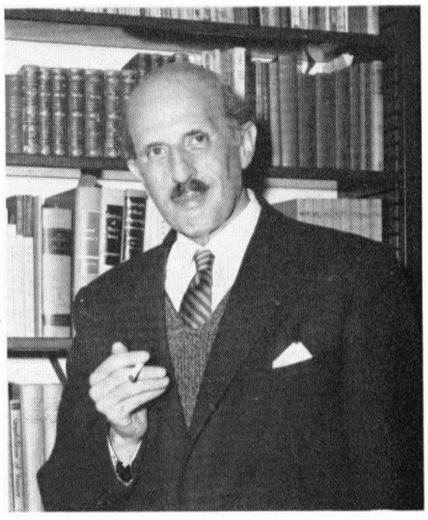
FRANCIS MAXSTADT
Registrar

DR. HALLETT SMITH, Chairman of the Division of the Humanities

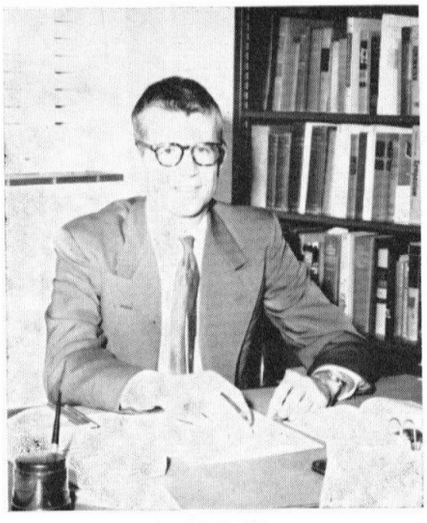
HUMANITIES

FIRST ROW, left to right: Hunter Mead, Roger Stanton, George Tanham, Horace Gilbert, Paul Eaton, Alfred Stern. SECOND ROW: Jacob Chaitkin, Arthur Gray, Harvey Eagleson, Thomas Smith, Kent Clark. THIRD ROW: Paul Bowerman, James Davies, Beach Langston, Dan Piper, Hallett Smith, William Huse.

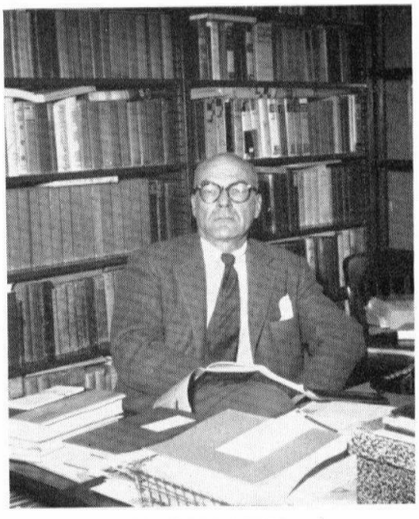




ALFRED STERN
Philosophy and Languages

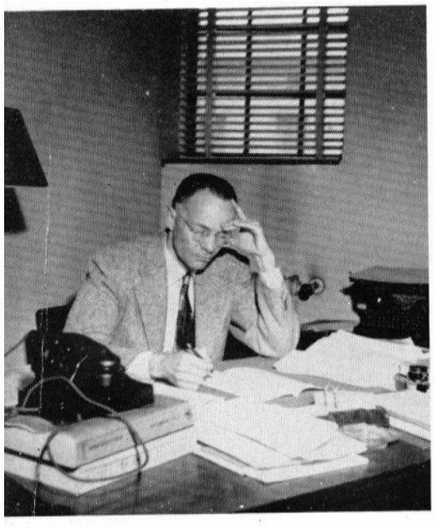


KENT CLARK
English

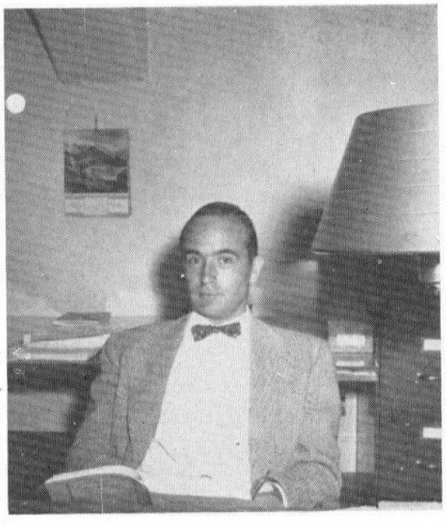


HARVEY EAGLESON
English

HUNTER MEAD
Philosophy

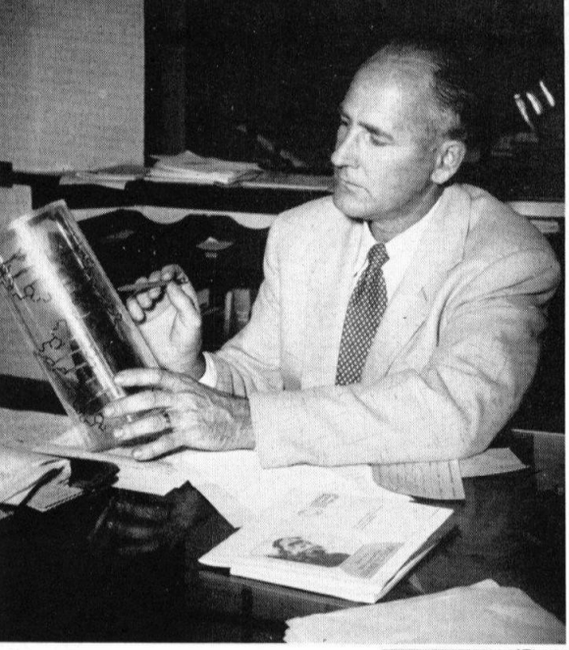


DAVID ELLIOT
History

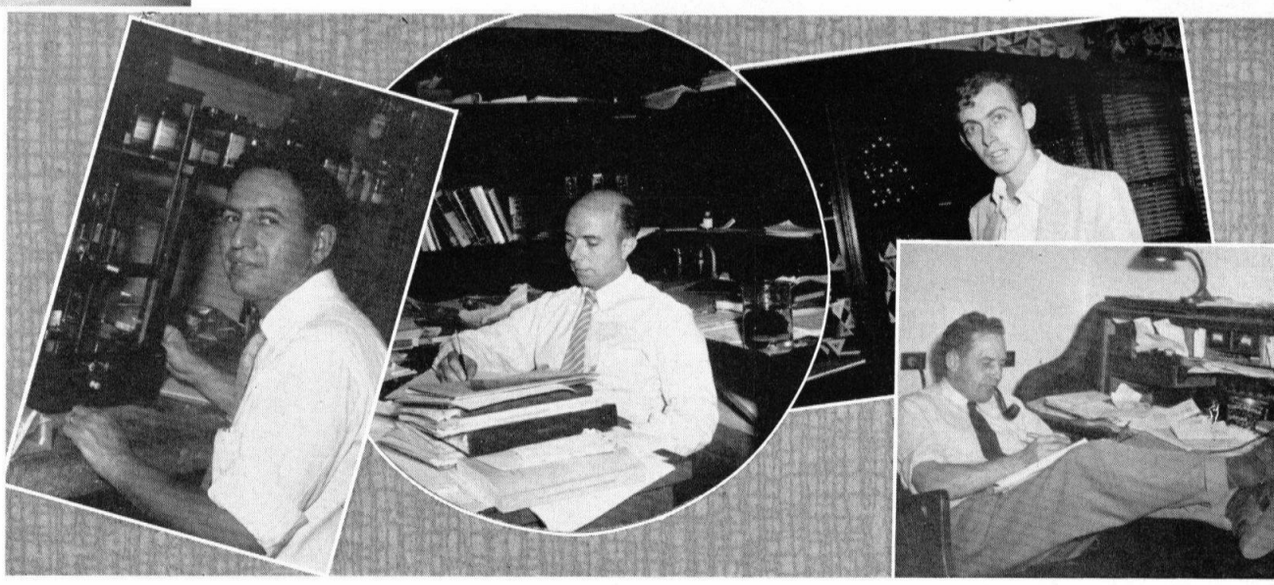


ALAN SWEEZY
Economics

BIOLOGY

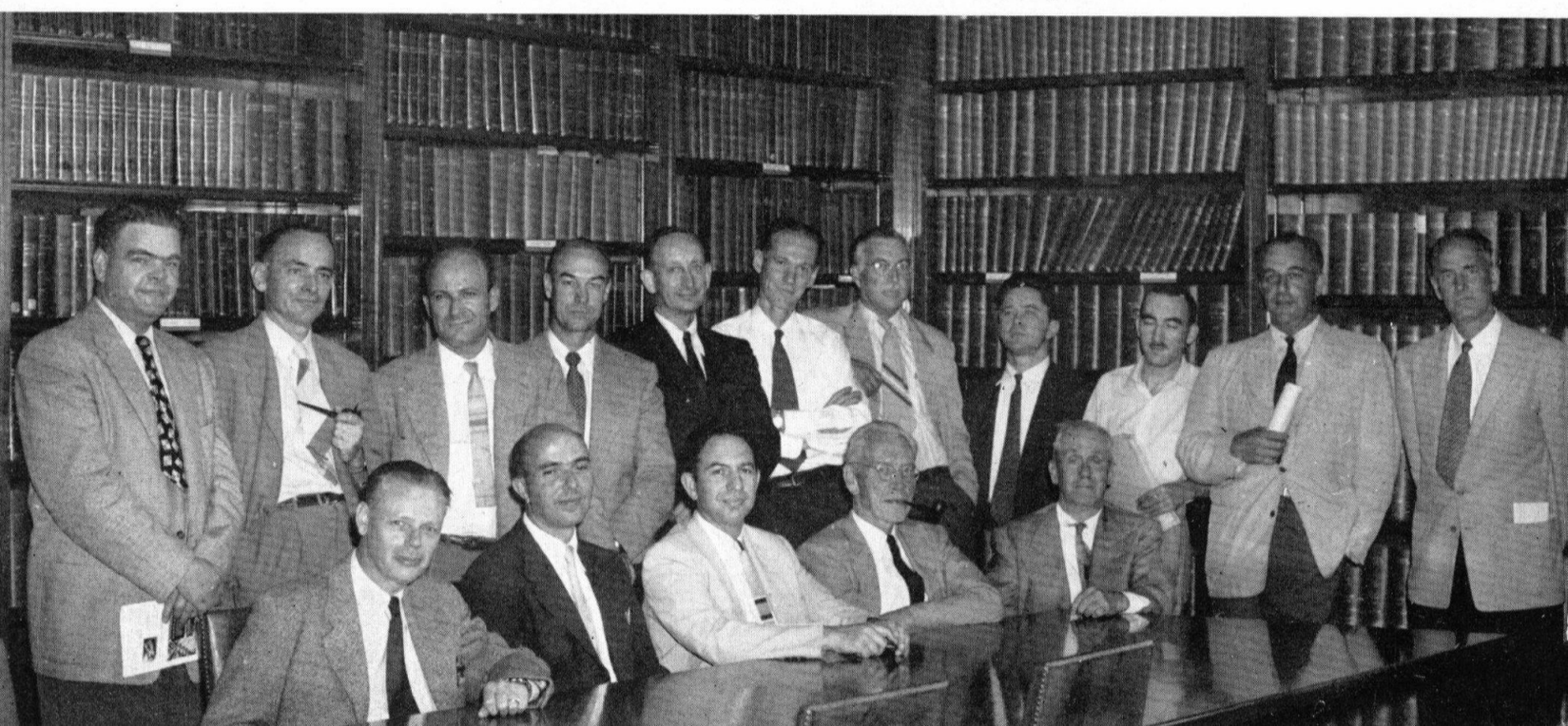


DR. GEORGE BEADLE
Chairman of the Division of Biology



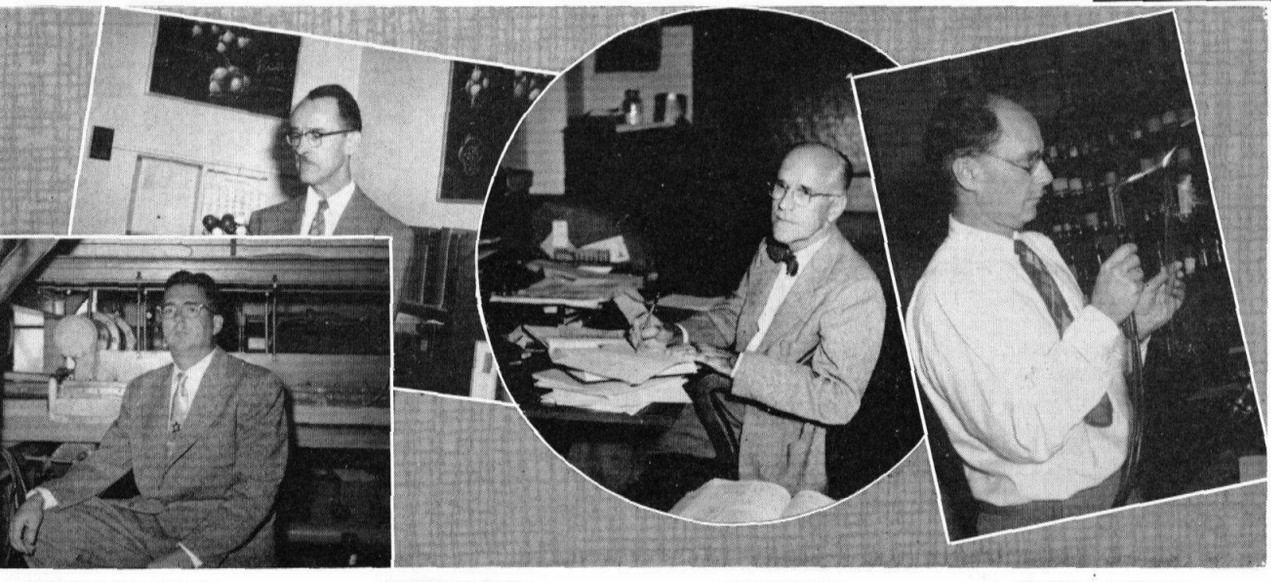
ARTHUR GALSTON | RENATO DULBECCO | JAMES WATSON | RAY OWEN

SEATED, left to right: Anthonie van Harreveld, Renato Dulbecco, Arthur Galston, Alfred Sturtevant, Albert Longley.
STANDING: Henry Klostergaard, Cornelus Wiersma, Jacob Dubnoff, Roger Sperry, Albert Tyler, Herschel Mitchell, Sterling Emerson, Edward Lewis, Giuseppe Bertani, Victor Rothschild, George Beadle.



CHEMISTRY

DR. LINUS PAULING
Chairman of the
Division of Chemistry and Chemical Engineering



WILLIAM CORCORAN ROBERT COREY ERNEST SWIFT NORMAN DAVIDSON

FIRST ROW, left to right: Norman Davidson, László Zechmeister, William Lacey, Linus Pauling, Robert Corey. SECOND ROW: William Corcoran, Gunnar Bergman, Kenneth Hedberg, John Roberts, Bruce Sage, Walter Schroeder, Oliver Wulf, John Opfel.

SEATED, left to right: Thane McCulloh, Harrison Brown, Ian Campbell, Robert Sharp, Lloyd Pray. STANDING: William Rubey, Hewitt Dix, James Noble, Francis Stehli, Claire Patterson, Heinz Lowenstam, Albert Engel, Gennady Potapenko, Samuel Epstein, Charles Richter, Charles Weaver, Clinton Stauffer, Richard Jahns.

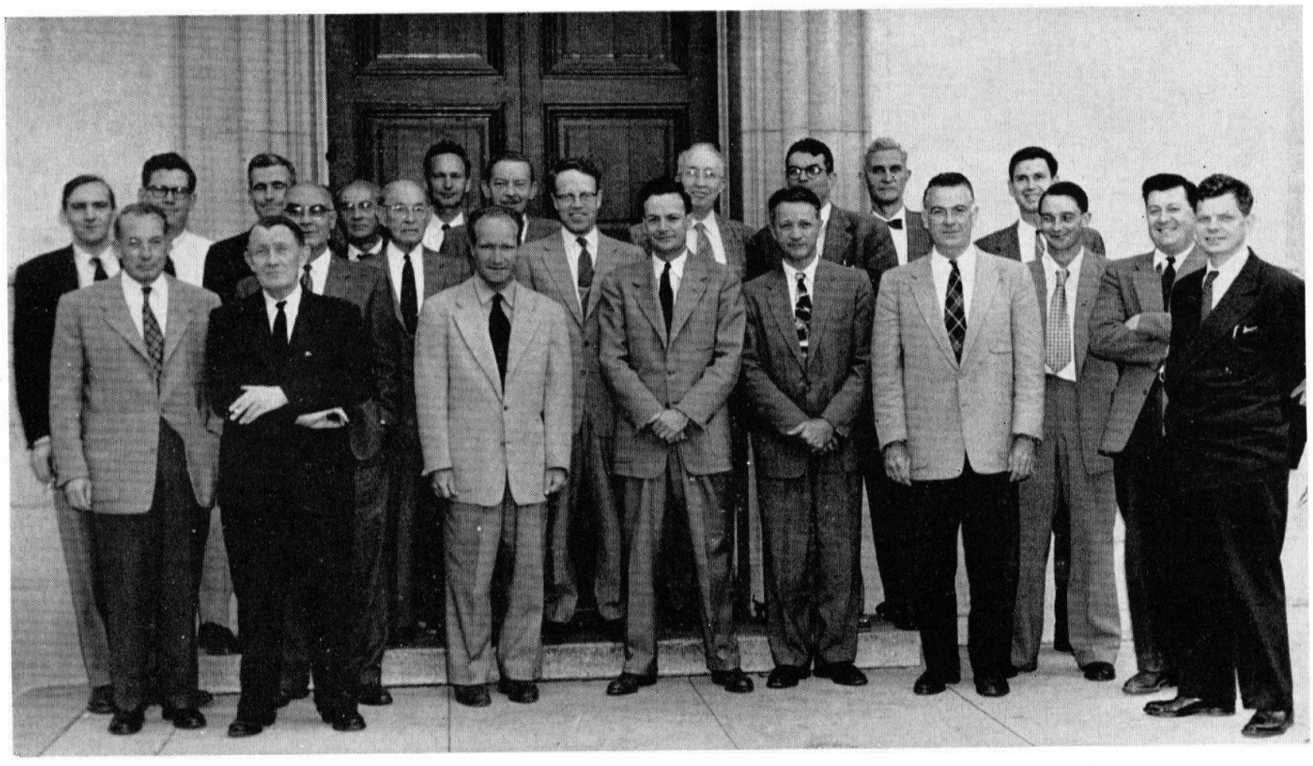
DR. ROBERT SHARP
Chairman of the Division of Geology

GEOLOGY

BENO GUTENBERG
RICHARD JAHNS

IAN CAMPBELL

ALBERT ENGEL

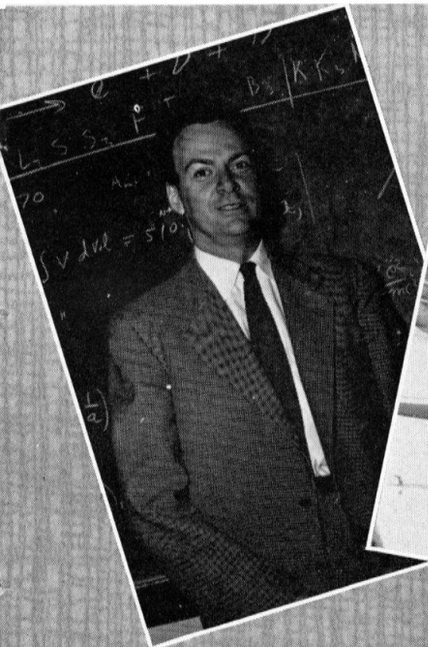


FIRST ROW, left to right: Robert Bacher, Charles Lauritsen. SECOND ROW: Matthew Sands, Carl Anderson, Robert Walker, Richard Feynman, Victor Neher, John Pellam, John Bolton, Charles Barnes, Thomas Lauritsen. THIRD ROW: John Teem, Edward Clancy, Spyro Kyropoulos, Walter Cady, Eugene Cowan, Alexander Goetz, Leverett Davis, Jesse DuMond, Robert Langmuir, William Smythe, Robert Christy.

PHYSICS

DR. ROBERT BACHER
Chairman of the Division of Physics

RICHARD FEYNMAN



VICTOR NEHER

CARL ANDERSON
JESSE DuMOND

MATHEMATICS

FIRST ROW, left to right: Frederic Bohnenblust, R bert Dilworth, Michael Fell. SECOND ROW: Morgan Ward, Tom Apostol, Arthur Erdélyi, Frank Spitzer. THIRD ROW: James McGregor, George Mackie, Eugene Calabi, Richard Dean, Brock Fuller.

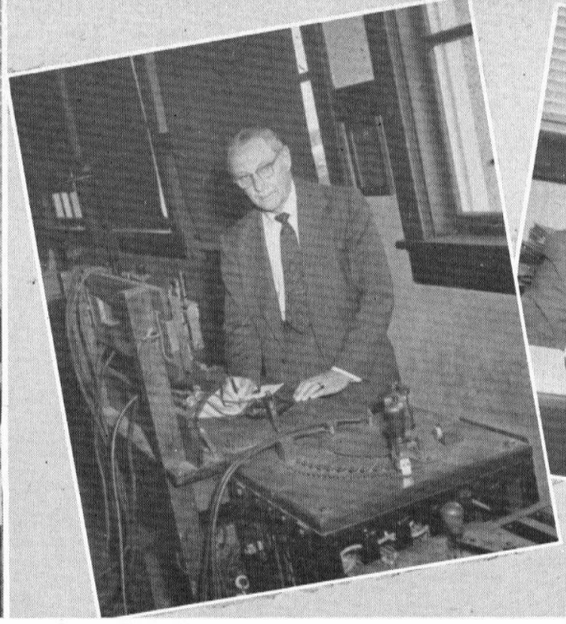
DR. FREDERIC BOHNENBLUST
Chairman of the Department of Mathematics

DR. JESSE GREENSTEIN
Chairman of the Department of Astronomy

ASTRONOMY

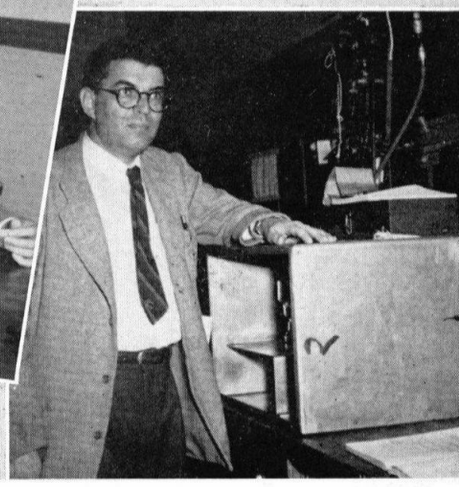
SEATED, left to right: Donald Osterbrock, Fritz Zwicky, Jesse Greenstein. STANDING: Paul Wild, William Melbourne.

DR. FREDERICK LINDVALL
Chairman of the Division of Engineering



FRANCIS MAXSTADT

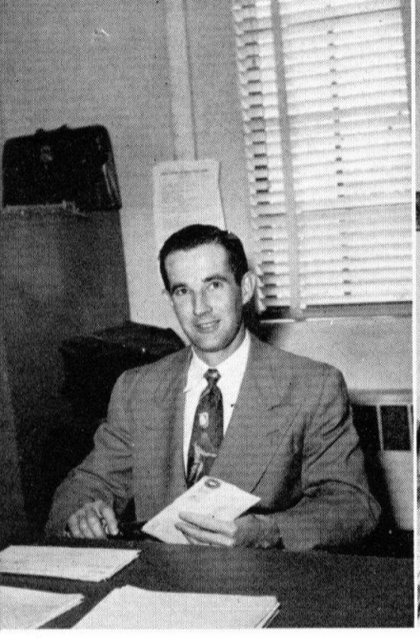
GILBERT McCANN



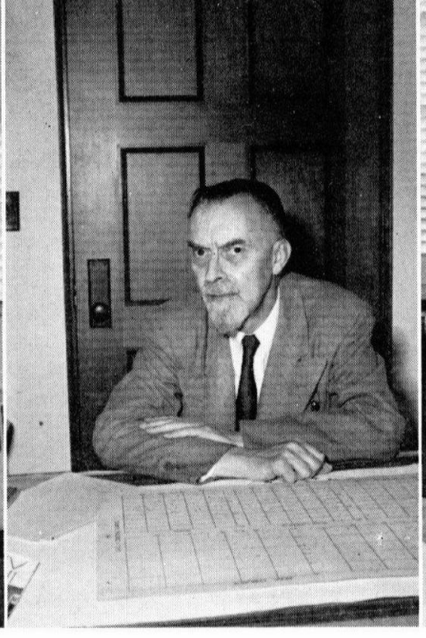
ROBERT LANGMUIR

ELECTRICAL ENGINEERING

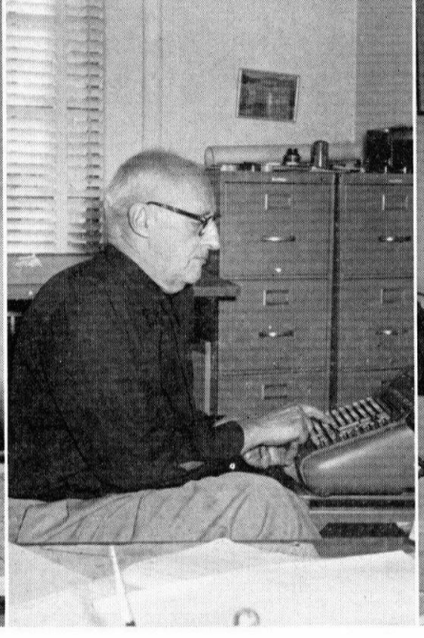
LEFT TO RIGHT: Lester Field, Charles Papas, Richard MacNeal, Royal Sorensen, Hardy Martel, Francis Maxstadt, Eric Hallén, Robert Langmuir, Gilbert McCann, Charles Wilts, William Pickering, Michael Basin.



CALEB McCORMICK



ROMEO MARTEL

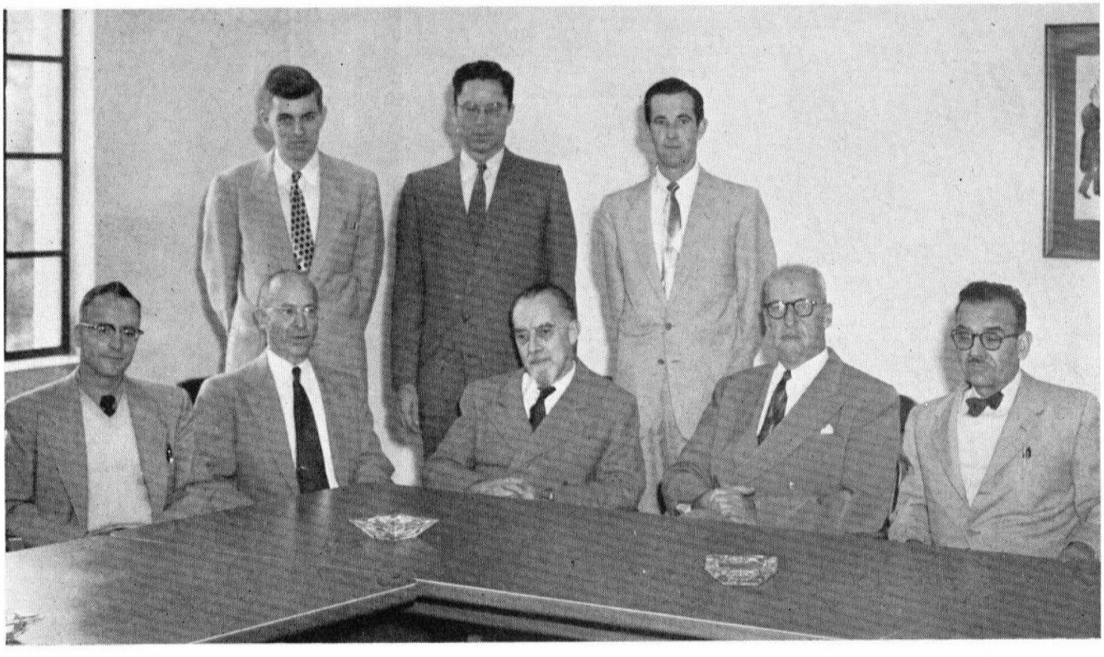


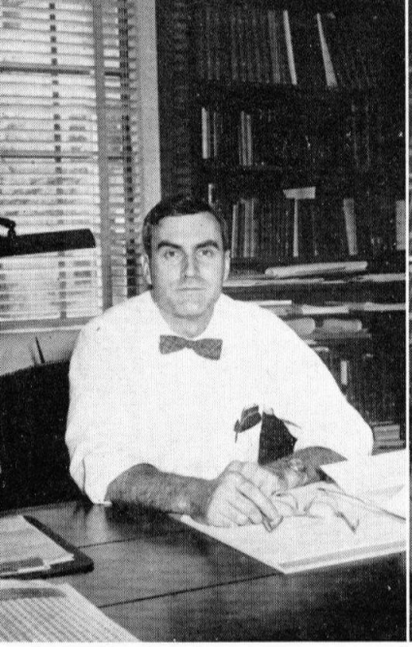
WILLIAM MICHAEL

GEORGE HOUSNER

CIVIL ENGINEERING

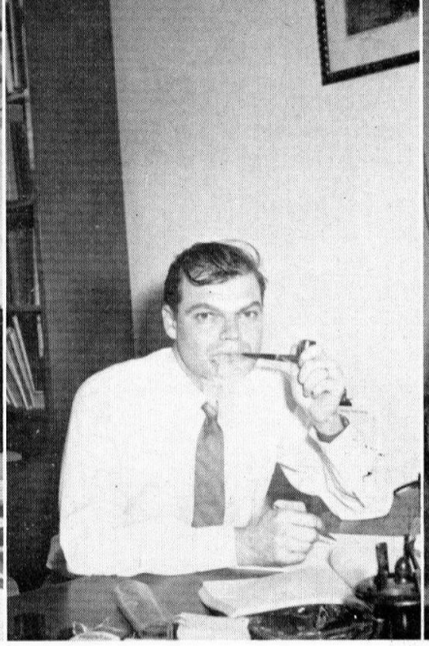
SEATED, left to right: Jack McKee, Frederick Converse, Romeo Martel, William Michael, Vito Vanoni. STANDING: Norman Brooks, George Housner, Caleb McCormick.



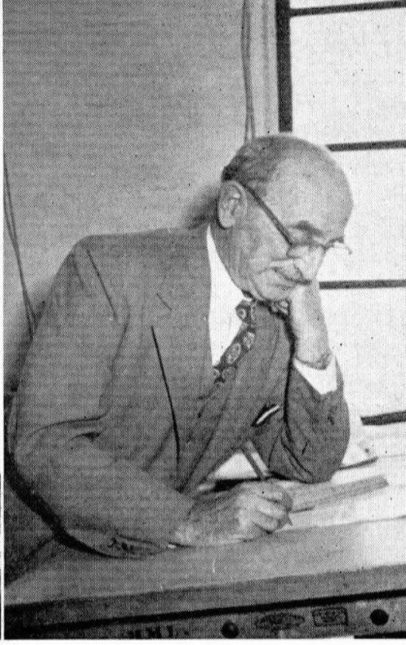


PETER KYROPOULOS

DONALD CLARK



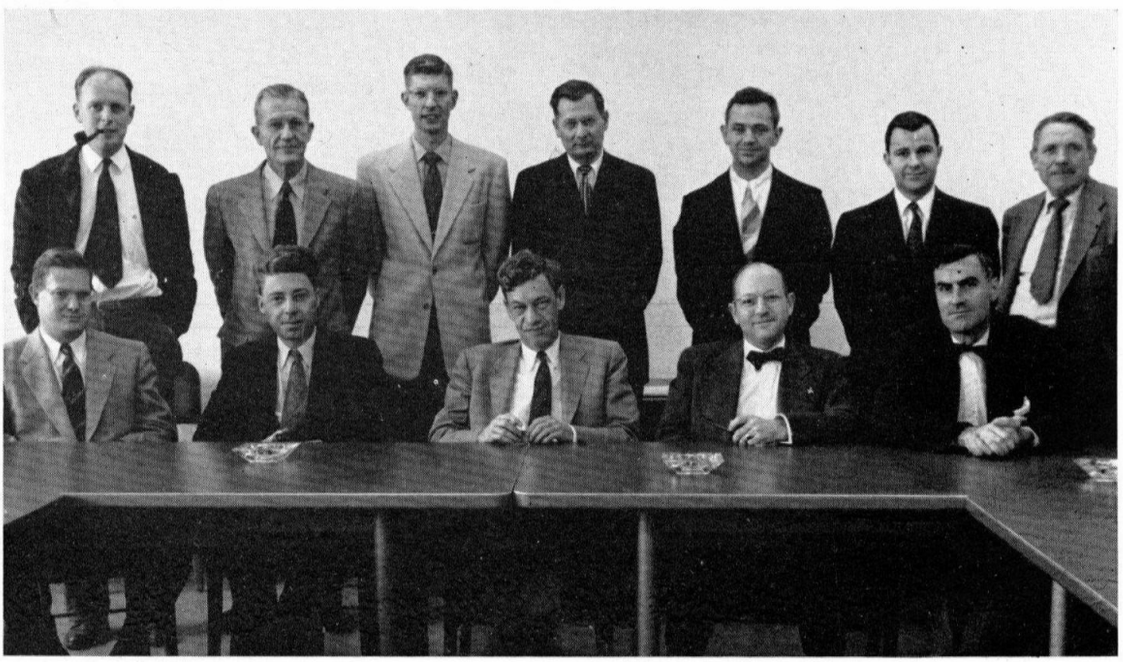
ROLF SABERSKY



ALADAR HOLLANDER

MECHANICAL ENGINEERING

SEATED, left to right: Donald Hudson, Pol Duwez, Duncan Rannie, Donald Clark, Peter Kyropoulos. STANDING: David Wood, Howell Tyson, Thad Vreeland, Francis Buffington, Frank Marble, David Welch, Robert Knapp.

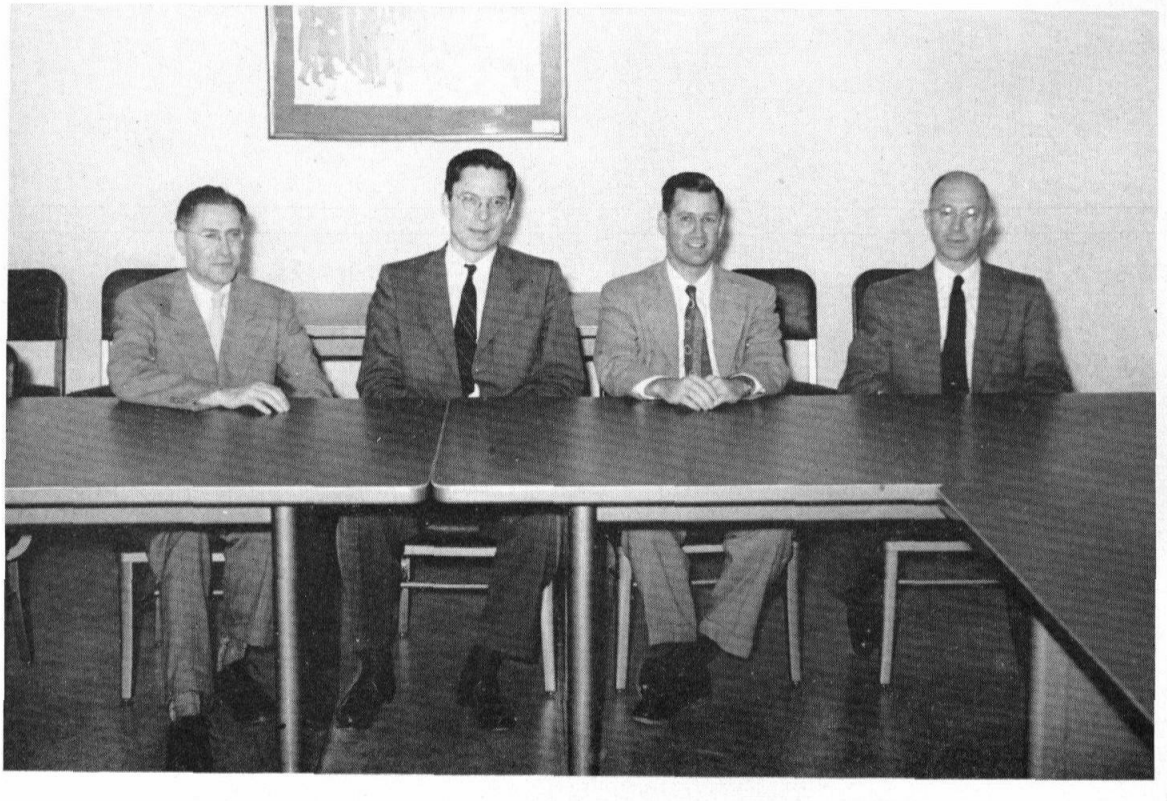


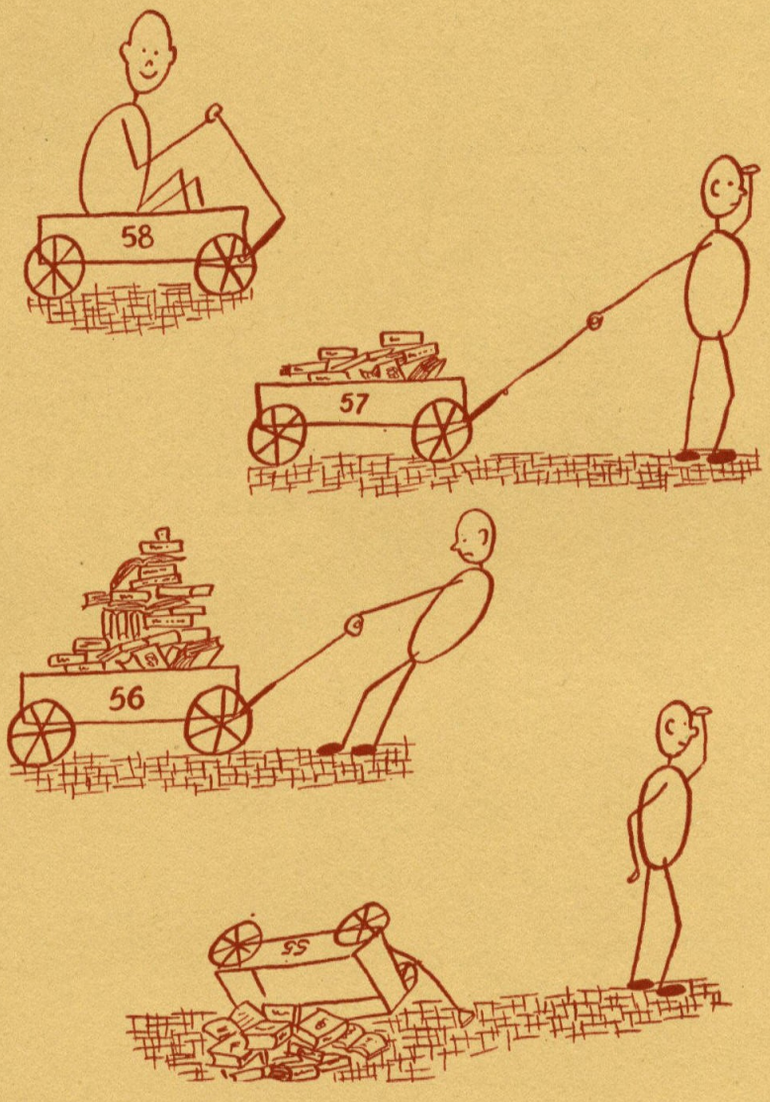
GRAPHICS

LEFT TO RIGHT: Nathaniel Wilcox, Howell Tyson, David Welsh.

APPLIED MECHANICS

LEFT TO RIGHT: *Harold Wayland, George Housner, Harold Lurie, Frederick Converse.*



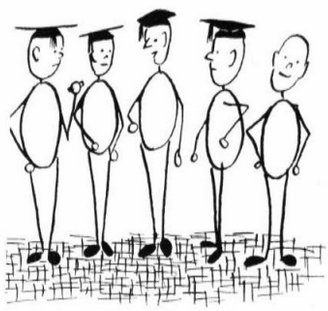


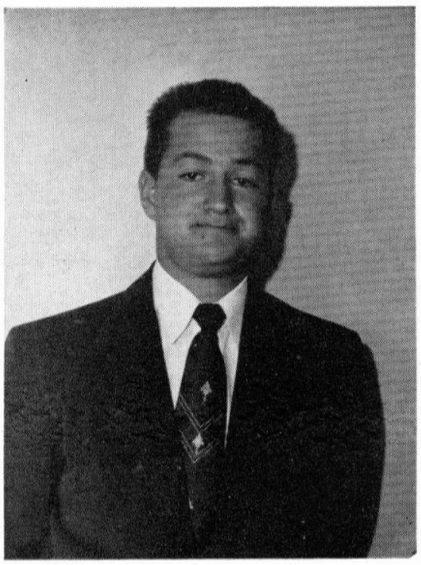
Classes

SENIOR

VAN WALKLEY
Vice President

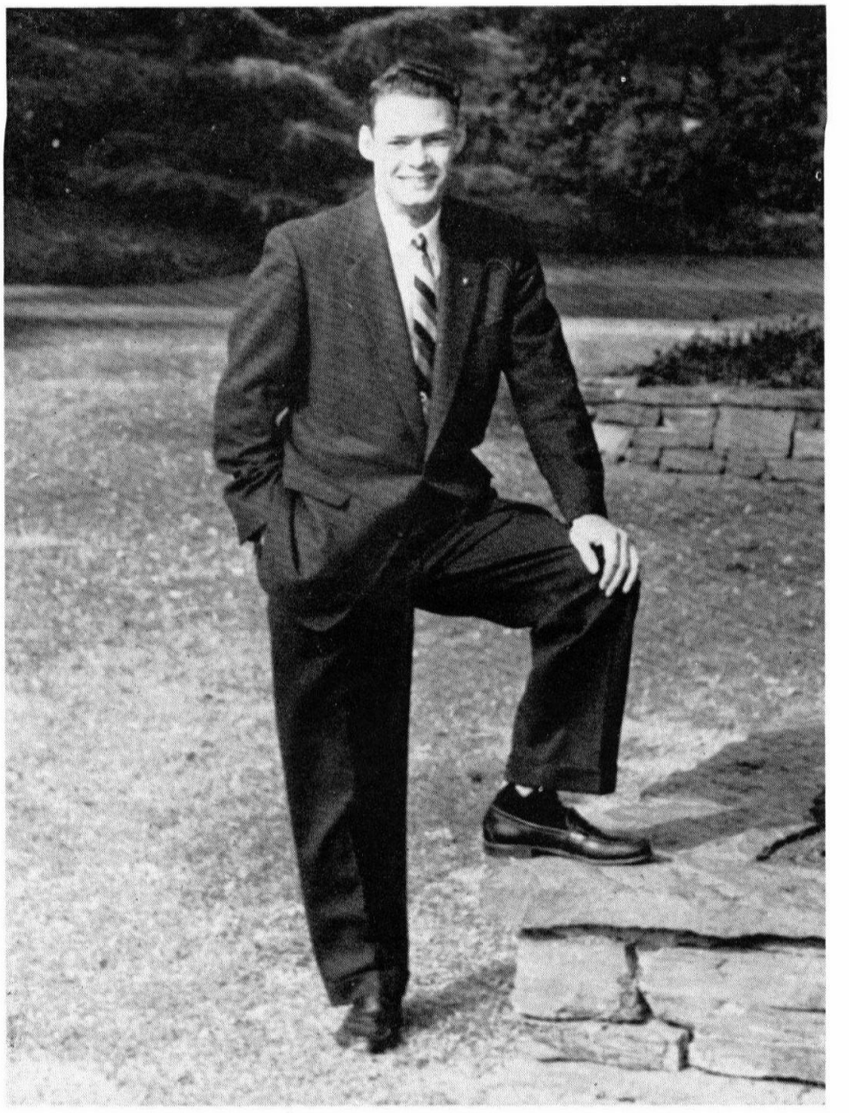
GEORGE MADSEN
Secretary-Treasurer



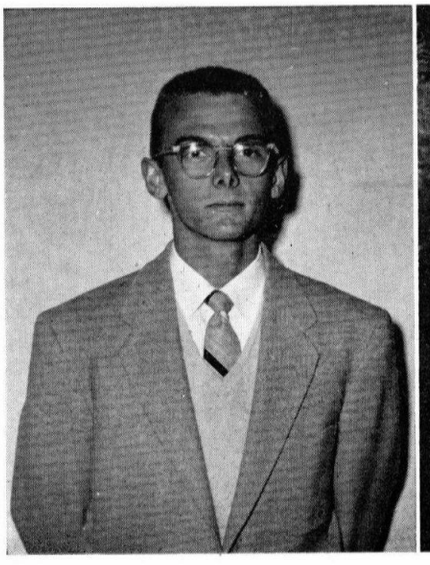


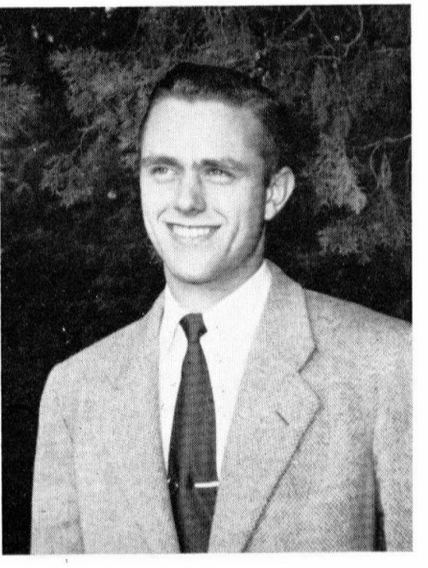
SAM SIMS
Athletic Manager

CLASS



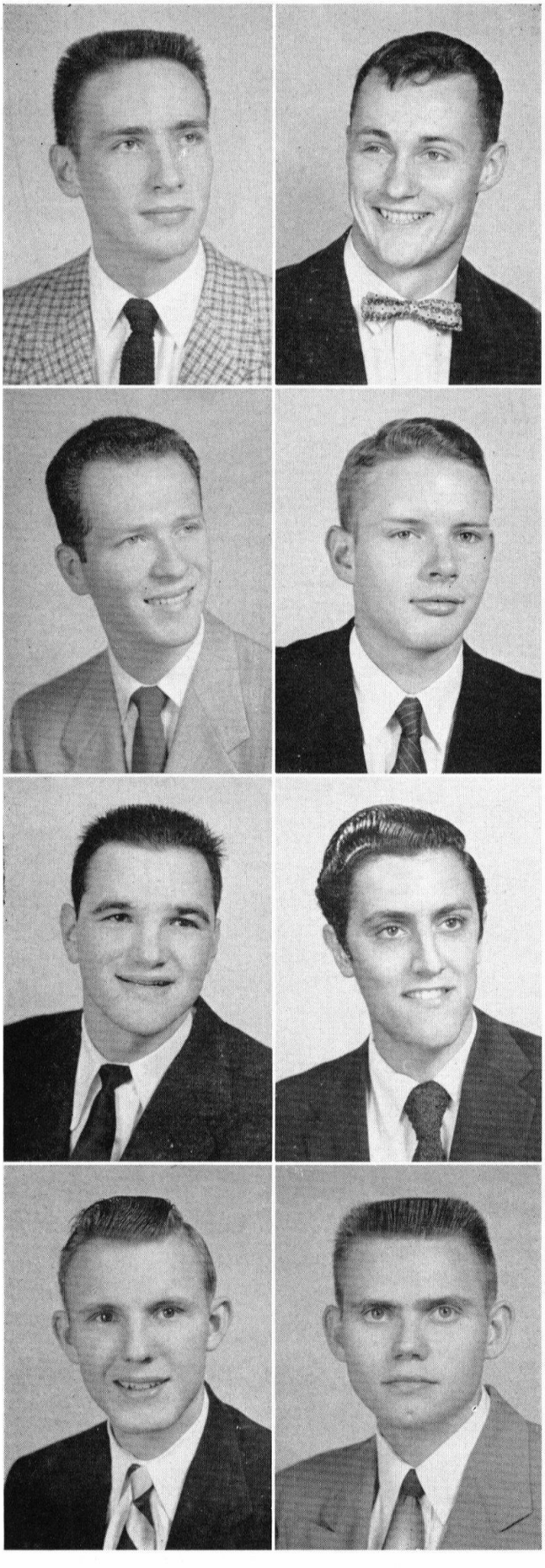
ROD SUPPLE
President





CHUCK BROKAW
Board of Control

AL HELGESSON
Board of Control



JAMES L. ADAMS, ME, Ricketts, TBII, Honor Key

If Jim Adams had snaked continuously for four years he couldn't have gotten better grades or played the piano any more skillfully. Seeing this, he decided to spread himself out a little, and all he did was serve two years on the ASCIT Board, first as publicity manager and then as president; play interhouse and jayvee basketball; supplement his piano with accordion and harmonica; serve on the BOC, and in the SAE — and who knows what else? AFROTC has first claim on him, and then it is time for Long Jim to make the splash in the outside world that he made at Tech, and no small splash is that.

JOHN E. AMES, Ae, ME, Blacker, T²

Sail boating has lured John to the ocean for many a gay week end. It must have all started 'way back in Niles, Michigan, with the summers on the big lake. In athletics, John has been a two-year cross-country man along with Interhouse sports. with a dearee in Aeronautics and Mechanical Engineering, John will be out looking for a job which can provide biaaer and better sailboats (even a yacht, maybe).

JOHN P. ANDELIN, JR., Ph., Throop, TBII, Honor Key

Originally from the windy city of Chicago, John came to L.A. seven years ago. A graduate of Fairfax High he kept active during his years at Tech as president of Throop Club, secretary of Tau Beta Pi, and as Beaver and Instituter. Golfing, swimming, tennis, dancing or model railroading filled in any other available time. After graduation his plans include grad school and eventually teaching.

JOHN S. BAILEY, Ph., Ricketts

From Southern New Orleans, John set this place on fire during his tenure. Now a Pre-Med (formerly a mathematician) John figures doctoring is his forte. Cards, skiing and mountain climbing occupy most of his spare time. John will be with us again next year to continue his studies in Biology.

MERVYN L. BARMAN, Ph., Ricketts

Merv liked physics when he came to Caltech and he still likes physics. Moreover, he planned on grad school when he came here and he still plans on grad school. His career at Hollywood High shrouded in mystery, he showed fundamental stability of character in successfully fighting off the influences of the activities of snakes and the lounge rats for four years (although he did succumb to high fidelity).

ALFRED A. BARRIOS, ACh, Blacker

All the way across the country—from the Bronx, New York—comes Al, an old reliable on Blacker Interhouse teams. Al has always liked ping-pong, and with the renovation of the game room this year he organized Tech's first ping-pong tournament. Work is next on the agenda for this Chemical Engineer.

GILBERT L. BEEBOWER, ACh, Rickets, T¹

The world of concert music lost a great artist when Gilbower went into science. Nevertheless, one still might hear him at the Dabney Hall grand piano late some night before a big test. A stalwart of the varsity tennis team, and one of the best laundry and dry cleaning men Ricketts ever had, Gil is still planning to be a chemical engineer, unless his term in the Air Force converts him to the military life (which we doubt) or unless someone talks him into concert piano.

WILLIAM A. BERG, JR., Ph, Fleming

Originally from North Las Vegas, Nevada, Bill Berg went to Franklin High School in Portland, Oregon, and came here to join the physics option. Chief activities are interhouse sports, reading, music, managing varsity basketball, and cynicism. Air Force and work are in his plans after graduation.

FRANCESCO G. BEUF, ME, Blacker
Chek has pursued knowledge at Tech on the week days and women at Scripps on the week ends. But for *this Chemist turned ME time has not* been wasted. Evidence: Blacker co-social chairman, Big T Classes Editor, Instituter President, Drama Club Secretary, and Varsity Soccer. For a Wyomingite who is anything but a cowboy, a job after graduation looks mighty attractive, podner.

E. MICHAEL BOUGHTON, JR., Bi, Fleming, Honor Key
Already in business as a member of Techmen, Inc., Mike has set July 24 as *his marriage day with plans for* medical school after service with the Air Force. At Tech he has won an honor key, been house social chairman, Drama Club president, a member of the Beavers, and a Fleming participator in interhouse sports.

CARL BOWIN, Ge, Throop
Carl is the only geologist this year that aspires to a Ph.D. He has been active in Throop Club, serving as *Co-Social Chairman for the past* year, and on their interhouse teams. Carl finds time to spend at his other interests of women, photography, and skiing. He hails from Los Angeles and is a graduate of Benjamin Franklin High. After graduate school he plans to do geologic research.

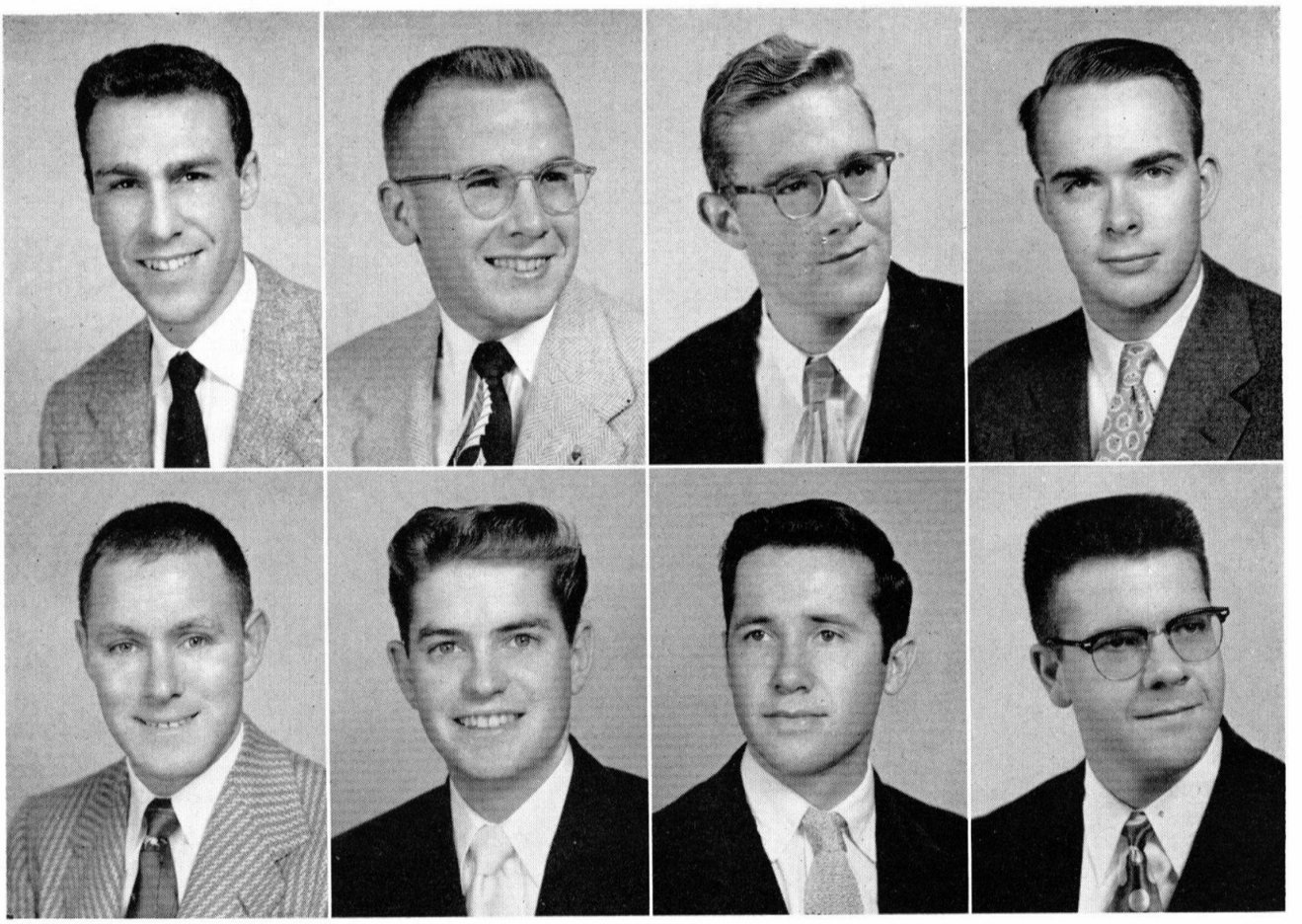
CHARLES J. BROKAW, Bi, Dabney
"Dumb" Charley is the acknowledged genius of the senior class. This dubious honor has not stopped *him from serving on the Board of* Control, listening to music, going hiking, playing bridge and planning on getting married. Charley plans to go to grad school either at Berkeley or at Cambridge after graduation. El Segundo can be proud of this native son!

DELANO A. BROUILLETTE, EE, Throop, TB II
It is remarkable enough that Brouillette should have kept his sanity through his years at Glendale High. But four years at Caltech trying to get people to pronounce his name right, or at least to spell it right, would have brought any lesser mind to disaster. Having also kept his head through interhouse athletics and campus clubs, he now is ready to tackle the biggest challenge to his sanity of all: EE grad school.

JOHN D. BUSH, ME, Fleming, T[8]
Captain of the water polo team, letterman in varsity water polo, swimming, and golf, John Bush has still found time to make his degree, and plans on either Harvard Business School or a job after graduation. Further campus activities are House secretary, member of the student shop, and non-member of the Caltech Dart Club.

CHALON L. CARNAHAN, Ch, Fleming, T
Okie came to Tech from Palo Alto, California, via Highland High School, Albuquerque, New Mexico. When not upholding peace and sanctity as house constable, he has been active as Students' Day guide and exhibitor and member of the Chemical Engineering Club, as well as member of varsity football and various interhouse teams. Other interests are hiking, fishing, ice skating, music, and bull sessions. He plans on graduate work in physical chemistry next year.

WILLIAM H. CHAMBERS, JR., ME, Fleming T[4]
Four-year basketball letterman, Chambers is a native Pasadenan from Visalia Union High School. Being Fleming House secretary has left him time for golf, tennis, bowling, and classical music. The Air Force has him chained after graduation.



ROBERT L. CHAPKISS

The Big T erred in that Bob is in the Class of 1956.

DAVID R. CLARK, Ay, Dabney, T[3]

Kansas City sent Dave Clark to Tech to take care of the athletes. In a little over three years at Tech, Dave earned respect as a conscientious manager of football and basketball teams. Despite the handicap of a quiet, gracious personality, he was promoted to Dabney House head waiter, besides working as house secretary and Y treasurer. After all this, he probably considers the Army a vacation.

RONALD R. COCHRAN, ME.
Blacker, T[4]

As president of the Glee Club, Ron was one of the foremost proponents of the Interhouse Sing. Not limited to music, he became a familiar sight beside the swimming pool as he managed the swimming team and played water polo. He was also seen writing for the Pendulum and the California Tech as well as helping to run the ASME. If he can fight off his draft board Ron will go to work next year.

JOHN W. CONVERSE, ME.
Blacker, T

Rockets, big, small and medium sized, have been John's big interest as long as anybody can remember. Aside from building little ones in his spare time, John has been Foreman of the Student Shop and varsity member and Senior Manager of the Water Polo team. After getting rid of his I-A the hard way, John will be back to his first love—bigger and better rockets.

LAWRENCE S. CRANE, EE,
Off Campus

Lawrence came to Tech from Marshall High in Los Angeles. He is obviously a serious-minded lad as is shown by his interests in applied physics and electronics (his vocation as well as his hobby), sociology, current events and classical music. His plans include grad school or a job in the Los Angeles area.

WILLIAM J. CREIGHTON, ME,
Rickets, TB II

Bill hails from Dorsey High in Los Angeles. While at Tech he has belonged to the ASME and the SAE, has played with the band, has taken part in interhouse sports and was elected to the Tau Betes. His hobbies are swimming, singing and dancing. Marriage and grad school loom near in Bill's future.

DAVID L. CROWTHER, Ph.,
Throop, TB II, T[7]

Smooth-striding Dave Crowther came up from Whittier, California, and Whittier Union High School. Before he was through with us he had run three years of varsity track and four years of varsity cross-country; had been cross-country captain one year; had played a fair share of golf and toyed a fair share with his car; and had galloped through physics option nobly enough to have become a Tau Bete. Next event: grad school at the University of California.

BENJAMIN E. CUMMINGS, Ae,
Fleming

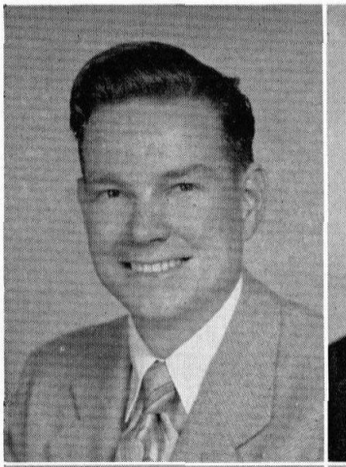
From Fullerton, after attending Fullerton High School, Ben came here to major in Aeronautical Engineering. After a rowdy freshman year he settled down to work on the Board of Control and in IAS, with badminton and model making taking up his spare time when he was not working. He plans on graduate school and the Air Force upon graduation.

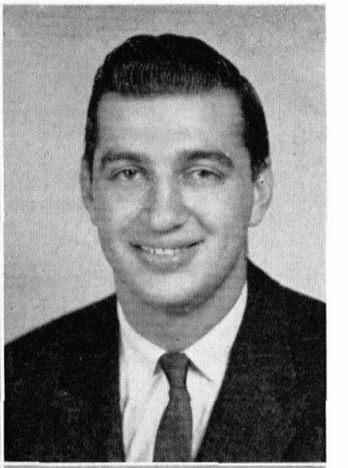
RONALD DANKLEFS, ME,
Throop

Presently a resident of Altadena, Ron shifted his education a few blocks south two years ago as a junior transfer from P.C.C. All set to cash in on the latest boom, he will concentrate on nuclear engineering after graduation.

ERNEST A. DERNBURG, Bi.,
Fleming

Ernie's first step to fame was membership in the great "Alley One." Subsequent endeavors are as student day worker, writer for the California Tech, Pajamarino house chairman, House constable, and president of the Biology Club. He claims activity in interhouse sports, cars, photography, and collecting stamps, women and books. Graduation plans are graduate work at UCLA in neurophysiology.



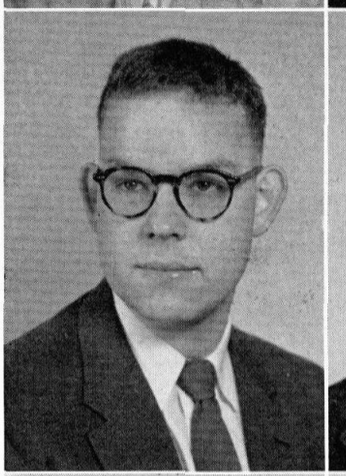


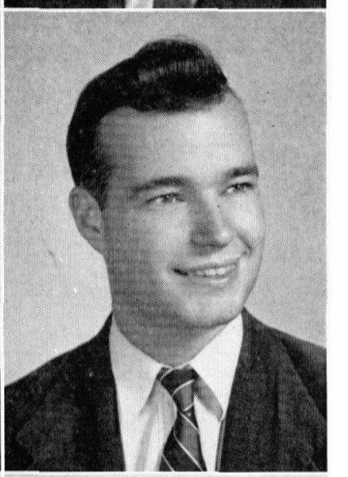
JOHN J. DOMINGO, Ph.,
Off Campus, TBΠ

John's main claim to fame is his home town: he is a proud native of the great little town of Weeping Water, Nebraska. He also is famous for having shown the strength of character to turn down a membership in Tau Beta Pi when it was offered to him in his junior year. It is sad to relate, however, that even the mighty fall; John finally succumbed to the blandishments of the wily Tau Betes in his senior year and joined that evil group. When not studying (rare occasions) John keeps up his interests in electronics, photography and classical music. He plans to go on to some eastern grad school.

JOHN L. DRESSER, EE,
Ricketts

Dresser seemed to be singularly unaffected by the atmosphere around Tech. Coming to us from Reno, Nevada, and Webb School in Claremont, he stuck to his EE without working at it too hard, played around with sports cars and amplifiers and things, played endless hours of bridge in the lounge, and took Brat to all the parties—and *all along you could tell he was* having a good time but you couldn't exactly tell why. John plans to go to grad school to study business ad, and then go out and pile up some millions.



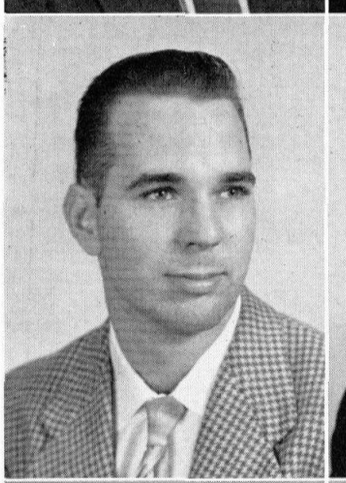


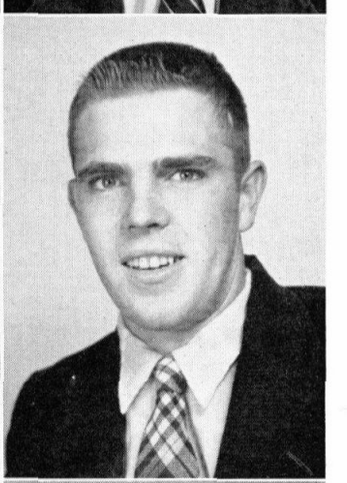
EUGENE H. DRYDEN, EE,
Blacker, TBΠ

The "old man" of the Air Force ROTC, Gene has had the responsibility of leading the Tech unit as Group Commander. His interest in ham radio has led to reorganizing the Radio Club and sparkplugging the MARS program. The military has an attraction for this San Marino man, and the Air Force will provide the opportunity to follow up the ROTC.

LEWIS F. ELLMORE, Ph.,
Dabney

For years to come the underclassmen of Dabney will undoubtedly be *relating legends of this colorful* character. Known to all as Lupe, he seemed to have a philosophy that "All work and no play . . . means just another dull day." Not one for vicarious living, Lupe always found time to do things that most people only think about. An ardent skier and sailor, and a jazz fan (both cool and classic), he plans to attend grad school in electronics.



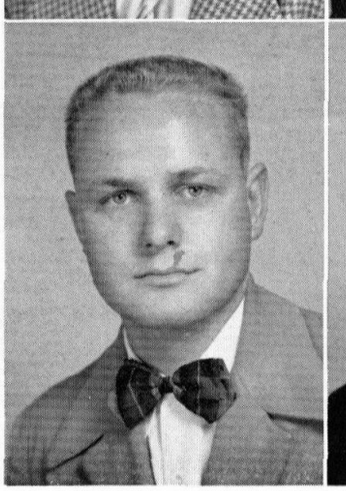


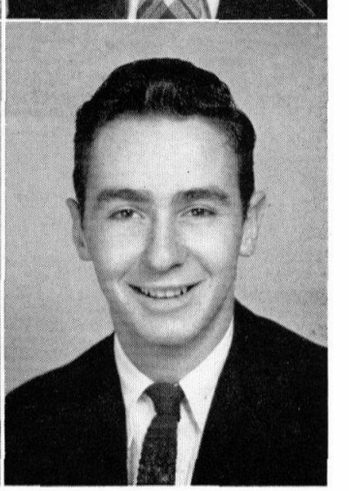
EUGENE ENGELS, Ph.,
Throop

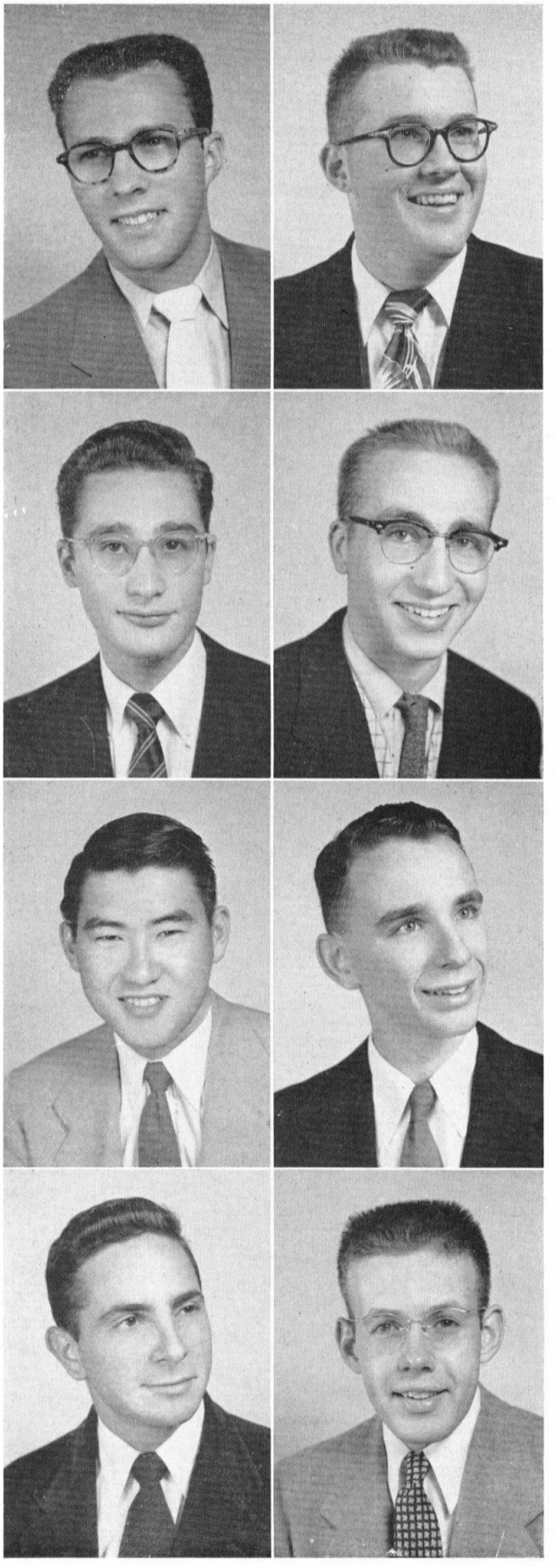
Gene came to Tech from South Gate High in Los Angeles. He spent a good deal of his time here trying to convert his friends to an appreciation of the beauties of the Wagnerian operas. His other activities at Tech have included ΠΚΔ, the band and golf. His plans for the future are first the Air Force and then grad school.

GEORGE EPSTEIN, Ma.,
Blacker

Blacker will never forget their Pirate Ship built for the IH Dance the year George was co-social chairman. As a senior George helped to dispel the image of twitchy mathematicians by serving as Blacker Veep. The House volleyball and basketball teams had George out leading the way. The long hard road to knowledge is pointing to grad school in math after graduation.







PAUL FARLEY, ME,
Fleming, T⁴

Paul Farley has had a lively stay at Tech with activity in the Caltech Christian Fellowship, Student Shop, SAE, Wabste Club, Musicale, and as nonmember of the Caltech Dart Club. Graduating from John Muir High School, he came here to be a four-year letterman in golf and captain of the team. Power plant design appears as the opening step in his postgraduate career.

PHIL FERRELL, Ph.,
Fleming

Noted as house radio man and pistoleer, Phil came to Pasadena from the clean air of Washington, where he graduated from Everett High School. He has stayed here and survived the corrosive atmosphere of smog and ice plant. As if this was not enough, he has served as both president and treasurer of the Radio Club and followed his hobby of Hi-Fi. Air Force Wings are due on graduation.

BERN D. FOLKMAN, ACh.,
Fleming

From bright, sunny Phoenix, Arizona, comes Bern Folkman. A graduate of West Phoenix High School, he has distinguished himself by the running of a Phoenix to Tech taxi service, and membership in ACS and the Chemical Engineering Club. His graduation plans are graduate school in applied chemistry.

HARVEY S. FREY, Ph.,
Ricketts

No matter how hard he tried to appear cynical, Harvey never really convinced any of those who knew him well. Member of the Sailing Club and the Fencing Club, and well versed in the ancient code of heraldry, he became one of the disillusioned little group of Ricketts seniors who left physics option to go into pre-med. His most remarkable achievement was staying in Tech for six whole months while holding down the highly lethal job of Ricketts house treasurer.

HORACE W. FURUMOTO, Ph.,
Fleming

From Honolulu, T.H., comes our barefoot boy with cheek. Horace went to Saint Louis College before coming to Caltech, where he has taken part in interhouse sports and has served as Fleming House treasurer and athletic manager. The ROTC willing, Horace plans to relax upon graduation, having suffered through four years of the physics option, more or less.

GARY S. GAYRON, Ph.,
Off Campus, TB II

From New York hails this physicist and junior birdman, Gary has been a member of Tau Beta Pi while at Tech and has distinguished himself in the ROTC unit.

JAY A. GLASEL, Ch.,
Dabney

From Point Loma High School in San Diego, California, comes this fireball. Jay has distinguished himself in interhouse football and in the Chem option. He plans to go to grad school next year.

ALFRED M. GOLDMAN, JR., Ae.,
Fleming

From Point Loma High School in San Diego Al has come here to engage in a full load of both scholarly and extracurricular activities. Membership in the SAE, IAS, AFROTC, and service as Fleming House vice president, SAE secretary, IAS chairman and vice chairman, AFROTC Group Commanding Officer, and several letters in interhouse sports illustrate his busy life, in which he finds time to include stamp collecting and photography. He plans graduate school and a career in the U.S. Air Force.

JOSEPH E. GRAETCH, ME,
Throop

Joe graduated from Whittier Union High School in Whittier. He has been a four-year member of Throop Club and has belonged to the SAE and the ASME. Joe got married second term this year but he did not let this stop him from attending the election rally. After graduation the Air Force has a place for him in their pilot training program.

RAYMOND G. GRIESER, EE,
Fleming, Honor Key, T^3

Fleming House president and athletic manager, Big T sports editor, varsity football hero, member of AIEE, Beavers and Student-Faculty Relations Committee, Ray Grieser has won the love and respect of his house as the ideal Fleming man. Here from Buffalo, New York, Ray plans to work in industry on graduation.

DANIEL J. GRIFFEN, JR., EE,
Throop

One of the old married vets, Dan makes his home in Azusa. Before he went in the service he graduated from Sweetwater Union High in National City, California. He has amused himself in school by belonging to Throop Club and the Student Shop; and out of school by reading, worrying about politics and trying to make his TV set work. He now plans to start work in some good job.

STANLEY L. GROTCH, ACh.,
Blacker, TBΠ

Notorious for his Hi-Fi set and famous for his interest in classical music and art, Stan radiated culture while staying loyal to his first love, chemistry. Between symphonies he played interhouse sports, was TBΠ veep, president of the student affiliate of the American Chemical Society, and California Tech writer. Still feeling uneducated he plans to go to grad school either here or at MIT.

WALTER HAENGGI, Ge.,
Ricketts, T

Professional extrovert and man-about-town Walt Haenggi's varied career took up at Caltech only roughly where it left off at Inglewood High. He put in time with the Big T and the California Tech but the position which he took most to heart was his year as house resident lecturer. Bridge player, poker player, horseplayer, and even geologist, Walt claims that he will be married in the near future (and will bet on it) but most of us still think of him as the perfect bachelor.

WILLIAM R. HAGEMEIER, Ph.,
Off Campus

A graduate of Franklin High in '46 Bill spent a hitch in the army, then work and LACC from which he transferred to Tech in '53 as a junior. Being somewhat of an opportunist he naturally enjoys anything that happens to come along. He seriously plans to continue his studies at grad school after graduation.

WILLIAM B. HAIGLER, ME.,
Fleming

Bill will be remembered for awhile here for his guitar play ng and ballad singing and by many conversationalists for his caustic wit. Manager of varsity track and soccer teams, he has also been active in the SAE. After graduation he plans employment in industry.

LEIGHTON D. HANON, JR., ME,
Off Campus

Leighton arrived at Tech after graduation from Manual Arts High in Los Angeles. Being married kept him pretty busy but he found time to join the ASME and was a member of Throop Club for awhile. Any leisure time he can get is taken up with cars, bowling, skating and dancing. He plans to start work upon graduation if he can avoid the Army.

PAUL L. HARRISON, EE,
Blacker

Known far and wide as the Hi-Fi fiend of Blacker, Paul could be counted on to dispense information or sell electronic gadgets at the drop of a hat. Family life kept this San Bernardino EE jumping in his spare time since three do not live as cheaply as one these days. Never without a new idea for a business venture, Paul can't wait until he gets a chance to try them out. Next year he will apply his talents to the Air Force.

ALAN L. HELGESSON, EE,
Blacker, TBΠ, Honor Key, T²

Leadership has become synonymous with Helgesson. Showing an interest in the YMCA, he worked in that organization and became its president in his junior year. As a Blacker man he played five interhouse sports and as Blacker president he guided all phases of House activity with such skill that his administration was one of the most successful in recent Blacker history. Some lucky grad school is going to get this fellow.

