The California Tech

California Institute of Technology

Volume LIX

Pasadena, California, Thursday, October 3, 1957

Sporting one of the classiest

backfields ever seen in the South-

ern California Conference, Cal-

tech opens against Riverside in

ball squad in years, both in ex-

perience and depth, Coach Bert

LaBrucherie has high hopes for

a very promising season. 35 play-

ers have been suiting for prac-

tice, the biggest squad since 1948.

ienced, includes Dick Van Kirk,

Ed Krehbiel, Don Stocking, Art

Takido and Hal Forsen, varsity

lettermen. Takido, Krehbiel, and

Stocking hold All-Conference

honors, Takido having lettered

on the 1953 team as a sophomore,

and spent the intervening years

playing for Uncle Sam. As in

the past, Tech uses the Split-T,

which suits the passing abilities

The strongest position on the

team is end, where senior Gene

Stanley and junior Fred New-

man are backed by Tony Leon-

The backfield, fast and exper-

Presented with the best foot-

Tournament Park Saturday.

New faculty members will begin teaching, research duties

Looking forward to living with Caltech's academic spirit and its student body, 61 new faculty members have arrived to join our staff in this new school year.

Prof. John Todd and his wife, Dr. Olga Todd, are both entering the Mathematics Department. Both have obtained their degrees in Europe. They worked for the British Government during the war and for the American National Bureau of Standards afterwards. Professor Todd will give training in mathematical experiments on computing machines. Dr. Todd will work as Research Associate in Mathematics.

Dr. R. L. Sinsheiner, who received his degree at MIT in biophysics, has come to Caltech from Iowa State College to continue his research work on nucleic acids in viruses. At the same time, he will teach in the Biology Department.

Hoyle Returns

Fred Hoyle, who has been at Caltech in previous years, has returned as Visiting Professor of Astronomy. He is also a staff member of the Mount Wilson and Palomar Observatories.

Visiting Professor of History, Dr. L. H. Jenks, retired this year from Wellesley College after working there for 27 years. Others include professors, instructors, senior research fellows, and research fellows, who will stay with us for one year.

61 Come, 60 Leave; Staff Grows

Sixty faculty members have left Tech since last June, mostly because of the termination of their one-year visits.

H. S. Johnson, Associate Professor of Chemistry, resigned to join the staff of UC at Berkeley. Dr. P. Kyropoulos, Associate Professor of Mechanical Engineering, left to become Executive Assistant in Charge of Technical Development of the Styling Section of the General Motors Corporation.

Besides the addition of new faculty members, the roster of lab assistants, secretaries, and accountants, shows about twenty new faces. They can be found in the General Library, the Biology Lab, the Chemical Engineering Office, the Accounting Department, and elsewhere.

Tech grad wins \$5000

Ted Lang, Caltech class of '57, won the \$5000 first prize in a satellite essay contest sponsored by the Martin Company of Balti-

The contest, open to seniors and graduate students throughout the country, was for an essay written in 2500 words or less on any phase of the satellite program. Lang's paper, entitled "An Equilibrium Trajectory for a Satellite Powered by Solar Radiation" brought not only the first prize to him, but a like amount to Caltech as the Institute attended while the paper was being written.

He will continue at Caltech in graduate work toward a MS de-

Frosh! - girls

Sunday afternoon, October 6, at 2:30 p.m., the annual Frosh Tea Dance will take place in Dabney Hall lounge and courtyard. The freshmen will meet girls from local colleges and prep schools and will dance to the music of Claude Davis and his quintet.

The dance was planned by Tom Jovin and Mike Talcott. Refreshments will be served.

Around The Quad

FRESHMAN HONORS

Twelve freshmen have been awarded Honors at Entrance on the basis of their high standing on entrance examinations, Professor L. W. Jones, Dean of Admissions, announced.

They are Jerome V. Casper, Raymond L. Phoenix, Robert F. Poe, Richard H. Kruegar, Laurance J. Sloss, John C. Champion, John B. Trenholme, Peter J. Bickel, Kendall F. Casey, Martin P. Kellogg, Keith Matthews and Richard S. Norman.

LINDVALL

Dr. Frederick C. Lindvall. Chairman of the Division of Engineering and Aeronautics, has assumed the office of President of the American Society for Engineering Education for the 1957-58 term.

Dr. Lindvall has been a member of the ASEE for 16 years and for the past two years has been vice-president in charge of sectional activities.

WIN MEDAL

The American Society of Civil Engineers will present the Rudolf Hering Medal for outstand-(Continued on page 6)

in season opener Saturday

Hic!

