

Volume LI.

Debaters Off To Stanford

Blacker Wins Lincoln Forensics Trophy

Caltech's debate squad will send two of its teams to Stanford University next week for the Western States Intercollegiate Speech Tournament. The teams of Ulrich Merten and Bob Smith, Stan Groner and Ralph Stone will debate the proposition, Resolved: That the United States should set up a Marshall Plan for the Orient.

Speech Activities

When not debating, they will vary their activities with Extemporaneous, Impromptu, and After-Dinner Speaking. They will be accompanied by their coach, Dr. Lester McCrory, who will remain in the region for the Speech Association Convention to be held after Thanksgiving.

Lincoln Trophy

Blacker House succeeded in removing the Lincoln Forensic Trophy from Dabney's mantle on Monday night when their debate team of Goss and Groner beat Beek and Smith of Dabney. The interhouse debate was also on the question of an Oriental Marshall Plan.

Off Campus Men

Your only opportunity to get your picture in the 1950 yearbook, the Big T, is by signing up for an appointment with the photographer. A representative of the Big T is stationed daily outside Dabney Hall from 11 to 4 in order that you may arrange the appointment most suitable for you.

Avoid the last minute rush; an appointment made now means a more convenient time for you!

Production Alumni Theme

The last Alumni Placement lecture before the Thanksgiving holiday will feature Mr. Forrest J. Young. The subject, "Production and Manufacturing," is the most important one to the future executive and engineer.

Chief Engineer

Mr. Young is well qualified to discuss this problem, since he is, at present, the Chief Engineer of the National Supply Co., at Torrance, Calif.

Opportunity

The material to be covered will include the opportunities for engineers and scientists in the field of production and manufacturing, the opportunities for advancement, and what type of men are best suited to work along these lines.

The usual time will prevail with the place being changed to Ricketts House.

Pre-Registration

Pre-registration for the second term, 1949-50, will be held from Nov. 21 to Dec. 2. Obtain registration material from Room 119A Throop.

Campus Calendar

THURSDAY, NOVEMBER 17
12:00 Y Upperclass Lunch Club
12:15 Throop Club Meeting
7:15 ASCIT Board of Directors Meeting
in Lower Fleming

7:45 Dancing Class in Culbertson

FRIDAY, NOVEMBER 18
4:15 Frosh Cross Country vs. Redlands
at Redlands

4:30 Varsity Cross Country vs. Redlands
at Redlands

4:40 Water Polo vs. Muir at P.C.G.

7:30 Football vs. Cal Poly at San Dimas

SATURDAY, NOVEMBER 19
10:00 Varsity Soccer vs. USC at Tournament Park

Frosh-Soph Dance

Blacker Barn Dance

Dabney Skating Party

Fleming Theater Party and Dance

Ricketts-Throop Barn Dance

SUNDAY, NOVEMBER 20

7:00 Caltech Musicals in Dabney

7:15 Film Classics Series in Culbertson

MONDAY, NOVEMBER 21

11:00 Biology Club Meeting, 234 Kerckhoff

7:15 Film Classics in Culbertson

TUESDAY, NOVEMBER 22

7:30 Y Frosh Lunch Club

7:15 Alumni Placement Talk in Ricketts

WEDNESDAY, NOVEMBER 23

7:30 Orchestra Rehearsal in Culbertson

9:00 Glee Club in Throop Club

SOPHS SLOSH FROSH



How gooey can mud get? The above unidentifiable underclassmen found out last week in the annual Mudeo. The Sophomores sloshed to a 5-2 victory over the Freshmen.

Biology Club Plans Trip

Calling all nature lovers! The Biology Club is starting a drive for new members in a meeting open to all those interested next Monday, November 21, at 11:00 in Room 234 Kerckhoff.

The Club, composed of undergraduate biologists and others with biological interests, exists for the purpose of furthering those interests in fields not directly related to class work. In the past the major effort of the Club has been the Spring Field Trip held each year during the spring vacation. At this time "expeditions" of biologists have visited desert areas in Baja California, Death Valley and elsewhere.