JOHN L. HONSAKER, Ph.,
Off Campus, TBΠ

The Caltech band, the Musicale, AFROTC, Tau Beta Pi, and the Physics Club have all offered diversions from the routine for John. He is a resident of Pasadena and a graduate of John Muir High. Interests in music, tennis, golf, and swimming helped fill his free hours. After graduation he plans to go to grad school or into the Air Force.

GERALD E. HOOPER, EE,
Throop, TBΠ

Gerry came to Tech from Alhambra High in Alhambra, California. While here he has kept himself busy with Throop Club, Tau Beta Pi, the AIEE, the IRE and the AFROTC. His hobbies are automobiles and photography. The first thing in Gerry's future is a stint with the Air Force and then a job.

CONRAD HOUSELEY, Ge.,
Fleming

Long Beach Polytechnic's gift to Tech, Conrad Houseley is most noted for making noise with his damn geology pick, avowedly in the interest of science. Interhouse sports, photography, and paleontology are his varied activities. His graduation plans are centered on employment.

RICHARD M. JALI, Ph.,
Ricketts

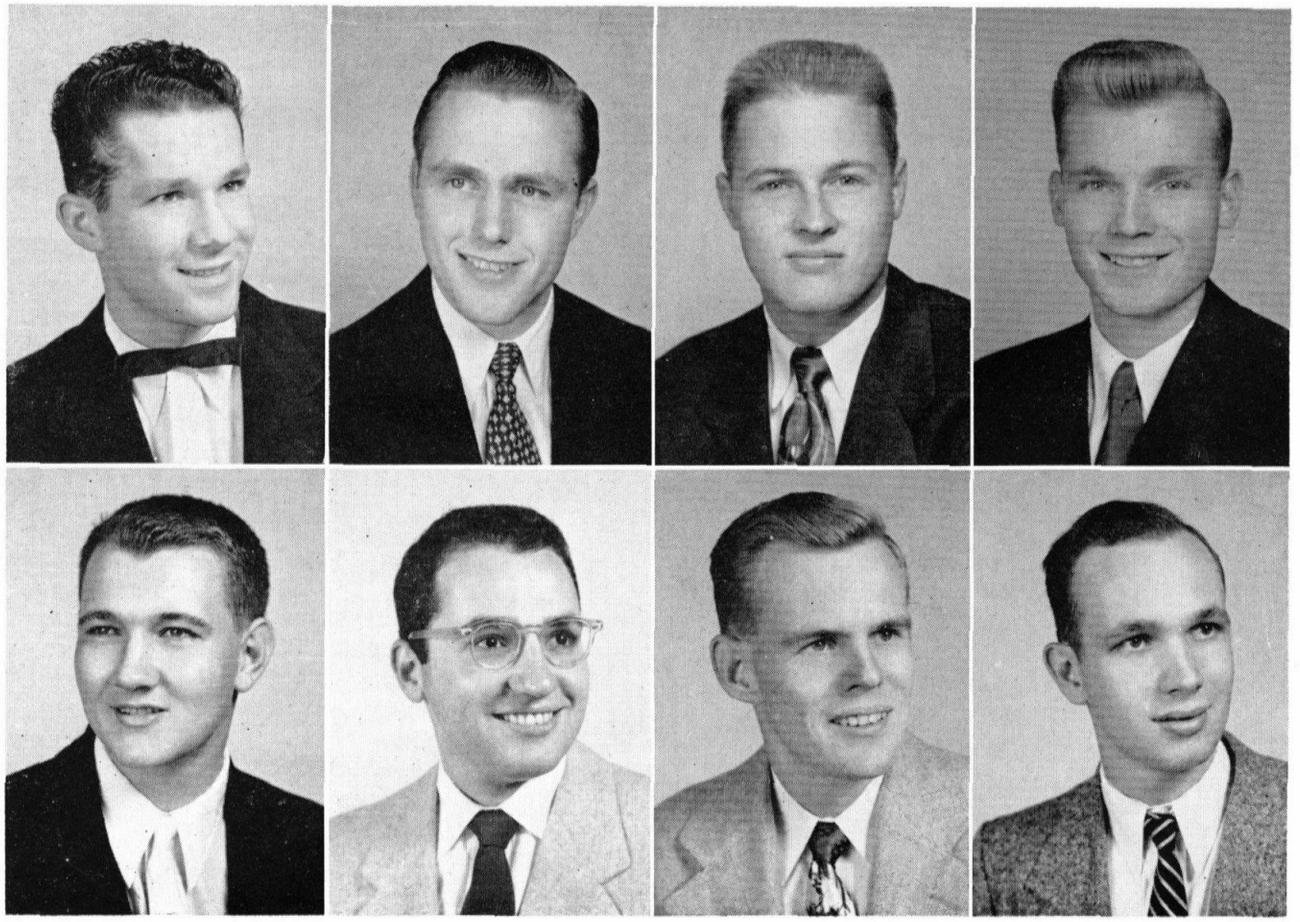
Jali claims to have the world's record for fastest time from Pasadena to Portland (in the Great Rain Forest Country) after finals, and if you ever ride with him, you'll be inclined to believe it. Before graduating Dick devoted most of his time to sailing, skiing, photography, interhouse sports, SAE, and IAS, along with fender-bending. After graduation he plans to spend his time making money, evading the clutches of Uncle Sam as long as he possibly can.

CARL W. JOHNSON, EE,
Throop, TBΠ

Carl is a local boy, coming to Tech from Eagle Rock High School. Here at Tech he has played baseball, been a member of the IRE and Throop Club, and has been elected to Tau Bete. However, all these things had to take a back seat to his major job of raising his family. His plans now are for a job.

M. ALAN JONCICH, Ph.,
Ricketts

Al Joncich may not fit our stereotype of the San Pedro High School graduate but he stubbornly maintains that that's where he comes from. While sticking with physics option for four whole years, Al has found time to dabble in debate, newspaper work, tennis, photography, and what have you. President of the Newman Club this year, he is thinking of entering the Jesuits after graduation.

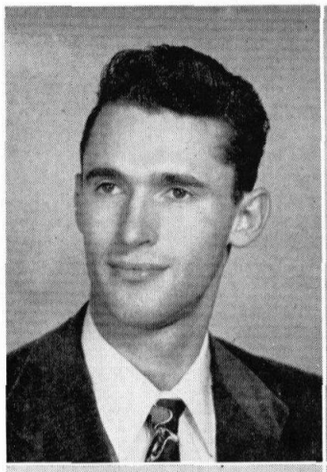


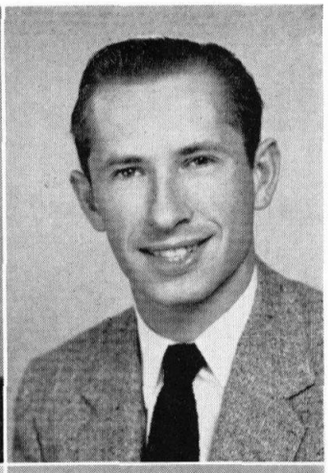
LOUIS U. KILCHENMAN, EE,
Throop

Louie, a native North Dakotan ("I'm just one of the folks from Oaks"), graduated from Franklin High in Los Angeles. Here at Tech he was an active member of Throop Club and the Beavers and sang with the Glee Club for three years. Louie was secretary-treasurer of the junior class and while a senior served as co-social chairman of Throop Club. He has competed in interhouse football, track and cross-country. Add onto all this the fact that Louie was president of the Arroyo Seco branch of the Los Angeles Ephebian Society and you can see why he spent most of his senior year worrying about flunking out. He has his eye on Stanford or some other grad school.

HAROLD R. KRAMER, EE,
Fleming

Bud Kramer is from National City, California, where he graduated from Sweetwater High School. His college career was interrupted by the Navy, but he has been active as varsity basketball manager (1952-53), Fleming House cross-country runner, and in photography, skiing, and piano playing. He tentatively plans graduate school in business on graduation.



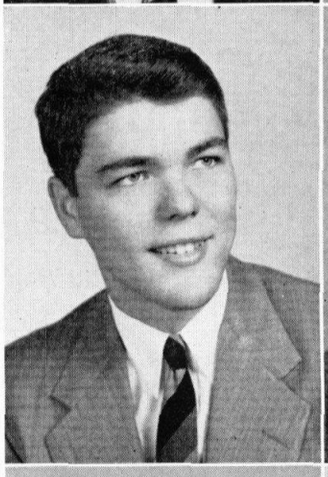


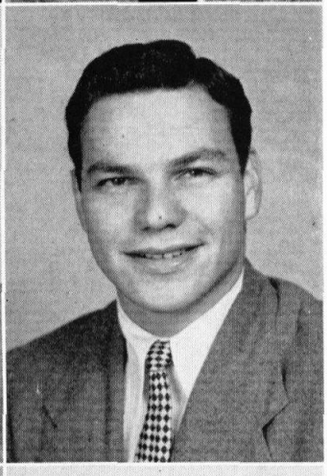
ROGER E. LAGERQUIST, ME,
Ricketts

Graduate of Eagle Rock High School in the hill country to the west of Pasadena, Roger apparently found his 1933 Plymouth more of a challenge to his ingenuity than all the rest of mechanical engineering put together. This did not prevent him from being active in SAE and ASME, though. Sailing and roller skating commanded the elusive spare time. If all goes well Rog will be flying for the United States Air Force before very long.

WILLIAM F. LAPSON, ME,
Ricketts

A Los Angeles boy. Bill has served in the band while at Tech and has been a member of the student shop. After graduation this ME is still undecided as to which course to follow.



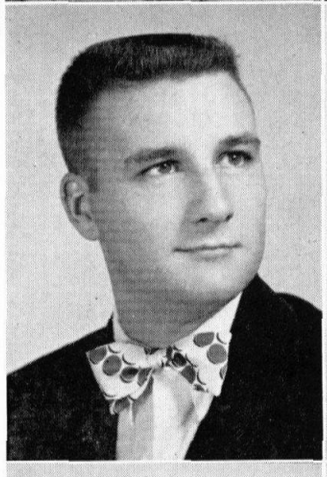


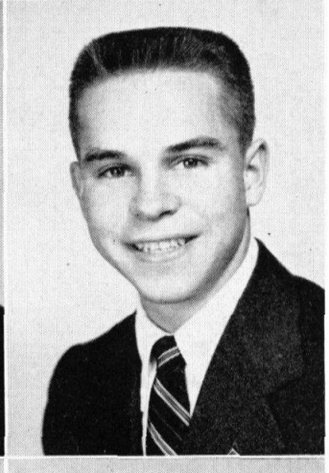
HUGH G. LENEY, EE,
Dabney, TB II

Another of those Sacramento boys, Hugh has been a member of Tau Beta Pi, the student shop, and the AIEE-IRE. He has served as Tau Bete treasurer, co-chairman of AIEE-IRE and as a member of the student shop committee. This mechanical engineer plans on a year of grad school if the ROTC will give him that chance.

JAMES P. LEWIS, ME,
Ricketts, Honor Key

Big things come in small packages? Well, anyway, Jim Lewis was usually a pretty big thing around campus. His room was decorated with medals won in track at Orange Union High School but he didn't bother with varsity track at Tech. All he did here was manage the business affairs of the California Tech for two years, run Students' Day his senior year, and be an active member of the Beavers, ASME, ASE, and some other things. He heard somewhere that there was a lot of money in petroleum engineering so he's going into petroleum engineering.



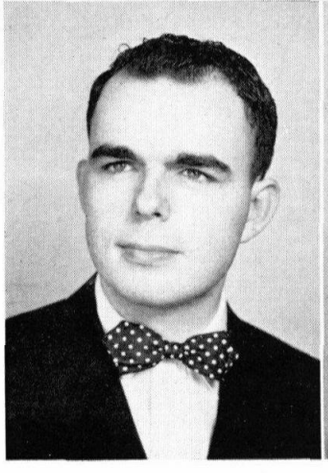


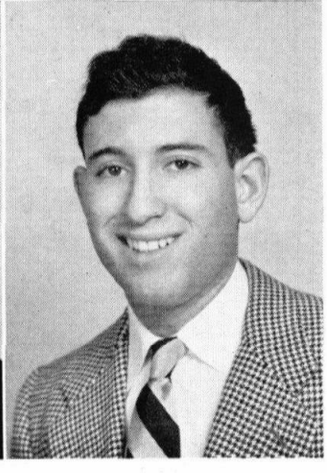
ALBERT J. LIEBER, Ph.,
Throop

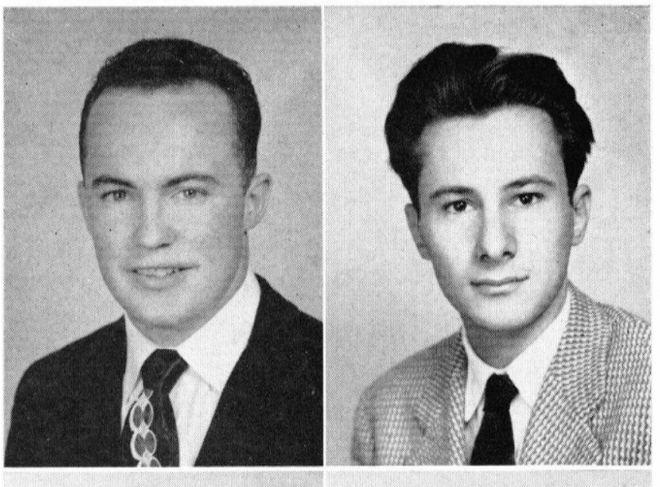
Al hails from Phoenix, Arizona where no doubt he acquired his interest for snaking as well as fishing and stamp collecting. He graduated from North Phoenix High School before coming to Tech to study the finer phases of physics. After graduation he plans to go to Stanford.

GERALD LIPPEY, Ae.,
Throop, TB II

A native Angeleno, Gerald came to Tech from Marshall High in L.A. While here he joined the IAS and the SAE and was elected to the Tau Betes. He plans to continue studying in graduate school and to keep on devoting time to his hobby, herpotology.







GEORGE E. MADSEN, CE,
Dabney, TBΠ, Honor Key, T²

George came to Tech from Claremont, California. There are very few campus activities that George hasn't participated in while at Tech. He has been a standout on the baseball and basketball teams, a Tau Bete and has held numerous house, club and class offices. His hobbies are skiing, swimming and most other sports. After graduation George is undecided whether to work as a civil engineer or to go to grad school.

PIERRE MAHIEUX, Ph.,
Off Campus

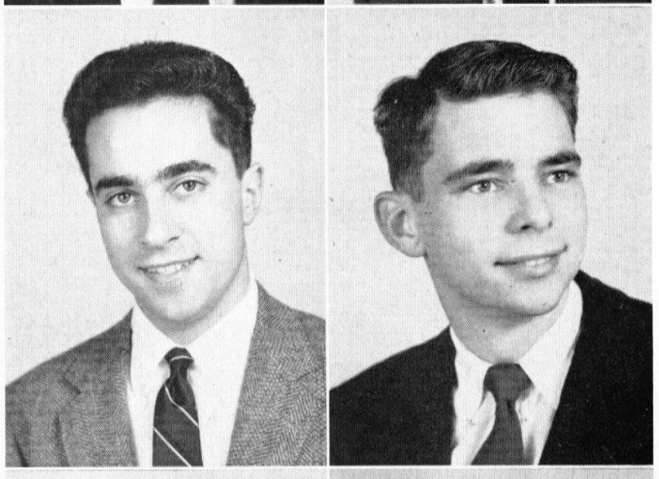
Not provincial in any way, Pierre comes from Baja, California, and will travel to Africa and India for a hunting trip after graduation. Pierre played frosh soccer and was a member of the Sailing Club at Caltech. He will attend grad school in the United States or Europe next year.

STANLEY L. MANATT, Ch.,
Throop, TBΠ, T

Stan is one of Glendale High's many delegates to Tech. While here he has been a member of Throop Club, vice president of the ACS, a member of the Chem Engineering Club and has played with the band for two years. He has lettered in varsity cross-country and has fought for Throop in interhouse basketball, baseball, tennis, track, cross-country and football. Stan's extracurricular interests are fishing, swimming, night league basketball and women (wonder if the last two have any connection). He wants to stay here at Tech for grad school and study real pure type chemistry.

RICHARD A. MANLEY, ME,
Fleming, T³

From La Grange, Illinois, Manley, through arduous studies, accomplished his BS in mechanical engineering. Campus activities to his credit include three years of varsity football, service as house treasurer, SAE chairmanship, Sailing Club vice presidency, and nonmembership in the Caltech Dart Club. Considering life after graduation, he optimistically plans work in the automotive industry before serving in the Air Force.

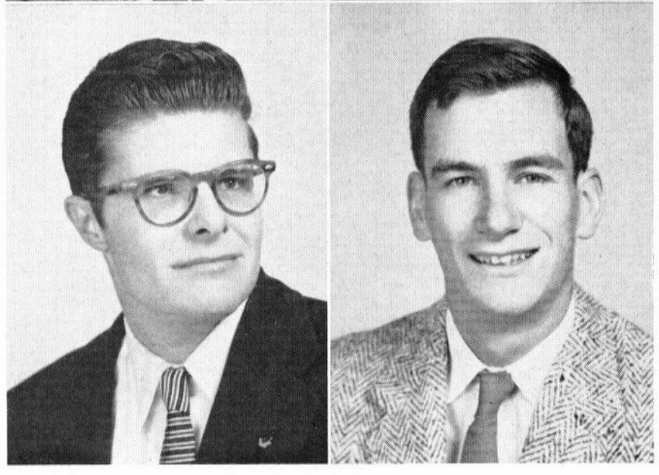


VINCENT A. MARINKOVICH, Ph.,
Ricketts, Honor Key

Resisting the evil influences at San Pedro, Marinkovich has developed into a real culture snake, listing chamber music, ballet, opera, and literature among his hobbies. He will be remembered around here as ASCIT vice president, house officer, blood and charities drive chairman, and (most of all) as proprietor of those evil ice-cream machines which he has planted around the houses. Vince is now a biologist, and will be at Harvard med school this fall.

FREDERICK MARTIN, Ph.,
Dabney

A physicist from Huntington Park High School, Fred is an able mountaineer. He is a member of the Caltech Alpine Club and spends most of his spare time skiing and climbing. After graduation Fred plans to go to work, travel, climb, ski, and possibly go to grad school if the draft doesn't catch up with him first.

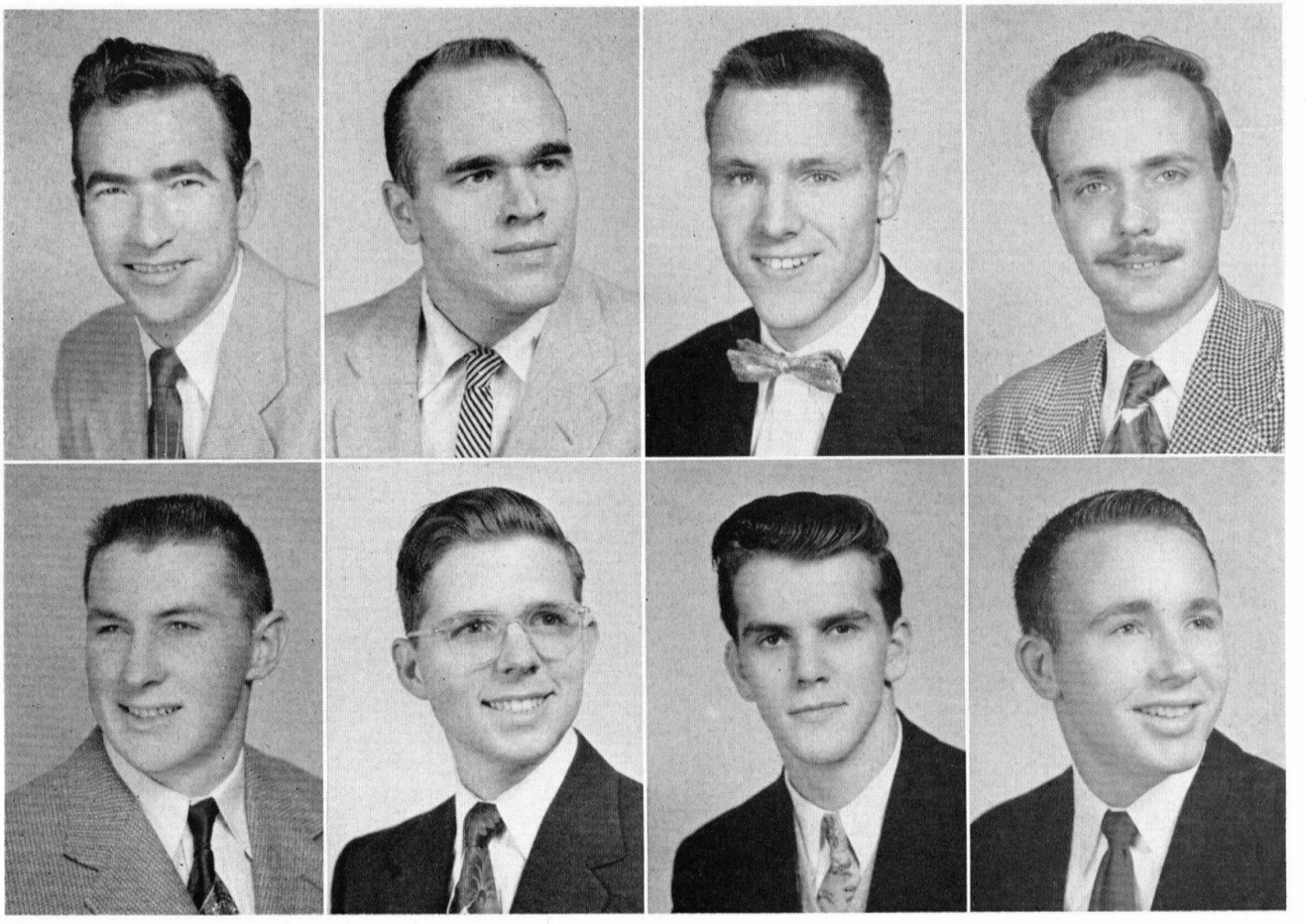


FRANK R. MASTROLY, JR., ME,
Blacker

Frank wised up early and left his native New York City for beautiful Southern California—North Hollywood, in particular. An interest in "things mechanical" led Frank to ME and membership in the SAE and ASME, along with his hobby of model railroading. A year of graduate work at Tech and then, who knows?

THEODORE K. MATTHES, Ma.,
Ricketts, T

Matthes is not only a graduating mathematician, which is rare enough, but is a mathematician with a raft of outside interests besides. Renowned for his skiing and mountain climbing skills, successful in varsity soccer, interested in music and current events, Ted also did a capable job as president of the Caltech Y his senior year. Presumably he will take off for the Wall Street stock exchange after graduating, in order to test a few of his ideas on statistical analysis.



JAMES N. McCLOUD, ME, Throop

Jim is a native of the deep south. He came originally from Chattanooga, Tennessee, and graduated from high school in Pisgah, Alabama. He then went to Florence State Teachers College where he was president of his class and president of the Future Teachers of America. Here at Tech he belonged to the ASME and played basketball. He is interested in vocal music and any sort of gadget. Jim's next stop is grad school.

GEORGE H. McDONALD, JR., CE, Fleming, TBΠ, Honor Key, T5

George has accomplished a tremendous amount in four years at Tech. He came here from Rock Island, Illinois. Tau Beta Pi, he has played four years of varsity football, two years of varsity golf, been 1954 Big T business manager, class and house athletic manager, and played interhouse sports, as well as relaxing at contract bridge or music. The Air Force or graduate school will see him on graduation.

CHARLES N. McKINNON, JR., Ae., Off Campus

Son of the sea, McKinnon lives in Corona Del Mar and went to Newport Harbor High. Developing interests typical of shore dwellers in these parts, he numbers swimming and fishing among his hobbies, as well as photography. But now he has deserted his mother ocean and taken to the air; his plans after graduation are graduate school in aeronautical engineering, and even maybe the U.S. Air Force.

ROBERT F. MEADE, Ge., Throop

This pseudo-Canadian hails from Belmont High in Los Angeles. He has distinguished himself as the originator of the "good guy" philosophy of life. (He's a good guy—he buys free beer.) A member of Throop Club and onetime undergraduate editor of the Fumarole, Bob hopes to attend graduate school, at which time he also intends to shave off his mustache, and then go to work.

WALTER R. MENETREY, Ph., Fleming, TBΠ, T3

Hollywood High School preceded Walt's work at Tech, where he has won honors as a member of Tau Beta Pi and as co-captain of the varsity football team. Versatility is his characteristic, expressed in additional activities of hiking, photography, and hunting. Gradute work in physics awaits his BS degree.

JOHN J. MERRILL, Ph., Dabney, TBΠ, Honor Key

John is another one of those men who has done everything at Tech. He has participated in interhouse sports, is a member of the Beavers and has held numerous ASCIT offices. All of this would be enough, but he snared a Tau Bete key while suffering through Physics. The ROTC program will probably send him to the Air Force soon after graduation.

F. CURTIS MICHEL, Ph., Blacker

A hundred years ago people found gold near Sacramento. Today they found Curt Michel, "boy physicist par excellence." This member of the Hell Alley Alumni Association is noted around campus for his artistic talents which have led him to be cartoonist for the Big T and California Tech. Physics may be great, but the Air Force has first priority.

RALPH F. MILES, Ph., Blacker, TBΠ, T

A tennis player from Santa Barbara, Ralph has been able to use all of the spare time that the Physics option provides. Ralph has left his mark on Tech with his work as ASCIT second rep., secretary and then president of the Beavers, varsity tennis, and Board of Control member. Ralph looks forward to the Air Force as "a two year interlude" before grad school.

MARCO R. NEGRETE, Ph., Ricketts

Marco claims Los Angeles for his home town where he graduated from Loyola High. He has an avid interest in music that complements his intellectual interest in physics. After graduation he has plans for further study presumably in physics.

MILES A. NESMAN, Ae., Dabney

This verbose and convincing orator has won many a point in his debating career at Caltech. Member (and president one year) of Pi Kappa Delta, the school band, SAE and IAS, Miles was also an active socialite in Dabney, until he moved off campus anyway. Off and on, he dabbles with photography, and has an admirably broadminded attitude toward music—he likes all kinds. After tendering his debt to the Air Force, Miles will go to work in the aircraft industry.

ALBERT NICHOLS, ME, Blacker

From Sunny El Centro comes the Nichols. He has participated in SAE and ASME while here at Tech. His hobbies are square dancing and Hi-Fi (guess he just doesn't dig that rhythm and blues). An ME, Al will go to work after getting away from Tech.

RICHARD L. NIELSEN, Ge., Throop

Between summers spent in the wilds of the north, this Eagle Rock offspring has managed to spend a little time at geology when not skiing or playing geology football. "Nagoon," as he was known in Alaska, is a member of Throop Club, the Ski Club, has served as secretary-treasurer of the Geology Club, and has spent a season as tackle on Tech's sterling football team. The draft permitting, he plans to go on to graduate school and then to work.

E. VERN NOGLE, EE, Throop

Vern graduated from Downey Union High in Downey, California, but since attending Tech he has been living in Rosemead. While here he was a member of Throop Club for awhile and played novice tennis. He keeps himself busy with church activities, his Hawaiian steel guitar, audio work, photography and tennis. He is also an avid baseball fan. His future will take one of three courses: Stanford grad school, a job or the Army.

THOMAS W. NOONAN, Ph., Off Campus, TB II

Tom hails from Eagle Rock and Eagle Rock High School ,which is in the coed district of Los Angeles. Disillusioned. he came to Caltech to take up education instead of coeducation, and seems to have made something of a go at it. While here he has been secretary and (at another time) president of the Caltech Christian Fellowship. Grad school is next on the program, probably in theoretical physics.

H. HUNTER PAALMAN, ACh., Dabney, TB II

Herr Paalman graduated from Christian Brothers High School in Sacramento, California. Participating in interhouse football, the Chem Engineering Club, the Newman Club, and what have you, he still managed to snare a Tau Bete key. His hobbies are Hi-Fi and frauleins. After he gets his MS here in chem engineering, Hunter plans to go for a Ph.D. at MIT.

STANLEY F. PARKILL, ME, Fleming

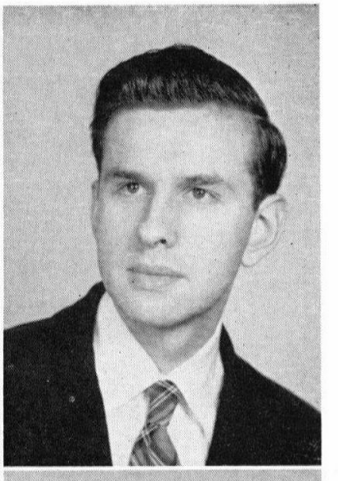
From Los Angeles and Dorsey High School, Stan Parkill came to Fleming where he has been most noted for his studies in energy conservation. Active interests are principally sailing and sleep with time out for SAE work. Maintaining as high a standard of living as possible is his plan for postgraduate life.

RUDOLPH C. PARZL, EE, Throop

Rudy is another of the many proud sons of Hoover High in Glendale to come to Tech. While here he has been a staunch defender of Throop Club in interhouse basketball and football. In the club Rudy was one of the small but dedicated band who hold that pinochle is better than bridge and poker put together. Away from school he is interested in fishing and radios. The future for Rudy is at present just a big question mark.

ROY W. PAUL, JR., Ma, Fleming

Upholder of all things Scottish and also many medieval customs and entertainments, Roy surprises everyone by claiming Glendale, California, as his home town. His list of rare accomplishments begins with music of sundry kinds, bagpipes, recorder, guitar, and the singing of ancient songs, fencing, and taking the mathematics option, not to mention work as Soccer manager and Drama Club treasurer. Graduation plans center on grad school.

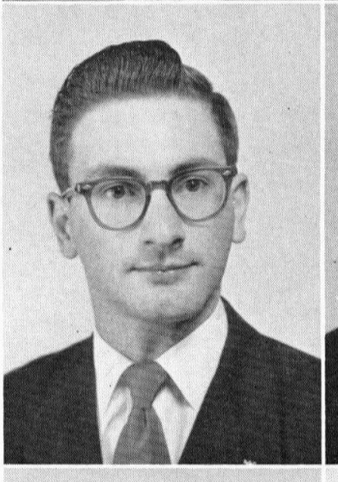


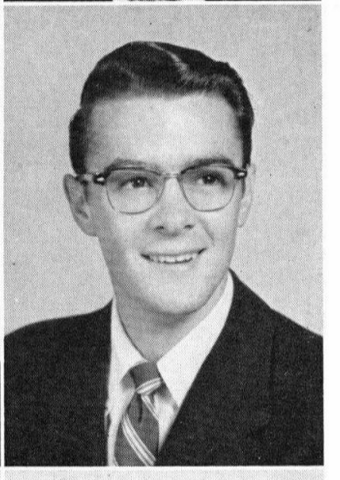
RICHARD B. READ, Ph., Blacker, TB II

Ambitious plans for marriage, Air Force, and then grad school are in the future for this Tau Bete from Washington High in Los Angeles. Dick has been seen leading the ROTC Band when not busy playing the trombone. A Hi-Fi enthusiast at heart, he looks forward to a career in Physics.

DONALD B. ROBERTS, Ph., Ricketts, TB II, Honor Key, T^3

Little Peewee is a big man, and no two ways about it. Handicapped by a secondary education obtained in some unpronouncable part of the Territory of Hawaii, Roberts nevertheless managed to keep his GPA in the upper regions most of the time, to make the varsity fish squad four years running, and to soothe his savage roommates with sweet music off his classic vocal cords. Oh, yes—Beavers, Tau Bete, class president, Board of Control, house president, Interhouse Committee president. Wow!



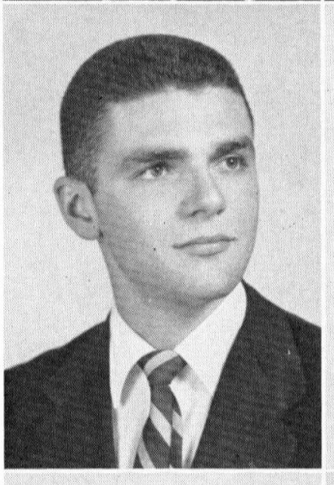


JACK W. ROCCHIO, Ph., Ricketts

Descending upon us from Ontario, California, in the first of a series of abominable sport cars, this eager physicist lost no time in acquiring that Collegiate Look. Beaver, house vice president, IRE wheel, skiing enthusiast—and all he can think of for after graduation is AFROTC! At least when Tall One strolls the hallowed halls of Chaffey Union High School with his characteristic stride, no one will mistake him for a mere inexperienced youth. Rocchio certainly has left his mark.

JERROLD A. ROYCE, CE, Dabney

From the land of sky blue waters, specifically Minneapolis, Minnesota, comes this stalwart senior. He has been in the Sailing, Drama, and Glee Clubs while out here in sunny California. A winter sports and Hi-Fi fan, Jerry plans to work as a CE as long as Uncle Sam will allow.

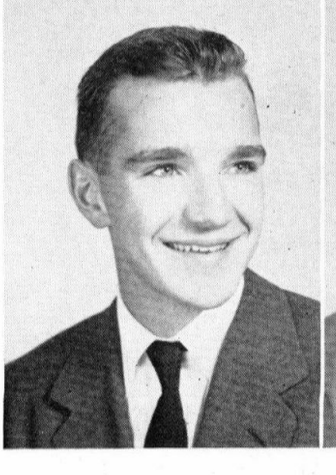


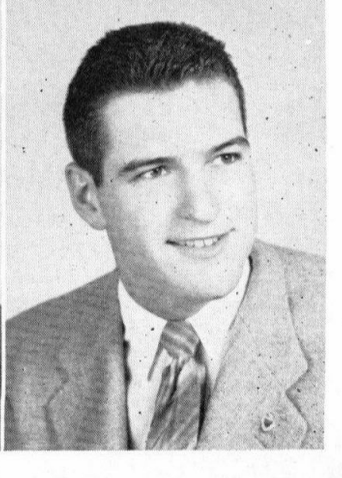
CHARLES S. SARGENT, Ph., Throop

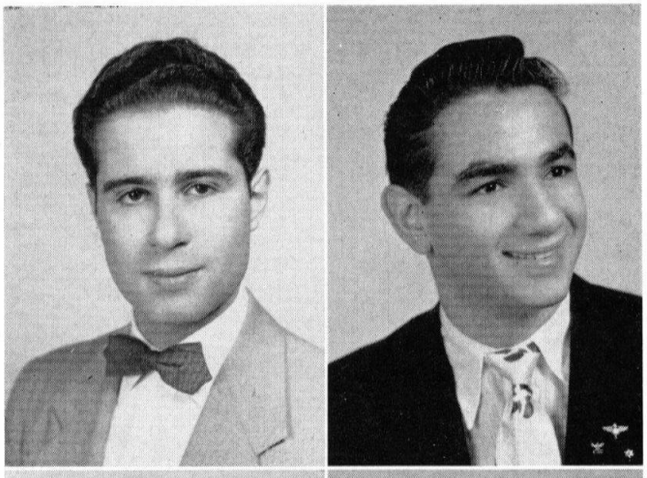
Chuck graduated from Hollywood High in L.A. and came on to Tech. After he had been here a year the Air Force decided it wanted him and he spent a year with it. He has been a long time member of Throop Club and served as its athletic manager in his senior year. He has also taken an active part in interhouse athletics, particularly football. Chuck is a physicist who discovered too late the pleasant life of the geologist and has spent his senior year trying to be both. He plans to go to UCLA grad school to become a petroleum engineer.

RICHARD R. SCHMID, CE, Dabney, T^3

From Garden (sic) Grove, California, comes our hero. Graduated from Anaheim Union High, Smitty has served in the ASCE and as a Mudeo judge while at Tech. He has been vice president of the ASCE and athletic manager of Dabney. He has participated in varsity tennis and football in addition to some attempts to enter interhouse sports. Hobbies? Farming (apt), bridge, sports and girls. He will probably go to CE grad school, Ft. Ord, or to work after graduation.





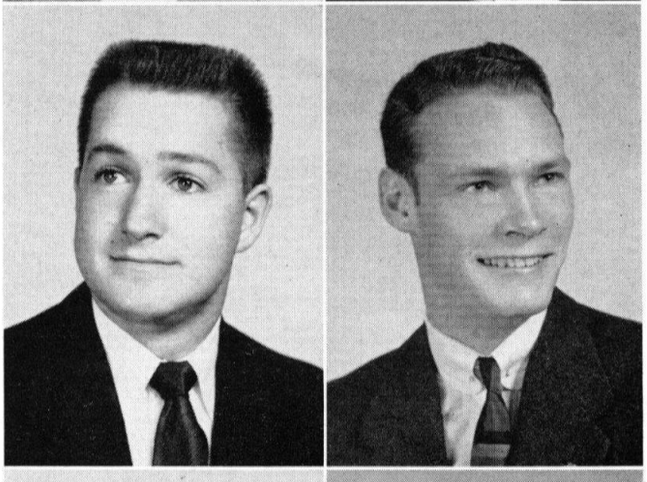


BERNARD P. SCHWEITZER, Ph., Ricketts, Honor Key

Just talking to Bernie you'd never guess he was from The Bronx. However, his record at Tech shows telltale signs of Eastern drive and consuming energy. Bernie came to us from the Bronx High School of Science all fired up to be a physicist and he's still in the option. He served on the California Tech, the Big T, the band, and the Drama Club, even to the point of earning an Honor Key, in between nights of dancing or ice skating or other less intellectual pursuits. Bernie is open to suggestions as to what he'll do after graduation.

EDWIN B. SEIDMAN, Ch., Off Campus

Born in Brooklyn (where?), raised in Plainfield, New Jersey, and educated at Huntington Park High School in sunny Southern California, cosmopolite Seidman has braved the chemistry option unfalteringly. Still and all, there has been time for sports and for stamp collecting and what have you. Although he refuses to admit this to his friends, he has been informing a select few of his honest intentions to go to work after graduation.

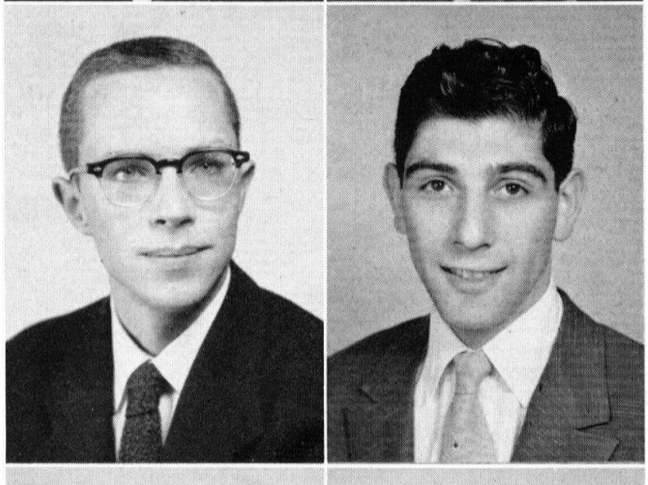


SAMUEL J. SIMS, Ge, Blacker, T²

From out of the desert comes—a geologist. All the way from Indio, California, comes this athletically talented fellow. Sam has been a varsity football man and a reliable shot-putter as well as coordinator of athletics as Blacker and Senior Class Athletic Manager. The great out-of-doors will be Sam's main interest as he draws his pay as a professional "rock-hound."

RODNEY W. SUPPLE, ME, Fleming, Honor Key, T⁴

"It's fun to run," is Rod's byline that epitomizes the spirit that has won him the Goldsworthy track award, and distinction as Senior Class president, 1954 Big T editor, Students' Day co-chairman and as member of the SAE, YMCA, and soccer team, not to mention track. Outside interests are photography, automobiles, and skiing. Work, possibly for an oil company, is the plan after graduation.

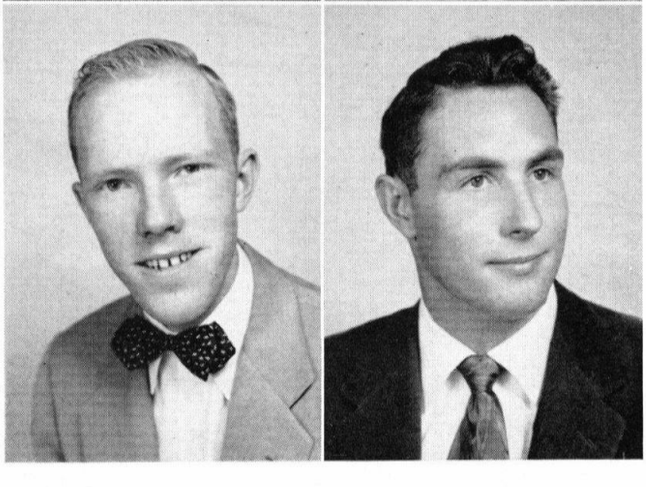


ROBERT TAMBLING, Ma, Blacker

Known as the man who brought jovial distinction to the Vatican, Bob was worshipped reverently as Blacker House Pope before venturing forth on a crusade for Uncle Sam. In a little over three years at Tech, Bob, a New Jersey native, soaked up more of the Southern California sun than any other electronics man taking mathematics. The beach, mountains, and the volleyball court were his home, as well as the cross-country track on which he excelled.

THOMAS TAUSSIG, EE, Dabney

Tom is one of those rare individuals who, when they aren't sleeping, always seem to be doing something constructive. If he wasn't to be seen fixing radios with a soldering iron and a tube manual, or perhaps emerging from the dark room, or directing band practice, or any one of a countless number of other things, then he was probably skiing, or on his way to pick up a date. After graduation? As Tom puts it, "Grad school, or work, or draft, and/or a female."



DONALD J. TAYLOR, Ph., Throop, T³

Don has helped bring points to Tech through his varsity track achievements in the hurdles. He has also been active in interhouse track and as secretary of Throop Club in '54-'55. A graduate of Whittier Union High School, he enjoys amateur astronomy, telescope building, roller skating, and tinkering with cars and radios. After graduation two years in the Air Force is on the agenda, followed by work in the field of space travel or such related fields as missiles and aircraft.

ALAN J. TEAGUE, ME, Off Campus

Alan graduated from Marshall High in Los Angeles in June, 1949, and came immediately to Tech. His education was rudely interrupted by the Air Force in March, 1951, and he returned at the beginning of 1953. As a frosh he was a member of the Board of Control and the Student-Faculty Relations Committee. During his senior year he served as chairman of the ASME. Alan has lettered in track and has also played football. His main joys in life are water skiing, boat maintenance and two stroke I.C. engines.

THOMAS TRILLING, Ph., Ricketts

Sports fan of sports fans, Trilling went out for at least five different interhouse sports before he found out—in his senior year—that he could run the 100 in 10.4, and became a varsity man. Always the authority on sports, card games, checkers or chess, public affairs, the Bay Area, or what have you, he also diddled with the California Tech, with varsity soccer, house social activities, current events, and even physics! After graduation, he looks forward to service, grad school, or even work.

MARTIN VOGEL, Ch., Fleming, TBII, T

Four years at Tech have gained Martin a fame as a godsend to snowed chemistry students. He really understands. Coming here from Manual Arts High School in Los Angeles, he has lettered in varsity football and interhouse sports, been active in ACS, and found time for musical enjoyment. On graduation he faces graduate school of the Air Force.

NEWMAN A. WADE, ME, Fleming, T

Newman came from San Diego for three years at Caltech, then returned to San Diego State for his senior year. While at Tech, he was Crew Captain of Fleming House, Varsity Track Manager, and a nonmember of the Caltech Dart Club.

J. PHILIP WADE, EE, Blacker, T

Another of the distinguished citizens of Coos Bay, Oregon, Phil has been a Glee Club member and has worked for the IRE. The athletic field has seen Phil out for the high jump. The lure of a job in industry is strong, but it may not be strong enough to win over a year of grad school.

VAN I. WALKLEY, CE, Blacker, T^4

They couldn't stop this Washington lad from running. Besides distinguishing himself in track and cross-country he helped run the Y for two years as veep and treasurer. Blacker co-social chairman, senior class veep, and Beaver member rounded out his campus activities. Van managed to outrun marriage for three years, but the last fateful summer he broke his stride and was nabbed. The Air Force is planning his next race.

F. BLAKE WALLACE, JR., ME, Dabney, Honor Key, T^6

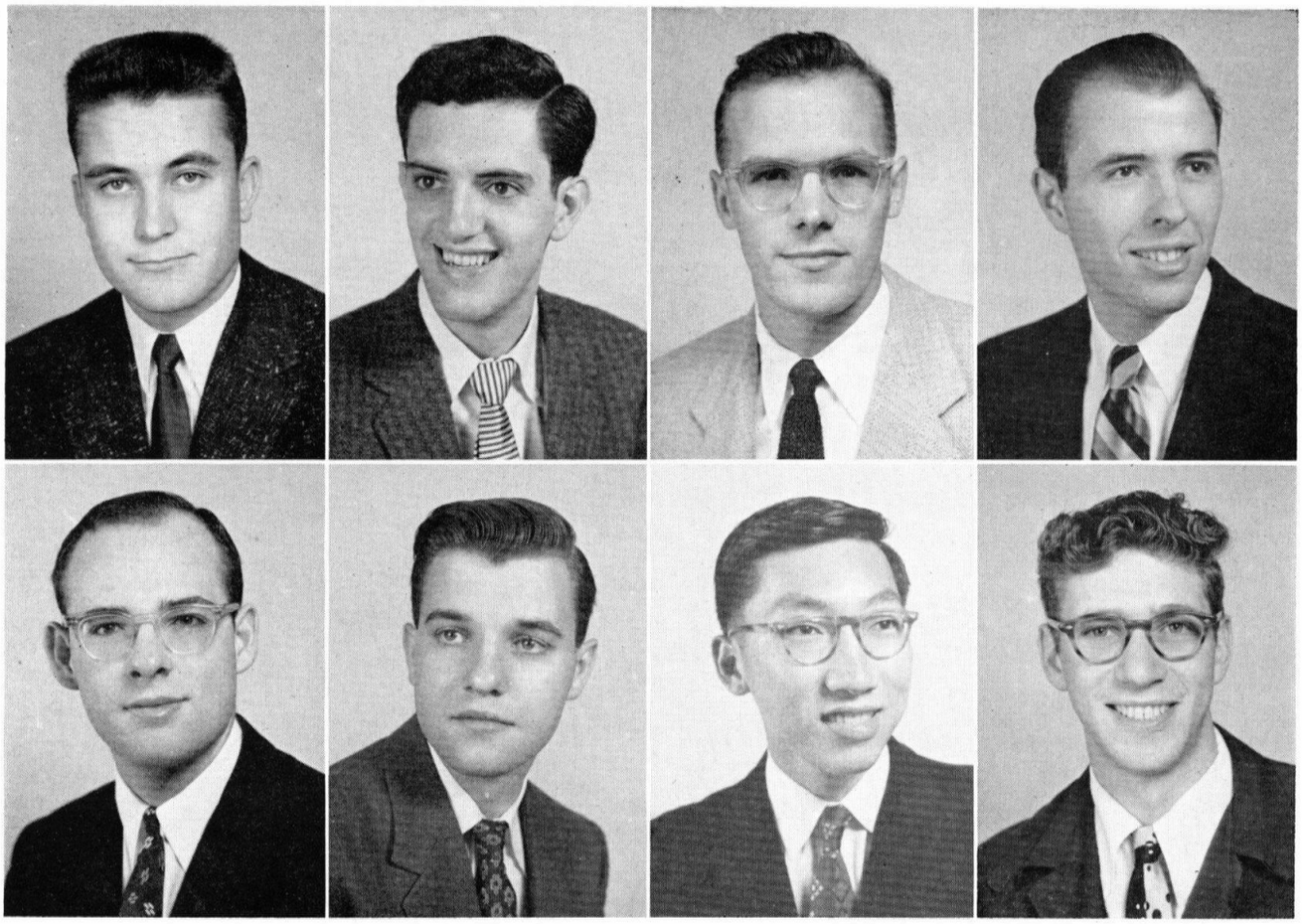
Blake has led a full life indeed since coming to us from North Phoenix High in Phoenix, Arizona. He has served as social vice president of Dabney, as a UCC, and has lettered three years in swimming and water polo. His hobbies are probably skiing and bridge. Blake plans to go to work as a mechanical type engineer after graduating.

PAUL K. C. WANG, EE, Fleming, TBII

From Tientsin, China, Paul has come to Fleming. He gives his graduation plans simply as suicide, but we think he will probably decide life is worth living when he is no longer studying to survive Tech's competition. His hand made home model electronic analog computer is the envy of the double E's.

RICHARD N. WAGENSELLER, ME, Dabney, TBII, Honor Key, T^3

From Hamilton High School in Los Angeles, Dick has done well at Tech. Serving terms as Dabney House athletic manager and president, he became a member of the Beavers and Tau Betes. His outside interests are skiing, bowling, and tennis; his inside interests are baseball and women. Dick is undecided whether or not to go to ME grad school next year.



RICHARD F. WEBBER, Ph., Throop
Living in Los Angeles Dick naturally picked Tech after graduating from Wilson High School. Feeling that other things besides Physics are also important he enthusiastically enjoys Hi-Fi music, hiking and photography. After graduation his plans are undecided between grad school or the Air Force.

JOHN D. WEISNER, Ph., Ricketts
Tall John Weisner calls Hollywood his home town but modestly denies having taken out more than a dozen or so movie starlets. His hobbies include bumming around on the soccer team, bumming around on the beach, bumming around in the mountains, or bumming around. After graduation he doesn't know whether he wants to bum around in grad school or bum around in steady work or just what. His most unusual achievement is probably being a Ricketts senior and a physicist at the same time.

DONALD E. WELCH, ME, Off Campus
From Los Angeles comes this senior, who has distinguished himself in the ME option while at the Institute. What the future has in store for this senior is still uncertain.

WALTER L. WHIRRY, EE, Blacker, TB Π
Walt, a local boy from Inglewood, California, has always had an interest in electronics. That interest has carried him through EE with flying colors as evidenced by the Tau Bete key. The IRE and Glee Club have occupied his spare time. It's off for grad school with the ever-present condition of Uncle Samuel's approval.

JOHN H. WOLFE, Ma., Dabney, TB Π
One of that rare species on campus of student d'mathmatique, John has been active in the Caltech Y and especially in the Undergraduate Luncheon Forum, for which he was chairman last year. He spends his spare time in an unusual way: dianetic processing (pertains to discursive reasoning—look it up in the dictionary). John will take graduate work in either mathematics or psychology.

GEORGE A. YANKURA, Ph., Ricketts
One of the world's more quiet individuals, George Yankura will never live down the day in his junior year when he was caught raiding a bonfire at Oxy and lost all his hair as a result. It wasn't too often that George was coaxed into ventures of this sort, but how can you make his folks back in respectable New Jersey believe that? After he pulls out of Tech with his degree in physics George will go out and get a good job and be a good physicist and try to forget about bonfires.

ALVA F. YANO, Ph., Fleming, T^4
Alva Yano is distinguished as Caltech's chief varsity tennis hero, besides his work in physics. From Dorsey High School, Los Angeles, he has interspersed his school work with his interest in music. With a BS in his pocket graduate school looms up as the next step in his career.

KENNETH ZIEDMAN, Ph., Off Campus
While at present not affiliated, Kenneth has been a member of Throop, a social member of Dabney, and a resident in Blacker during his sophomore year. Being secretary of student shop for two years as well as interests in ham radio, hiking and women helped keep him out of mischief. He plans to work towards a Ph.D. in psychology after graduation and get married in the not too distant future.

WALTED D. BIGGERS, ME,
Blacker

A rosy future for this ME from Emmett, Idaho, is assured by a job with the Holly Mfg. Co. in Pasadena. Walt has been an off-campus member of Blacker and has been in there working on varsity football.

JOHN A. BRYANT, ME, Dabney

Grosse Point sent us this carefree young man who, for all he might say, really doesn't believe that the total picture of life is too painful to contemplate. Perennially sun(?)-bronzed John is an avid snow and water skier, sports car fan, and a connoisseur of wine, women, and song. Dabney co-social chairman in his senior year and SAE and Ski Club memberships were his on-campus extracurricular activities. Future plans: work.

ROBERT D. CHRISTIAN, ME,
Throop, T^3

Another one of the junior birdmen, Bob is a member of the continuous horde that descends on Tech from Whittier Union High School. He has played varsity football for four years and is interested in all sports. He has been an active member of Throop club and was its treasurer during his senior year. After graduation his future is planned for him; it's the Air Force.

JAN W. HAAGEN-SMIT, ACh.,
Throop

After graduating from PCC, Jan decided he would go slumming and came to Tech. While here Haagi has been a loyal member of Throop Club and for four years has been one of its most constant card players. He has taken part in interhouse athletics and has been the junior and senior class representative in the Chem Engineering Club. Now that he is out he plans to start in on some good job.

WILLIAM B. LINDLEY, Ph.,
Blacker

One of Dr. McCrery's prize pupils, Bill has made intercollegiate debating his chief interest at Tech. He has been President of Tech's chapter of Pi Kappa Delta, national honorary speech fraternity. A social member of Blacker, Bill has lived at home in Pasadena. Future plans: Uncle Sam is hard to dodge.

ORESTE W. LOMBARDI, Geoch.,
Off Campus

Oreste comes to us from the state of Utah. He graduated from high school in Cedar City and spent some time as a Mormon missionary. He attended the College of Southern Utah for two years where he competed in one and two-mile cross-country runs. His hobby is meteorology and he has proved indispensable on geology field trips in giving the clue on the weather to be expected; even the profs consulted him. He plans to try for a Ph.D. in geochemistry and already has his thesis picked out.

JAMES E. MEACHAM, Ch.,
Off Campus

A home town boy (Los Angeles), this senior has distinguished himself in the Chemistry option at the Institute. Uncle Sam may have plans for him after graduation.

RICHARD PICCOLINI, Ch.,
Off Campus

Dick is a native of San Bernardino, California, where he graduated from high school. Here at Tech he has made like a snake and spent most of his time studying chemistry. For diversions he turns to books and philately. He wants to get a Ph.D. in chemistry from UCLA.

ROBERT V. POWELL, EE,
Blacker

A Glendale fan, Bud has cooled through Tech without much sweat. Known for his prolific use of navy lingo and his interest in women Bud will probably decide on the latter. After getting out Bud will probably go to work.

JAMES G. ROBINS, EE,
Blacker

Jim now lives in Alhambra with his wife Roberta but he graduated from Wilson High in Los Angeles. He was a member of Throop Club until the 3-D tic-tack-toe set was lost and then he became a social member of Blacker. He also belongs to the IRE. Jim is a radio ham and has started his own business manufacturing custom electronic devices. He plans to go to grad school if he can get someone else to pay for it, failing that he will take a job with Hoffman Labs.

CHARLES S. ST. CLAIR, Ge.,
Off Campus

A local product from South Pasadena — San Marino High School, Chuck has distinguished himself in the Geology Department by his printing skills, which continually appear on the bulletin board in the form of cryptic comments. He served as manager for the 1952 track squad and then retired to the more restful life of stamp collector and geologist. He plans to go to graduate school if things work out the right way, i.e., if he doesn't get drafted.

JAMES S. TYLER, ACh.,
Fleming, T^8

Social member of Fleming from San Marino, doing his high school at Pasadena City College, Tyler has done a sterling performance in four years of varsity basketball and track. Also active in stamp collecting, other athletics, and social events, he plans on either an MS at Tech or work.

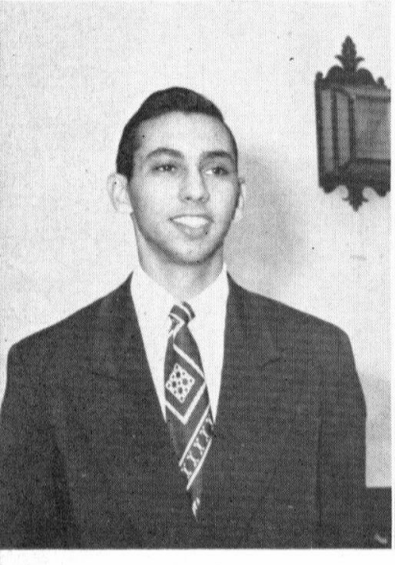
After a senior's name comes his option, then the house with which he is affiliated. **TBII** denotes that he was elected a member of that organization; **Honor Key** means he received one or more Honor Keys in any of his years at Caltech, not necessarily his senior year. **T** denotes that the senior won a **Varsity** letter and the exponent is the total number of letters won, regardless of the number of years or the number of sports.

JUNIORS

DICK JOHNSON
President

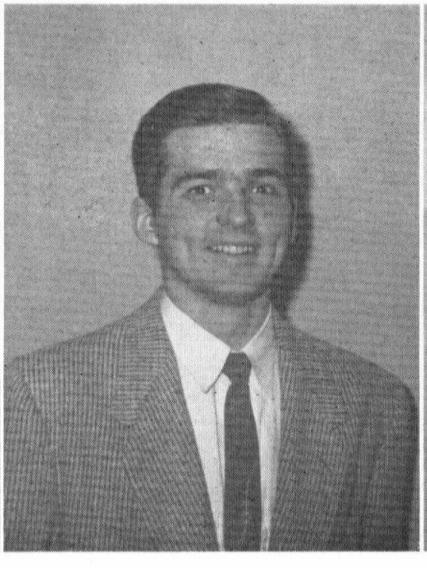
TOM BERGEMAN and LYMAN FRETWELL
Board of Control

AL POISNER
Vice President

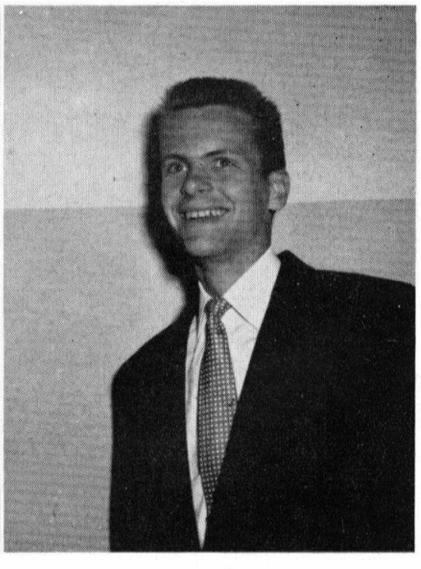


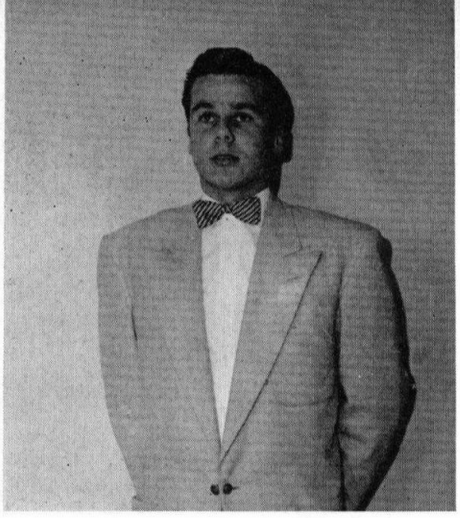
FRITZ BENNING
Secretary

ROSS BROWN
Treasurer



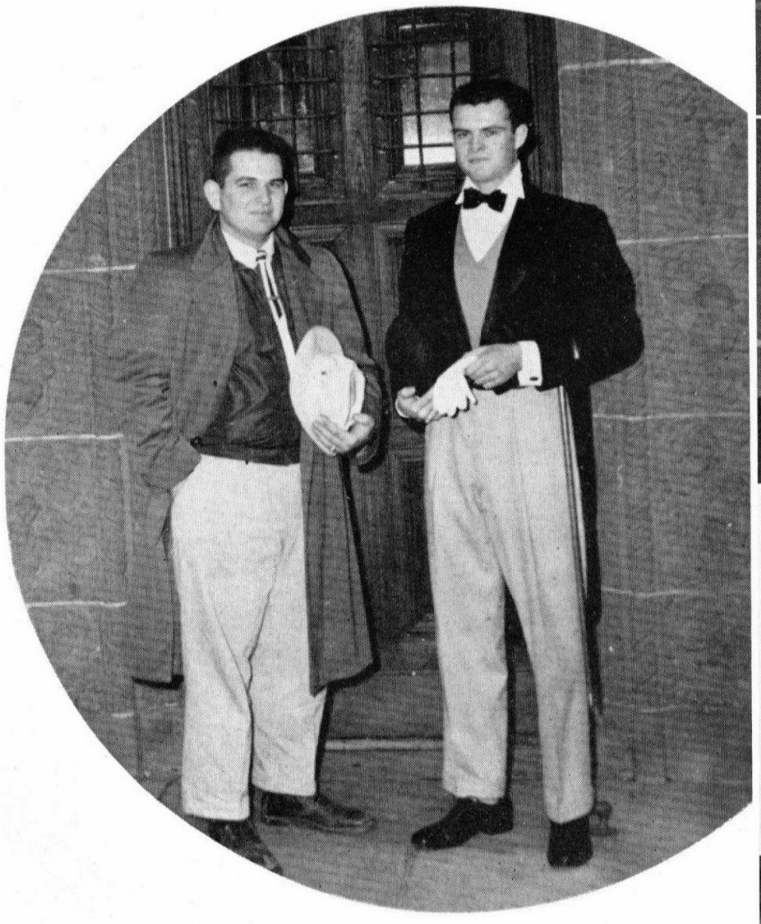
DON LEWIS
Athletic Manager



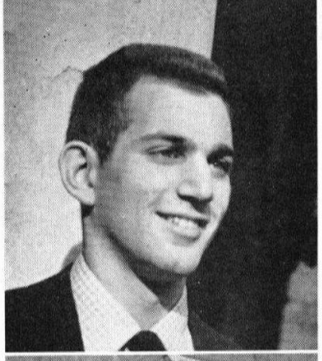


BOB GELBER
President

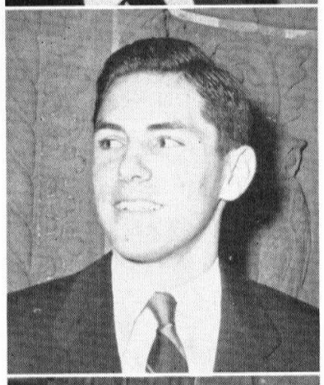
SOPHOMORES



RUBE MOULTON and CRAIG ELLIOTT
Board of Control



HOWARD BLOOMBERG
Vice President

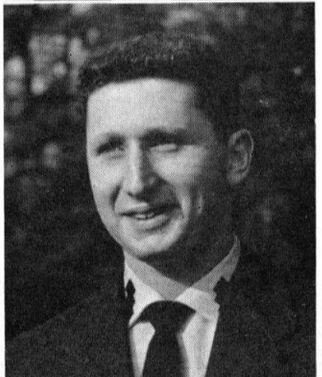


MARTY TANGORA
Secretary

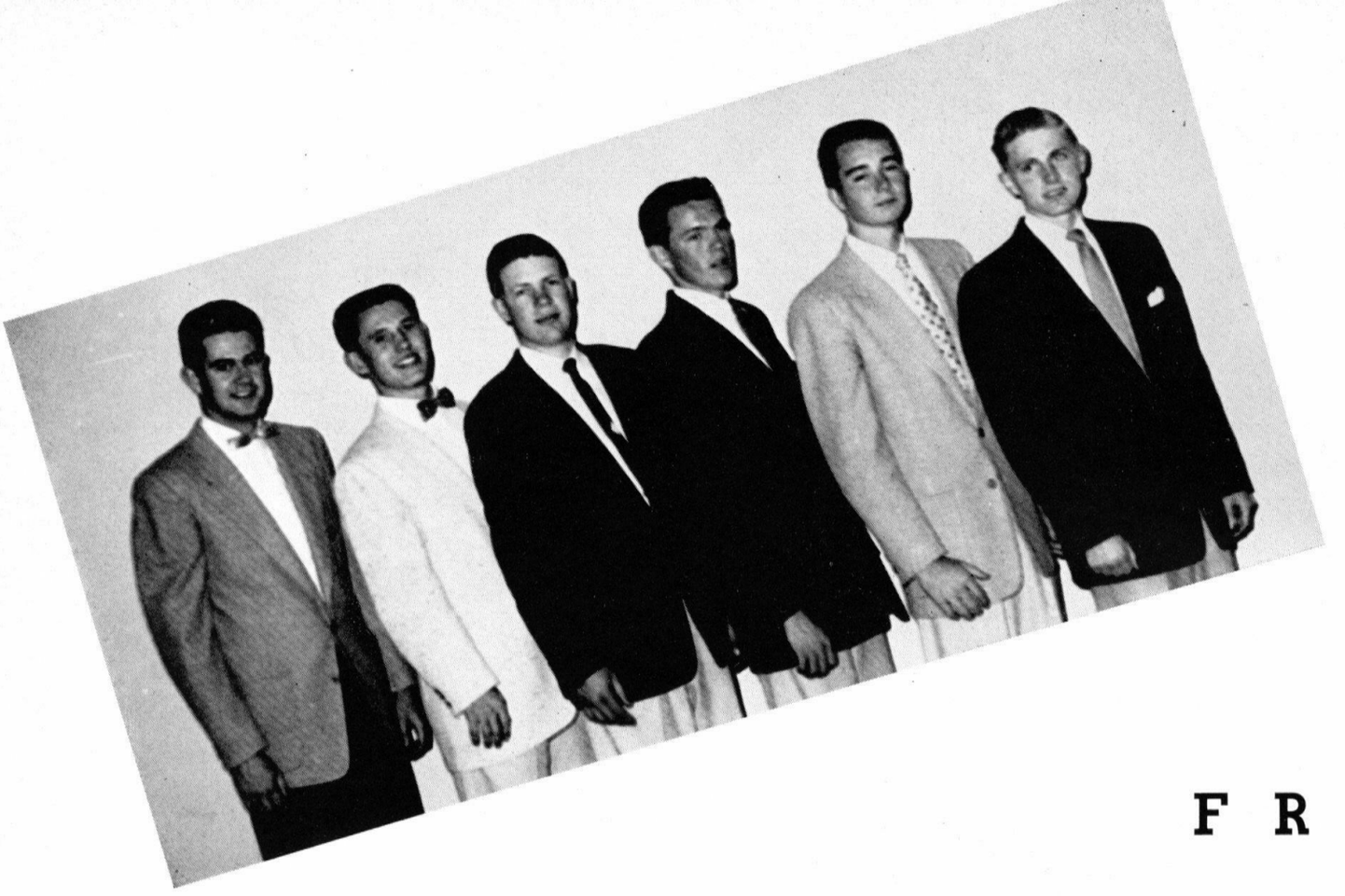
JIM WORKMAN
Treasurer

RON DOCTOR
Athletic Manager

BOB CHAMBERS
Entertainment Chairman

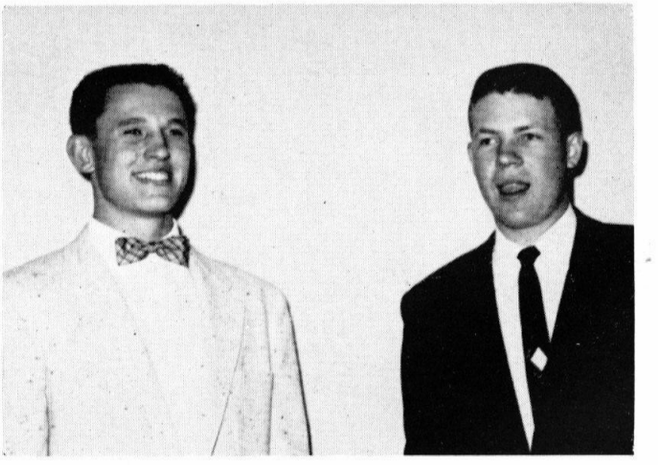


FRANK KOFSKY
Entertainment Chairman

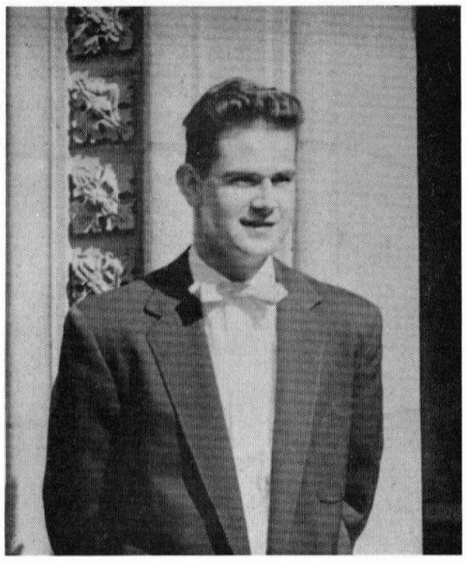


FRES

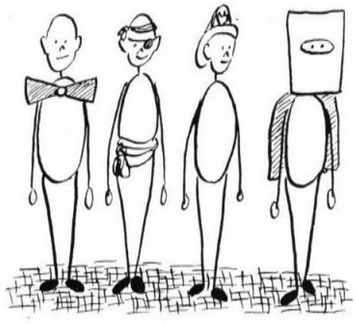
FIRST TERM OFFICERS, left to right: Dick Kirk, Dick Baron, Dick Ashby, Ron Leonard, Clarks Rees, Jon Stedman.



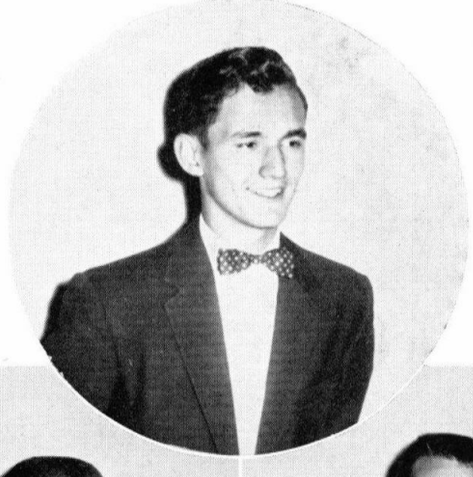
DICK BARON and DICK ASHBY
Social Chairmen



DICK KIRK
President

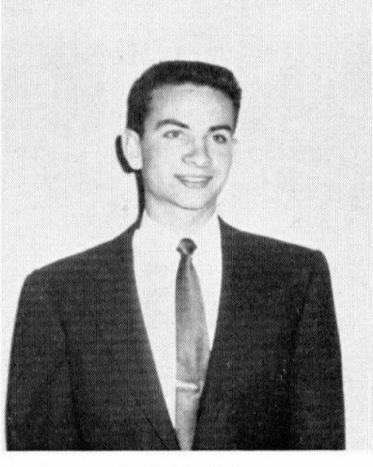


H M E N

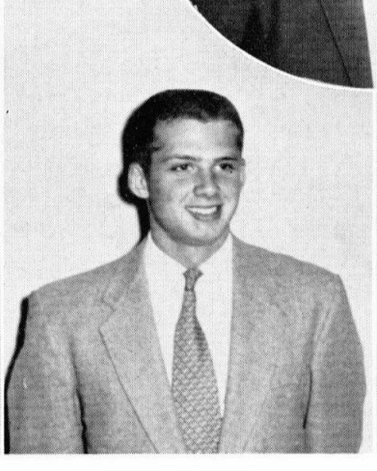


DICK VAN KIRK
Vice President

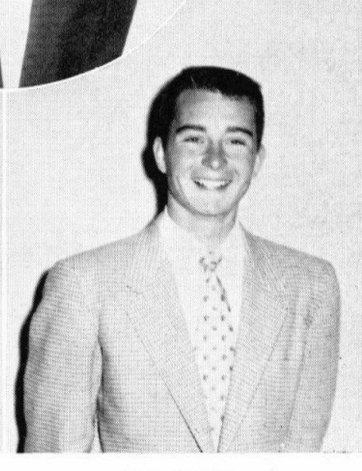
JON STEDMAN
Board of Control



ZACK MARTIN
Secretary

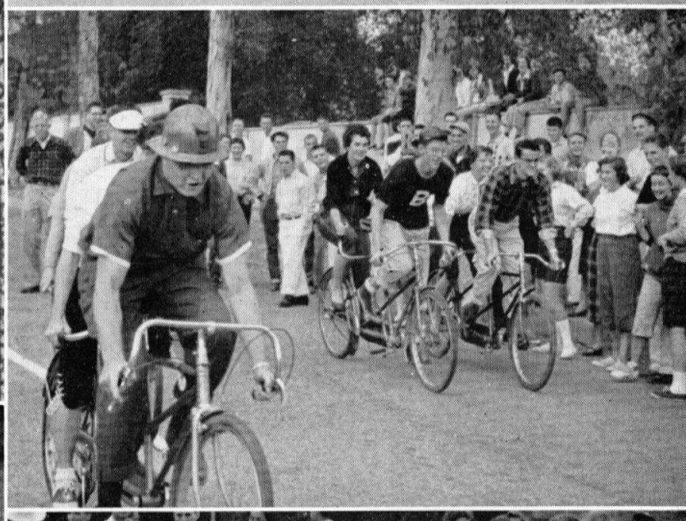


BRUCE BLACKIE
Treasurer

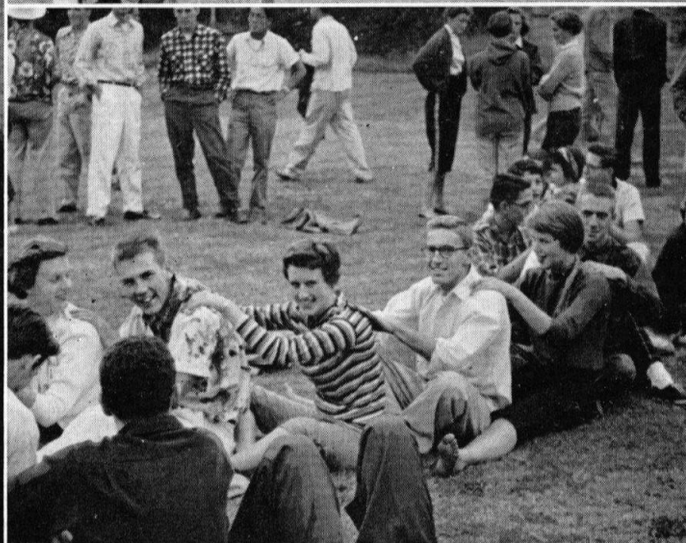


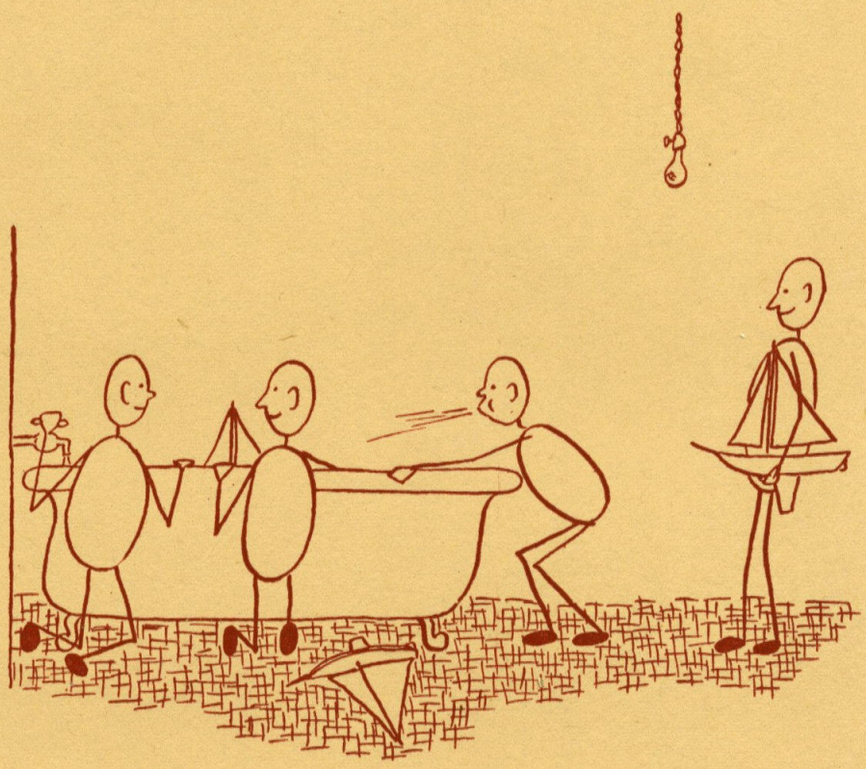
CLARKE REES
Athletic Manager

OXY RALLY



SCRIPPS BIKE RACE





Activities

BOARD OF CONTROL

VINCE MARINKOVICH
Chairman

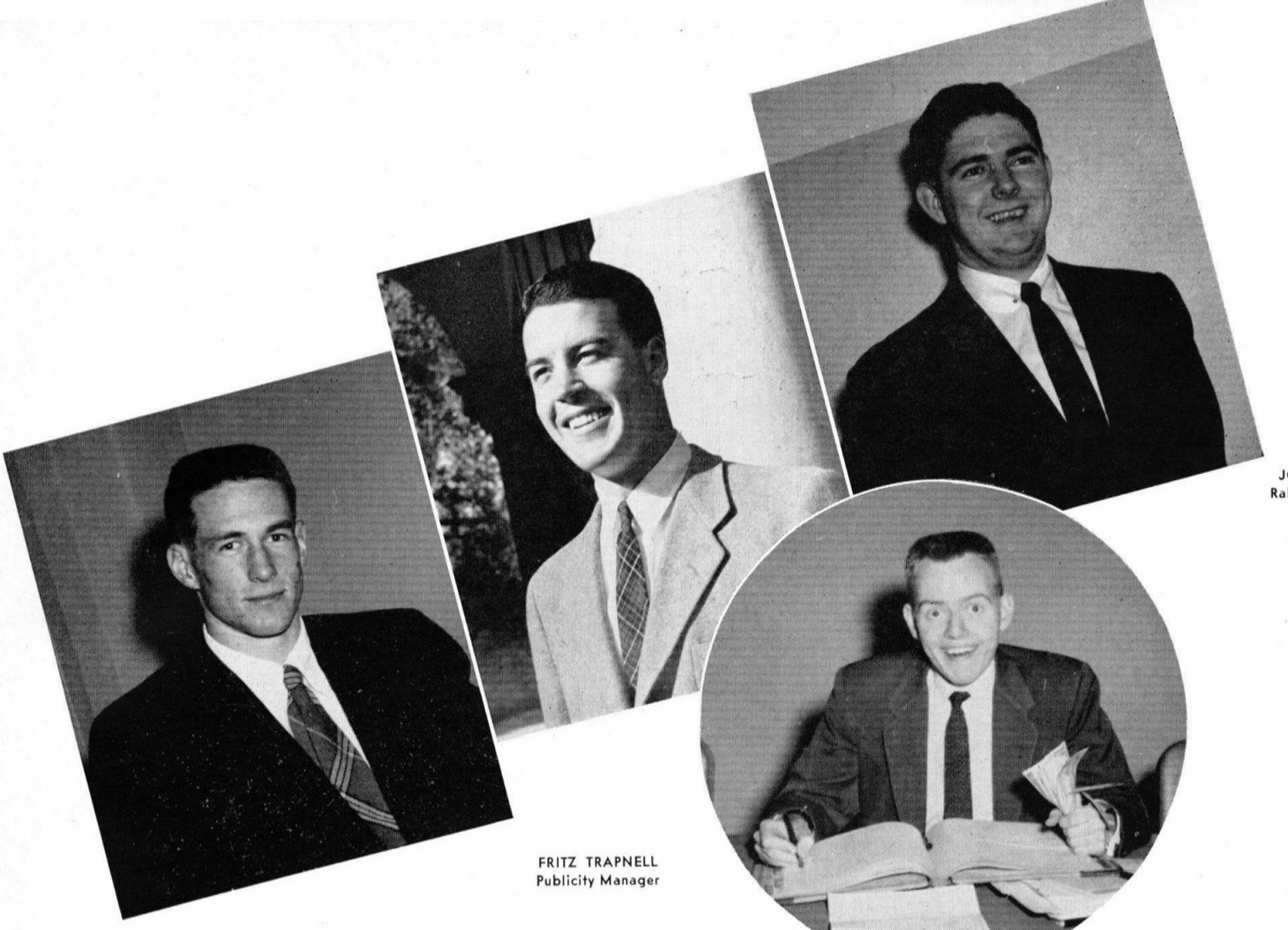
FIRST ROW, left to right: Chuck Brokaw, Lyman Fretwell, Vince Marinkovich, Ted Johnson, Rube Moulton. SECOND ROW: Tom Bergeman, Al Helgesson, Craig Elliott, Jon Stedman. NOT PICTURED: Jim Adams.