Alcohol laws reprinted for **Tech minors**

In a letter from the Department of Alcoholic Beverage Control of State of California, it has been brought to the attention of the California Tech that the "'Number One' problem concerning violations of the Alcoholic Beverage Control Act in this state involves the purchase, consumption and possession of alco-Tech here reprints the essence than 21 years of age." Since this age group embraces most of the students at Caltech, and many of these students are not aware of the specific California laws applying to them, the California Tech here reprints the essence of the laws brought to our atten-

- 1. It is a misdemeanor to sell or furnish alcoholic beverages to a minor in any way. It is also illegal for a minor to possess alcoholic beverages in any public place.
- 2. It is a misdemeanor to present false evidence of age in order to obtain alcohol.
- 3. If any person is caught driving a motor vehicle under the influence of alcohol, it is a misdemeanor. If he violates another act of the Vehicle Code while intoxicated, it is a felony.
- 4. A misdemeanor is punishable by a fine of not more than \$500 or more than six months in the county jail. A felony is punishable by a fine of between \$200 and \$5000 and/or 90 days to one year in jail.

Returning lettermen to spark team; strong backfield augers well by Steve Emmanuel



Tech to host Riverside

Courtesy CIT Athletic Dept. Ed Krehbiel, last year's All-Conference fullback, returns to spark Tech's offense.

Alumni increase scholarship fund

The \$90,000 Alumni Scholarship Endowment Fund now is permanently established due to the fund-raising activities of the Alumni Association during the past year.

By adding \$29,000 to the trust fund, they have insured that a four-year full tuition scholarship can continue to be given to one man in each entering class.

Rotation now under way

The interhouse system of Caltech, combining the best elements of fraternity and non-fraternity schools, went into full swing this week with the beginning of freshmen rotation. The freshmen, "rotating" from house to house, "live" in each of Caltech's four houses for two days, eating there and spending their free time there. At the end of this period, each frosh chooses the house of his choice, while the houses in turn choose the frosh

The California Tech here reprints the IHC rules on rotation: "Rotation shall at all times be governed by an attitude of mutual respect between the houses and the freshmen. The criteria for weighing all matters shall be: does the act in question put pressure on the freshmen? does it constructively present the best points of the house? and does it damage the other houses?

"Freshmen are encouraged to state a preference for a particular house to the president of that house. However, such a preference shall not be expressed until the last 24 hours before the final preference lists are made out. Only the president of a house may express the house's preference for a freshman, and then only after the freshman has expressed a preference to himexcept that an individual may say that he, personally, would like to see the freshman in his house.

"During rotation no house shall: (Continued on page 6)

ard and Tony Howell. Newman, a halfback last year, was moved to end because of his speed and shiftiness; however he still needs to learn the fine points of de-The line is good but neither

of Van Kirk.

outstanding nor especially heavy. Russ Pitzer, John Conover, Lance Hays, Dick Baron, and Tom Bjorklund have been outstanding in practice.

The league this year is expected to be tougher, with no team particularly outstanding. The games should all be fairly

(Continued on page 5)

they want.

Test dates revealed to grad students

Admission tests for Graduate Study in Business, Law and 15 other subjects will be offered on dates during the coming year, according to Educational Testing Service, which prepares and administers the tests. These tests are required for admission to a number of graduate schools throughout the country; a candidate must make separate application for admission to each school of his choice, and should inquire of each whether it wishes him to take the Admission Test and when.

The Law School Admission Test will be given at more than 100 centers on November 9 in 1957, and February 15, April 19, and August 2 in 1958. The other tests may be taken on November 16, 1957, or January 18, April 26, and July 12, 1958.

A Bulletin of Information provides details of registration and administration as well as sample questions, and may be obtained from Educational Testing Service, 20 Nassau St., Princeton, N.J. A completed application must reach the ETS office at least fifteen days before the test for which the candidate is applying.

Sandy Gordon (PhD, '56) pursuing new vocation

by Mike Milder

Yes, "boy wonder" Sandy Gordon (Basil Gordon, PhD '56) has a new job. Since late August he has been scrubbing floors and sorting garbage at sunny Fort Jackson, South Carolina.

Remembered by Caltech undergrads as one of their favorite instructors, Gordon made news last year by leaving Tech for a teaching position at UCLA. But his penchant for changing produced an unexpected trend: Instructor of Mathematics, Caltech; Instructor of Mathematics, UC LA; Private, US 52452818.

Surprised friends of Gordon express the opinion that their brilliant, shy, sensitive Sandy and the U.S. Army were just not designed with each other in mind. Recent correspondence from Gordon supports this theory. He writes, "The intellectual climate is somewhat different from that at Caltech; in fact 42 men out of this company of 180 have already been discharged for idiocy."

After basic training, Gordon hopes to persuade the Army to use his mathematical talents for something besides counting potatoes, but in his words, "I wouldn't give too much for my chances."

He will resume his instructorship at UCLA after about 2 years.

Announcements

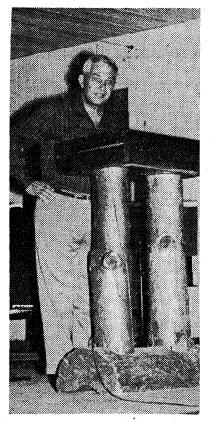
STUDENT SHOP

Any student interested in shop practices who would like to join the Student Shop may obtain application blanks and information from Al Forsythe, D 5; John Conover, B 57; or Bob Pailthorp, F 8. Deadline will be Oct. 10.