Other Activities

However, this is not the sole activity of the group, for many shorter trips can be arranged to nearby points of interest, and lectures have been arranged on various popular topics, the most outstanding in recent years being one on hypnotism which drew capacity crowds to 154 Arms. And at all times, informal discussion of their work with various members of the research staff has been possible.

Planning Planned

It is in order to plan this year's program that Monday's meeting has been arranged. Since it is expected that by far the majority of those present will be new members, it is essential that all those interested attend so that their opinions be consulted in formulating future plans.

Biology Fellow Honored by Medal

Dr. Warren P. Spencer, Gossen Fellow in the Biology division at the California Institute of Technology, has been recently awarded the Leidy Medal by the Academy of Natural Science of Philadelphia. Dr. Spencer, who is professor of biology at the College of Wooster, Wooster, Ohio, is on leave from that school to carry on research in genetics at Caltech, a field in which he has been working for many years. He did previous genetic research at Caltech in 1936-37 as a National Education Fellow.

Drosophila

The Leidy award, which consists of a bronze medal and a cash honorarium of \$100, is awarded every three years by

(Continued on Page 6)

California Institute of Technology

Thursday, November 17, 1949

No. 7

Freshman-Sophomore Hop Slated for Saturday Night

"Movie Music" Y Forum Topic

Nathan Scott, composer-arranger for Republic Studios, will be featured on a Y forum to be held Monday, November 21, at 7:30 p.m. in Dabney Lounge. Recordings, taken from Republic pictures, will supplement Mr. Scott's talk on "Music and the Movies." All students, faculty and friends are cordially invited.

Tech Man

Mr. Scott attended school here at Tech from 1933 to 1935 and then transferred to the University of California, where he received his degree.

Starts With NBC

In 1937 he took a job with NBC, and got to the top quickly in radio, for by 1942 he was musical director of the Blue Network.

Since he left the Army in 1946 Mr. Scott has been with Republic Studios and his talk here will be mainly on his work with this company.

Consolidated Drive Report

The following is a summary of the totals in the ASCIT Consolidated Charities Drive as of Monday, November 14th. The returns from the Graduate Divisions are not yet complete, better than \$100 probably being outstanding.

Goal \$2500				
Total Contributions \$2462.36				
March of Community				
Graduates	WSSF	Dimes	Chest	Total
Off Campus	\$ 235.75	\$ 162.00	\$ 152.25	\$ 550.00
Undergrads	177.75	141.80	104.94	424.49
Blacker	137.42	127.27	128.17	392.86
Ricketts	190.30	124.15	78.06	392.51
Fleming	151.15	125.65	79.95	352.75
Dabney	132.58	126.09	91.08	349.75
Totals	\$1,024.95	\$806.96	\$630.45	

Over 115 people working on various phases of the drive are responsible for its success. On behalf of the ASCIT Board of Directors, I wish to thank the following people in particular: The 105 solicitors for devoting a great deal of their time and energy to the drive; Kent Stratton for doing such an excellent job on the publicity; the Caltech Y for furnishing many hours of secretarial and bookkeeping aid free of charge; Wes Hershey for his advice and help in organizing the drive.

And on behalf of the WSSF, March of Dimes, and the Pasadena Community Chest, I wish to thank all the students for contributing so generously.

Sincerely,

David B. MacKenzie
ASCIT Vice-President

Geology Students Win Paper Prizes

California Institute of Technology students recently made a clean sweep in the annual Student Papers Contest sponsored by the Southern California Section of the American Institute of Mining and Metallurgical Engineers.

Graduate Prizes

Charles W. Allen, in the graduate division, took first prize on a report on the stratigraphy and structure of a part of the Puente Hills, and William R. Muehlberger's paper on problems of the origin of granites at Barre, Vermont, took second prize in this division.

First prize in the undergraduate division went to Thomas R. Fahy with a report on the geology of the Sunland area.

Institutors Slate Big T Appointments

Dabney House Institutors, headed by Joe Cain, are getting appointments this week for off-campus men to have their pictures taken for the Big T.

They will be taking appointments every day this week between 11:00 and 4:00. Every off-campus man should make an appointment this week and be sure of getting his picture in this year's Big T.