ASCIT BOARD OF DIRECTORS

JIM ADAMS
President

VINCE MARINKOVICH
Vice President

TED JOHNSON
Secretary



JON HARFORD
Rally Commissioner

FRITZ TRAPNELL
Publicity Manager

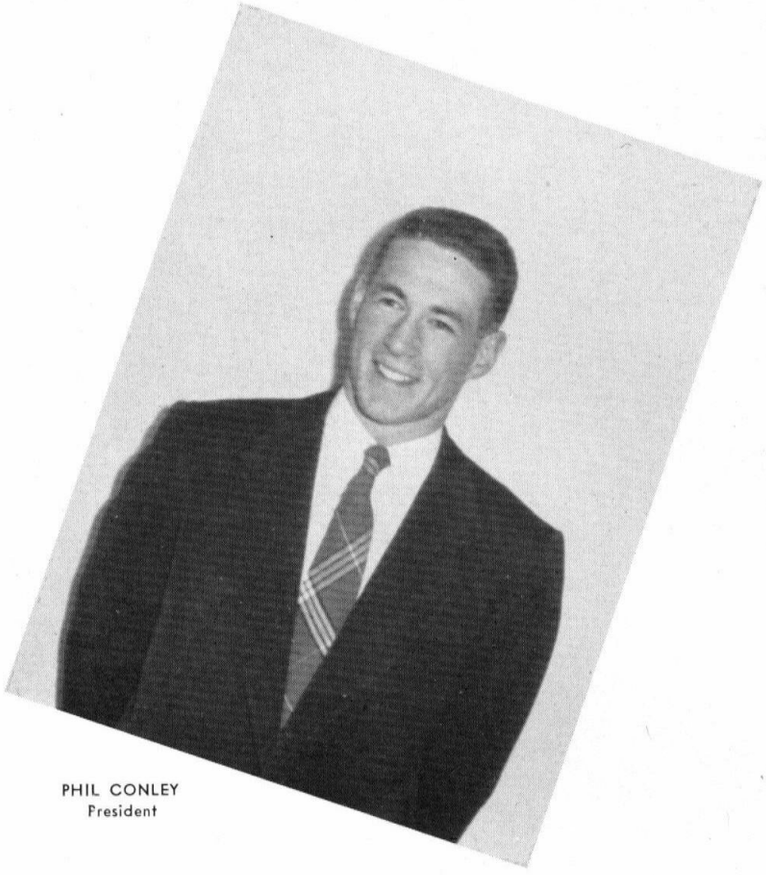
PHIL CONLEY
Athletic Manager

HOWARD BERG
Treasurer

BOB KAUSEN
First Representative-at-Large

BILL McDONALD
Second Representative-at-Large

ASCIT BOARD OF DIRECTORS 1955–1956

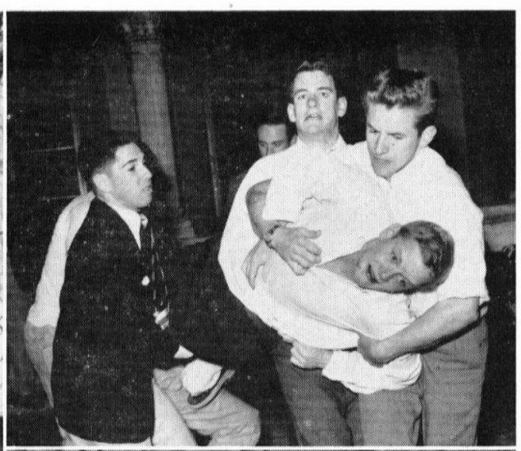


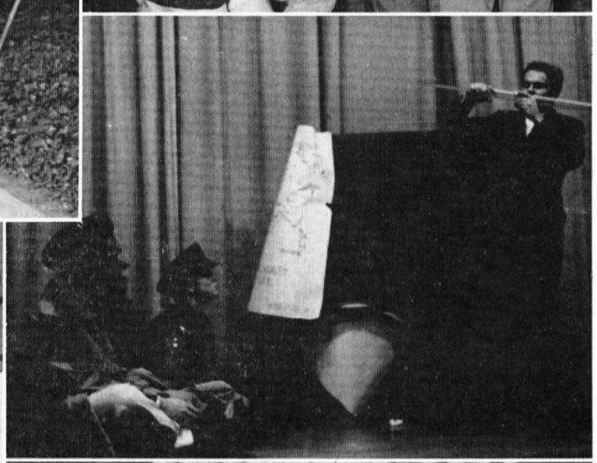
PHIL CONLEY
President

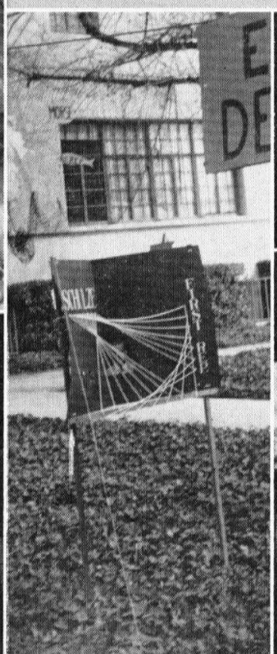
SEATED, left to right: Dick Morse, Howard Berg, Phil Conley, Tom Bergeman. STANDING: John Young, Dick Ashby, Craig Elliott, Jim Workman, Frank Kofsky.

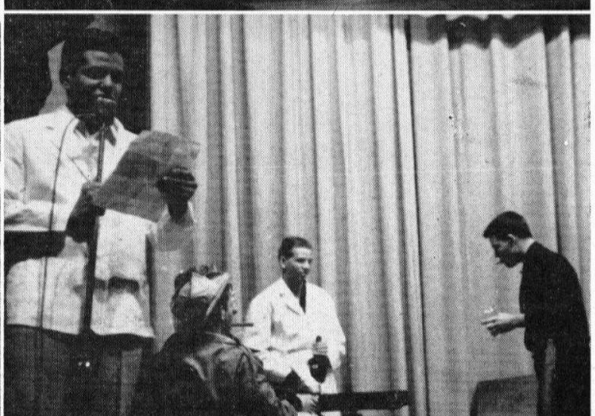
ELECTIONS

ELECTION COMMITTEE, left to right: Harrison Schmitt, Dan Mack, Gary Dietrich, John Howell, John Kleiderer, Blake Wallace, Bill Purves.







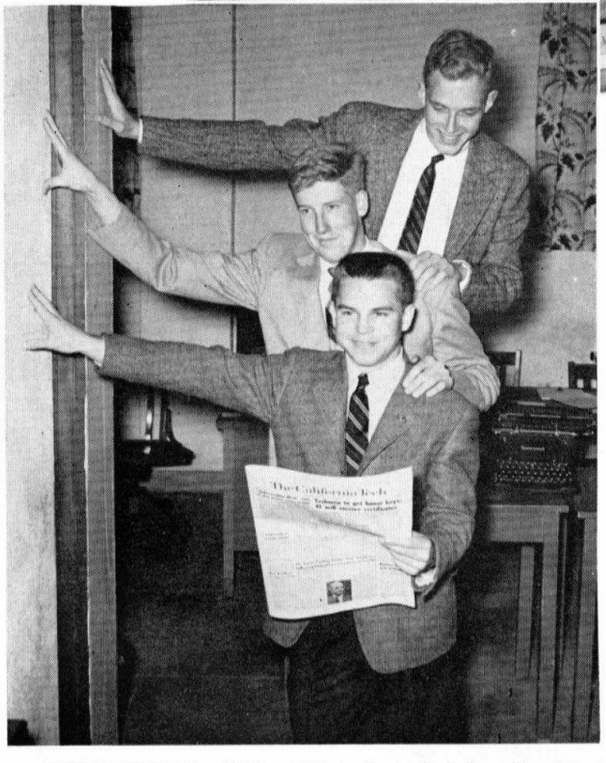


FIRST ROW, left to right: Jerry Fried, Al Farley, Gordon Reiter. SECOND ROW: Bob Walsh, Frank Kofsky, Ed Park, Bill Hecht, Dick Hundley, Dick Kirk, Don Lewis, John Young, Stan Grotch. THIRD ROW: Arne Kalm, Ernie Dernberg, Bill Purves, Marty Tangora.

TOM BERGEMAN and LYMAN FRETWEL
Editors-in-Chief

DON LEWIS, ARNE KALM, BOB WALSH
Sports Staff

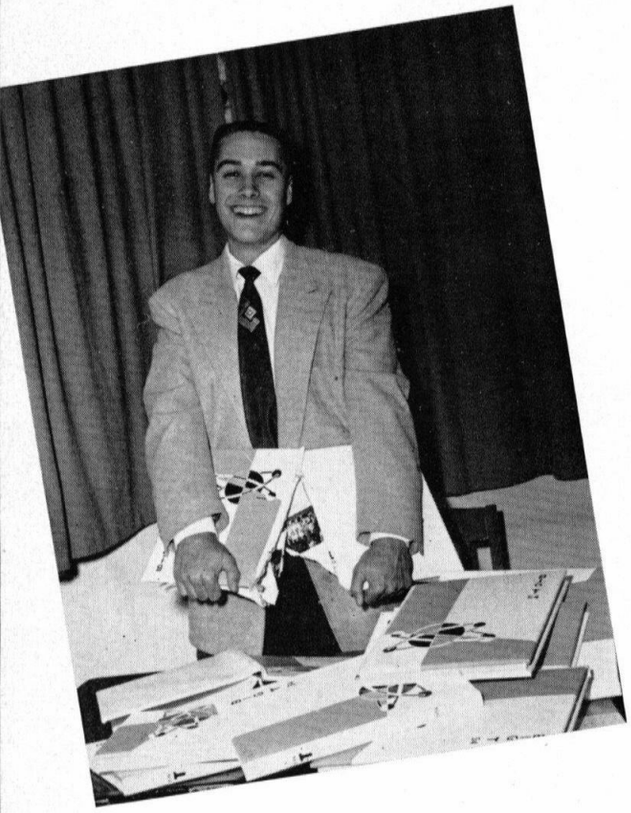
EDITORIAL STAFF—SEATED, left to right: Tom Bergeman, Editor; Lyman Fretwell, Editor. STANDING: Marty Tangora, Reporter-at-Large; Dick Hundley, News; Arne Kalm, Sports; Gordon Reiter, Reporter-at-Large; John Young, Feature.



BUSINESS STAFF: Sam Phillips, Ed Park, Jim Lewis, Business Manager.

THE CALIFORNIA TECH

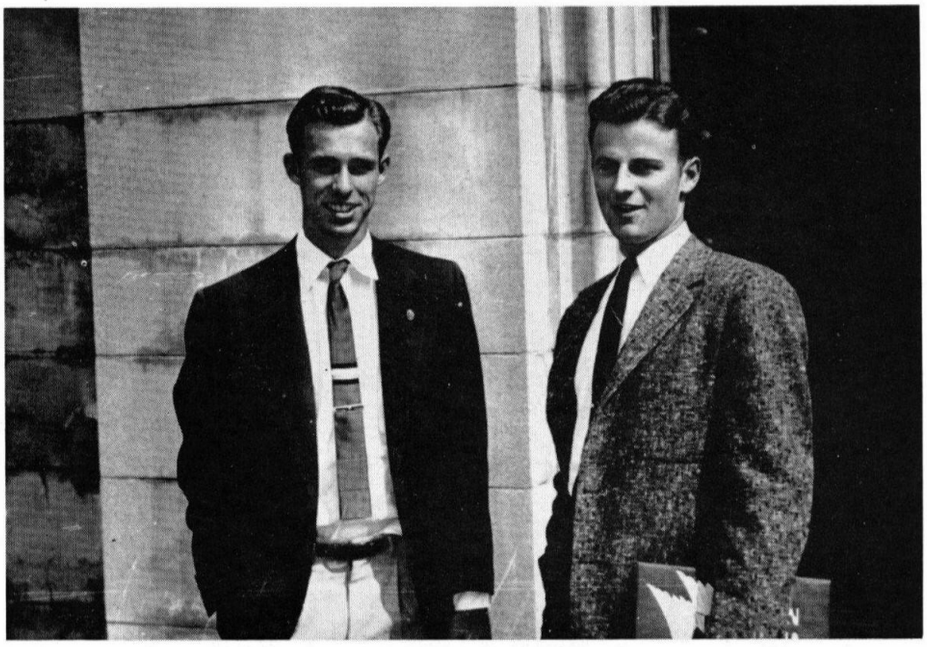
THE BIG



JOHN LANSINGH
Editor-in-Chief

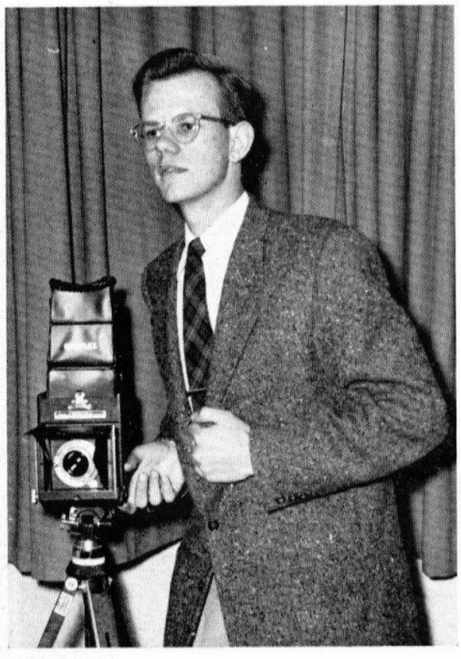
SEATED, left to right: Walt Haenggi, Seniors; Arne Kalm, Sports. STANDING: Bill McDonald, Activities; Chuck Bodeen, Art.

PHOTOGRAPHY STAFF—SEATED, left to right: Luis Soux, Stu Bowen, Jon Robinson. STANDING: Kim Cranney, Dick Jali, Ed Hershberger.



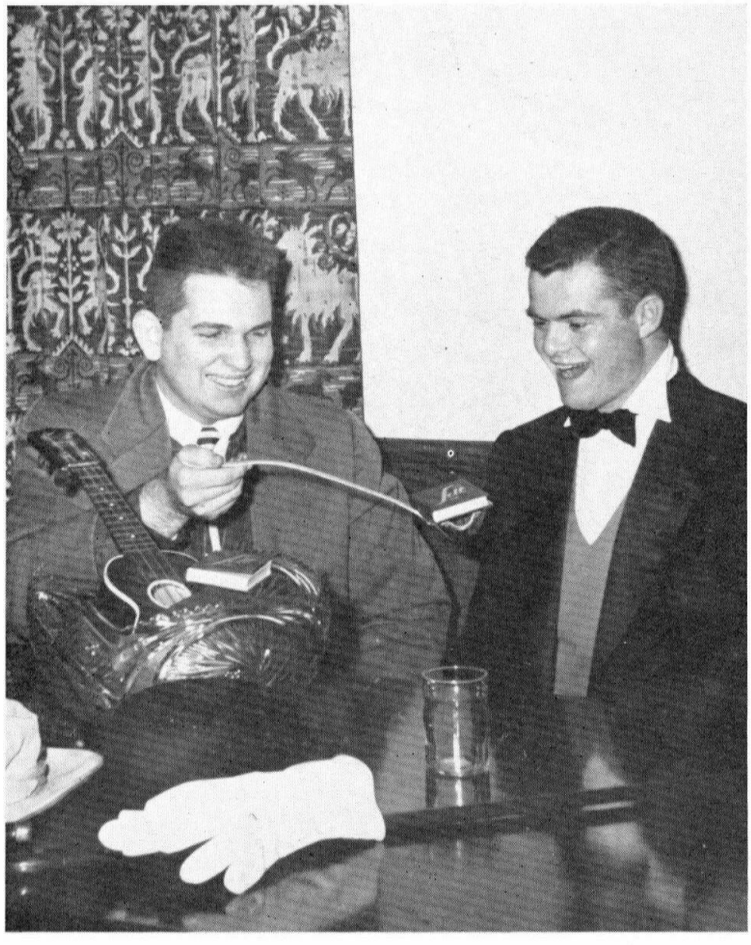
LOUIS FLETCHER and BILL PURVES
Business Managers

DON NIERLICH
Photography Editor



Ray Orbach, Managing Editor, and his secretary, Eva.

Rube Moulton, Assistant Editor, without secretary.



RUBE MOULTON and
CRAIG ELLIOTT

LITTLE T

PENDULUM

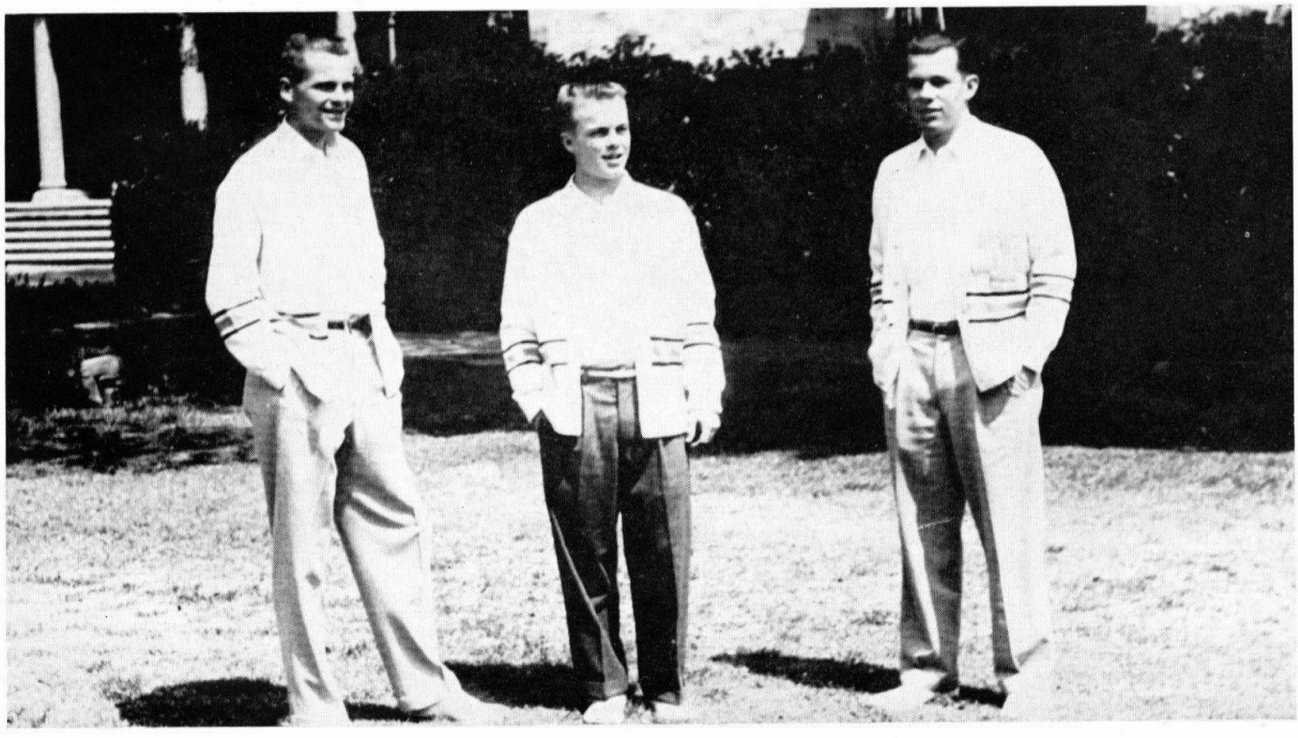
Jim Short, Chuck Bodeen, Mike
Boughton, Russ Hunter.

Jon Harford, Bob Chambers, Frank Kofsky, Baird Brandow.

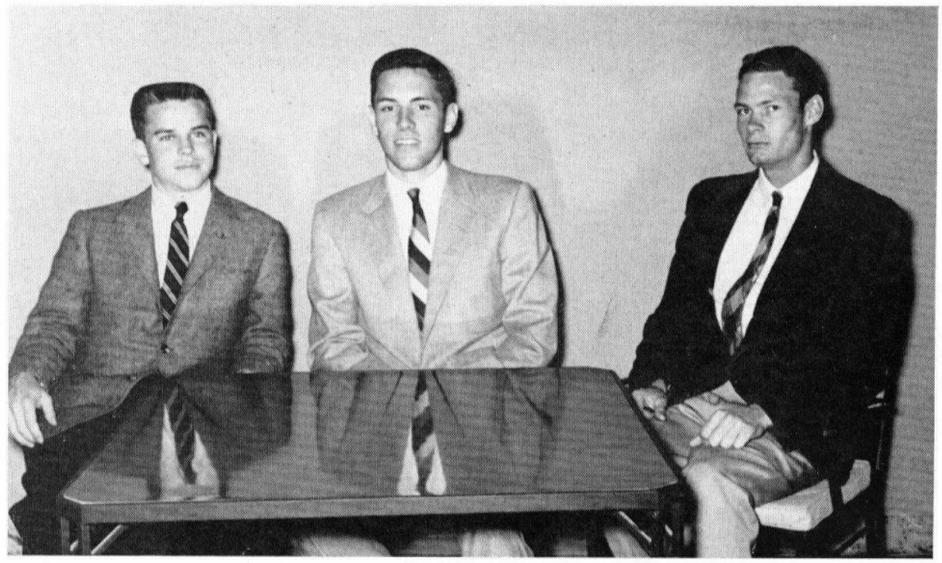
RALLY COMMITTEE

CHEERLEADERS

Don Lewis, Curt Schulze, Dick Johnson.



STUDENTS' DAY

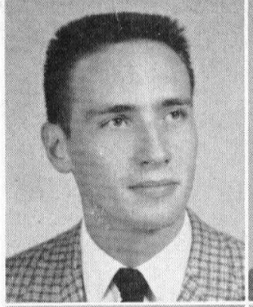
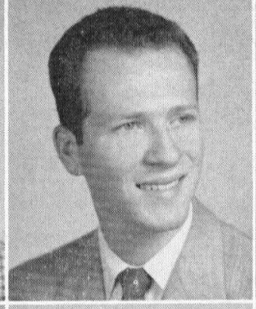


STUDENTS' DAY COMMITTEE, left to right: Jim Lewis, Marty Tangora, Rod Supple.

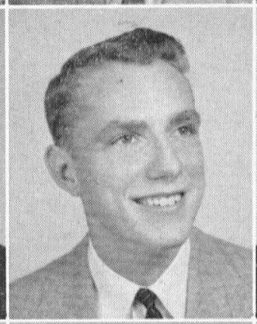
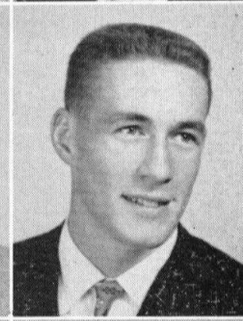
HONOR KEYS

HONOR POINT COMMITTEE
Bob Kausen, Vince Marinkovich (chairman), Bill McDonald.

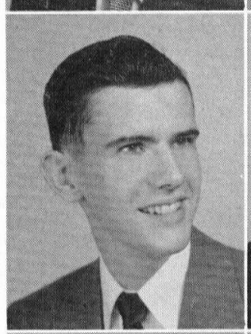
JIM ADAMS
JOHN ANDELIN
HOWARD BERG

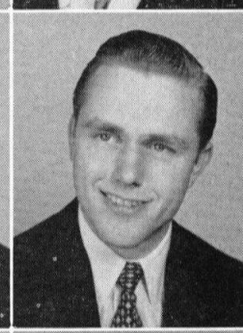



CHUCK BODEEN
MIKE BOUGHTON
PHIL CONLEY

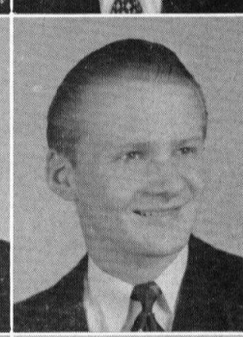



LYMAN FRETWELL
RAY GRIESER
AL HELGESSON

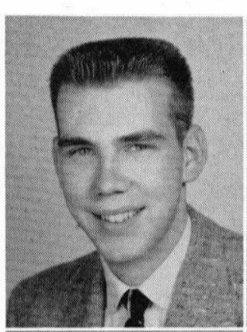
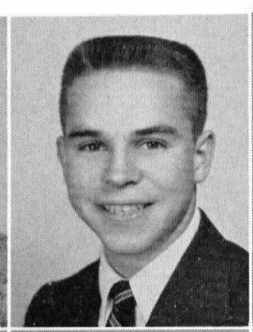


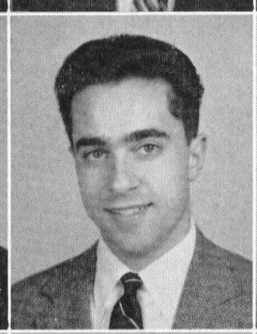
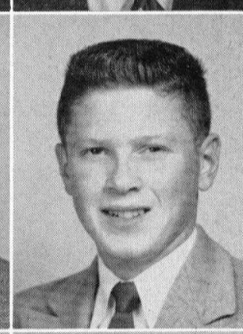


DICK JOHNSON
TED JOHNSON
ARNE KALM

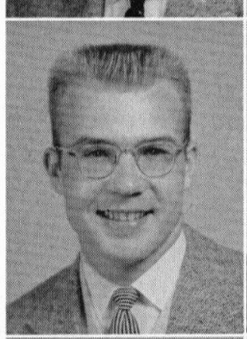
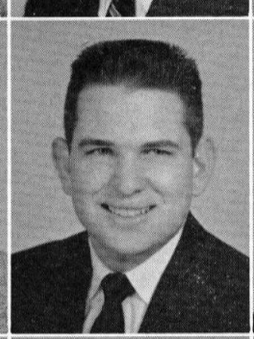
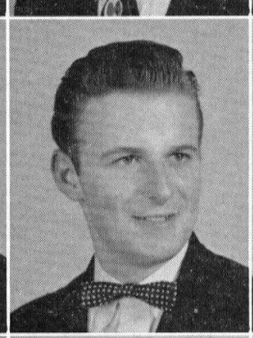
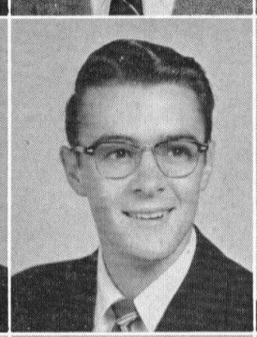
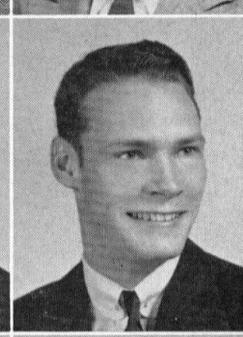


BOB KAUSEN
JIM LEWIS
GEORGE MADSEN
VINCE MARINKOVICH
BILL McDONALD

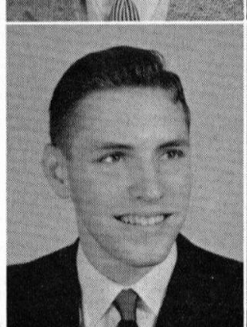
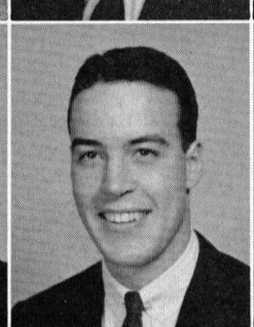
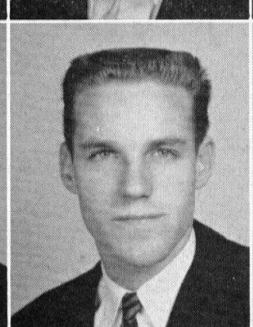
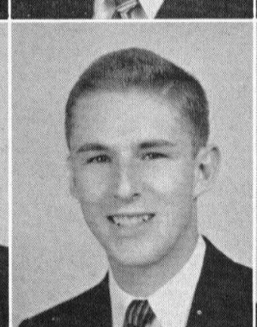



JIM MEBUST
RUBE MOULTON
BILL PURVES
DON ROBERTS
ROD SUPPLE

MARTY TANGORA
FRITZ TRAPNELL
DICK WAGENSELLER
JIM WORKMAN
JOHN YOUNG

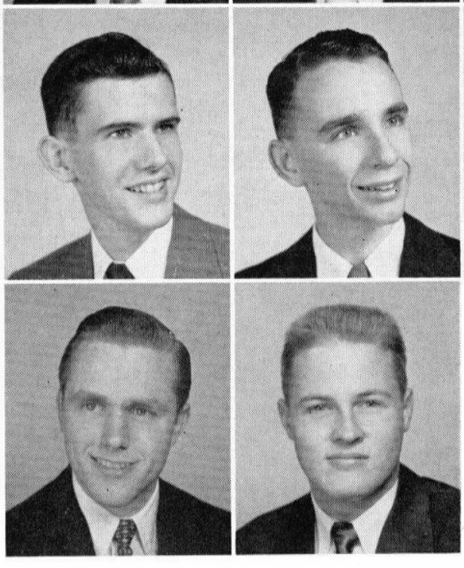





TOM BERGEMAN
JOHN DOMINGO

MYRON BLACK
GENE DRYDEN

CHUCK BODEEN
EVERETT EISELEN

TAU BETA PI



HOWARD BERG
DAVE CROWTHER
STAN GROTCH

JIM ADAMS
DELANO BROUILLETTE
LYMAN FRETWELL
AL HELGESSON

JOHN ANDELIN
BILL CREIGHTON
GARY GAYRON
JOHN HONSAKER

TAU BETA PI OFFICERS, left to right: Dick Read, Stan Grotch, John Andelin, John Merrill, Hugh Leney, George Madsen.

GERALD HOOPER
CARL JOHNSON
DICK JOHNSON
HUGH LENEY

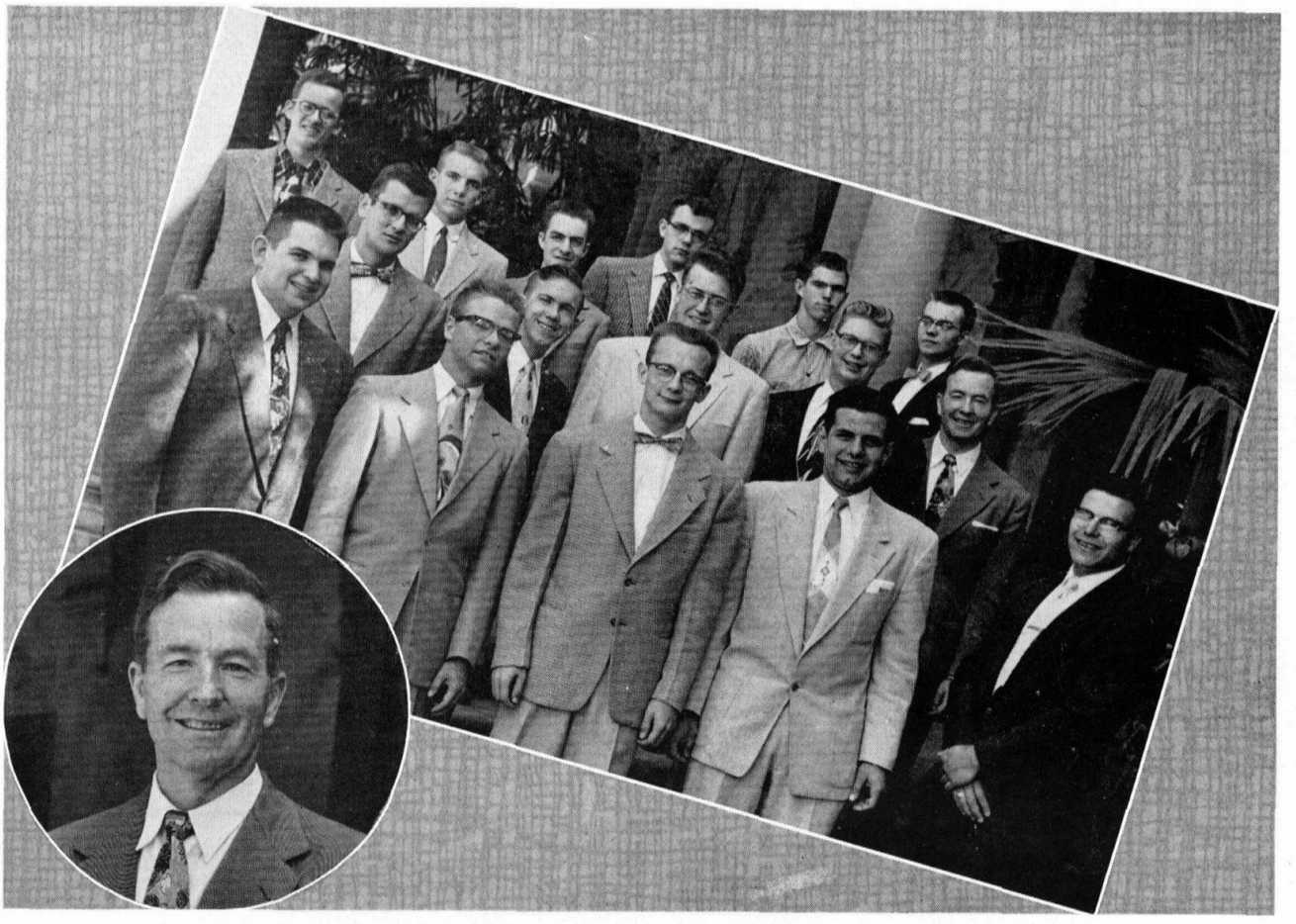
GERALD LIPPEY
GEORGE MADSEN
STAN MANATT
GEORGE McDONALD

PAUL McHORNEY
WALT MENETREY
JOHN MERRILL
RALPH MILES

TOM NOONAN
RAY ORBACH
HUNTER PAALMAN
DICK READ

DON ROBERTS
MARTY VOGEL
DICK WAGENSELLER
PAUL WANG

RAY WEYMANN
WALT WHIRRY
JOHN WOLFE
JOHN YOUNG



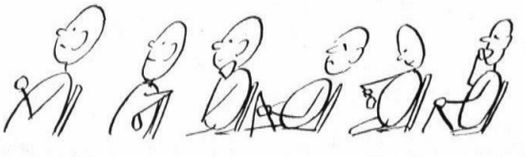
LESTER McCRERY
Coach

FIRST ROW, left to right: Rube Moulton, Don Meyer, Tom Gunckel, Ray Orbach, Mike Bleicher. SECOND ROW: Leon Keer, Jim Short, Andy Perga, Myron Black, Dr. Lester McCrery. THIRD ROW: Bill Lindley, Gene Cordes, Duncan MacDuffie, John Young, Gene Barnes, Kim Cranney.

DEBATE

For the second consecutive year, the Caltech forensic squad outdid itself in achievements. The year was climaxed at the national Pi Kappa Delta tournament at Redlands where Caltech was ranked the number one men's forensic team in the nation. Tech received superior ratings in debate, extemporaneous speaking, and discussion. Earlier in the year, eight men literally swept to victory at Tucson in the annual Western States tournament. Tech's outstanding Frosh team of Cordes and Perga, and the perennially undefeated Sophomores, Bleicher and Moulton, tied for first place in Lower Division debate, giving Tech lower division sweepstakes. Lindley took fourth in Upper Division discussion. At Los Angeles City College, Tech boasted three undefeated teams, equaling its record of two years standing, and in addition claimed two superior debate ratings. The twenty men participating in the ten tournaments Tech attended placed high in each. More awards and trophies were received at Pepperdine, Occidental, UCLA, USC, Santa Barbara, and Long Beach.

The Big T wishes our outstanding coach, Dr. Lester McCrery, well in the coming years. This year will be long remembered, not only for outstanding performance by the squad, but for the loss of the man who made all of its success possible.



BEAVERS

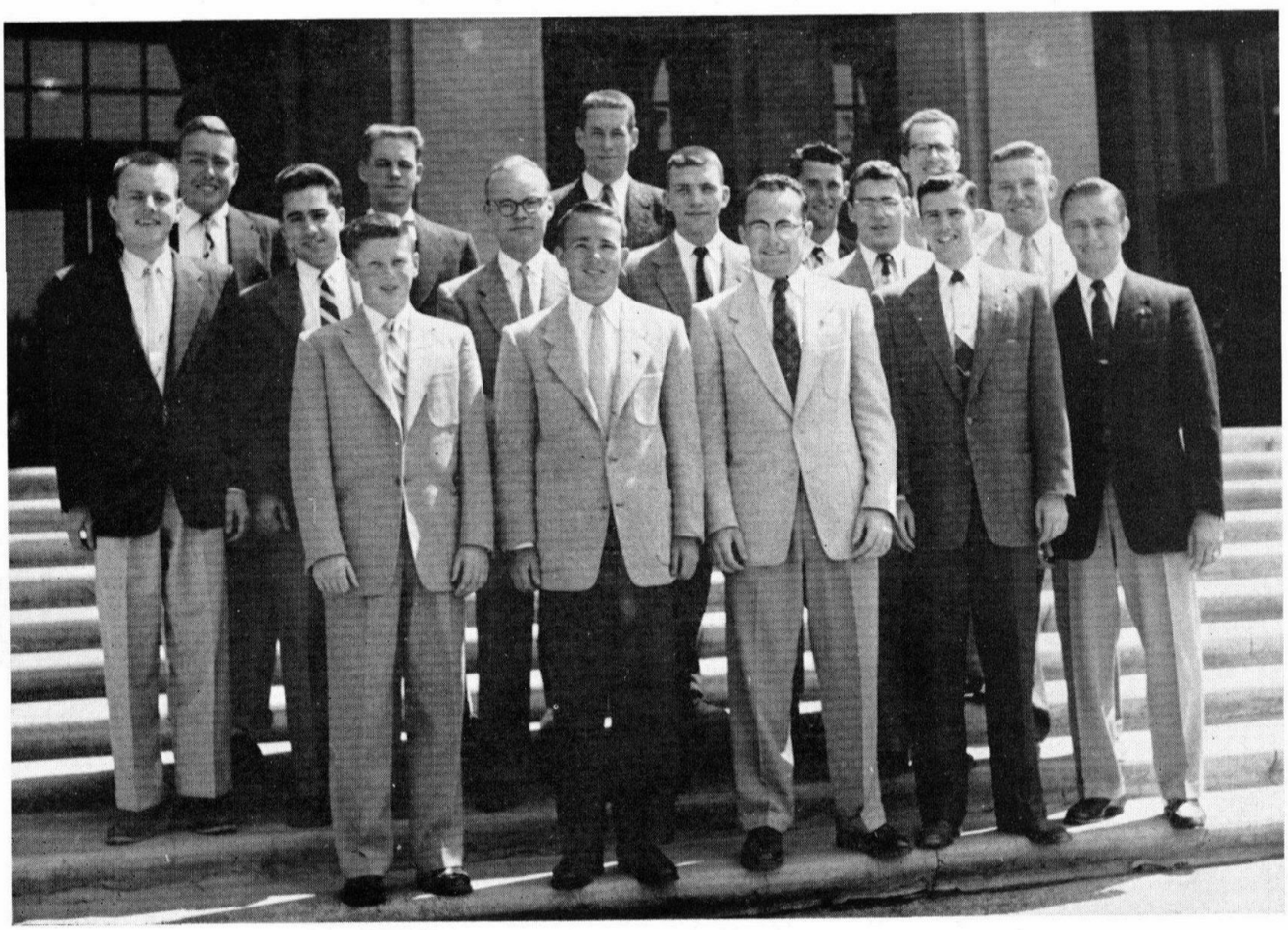
The Beavers is an honorary student service organization whose purpose is service to the student body. The group consists of about thirty elected student members, Dr. Lee Du Bridge, and ten elected faculty members. Candidates for membership are selected from among the student body on the basis of interest and participation in student body activities, and Beaver membership is a recognition of an individual's service to the school. Faculty members are elected for a term of membership, and faculty membership changes as terms expire.

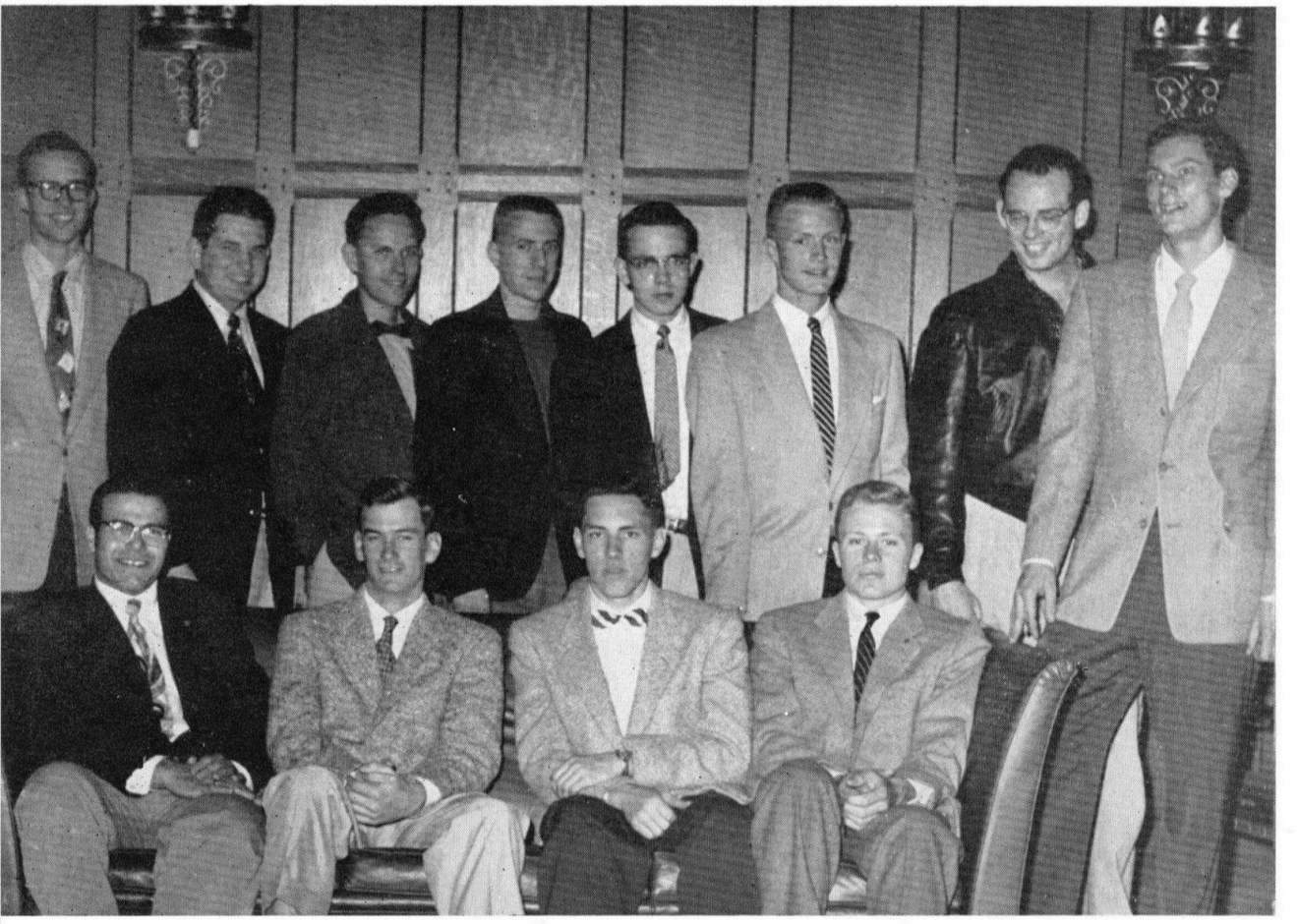
The organization had a full slate of activities this year, beginning with another very successful Frosh Camp. The management of Frosh Camp is the biggest of the Beavers' responsibilities, and the planning and directing is done with the purpose of aiding new students to adjust to Caltech life. The visitation program, directed again this year by John Merrill, was expanded to include visits to thirty-six high schools in the area. At each school Beaver representatives showed the Caltech film, answered questions, and tried various "see if you can do this one" problems.

The monthly meetings between students and faculty at some faculty member's home gave rise to discussions on a wide variety of problems. Typical of the problems concerning the Beavers this year were student parking and Throop Club. In these discussions the nature of each problem is pretty well aired, and better understandings and possible solutions often result. The discussions foster better understanding, cooperation, and mutual interest between students and faculty.

The organization will handle the sale of the new school jackets introduced this year by the ASCIT as just another of the many services the Beavers render to the student body.

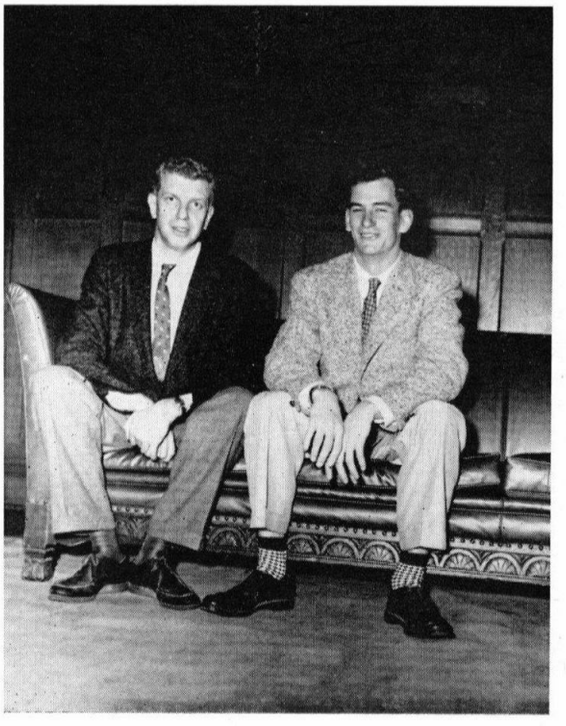
FIRST ROW, left to right: Bill McDonald, Ralph Miles, George Madsen, Lyman Fretwell, Al Helgesson. SECOND ROW: Howard Berg, Vince Marinkovich, Ted Johnson, Jerry Crocker, Tom Bergeman, Van Walkley. THIRD ROW: Ray Grieser, Dick Wagenseller, Phil Conley, Louis Kilchenman, John Andelin.





SEATED, left to right: Mike Bleicher, Ted Matthes, Marty Tangora, Don Evans. STANDING: Don Pinkerton, Rube Moulton, Chuck Bodeen, Don Reiterman, John Young, Kim Malville, John Wolfe, Pete Lauritzen.

BEACH LANGSTON, Acting Executive Secretary, and TED MATTHES, President.



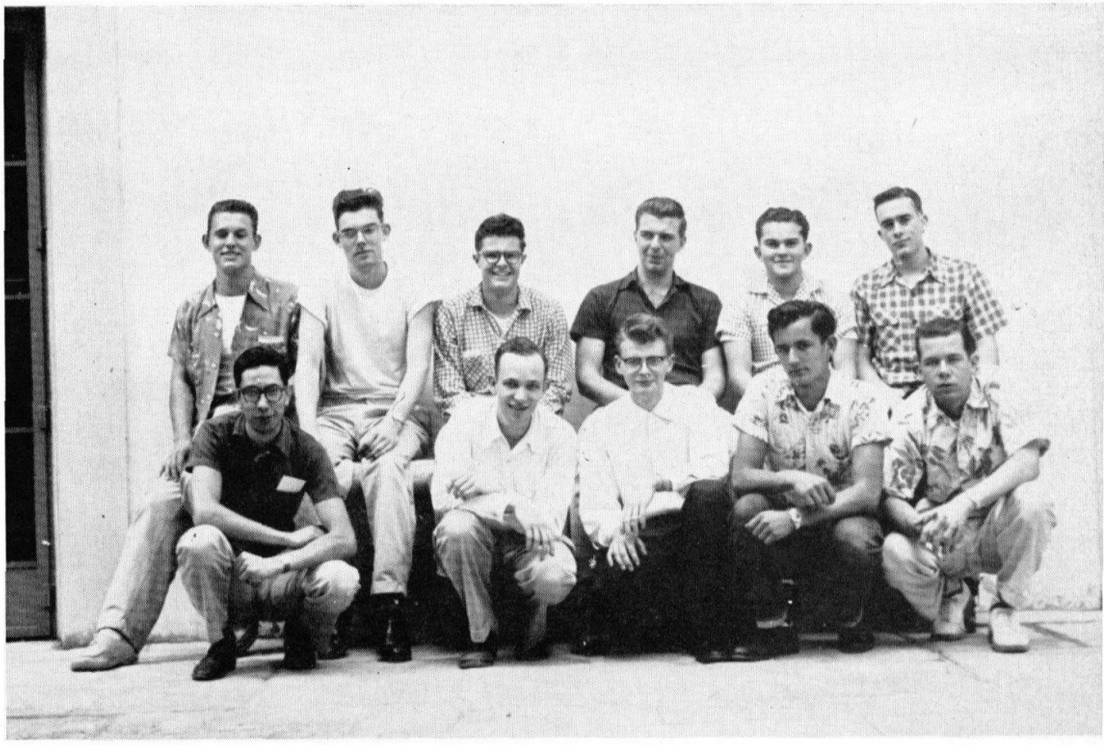
Y M C A

The "Y" is very proud of its new, larger, and more conveniently located headquarters acquired this year. Located in T-1 near the Student Houses, the new quarters provide increased office space, a new poster and publicity room, and a big new lounge which is available for relaxing, reading, and for club and organization meetings.

Advised by Beach Langston in the temporary absence of Wes Hershey this year, the "Y" again promoted closer student-faculty contact through faculty firesides and luncheon clubs and broadened its program of discussions on problems and subjects of current interest. Dr. Lee Du Bridge's talk on science and security was one of the highlights of first term. From the Chicago Divinity School the "Y" brought Dean William Hawley to survey and criticize the Tech educational program, and the results led to a series of discussions during third term on the philosophy of life, "Delving into Toynbee." A very successful film series program presented several very good, very recent academy award-winning films for student enjoyment.

This year closed with definite plans to bring a group of some of the nation's foremost leaders to the campus next year to participate in a "Leaders of America" program.

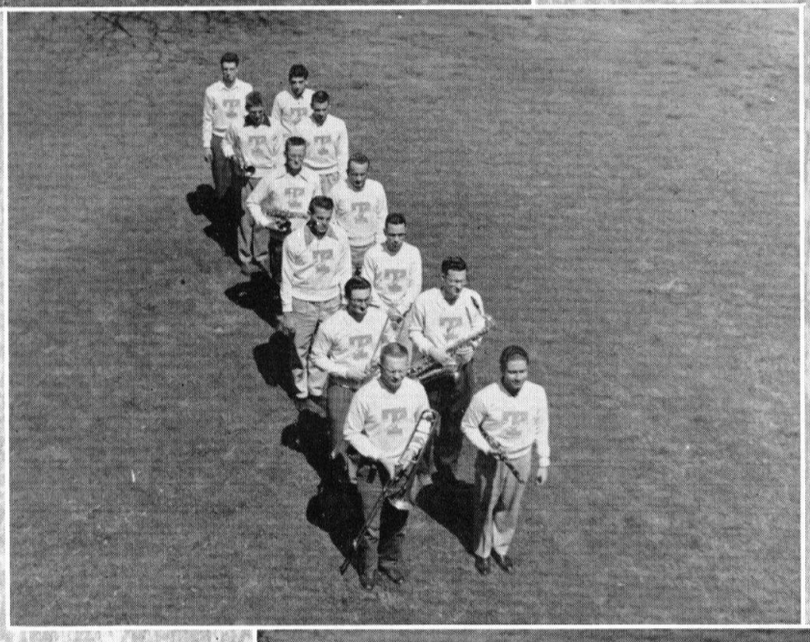
NEWMAN CLUB

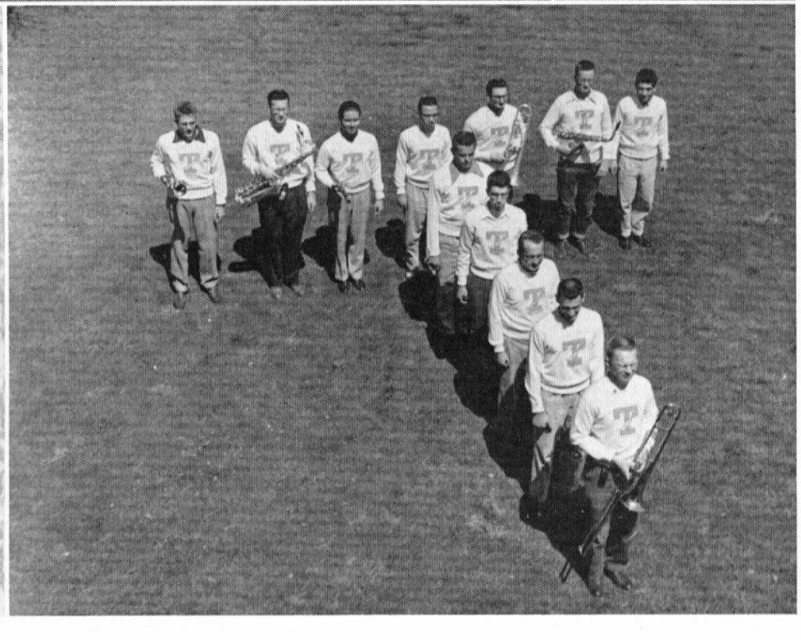


FIRST ROW, left to right: Luis Soux, Al Joncich, Walt Petersen, Dick Van Kirk, Dick Johnson. SECOND ROW: Dick Baron, Bob Curley, Frank Mastroly, Hunter Paalman, Jim Espenson, Mauritz Kallerud.

CALTECH CHRISTIAN FELLOWSHIP

FIRST ROW, left to right: Buddy Jensen, Baird Brandow, Jay Kimmel, Don Russell, Tom Noonan. SECOND ROW: Gordy Brown, John Holland, Joe Lingerfelt, Walt Thorson.





BAND

ORCHESTRA

LEFT TO RIGHT: Pat Berreman, Truman Long, Jerry Pressman, Henry Schwarcz, Bill Zimmerman, Dwight Berreman, Frank Mallory, Ed Royce, Bob Johnstone, John Stewart, Read Warriner, John Deichman.

MUSICALE

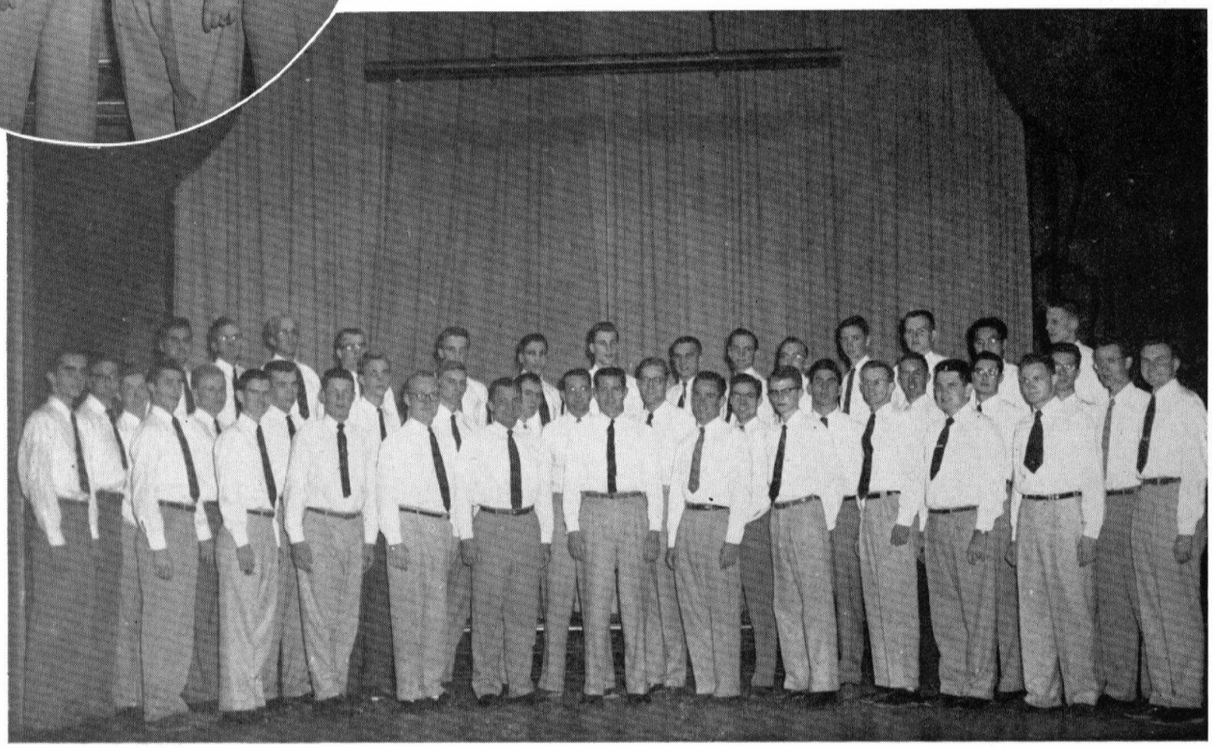
FIRST ROW, left to right: Rube Moulton, Al Farley, Gordon Reiter, Marty Tangora, Stu Goff. SECOND ROW: Barry Feinberg, Dave Hein, Bill Dietrich, Bruce McKeever, Bill Chapple, Dick Cowley.

GLEE CLUB

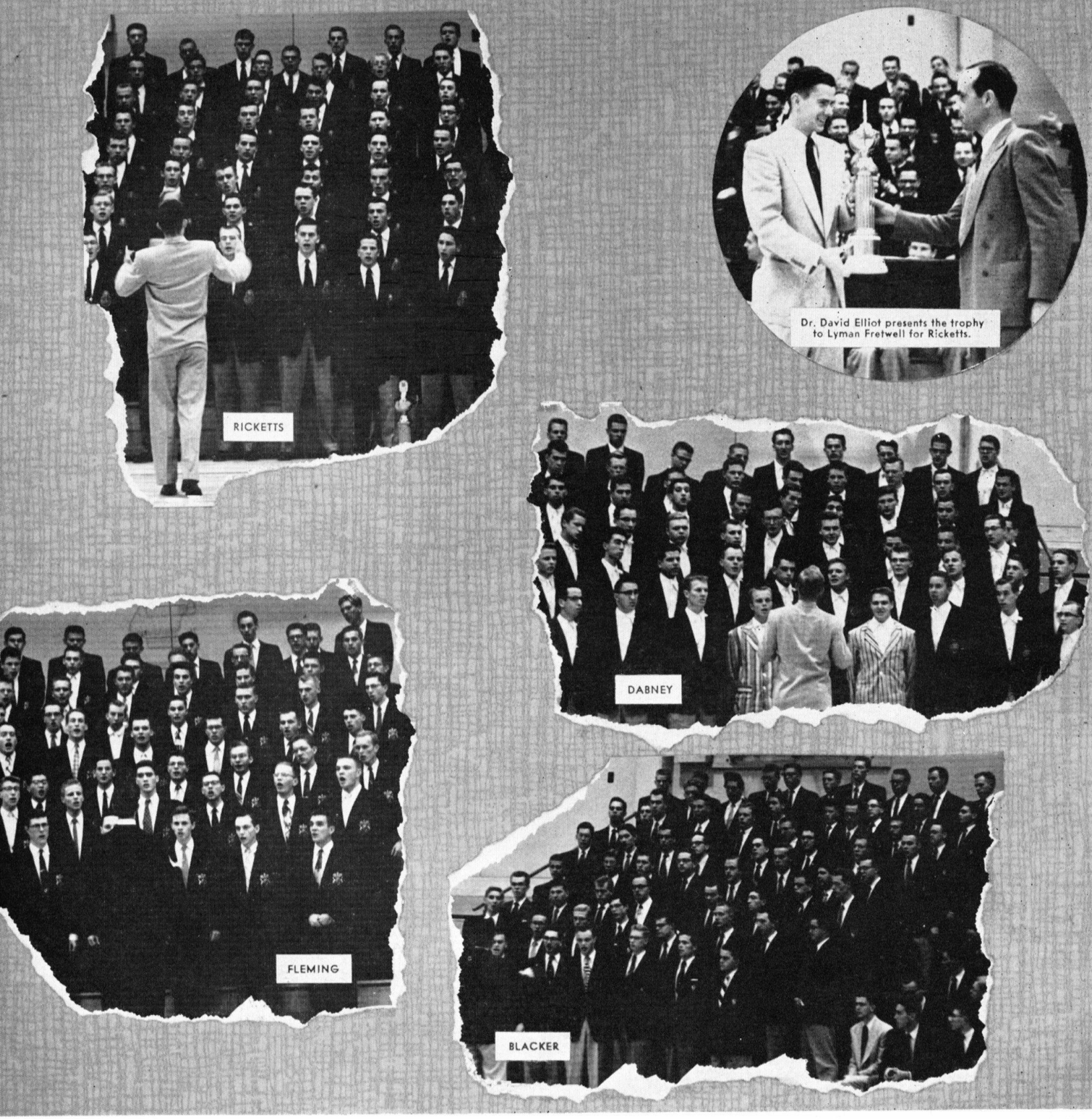
LEFT TO RIGHT: Kay Sugahara, Ted Oakberg, Olaf Frodsham (director), Ron Cochran (manager), Dick Pratt, Howard Berg (president).

Acknowledged to be the most active musical group on this campus in many years, the Caltech Glee Club has been going great guns. The Club's schedule this year has included a program at Scripps, broadcasts on station KPPC, several local concerts, and the two big events: presentation of the Caltech Spring Concert and participation in the Southern California Intercollegiate Glee Club Festival. This schedule, supplemented by appearances of the now famous Glee Club Quartet, has been backed up by regular Tuesday and Thursday rehearsals under the leadership of director Olaf Frodsham. A really hard-working organization, the Glee Club is looking forward to an even better season next year.

LEFT TO RIGHT: Harry Griffith, Dick Pratt, Rube Moulton, Charles Anderson.



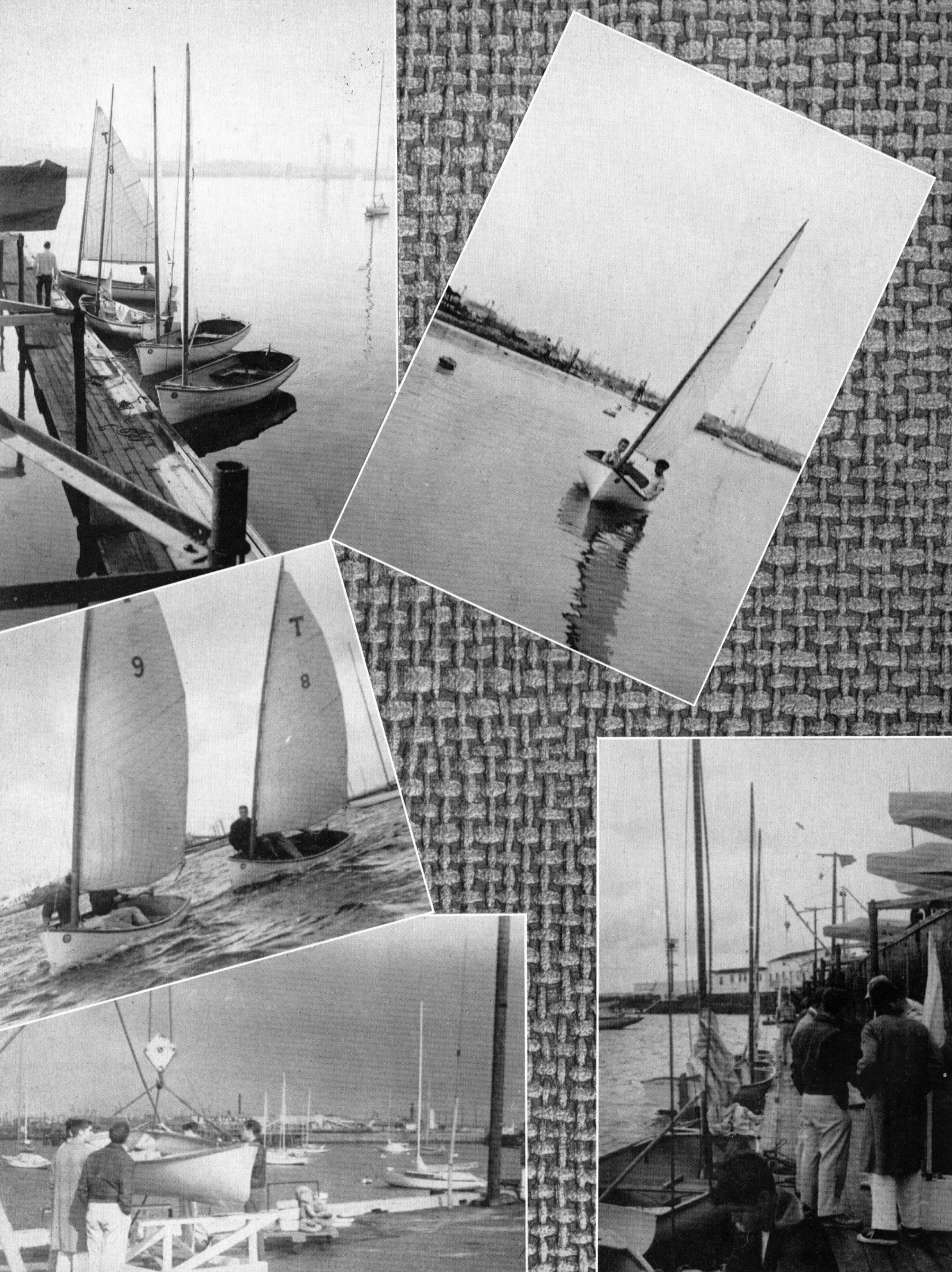
FIRST ROW, left to right: Baird Brandow, Lyman Fretwell, Dick Ashby, Ted Johnson, Harry Griffith, Olaf Frodsham, Ralph Kehle, Walt Peterson, Don Nierlich, Rube Moulton, Joe Lingerfelt. SECOND ROW: Pete Moretti, Louis Soux, Dick Pratt, Don Evans, Bob Kausen, Sam Phillips, Jan Arps, Walt Whirry, Roy Whiteker, Ron Cochran, Bob Norton, Bob Schenter, Tony Howell, Bill Dietrich, Bernie Lopez, Jim Wade, Pete Stair. THIRD ROW: Harrison Schmitt, Ted Oakberg, Roy Stake, Jim Mebust, Danny Wulff, Barry Feinberg, Dick Smisek, Bob Moore, Charles Anderson, John Thomas, Phil Thacher, Howard Berg, Kay Sugahara, Joe Fineman.



INTERHOUSE SING

The second annual Interhouse Sing, sponsored by the Glee Club, was again met with a lot of enthusiastic support among the four houses. As one of the first events to be held in the new gym, the Sing drew a large public audience. The trophy was taken this year by Ricketts House, directed by Lyman Fretwell ("a physicist"), and many favorable comments were drawn by each house's performance.

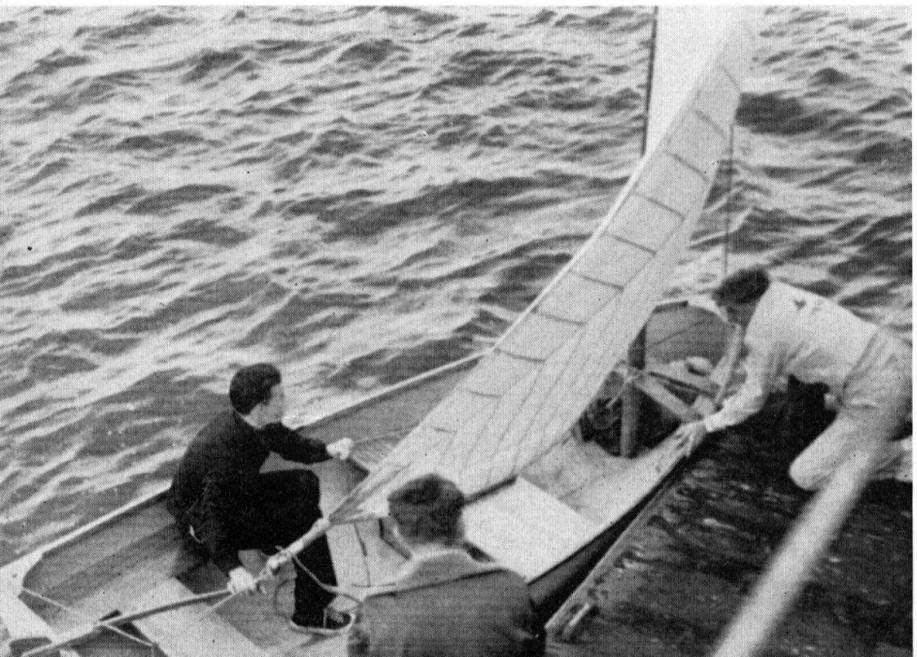
This year's contest number was "Cindy," a southern mountain song; in addition to the contest number, each house sang another selection of its own choice. As a very impressive conclusion to the program, the four houses combined under the direction of Mr. Olaf Frodsham, Glee Club Director, sang "Guadeamus Igitur" and the Alma Mater, "Hail CIT."



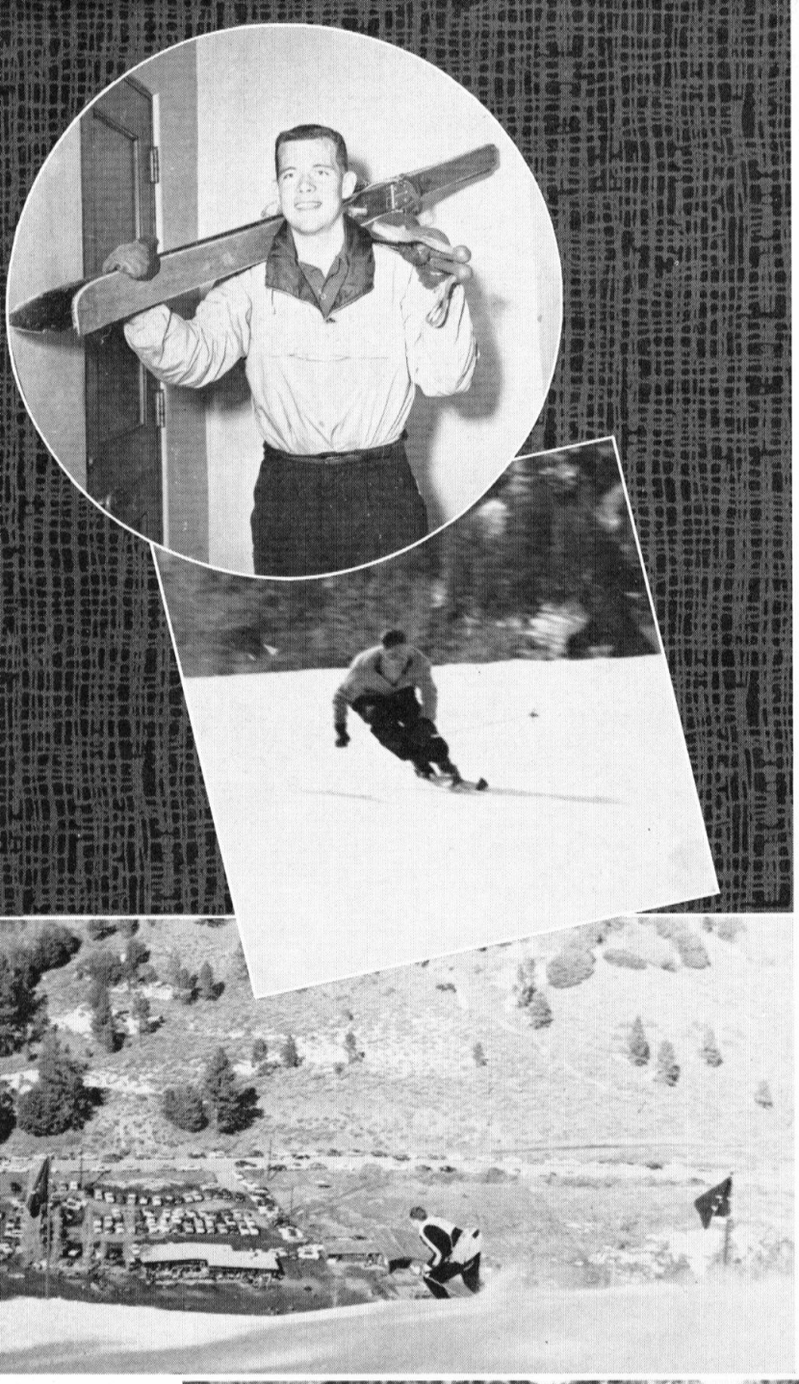
SEATED, left to right: Eric Johnson, Jan Arps, Gordon Barienbrock, Chuck Helsley, Dave Allen, John Lansingh (honorary), Harvey Frey. STANDING: Fritz Trapnell, Dick Lewis, Ron Wann.

Under the volunteer coaching of Pete Serrell, Caltech alumnus and past national champion in the international-14' sailing dingies, the Sailors enjoyed another eventful year. Most of first term was spent making the Club's six "Glascat" dingies ship-shape for a vigorous season. Weather permitting, the Club tried to sail nearly every week end during the season, while meetings on campus during the year featured movies and prominent speakers. When the weather proved too rough to hoist a sail, Club members usually weather the storm safely hove to in the lee of B & G reworking another "Falcon" sloop to add to their fleet. The Sailors have high hopes of floating a pair of "Falcons" next year in addition to the six dingies. This summer Club members will have the opportunity to sign on as crew members on ocean-racing yachts, including those in the famous Honolulu race.