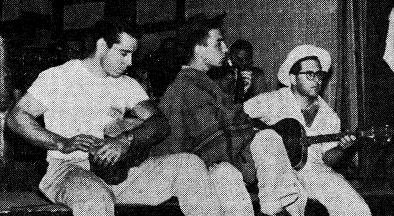
The student-operated club has wood and metal-working facilities for its members. It is equipped for most light machine work and cabinet-making; a variety of hand tools is also avail-

GLEE CLUB

Final tryouts for the Caltech Glee Club will be conducted at 4 p.m. today in Culbertson.

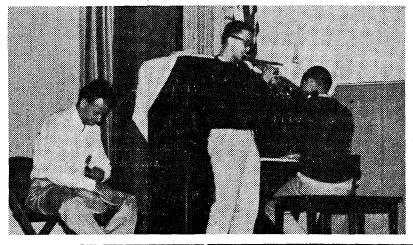


Courtesy ASCIT Photo Division "\$900 Bargain . . ."



Courtesy ASCIT Photo Division

Above: Kelly, Jovin, and Leeson back for a return engagement. Below: Feynman, Iorillo, and Nordlander in a successful open-



Frosh views Freshman camp

by Joel Yellin

Through three days of fun, sun and turmoil came one conclusion: This year's frosh are the brightest ever to enter CIT. But this we knew already, speaking from an unprejudiced point of view. These junior genii received an education: an education in listening, in bridge—how many lounge rats developed at Camp Radford remains to be seenand in finding a faculty who are actually human beings. Whether they are such from other than the Tech point of view remains a mystery to this writer, but all will come to pass as Allah wills it. One must wait and be patient.

The programs varied little in content, if we take the talent show and a small but hilarious skit as the exceptions which prove the rule . . . My very first impression of those on the program was that Dean Strong resembles my dentist, an interesting, beague-eyed man, who hates wasting anaesthesia on such simple things as impacted wisdom teeth. Dean Eaton, a misplaced advertising executive for Crest toothpaste, witted a funny line



One hundred eighty-four 'eager" freshmen, together with the usual complement of "cynical" upperclassmen and "inspiring" faculty, last week recreated the annual experience of frosh camp.

Faculty warned frosh of upperclass cynicism, upperclassmen warned frosh of the dangers of studiousness and the daggers of the faculty, and the frosh proved themselves normal, healthy boys by enjoying themselves and ignoring the speakers.

There is nothing new about freshman camp except the freshmen; the California Tech welcomes the class of '61.

or two-and impressed favorably.

The student leaders, several smiling gentlemen led by Dick Kirk, were introduced among polite aacclamation. A small, introspective skit was presented, involving the baring of the quasiquasi- Einsteins in our midst. While enjoyable, it probably did nothing for adjustment. It revealed one whose humour is that of the fabled overdry martini: Brad Efron, budding genius. Dennis Long, graduate student, informed the multitude that everyone is buddy-buddy, a fact well brought out, surprisingly true.

Friday was the day when Mr. Efron stepped gaily into the limelight with a commentary on TA's, the men you love to hate. It surprised some that the abused clique never had a representative to come to the defence.

Dean Strong showed himself full of perspicacity and wit when he cut the faculty down to humans while introducing them Thursday night. One of those cut, a very scholarly gentleman named Eagleson, gave an interesting resume of Institute history. Next was the first appearance of a mercenary character (initials Dave Leeson) who offered previously opened soft drinks and stale peanut butter cookies for sale.

The afternoon's program opened with a discussion of the Honor System. Gene Cordes, an expert on the subject, and an extremely lucid one, more than ably described the system from the student point of view. Professor Robert Sharp's sober observations pleased everyone.

Dr. Webb's explanation of the health program included a welcome notice that one need not worry over the possibility of a high mortality rate from the Asian Bug.

That evening's talent show was generally well accepted. A really wonderful Victor Borge imitation highlighted the show. The quasi-professional emcee and his talented Marlon Brando-ish friend amused with excerpts from Playboy and the Sullivan Show. The Curacachas, Jovin (guitar), Leeson, Kelly, Jovin (voice), talented group who last year introduced termites into Radford, provided unwholesome entertainment. The talented dialogue comedian Pierre Langlois, is still running. Except for the lack of a good washboard man, Al Forsythe did a good job with the makeshift band.