Rotary Offers Fellowships

Applications for Rotary Fellowships for study abroad are now being accepted from outstanding graduate students by Rotary Clubs in nearly every country of the world.

These one-year Fellowships, with grants ranging from \$1,800 to \$3,400, are awarded by Rotary International, world-wide service club organization, as a contribution toward the promotion of international understanding, good will and peace.

California Grants

Since the program was established in 1947, 111 Rotary Fellowships have been awarded to students from 26 different countries. Among the current Rotary Fellows are two Stanford graduates who are studying in Switzerland and three students who are attending California schools—one from England at Caltech, one from Peru at the University of California in Berkeley, and one from Switzerland at Stanford University.

Deadline for receipt of applications by the Rotary District Governor of Los Angeles County is December 15th—so applications must be made to the local Rotary Club well in advance of that deadline.

One Fellowship candidate will be selected from those sponsored

(Continued on page 6)

Frosh Finance While Sophs Arrange Eats, Band for Dabney Hall Affair

This year's Soph-Frosh dance will be held in Dabney Hall of the Humanities, Saturday, November 19, from eight to twelve p.m. All Freshmen and Sophomores are invited to attend.

Vern Rowe's orchestra, including quartet and vocalist, will furnish the harmony; and if things go as scheduled there will be some sort of floor show. Sport dress will be in order.

Upperclassmen Shunned

Upperclassmen, who will doubtless be tempted by such attractions as the fine dance orchestra and the savory "green death" punch with ginger ale, unfortunately are not invited. The only non-underclassmen at the dance will be Deans Eaton and Strong, Mr. Tanham, and their wives.

Frosh Financiers

There is good reason to anticipate a very successful dance, for the Freshmen are furnishing the money and the Sophomores are planning the affair. The Sophs are not likely to be miserly with the funds of the Frosh treasury. The Frosh are privileged to pay for the dance as a result of their recent defeat at the hands of the Sophomore class in the Mudeo by a score of five to two.

Haber's Prediction

The dance committee consists of three sophomores, John Noble, Sophomore President; Gil Kitchings, Al Haber, and the Frosh President, Tom Janssens. Dance committeeman Haber made the following statement to Tech reporters: "This year's Frosh-Soph dance shows signs of being the best in modern times, being a product of the enthusiasm of the Freshman class directed in a manner commensurate with the intelligence of this year's sophomores."

Last Meeting

At the last meeting of the shop, the recommended constitution was passed and members of the shop committee were elected. Subsequently these committeemen secured approval of the constitution and elected Barry Schuyler foreman, Dick Fairall assistant foreman, Dave Oakley secretary, and Phil Halverston treasurer.

Neglect

Last year due to the neglect of the members the shop was discontinued. It is to be opened this year for the members as long as it is properly maintained. It is the hope of the members that the shop will remain open this time for an indefinite period.

Planning for Freeways

Instructions were given on obtaining a free subscription to the state publication, "California Highways and Public Works," and other texts essential to the Highway Engineer were mentioned.

Free Subscription

Featured as the guest speaker at last Monday's CES meeting was Mr. A. D. Griffin of the State Division of Highways. Because Mr. Griffin graduated from Stanford in 1917, joined the Division of Highways in 1921, and is now District Engineer, the ASCE felt fortunate in being able to introduce a man of such qualifications to speak on "Freeway Problems."

Maps and aerial photos were referred to as Mr. Griffin enum-

All Seeing Eye

A Word of Thanks

Last week the Athletic Department announced the establishment of a perpetual trophy to be awarded each Spring to the outstanding basketball player at Caltech. The recipients of this trophy will be chosen on the basis of improvement, moral influence, scholarship, and sportsmanship with the basketball squad determining the first three qualifications.

The donor of this trophy, Mr. Howard G. Vesper, was active in this sport as well as numerous other activities at Caltech in his undergraduate years, 1918-1922. Since then he has been a graduate that Caltech can well be proud of, and he now holds the position of president of the California Research Corporation.

On behalf of the Associated Students of Caltech, the California Tech wishes to thank Mr. Vesper for his welcome gift to the school and for the keen interest he has shown in Tech undergraduate activities since his graduation.