HARVEY FREY
Commodore



SAILING CLUB



SKI CLUB

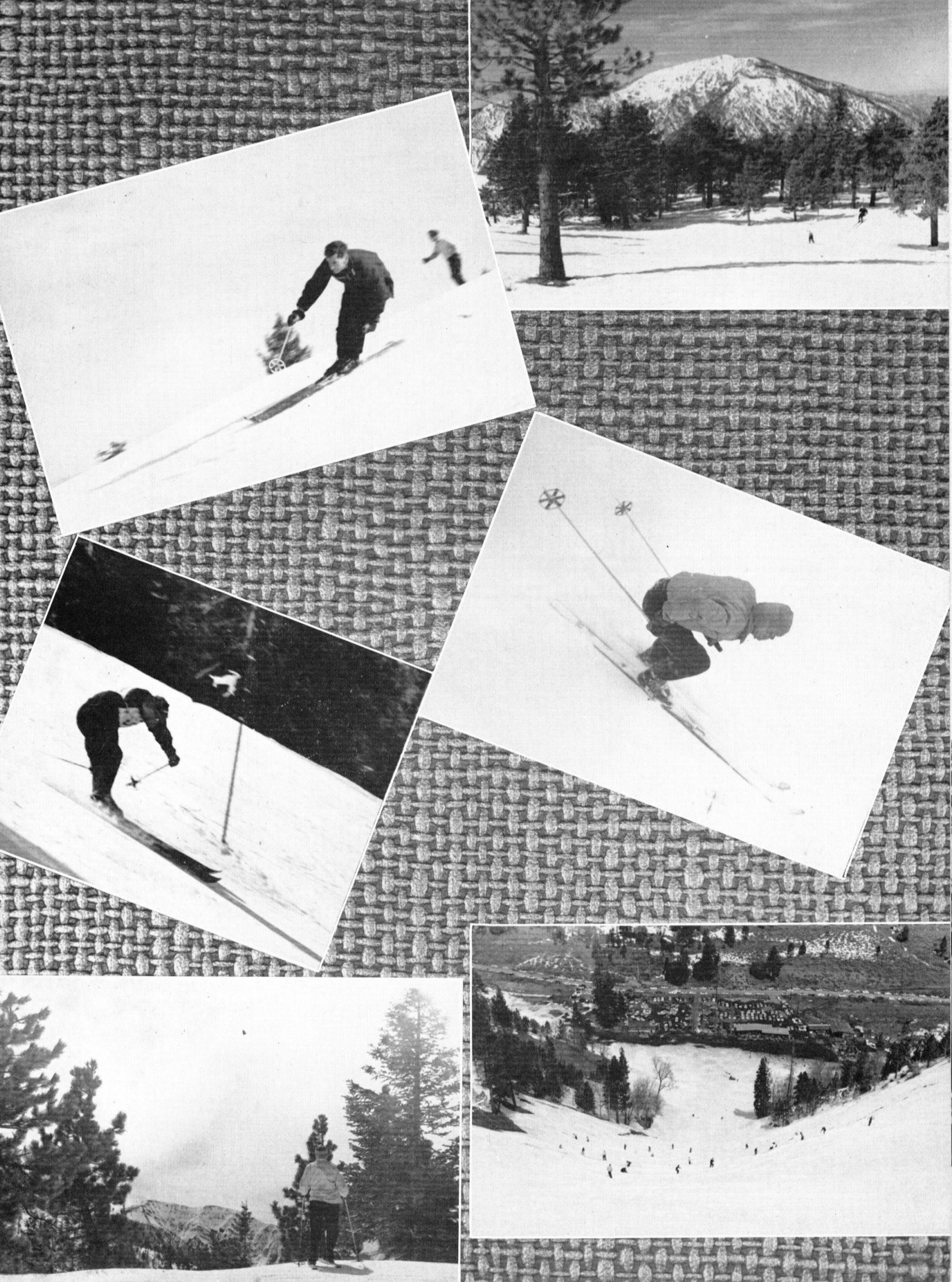
The enthusiasm of Ski Club members is usually evidenced by the number of sun and wind-burned faces among the student body during the snow season. During the warmer weather, when skiing isn't possible, the guys get together frequently to look at movies and talk about ski trips.

The Club maintains and supervises the use of the Ski Hut in Snow Valley. Every year they conduct the interhouse ski races as part of the interhouse athletic program. This year over the Thanksgiving holidays the Club took a trip to Mammoth for several days of skiing high in the Sierras.

Something new was added to Club activities this year. A Ski Team was organized from among the members of the Club and raced once this season against Pomona. Although defeated by a much more experienced Pomona team, the Tech team was undaunted and is planning a full slate of meets next year. The Club's out to get a lot of new recruits next year, and it's offering skis, reduced rates on the ski runs, instructions, and the lure of the snow-covered slopes to all interested.

DICK JOHNSON
President

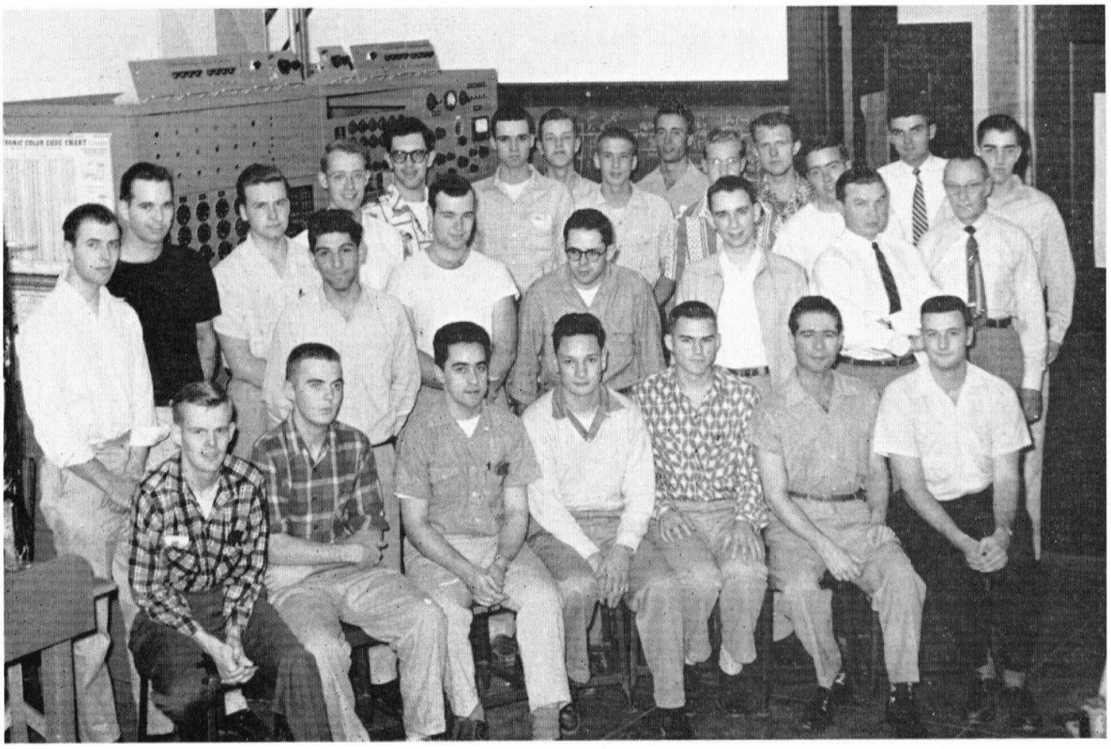
FIRST ROW, left to right: Luke Bogdanovic, Dick Jali, Dick Johnson, Bob Jetter.
SECOND ROW: Hugo Fischer, Tom Slanger, Ted Matthes, Fritz Benning, Dick Morse, Bruce Blackie, John Velman, John Weisner, Dave Ackley, Bob Johnstone.



SAE

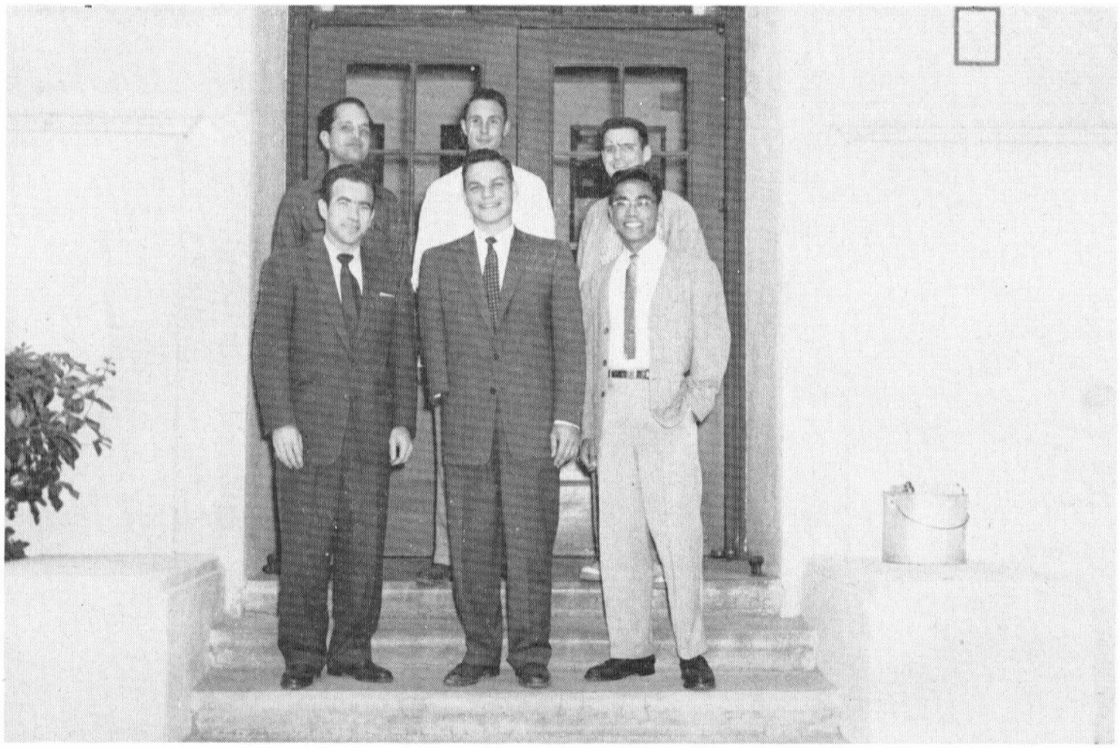
FIRST ROW, left to right: Bob Herzog, Roy Stake, Walt Weiss, John Lukesh, Stan Parkill, Baird Brandow. SECOND ROW: Dick Manley, Dwight Dennis, Rex Peters, Dick Fiddler, Chuck Luke, Bruce Nevelli, Jan Arps, Frank Mastroly, Pete Moretti, Perk Eiselen.

AIEE-IRE



FIRST ROW, left to right: Carl Johnson, Gordon Reiter, Vince Marinkovich, Marco Negrete, Walt Specht, Bernie Schweitzer, Hugh Leney. SECOND ROW: Walt Whirry, Tom Taussig, John Dresser, Bob Simpson, Gary Gayron, Dr. Lester Field. THIRD ROW: Gene Dryden, Pete Stair, Phil Wade, John Weisner, Pete Smith, Bill Konrad, Bob Marshall, Ray Grieser, Dr. Francis Maxstadt. FOURTH ROW: Lee Schmidt, Jerry Pixton, Delano Brouillette, Jack Rocchio, Dick Alvarez.

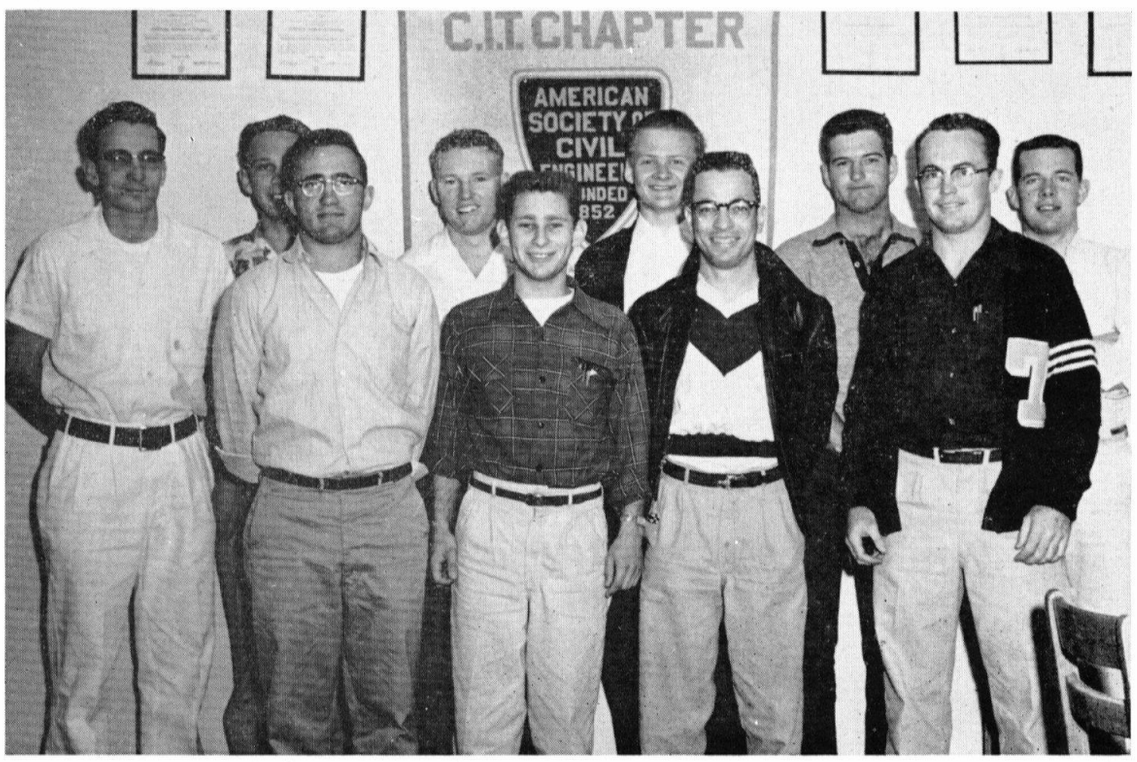
ASME

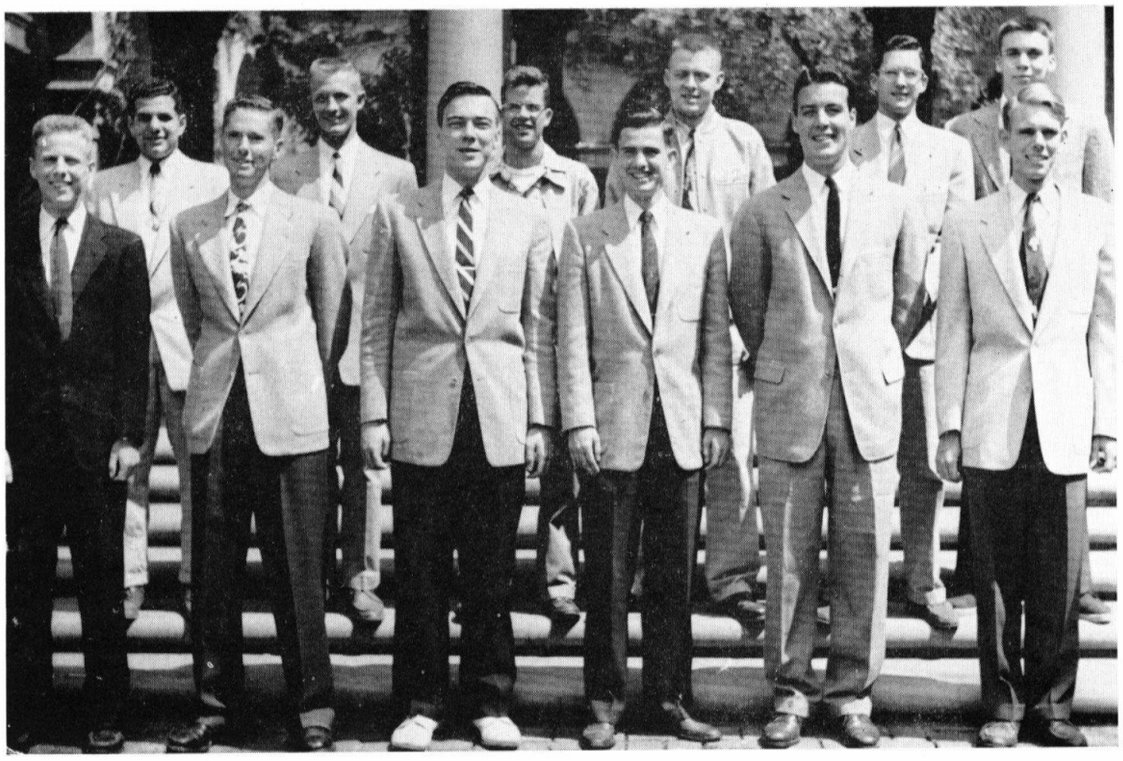


FIRST ROW, left to right: Jim McCloud, Bill Lapson, Bob Ragsac. SECOND ROW: Dick Hyde, Al Teague, Kirk Irwin.

ASCE

FIRST ROW, left to right: Ed Hershberger, Gary Dietrich, Jim Cowan, Jerry Royce, George Madsen. SECOND ROW: Paul McHorney, Van Walkley, Arne Kalm, Dick Schmid, Dick Johnson.



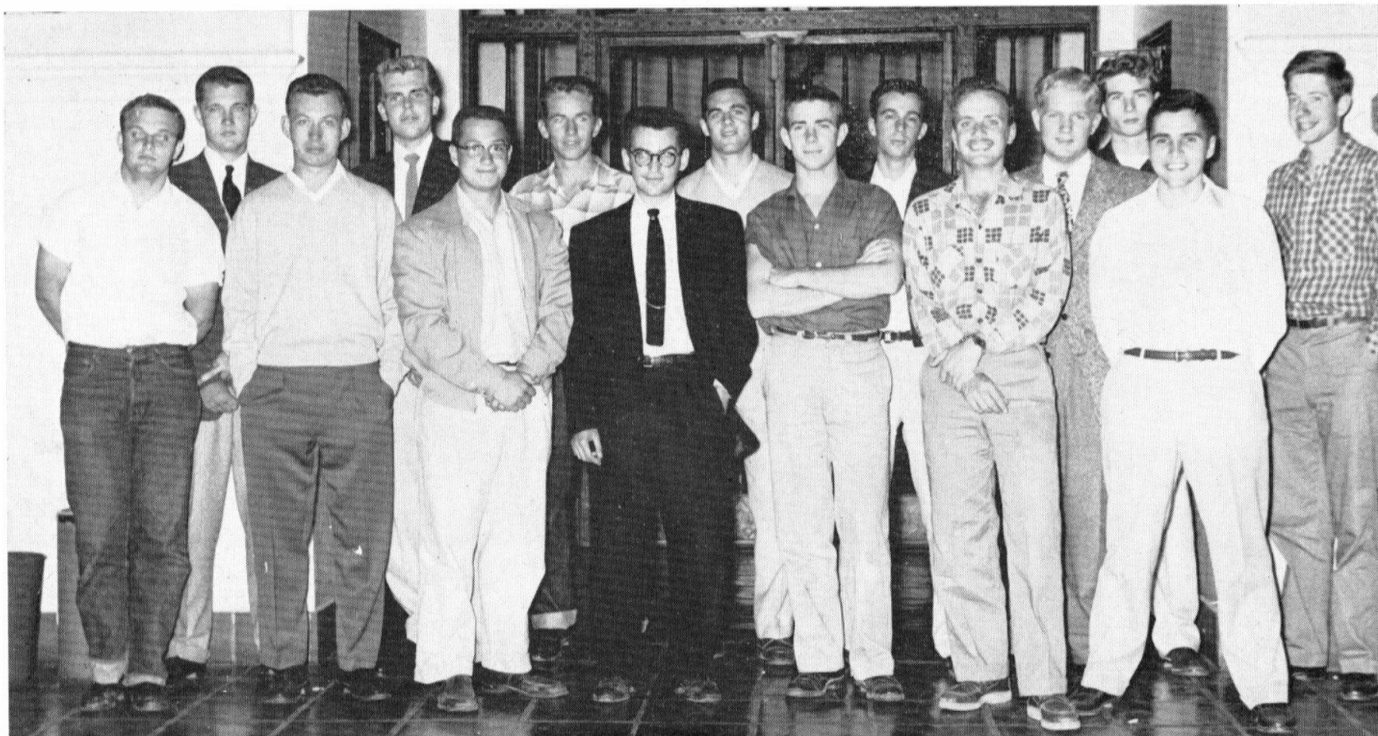


FIRST ROW, left to right: Joe Fineman, Gene Epstein, Dick Hundley, Lyman Fretwell, Fritz Trapnell, Howard Marshall. SECOND ROW: Ray Orbach, Kim Malville, Stu Bowen, Gerhard Hahne, Ken Laws, Bill Below.

PHYSICS CLUB

GEOLOGY CLUB

FIRST ROW, left to right: Walt Haenggi, Gene Nelson, Sam Sims, Henry Schwartz (mascot), Larry Griffith, Bob Meade, Harrison Schmitt. SECOND ROW: Conrad Housley, Dick Nielsen, Chuck Helsley, Dan Horowitz, Carl Bowin, Chuck St. Clair, Jim Hall, Dick Pratt.

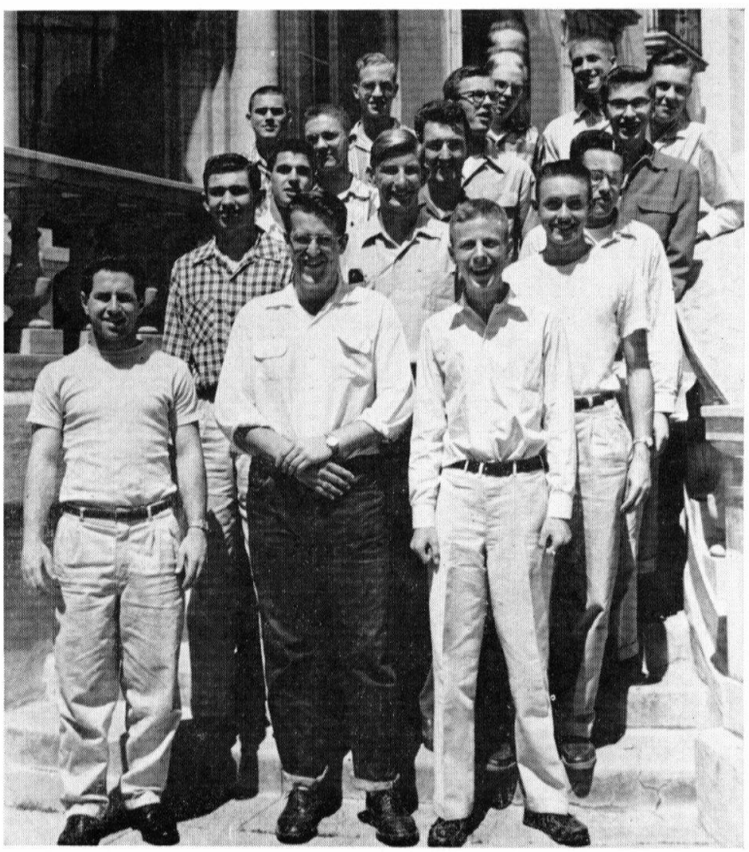


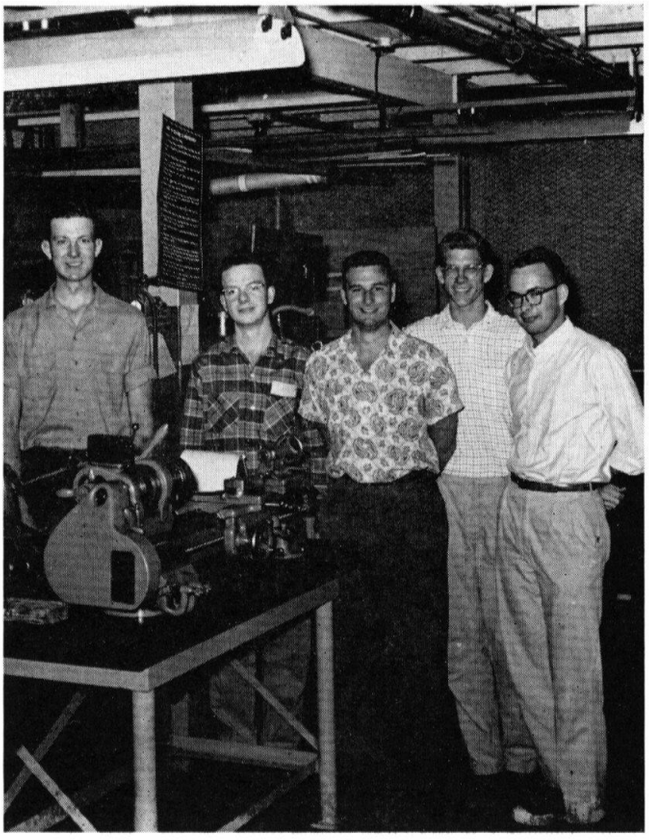
ACS

FIRST ROW, left to right: Martin Vogel, Dick Piccolini, Jay Glasel, Stan Manatt, Larry Morantz, Dave Tansey. SECOND ROW: Harold Almond, George Kaufmann, Al Farley, Bob Deffeyes, Roger Caputi, John Carney, Stan Grotch, Howard Berg, Kim Cranney. THIRD ROW: Chuck Goebel, Dick Miller, Tets Yamane, Jerry Klaz, Al Goldberg.

RADIO CLUB

FIRST ROW, left to right: Dave Leeson, Andy Perga, Joe Fineman. SECOND ROW: Bob Tokheim, Jan Arps, Bob Polansky. THIRD ROW: Chuck Malone, Jack Zeilenga, Gene Barston. FOURTH ROW: George Oetzel, Don Pinkerton, Don Roberts. FOURTH ROW: Walt Specht, Bob Marshall, Tod Whitmore, Mike Konrad, Lee Schmidt.





LEFT TO RIGHT: Joe Gibbs, John Carney, Hugh Leney, Fritz Benning, John Converse.

STUDENT SHOP

MATH CLUB

FIRST ROW, left to right: Roy Paul, Dave Cantor, Bill Below, Dr. Tom Apostol.
SECOND ROW: Mike Bleicher, John Wolfe, Ray White, Nick Grossman.

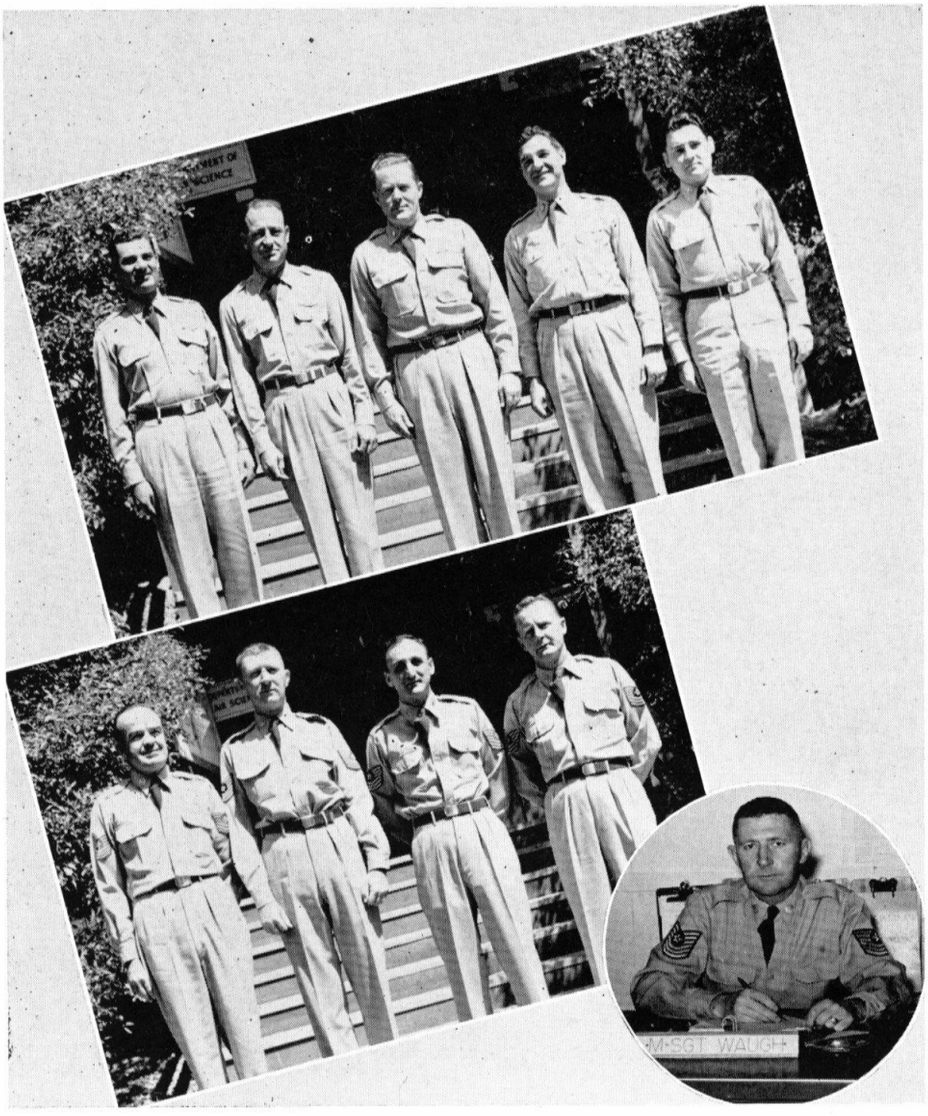
CHEMICAL ENGINEERING CLUB

FIRST ROW, left to right: John Lansingh, Roger Caputi, Larry Morantz, John Carney, Jim Espenson, Dave Tansey, Eric Johnson, Tets Yamane. SECOND ROW: Harold Almond, Stan Manatt, Dick Miller, Chuck Goebel, Al Poisner, Myron Black, Al Goldberg, Don Reiterman, Bill Moeur. THIRD ROW: Al Farley, Mauritz Kallerud, Bob Deffeyes, Jerry Klaz, Kim Cranney, Stan Grotch.

IAS

SEATED, left to right: Dick Jali, Ralph Miles, Al Goldman, Gordon Fullerton. STANDING: Dick Smisek, Curt Michel, Larry Berry, Bob Herzog, Jerry Peck, Jim Koontz, Dick Cowley, John South, Bill Kern.

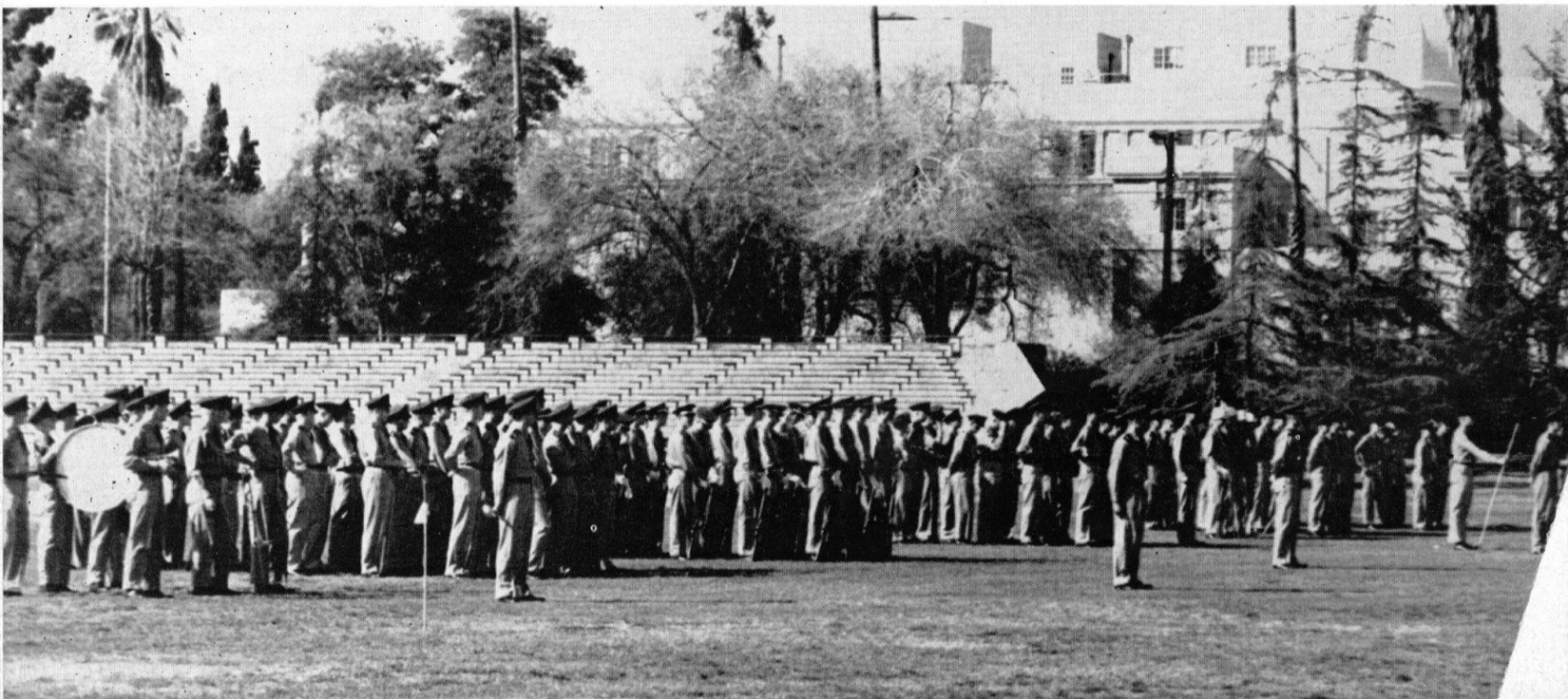
AFROTC

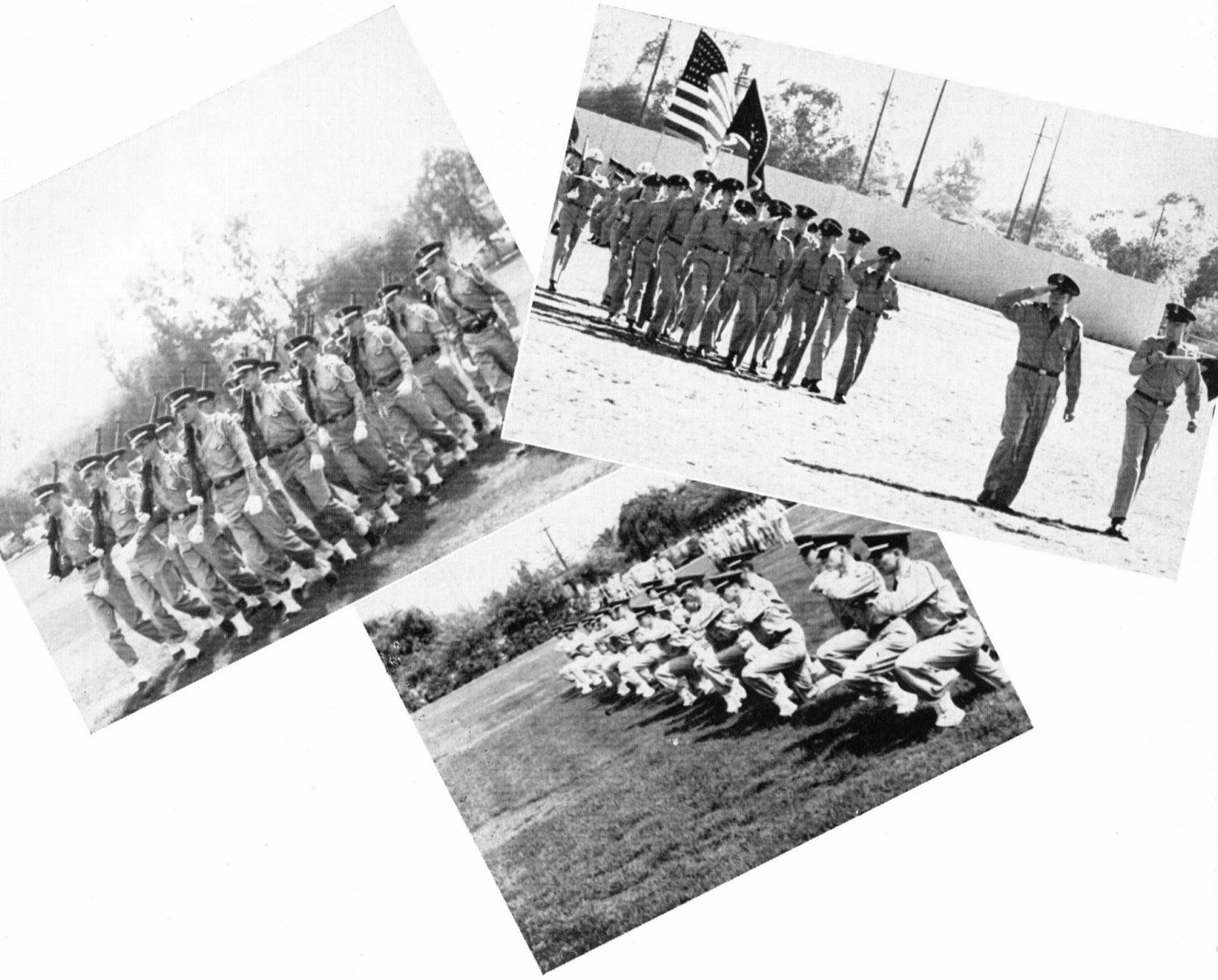


LEFT TO RIGHT: Captain Leonard Zorne, Major William Libby, Lieutenant Colonel Lyle Johnston, Major Robert Steffy, Captain Henry Gibbia.

LEFT TO RIGHT: Master Sergeants Eugene Justis, Harold Waugh, Dominic Zangari, LeRoy Lee.

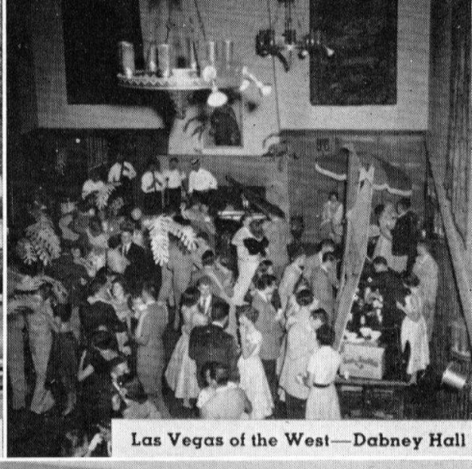
Master Sergeant Harold Waugh.





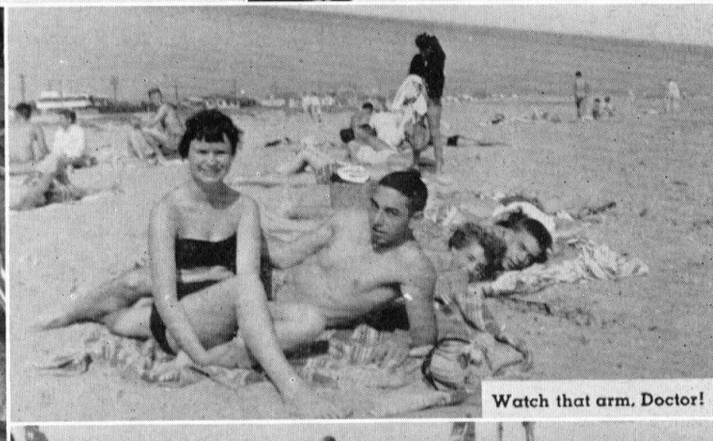
LOST WEEKEND 1954

Look, Ma, no hands . . .



Las Vegas of the West—Dabney Hall

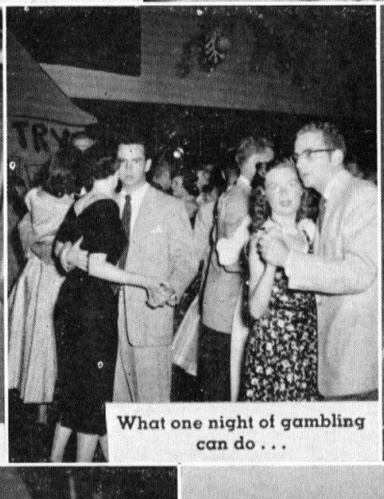
6 and I ride back home



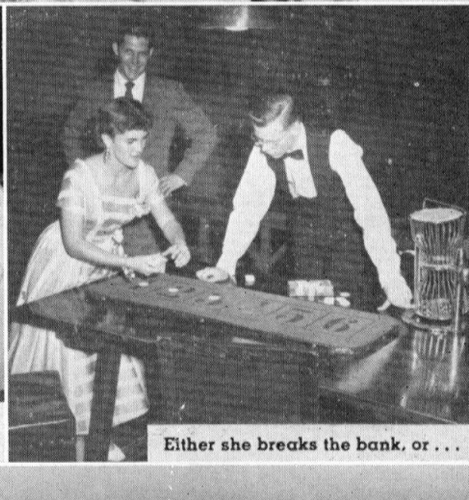
Watch that arm, Doctor!

Feet cold?

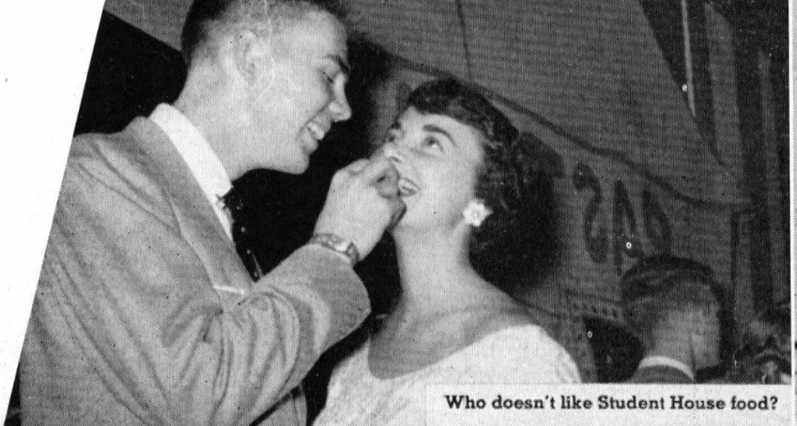
Who needs Monte Carlo?



What one night of gambling can do . . .

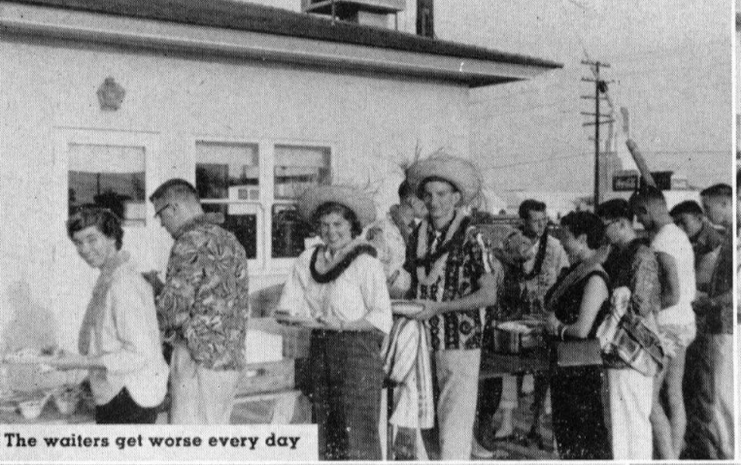


Either she breaks the bank, or . . .



Who doesn't like Student House food?

Can't stop playing bridge!



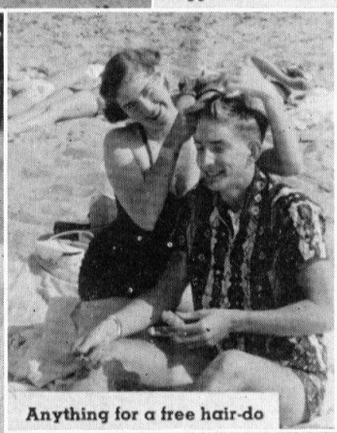
The waiters get worse every day

Seconds?

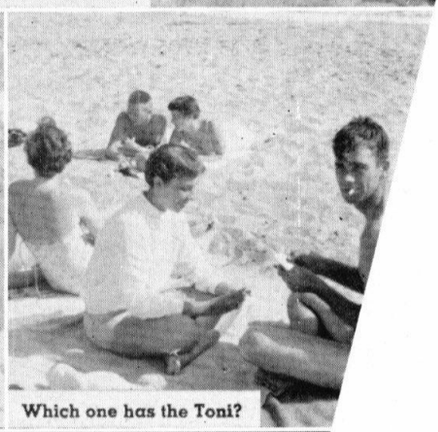
Water, water everywhere—but they're all dry!

Typical student house meal . . .

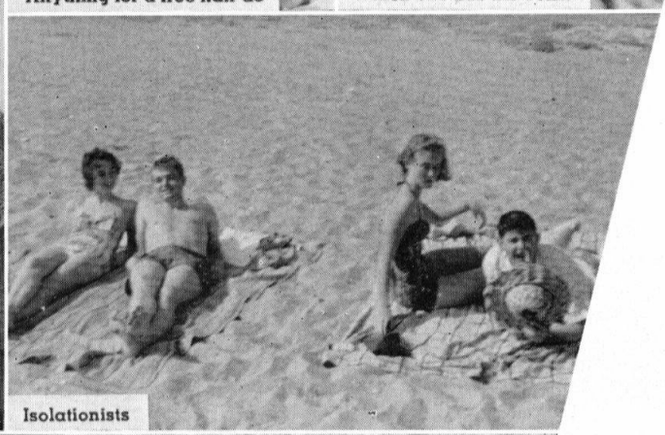
Meet new-car Johnny



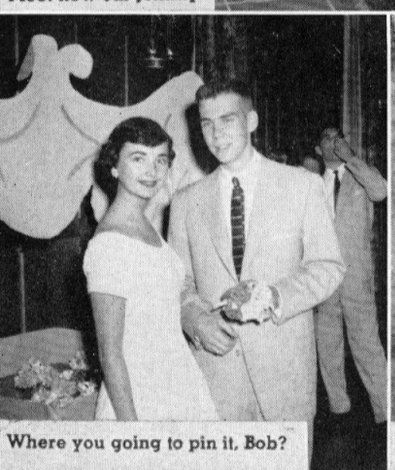
Anything for a free hair-do



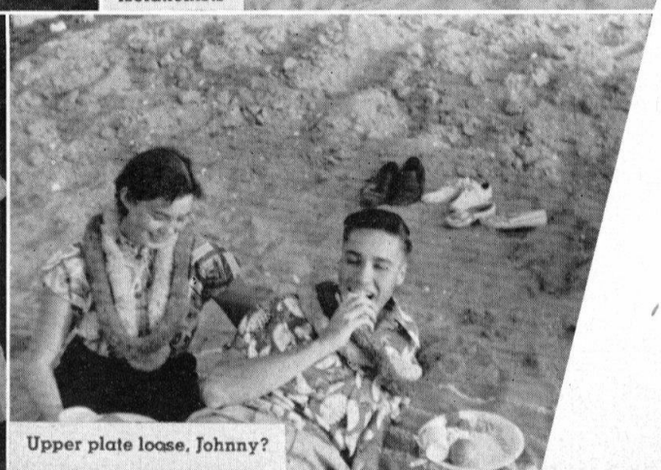
Which one has the Toni?



Isolationists

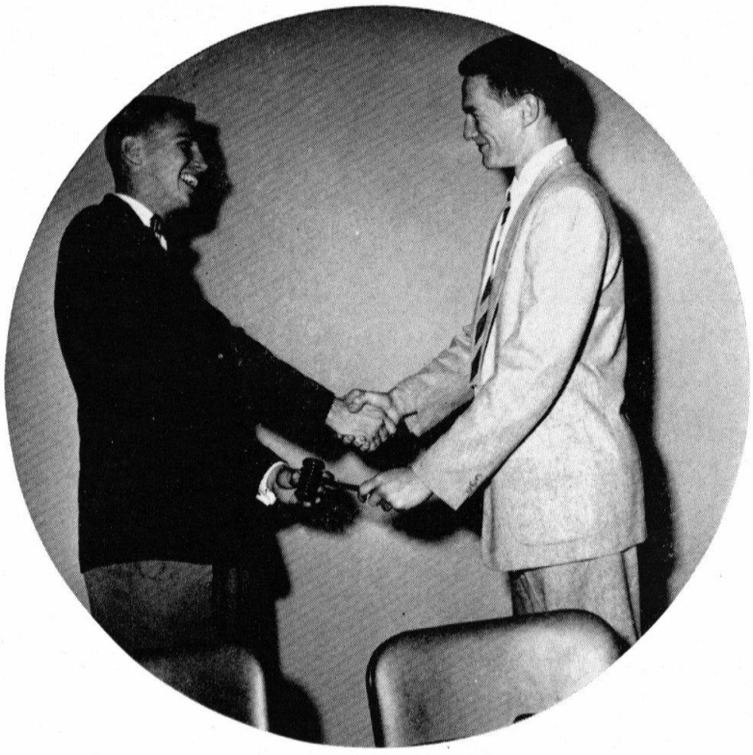


Where you going to pin it, Bob?



Upper plate loose, Johnny?

ASCIT ACTIVITIES



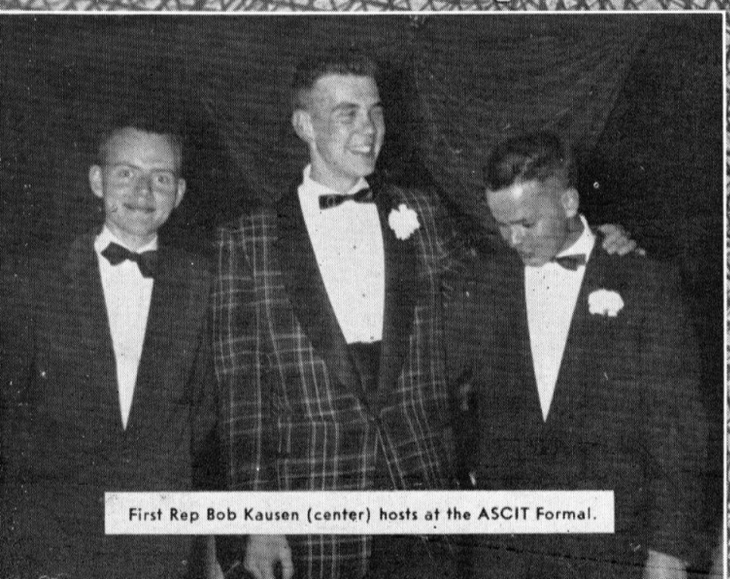
Jim Adams, ASCIT President for 1954-55, presents the gavel to Phil Conley, ASCIT President for 1955-56.

ASCIT BOARD OF DIRECTORS, left to right: Jon Harford, Bill McDonald, Phil Conley, Vince Marinkovich, Jim Adams (chairman), Howard Berg, Ted Johnson, Bob Kausen, Fritz Trapnell.

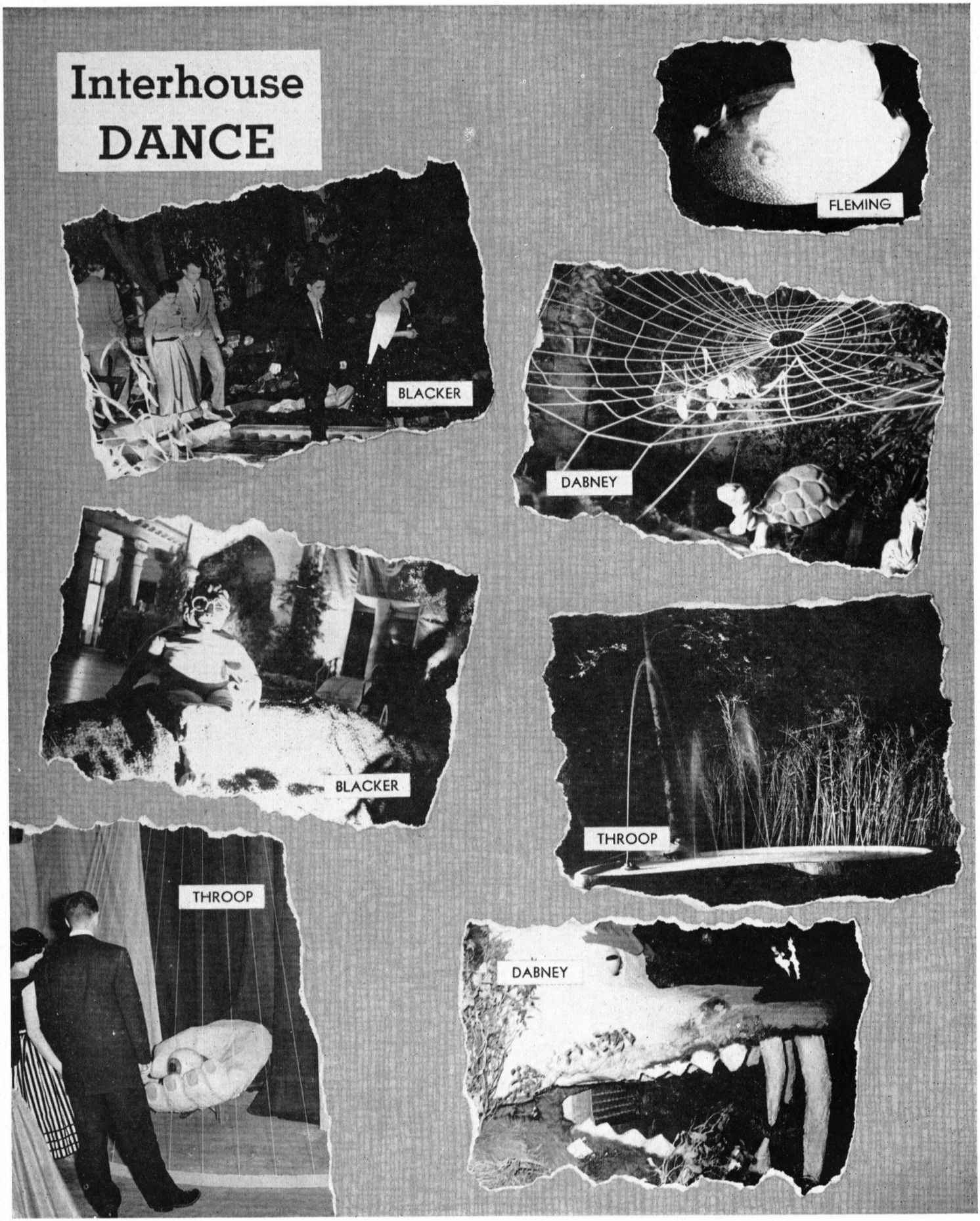
Fleming wins Faculty Banquet for best solicitation in the ASCIT Charities Drive.

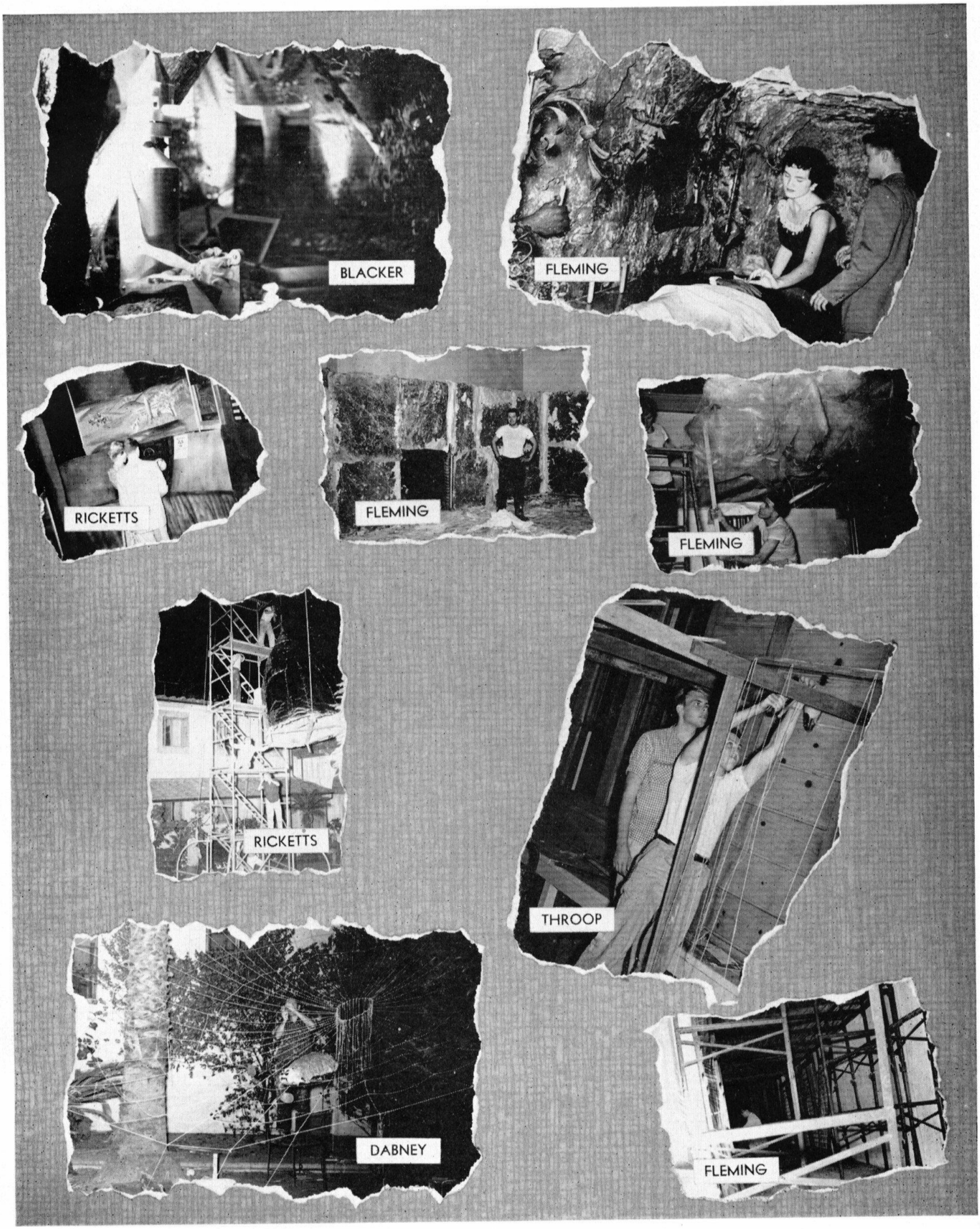
CHARITIES DRIVE

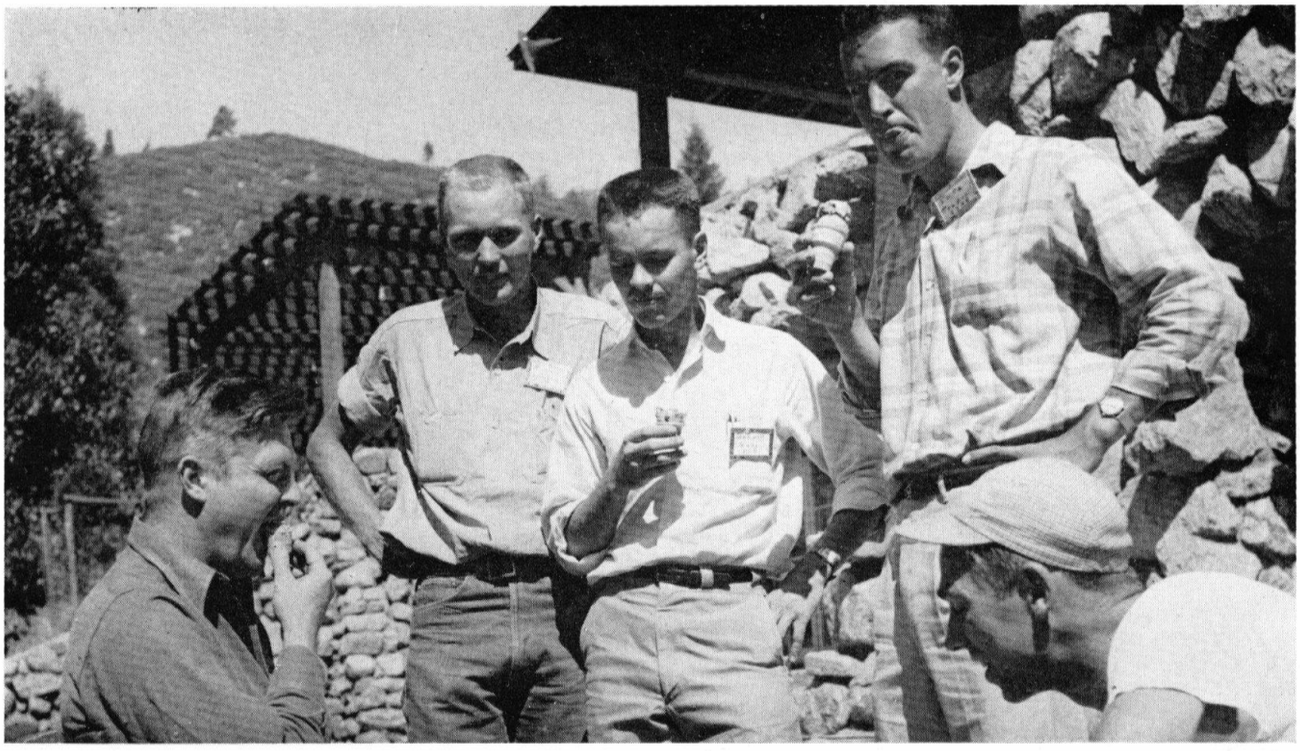
ASCIT FORMAL



First Rep Bob Kausen (center) hosts at the ASCIT Formal.

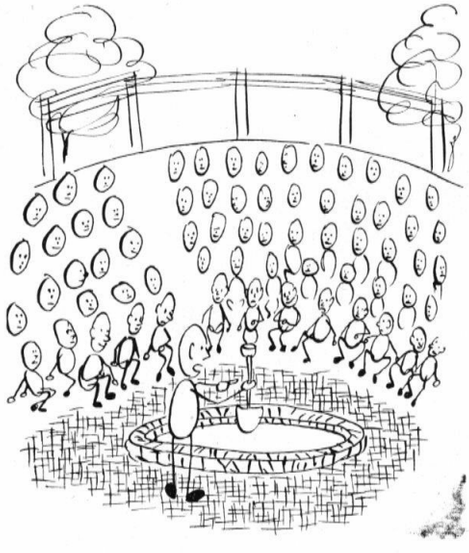

Interhouse
DANCE
FLEMING
BLACKER
DABNEY
BLACKER
THROOP
THROOP
DABNEY


BLACKER
FLEMING
RICKETTS
FLEMING
FLEMING
RICKETTS
THROOP
DABNEY
FLEMING

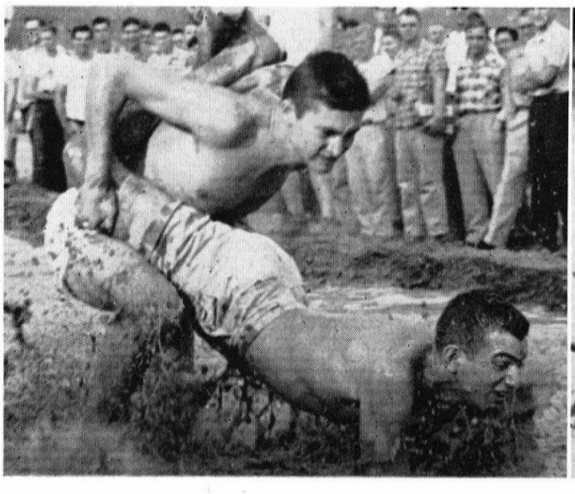


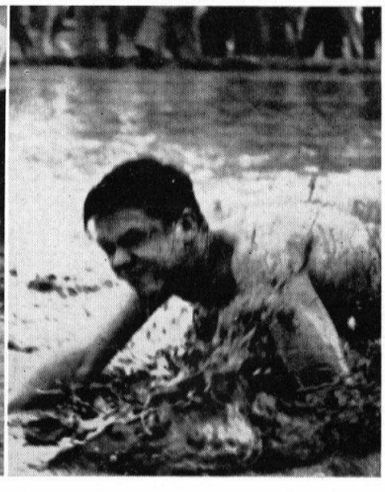
Wheels at Student Camp: Dr. George Mayhew, Ron Shreve, Denver Gore, Fritz Trapnell, John Ruckmick.

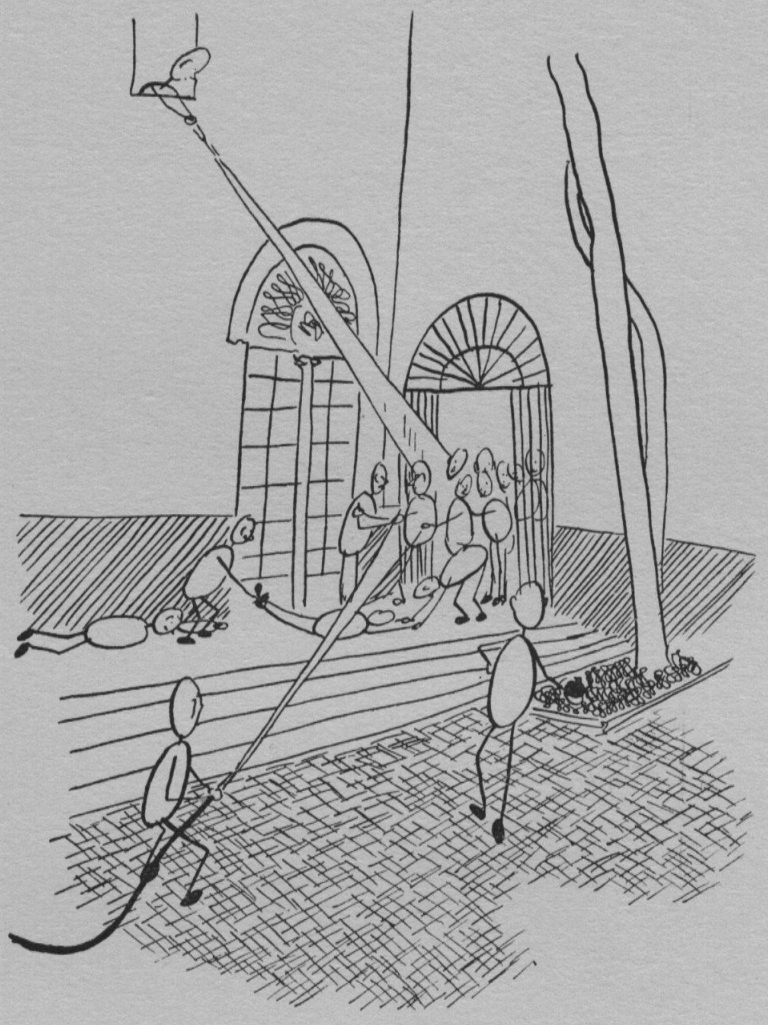
FROSH CAMP



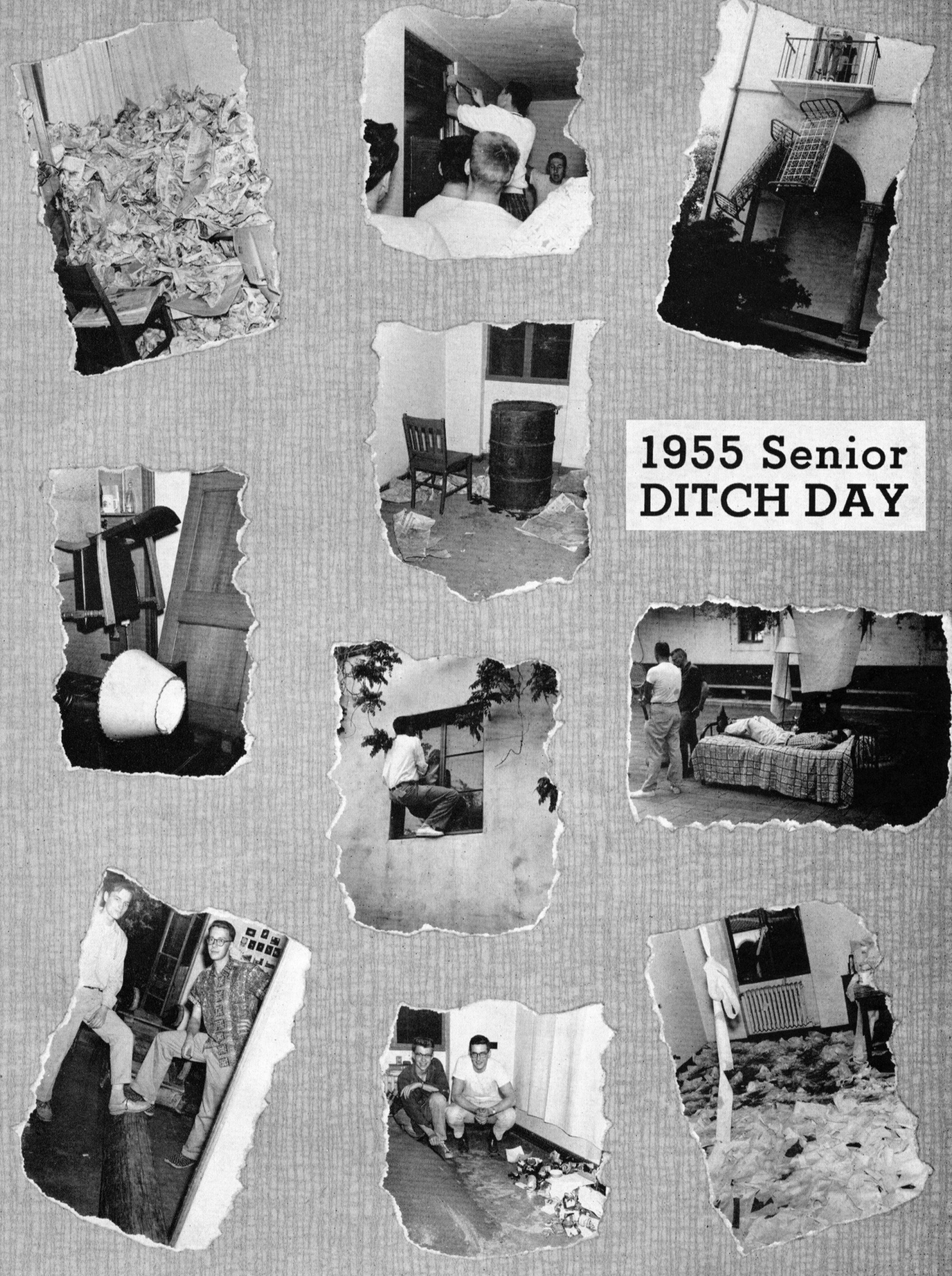
MUDEO



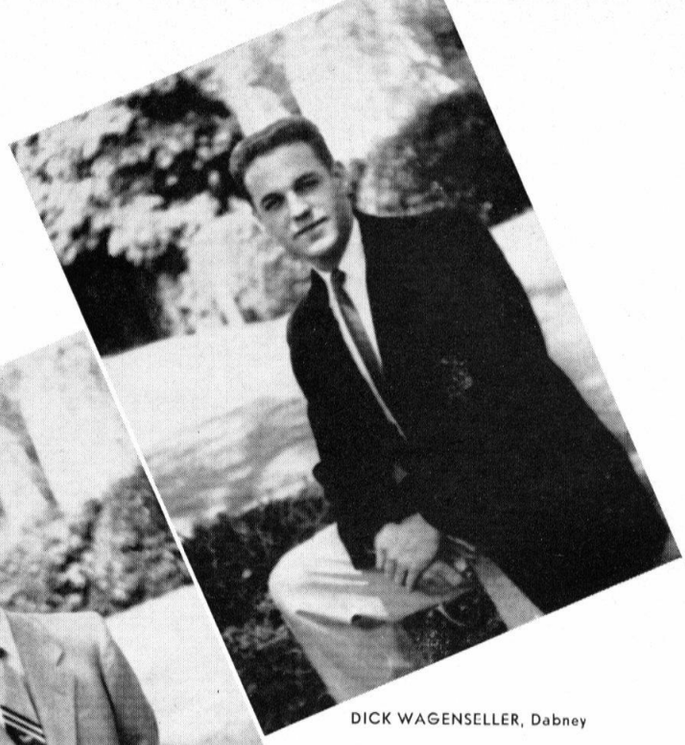




Houses


1955 Senior
DITCH DAY

DON ROBERTS, Ricketts



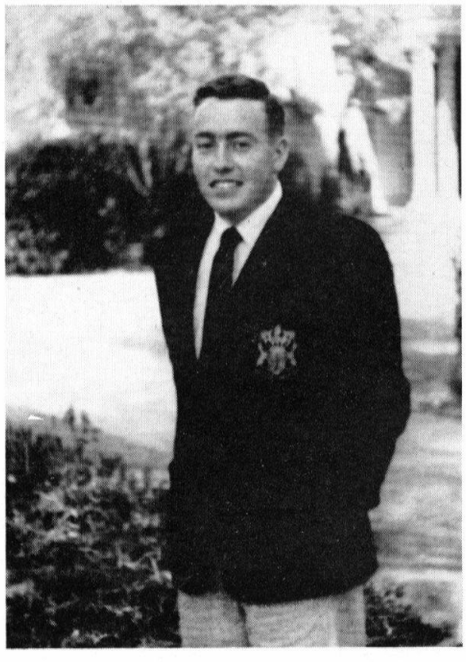
DICK WAGENSELLER, Dabney

JOHN ANDELIN, Throop

AL HELGESSON, Blacker

HOUSE PRESIDENTS

RAY GRIESER, Fleming

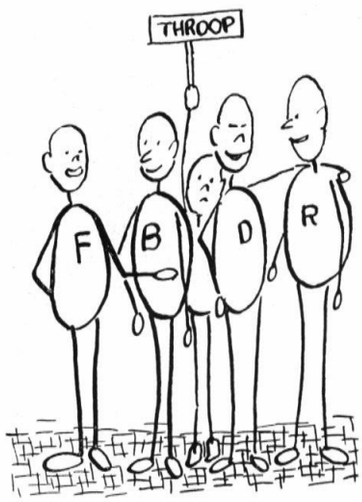


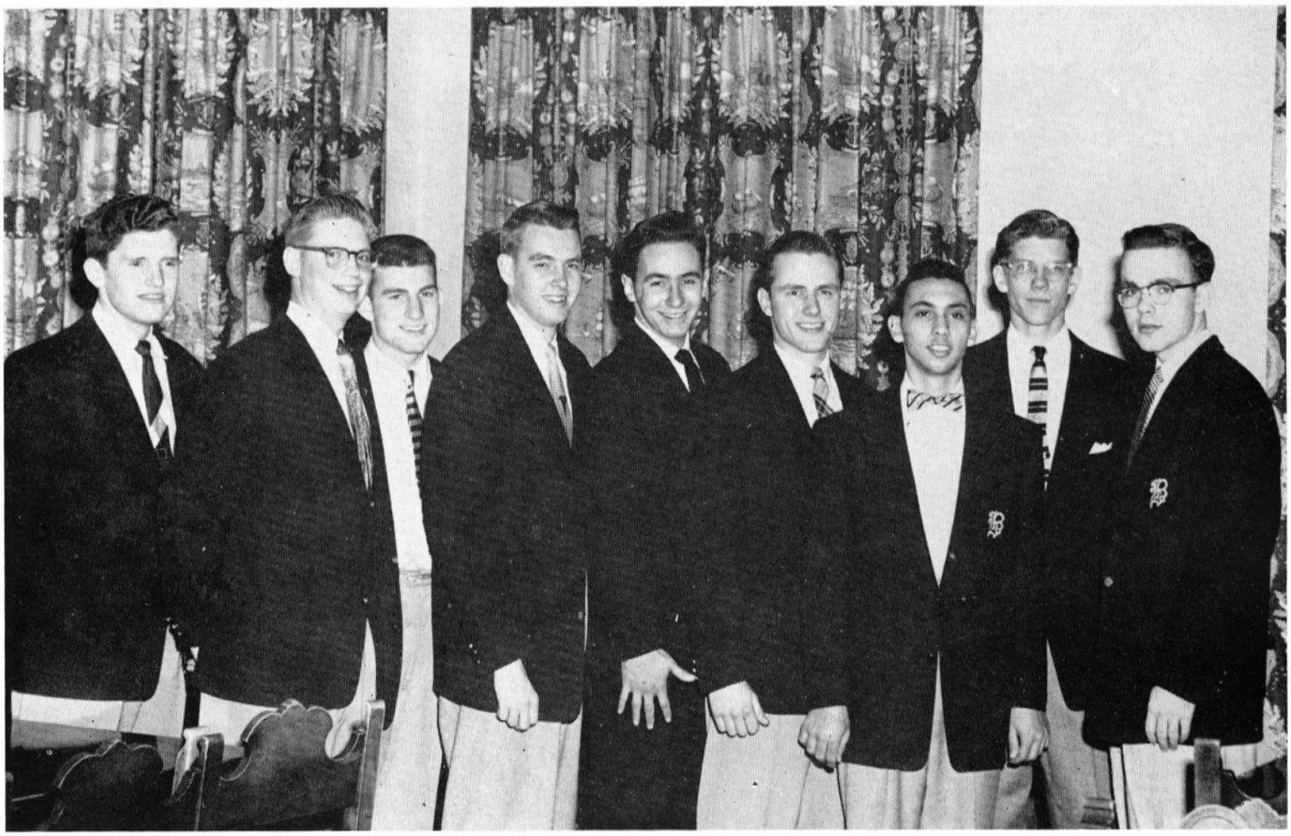
SEATED, left to right: John Andelin, Al Helgesson, Don Roberts (president), Ray Grieser, Dick Wagenseller. STANDING: Harvey Frey (secretary), George Epstein, Jack Rocchio, Al Goldman, Jim Snyder, Bill Purves. NOT PICTURED: Jim Lloyd.