Dr. Feynman's performance with Tony Iorillo and Rick Nordlander was unofficially voted the best musical performance at Rad-

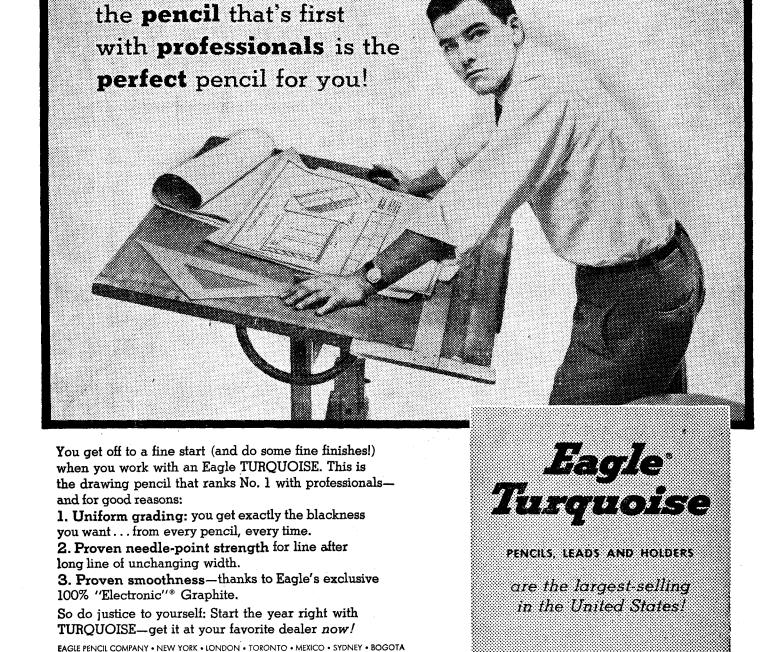
Professor David Elliot, his rich brogue rolling, introducing Craig Elliott, upperclass seer, who spoke on having lunch with Pancho Villa.

Camp closed the next morning with speeches by Dick Cooper and Vince Taylor.

After speeches by such student notables as Dick Kirk, Dave Lee-

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Super-soft, non-abrasive rubber.



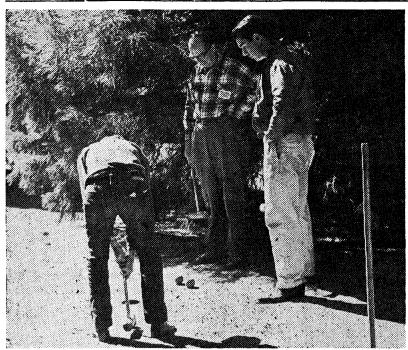
• TURQUOISE DRAWING LEADS: Fit any standard holder. Grades 5B through 9H.

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TURQUOISE LEAD HOLDERS: Hold any grade of Turquoise lead—so firmly that lead cannot be pressed back.

(Continued on page 3)



Courtesy ASCIT Photo Division Upperclassman Jon Kelly, Dean Foster Strong and an unidentified freshman enjoy a game of mountain golf.

FROSH CAMP

(Continued from page 2)

son, Vince Taylor, Bob Walsh, Russ Pitzer and Harry Spertus, the frosh had a pretty good idea of what Caltech is, what it offers, and what it stands for. This writer spoke to several upperclassmen who were present for their third or fourth time and discovered the very interesting fact that each time the experience becomes more and more meaningful. Take it for what it's worth. Others noted at camp were Dave Kubrin, Larry Brown, and Dick Feynman (my roommate).

For those who still understand little of the camp's idea and purpose. Samuel Johnson once wrote: "The seeds of knowledge

Camp Brewins

Dubridge continued his arithmetic series of frosh camp talks ("Your \$600 bargain," "Your \$750 bargain,") with one entitled "Your \$900 bargain." However, it seems proper to rejoice in this trend, as the students' percentage share is going down, down, down. Moral of speech: if you're flunking out cause you can't afford bluebooks, be happy. The institute's doing much worse.

Most effective speech was given by frosh Yellin, deploring lack of organization in previous attempts to light Oxy bonfire. Deans were so roused they called an immediate meeting to excommunicate BOD for allowing such heresy.

Conversation overheard: Hey, who's the cat with the

Dick Feynman. Teach here?

Yeah. Nobel Prize?

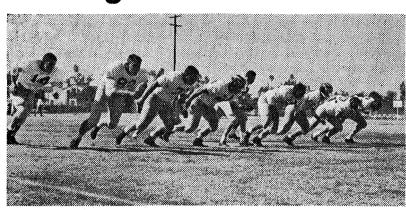
Guess it don't take brains to play a good bongo.

may be planted in solitude, but must be cultivated in public."



Calypso singers and five guitars.

Big 10 invades TP



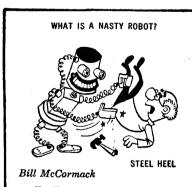
Courtesy ASCIT Photo Division



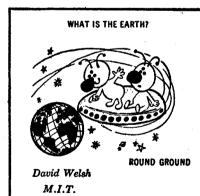
Feelin' blue? Need money, too? Students, we've got news for you!

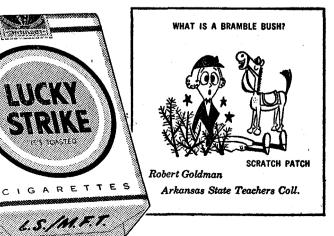


Sticklers back!