Secretary's Report

Thanks to the untiring help of a good many people on campus, the Consolidated Drive of last week turned out to be very successful. The ASCIT wants to hereby commend these people for their work in helping to put over this drive, the first of its kind. They did a great job and the ASCIT is very grateful to them for it.

The YMCA should be especially commended for the time and great effort that they so willingly gave in aid to the ASCIT in this affair. Not only did the Y contribute valuable advice from its past drive experience, but during the drive many Y members and particularly the Y secretary gave much time and energy in direct help to the operations of the drive. ASCIT, therefore, is very much indebted to the Y and truly thanks that organization for its aid.

Ollie Gardner

What's the Matter, No Gripe?

I was asked last Monday morning to attend the student-faculty committee meeting as a proxy for a student member who couldn't make it.

After the late-comers straggled in the count of faculty members to students was 14-7. In view of two of the more interesting topics which were on the agenda—honor sections and graduate instructors—the student turnout was appalling. Of the 25 student members notified only four showed up (Lovberg, MacKenzie, Groener and Pings) and only four others sent proxies.

The question came before the faculty recently of whether or not to eliminate honor sections. Before deciding, the faculty wanted student opinion. Dr. Eagleson, chairman of the student-faculty committee, was asked to determine our opinion on honor sections and report to the Faculty Board. Where else could he better turn for a representative student opinion than to his committee, whose student members consist of:

1. The four class presidents
2. The Throop Club and house presidents
3. All elected ASCIT officers (including publications men and yell leader)
4. The board of control (two members from each class.)

Not being able to rely on the committee, however, Dr. Eagleson had to ask Ralph Lovberg to sample student opinion for him and report his findings at the committee Monday, which essentially bypassed the question around the group by whom it should have been discussed. This procedure also makes a poll-taker out of our president, who I'm sure has better things to do in his spare time.

At Monday's meeting the perennial question arose of whether a grad student's teaching fellowship is given to benefit him or his students. Faculty members of the committee had some very interesting and conflicting views on the whole topic of grad instruction. Dean Strong said that Dean Watson had told him that instructors whom Strong had complaints on had rated high on the Tau Beta poll. Several of us objected that we and our friends had not refrained from giving bad scores to poor instructors, but one student there today said he thought a lot of students had kindly up-graded poor instructors who were "good guys."

Not enough students were there to settle the question, and it wouldn't be surprising if the faculty members left wondering what the Tau Beta poll of student opinion on instructors was worth if

(Continued on Page 4)

The Evening Concert Musical Masterpieces

KFAC 8-10 p.m.

Presented by the Southern California and Southern Counties Gas Companies

THURSDAY, NOVEMBER 17
Parsifal—Prelude and Good Friday Spell, by Wagner. The Philadelphia Orchestra conducted by Leopold Stokowski (26).

Symphony No. 1 in F Major, by Shostakovich. The Philadelphia Orchestra conducted by Leopold Stokowski (35).

Leon Goossens, Oboist.

Concerto for Oboe and Orchestra, by Richard Strauss. The Philharmonic Orchestra conducted by Alceo Galliera (24).

Three Romances for Oboe, by Schumann.

Gerald Moore, pianist (10).

Concerto Gross No. 2, by Geminiani.

Chamber Orchestra conducted by Carlo Zecchi (16).

FRIDAY, NOVEMBER 18
A Night at the Ballet

The Good Humored Ladies, by Scarlatti-Tommasini. London Philharmonic Orchestra conducted by Sir Malcolm Sargent (16).

Petrouchka, by Stravinsky. London Philharmonic Orchestra conducted by Ernest Ansermet (35).

Graduation Ball, by Johann Strauss. Dallas Symphony Orchestra conducted by Artur Dorati (30).

Les Forains, by Sauguet. Lamoureux Orchestra of Paris conducted by Henri Sauguet (25).

Naila—Waltz, by Delibes. Royal Opera House Orchestra of Covent Garden conducted by Lawrence Collingwood (4).

SATURDAY, NOVEMBER 19
Manon, by Massenet. Soloists, Chorus and Orchestra of L'Opera Comique de Paris conducted by Elie Cohen.