INTERHOUSE COMMITTEE

The Interhouse Committee consists of the presidents and vice presidents of the five Student Houses and an elected secretary, and meets once a week to hash out Student House problems. Each year at the beginning of first term the IHC decides on the rules of frosh rotation to maintain fairness to both the houses and the frosh. The Committee sets up all discobolus and interhouse sports rules, decides on any disputed game results, and approves varsity ratings. Disagreements between houses may be brought before the IHC, and any problem concerning any or all of the houses may be discussed.

Added to the responsibilities of the IHC this year was the new Game Room. The Game Room has proved to be a great asset to the houses, and the facilities it has are for the exclusive use of house members. The IHC established a Game Room Committee of representatives from each house to supervise and maintain the equipment in the room and to set up rules for its use. Under the care and direction of the Game Room Committee the facilities may be enjoyed by house members for a long time to come.





BLACKER HOUSE OFFICERS, left to right: Dick Stark, Myron Black, John Velman, Paul Lindfors, George Epstein, Al Helgesson, Al Poisner, Fritz Benning, John Young.

BLACKER HOUSE

Blacker survived freshman rotation with no more than the usual number of blistered hands from the two weeks of intensive hand-shaking. And lo and behold, when the smoke cleared, it was found that Blacker's freshmen were becoming rapidly adjusted to the Caltech atmosphere. Their youthful spirit was immediately channeled into more serious endeavors, like water fights engineered by Pledge-master Epstein. After several such water-wars, peace was declared by higher authorities and the spirit was diverted to other activities.

From the first contest in the race for the Interhouse Athletic Trophy, it appeared that Blacker could not be defeated. The boys in blue, cheered on by substantial numbers of spirited Blacker men, took first places in Softball, Cross-Country, Tennis, and Track. By the end of the second term the pace had not slowed down and Blacker stood in a good solid first place. Athletic Managers Poisner and Black had succeeded in working up the enthusiasm that put real meaning into the spirit of Interhouse athletics.

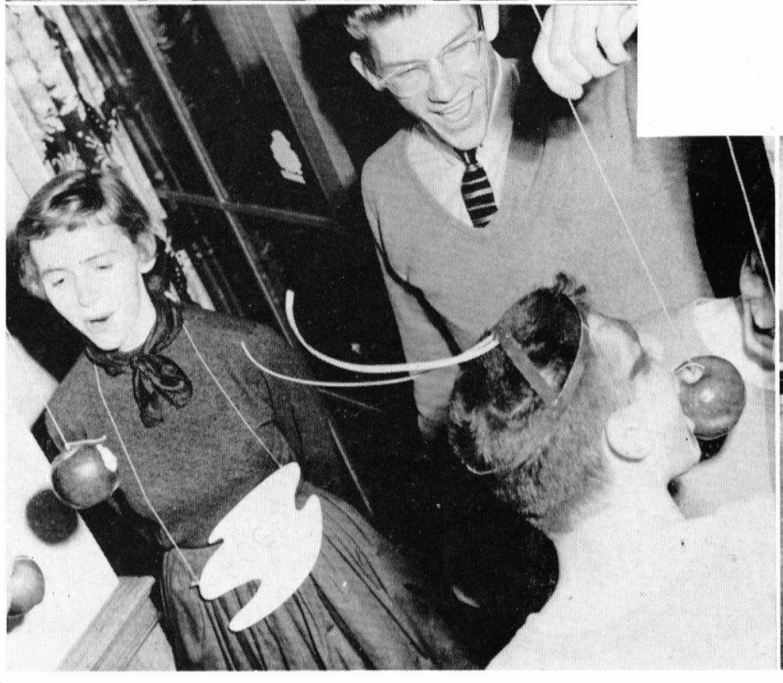
The wandering Discobolus, the rotating challenge athletic trophy, found a resting place on the Blacker mantle.

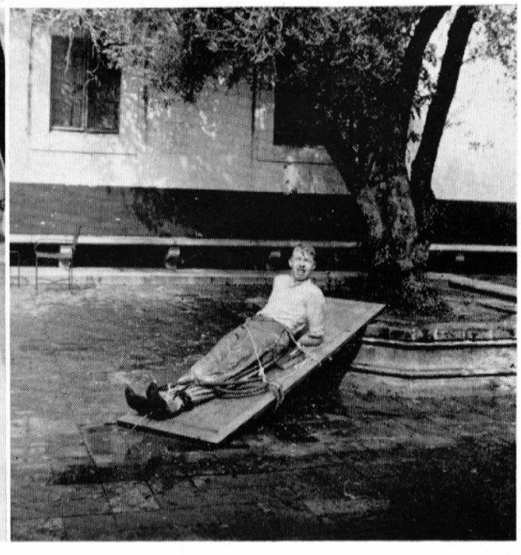
It was successfully defended four times, despite an unusually large number of technical squabbles. At the end of the second term, Blacker was in the lead for total Discobolus points.

Not letting any campus prize get away from them, and with an eye toward impressing Scrippsies, Blacker went all out for the Scripps Bicycle Race. Blacker won, the girls were impressed, but the promised trophy got lost somewhere on its trip to Blacker.

Under the inspired leadership of co-social chairmen Fritz Benning and Paul Lindfors, the Blacker social program rolled smoothly. The highlight of first term's program was, as usual, the grand and glorious four hours of make-believe called the Interhouse Dance. The Blacker courtyard was transformed into the Land of Oz, with a yellow brick path meandering through a poppy field. The path led over a couple of bridges crossing the stream leading from the Hell Alley steps (a waterfall) to a reflecting pool in the middle of the court. Farther along the path were a scarecrow, a lion, and a tin man, all of which were able to carry on lively conversations with bystanders by means of hidden loudspeakers. The interior was decorated as the Palace of Oz, with the band playing in front of the raised throne holding the rotating fire-ball. The dance broke old traditions by being finished on time with all of the decorations in place before the band started playing. It stayed with a long-established Blacker tradition, however, by the fact that the stream leaked, flooded the yellow brick road and before emergency repairs were made couples walked in two inches of water. It is needless to say that by all, fun was had.

The year was marked by frequent exchanges and Benning's blind date bureau was actively acclaimed. The statement, "Thirty girls and every one a queen," will soon become immortal in Blacker history.





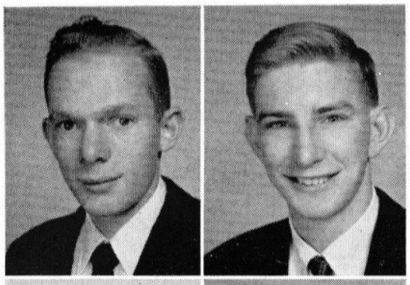
The Spring Term was noted for beach parties, hay rides, and of course, the Spring Formal. For one night, at least, the dining room assumed the atmosphere of a banquet hall and Blacker Men donned their favorite white dinner jackets to dance in a moonlit courtyard.

Costume parties were highly popular with the "Stalag 17" party in which the movie setting was reproduced in the lounge, and the Casino Party with the atmosphere of the "Old West" being standouts.

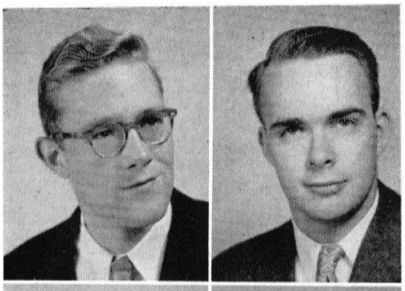
President Al Helgesson came to the leadership in Blacker after a successful year as YMCA President. Besides adding a touch of humor to the twice-a-day mealtime announcements and effectively pounding the gavel at house meetings, he was seen as the Blacker executive, with a careful eye to all phases of the House program.

The Associate's Tea, a tradition unique with Blacker, was held during the Spring Term. Blacker Men played host to a large group of faculty members and their wives for a very pleasant social afternoon. Along with the Associate's program, various faculty members were entertained at dinner frequently during the year.

The little bronze statue of Abraham Lincoln, the symbol of Interhouse debating prowess, has become almost a permanent fixture on Blacker's mantle. Blacker defended the affirmative on the highly popular questions: Resolved: "The Caltech ROTC unit should be abandoned," and Resolved: "The Caltech grading system should be changed." It was one of those times where the debaters could really put their hearts into their words.



HAROLD ALMOND
JAN ARPS



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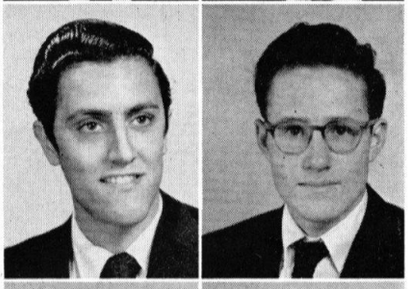
JOHN CONVERSE



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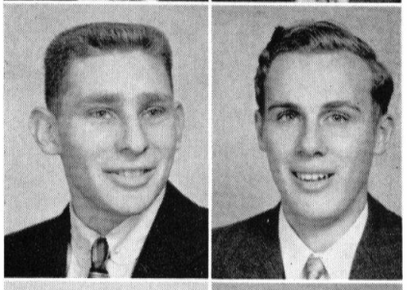
GENE BARSTON



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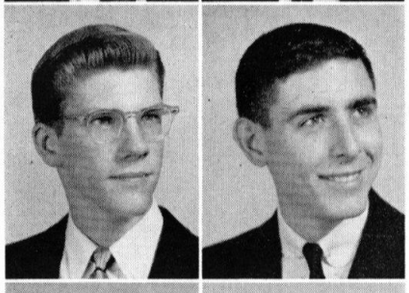
DICK COWLEY



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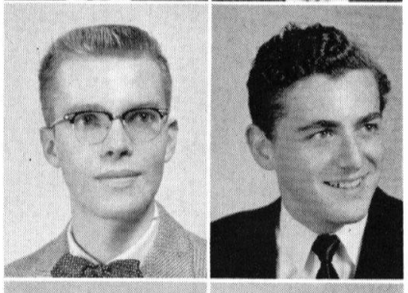
CHEK BEUF



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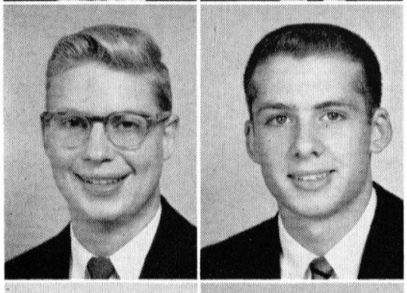
BOB DEFFEYES



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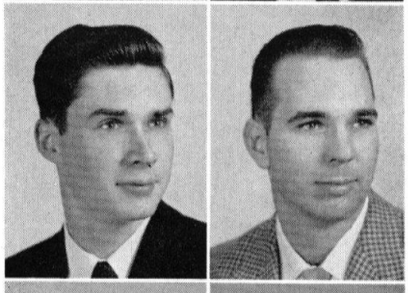
BRUCE BLACKLE



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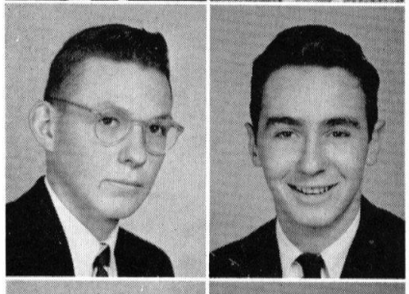
GENE DRYDEN

ROBERT BLAKELEY
MIKE BLEICHER



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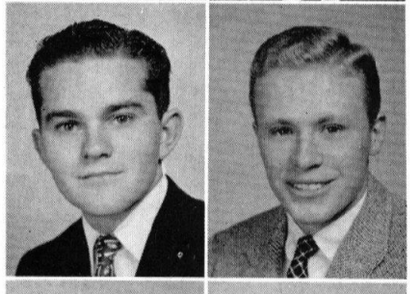
GEORGE EPSTEIN

CHUCK BODEEN
JOHN CARNEY



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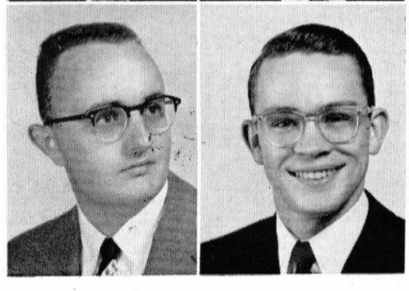
DON EVANS



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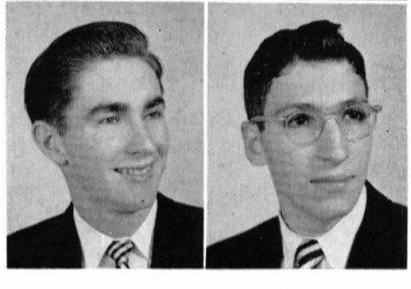
FORREST CLEVELAND



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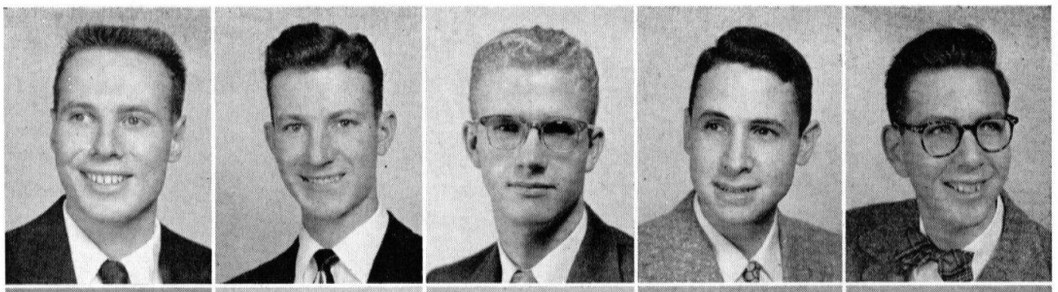
BARRY FEINBERG



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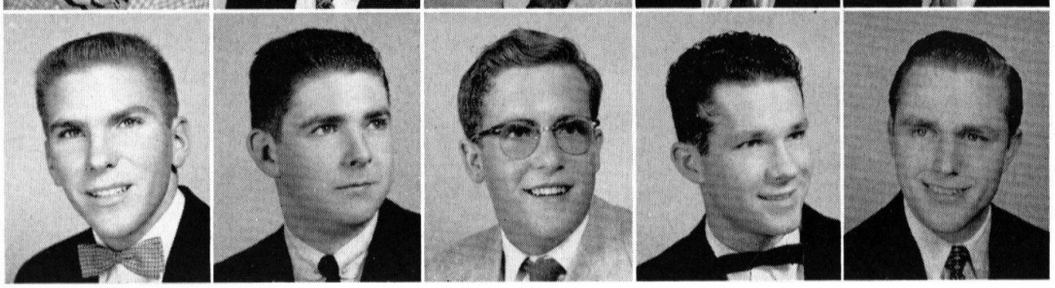
JOE GIBBS
JIM GIRARD
GORDON GLATTENBERG
STUART GOFF

AL GOLDBERG
MARK GOLDENBERG
STAN GROTCH
GEORGE HALL
DAVE HALLMAN



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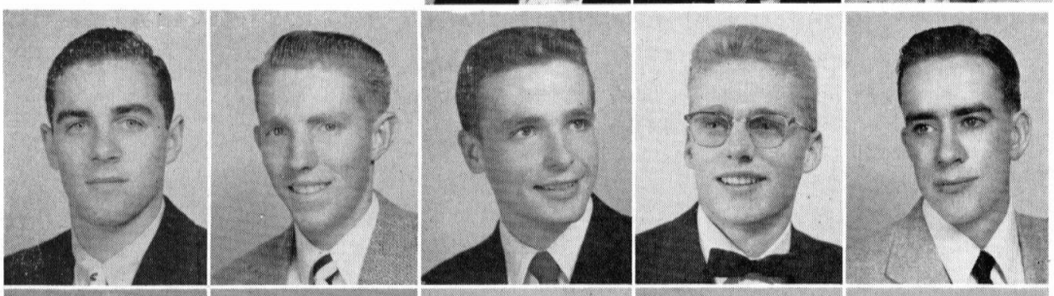
JON HARFORD
TIM HARRINGTON
PAUL HARRISON
AL HELGESSON



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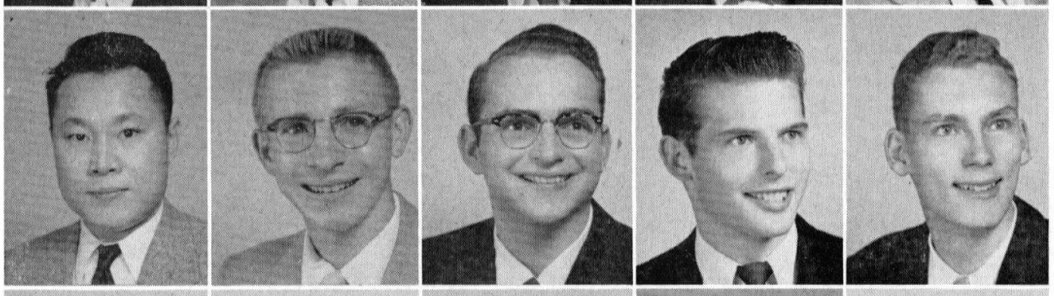
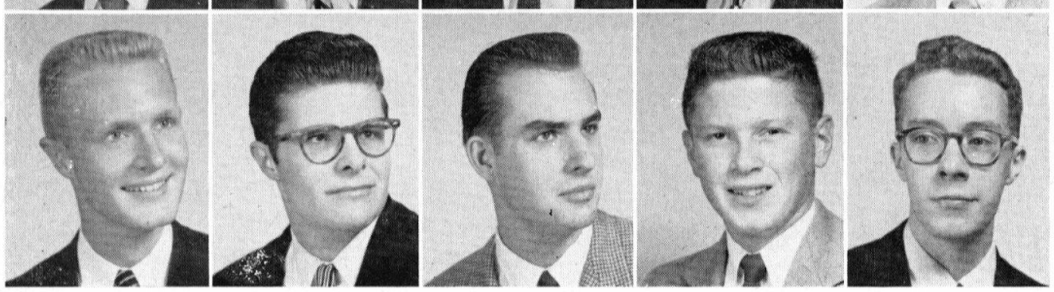
BUDDY JENSON
ERIC JOHNSON
BOB JOHNSTONE
MAURITZ KALLERUD



ART KAMII
BILL KERN
JERRY KLAZ
TED LANG
PETE LAURITZEN

GERRY LAWRENCE
KEN LAWS
PAUL LINDFORS
JOE LINGERFELT
JIM LOVELADY



KIM MALVILLE
FRANK MASTROLY
DEL McCUNE
BILL McDONALD
BILL McLAUGHLIN

CURT MICHEL
RALPH MILES
BARRY MILLER
PETE MORETTI
CHUCK MOSHER
BERNIE MUELLER

DAVE NETBOY
BRUCE NEVELLI
AL NICHOLS
HAL NOLTIMIER
JOHN PARKS
HENRY PHIPPS

DON PINKERTON
AL POISNER
DICK READ
GORDON REITER
GALEN SARNO
REED SAUNDERS

JIM SHORT
SAM SIMS
WAYNE SMITH
WALT SPECHT
DICK STARK

DON STERN
JOHN STEVENS
CHARLES STONE
BOB TAMBLING
FRITZ TRAPNELL

JOHN VELMAN
PHIL WADE
VAN WALKLEY
READ WARRINER
BOB WELLCK

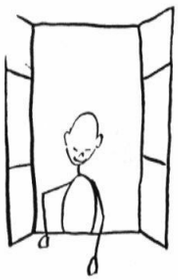
WALT WHIRRY
AL WHITSETT
LEN WIENER
ROGER WILEMAN
JOHN YOUNG

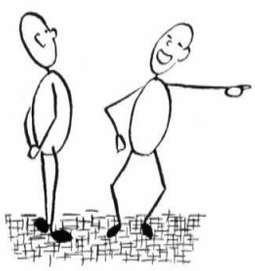
Constant upheaval is the only possible characterization of the Blacker church. The church had decayed somewhat in recent years and under the leadership of Pope Bob Tambling it was hoped that a new spirit could be installed into the troops. Unfortunately Pope Tambling left for greener pastures before his program really got under way. Jon Harford assumed the job. Things went well for a while until a heresy led by Mike Bleicher threatened a revolt, at which time Harford judiciously abdicated. Before Bleicher really got started there were new elections and Henry Phipps assumed leadership of the fold.

Announcements at dinner began to fall into a pattern. While Dick Stark was always announcing dancing class, John Young endeared himself to all with long-winded sales talks for House stationery.

When elections for campus organizations rolled around at the end of second term, the leadership of the YMCA moved solidly back to Blacker as Chuck Bodeen was elected Prexy, Fritz Benning, Veep, Pete Lauritzen, Treasurer, and Don Pinkerton, National Representative. In the student body elections, Blacker Man Young won a seat on the ASCIT Board as Treasurer.

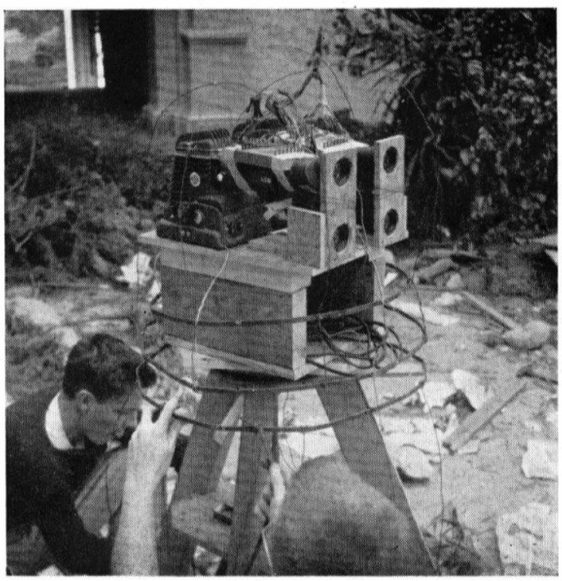
The Blacker House elections were just like South American revolutions—the campus took notice of Blacker once more. Myron Black was given the nod as President to fill the spot held by Al Helgesson. Fritz Benning took over as Vice President from George Epstein, while Bruce Blackie replaced John Velman as Secretary. A triple-threat combination of George Hall, Jon Harford, and John Velman took on the sizable task of planning social affairs which Benning and Paul Lindfors relinquished. Bob Deffeyes was successful over a field of seven candidates in his bid for Treasurer, relieving Young of his House book-juggling. John Carney was swept into office as Librarian on a promise to make the freshmen keep the lounge cleaner, when Dick Stark retired. Phipps took over as Pope in a program of reform. Jim Short proposed the creation of the office of Toastmaster and was elected to it by acclamation. Finally, the highly revered office of HHA was won by George Epstein as the House gave a parting show of affection for a dearly beloved Senior.

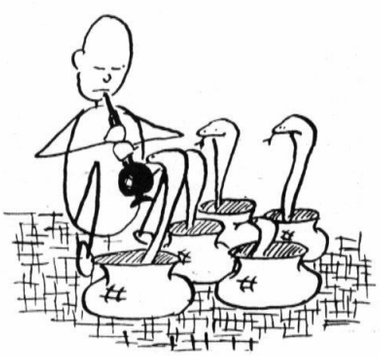




DABNEY HOUSE OFFICERS, left to right: Dick Wagenseller, Dan Mack, Jerry Peck, Bill Purves, Louis Fletcher, Ray Weymann, John Bryant, Tom Plambeck. NOT PICTURED: Jim Moule, Pete Stair.

DABNEY HOUSE





As the school bell tolled an end to summer holidays, the Darbs poured back to Reading, 'Riting, 'Rithmetic, and ME3. And also to the more important things in life, which are made more sweet by the hours (or minutes) spent on Studies. After skimming off the cream of the frosh class (and Dick Ashby, too), sophs and upperclassmen turned to initiation and then to indoctrination into the Dabney whirl. The eager frosh proved so precocious as to put the sophs to shame in matters social and athletical.

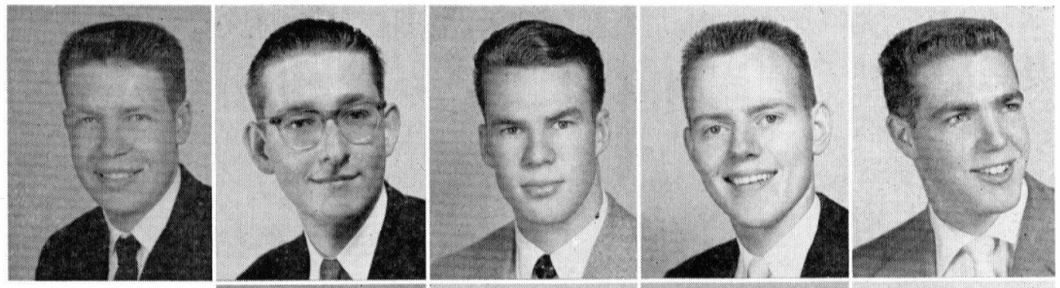
The youthful talents were initially channeled towards retaining the shiny brass on the mantle; the old lady, discobolus, Acme, bowling, and the itinerant sing trophy. However, the most honored extracurricular activity, goofing off, came into vogue, and a couple of the baubles disappeared to less desirable places. But the majority linger in the seductive air of Dabney lounge.

Enchanted Forest! This was the scene that greeted the surging throngs of Interhouse Dancers as they trooped into Dabney. Passing nervously through the mortuary in Fleming tunnel, visitors were relieved to return to life in the sylvan calm of the enchanted courtyard. In one corner of the clearing was a fluorescent green watering place patronized by Bryant's fluorescent pet turtle and tiger. In another corner was a foggy pool over which hovered a menacing giant spider (shades of "Thief of Bagdad"!). Star performer of the evening was the wise owl concocted by Darb EE's. This beast kept a watchful eye on Techmen and a roving one on their dates.

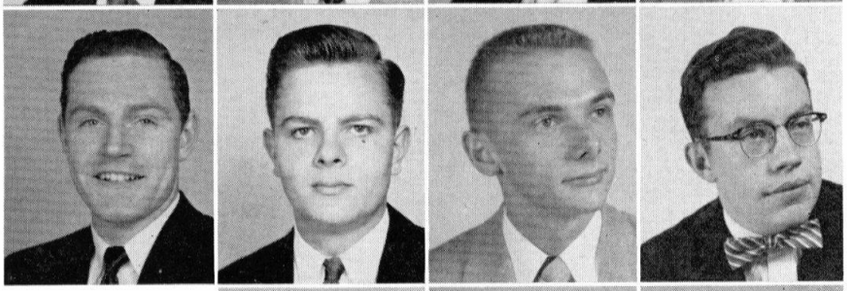
Those hardy souls brave enough to enter the hungry jaws of a fire-breathing dragon were rewarded by a view of another woodland glade and a chance to join the pushing mob on the dance floor. Stimulation for the mob was provided by the melodious strains of Johnny Smith's band of studio musicians. Featured in the lounge were a roaring fluorescent waterfall over the ex-mantlepiece, a glimpse of the distant enchanted castle cradled amidst snowy mountain peaks (complete with black snow thanks to Fletcher's miscalculation), and tons of imported foliage.

Those craving relief from the omnipresent ultraviolet could escape into a cave complete with echo and underground river. One of the stalactites poured a steady stream of golden cider, and cups were found mysteriously growing within another rocky outcropping. Refreshed, the troops could return to the strenuous fun provided by all five houses.

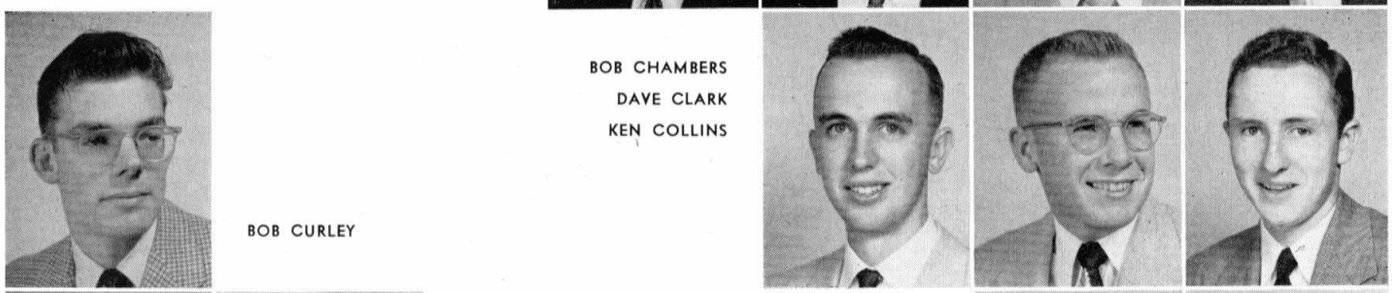
Oh, the pain! Hundreds of hours of work and hundreds of dollars built four hours of enchantment, but an hour's hard labor with hammers, crowbars, and clawing hands reduced it all to a mountainous heap of greenery.



DICK ASHBY
STAN BAKER
KYLE BAYES
HOWARD BERG
ED BERRY



BOB BRADFORD
CHUCK BROKAW
LARRY BERRY
BILL BURROW



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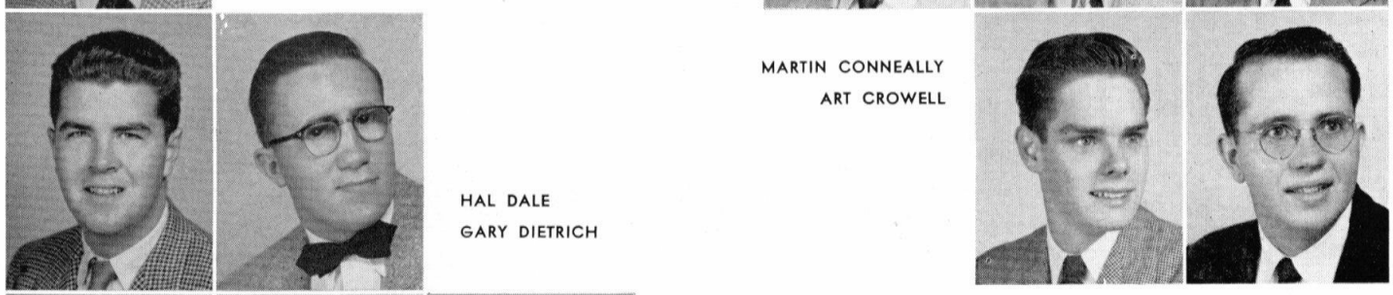
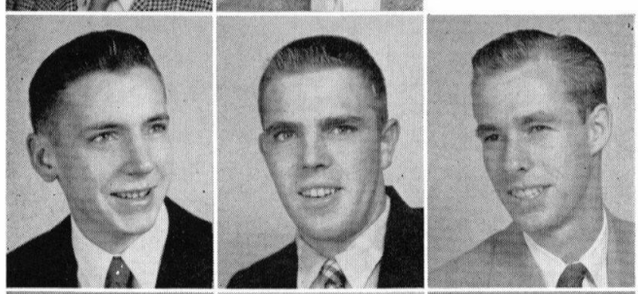
DAVE CLARK
KEN COLLINS

BOB CURLEY

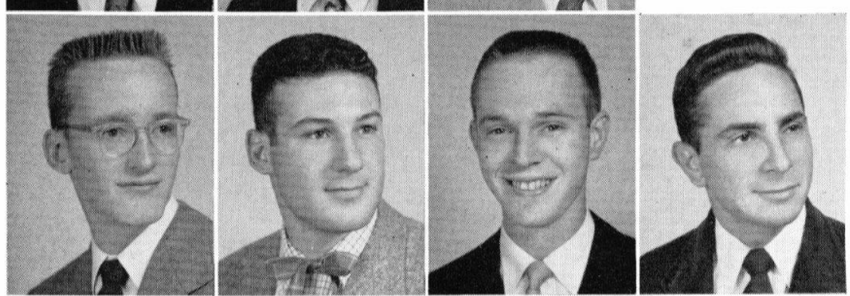


MARTIN CONNEALLY
ART CROWELL

HAL DALE
GARY DIETRICH

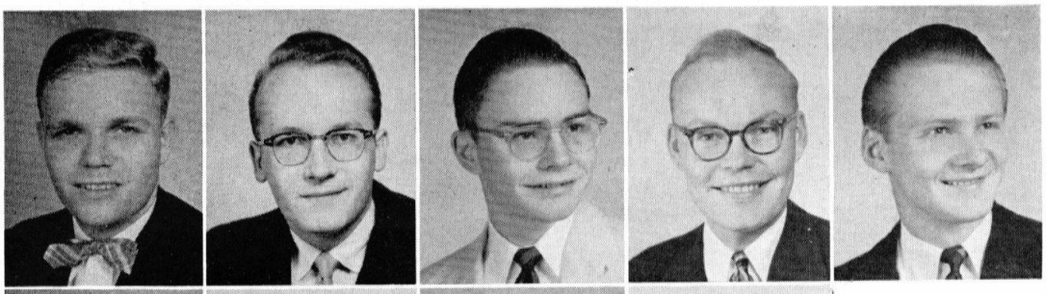


PERK EISELEN
LEWIS ELLMORE
LOUIS FLETCHER



ALAN FORSYTHE
GERRY FREEMAN
JERRY GALLAGHER
JAY GLASEL

LARRY HARVILL
BILL HELMAN
ED HERSHBERGER
PETE HOAG
JOHN HOWELL



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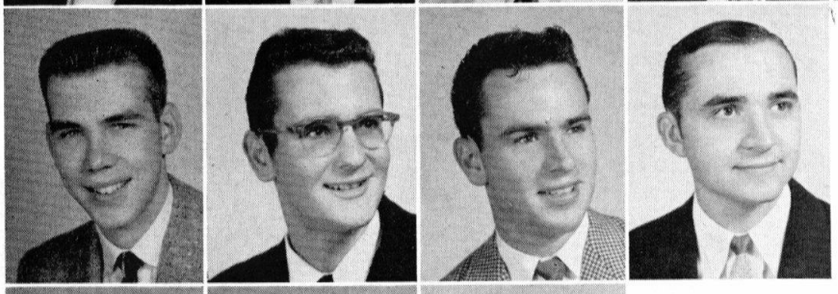
BOB JETTER
ROGER JOHNSON
TED JOHNSON
ARNE KALM



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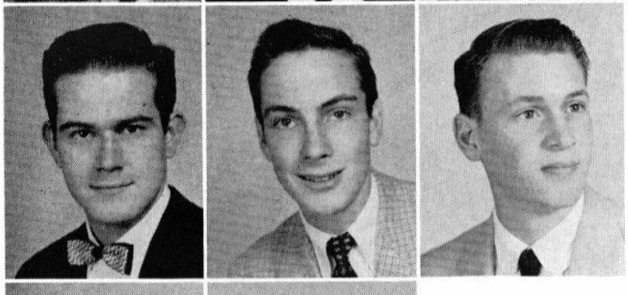
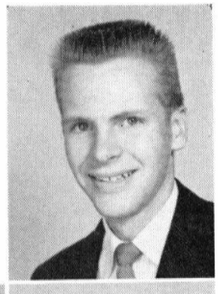
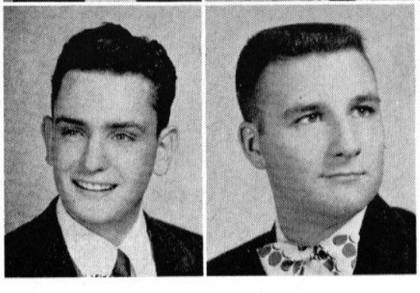
LEON KEER
RALPH KEHLE
JAY KIMMEL



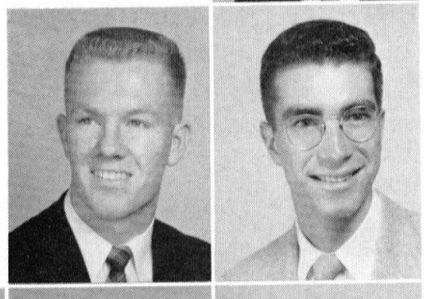
DICK KIRK
JOHN KLEIDERER
WAYNE KREGER



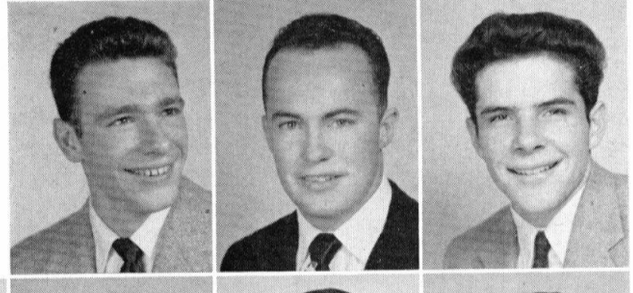
DON LEWIS



DAVE LANGE
HUGH LENEY



TRUMAN LONG
BERNIE LOPEZ



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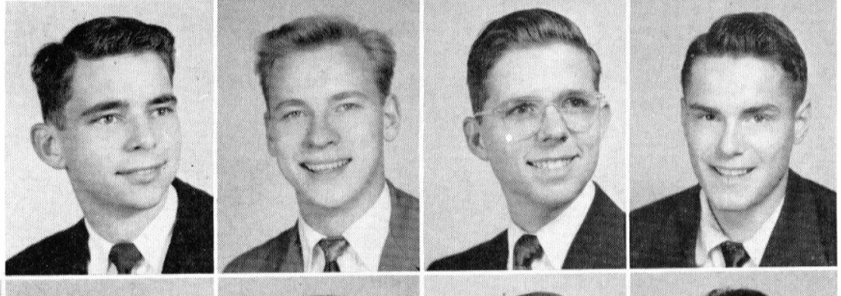
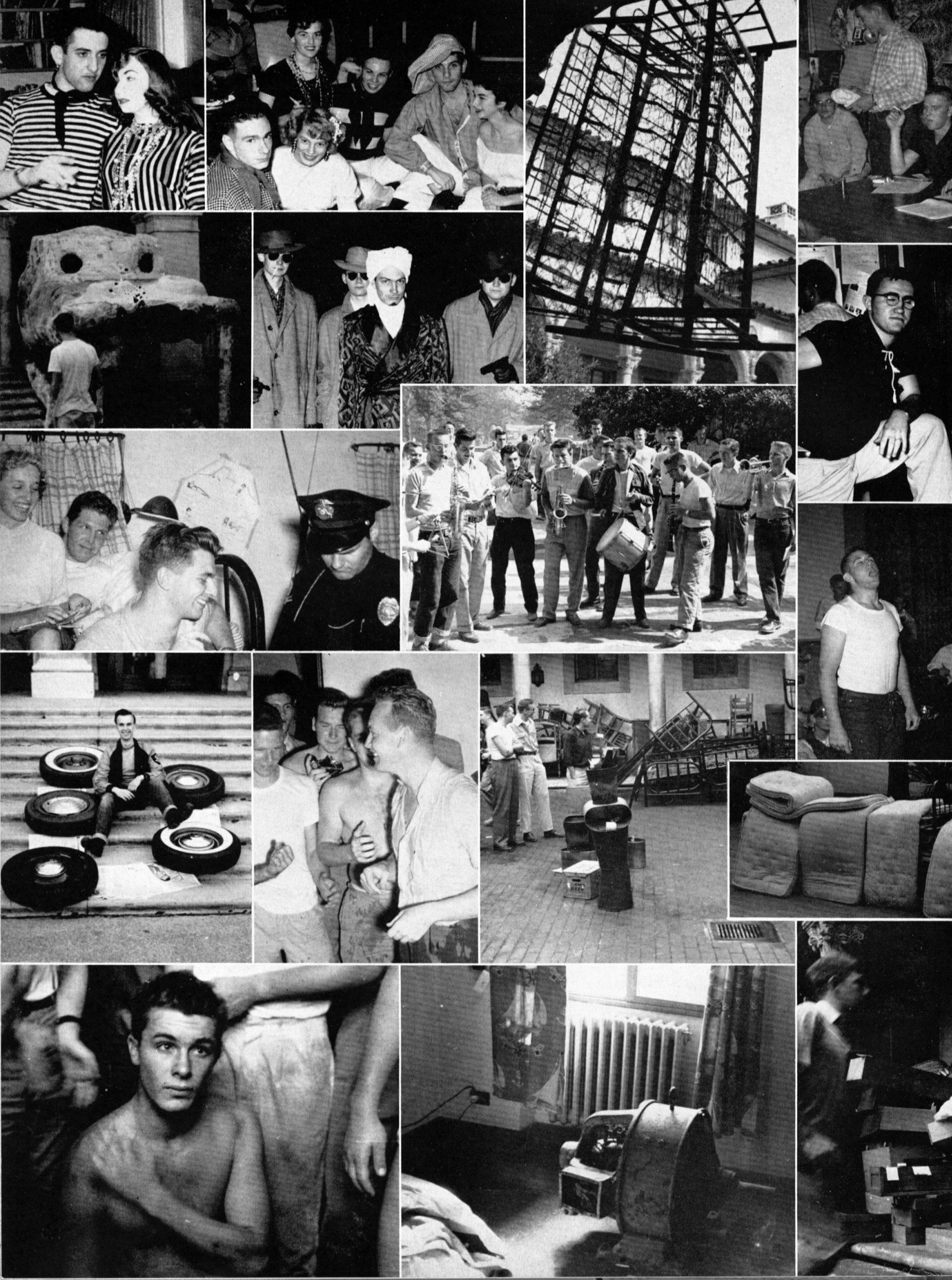
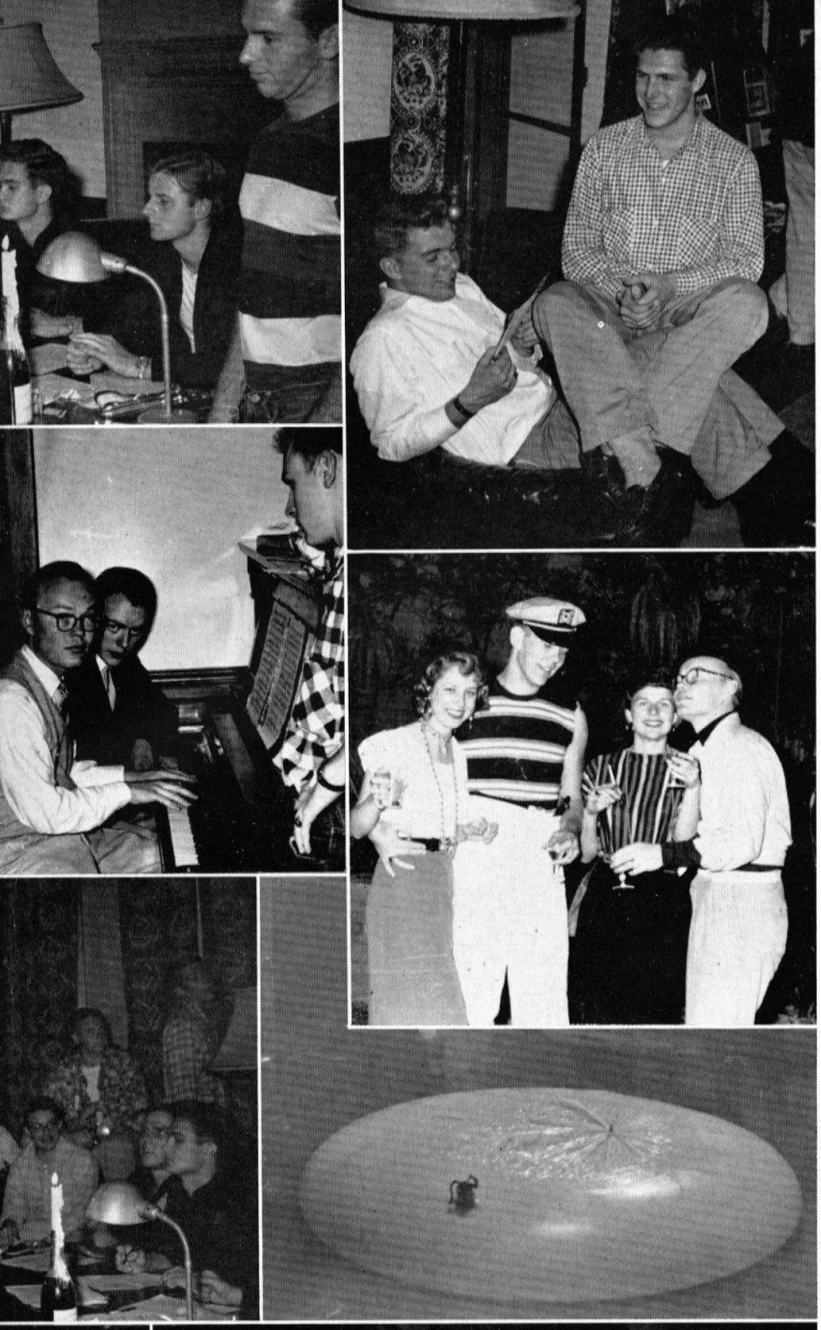
GEORGE MADSEN
RON MARSON



FRED MARTIN
KEITH MARTIN
JOHN MERRILL
TOM MOORE

JOHN MOSER
JIM MOULE
MILES NESMAN
DON NIERLICH
RAY ORBACH





In addition to the Interhouse Dance, a series of other smaller, but no less successful, social functions supplied Darbs and their dates with many pleasant evenings. The snow party, barn dances, and beach parties will be long remembered; and who could forget the party parties—acme of all house functions. Especially the one at which the Maharaja Kleiderer of East Kumquat appeared with private bodyguards and a fan-waving eunuch. For the first two terms (and probably for third term, too, on the basis of contenders' past records) the crew trophy has stood on the mantle, mute testimony to the ability of the only crew team dressed in house coats to "down the hatch!"

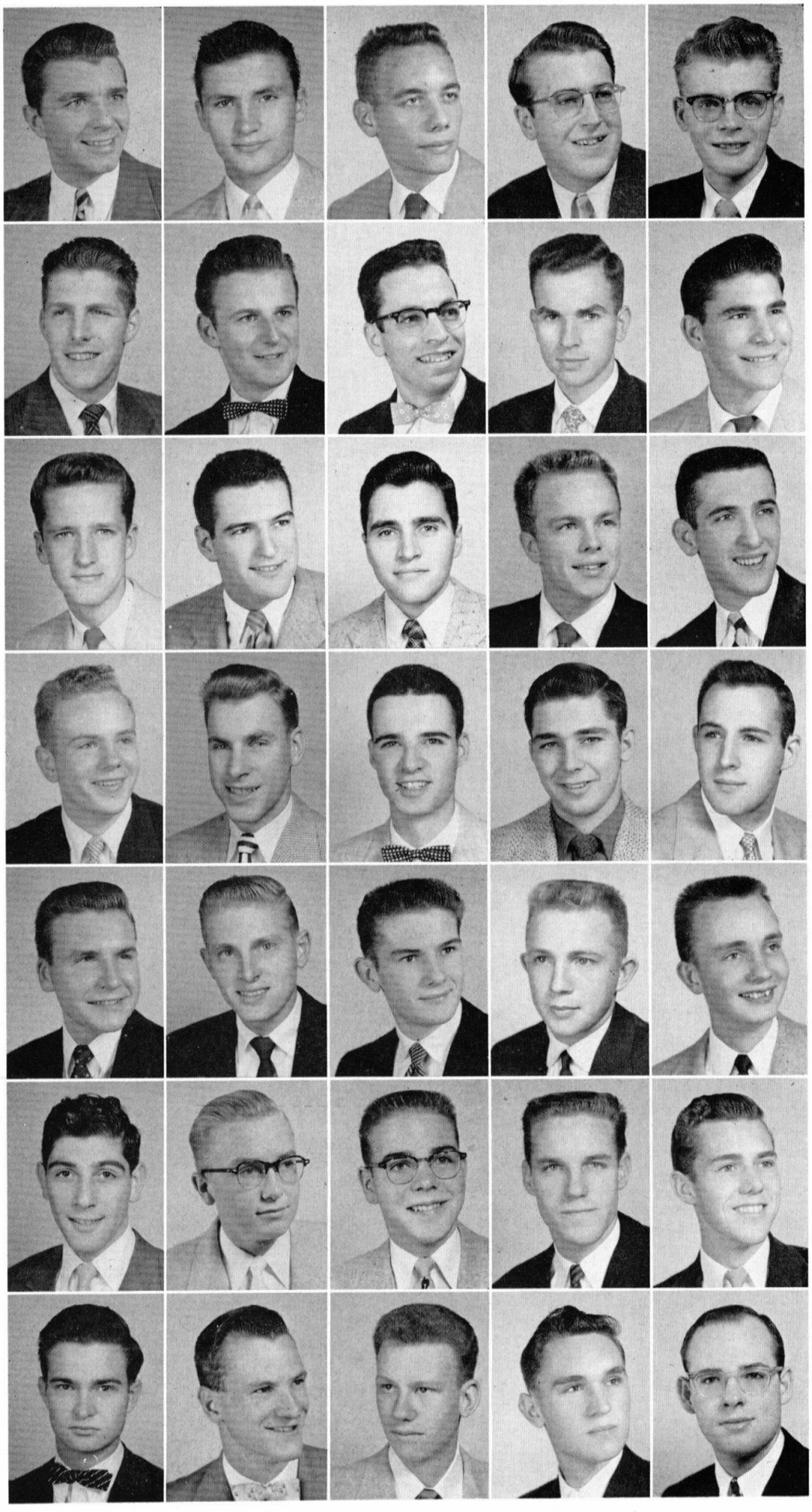
First place in interhouse swimming and basketball, along with seconds in track and cross-country, give Dabney a strong second in the interhouse sports race at this time, and a good chance for first at the end of the year. The "Lady" may well be hanging in the lounge for her third straight year next fall.

After Senior Dave Clark, house secretary and connoisseur of the fine arts, left school for a less winsome existence in Kansas City, his Sheppard Scholarship was awarded to quiet Jay Glasel, who was henceforth fondly known as "house culture."

Perhaps the most ingenious idea worked out in the houses this year was an extensive "piped-in-music" system. EE's Taussig and Stair rewired the unused telephone leads in many of the rooms to a central tuner and phonograph. So a continuous twenty-four hour program of music was made available to all subscribers.

Dabney men seemed to find ample time throughout the course of the year to engage in those little fun-loving escapades that fill in between studies and social activity; one group tore off to Las Vegas to see an atom blast, and others went for what Las Vegas is better known for. The stout and well organized frosh managed to cart soph pledge master Clint West off to Hollywood and Vine and leave him shivering there in his pajamas. Water fights and baptism incidents now and then kept a few mercenary war-mongers flush by providing a ready demand for their tools of destruction—balloons. New decks of cards were rapidly worn out by the bridge and gin players, almost as fast as volleyballs had to be replaced by the avid after-lunch sport fans.

While he wasn't helping Father "Fingers" Johnson with advice for what to do with his harem, or President Wagenseller with what to do for lack of one, youthful Grandfather Denver Gore was usually seen in ski pants, tennis shorts, or white bucks. Denver carried out his R.A.-ship quite well, doing all he could to uphold the letter of the law in the house.



HUNTER PAALMAN
JERRY PECK
BUD PENQUITE
ANDY PERGA
WALT PETERSEN

TOM PLAMBECK
BILL PURVES
JERRY ROYCE
DON RUSSELL
BOB SCHENTER

RALPH SCHINNERER
DICK SCHMID
HARRISON SCHMITT
CURT SCHULZE
DON SELDEEN

ATTILA SAMANYI
DICK SMISEK
PETE SMITH
JOHN SOUTH
LANE SPENCER

PETE STAIR
JON STEDMAN
DON STOCKING
DAVE SUNDQUIST
JOE SWINDT

TOM TAUSSIG
JOHN THOMAS
BOB TUCKER
DICK WAGENSELLER
BLAKE WALLACE

CLINT WEST
RAY WEYMANN
HARPER WHITEHOUSE
FRED WITTEBORN
JOHN WOLFE

His policy of laissez-faire and maintaining of the status quo worked out well. In recognition of his efforts, he was elected House Pretty Boy.

The final fling of second term was, of course, elections. During the year five Darbs had served as ASCIT officers; and the new elections brought in Howard Berg, vice president; Dick Ashby, second rep; and Don Nierlich, spiritual leader of the Big T. In all, eight Dabney men ran for ASCIT offices.

In the ensuing house elections, Dick "President" Wagenseller retired after a year as Dabney's most outstanding prexy. Stepping into Wag's big shoes was Ted Johnson, known in better circles as "one dumb Swede." Ted was subsequently elected to serve as president of the Interhouse Committee. Bill Purves disappeared after a noisy year as executive vice president and was succeeded by Lou "Strength and Dignity" Fletcher. The latter having been kicked upstairs from his secretaryship, a gap was left only to be filled by Bob Jetter, author of the "Jetterisms" which are gradually replacing the axioms of "Poor Richard's Almanac." Dick Kirk became treasurer against the advice of a disillusioned Jim Moule who left office still predicting financial ruin through an overexpanding stock market. The dynamic duo of Hal Dale and Ed Berry replaced Bryant and Mack as social leaders of the Darb bluebloods. Promises of orgies for some, unorgies for others, and fun for all were heard. Frosh Pete Hoag promised to keep up the files in the Library (nee Snake Room) and the cue chalk in the Recreation (nee Game) Room. Impressed by his zeal, Jerry Peck yielded his post as librarian. Pete Stair, author of the year's scrapbook, passed on the historian's job to Curt Schulze. And Andy Perga seemed so worthy of holding office that a new one was created: comptroller (glorified bill collector). Athletic Don Russell and Pete "Cripple" Abbey were chosen to replace Tom Plambeck and Ray Weymann as co-sports czars. A new era of prosperity was seen for the men in green, and they all set out to enjoy it.

SEATED, left to right: Mike Boughton, Ray Grieser, Jim Snyder. STANDING: Dick Manley, John Bush, George McDonald, Horace Furumoto, Dave Yount.

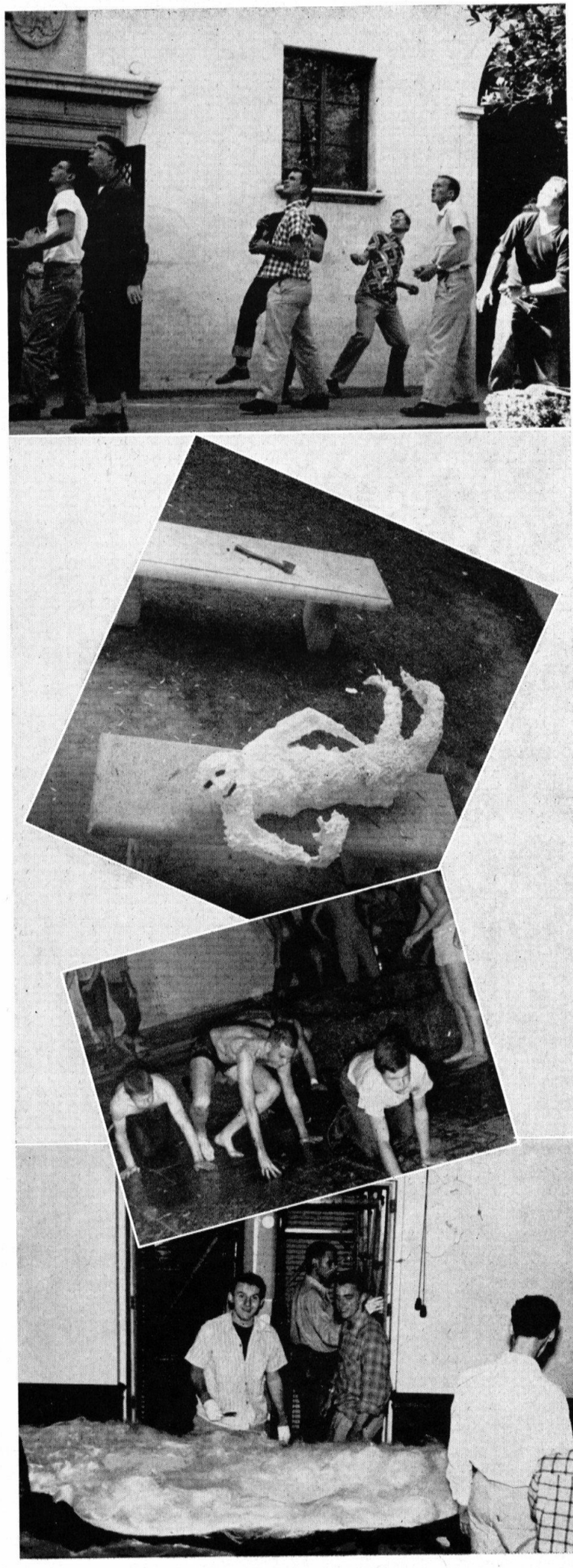
FLEMING HOUSE

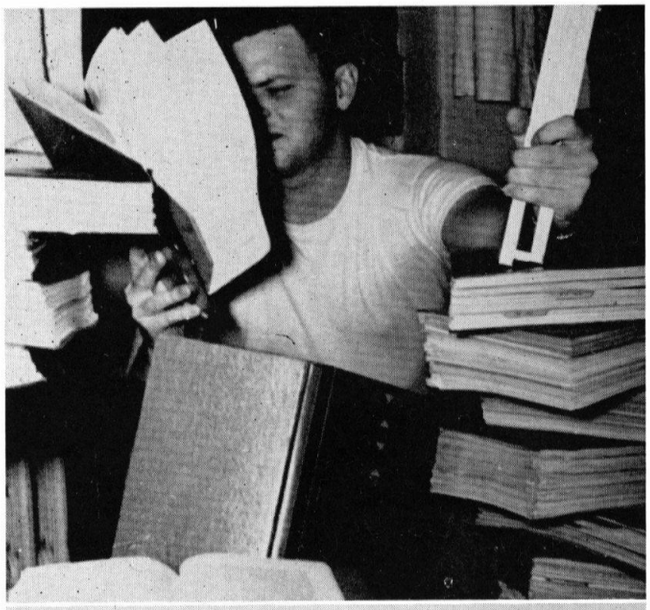
Under the able leadership of President Ray Grieser and the guidance of its new and very popular Resident Associate Ward Whaling, Fleming started off its year in a hectic attempt to assimilate an unusually large, varied, and active group of incoming freshmen. The initiation (directed by Larry Whitlow and his fellow sophomores) had to fight the opposite obstacles of excessive violence on the part of some and lack of interest on the part of others, but in the end the purpose of creating a unified spirit in the house was achieved. Throughout the year, Fleming's philosophy of unity through diversity helped it preserve and respect its traditions while continuing to grow.

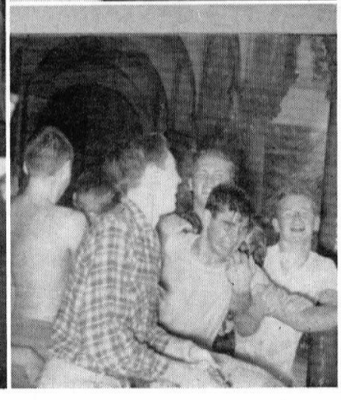
The House's first big project, the Interhouse Dance, was well timed to help this trend by giving the whole house a chance to work together on something creative. In the dining room, scores of people under Don East toiled with bedsprings, glass wool and cardboard, and lights in an effort to make it into paradise for a night. Meanwhile, Sig Porter and his assistant devils were busy with the possibly less formidable task of making the Lounge look like Hell. Walls of red-painted plaster were built up to look like fire, while a pot of fire boiled in the fireplace. Outside, in a setting of incense and funereal music, a corpse lay awaiting the grave. The theme of the dance, Dante's **"Divine Comedy,"** was suggested by a luminous sign in the solid ice entrance. As usual, the whole house did without sleep and study for days while the project was under way, and even up to the last minute some unfortunates without dates were seen finishing a few technical jobs.

The rest of the year's social program likewise showed more than ordinary spirit. Besides numerous exchanges and barn dances, Social Chairman Mike Boughton arranged a hayride and a theater party; while Bill Davis' program for the spring term boasted such novelties as a Luau and a Swimming Party.

As important in the Fleming year as the social program is that form of behavior which in sophisticated circles is known as horseplay. The venerable 69th Gospel Church, long the guardian of such and similar activities, actually did little extraordinary of its own this year. Besides awarding awards, administering the Purity Test, and running a couple of Brass Spittoon contests, its main useful action was in requiring attendance of all frosh at all basketball games. The enraged freshmen, represented by Norton Starr, rose in revolt, and declared that they would contrariwise expect the presence of all Church members at all frosh games. Hunt Holladay, Father Divine and Pastor, replied that Mr. Starr should do penance at the rate of five minutes in the





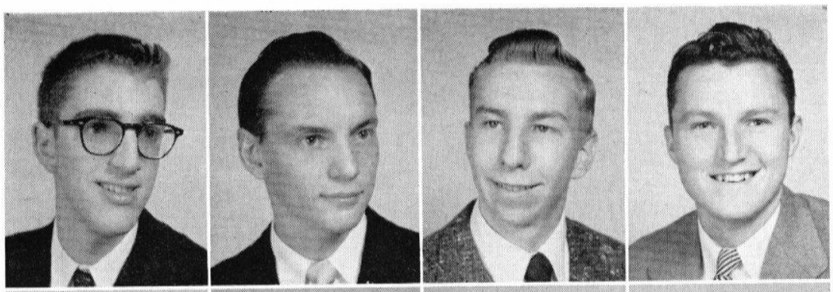


showers for each failure of the frosh to do their duty; whereupon Mr. Starr declared similarly concerning Father Holladay and the Church. The entire affair, however, ended with both groups joining in an assault on a member of another house after the game; rather than splitting the house, it on the contrary united it, as was its legitimate purpose.

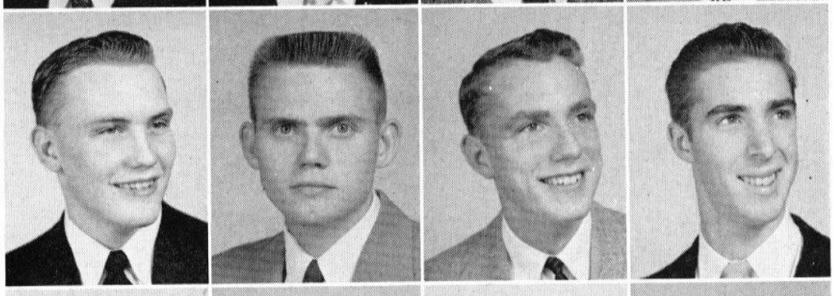
Another important event in the calendar of violence was the formation of the Fleming Percussion Orchestra, consisting of a drum removed from Dabney, in addition to miscellaneous musical instruments such as bottles, belts, cans and plates, which entertained the various Houses with primitive compositions for several hours one spring night, until Blacker water and the Pasadena police forced them regretfully to conclude their performance.

Although the activities of the Waiters' Union and the Anti-Waiters Union Union consisted mainly in swapping members to the accompaniment of enormous choruses of cheers and boos, Fleming table manners achieved even more sublime levels of spirited exercise than before, and up occasion even the beloved Resident Associate was not entirely safe from his neighbors' water, which they sometimes carelessly spilled into the seats of others.

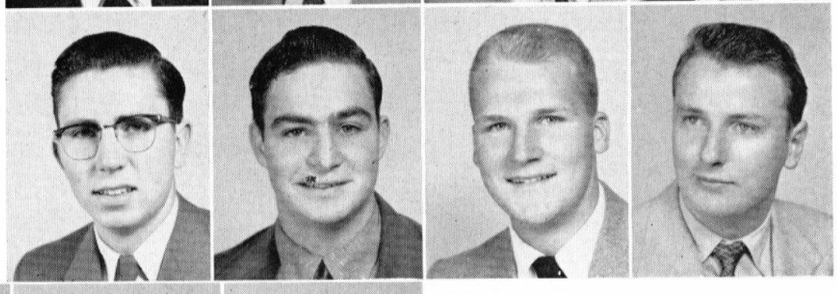
Fleming spared no effort to maintain its usual superior position in the field of athletics. Responding to the impassioned cries of Athletic Managers Horace Furumoto and George McDonald to get out and work out, Fleming men held the Discobolus and the Varsity Rating Trophy for the *n*th time. Though the House had no illusions that its athletes represented an entirely invincible machine, it was clearly determined that they not be second to those of any other.



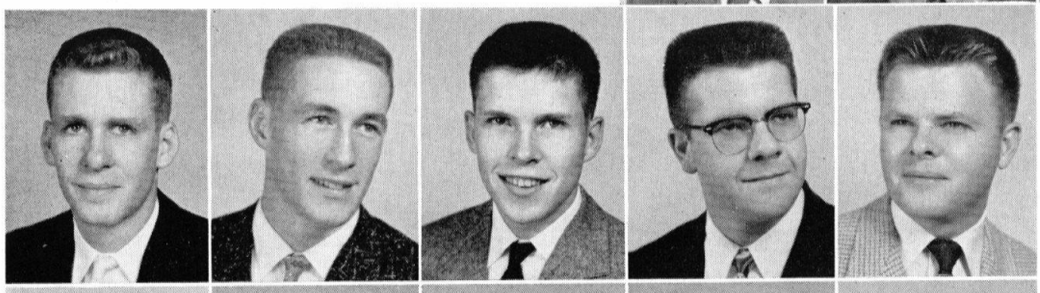
DICK ALVAREZ
CHARLES ANDERSON
DEAN ANSCHULTZ
JIM BALL



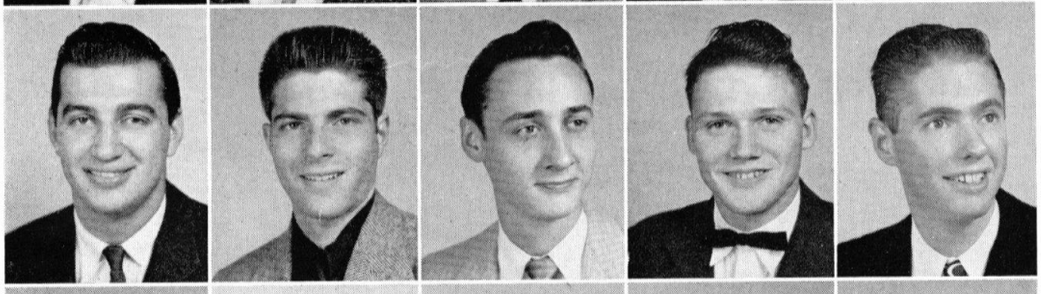
GENE BEISMAN
BILL BERG
MIKE BOUGHTON
BAIRD BRANDOW



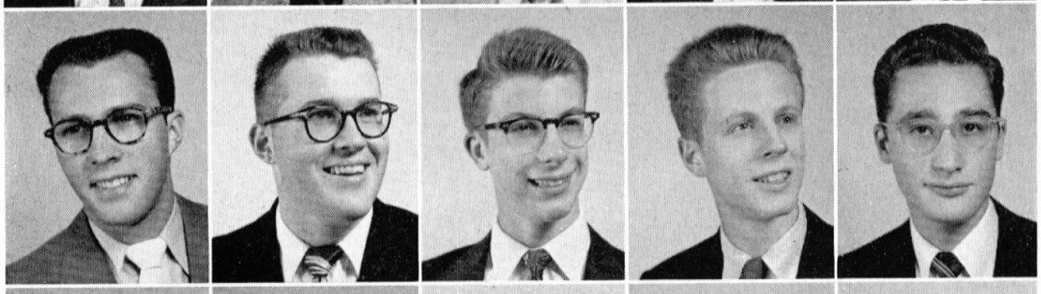
GORDON BROWN
BASIL BRADY
JOHN BUSH
CHALON CARNAHAN



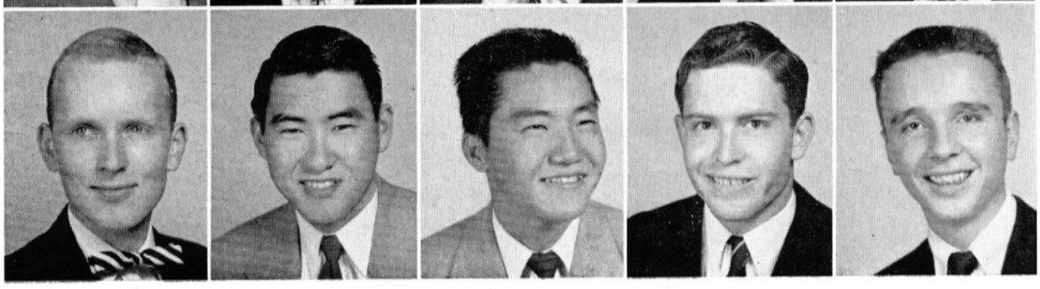
BILL CHAMBERS
PHIL CONLEY
GLENN CONVERSE
BEN CUMMINGS
DWIGHT DENNIS



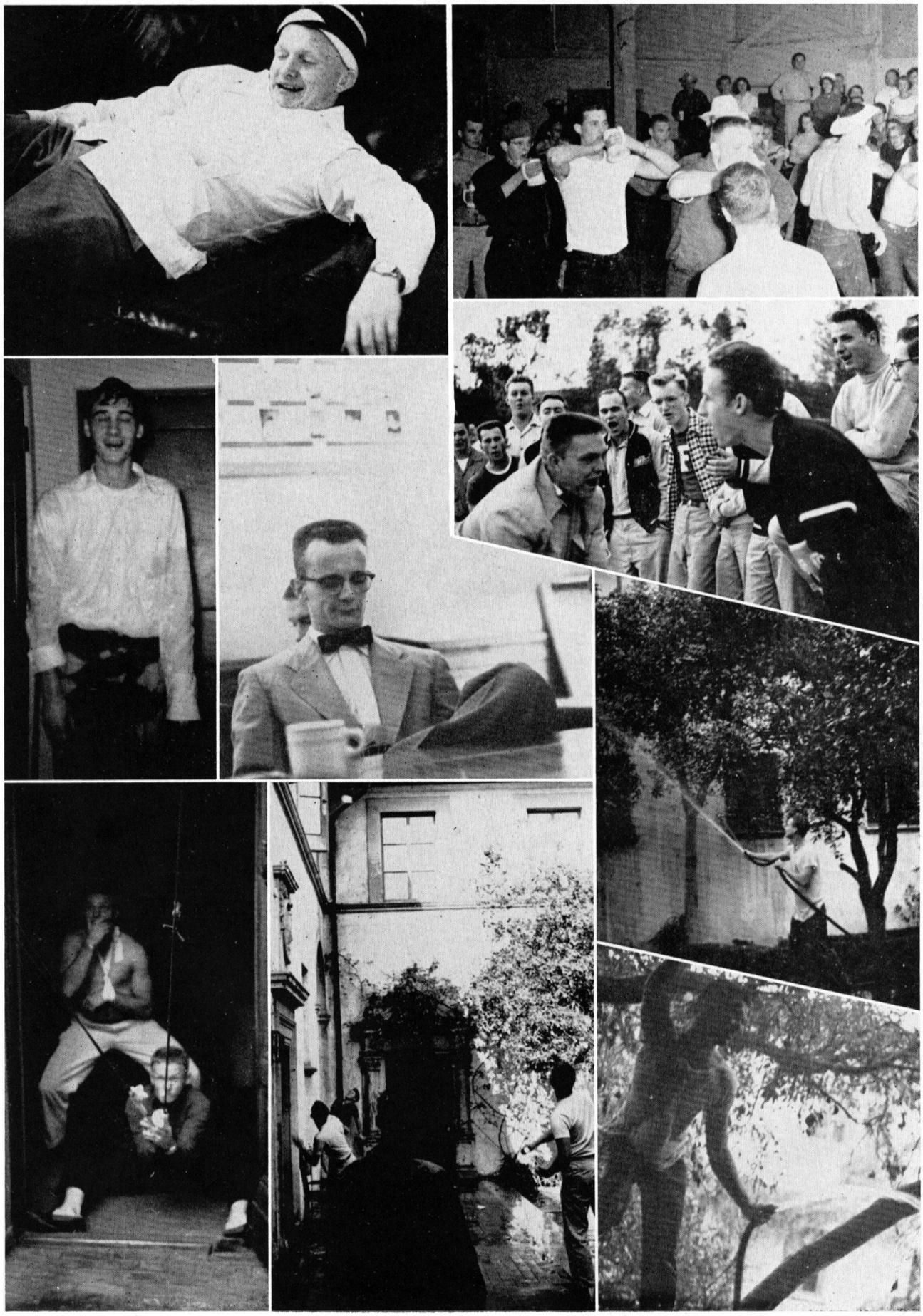
ERNIE DERNBURG
HAROLD DESSAU
DON DIERCKS
DON EAST
EUGENE EPSTEIN



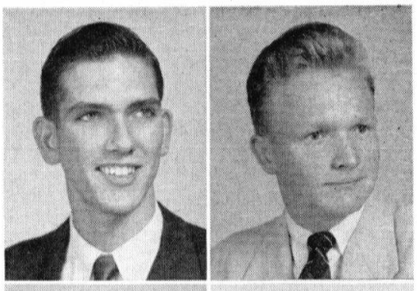
PAUL FARLEY
PHIL FERRELL
DICK FIDDLER
JOE FINEMAN
BERN FOLKMAN



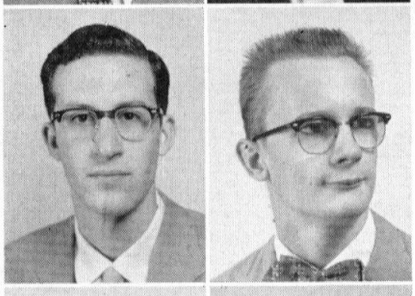
GORDON FULLERTON
HORACE FURUMOTO
WARREN FURUMOTO
PETE GASPAR
DAVE GILSON



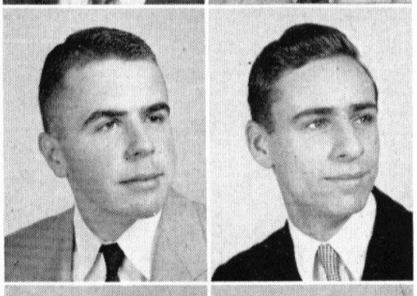
AL GOLDMAN
RAY GRIESER



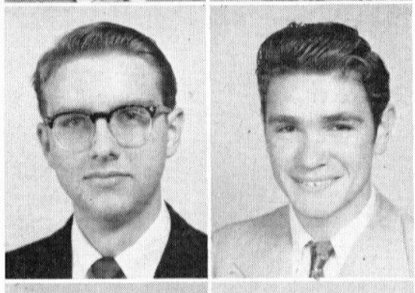
RILEY JASCHKE
RUDY JENSEN



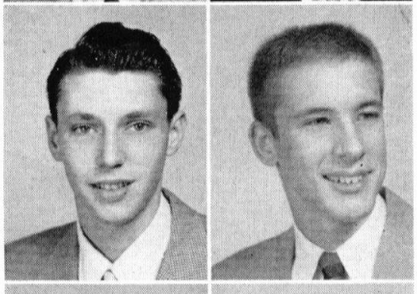
NICK GROSSMAN
TOM GUNCKEL



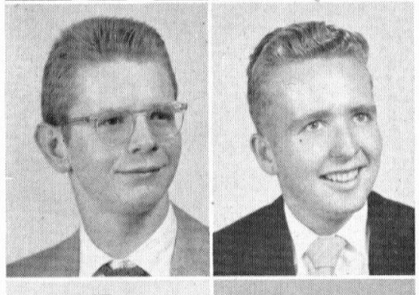
LARRY JONES
PETE JORDAN



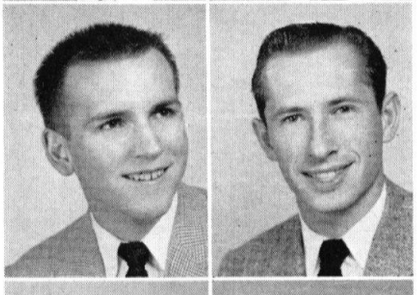
BILL HAIGLER
CHARLES HARDING



GEORGE KAUFMANN
MIKE CONRAD

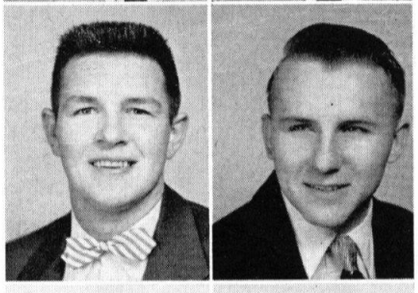


DICK HERLEIN
BOB HERZOG



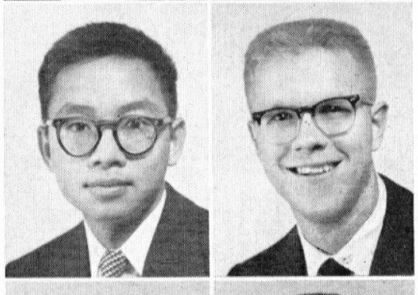
JIM KOONTZ
HAROLD KRAMER

JOHN HOLLAND
DICK HOMEYER

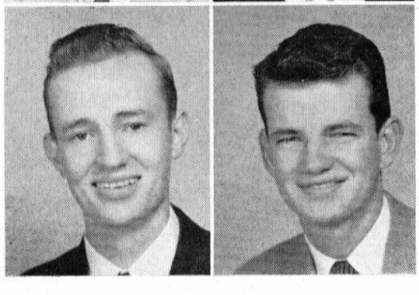


CHUCK LUKE
STEVE MAGER

HARVEY HORIUCHI
CONRAD HOUSLEY

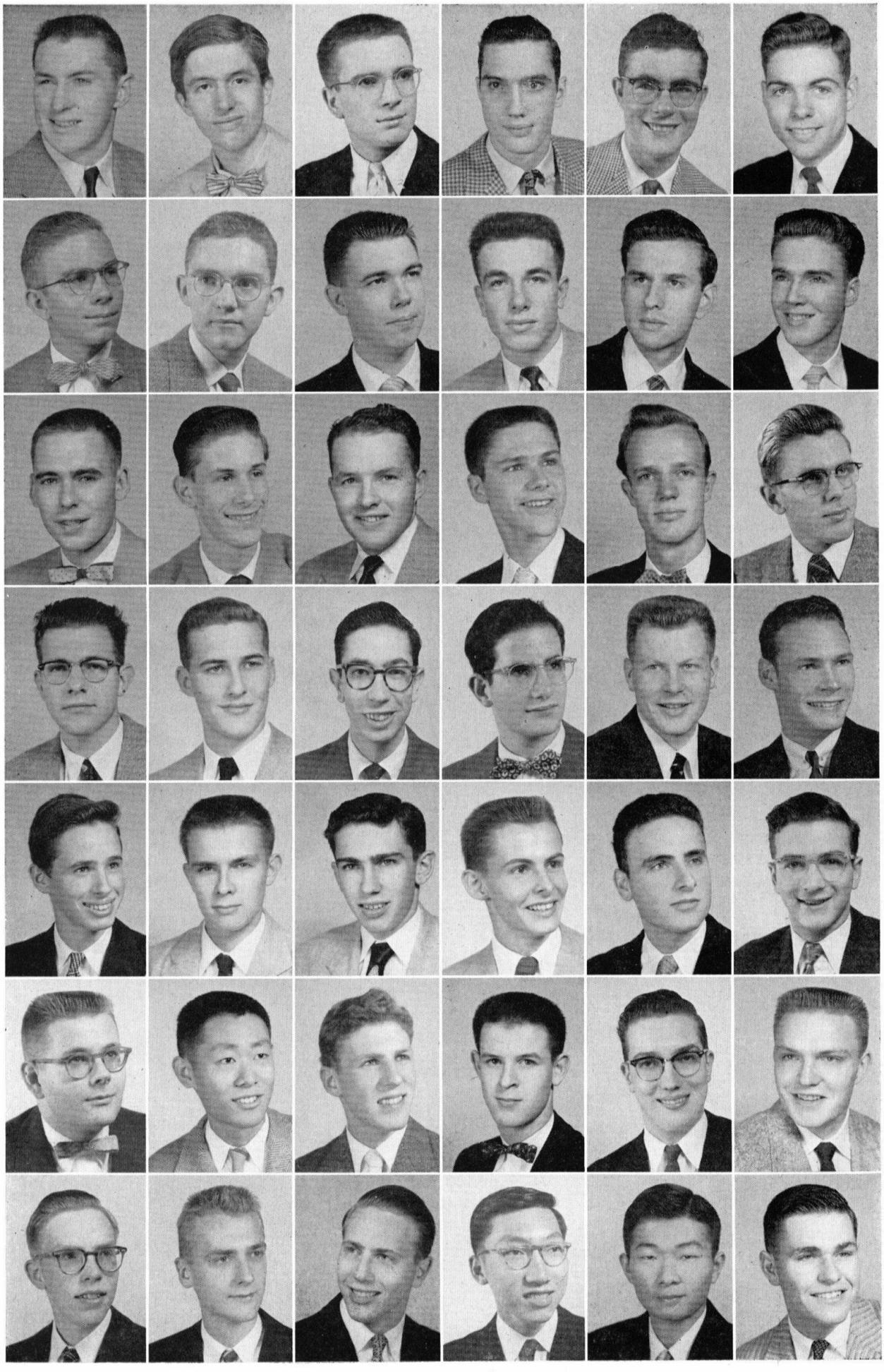


STEVE MAK
DICK MANLEY



DICK HUNTER
PETE JAMES

BOB MARSHALL
GEORGE McDONALD



WALT MENETREY
PAUL MINNING
BOB MOORE
JOHN MYERS
BLAINE NAVROTH
BOB NORTON

TED OAKBERG
GEORGE OETZEL
STAN PARKILL
RON PARKINSON
ROY PAUL
REX PETERS

MAC POOR
JOHN PRICE
GEORGE PROBERT
HERB RAUCH
JON ROBINSON
JOHN ROGERS

RUDY SCHINDLER
BOB SMOAK
LUIS SOUX
NORTON STARR
RAFN STEFANSSON
ROD SUPPLE

PHIL THATCHER
MARTIAL THIEBAUX
BOB TOKHEIM
JACK ULLEMEYER
MARTIN VOGEL
JERRY VUREK

NEWMAN WADE
PAUL WANG
JIM WEAVER
JIM WELSH
RAY WHITE
LARRY WHITLOW

TOD WHITMORE
DON WIBERG
JOHN WISE
AL YANO
CAVOUR YEH
DAVE YOUNT

But while these traditional Fleming interests and activities continued unabated, others developed rapidly which enriched its atmosphere and increased the variety of its successes. If sports, fights, grades, and girls continued as ever to be the commonest subjects of conversation in the Lounge; politics, history, music, and even science were far from uncommon objects of deliberation among the men of Fleming. Interest in ham radio blossomed with the immigration of numerous enthusiasts. And the House Glee Club, under the direction of Luis Soux, surprised everyone by winning second place in the Interhouse Sing.