Fordham





Send yours in and

MOST POPULAR GAME that ever went to college—that's Sticklers! Just write a simple riddle and a two-word rhyming answer. For example: What's a big cat shot full of holes? (Answer: peppered leopard.) Both words must have the same number of syllables—bleak freak, fluent truant, vinery finery. Send Sticklers, with your name, address, college and class to Happy-Joe-Lucky, Box 67A, Mt. Vernon, N. Y. Don't do drawings! We'll pay \$25 for every Stickler we use in our ads-and for hundreds that never see print. While you're Stickling, light up a light smoke-light up a Lucky. You'll say it's the best-tasting cigarette you ever smoked!

LIGHT UP A LIGHT SMOKE—LIGHT UP A LUCKY!

• A. T. Co. Product of The American Tobacco Company—Tobacco is our middle name

The Caltech varsity football team came as close as they probably will ever to playing a Big Ten team when the Michigan Wolverines worked out on Tech's field last Friday afternoon before their game with SC.

Bennie Oosterbaan's team no doubt sought out the Pasadena campus because of the privacy and excellent locker room facilities. Bennie's choice proved a wise one as the Wolverines beat the Trojans 16-6 on the following day.

HELP WANTED!

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KEEP ALERT FOR A BETTER POINT AVERAGE!

Don't let that "drowsy feeling" cramp your style in class .. or when you're "hitting the books". Take a NoDoz Awakener! In a few minutes, you'll be your normal best... wide awake . . . alert! Your doctor will tell you-NoDoz Awakeners are safe as coffee. Keep a pack handy!

15 TABLETS, 35c



The Outside World ASCIT starts

Inflation - Causes and Cures photo division

by Al Carlin

As the student body learned last Monday, prices are going up. Curiously enough, the recent Caltech tuition increases have paralleled similar increases in the national economy as a whole. Labor Department statistics show that prices took a marked upward turn near the beginning of 1956 and have been going up ever since despite increasing Federal Reserve discount rates. This appears to be due principally to an industrial price rise which commenced in the middle of 1955 but was hidden until the first of the year by falling farm prices. However, when farm prices began to recover in 1956, prices took a noticeable jump.

Therefore, to explain the current inflation, it is necessary to inquire into why industrial prices took a marked upward turn in 1955. There are two obvious possible explanations, increased wages and increased profits. Both exhibited a remarkable increase during 1955. Corporate profits reached new highs in 1955 and 1956, just exceeding those during the Korean War years of 1950 and 1951. Taking it for granted that inflation is undesirable, we must consider whether either or both of these increases for major sectors of the economy are justified.

First, labor: Briefly, what has happened is that production workers have received a noticeably bigger slice of the national income since the war at the expense of those with fixed income, partly because employers have had no strong reason not to pass wage increases along to consumers. Certainly wage increases cannot be justified as mere productivity increases; Labor Department statistics show that total non-agricultural wages have risen 28 percent more than productivity in the last decade. It is difficult to blame raw materials—those with low labor costs—since they show slightly lower prices on the average, but show higher and higher comparative prices at each succeeding stage of manufacture, so that the wholesale price index for "finished goods" is 18 percent higher than 10 years ago.

The question of corporate profits is even less clear cut; for who is to decide what a proper return on investment should be? First of all, profits can be measured in at least four different ways, each of which gives a different result. While the total dollar volume of profits set a new record last year, so did business volume. Federal Trade Commission figures, in fact, show a slight decline over the decade and between 1955 and 1956 in profit "margins"; i.e., profit before tax as a percentage of total costs. Labor economists, however, point out that there has been an increase in profits as a percentage of the capital invested. It does seem clear that increases in profits cannot account for a significant part of the inflation. But perhaps profits were too high to start with.

Numerous other culprits have been singled out; but in the opinion of this observer they are not major factors. One is private spending, the classical villain which has once again received the official blame from Washington. According to former Secretary of the Treasury George Humphrey, the prime cause and origin of the current inflation was a "capital goods boom"—a surge in business buying; and it is true that some of the steepest wholesale price rises were in so-called "investment goods." It does seem to be true that consumers helped to start the boom by a buying spree (heavily financed by installment credit) in 1955. While this did not continue into 1956 or 1957, there has been a high level of consumer demand.

Another of the accused is government spending. This is hard to substantiate, however, as the Federal Government has been removing at least a little more money from the economy through taxes than it has been putting into it. Taxation is also blamed, first because taxes are reflected in higher prices, and secondly because of subtle changes it produces in investment and spending habits, of which the expense account is the best known example. A sixth possible cause is the huge increase in the money supply since 1940. And, even though the Federal Reserve has kept a tight reign on the supply for the last two years, this has really not had much effect because of the increased "velocity' of money, a rather difficult phenomenon to control.

Therefore, it seems to this observer that the country must decide whether labor deserves a larger slice of the national cake; if it does, it will have to pay the price, literally. If it decides that labor does not, there is really little that it can do about it short of wage controls which are politically impossible in the foreseeable future.

"Totem" arrives!