A hint at Fleming's academic progress, especially in the lower classes, came at the end of the first term, when six frosh got into Honor Section. The second term grades, however, were even more surprising. Frosh gleefully computed averages and talked of winning the Snake Trophy, while upperclassmen, more mindful of Fleming's traditional academic performance, wondered what the House was coming to.

Another of Fleming's successes was in the ASCIT Charities Drive, to which it contributed more than any other house and won a very enjoyable dinner in which they were amusingly served and hilariously entertained by the more prominent Caltech faculty.

The ASCIT elections brought great honor to Fleming in the election of Phil Conley to the office of President. Conley, combining his athletic with his political talent, has been and will be a great asset to the House. Fleming also succeeded in placing Norton Starr and Dean Anschultz as Big T Business Managers.

Fleming's own elections were conducted with vigor and interest. The principal issue was the treatment of freshmen during rotation, and the prospect is for more energetic proselytization in the future. Riley Jaschke, the new President, was elected in absentia over John Myers and Jim Snyder; Warren Furumoto, the only candidate for Vice President, was elected by a unanimous vote of remarkable warmth of feeling, replacing Al Goldman. Bill Davis promises great things as the new Social Chairman. Joe Fineman was elected Secretary after a supposedly humorous speech read from a roll of toilet paper. Herb Rauch became Treasurer on a platform of public budgets and balanced books. Hunt Holladay and Larry Whitlow made a strong team for the office of Athletic Manager. And Dick Herlein, elected Librarian, promised with all the others a conscientious job.

Looking back into the months past, Fleming House can remember a happy, busy, successful and progressive year; looking into the future, we can, after saying farewell to the seniors who have made our House a good place, confidently hope for many more years of unity, success and growth.

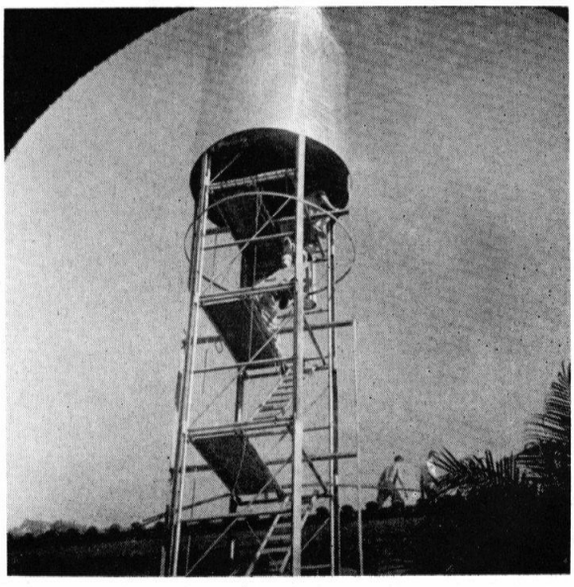
RICKETTS HOUSE OFFICERS—SEATED, left to right: Harvey Frey, Don Roberts, Dave Tansey, Jack Rocchio. STANDING: Frank Schroeder, Larry Griffith, Dick Morse. NOT PICTURED: John Bailey.

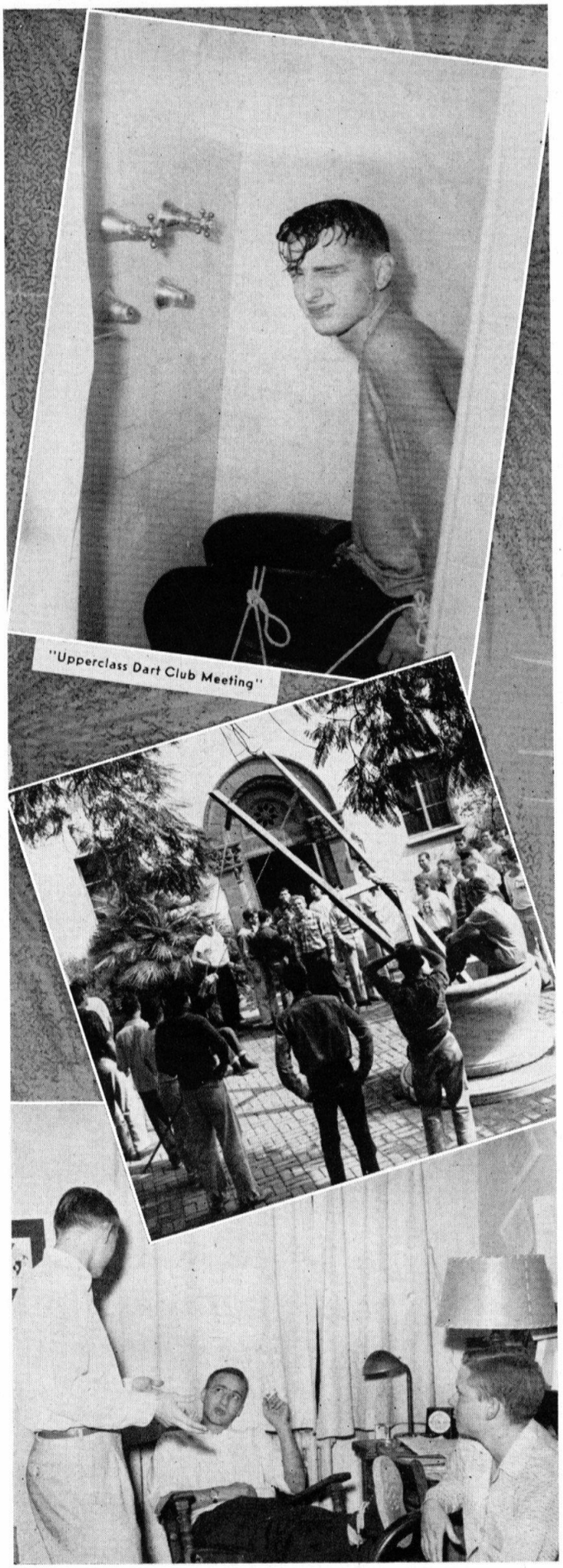
RICKETTS HOUSE

Under the leadership of President Don Roberts, the Ricketts Rowdies roared through another year at Tech last year with a rare combination of reckless abandon and huge success. Possessing a sort of Midas touch, the Rowdies invaded every conceivable activity on campus, and usually were to be found either as the officers of these organizations, or as the guys who were doing the work, or both.

Roberts' skillful administration had no small part in the success. Vice President Jack Rocchio continued the tradition of a top-notch Upper Class Committee, Dave Tansey ran off house minutes that were both useful and entertaining, and Harvey "The Kitchen Cynic" Frey held down the notorious office of Ricketts treasurer without even losing his balance.

As usual, the house social vice presidents, Dick Morse and Larry Griffith, turned up with a social calendar that would make fraternity men at any other college in the U. S. and A. moan with envy. The Ricketts molls were subjected to about three dozen social functions in all. There was a Catalina party, a snow party, an Irish Wake, and more than twenty dances, including three barn dances, two formals, and countless exchanges; all this, in addition to the standard list of ASCIT social and athletic events, and all the little unofficial parties which came off spontaneously during the course of the year.





"Upperclass Dart Club Meeting"

The first time things really went wild was in November, with the biggest Interhouse Dance of them all. The Rowdies spent five or six hundred dollars on this dance, plus countless man-hours of labor, and the return on their money made it all seem worth while. A huge rocket ship of aluminum was constructed in the courtyard, and towered to a height of 57 feet. At night the pointed warhead of the rocket could be seen from anywhere on campus (almost), reaching well above the roof of the student houses, and marked with a small but symbolic red light. The lounge had been transformed into the steaming surface of a distant planet, with suffocating atmosphere, jagged mountain peaks all around, and snarling alien monsters crouched in the crevices. Outside the lounge was a good-sized space station, well supplied with impressive electrical equipment, space charts, and impassable doorways.

This was only the first time that the social program exceeded the wildest dreams of the Ricketts men. No less a blast came in February, with the Eighth Annual Apache Mating Dance, at which a horde of filthy Parisian waterfront dwellers (barely distinguishable as former Techmen) danced heatedly with their women in almost total darkness.

Reports of the snow party, the Catalina party, the Irish Wake, and the barn dances are somewhat garbled, but assuredly everybody in attendance at any of these major events must have had an uproariously good time, since everyone plans to put them back on the social calendar for next year.

When the Rowdies were not out dancing or partying, they were off on the athletic field, and here too they found more than enough to keep them busy, with ASCIT varsity sports, interhouse sports, Discobolus sports, interalley sports, or what have you. Athletic Managers John Bailey and Frank Schroeter seemed to know what they were doing, for the teams made respectable showings in just about everything.

The number of Ricketts men who were out for intercollegiate athletics was growing fast, and a second in the Varsity Rating Trophy competition looked pretty solid, with the more optimistic souls looking for a win either this year or in the near future. The Ricketts interhouse teams regularly made a strong showing, and often furnished varsity coaches with material for their next year's intercollegiate teams. The interhouse ski trophy came home again, as did the crew trophy for part of the year.

Of course the Rowdies were unsurpassed in indoor sports (including the above-mentioned social program). This was demonstrated by the possession of the interhouse bridge trophy, although the "perpetual card game" in Ricketts lounge had lost some of its continuity. And even the card sharks took time off second term to help Lyman Fretwell whip three-fifths of the house into a glee club that was good enough to retain the huge and very impressive Interhouse Sing trophy.

DAVE ACKLEY
JIM ADAMS
FRANK ALBINI
DAVE ALLEN
JOHN BAILEY
JOHN BAKER

GORDON BARIENBROCK
MERV BARMAN
DICK BARON
GIL BEEBOWER
BILL BELOW
TOM BERGEMAN

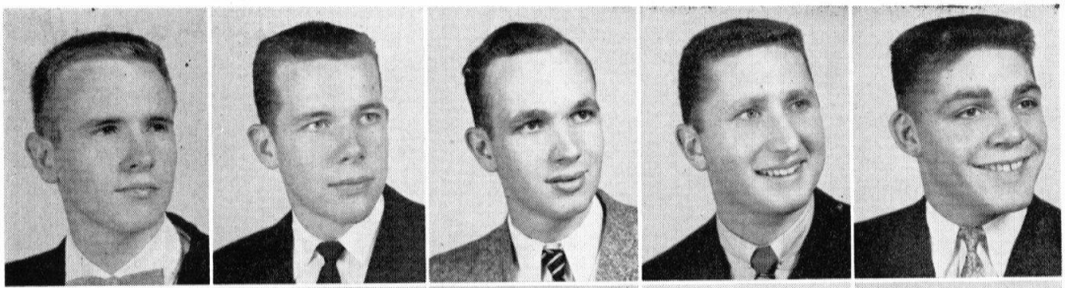
HOWARD BLOOMBERG
CHUCK BONWELL
GARY BREITBARD
ROSS BROWN
DAVE BYLES
DAVE CANTOR

DAN CHILTON
GENE CORDES
BILL CREIGHTON
JERRY CROCKER
RON DOCTOR
JOHN DRESSER

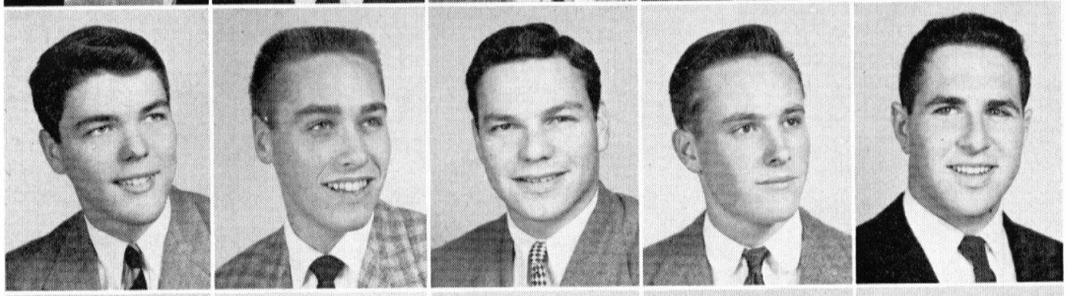
CRAIG ELLIOTT
HUGO FISCHER
LYMAN FRETWELL
HARVEY FREY
BOB GELBER
BILL GRAY

LARRY GRIFFITH
DAVE GROCE
WALT HAENGGI
HENRY HARRIS
CHUCK HELSLEY
BILL HECHT

JIM HIGGINS
FORD HOLTZMAN
DICK HUNDLEY
RUSS HUNTER
FRED ISHIHARA
DICK JALI

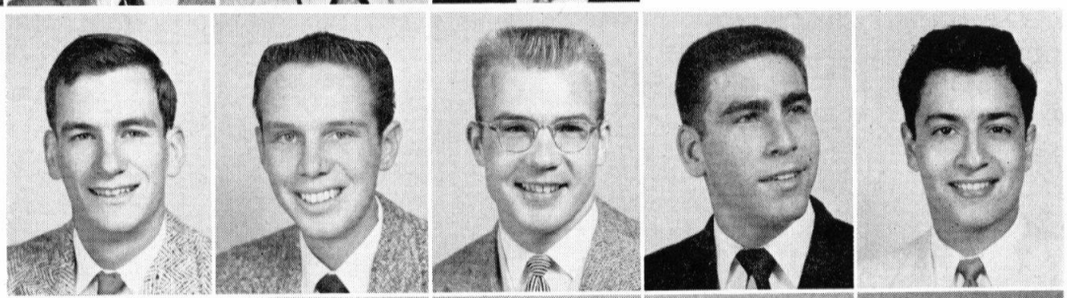


BYRON JOHNSON
DICK JOHNSON
AL JONCICH
FRANK KOFSKY
ED KREHBIEL

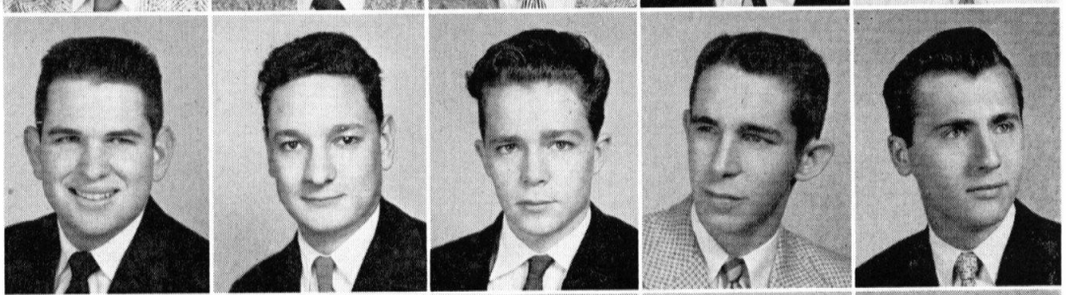


ROGER LAGERQUIST
JOHN LANSINGH
BILL LAPSON
DON LEE
DAVE LEESON

DICK LEWIS
JIM LEWIS
VINCE MARINKOVICH
HOWARD MARSHALL
ZACK MARTIN



TED MATTHES
PAUL McHORNEY
JIM MEBUST
BOB MITCHELL
LOU MONTOYA



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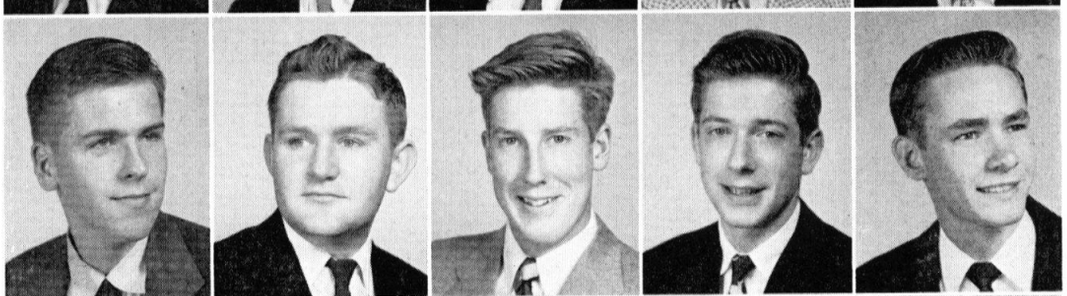
MARCO NEGRETE
ED NELSON
SONNY NELSON
WAYNE NELSON



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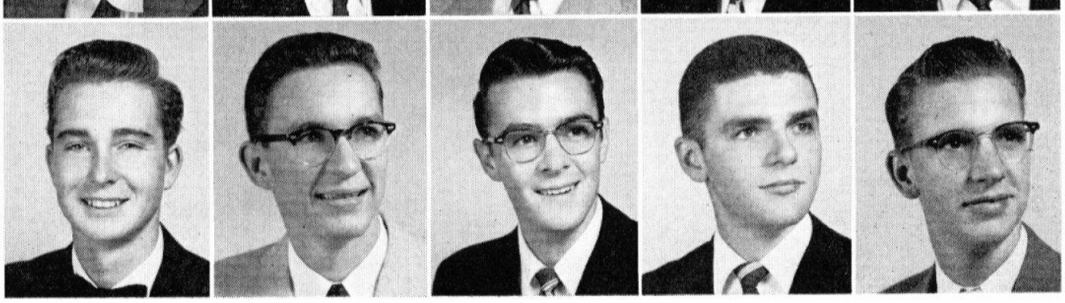
FRANK NOWAK
ED PARK
DICK PRATT
STU RICHERT



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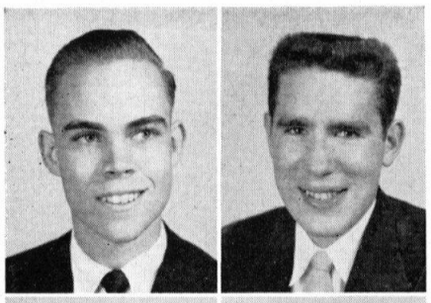
DOUG RITCHIE
DON ROBERTS
JACK ROCCHIO
FRANK ROSBACH



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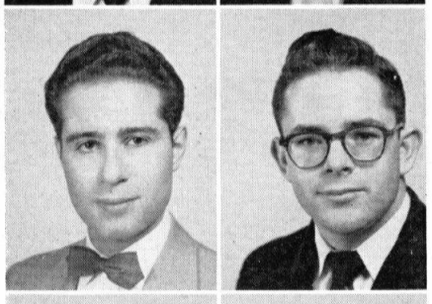
FRANK SCHROETER



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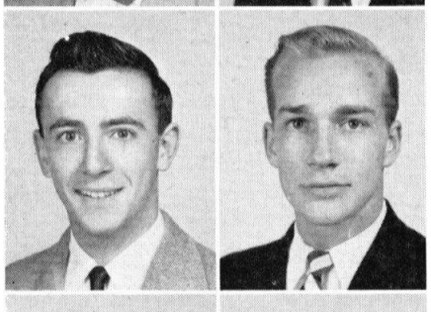
BOB SIMPSON



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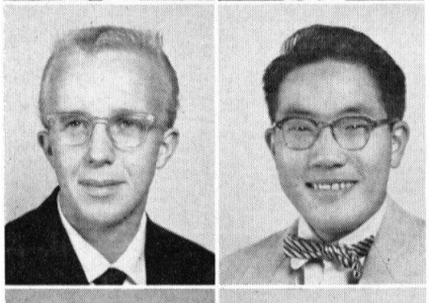
HUNT SMALL



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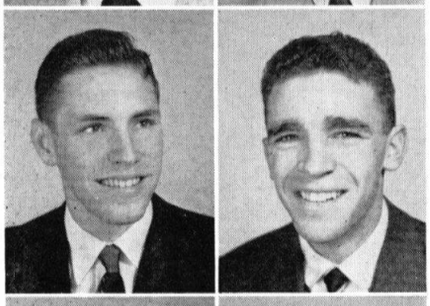
KAY SUGAHARA

JERRY SWEDLOW
TRAN TRUONG



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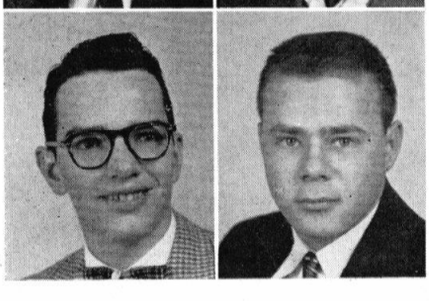
DAVE TANSEY



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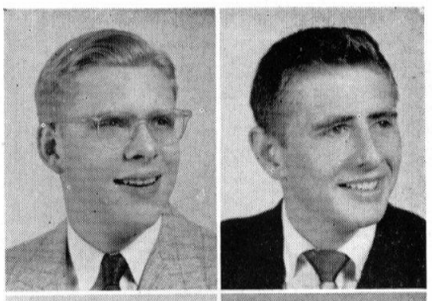
TOM TRILLING

JON VALBERT
MIKE VALE



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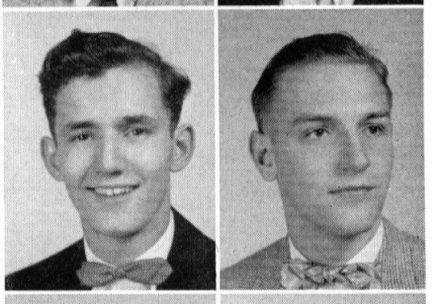
JOHN VARADY



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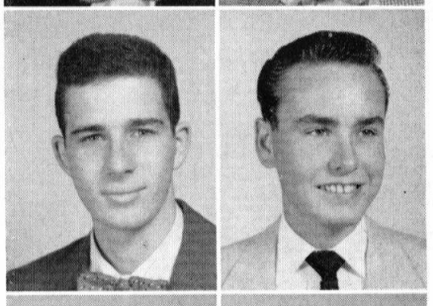
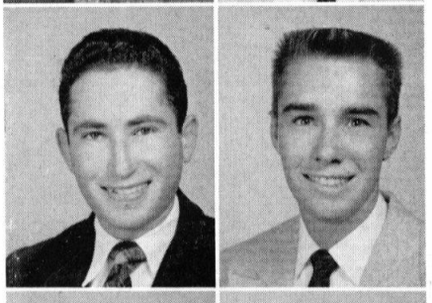
RON WANN



WALT WEISS
CHUCK WHEATLEY



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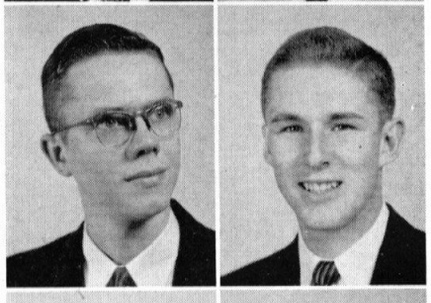
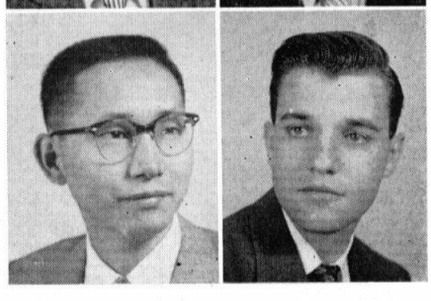
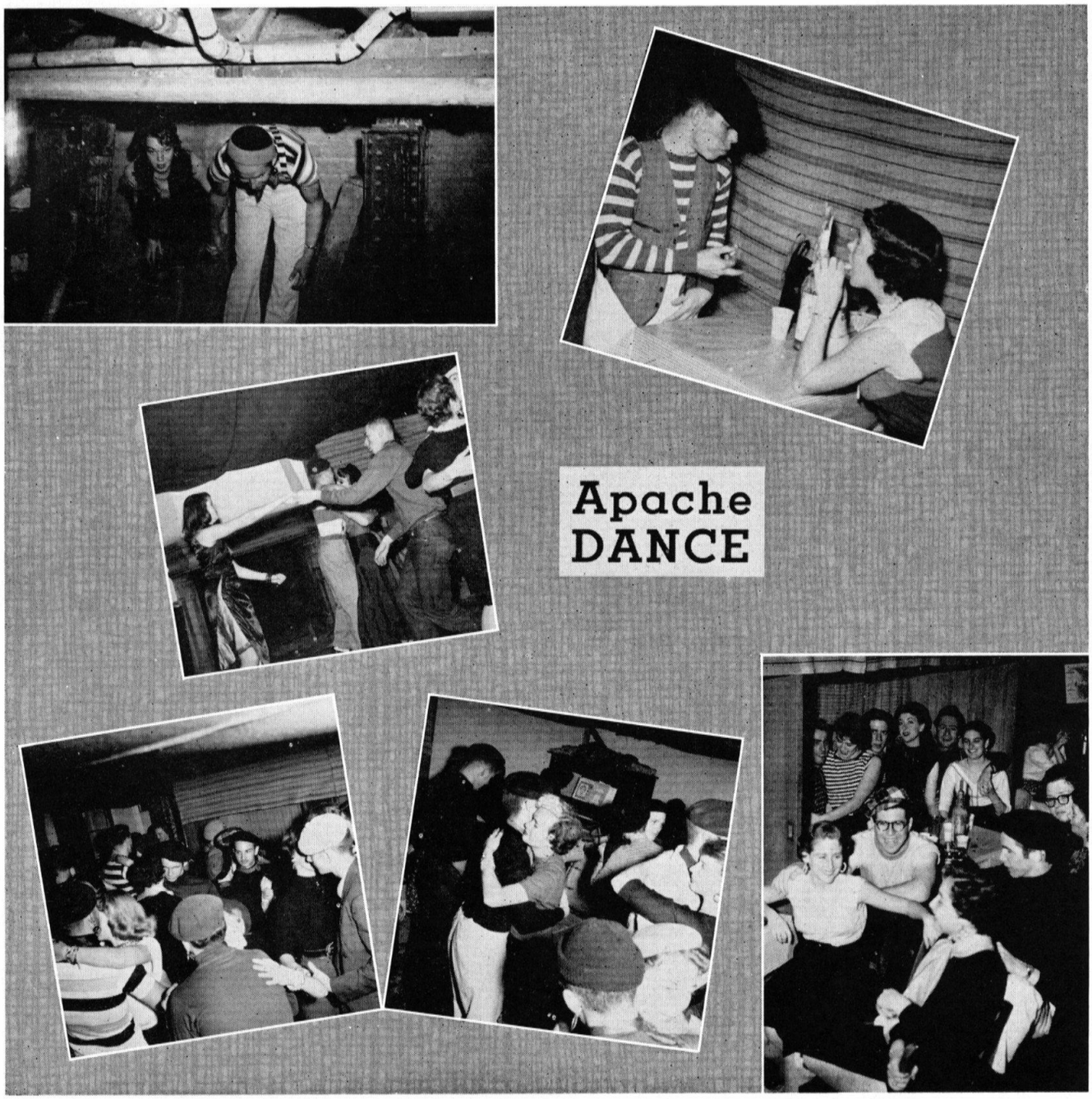
JIM WORKMAN

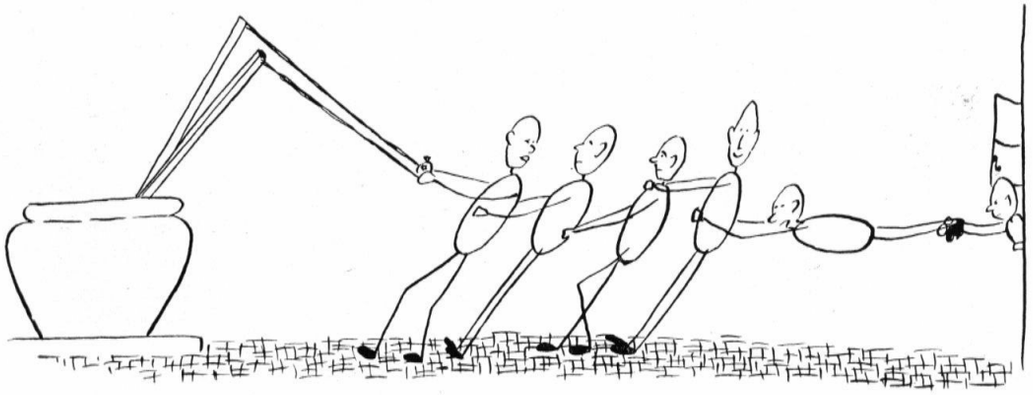


JOHN WEISNER
DANNY WULFF

TETSUO YAMANE
GEORGE YANKURA




Apache
DANCE



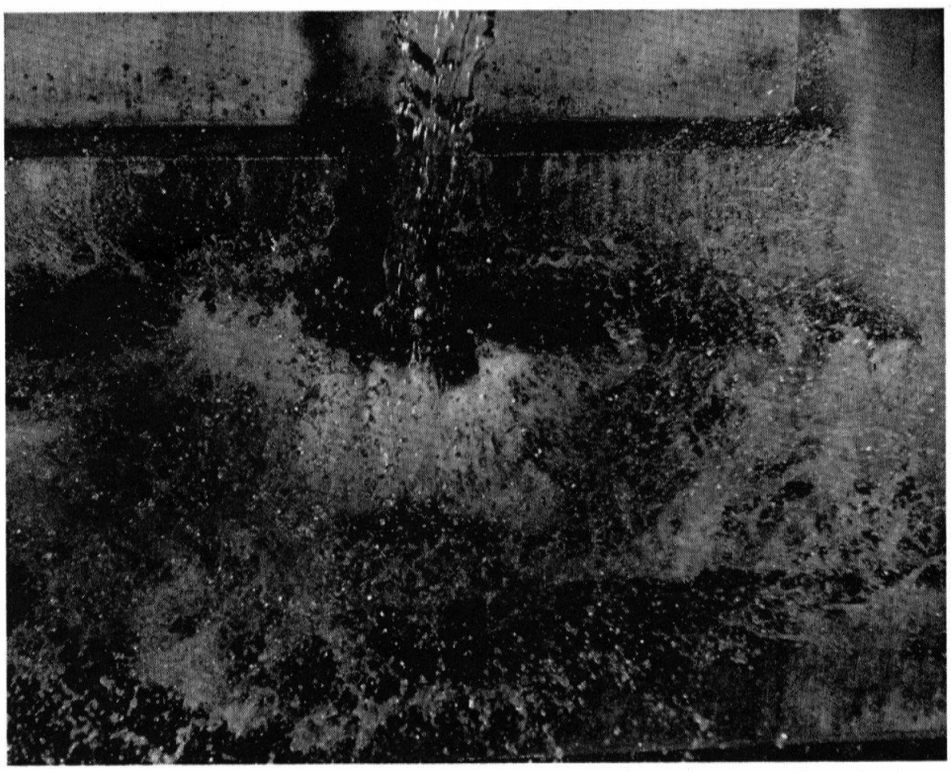
Other traditional "trophies" continued to circulate freely. The Inter-Alley Trophy was again the inspiration for ingenuity and wit, since the tradition continued that challenges for this trophy had to be something more than sane. The brake drum fell into the hands of the frosh in first term, so that the indefatigable Class of '57, now sophomores, maintained their perfect record of never winning a brake drum riot. And does the Fleming Brass Spittoon count as a trophy? For it paid a visit to the Ricketts alleys during a hectic week in second term.

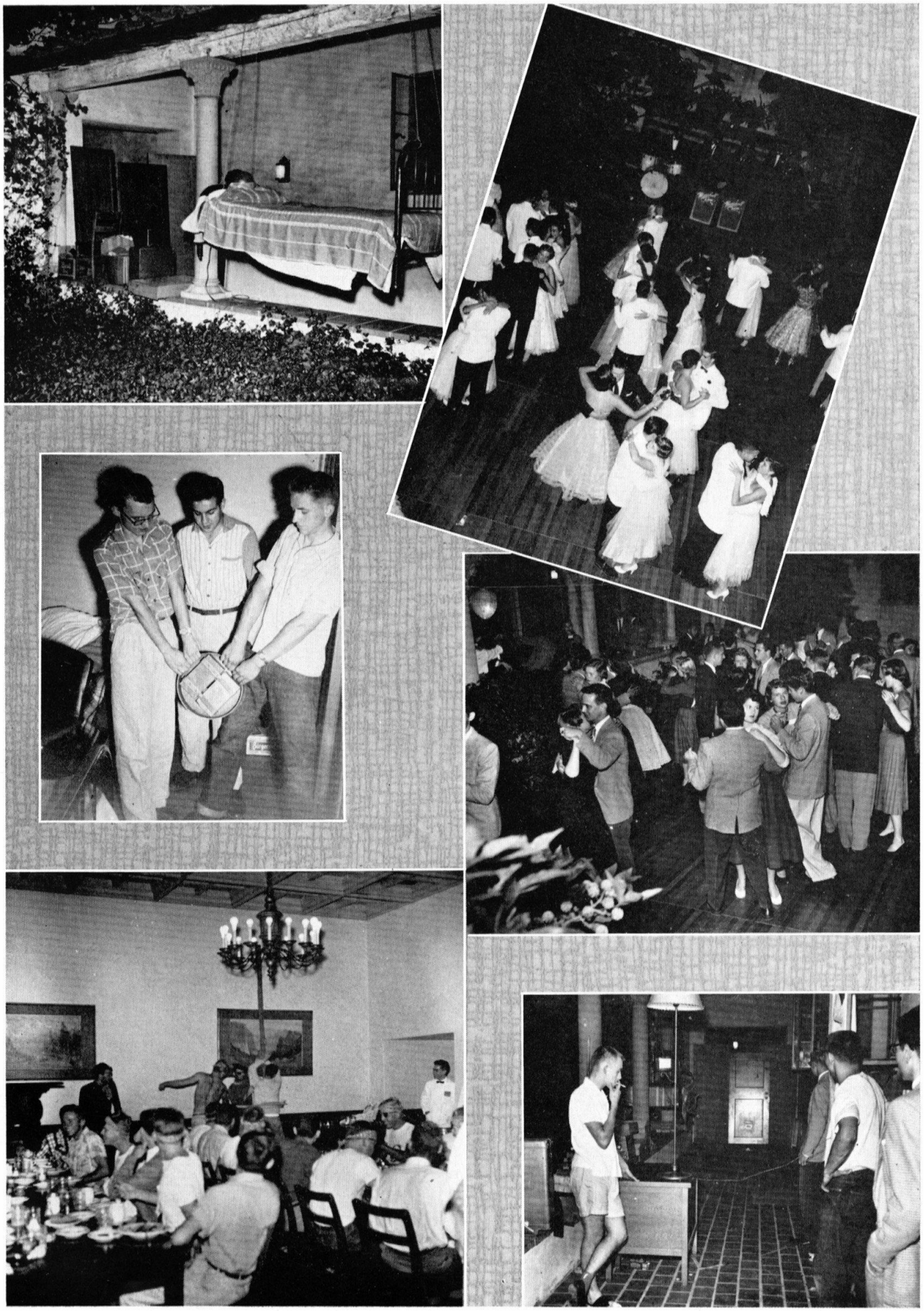
When a Ricketts man was not around the house, it was usually safe to assume that he was off somewhere lending ASCIT a helping hand. This was especially true when there was a varsity contest somewhere, the house turning out in force to root for the Orange and White.

The usual raft of ASCIT officers came from the northeast corner of the quad. The outgoing Board of Directors was led by Rowdies Jim Adams, president, and Vince Marinkovich, vice president. The incoming board will be more than half Rowdies, with Bergeman, Morse, Workman, Elliott, and Kofsky holding positions of leadership in the student body government.

Of the ASCIT leaders who do not serve on the board, again a large number are from Ricketts. Head yell leader for the coming year is "Smiling" Dick Johnson. The editors of the **California Tech** and **Farrago** this year will be Ricketts men; last year the editors of **Tech** and **Farrago,** and the **Big T** and **Little T** besides, were all from Ricketts. Half of the men on the Board of Control this past year wore maroon house coats to dinner. Two of the four class presidents were Rowdies, and the Ricketts sophomores held eight of the nine sophomore class offices. The Beavers were heavily infiltrated with Ricketts men, and next year's Beaver president and secretary are Lyman Fretwell and Jerry Crocker of Ricketts.

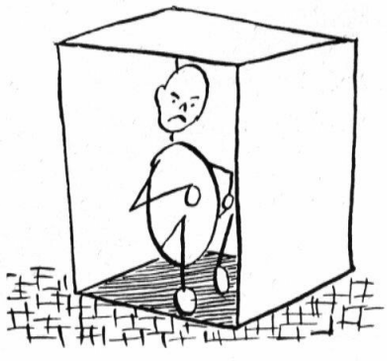
Ricketts was a little Caltech in miniature this year, with its members spread into every possible activity, and meeting everything with that Midas touch which may well become a house tradition in itself. Athletics, social events, waterfights, brake drum riots, student body government—there was a Ricketts finger in every pie.





FIRST ROW, left to right: Carl Bowin, Louis Kilchenman, Don Taylor. SECOND ROW: Bob Christian, John Andelin, Jim Lloyd.

THROOP CLUB

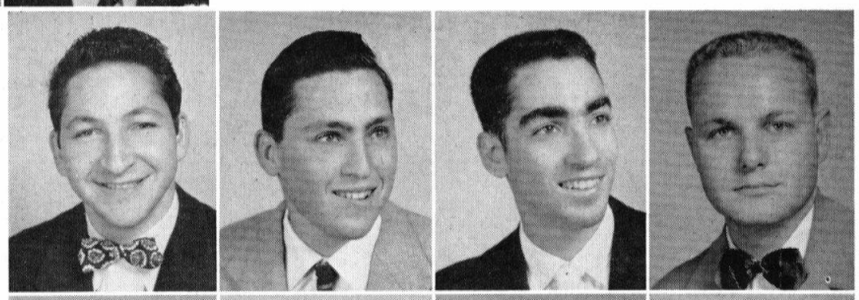


DONN ALLEN
JOHN ANDELIN
ARLEN BELL
STU BOWEN

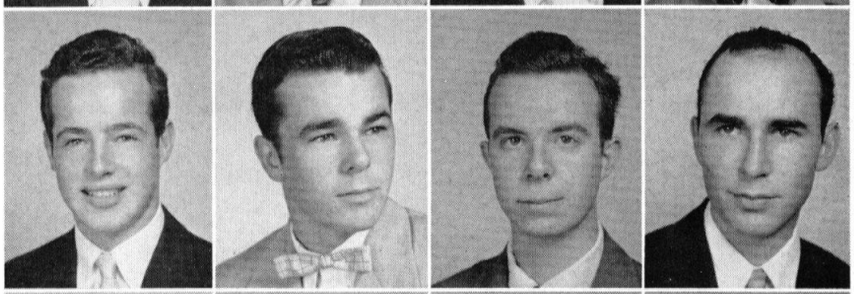
CARL BOWIN
DELANO BROUILLETTE
DAVE BRUST
BOB CALAWAY

BOB CHAPKISS
DAVE CROWTHER
RON DANKLEFS
SCOTT DAVIDSON

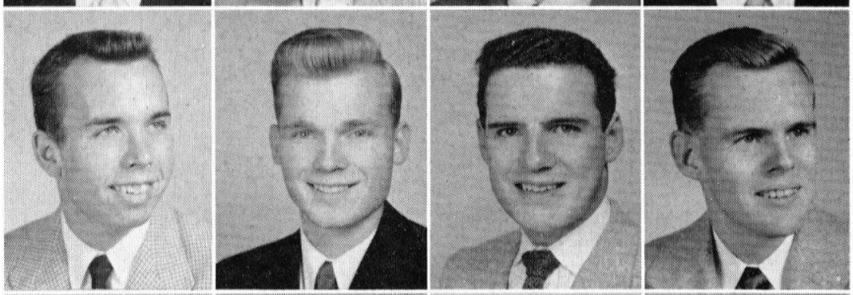
HUBERT DUBB
MIKE DUKE
STEVE EMANUEL
GENE ENGELS



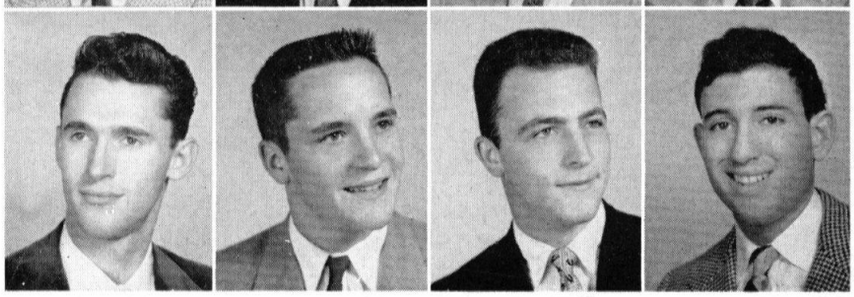
ROBIN FRENCH
JIM GILES
CHARLES GOEBEL
JOE GRAETCH

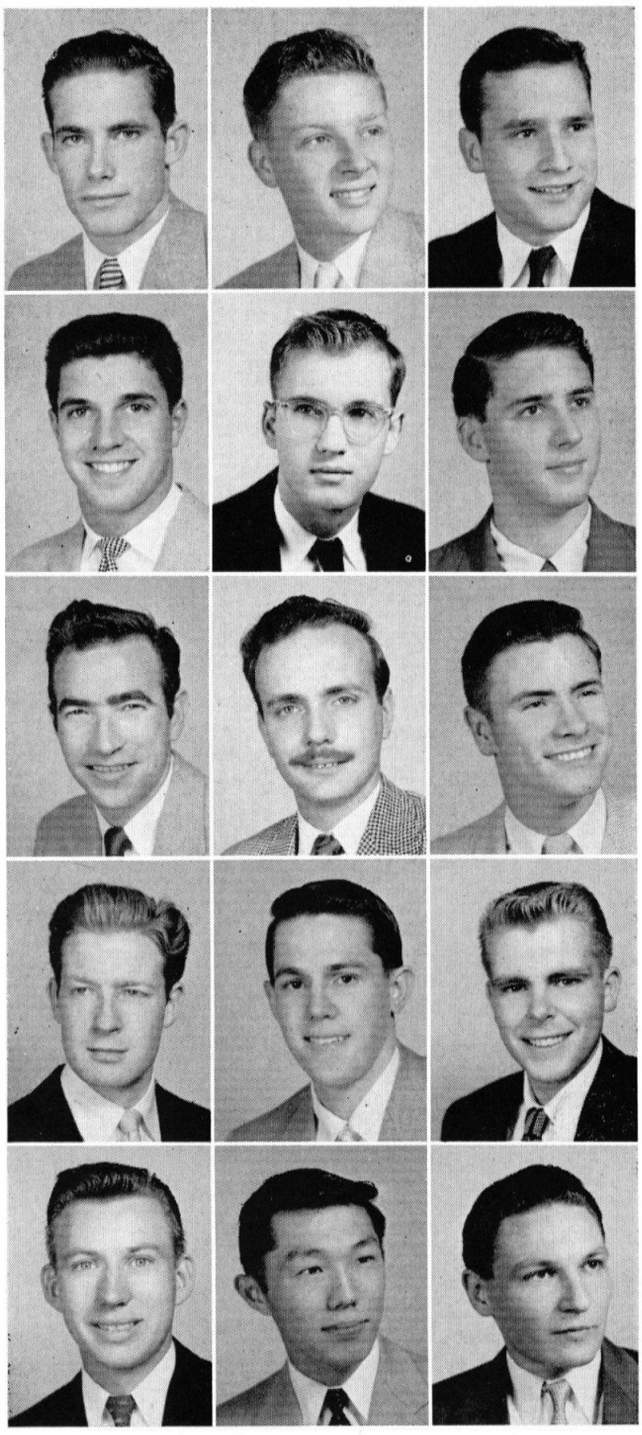


LANCE HAYS
GERALD HOOPER
KIRK IRWIN
CARL JOHNSON



LOU KILCHENMAN
BRUCE KOWOL
JOEL LIFTER
GERALD LIPPEY





JIM LLOYD	TOM LOVEJOY	JOHN LUKESH
CHUCK MALONE	STAN MANATT	LARRY MARANTZ
JIM McCLOUD	BOB MEADE	PETE MELIA
JIM MOORE	HAL MORRIS	DICK NIELSEN
GENE NELSON	JIM OKADA	RUDY PARZL

It's been another great year at Caltech, and particularly at Throop Club. John Andelin began the year as the leader of the off-campus men—the boys who snatched the Goldsworthy Trophy out of the grasp of the other four Houses and brought it to rest on the mantle of Throop's huge fireplace. From this vantage point, the trophy had a bird's-eye view of all the parties promoted by Throop's hard working Co-Social Chairmen, Carl Bowin and Louis Kilchenman. Hats off to these two for the Hawaiian party, the Apache dance, the square dance exchange, the snow party, the roller skating parties and many other week-end events!

Besides these doings, the everyday life at Throop Club has been terrific. The name has become synonymous with friendliness, relaxation and good times. Everyone knows that when things get tough and you feel the need for a little recreation, there is little better than a good game of "No Rules" volleyball, or ping-pong or maybe poker. As the year passed, the facilities of the Club were expanded to keep up with the requests of the members. Such things as an icebox, pop cooler, TV set and an R. D. Christian-built refreshman bar were added.

Throop has the largest lounge of all the Houses, and even though it is quite a challenge to decorate it, there is always ample room for decorations, band and dancers. This brings to mind the annual Interhouse Dance, with its many and varied decorations. On the eve of the dance, Throop Club had its usual work party. There was a large turnout, and everyone was busy with paint, paper, staplers, hammers, electric motors and even assorted pieces of pipe and a water pump. As the evening passed, a redheaded fellow could be seen every now and then through copious mists of colored paint. He was so busy spraying a walkway to the sky that he was totally oblivious of all the paint speckled couples that went home that night. Many a worker, while wiping the paint off his face, was startled by a demoniacal chuckle coming from the kitchen, where some ghoul was diligently forming a huge, bloody eyeball from a two-gallon flask. Having piqued your curiosity, gentle reader, it is time to mention that the theme of Throop was "Modern Abstractions."

DENNIS PETERS
DON ROBERTS
LEE SCHMIDT
RAY VIRZI

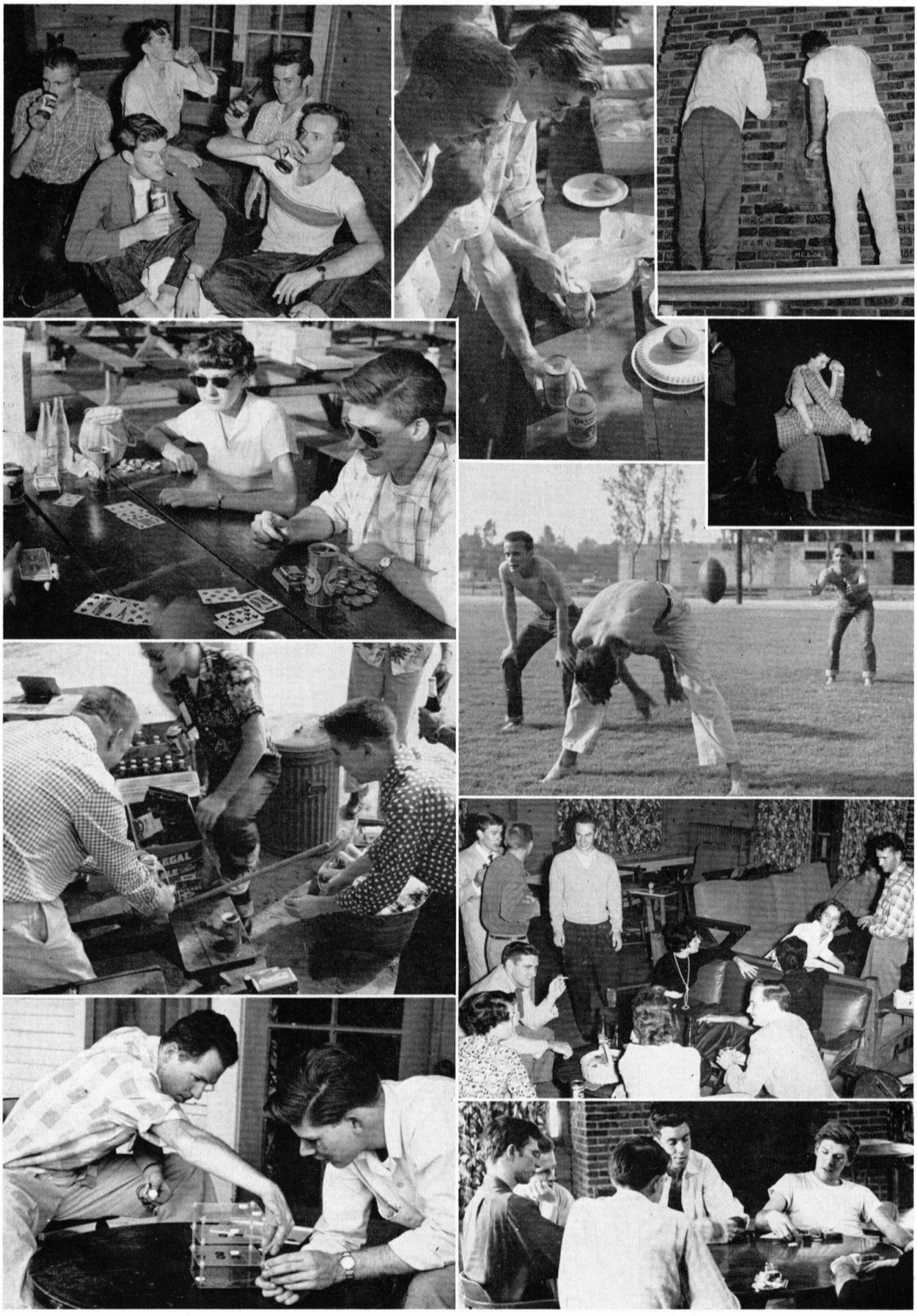
BOB POLANSKY
JIM RODE
TOM SCHUMANN
ROGER WALLIHAN

JERRY PRESSMAN
ED ROYCE
ED SHUSTER
DICK WEBBER

DON RASMUSSEN
GENE RUBIN
GENE STANLEY
BOB WILDEY

DON REITERMAN
MIKE RUSCH
HOWARD STURGIS

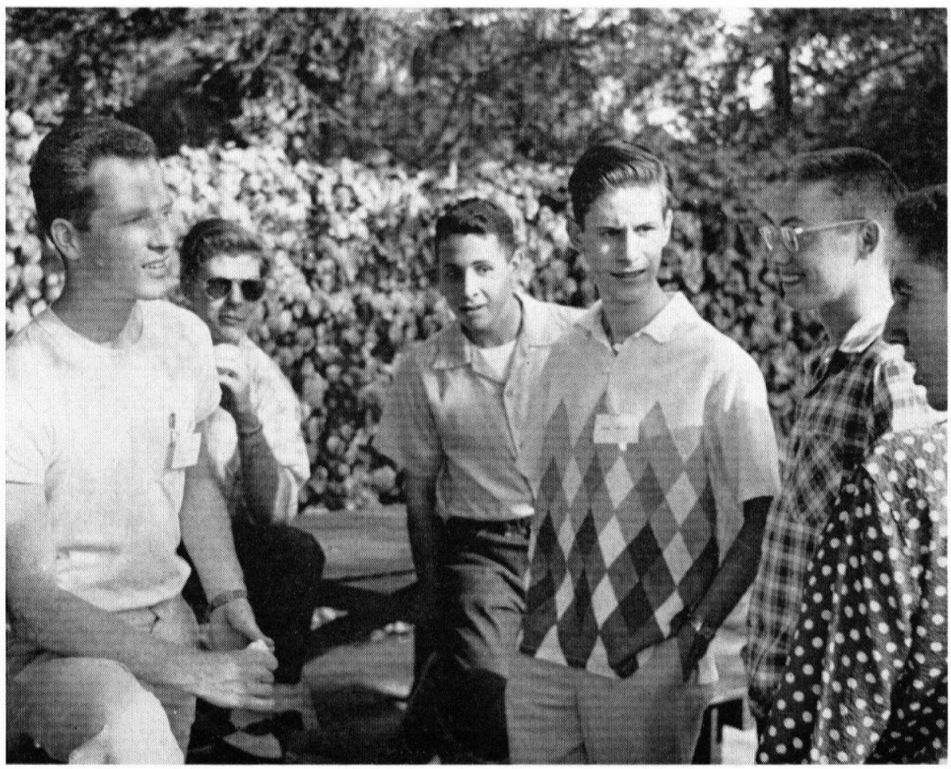
PHIL REYNOLDS
CHUCK SARGENT
DON TAYLOR

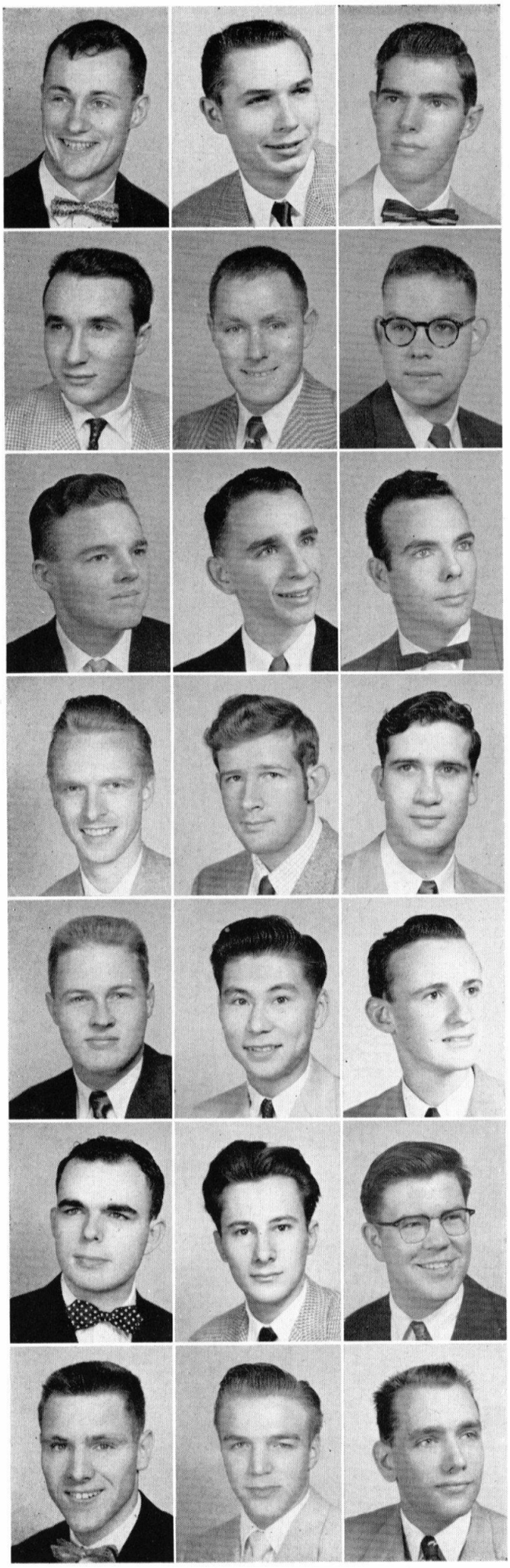


True to style, several self-styled Dali's were busy with paint brush in one hand and a tankard of beverage in the other all evening. Joe Graetch and Roger Lagerquist took up the challenge of building a pool and fountain that would not leak. As the night of the dance approached, excitement mounted. When it finally arrived, the dance was a huge success. It was rumored that Moser's freeform had to decline several invitations to dance. When it was all over, everyone was happy. Except Joe Graetch—the pool leaked!

To an observer outside the Club, Throop's year of athletics may seem to have been only mediocre. Spiritwise, this is certainly not the case. Furthermore, in intercollegiate sports the Club was well represented by Bob Christian, Dave Crowther, Jim Lloyd, John Lukesh, Gene Nelson, Don Taylor, and many others.

The time always comes for House elections, and this year was no exception. Jack Andelin gave his office of President to John Moser. Ever faithful Jim Lloyd (with two L's) continued as President of vice. Throop again had Co-Social Chairmen in Mike Duke and Gene Nelson, relieving Carl Bowin and Louis Kilchenman. The job of Treasurer went from Bob Christian to Dick Cooper. Don Taylor passed the Secretary's pen to Jim Rode. Paul King and Mike Rusch took over from Chuck Sargent as Athletic Managers. From this list of names, it can be seen that Throop had an inspired group of Freshmen who placed three officers—many more having been nominated. This should serve to forewarn the other Houses of great things to come.





JOHN AMES
JOHN ASMUS
GENE BARNES

ROGER CAPUTI
LARRY CRANE
JOHN DOMINGO

JIM ELLIOTT
GARY GAYRON
DAN GRIFFEN

BILL HAGEMEIER
JIM HALL
LEIGHTON HANON

JOHN HONSAKER
KANAU KAWASHIMA
PAUL KING

AL LIEBER
PIERRE MAHIEUX
BRUCE McKEEVER

CHUCK McKINNON
DICK MILLER
VERN NOGLE

OFF CAMPUS

WALTER SCHAAL
NORMAN SVENSRUD

ED SEIDMAN
AL TEAGUE

TOM NOONAN
MITCH SEIDMAN
DON WELCH

REID PARMERTER
DON SESSLER
KEN ZIEDMAN

R.A.'S

DR. GEORGE P. MAYHEW
Master of the Student Houses

DENVER GORE
Dabney

RON SHREVE
Ricketts

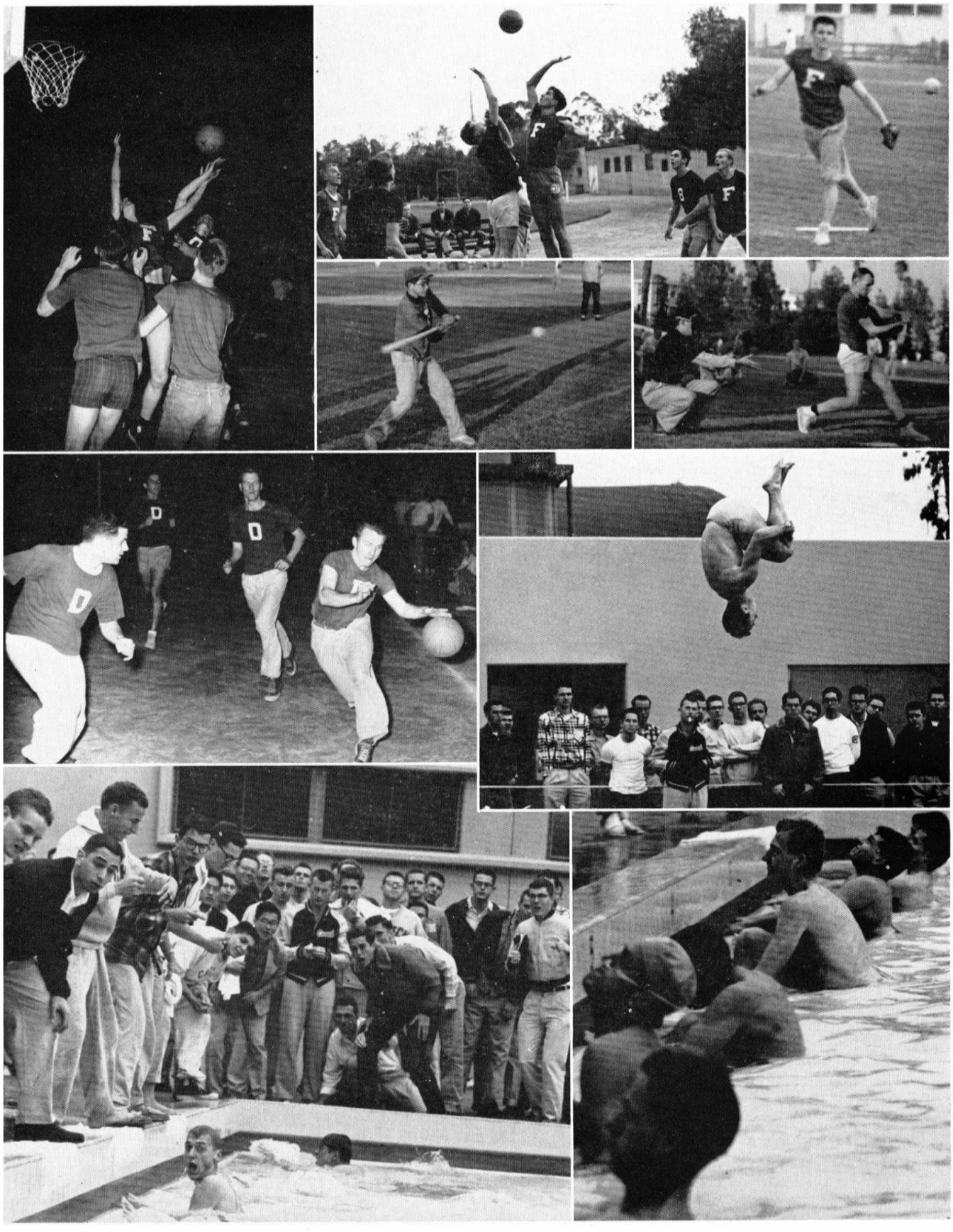
DR. WARD WHALING
Fleming

JOHN RUCKMICK
Blacker

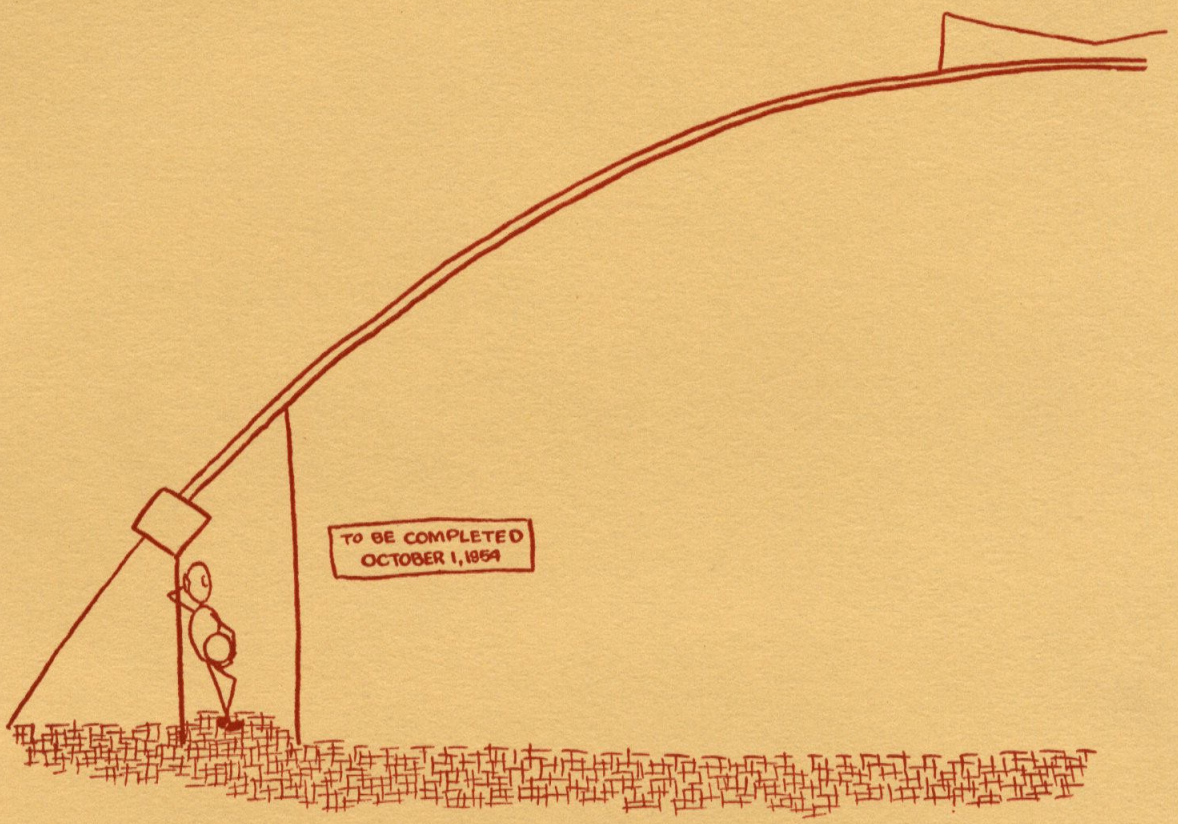
STUDENT HOUSE STAFF

MARIE SIMMONS
WILDA SOUTHWORTH

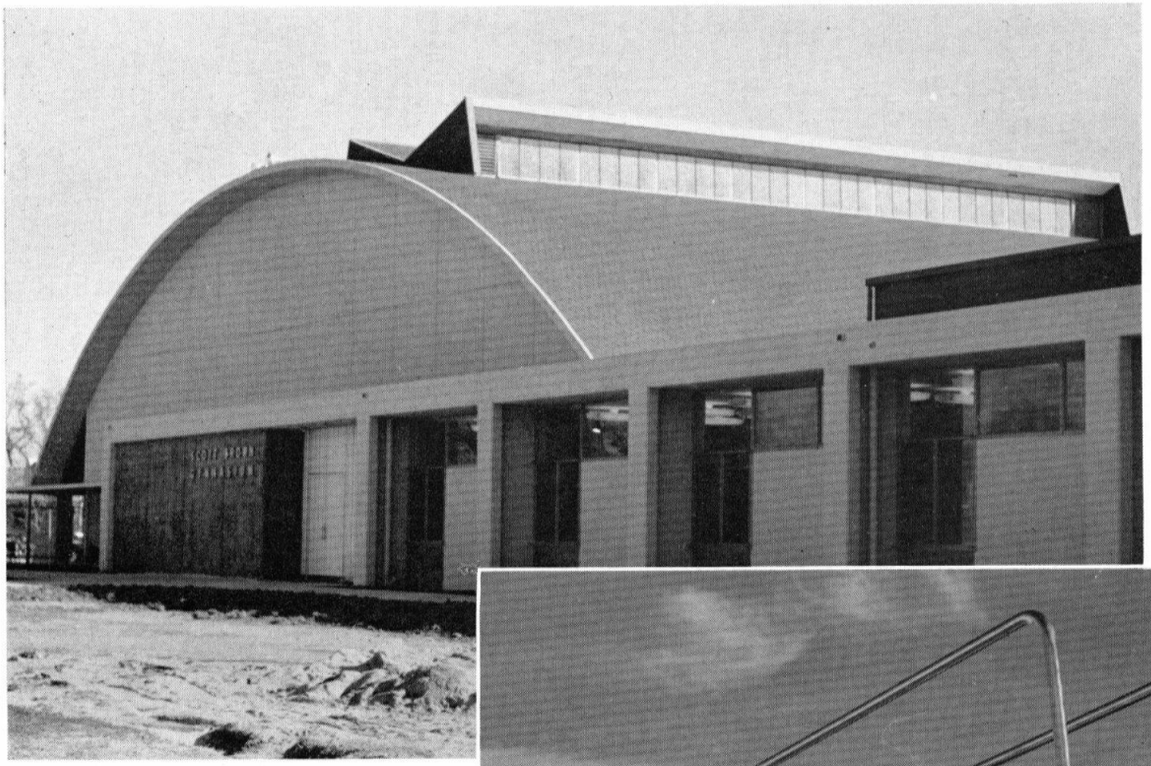
WINNIE YURICH
AMELIA LANG
NED HALE



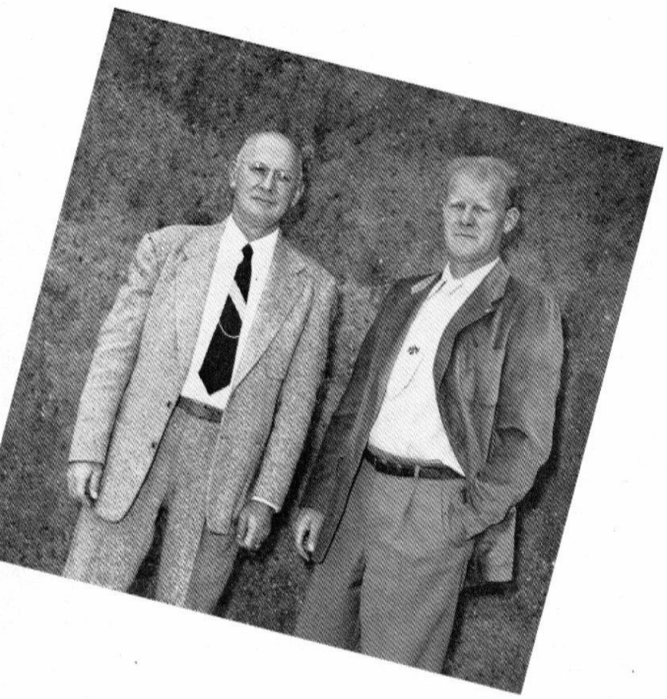
INTERHOUSE SPORTS



Sports



THE NEW GYM



Hal Musselman, Director of Athletics, and Jim Nerrie, Coach.

BERT LaBRUCHERIE
Head Coach

FOOTBALL

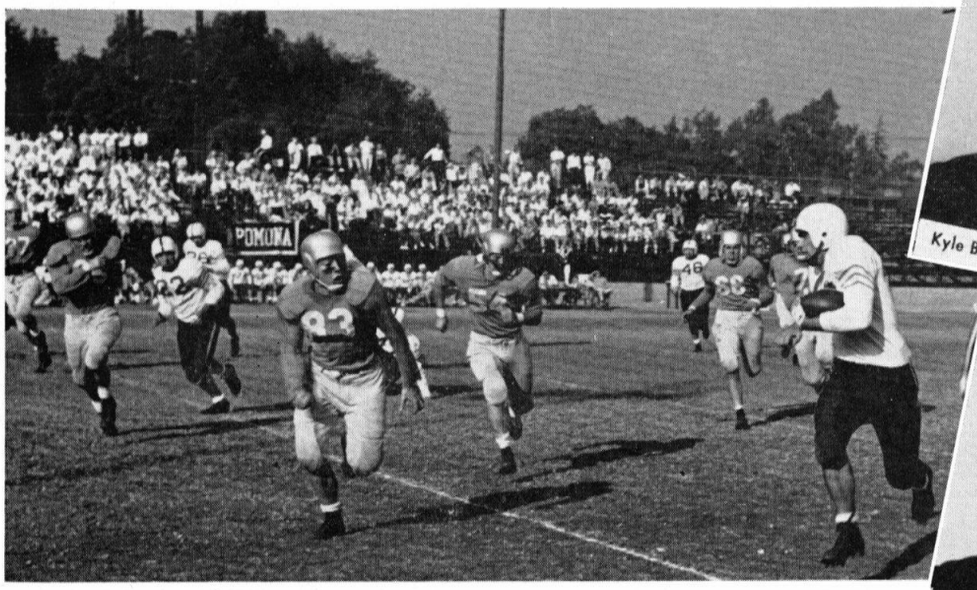
This year Caltech put a real fighting football team on the field for every game and although they failed to score a victory, the men never lost their spirit. The team scored at least six points in every game and a total of 95 for the seven-game season. Tech's thirteen points against Pomona in the first game was the most scored on the league champs all year.

Al Learned was the new assistant coach to Bert LaBrucherie and he did a bang-up job in coaching the line. There were seven seniors on the team, all of them starters, and five of them were three-year lettermen. The seven were: Co-captains Ray Grieser and Walt Menetrey, Bob Christian, Dick Manley, George McDonald, Dick Schmid, and Marty Vogel.

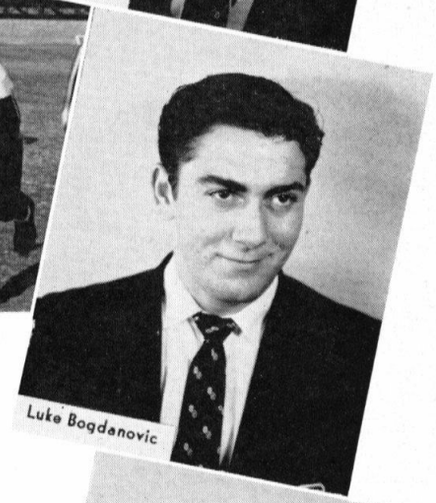
Junior quarterback Phil Conley led the offense and did almost all of the passing, and the backfield of Menetrey, McDonald, and Christian ground out a lot of rushing yardage. Conley was the conference leader in individual total offense and he was chosen quarterback on the second all-conference team.

At the fall sports banquet Walt Menetrey was awarded the Wheaton trophy for sportsmanship, moral influence, and scholarship.