The first issue of Totem, Tech's new literary magazine, appeared on schedule last week to greet frosh and returning upperclassmen as they registered. Although Totem is designated as Farrago's successor, it differs in several important respects. Totem is published under the auspices of the Humanities Department and

California Tech

Editor-in-chief — Bob Walsh

Entered as second-class matter November 22, 1947, at the post office in Pasadena, California, under the act of March 3, 1879.

will accept material strictly on the basis of its literary quality, from undergraduates, grad students, and faculty members. And finally, the magazine is experimenting with the process of offset printing, which combines versatility with a relatively low cost.

The editors, hoping for a prompt second issue, set Nov. 15 as the copy deadline for Vol. 1, No. 2. All those interested in writing for Totem should contact John Lango, Ken Scholtz, Eugene Robkin, or one of the staff members. Copy may be submitted directly to TOTEM, Church Lab, Caltech.

ASCIT starts photo division

ASCIT President Richard Kirk has given Dennis Paul and Randy Schmus, president of the Darkroom Club, unofficial permission to proceed with plans for a campus Photography Division, pending approval of the Board of Directors. Little doubt was expressed that the proposed measure would be approved.

Schmus revealed that the plan will combine campus photographic talent and equipment into a single organization partially supported by ASCIT funds. This organization would provide photographs for campus publications and news releases on an order basis and maintain a cataloged file of all pictures.

Schmus, charging that the old system of obtaining photographs is haphazard and wasteful of equipment, time, and money, claimed that the new Photo Division would effect an increase in speed and as much as fifty per cent savings in cost.



From the Los Angeles Times, Sunday, August 5:

WITHOUT A DROUGHT!

David Reid Gilson, a student, took a drink the hard way when he created his own fountain on San Vicente Blvd. in the West Side.

Gilson's water bill was well over \$100 when he lost control of his car and smashed into a fireplug. According to a city ordinance, the party damaging the plug must pay for all the water lost.

The Bull Pen

by Ford Holtzman

Now that rotation is with us in all its partisan fury, it might not be amiss to stop and consider the purposes of all this rigamarole.

The most obvious purpose is to fit each freshman into the House whose personality is most congenial to him. But, while this may be the most obvious purpose, it is not completely achieved, nor is it vital that it should be. In two weeks' time all the freshmen and the Houses can do is to give each other the once-over and trust to their skill in seasoning observations with appropriate quantities of salt. Usually they succumb to the influence of inertia; last year only 20 percent of the freshmen left their original Houses.

Best House?

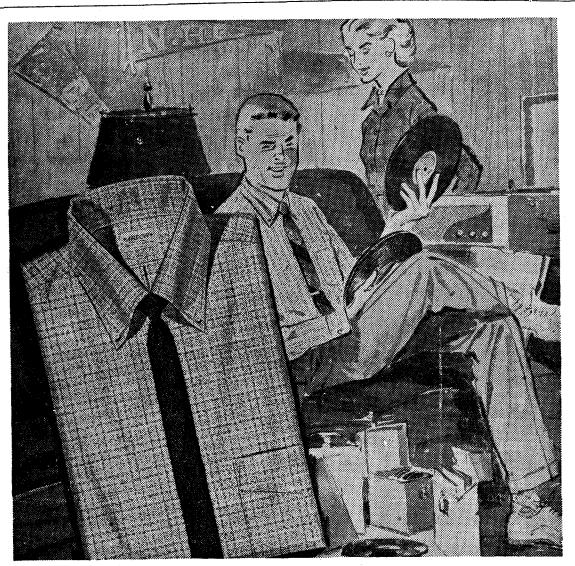
I am not saying that freshmen frequently fail to end up in the best House. The entire question of a "best House" is rather fatuous. By the end of the term almost every freshman will be convinced that, by the grace of providence, or his own wits, or God, or whatever you please . . . he has managed to join the best House. You can fit into all the Houses, or else you cannot fit into any of them. None of the Houses has such a set personality that a reasonably sane freshman cannot adjust to it and the House to him.

From Dorms to Frats

A more important purpose than merely to fit freshmen into Houses is to unite the diverse elements of each House and to integrate the freshmen into the Houses. When the student houses were first built, there was no rotation. New students were just assigned to one of the Houses with no ifs, ands or buts. However, it was soon noticed that freshmen who did not sweat a little blood to get into a House took little interest in the House and all it had to offer. And so the wheels of that day hit upon rotation as a means to keep the houses from failing as fraternal organizations but yet to protect all the brethren from the cold, cruel world. Without rotation the Houses would be as drab as dormitories.

The Grey Flannel Fib

To tell the truth, I have brought up these two "purposes" for rotation just to say that, though they may seem to be ample justification for rotation, they really are not. In a term's time nobody will really care which is the best House, and in four years' time nobody will really care whether or not the Houses were united. The real reason for rotation is not very glamorous, but very true. It is, very simply, to teach us how to fib, create unwarranted impressions, cast exaggerated aspersions, and in general to trounce friend and foe alike for the benefit of ourselves and for an organization with which we have cast our lot. And since most of us are going to spend a good portion of our lives doing these things, it's about time we had an opportunity to practice the most subtle and most sublime art of shooting the bull, and to evaluate our mistakes. Anyone who finds himself in any sort of executive position is going to have to be a graceful hypocrite. And though hypocrisy may not be very inspiring or delightful, I'm afraid it is here to stay. We came here to learn; rotation is a chance to learn some of the facts of life and how to deal with them.