FIRST ROW, left to right: George McDonald, Steve Nathanson, Marty Tangora, Bob Christian, John Velman, George Hall, John Lukesh, Jim Okada. SECOND ROW: Dick Schmid, Joe Lingerfelt, Luke Bogdanovic, Ed Nelson, Kyle Bayes, Walt Menetrey, Jim Snyder, Ray Grieser, John Myers. THIRD ROW: Ed Hershberger (Mgr.), Bert LaBrucherie (coach), Ted Lang, Larry Whitlow, Jim Workman, Del McCune, Marty Vogel, Phil Conley, Dick Manley, Ron Doctor, Dave Clark (Mgr.), Al Learned (coach).

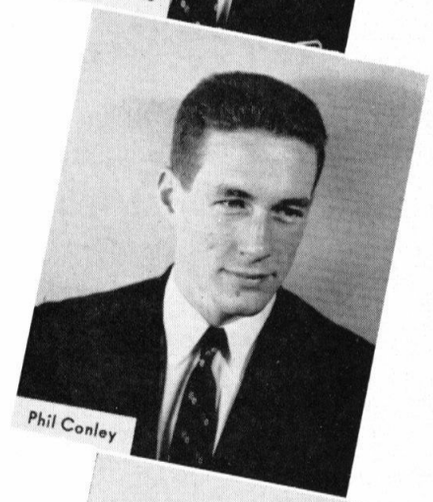


Kyle Bayes


Luke Bogdanovic

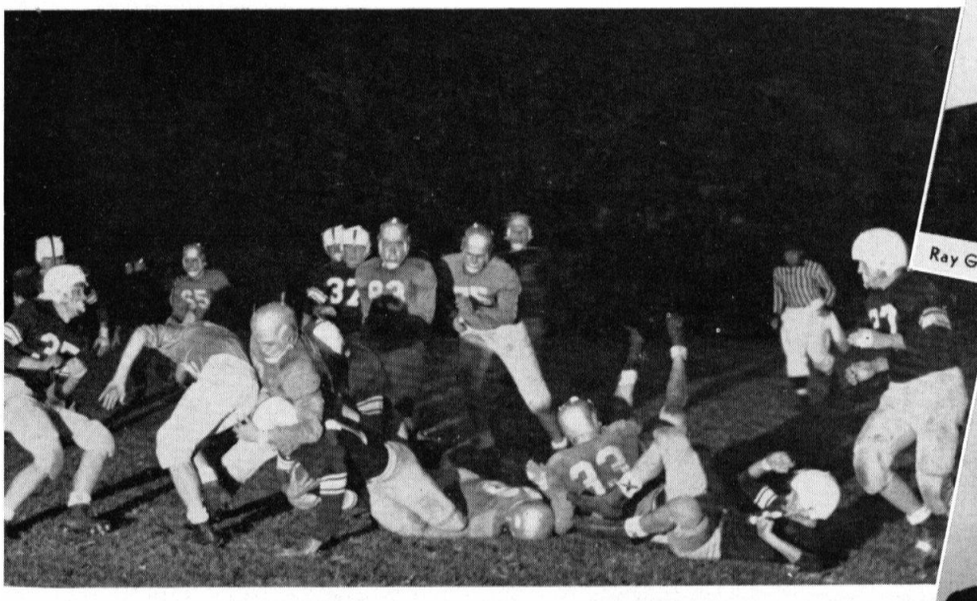
CALTECH 13 POMONA 32

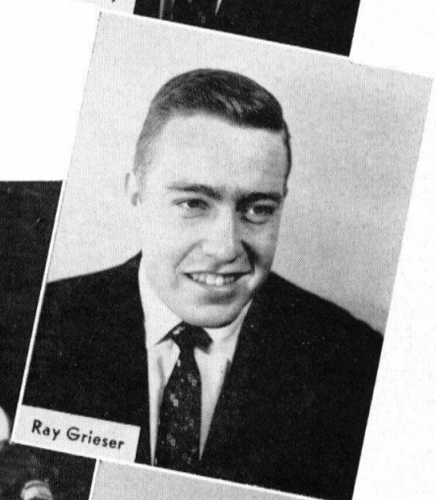
The Beavers opened the season against Pomona in the Rose Bowl on October 2 and suffered their first defeat. Tech played good ball, but fumbles and Pomona's passing attack brought about their downfall. Tackle Larry Whitlow scored Tech's first touchdown when he recovered a Pomona fumble in the end zone and Marty Tangora made the second score on a 40-yard reverse play.

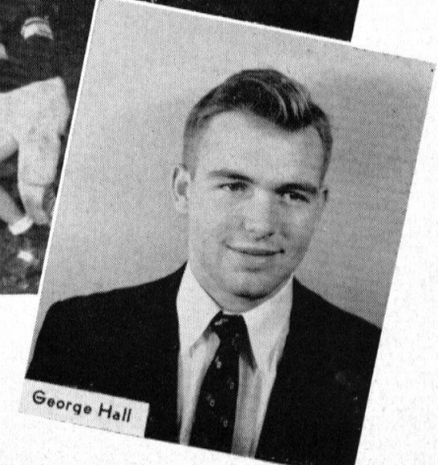

Phil Conley

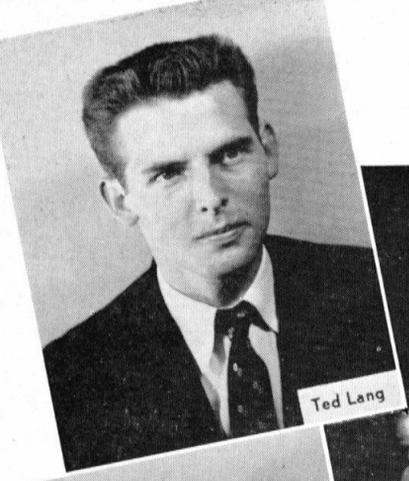
CALTECH 12 LOS ANGELES STATE 20

Tech sent a real football team to L.A. State on October 8. The Beavers scored in the first quarter on Walt Menetrey's two-yard plunge and in the second period on Phil Conley's quarterback sneak from the three. In the second half, however, State's superior bench strength tired out the undermanned Beavers and the Diablos snatched the victory in the waning minutes.



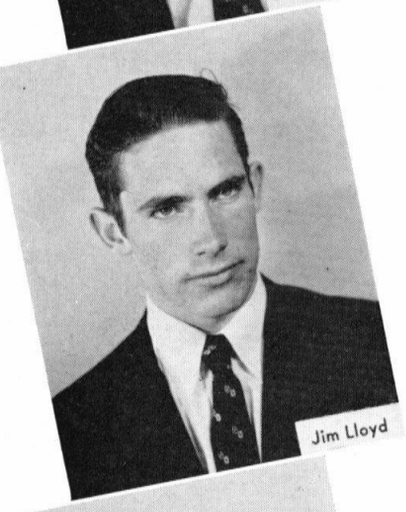

Ray Grieser


George Hall



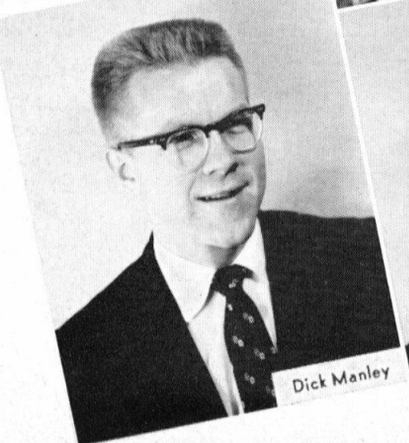
Ted Lang

Joe Lingerfelt

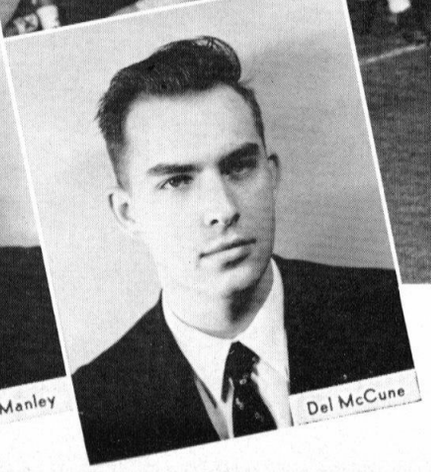


Jim Lloyd

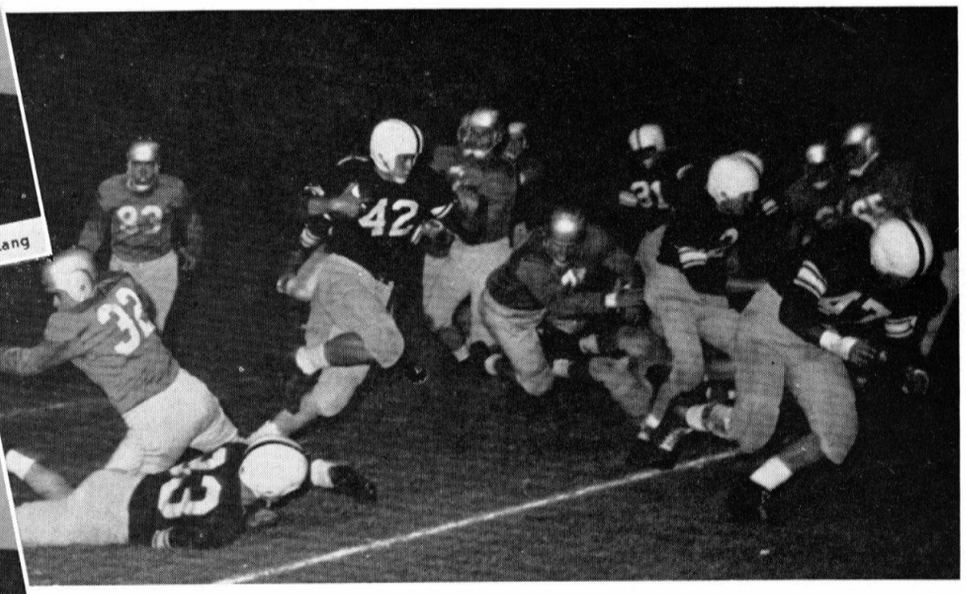
John Lukesh

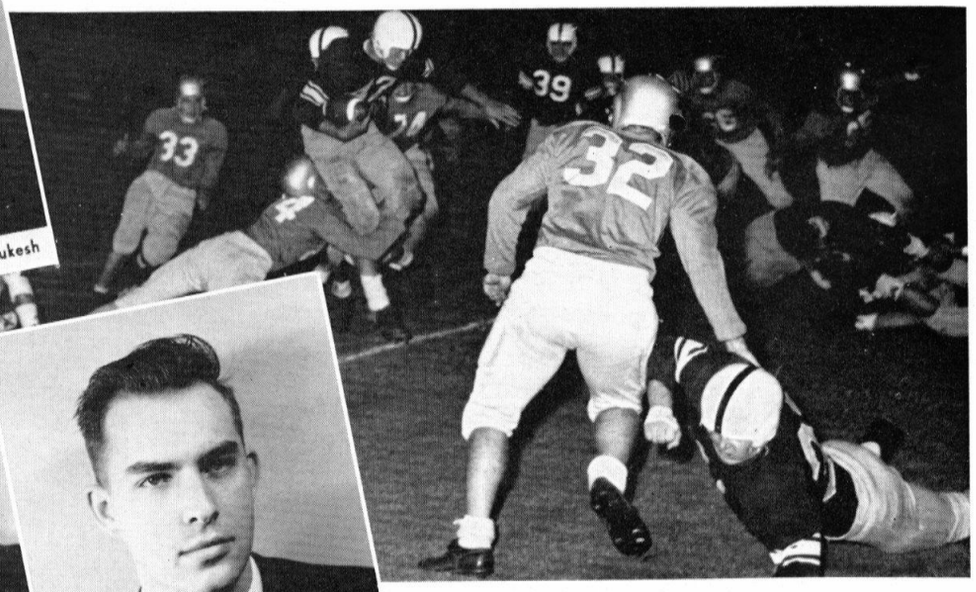


Dick Manley



Del McCune



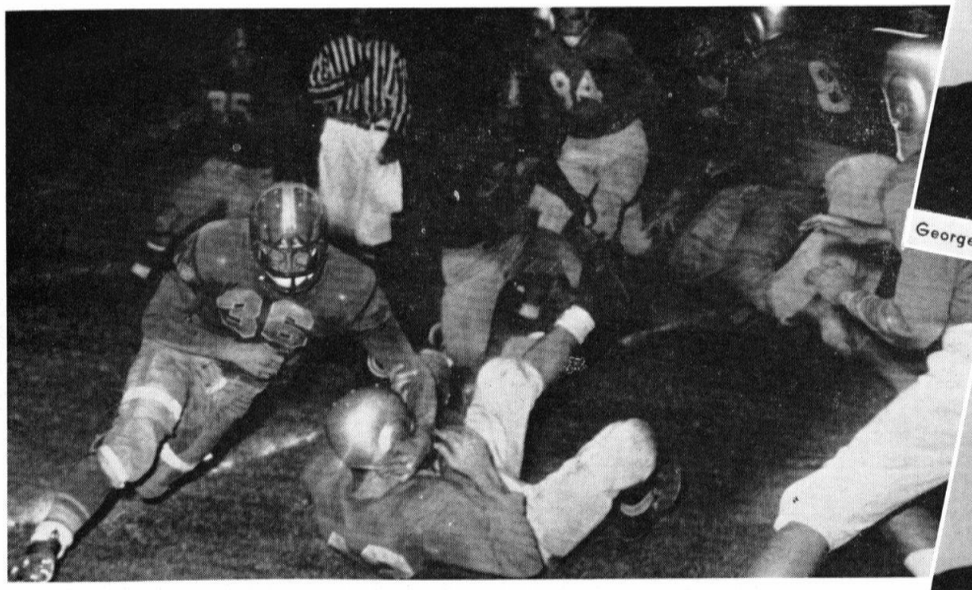


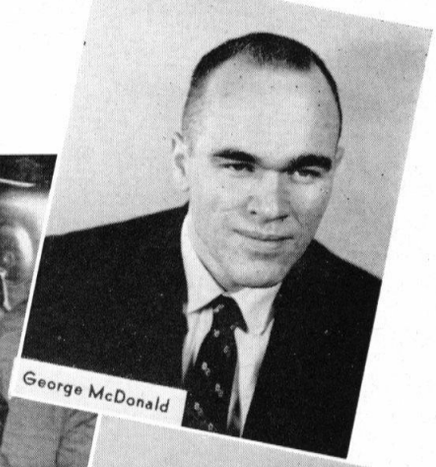
CALTECH 6 REDLANDS 33

On October 16 the Beavers met Redlands in the Rose Bowl in their final home game. The Bulldogs presented a tough eight-man line which stopped Tech cold for three quarters. The Beavers made their only touchdown in the last period after Phil Conley intercepted a pass on the Redlands 25. Conley gained eleven yards and then passed to Ray Grieser in the end zone for the score.

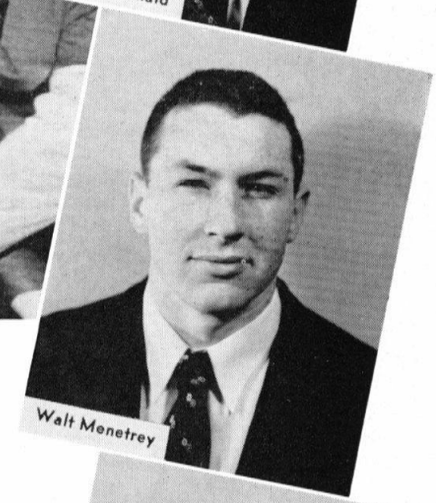
CALTECH 13 WHITTIER 53

Hadley Field in Whittier was the scene of Tech's game with Whittier College on October 23. The Beavers scored first when Phil Conley intercepted a Whittier pass and ran it back to the two-yard line from where Bob Christian carried into the end zone. Tech's only other score came in the last quarter on a pass from Conley to end Ed Nelson.





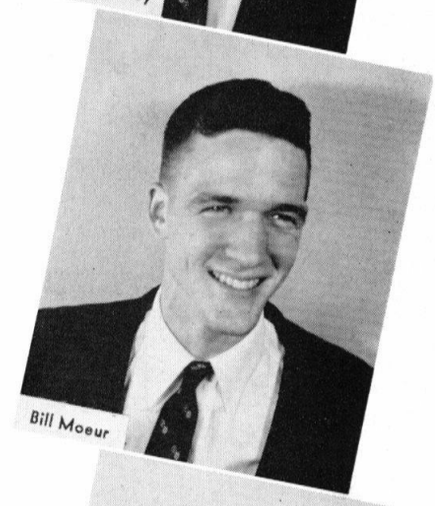
George McDonald



Walt Menetrey

CALTECH 6 POMONA 60

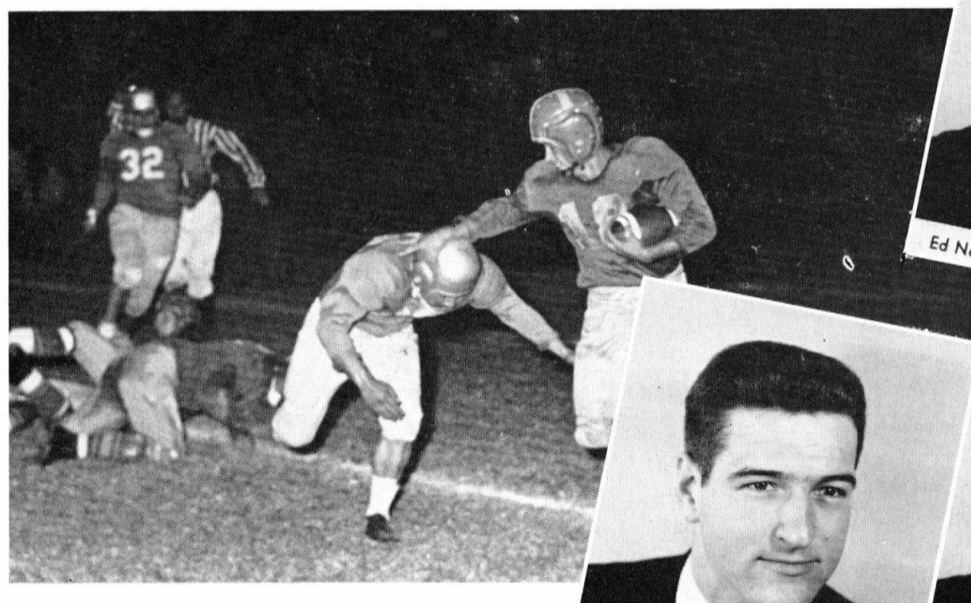
Pomona College played host to Caltech in an afternoon game on October 30. The Sagehens, who went on to an undefeated season and won the conference championship for the second consecutive year, scored on the very first scrimmage play on a 68-yard run and were held scoreless only in the second quarter. End Dick Schmid scored Tech's only touchdown on an 11-yard pass play.

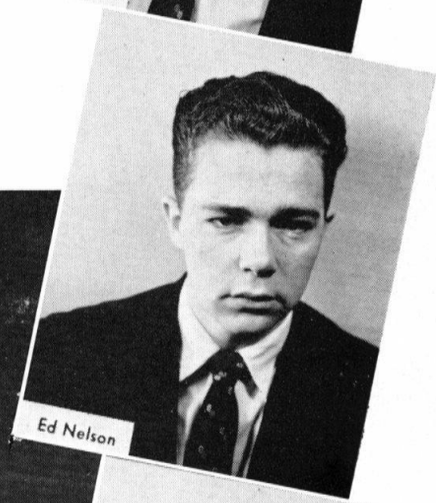


Bill Moeur

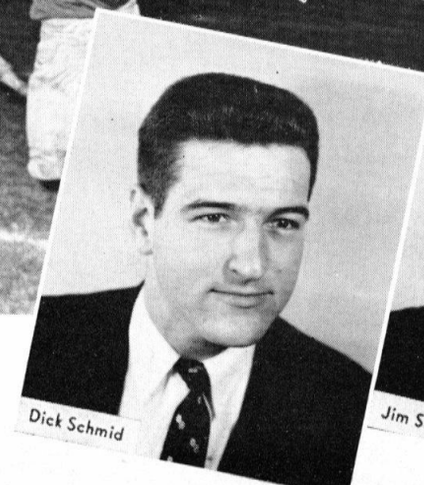
CALTECH 32 LA VERNE 44

Tech played the La Verne Leopards in the last game of the season and lost a 44-32 decision. Highlight of the game was Phil Conley's interception and 100-yard runback of a La Verne pass. Ed Nelson ran 81 yards with a pass to set up one score and a Conley to Dick Schmid pass play was good for 55 yards and a touchdown. Other Tech scores came on a seven-yard run by John Lukesh, a six-yard pass from Conley to Luke Bogdanovic, and a 28-yard pass play from Ted Lang to Nelson.





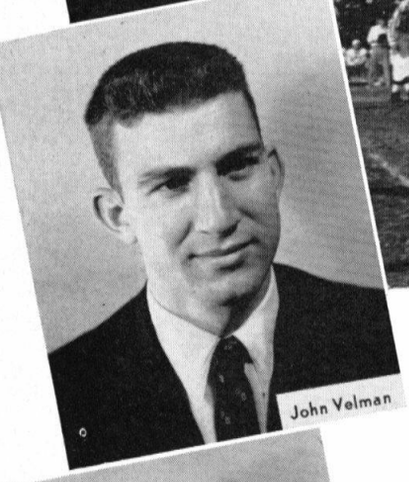
Ed Nelson



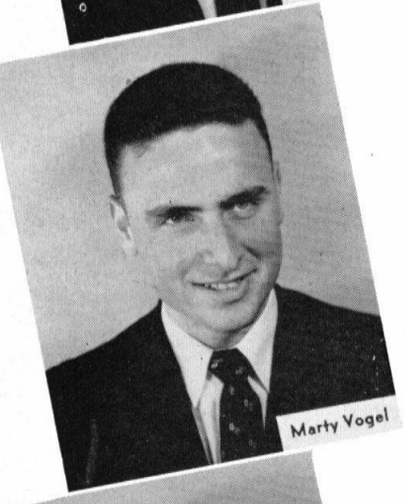
Dick Schmid

Jim Snyder

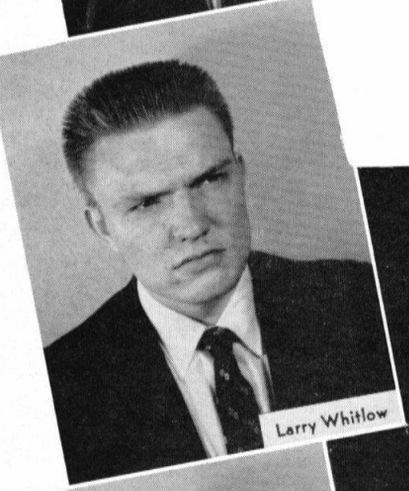
Marty Tangora



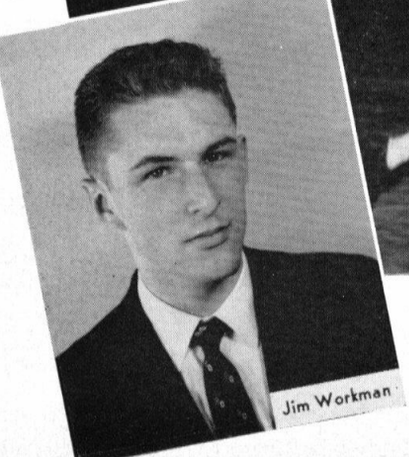
John Velman



Marty Vogel



Larry Whitlow

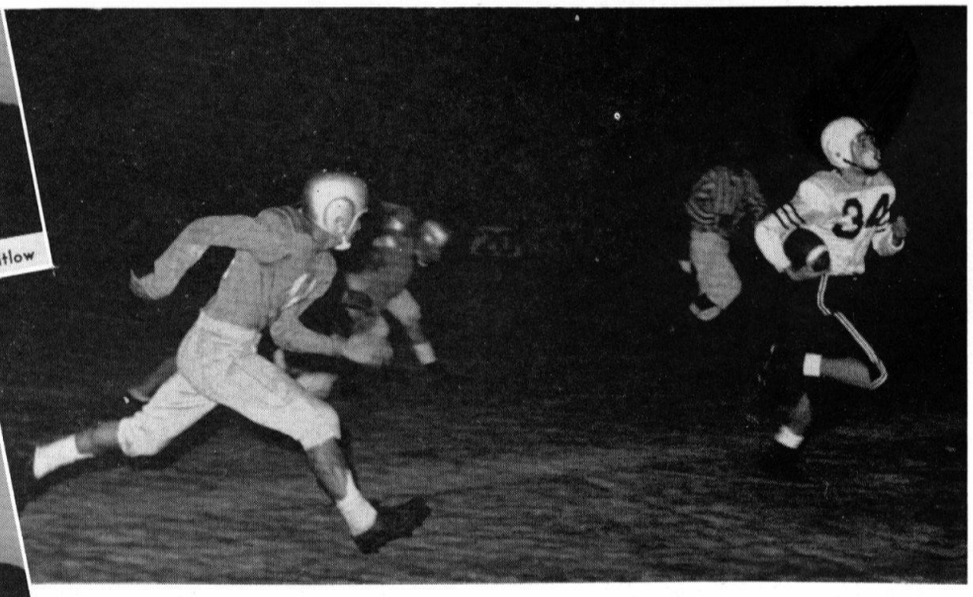


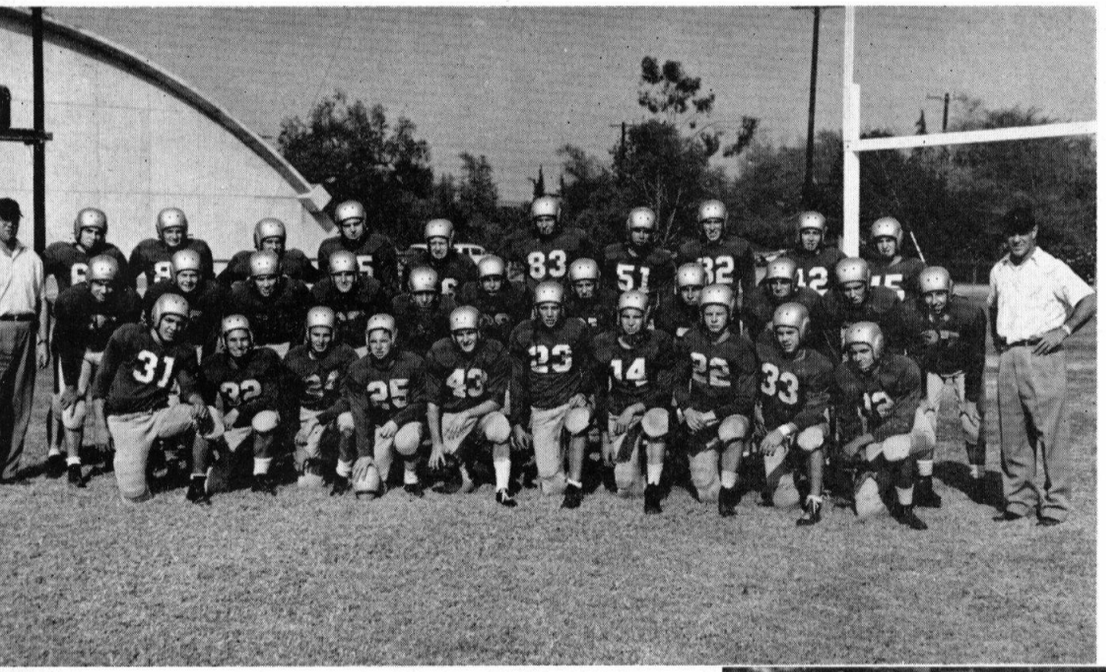
Jim Workman

CALTECH 13 OCCIDENTAL 39

The 50th Caltech-Oxy game took place on November 12 at Oxy's Patterson Field and the Tigers went home on the long end of the score, but not before the Beavers had given the crowd many a thrill with a fine running attack. Oxy scored two touchdowns in each of the first three quarters to build up a 39-0 lead, but then Tech shut the door and generated an offense of its own which scored 13 points in the last quarter.

In the third period Phil Conley gathered in an Oxy punt on his own 30 and raced 59 yards down the sidelines before being brought down. Conley quarterback-sneaked one yard for Tech's first score and George McDonald powered over tackle for one yard and Tech's second TD after an 80-yard march.



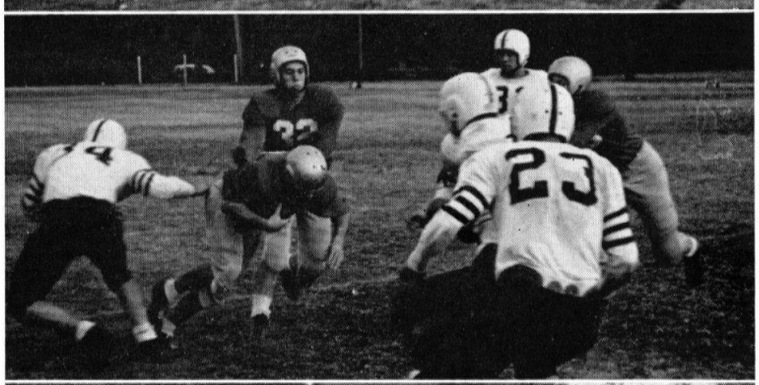


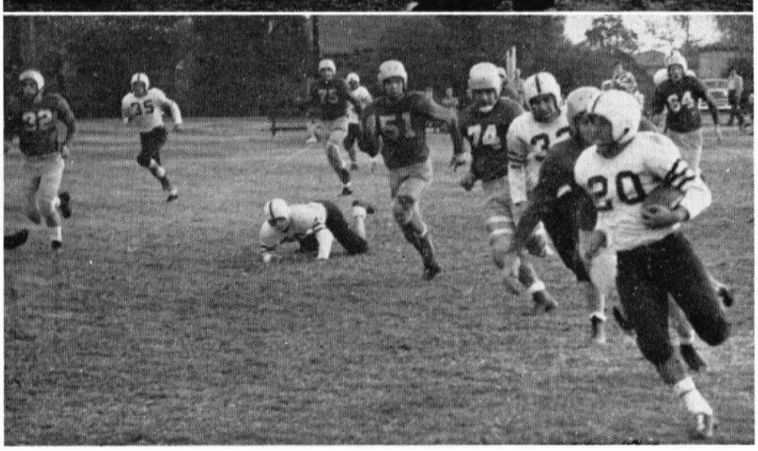
FIRST ROW, left to right: Ed Krehbiel, Dick Baron, Jack Ullemeyer, Dave Leeson, Don Stocking, Dave Sundquist, Gene Cordes, Dick Herlein, Howard Hilton, Dick Van Kirk, Ed Preisler (coach). SECOND ROW: Art Miller (coach), Galen Sarno, Jerry Lawrence, Gene Beisman, Lane Spencer, Bob Schenter, Clarke Rees, Paul Calaway, Bob Mitchell, Dan Horowitz, Danny Wulff, Don Stern. THIRD ROW: Ernie Parkinson, Larry Stanley, Tim Harrington, Larry Berry, Jim Moore, John Asmas, Lance Hays, Herb Hopkins, Phil Reynolds, Wayne Kreger.

FROSH FOOTBALL

This year Caltech came out with one of its best frosh football teams of recent years. The Frosh, guided by coach Ed Preisler and assistant coach Art Miller, dropped their opener to a more experienced Oxy team and then lost to Whittier and Pomona, but they came back with victories over Cal Baptist and Redlands in their last two games.

The team was blessed with size and strength in the line and speed in the backfield and many of the men will be welcome additions to next year's varsity. Tackles Larry Berry and Bob Mitchell, guards Lane Spencer and Galen Sarno, and center Lance Hays were the stalwarts in the line. Quarterback Don Stocking sparked the backfield with his ball handling and fine broken field running. Howie Hilton and Dick Van Kirk carried the mail from their halfback slots and big Ed Krehbiel did a great job as a plunging fullback, punter, and linebacker.





VARSITY

FIRST ROW, left to right: Van Walkley, Don Lewis. SECOND ROW: Bob Hamson, Fred Witteborn, Dave Crowther, Bob Tambling, Julian Cole (coach).

FROSH

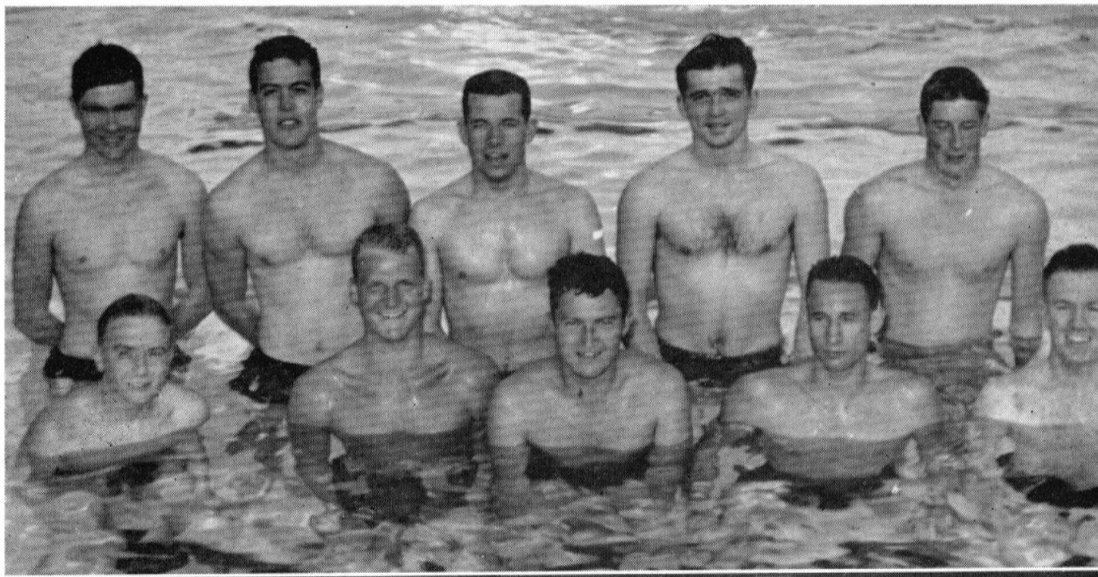
FIRST ROW, left to right: Steve Emanuel, Tom Moore. SECOND ROW: Julian Cole (coach), Frank Rosbach, Dick Cooper, Reed Saunders, Mike Rusch.

CROSS-COUNTRY

The Caltech cross-country team completed a very fine year as Coach Julian Cole led the harriers to second place in the conference. The team lost only one dual meet, that to Oxy, while defeating Whittier, Pomona, Redlands, and Pasadena Nazarene. Dave Crowther and Don Lewis were always leading the pack in the dual meets and they also finished high in the conference meet. Van Walkley, Fred Witteborn, Bob Tambling, Bob Hamson, and Don Taylor always scored valuable points. Van Walkley was elected team captain.

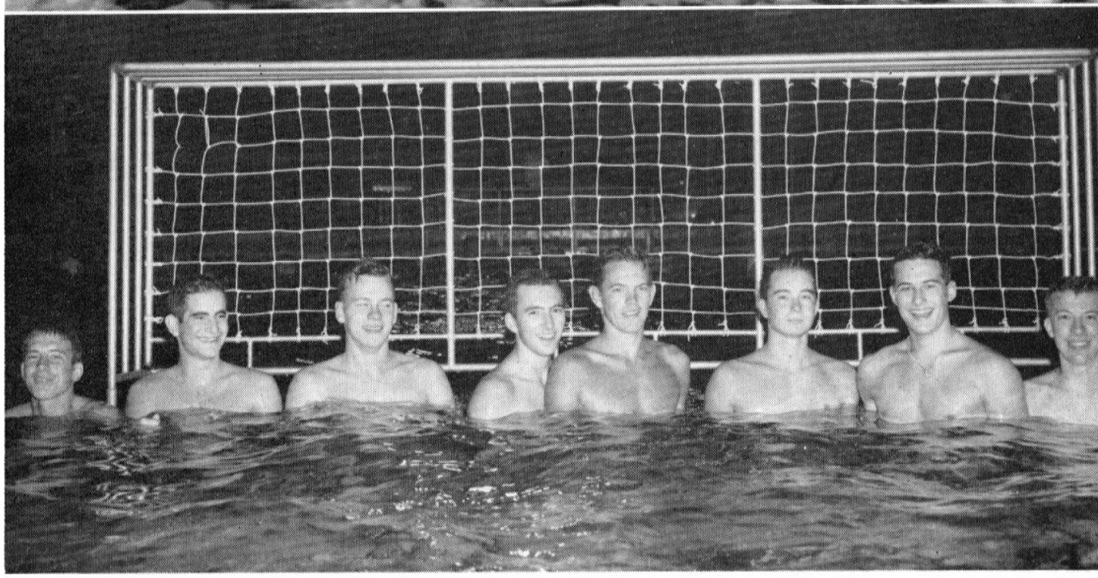
The frosh also had a good team and they finished third in the conference. Reed Saunders was the number one man and team captain. Other members of the team included Tom Moore, Mike Rusch, and Steve Emanuel.

Prospects for next year are real bright as Lewis, Witteborn, and Hamson will be back and the frosh will help out a lot.



VARSITY

FIRST ROW, left to right: John Thomas, John Bush, Jim Ball, Bill Davis, Truman Long. SECOND ROW: Blaine Navroth, Fritz Trapnell, Dick Johnson, Ross Brown, Ed Park.



FROSH

LEFT TO RIGHT: Mike Konrad, Norton Starr, Keith Martin, Wayne Smith, Ron Leonard, Clarke Rees, Bob Smoak, Dick Fiddler. NOT PICTURED: Vince Taylor (captain).

WATER POLO

Coach Don Garman guided the Tech water polo team to a very successful season this year as the splashers captured second place in the conference, winning four games and losing two. Two narrow losses to Oxy were all that kept the Beavers from grabbing their first league crown. High scorer Jim Ball teamed up with Bill Davis and Captain John Bush to form the offensive attack. Fritz Trapnell did a great job in the goal and Blake Wallace, Dick Johnson, and Ed Park held down the opposition on defense.

The freshman team, too, had a lot of talent. Vince Taylor and Clarke Rees were the backbone of the team and Mike Konrad, Ron Leonard, and Bob Smoak all played fine ball.

Next year's varsity will be even better than this year's, as only two men are graduating. With the added incentive of the new swimming pool, the team will really be gunning for the championship.

VARSITY

FIRST ROW, left to right: Roy Paul (manager), Sedat Serdengecti (coach), Olaf Boedker, Tony Howell, Ed Berry, Arne Kalm, Al Helgesson, Rafn Stefansson, Roger Duwiest, Bill Haigler (manager), Rube Moulton (manager). SECOND ROW: Bob Huttenback (coach), Dick Okada, Harry Bingham, Harry Williams, Bob Norton, Frank Scardiglia, Steve Mak, Jim Weaver, Ted Matthes, Jerry Crocker.

SOCCER

JUNIOR VARSITY

FIRST ROW, left to right: Jerry Gallagher (manager), Hal Dessau, Hugo Fischer, Dick Kaufmann, Dave Lange, Len Wiener, Joe Swindt, Pete Hoag, Robin French, Mac Poor, Phil Thacher, Glenn Converse. SECOND ROW: Bill Haigler (manager), Rube Moulton (manager), Jerry Fried, Charles Penquite, Bill Helman, Walt Weiss, Dick Ashby, Bill Burrow, Jack Zeilenga, Dick Morse, Don Pinkerton, Bob Deffeyes, Pete Lauritzen, Ted Oakberg, Jim Hall, Chek Beuf, Roy Paul (manager), Chuck Miller (coach).

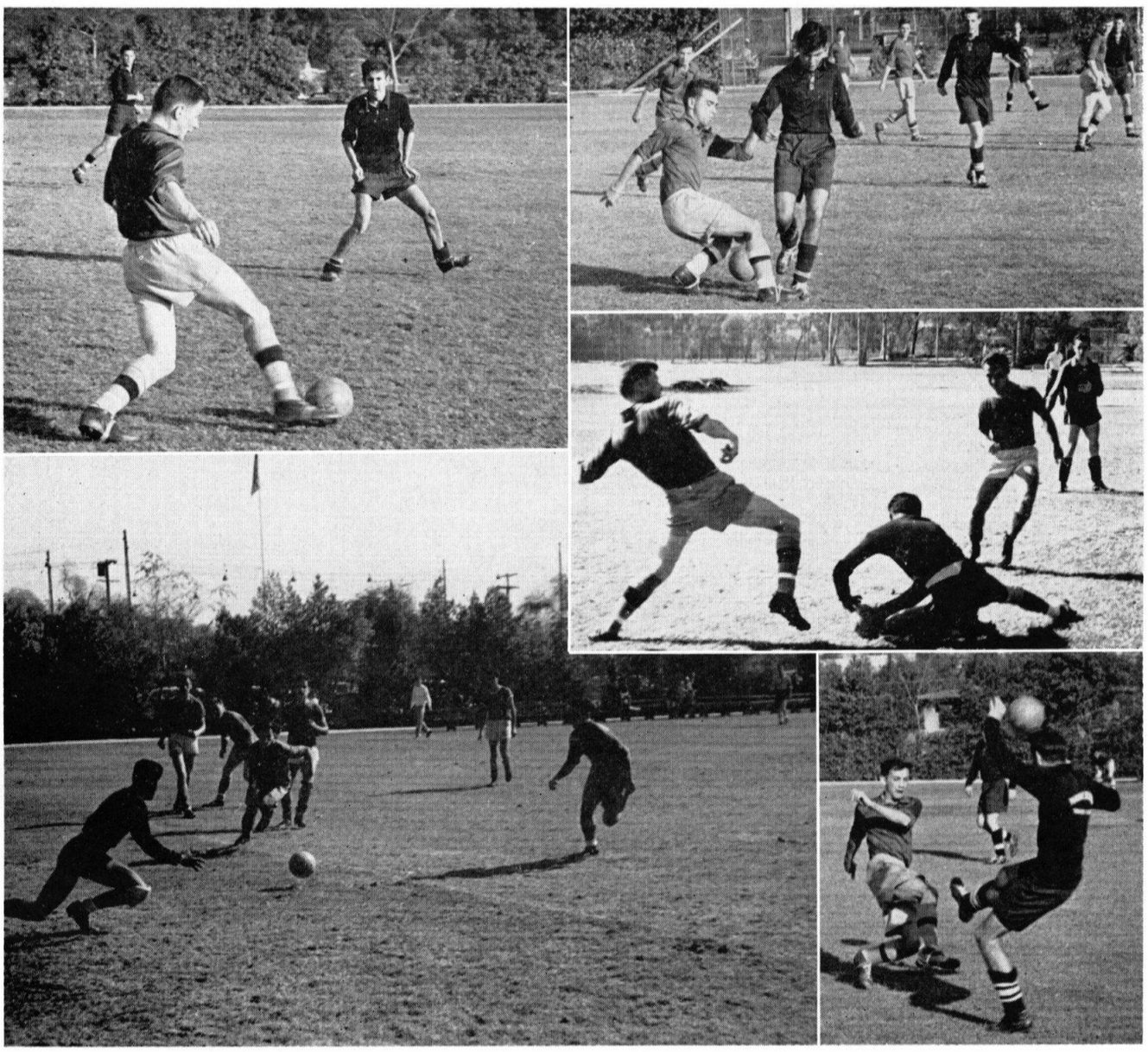
After winning the Southern California soccer championship for three consecutive years, Caltech relinquished the title this year to UCLA. The Beavers, missing many of its star performers of last year, dropped two contests to the Bruins and wound up in second place. Tech also bowed to USC and to northern powerhouse University of San Francisco in nonleague play, while having a one win, one tie record against both Pomona and Cal Poly of San Luis Obispo.

Rafn Stefansson scored a majority of the team's goals and was awarded the most valuable player trophy. Stefansson, player-coach Sedat Serdengecti, Dick Okada, and Olaf Boedker kept the ball down at the opponents' end of the field. Ed Berry, Tony Howell, and Captain Al Helgesson held down the fort and Arne Kalm turned in some fine performances as the goalie.

Coach Charlie Miller guided the fortunes of the junior varsity team and came up with some good men for next year's varsity in Pete Hoag and Joe Swindt. The jayvees played in a league with Thacher, Midlands, and the UCLA jayvee, but failed to score a victory.

SCORES

Caltech	**3**	**Pomona**	**1**
Caltech	**1**	**UCLA**	**3**
Caltech	**2**	**Cal Poly**	**2**
Caltech	**1**	**UCLA**	**4**
Caltech	**3**	**Cal Poly**	**1**
Caltech	**1**	**Pomona**	**1**
Caltech	**1**	**USC**	**3**
Caltech	**1**	**USF**	**6**



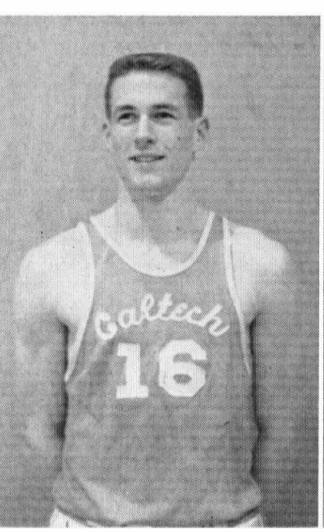
CARL SHY
Head Coach

BASKETBALL

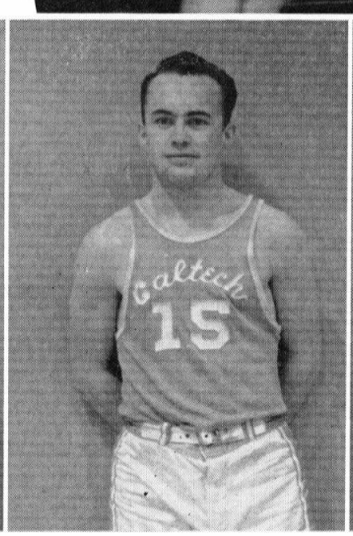
The Caltech basketball team dropped to the cellar in conference play this year as Oxy and Whittier tied for the crown, but it was not because they did not want to win. With a few more breaks the team could have turned four of its eight league losses into victories. After losing their first two games to Redlands and Oxy, the Beavers narrowly missed a victory against Pomona and then were edged out by Whittier. In both of these games the final margin was only three points. In the next game Tech threw a scare into Redlands before folding in the last three minutes, and in the last game of the season Tech gave Pomona a good battle.

Three stellar performers, team captain Bill Chambers, Jim Tyler, and George Madsen, played their last season for Caltech. Tyler was out of action for the early part of the year with a broken hand, but he returned to give Tech good shooting and rebounding strength for the rest of the campaign. Madsen was a real fireball at his guard position and Chambers played a well-rounded game every time. But it was a junior, center Phil Conley, who provided a good deal of the fireworks. He averaged nearly twenty points per game over the entire season and was chosen on the second string all-conference team. Sophomore Howard Bloomberg was the fifth starter for most of the year, with juniors Paul Lindfors or Rol Moody getting the call occasionally.

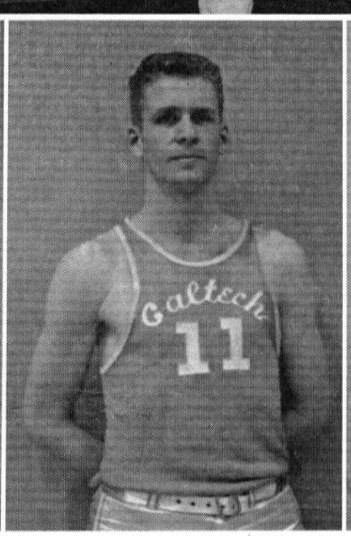
FIRST ROW, left to right: Jim Higgins (manager), Jim Welsh, Bob Gelber, Jim Koontz, Paul Lindfors, George Madsen, Rol Moody, Bill McDonald. SECOND ROW: Jay Kimmel (manager), Ed Nelson, Howard Bloomberg, Jim Tyler, Phil Conley, Bill Chambers, Dan Chilton, Jim Workman, Carl Shy (coach).



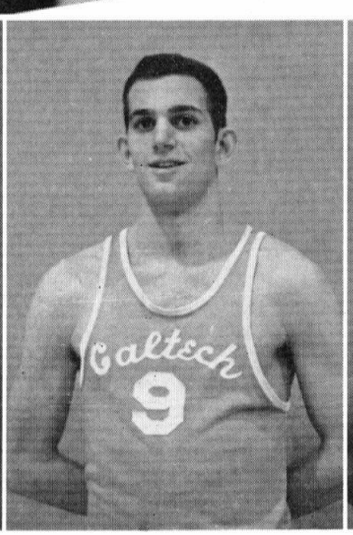
PHIL CONLEY



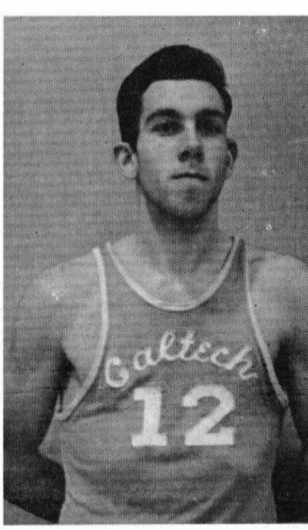
GEORGE MADSEN



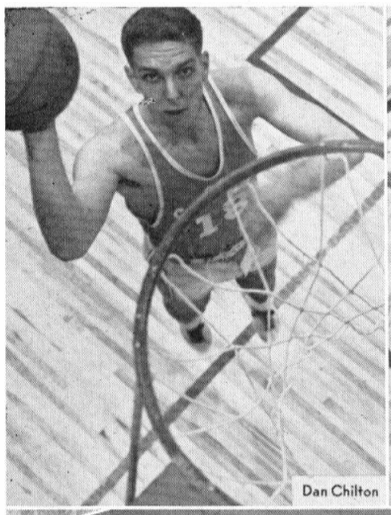
BILL CHAMBERS

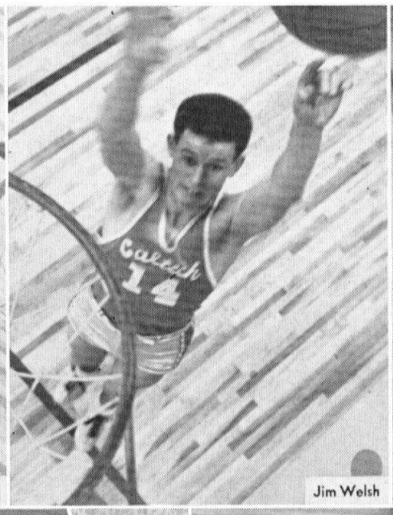


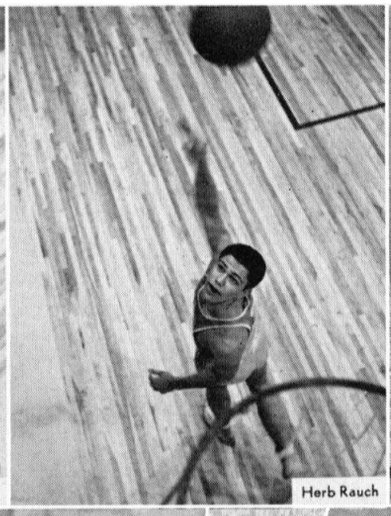
HOWARD BLOOMBERG

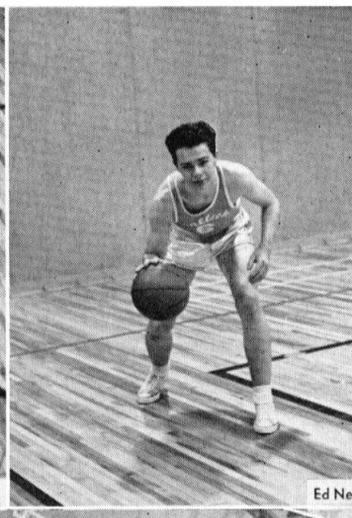


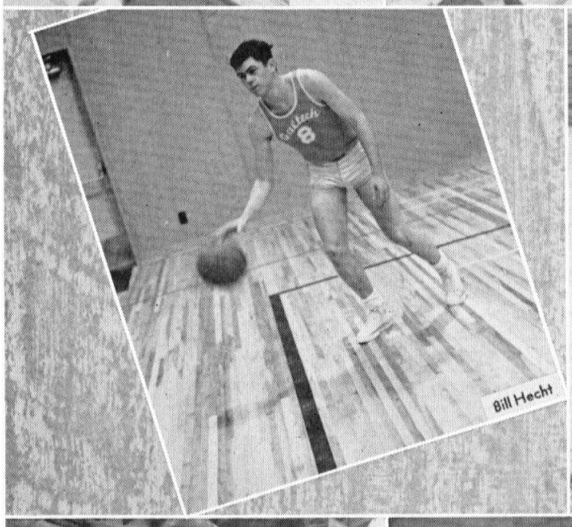
JIM TYLER

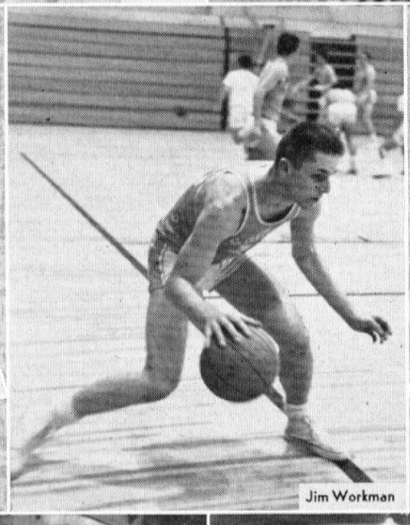

Dan Chilton


Jim Welsh


Herb Rauch


Ed Ne


Bill Hecht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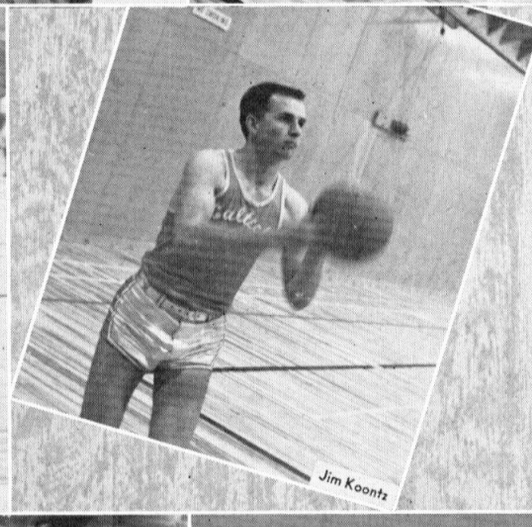
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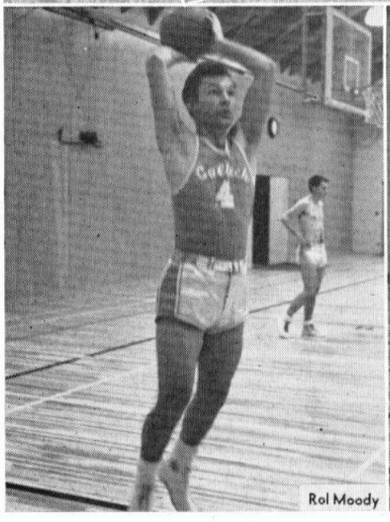
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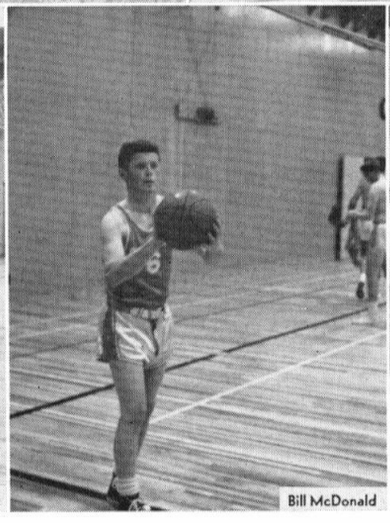
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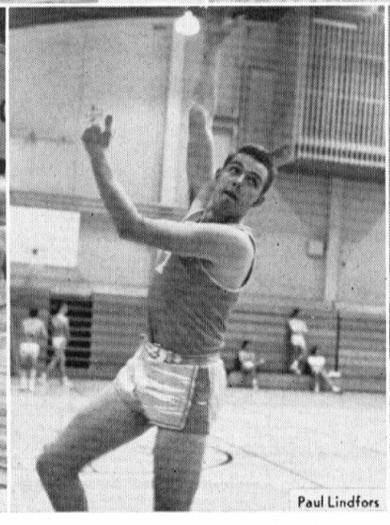
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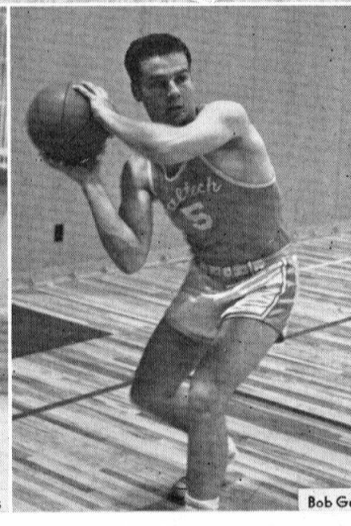
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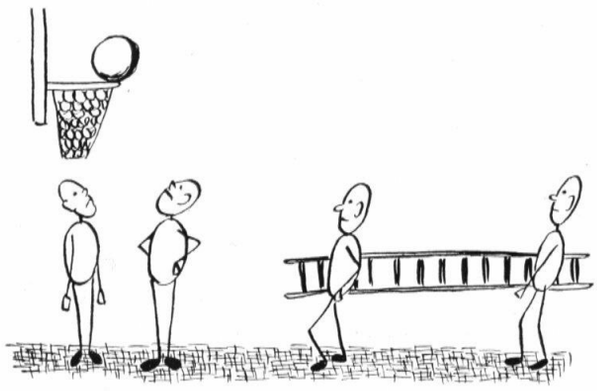
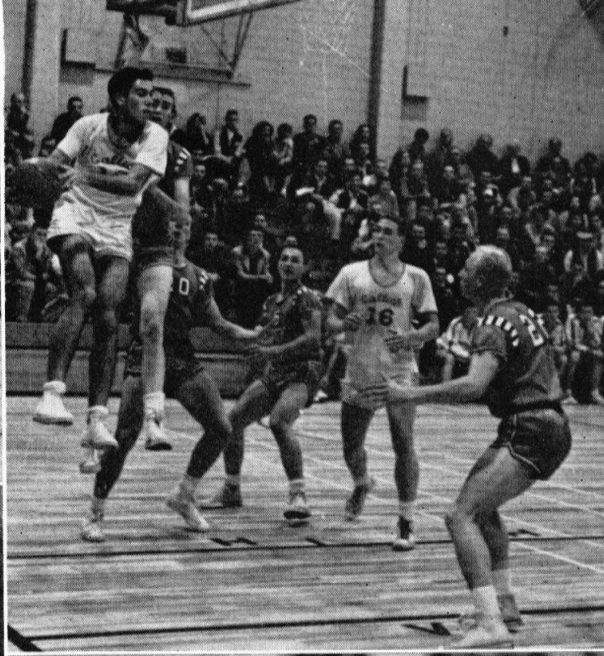
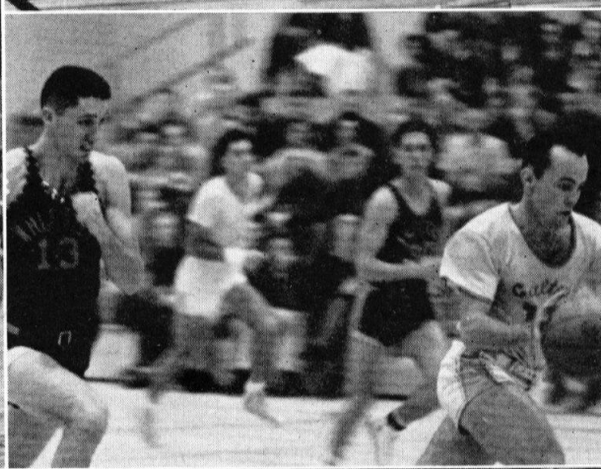


Pasadena
99





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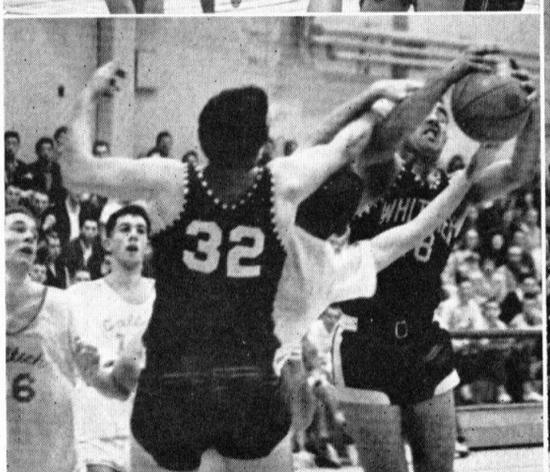
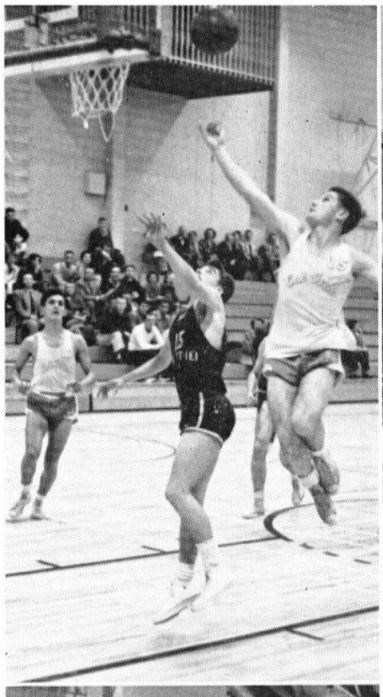
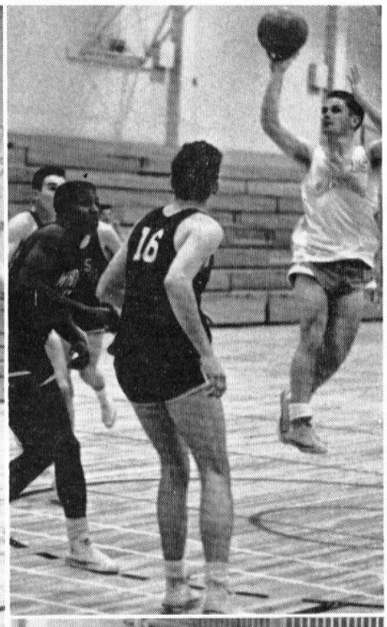
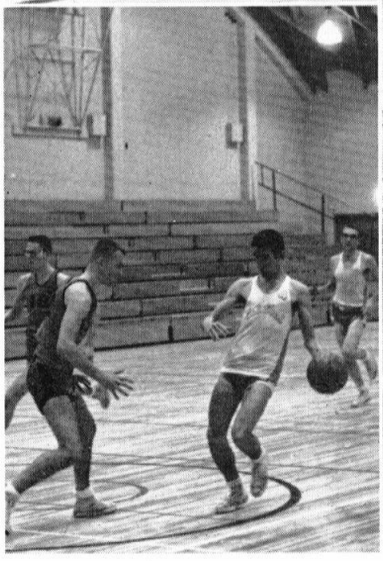

32

FIRST ROW, left to right: Ron Marson, Kay Sugahara, Dick Van Kirk, Frank Rosbach, Gene Cordes, Sonny Nelson, Don Stocking. SECOND ROW: Ed Preisler (coach), Dave Leeson (manager), Mac Poor, Glenn Converse, Don Wiberg, Larry Berry, Clarke Rees, John Baker (manager), Bob Walsh (manager).







FROSH BASKETBALL

This year Caltech had one of its best freshman basketball teams in many a year. The frosh, under the tutelage of coach Ed Preisler, won nine games while losing only six, and in conference play they had a four win, four loss record—good for third place. The team beat Redlands in the first game and then went into a slump, but they broke out of it to upset each of the other three league teams in the second round of play.

Guards Ron Marson and Sonny Nelson sparked the play of the team. Marson made up for his small size with a deadly shooting eye and he also played a fine floor game, while Nelson turned in a steady performance game after game. Glenn Converse handled the center spot effectively. He had a good array of shots and was consistently accurate from the free throw line.

Dick Van Kirk and Don Wiberg were the starting forwards at the beginning of the season, but Gene Cordes replaced Wiberg in the latter part of the season and instilled his hustle and spirit to the whole team.

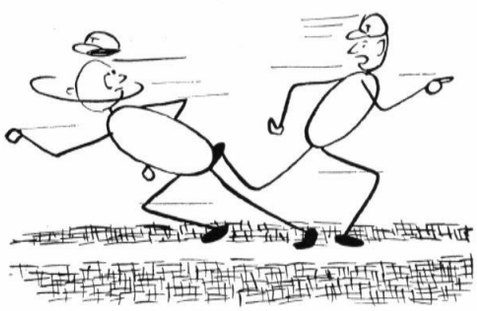
FIRST ROW, left to right: George Madsen, Jim Snyder, Hunt Holladay, Hubert Dubb, Jim Mebust, Hal Morris. SECOND ROW: Ed Berry, Gene Nelson, Dick Wagenseller, Bill Moeur, Ed Nelson, Ray Weymann, George Yankura, Mike Duke.

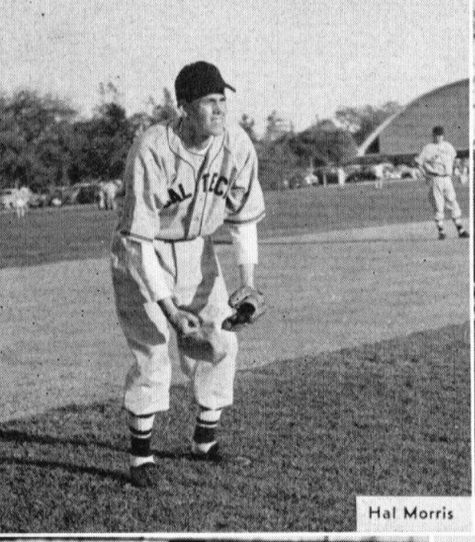
BASEBALL

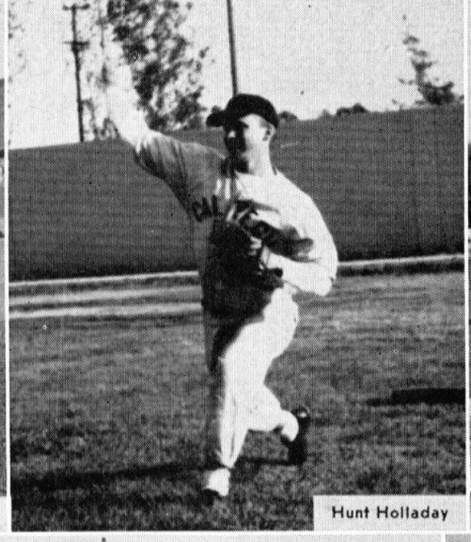
ED PREISLER
Coach

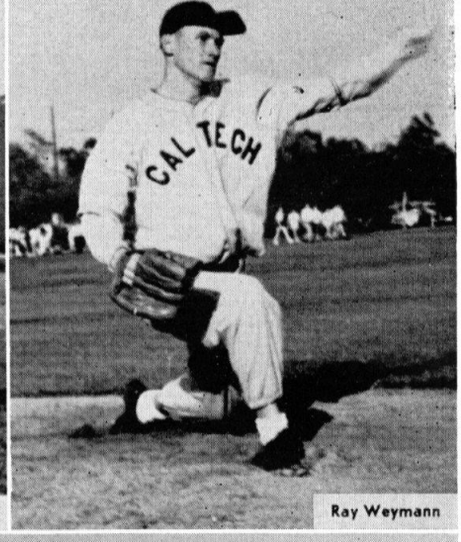
Tech's varsity baseball nine has gotten a lot of help from last year's frosh team and the men are looking forward to a good season. The team's fortunes will rest in large part on the good left arm of Ray Weymann, first string all-conference pitcher last year. He is backed up on the mound by Jim Snyder and Hunt Holladay, Sophomore Hal Morris has clinched the third base position and he has developed into the top hitter on the team. Another sophomore, Mike Duke, is handling the catching chores, and the outfield is well set up with Ed Berry, Ed Nelson, and Dick Wagenseller. Three infield positions are up for grabs. Al Goldberg and Jim Mebust are fighting for the first base position, with Goldberg having the inside track, and there are four men from whom Coach Ed Preisler has to choose a double play combination. These are Gene Nelson, George Madsen, Jim Koontz, and Warren Furumoto.

Prospects for next year are especially bright, as five of the starters are sophomores and all of the pitchers are juniors.

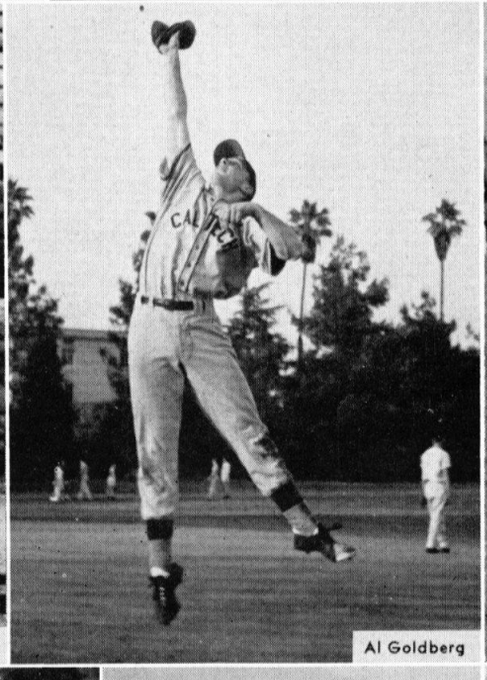


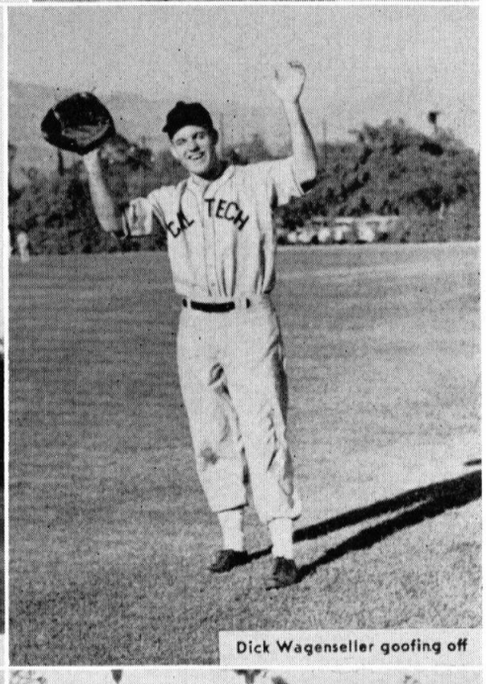

Hal Morris


Hunt Holladay


Ray Weymann

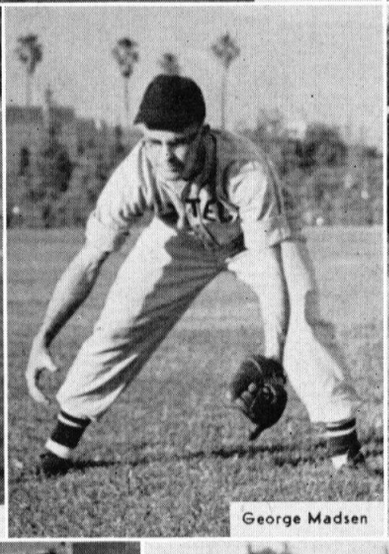
Mike Duke

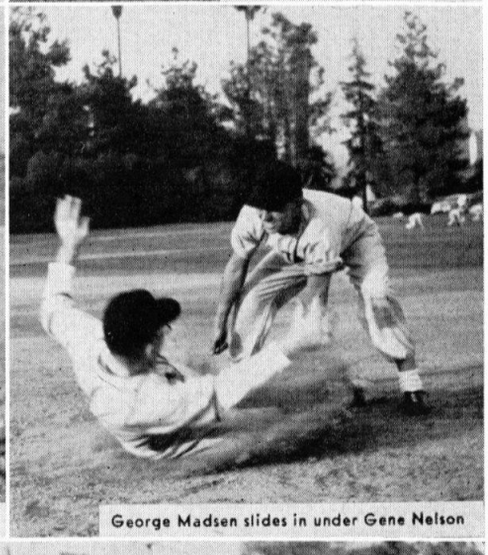

Al Goldberg

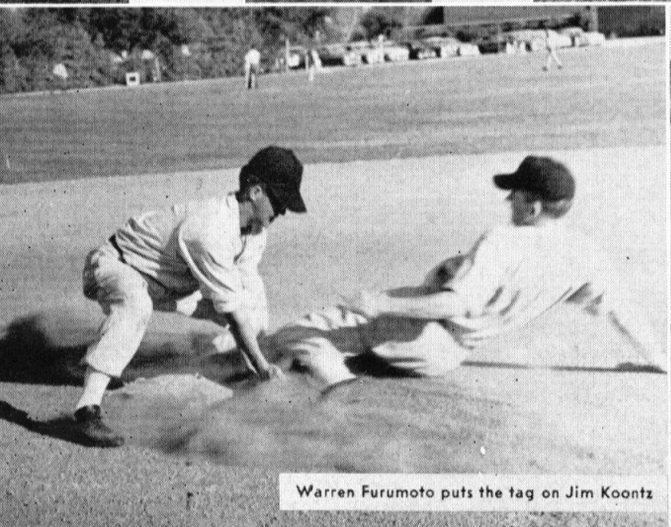

Dick Wagenseller goofing off

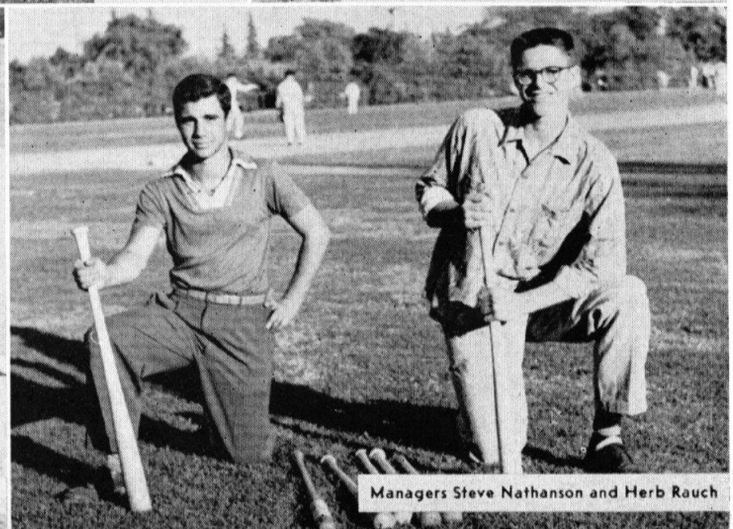
Ed Nelson

Ed Berry


George Madsen


George Madsen slides in under Gene Nelson

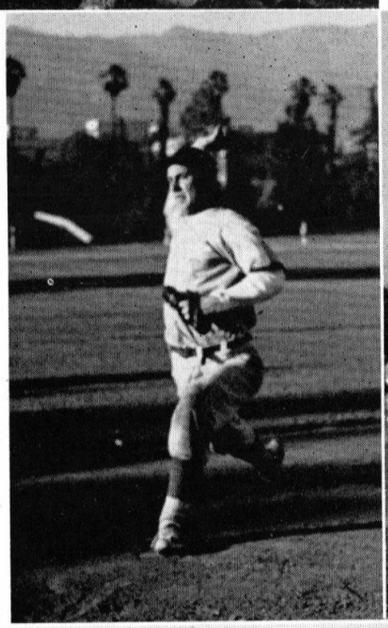

Warren Furumoto puts the tag on Jim Koontz

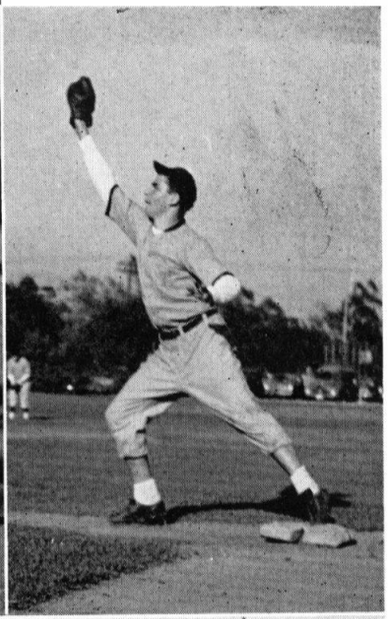

Managers Steve Nathanson and Herb Rauch

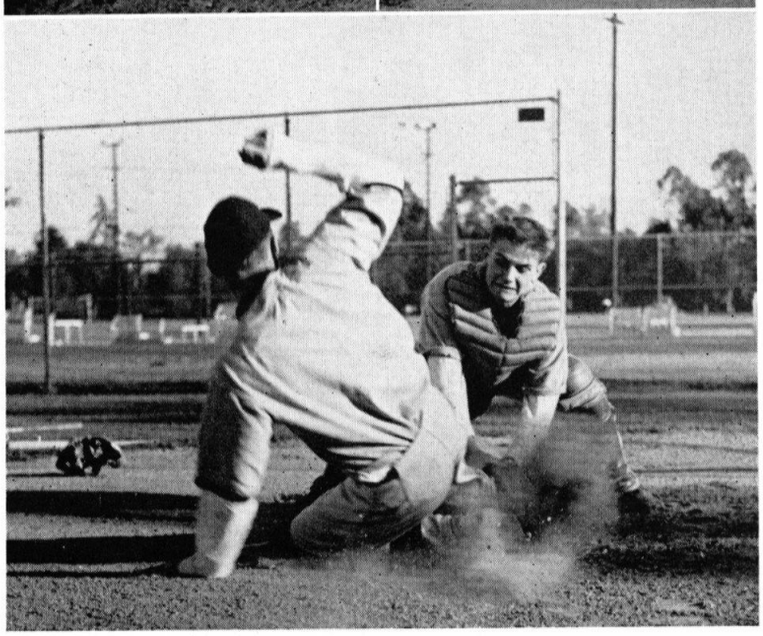
FIRST ROW, left to right: Dave Wilson (coach), Dave Leeson, Don Stocking, Danny Wulff, Ted Oakberg. SECOND ROW: John Baker, Don Stern, Lou Montoya, Dick Van Kirk, Bob Walsh, Bob Schenter.