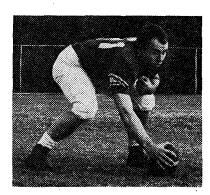


"Pretty soft!"...new Arrow Cambridge Cloth

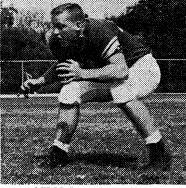
This new Arrow University-styled shirt is a deft blend of the old and new . . . traditional styling in smart new feather-soft Arrow Cambridge Cloth . . . bound to become as popular as our famous Oxford cloth. Collar buttons down, front and center back.

Mitoga®-tailored body and sleeves fit smooth and neat, without bunching. Full length box-pleat in back. Your favorite colors in solids, checks, pencil-line stripes. At your Arrow dealer's. Shirt, \$5.95; Tie, \$2.50.





CENTER-Lance Hays



GUARD—Russ Pitzer

Beavers seek winning season

by Dave Singmaster

For the first time in over twenty years or so, Caltech has a chance of breaking even or better in varsity football. Tech faces four league rivals and four non-leaguers, with UC at Riverside here Saturday afternoon for the season opener.

UC at Riverside

Riverside promises to be an easy game with Tech favored. This is Riverside's third year of varsity intercollegiate football and trey have not had time to develop a strong team. They beat Cal Baptist, a very weak team, 31-0 last week.

Redlands

Redlands is weaker than last year's champions. The Bulldogs' line is lighter but their backfield is still fast. Howard Tipton, Small School All Coast last year, is returning to spark the Bulldogs' wing T backfield.

Pomona-Claremont

Pomona will be spearheaded by two returning All-Conference backs, Jim Lindblad and Buzz Block, both only 150 pounds. They will operate a single wing under a new coach. A dark-horse team.

Cal Poly

Cal Poly is much improved over last year's team, which lost

to Tech. A new coach, a new athletic scholarship program and many returning lettermen add up to the strongest team that Caltech will face.

Whittier

Whittier has only two first stringers returning to their varsity. The loss of Gary Campbell, star tailback, has occasioned a shift from single wing to T formation under the direction of their new coach. The Poets have lost one game to Santa Barbara, 13-0.

Occidental

Oxy is Tech's traditional rival, only they don't know it. The Tigers have been strengthened by a number of Junior College transfers and a new coach. The loss of their brilliant pass combo, Jack Kemp and Jim Morra, more than offsets these gains, however. Stan Friedman, Alil Conference lineman, will return to spark the Tigers' wing-T, unbalanced-line offense.



TACKLE-Larry Berry

FOOTBALL

(Continued from page 1)

even, and it is unlikely that any team will emerge undefeated in league play.

LaBrucherie is expected to start Newman and Stanley at ends, Larry Berry and Gene Beisman at tackles, Pitzer and Conover at guards, Hays at center, Van Kirk at quarterback, Stocking and Takido at half, and Krehbiel at fullback.

VARSITY FOOTBALL CALENDAR

Saturday, October 5-UC, Riverside at Caltech (2:00)

Friday, October 11 — Caltech

Saturday, October 19—Caltech at Pomona-Claremont. (Day

Saturday, October 26-Caltech at Cal Poly (at Pomona)

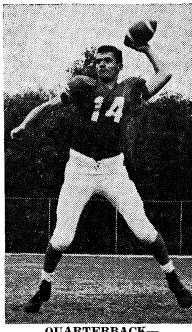
Friday, November 1-Whittier at Rose Bowl

Saturday, November 9 — Cal Baptist at Caltech (10:00 am) Friday, November 15 - Occidental at Rose Bowl

Saturday, November 23 — La Verne at Caltech (day game)



HALF-Art Takido



QUARTERBACK-Dick Van Kirk

Varsity water polo hopes still bright

The most important factor in the outlook of this year's water polo team is the loss of goalie Don Wiberg for the season. Except for the sudden weakness at this vital position, the outlook is bright and a championship year may be again in the offing. Clark Rees

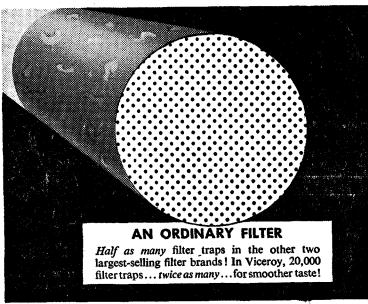
will be back as number one scoring threat, with help from Bob Blandford, Vince Taylor and Keith Martin.

The entire strategy of this year's offense and defense willbe changed in view of the strong returning squad and the loss of a goalie. Instead of playing sideways at our home pool, with two deep water goals, the game will be played lengthwise with one shallow water goal. Coach Web Emery plans to concentrate on offense in the deep end with all men forward, like basketball, with a large man in the shallow end goal. In the deep end, he plans either to use Don Owings

in the goal or pull one of the good swimmers, perhaps Dave Tucker, back into goal and play more defensively.