FROSH BASEBALL

Coach Dave Wilson's frosh horsehiders are showing real fighting spirit this year. Lack of experience has hurt the team considerably, but the men are improving with every game. Catcher Don Stocking is a fireball behind the plate and Lou Montoya is turning in a good job at third base. Tony Howell and John Baker are the two pitchers, but they have been hit pretty hard in early season games. Coach Wilson has been drilling the men hard and is hoping to have a smoothly working team by the end of the season.







BERT LA BRUCHERIE
Coach

This year's Beaver track team is shaping up as one of the best seen around Caltech since the war years. It took second place in the early season conference relays and has an excellent chance of finishing second in dual meet competition and in the conference meet. The team as a whole has good balance and strength in almost every event. The big noise has been the javelin throwing of Phil Conley. At this writing Phil's best is 218' 3¾", a throw which ranks him as one of the top collegiate javelin throwers in the nation.

Big Jim Tyler is the leading performer in the jumps and he is fighting it out with sophomore John Lukesh for top honors in the sprints. At present Ted Lang is within a foot of the school record in the discus throw and at the rate Ted is going, that record won't last out the year. The running events are also well taken care of. Roger Wileman and Rod Supple are handling the 440 and 880, while Don Lewis runs the mile and Fred Witteborn the two mile.

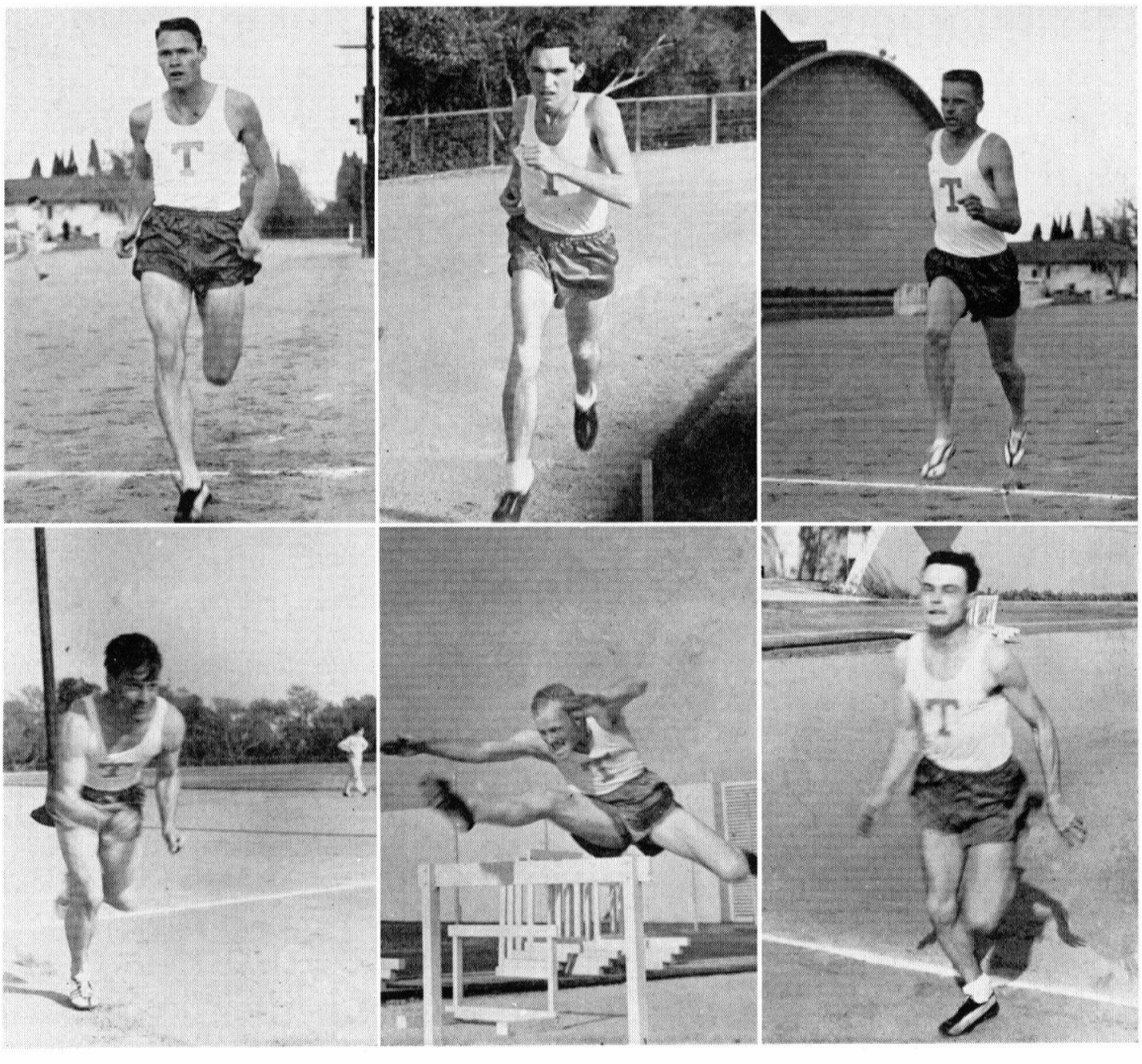
Prospects for next year are bright as we are losing only six seniors. Good men coming up from the frosh team will be two miler Tom Moore, high jumper Gordon Barienbrock, and shot putter Dan Horowitz.

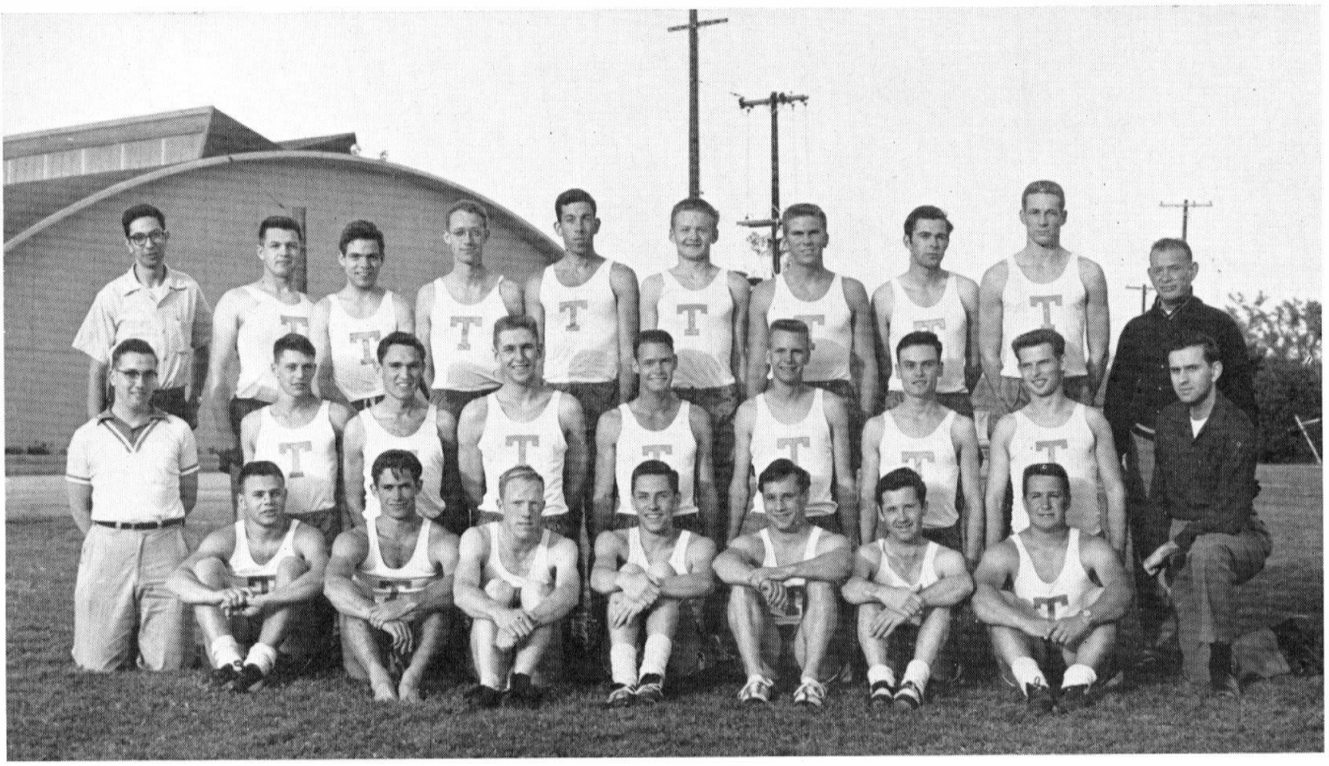
TRACK

ROD SUPPLE
JOHN LUKESH

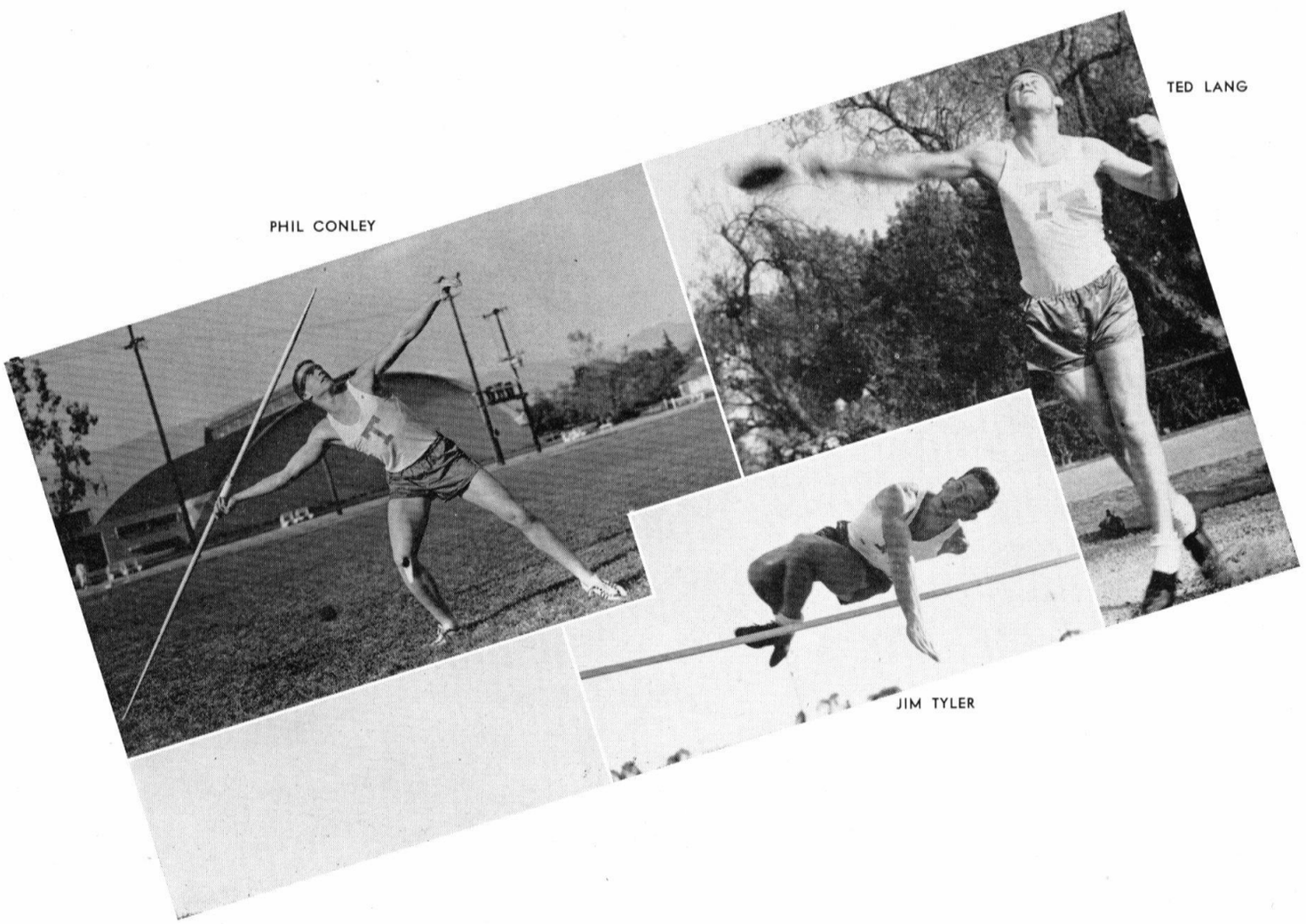
FRED WITTEBORN
DON TAYLOR

DON LEWIS
ROGER WILEMAN





FIRST ROW, left to right: Tom Trilling, Jim Lloyd, Don Taylor, Marty Tangora, John Lukesh, Dave Crowther, Sam Sims. SECOND ROW: Ray White (manager), George Kaufmann, Fred Witteborn, Jim Workman, Rod Supple, Don Lewis, Roger Wileman, Ted Lang, Roy Paul (manager). THIRD ROW: Luis Soux (manager), Chuck Luke, Bob Norton, Phil Wade, Jim Tyler, Arne Kalm, Bob Hamson, Loren Linstrom, Phil Conley, Bert La Brucherie (coach).

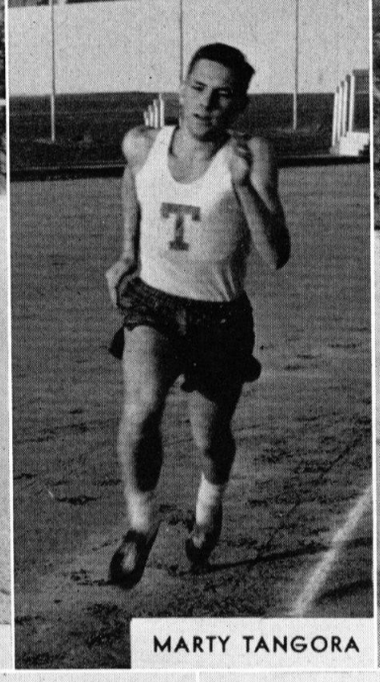


TED LANG

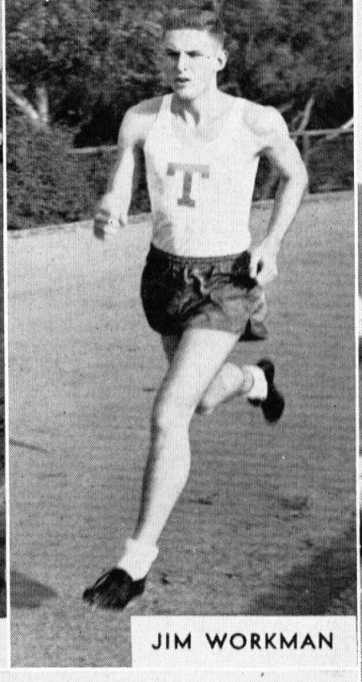
PHIL CONLEY

JIM TYLER

DAVE CROWTHER

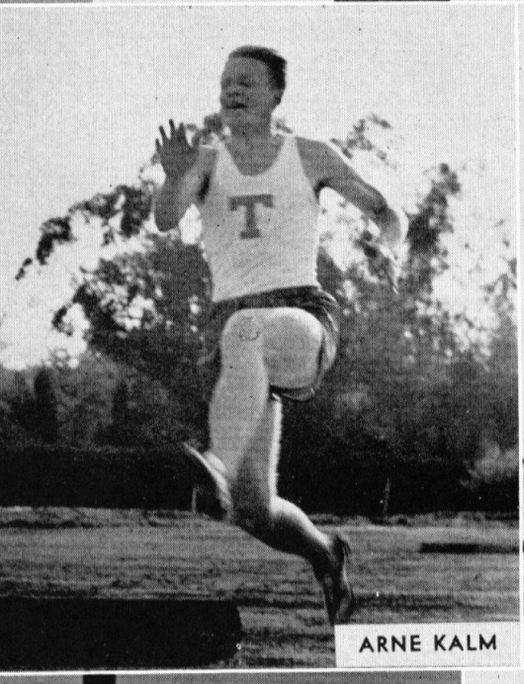


MARTY TANGORA



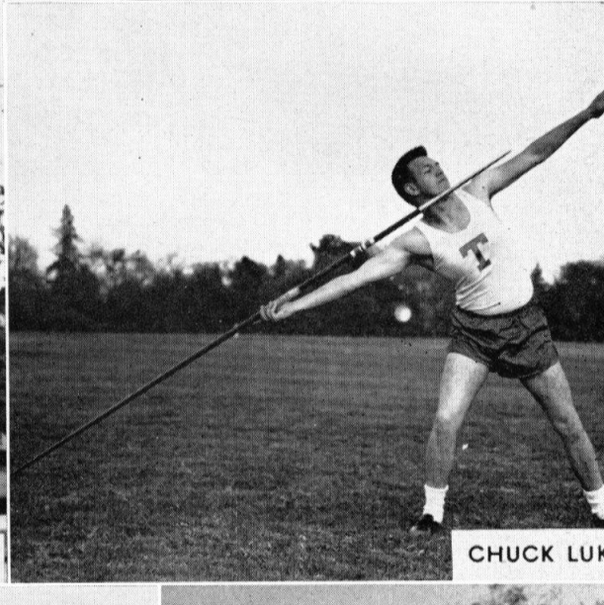
JIM WORKMAN

TOM TRILLIN

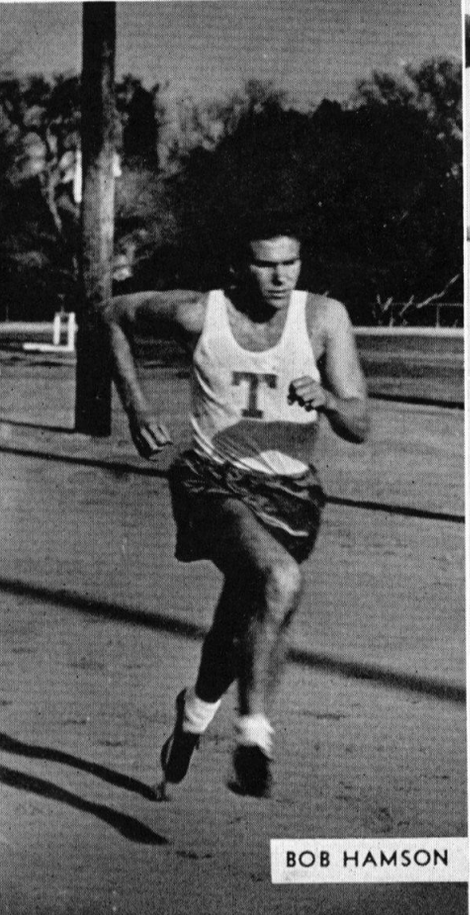


ARNE KALM

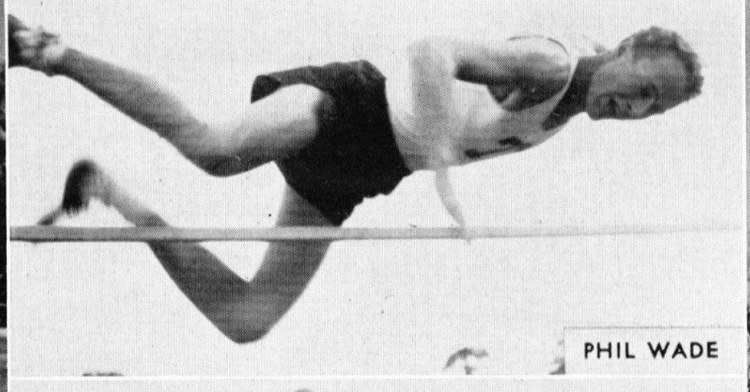
BOB NORTON



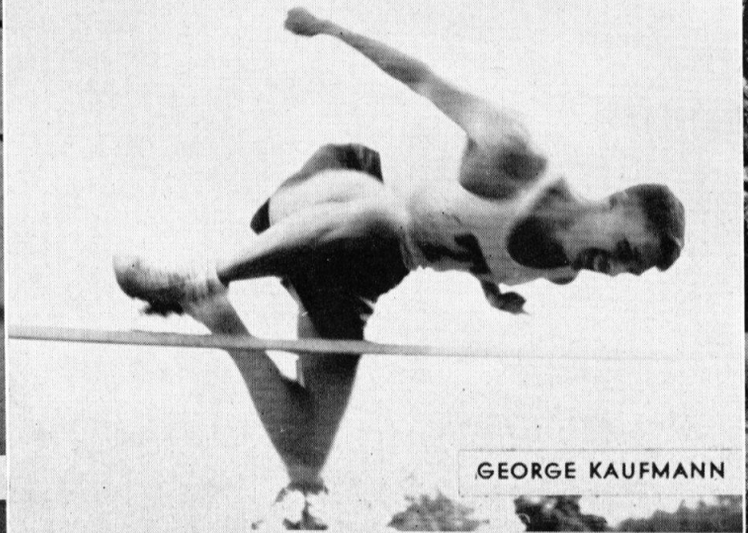
CHUCK LUK



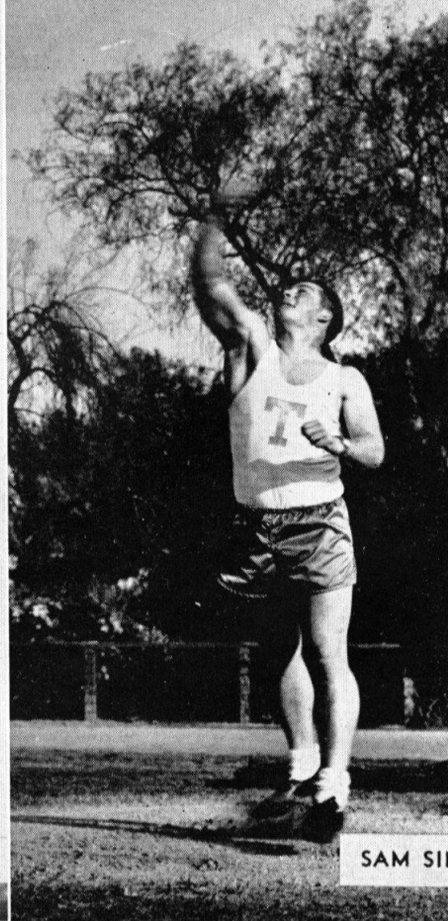
BOB HAMSON



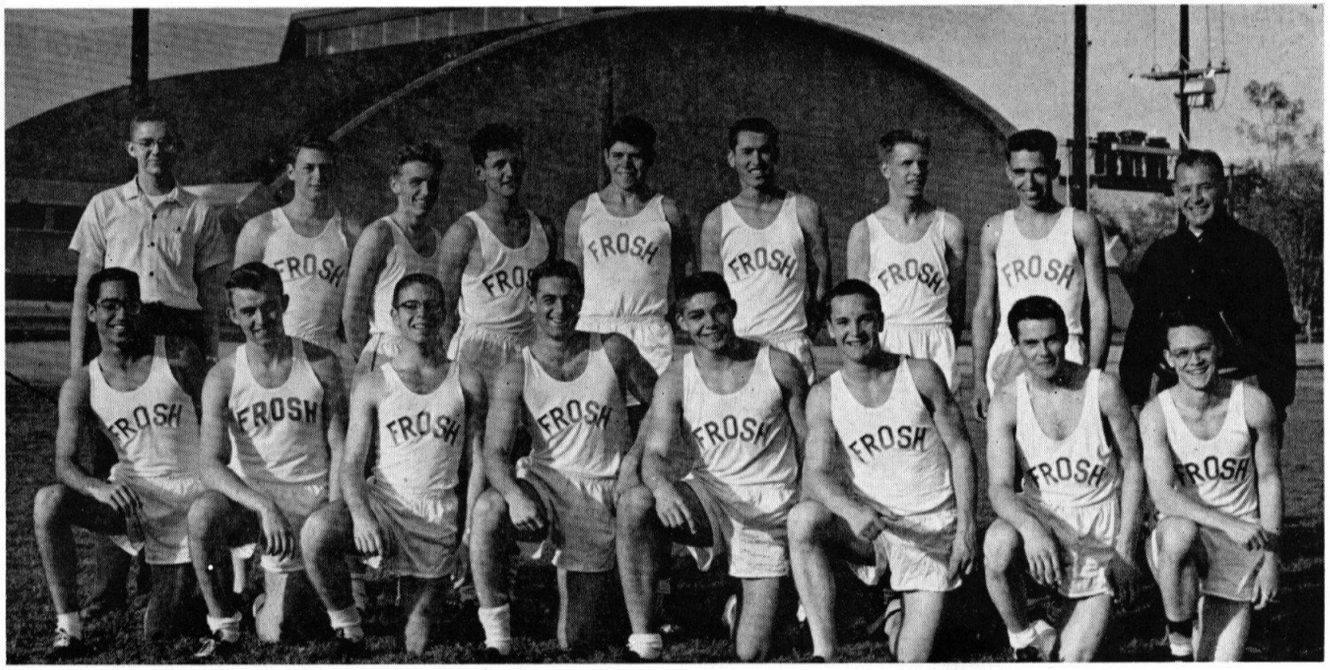
PHIL WADE



GEORGE KAUFMANN



SAM SI

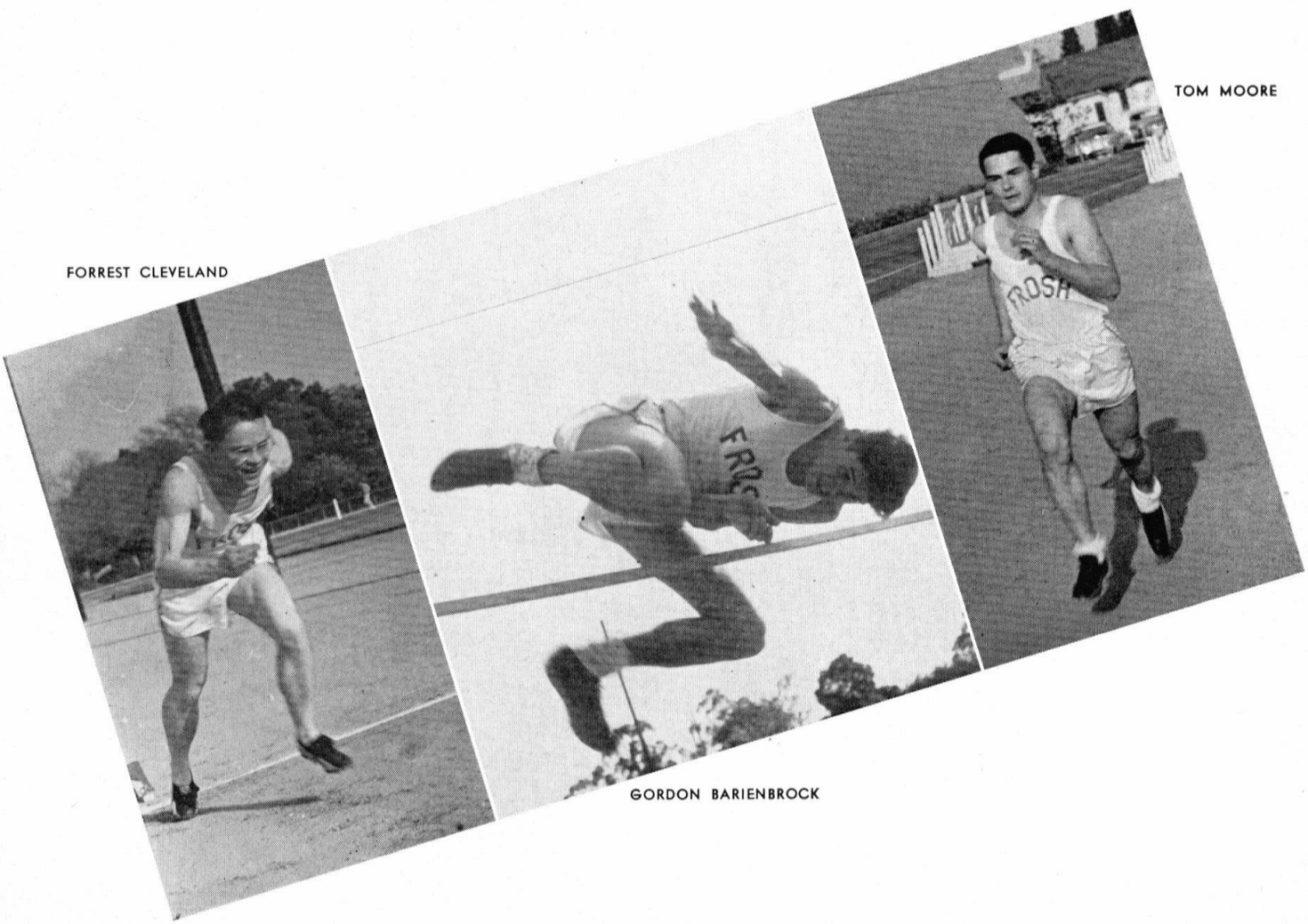


FIRST ROW, left to right: Steve Emanuel, Chuck Bonwell, Bob Tucker, Dan Horowitz, Ed Krehbiel, Bruce Kowol, Tom Moore, Forrest Cleveland. SECOND ROW: George Oetzel (manager), Wayne Kreger, Danny Wulff, Dick Van Kirk, Gordon Barienbrock, Hubert Hopkins, Reed Saunders, Mike Rusch, Bert La Brucherie (coach).

FROSH TRACK

TOM MOORE

FORREST CLEVELAND



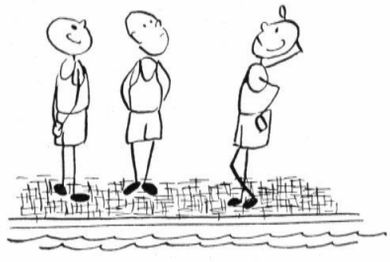
GORDON BARIENBROCK

HAROLD ALMOND
JOHN BUSH
DICK JOHNSON
DON ROBERTS

JIM BALL
RON COCHRAN
Manager
GEORGE MADSEN
HUNT SMALL

BILL BELOW
BILL DAVIS
BLAINE NAVROTH
JOHN THOMAS

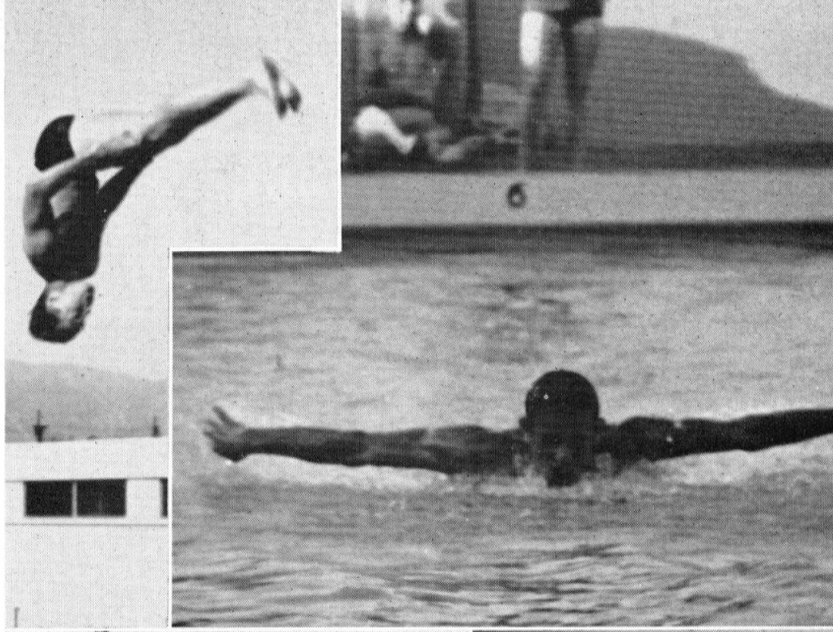
ROSS BROWN
ERIC JOHNSON
Manager
ED PARK
FRITZ TRAPNELL

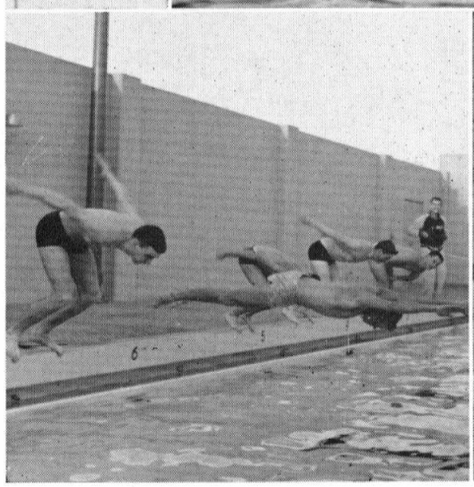


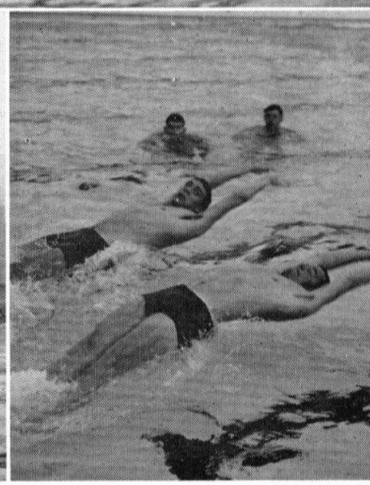
SWIMMING

Caltech's swim team is looking forward to another good season this year. Practically everyone from last year's team is returning and the Alumni Pool has added a great deal of incentive to every member of the team. Top performer on the team is breast stroker Bill Davis, and John Bush is a consistent point winner in the individual medley and free style events. Don Roberts and Dick Johnson give the team a potent one-two punch in the backstroke, while Jim Ball is always a leading contender in the 50 and 100 free style. Others who can be counted on to take places are divers George Madsen and Harold Almond and sophomore swimmers Ed Park and Bill Below.

The frosh team is the best seen at Tech for some time and it plans to give Oxy a good fight for the conference championship. Clarke Rees is outstanding in the individual medley and the backstroke and Bob Smoak is another fine backstroker. Vince Taylor tops the distance freestylers and Wayne Smith and Howard Hilton handle the sprints. These men will all help the varsity next year, and as only Bush, Roberts, and Madsen are graduating, hopes for next year are very high.

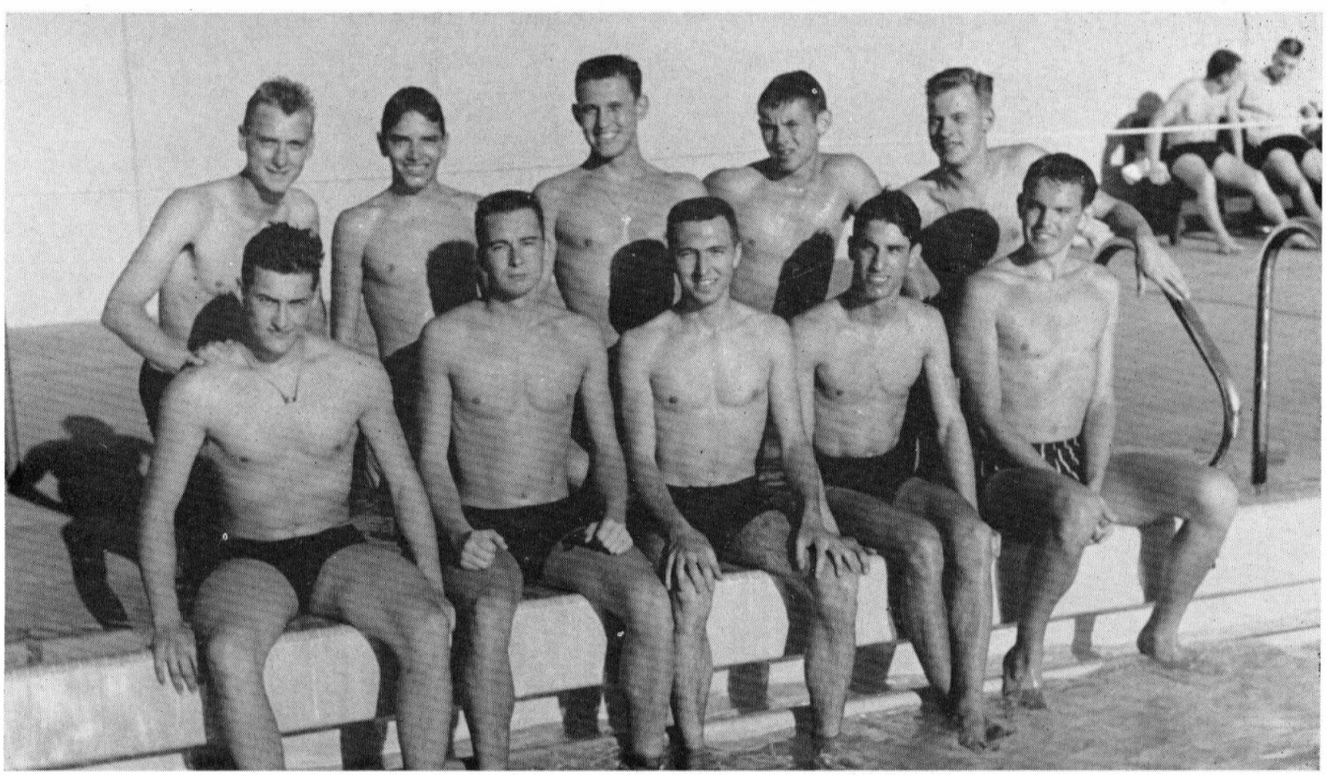






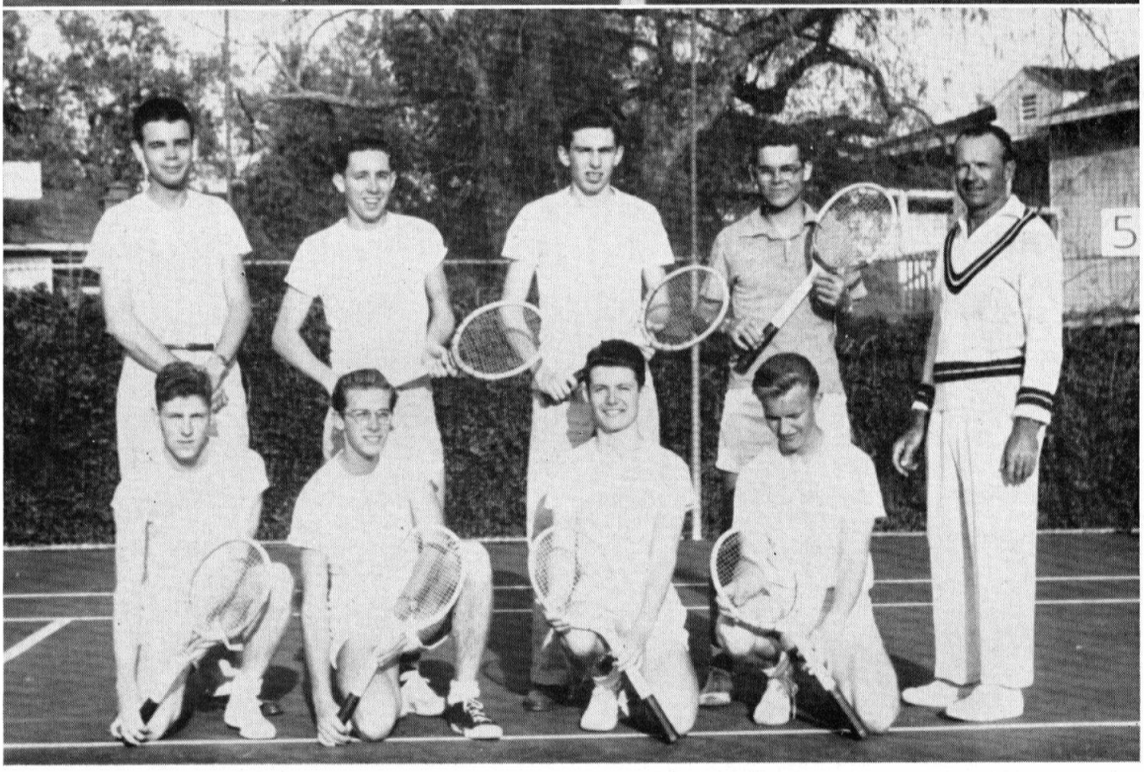
FRESHMEN

FIRST ROW, left to right: Bob Smoak, Clarke Rees, Wayne Smith, Tom Schumann, Ron Leonard. SECOND ROW: Don Wiberg, Vince Taylor, Dick Baron, Howard Hilton, Keith Martin.



VARSITY

FIRST ROW, left to right: Bernie Mueller, Gil Beebower, Al Yano, Dick Schmid, Ralph Miles. SECOND ROW: John Lamb (coach), Dave Yount, Tom Hays, Jim Ball, Gene Barnes, Rol Moody.



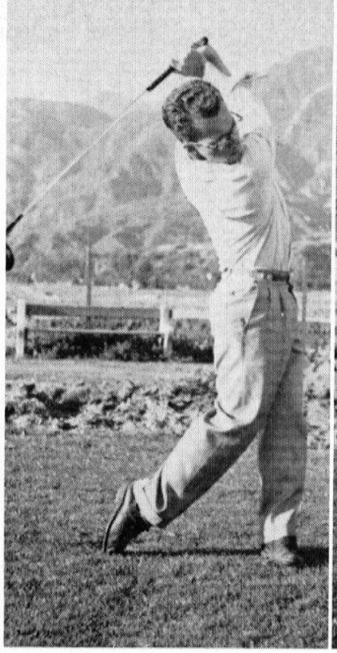
FROSH

FIRST ROW, left to right: Jim Weaver, Roger Wallihan, Jim Rode, Bob Calaway. SECOND ROW: Read Warriner (coach), Phil Reynolds, Bob Tokheim, Dick Lewis, John Lamb (advisor).

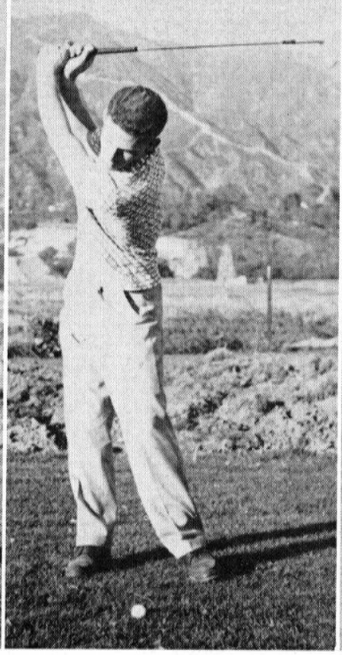
TENNIS

Coach John Lamb's varsity tennis team is virtually intact from last year and it is pointing for the top spot in the conference. The road, however, may be tough, as both Oxy and Redlands have strong teams. Alva Yano is again playing in the first singles spot, and he parts with number two man Bernie Mueller as the top doubles team. Gene Barnes, Gil Beebower, Tom Hays, and Dick Schmid round out the top six men. Jim Ball, Al Poisner, and Ralph Miles have also been playing in some of the matches.

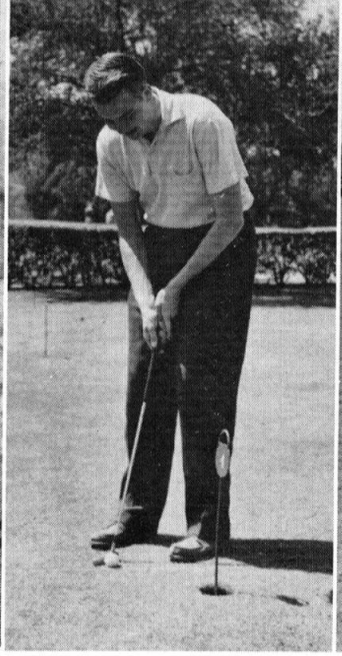
The frosh team has not been very strong this year, but the varsity next year will still be good, as only Yano, Beebower, and Schmid are graduating.



PAUL FARLEY

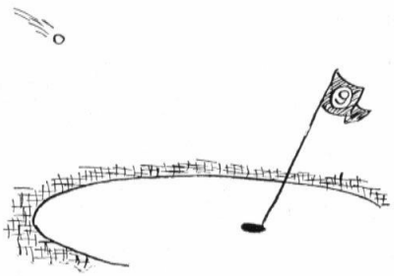


PETE ABBEY



PAUL LINDFORS

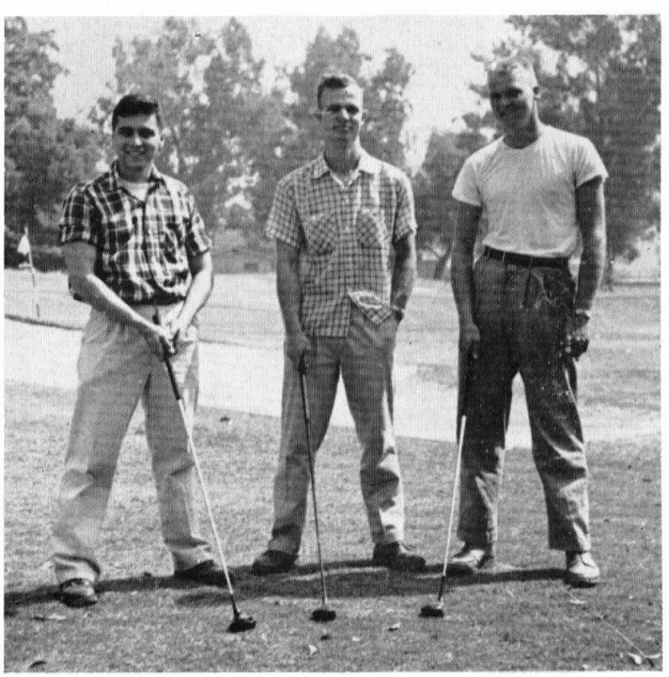
GEORGE McDONALD



GOLF

In addition to losing a coach, the Tech golf team also lost three of the top four men from last year's championship squad and has been faced with a big rebuilding job this year. Paul Farley has been shooting good golf as the number one man, but the rest of the team has been far from consistent. Paul Lindfors, George McDonald, and John Bush are returnees from last year's team, but they have not been playing well in early season matches. Pete Abbey, Harrison Schmitt, and Jon Robinson are new to the team this year and have been improving their play steadily. We are faced with graduation losses again this year, as Farley, McDonald, and Bush are seniors.

LEFT TO RIGHT: Harrison Schmitt, Jon Robinson, John Bush.



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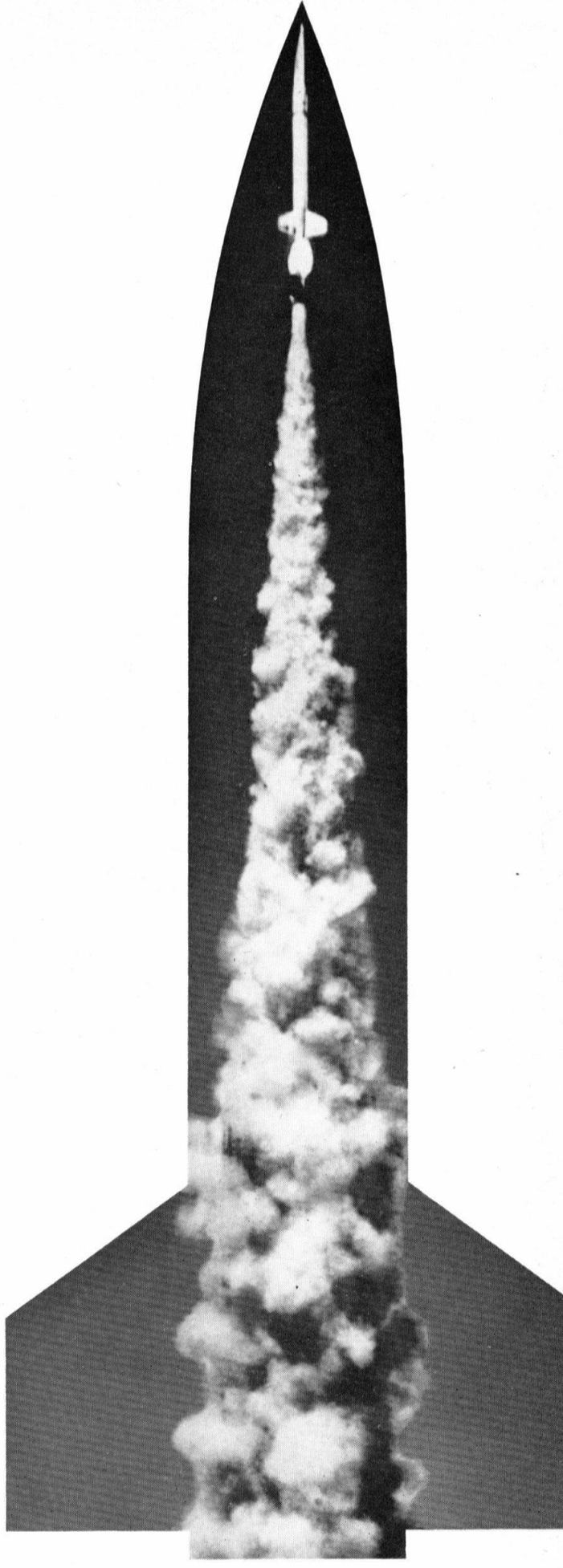

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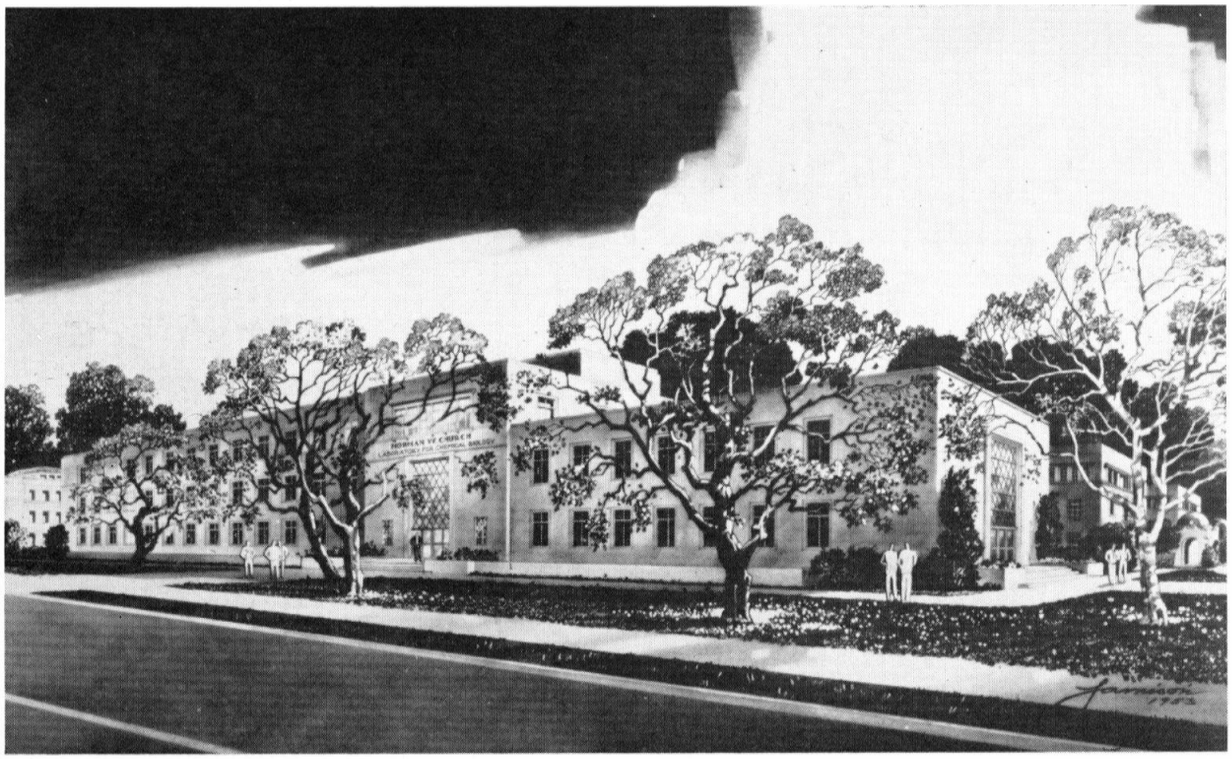

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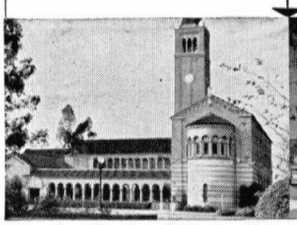

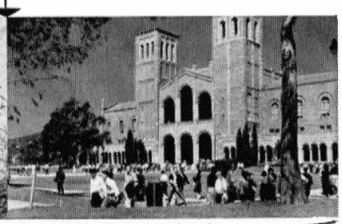

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Emphasis on systems development has consequences that profoundly affect all aspects of an organization. First, it demands an unusual variety of scientific and engineering talent. A single systems development project often requires concurrent solutions of challenging problems in the fields of electronics, aerodynamics, propulsion, random phenomena, structures, and analytic mechanics. In addition, the purely technical aspects of a systems problem are often associated with equally important non-technical problems of operational, tactical, or human relations character.

Therefore, competent systems development requires that a company contain an unusually large proportion of mature, experienced scientists and engineers who have a wide range of technical understanding and an unusual breadth of judgment. Further, all aspects of company operations must be designed so as to maximize the effectiveness of these key men, not only in the conduct of development work but in the choice of projects as well.

At Ramo-Wooldridge we are engaged in building such a company. Today our staff of professional scientists and engineers comprises 40% of the entire organization. Of these men, 40% possess Ph.D. degrees and another 30% possess M.S. degrees. The average experience of this group, past the B.S. degree, is more than eleven years.

We believe the continuing rapid growth of our professional staff is due, in part, to the desire of scientists and engineers to associate with a large group of their contemporaries possessing a wide variety of specialties and backgrounds. It is also an indication that such professional men feel that the Ramo-Wooldridge approach to systems development is an appropriate one.

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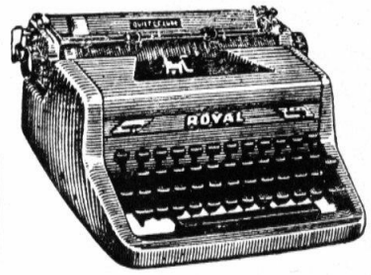

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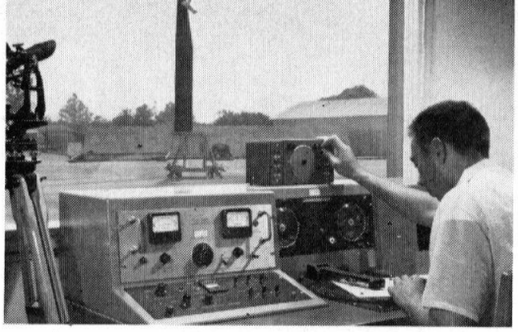
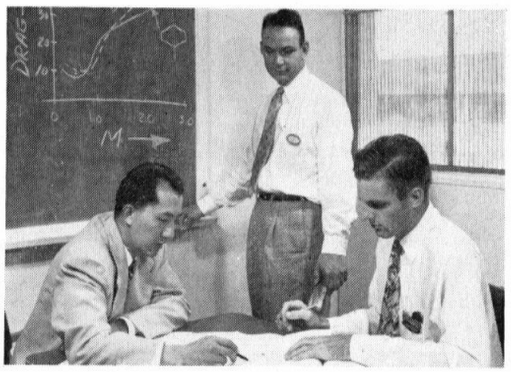
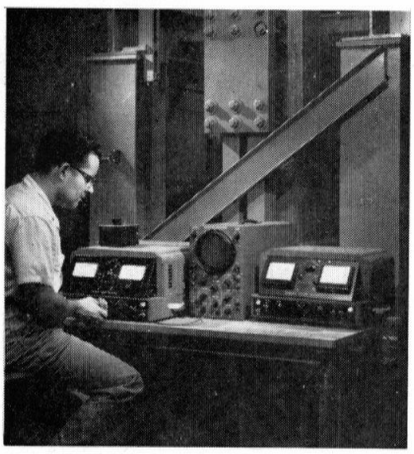


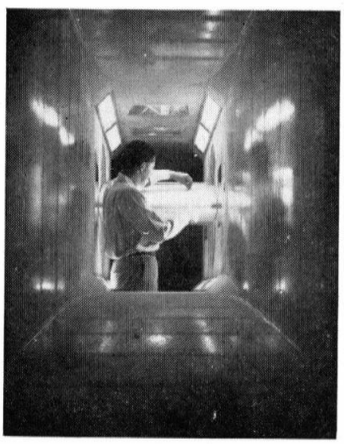
Electronics Research Engineer Irving Alne records radiation antenna patterns on Lockheed's Radar Range. Twenty-two foot plastic tower in background minimizes ground reflections, approximates free space. Pattern integrator, high gain amplifier, square root amplifier and logarithmic amplifier shown in picture are of Lockheed design.



Jim Hong, Aerodynamics Division head, discusses results of high speed wind tunnel research on drag of straight and delta wing plan forms with Richard Heppe, Aerodynamics Department head (standing), and Aerodynamicist Ronald Richmond (seated right). In addition to its own tunnel, Lockheed is one of the principal shareholders in the Southern California Cooperative Wind Tunnel. It is now being modified for operation at supersonic Mach numbers.



Research Engineer Russell Lowe measures dynamic strain applied by Lockheed's 500,000 lb. Force Fatigue Machine on test specimen of integrally-stiffened Super Constellation skin. The Fatigue Machine gives Structures Department engineers a significant advantage in simulating effect of flight loads on a structure. Among other Lockheed structures facilities are the only shimmy tower in private industry and largest drop test tower in the nation.



C. H. Fish, design engineer assigned to Lockheed's Icing Research Tunnel, measures impingement limits of ice on C-130 wing section. The tunnel has a temperature range of −40°F. to +150°F. and maximum speed of more than 270 mph. It is the only icing research tunnel in private industry.

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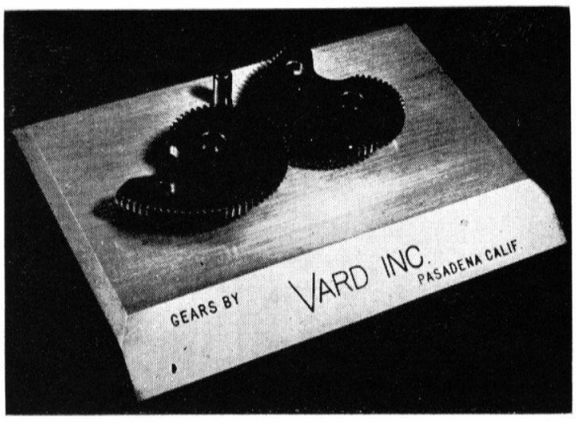

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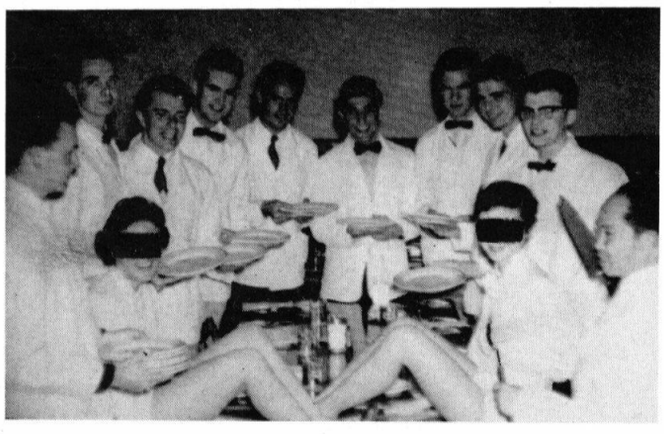

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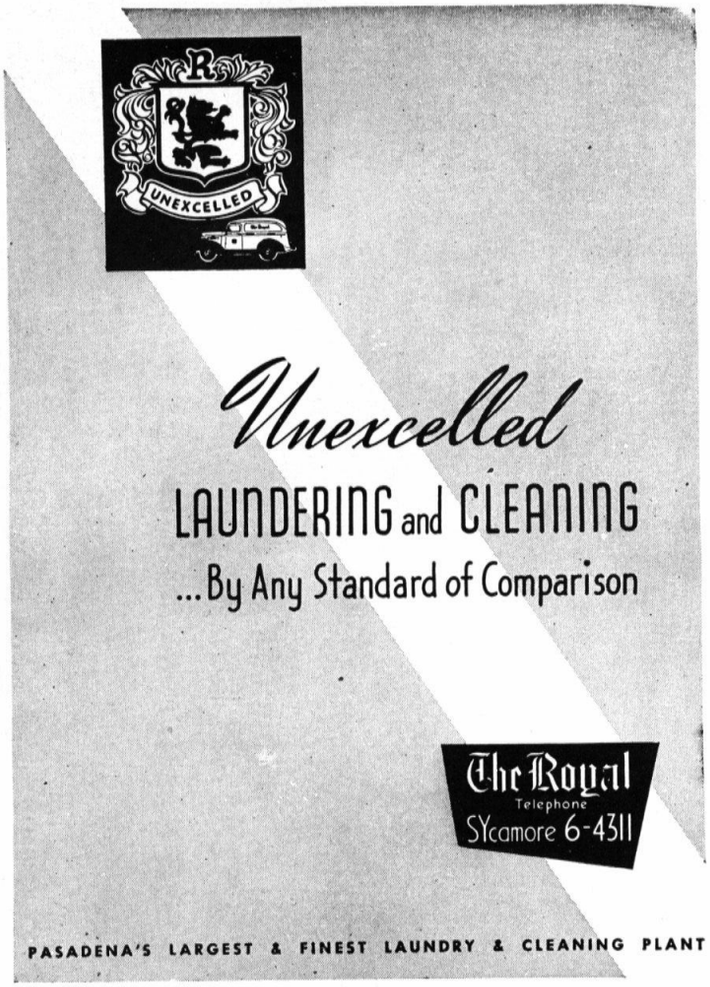

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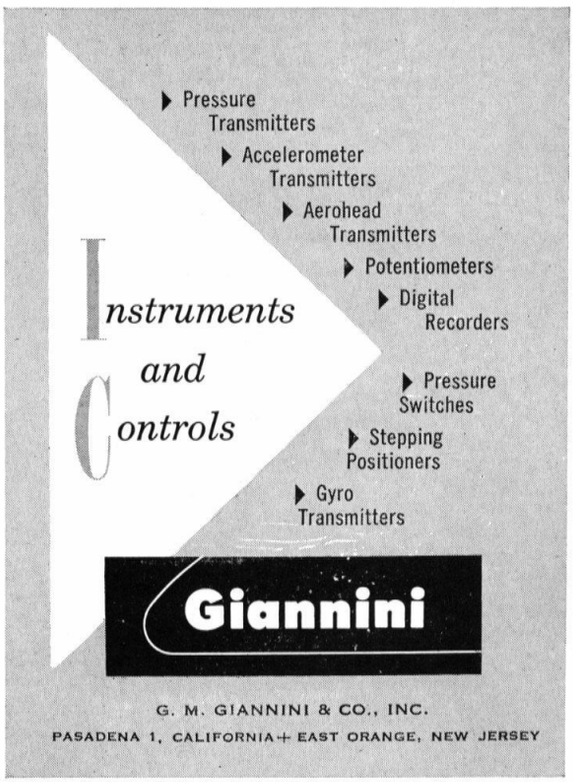

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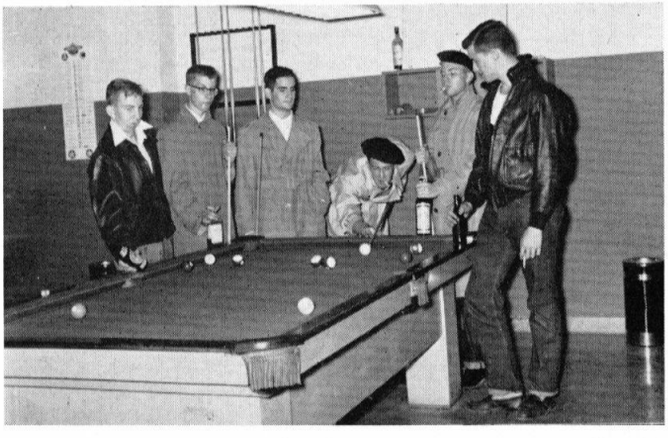

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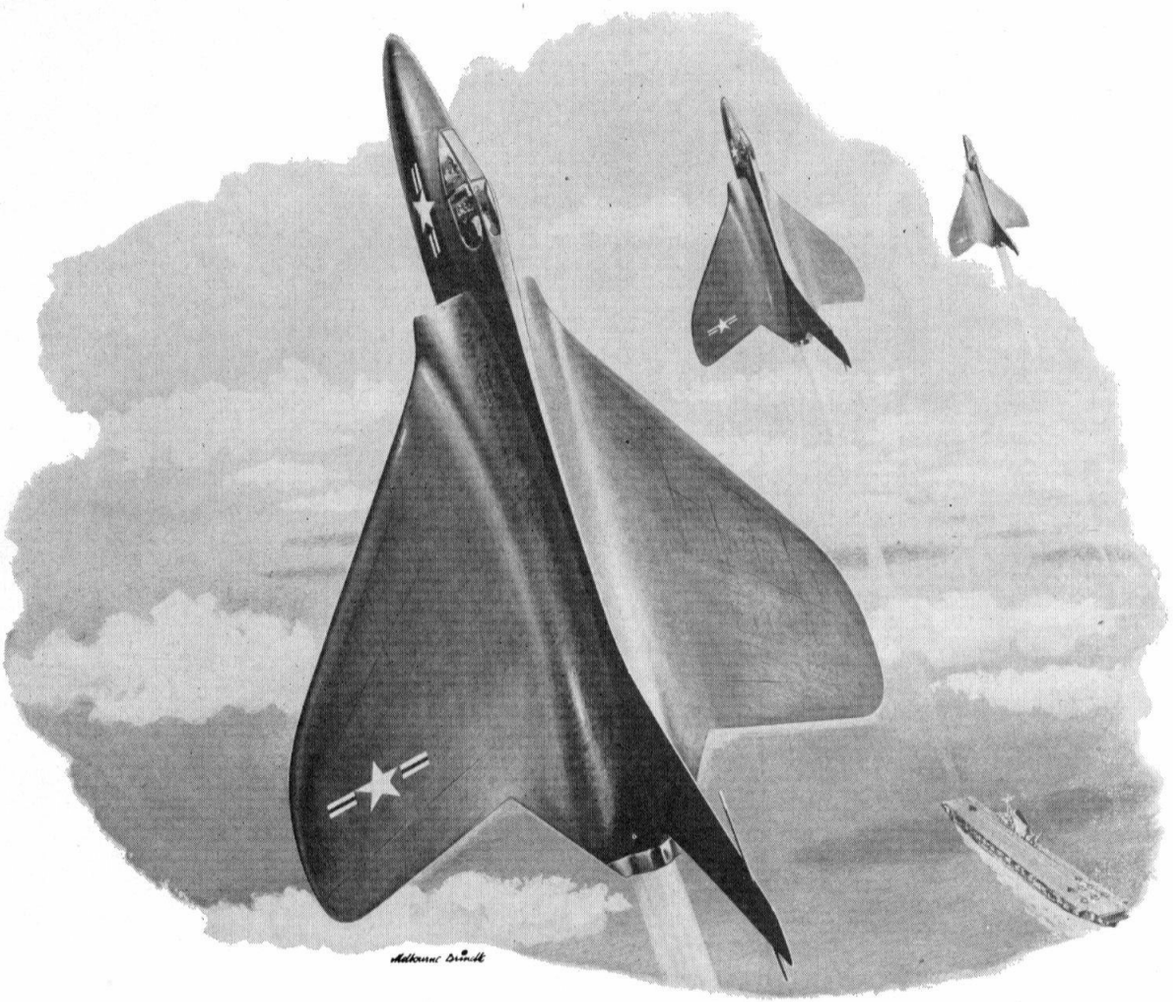

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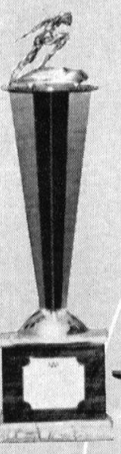

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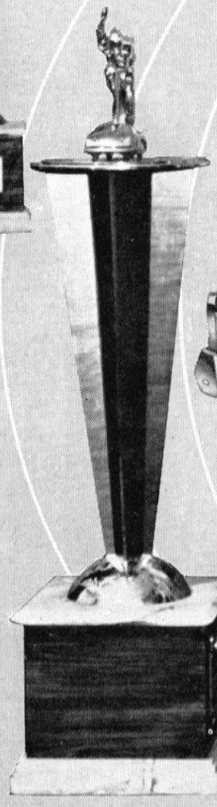

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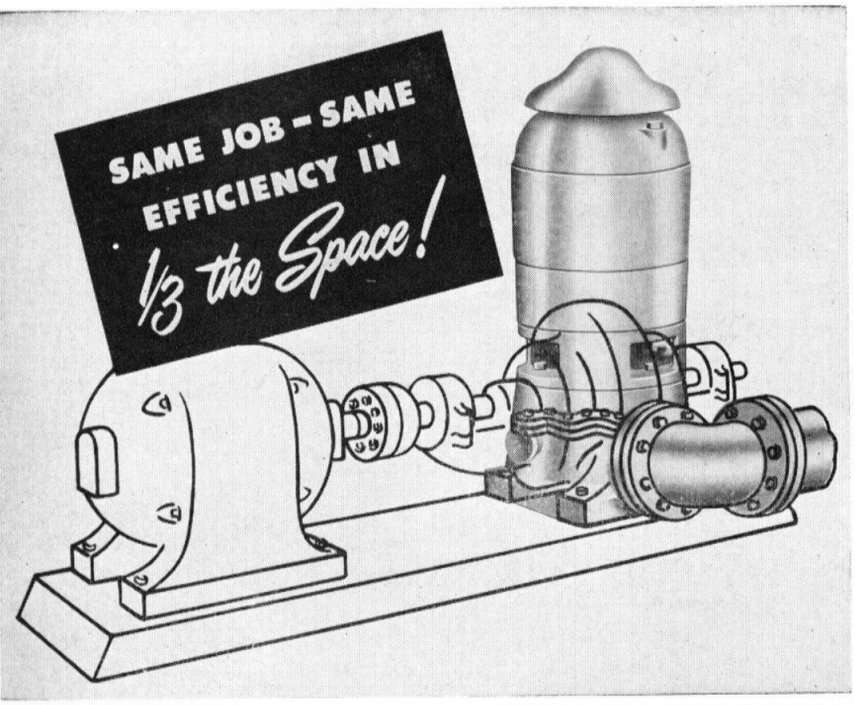

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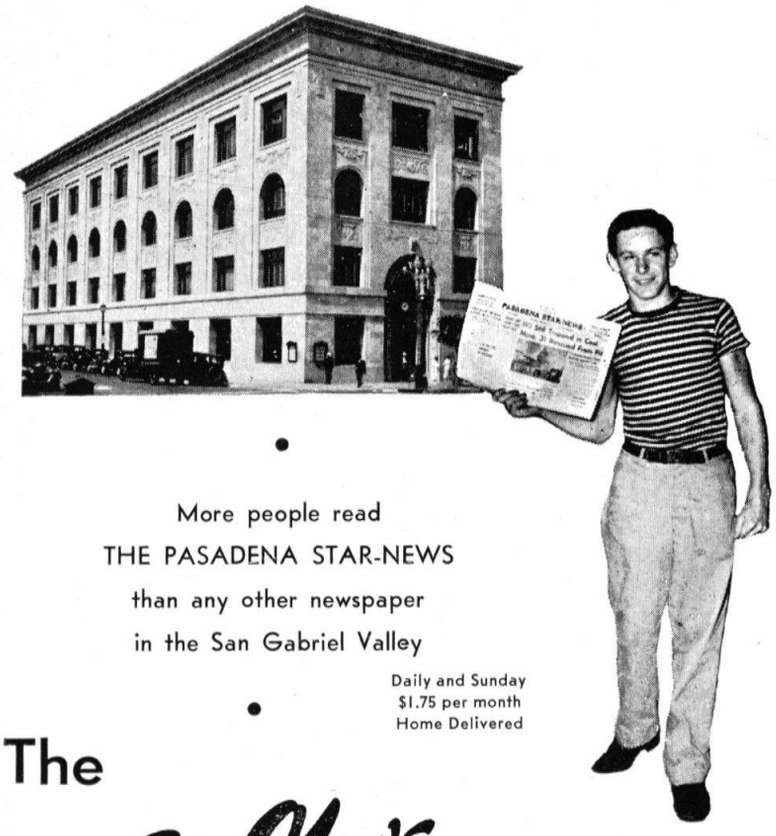

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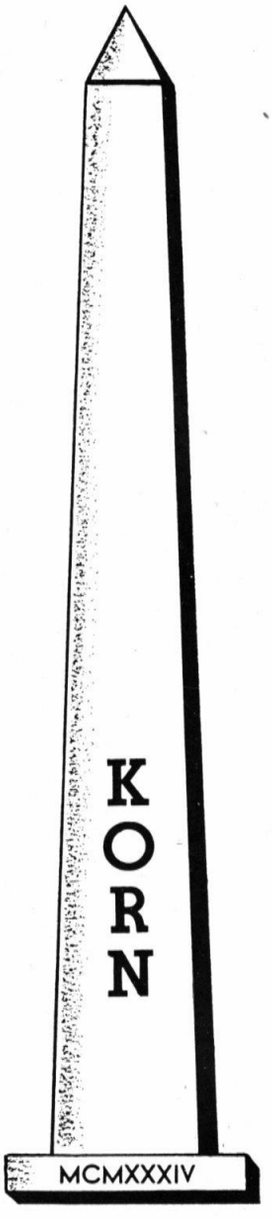

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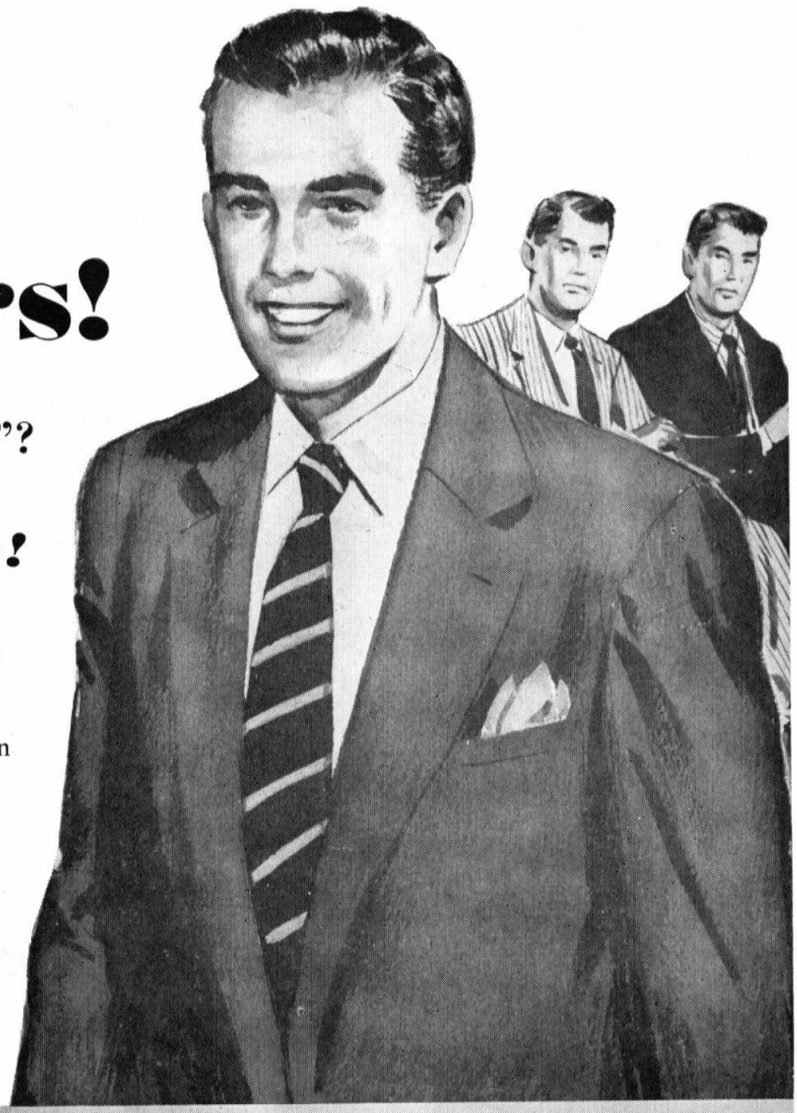

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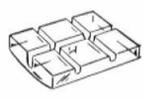

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