All-Conference center guard Ed Park is the only other loss from last year's team, and his place will be capably taken over by Bob Smoak. Also returning are Owings, possible goalie, Mike Milder, and Norm Velinty. Up from the Frosh are Tucker, Pete Rony, Bob Thompson and Dave Singmaster, possible shallow water goalie, to add further depth to Tech's already strong team. Bob Ruby, with good high school experience, promises to stand out on the Frosh team.

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ROTATION

(Continued from page 1)

- 1) spend any money on, or lend any to, a freshman. "Lending" includes furnishing goods or services on credit.
- 2) post a coming social pro-
- 3) organize or sponsor any social events. Unorganized stag parties on campus shall not be considered social events provided that they are conducted in accordance with the Student House rules as interpreted. 'Unorganized' means the existence shall be spread by individual word of mouth only.
- 4) get freshmen dates or lend them cars.
- 5) be in a freshman's room, or ask him to leave his room, after 10:30 p.m.
- 6) give information to a freshman on the preference of any other freshman.
- "No freshman shall actively or passively resist rotation.

"No freshman shall participate with any house in an organized athletic program during rotation, and no challenges for interhouse trophies shall be made during this period.

"'House' in the above rules, means either the organized body as a whole, or any or all of its individual members.'



The new year brought with it the usual 180 variations on the pictured scene above, in which the new students clutch to themselves their Institute catalog and all-important white card, while gasping at the size of the bill and making mistakes writing out their checks. On second thought, perhaps the one on the left isn't gasping at the size of his bill. At any rate, the picture is a sure indication of the beginning of a new academic year.

(Continued from page 1

ing published technical papers to Norman H. Brooks and Alfred C. Ingersoll, Assistant Professors of Mechanical Engineering, and Jack E. McKee, Professor of Mechanical Engineering, for their paper on "Fundamental Concepts of Rectangular Settling Tanks."

PRESS

Dr. Frank Press was appointed as director of the Seismological Laboratory in July.

Dr. Press, assuming his new duties this month, succeeds Dr. Beno Gutenberg, world-famous geophysicist who is retiring to half-time status after 27 years at Caltech and 10 years as director of the laboratory.

The new director, 32 years old, has been a member of the laboratory staff since 1955, when he came to Caltech as professor of geophysics. He had previously been associate professor of geophysics at Columbia University and a member of the research staff of Columbia's Lamont Geological Observatory.

FELLOWSHIPS

Caltech has to date awarded

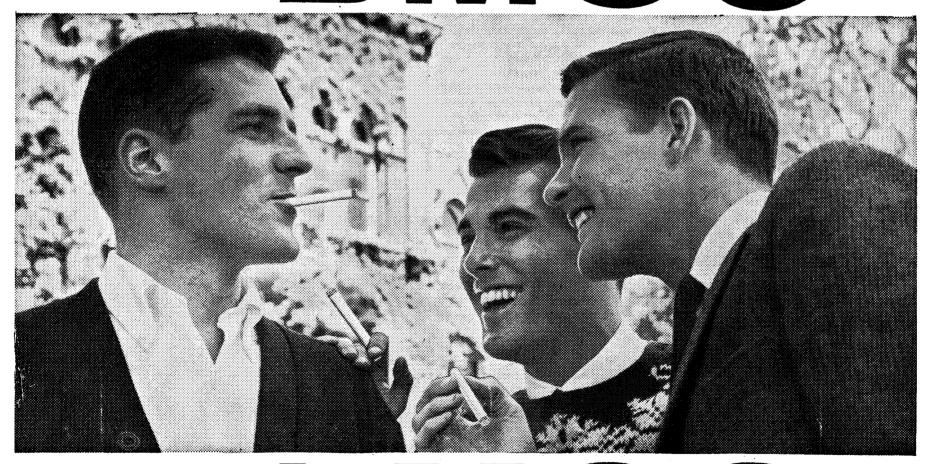
32 fellowships for graduate study during the academic year 1957-8. The fellowships, representing a total outlay of \$120,000, were financed by grants from 26 business corporations and founda-

Each fellowship grant covers a year's tuition and includes a stipend for major student expenses.

Class officers

Joining previously elected class presidents Sonny Nelson (senior), Jerry Arenson (junior), and Jim Sorensen (sophomore) was newly elected freshman class president Sid Leibovich. Also chosen by the BOD to take the helm were Ken Casey, vicepresident; Bruce Ulrich, secretary; Don Forrest, treasurer; Tom Tisch, athletic manager; and Bill Bauer and Pete Lippman, oBoard of Control. The new frosh officers will serve until elections at the end of first quarter.

THE



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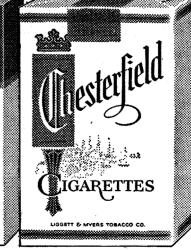
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hesterfield The big brand for big men who like their pleasure big! For full-flavored satisfaction ... it's Chesterfield...the cigarette that always goes where the fun is.

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