MONDAY, NOVEMBER 21
In the Kingdom of Indra—Overture, by Lincke. German Opera House Orchestra conducted by Wenzel Luhta (7).

Symphony No. 2 in E Minor, by Rachmaninoff. Minneapolis Symphony Orchestra conducted by Eugene Ormandy (46).

Vladimir Horowitz, Pianist.

Pictures at an Exhibition, by Moussorgsky (28).

Sonata in B Minor, by Liszt (26).

Espana—Rhapsody, by Chabrier. Philharmonic Orchestra conducted by Dr. Hans Schmidt-Issertsdorff (6).

TUESDAY, NOVEMBER 22
The Gypsy Baron—Overture, by Johann Strauss. Vienna Philharmonic Orchestra conducted by Herbert von Karajan (7).

Symphony No. 2 in B Flat Major, by Schubert. Columbia Broadcasting Symphony conducted by Howard Barlow (24).

Georg Kulenkampff, Violinist.

Concerto in A Minor for Violin and Orchestra, by Dvorak. Philharmonic Orchestra conducted by Arturo Toscanini (31).

Siegfried Idyll, by Wagner. NBC Symphony Orchestra conducted by Arturo Toscanini (16).

Passacaglia in C Minor—My Soul is Athirst—Carmina from the Easter Cantata—Aria, by Bach. The Philadelphia Orchestra conducted by Leopold Stokowski (36).

WEDNESDAY, NOVEMBER 23
Poet and Peasant—Overture, by Suppe. Concertgebau Orchestra of Amsterdam conducted by Willem Mengelberg (8).

Symphony No. 3 in D Major (Polish), by Tschaikovsky. Royal Philharmonic Orchestra conducted by Sir Thomas Beecham (40).

Potpourri

By Bob Crichton

The subject of new sports is still being discussed. The ASCIT Board of Directors is in the process of drawing up, for recommendation to the P. E. Committee, a set of prerequisites that could reasonably be required for all new sports.

* * *

Before the whole subject of athletics is cleaned up, the subject of P. E. credit will probably have to be rehashed. The rules, at the moment, appear to have been devised from logical premises, explained in detail, and the whole subject presented to the college in rational form.

* * *

Robert's Restaurant, an old favorite of Caltech men, has been redecorated. It's now an arty French cafe, complete with pictures, windows that open on Paris and an accordion player who goes around to the tables.

* * *

Nathan S Scott, a composer-arranger, gave a forum Monday about "Movie Music". He beat his brains out at Caltech for a couple of years before he transferred to Cal. He's bringing some recordings of movies to illustrate his talk.

* * *

I'm always impressed when people have obvious pride in introducing their folks. Ralph Stone the other evening, in introducing his Dad to the House, said, "Fellows, I'd like to have you meet the greatest guy in the world, . . . my Dad."

* * *

Edwin P. Hubble has an article in November's Scientific American entitled, "Five Historic Photographs from Palomar."

* * *

Dr. Gevurtz has been dealt a low blow—someone stole his 1949 Oldsmobile. Good luck on getting it back soon!

* * *

Over at the Health Center, they've got a piece of cotton hanging on a string in the outside doorway. They tell me that scares flies away. (Flies think it's a spider plus web in the door.)

* * *

Quad, three dimensional tic-tac-toe, is the new rage on the campus. If you haven't seen it already, drop in at the Bookstore and look and buy. It'll intrigue you.

THE SQUARES' CIRCLE

Student comment through letters is always invited by the staff of the California Tech. A box in Lower Throop is provided for letters from Caltech undergraduates to the paper.

The following rules must be observed:

1) All letters must be signed, although name will be withheld by request.

2) Letters should be less than 150 words in length.

3) Address all letters to The Editor, The California Tech.

4) The Editor reserves the right to refuse publication of any letter.

CAMPUS BREWINS

The tomblike silence about the campus this weekend induced in us a choking fear that at last the unremitting efforts of the powers-that-be had succeeded in stifling all semblance of the earthy life we so adore. Upon wandering farther afield, however, we discovered, to our tremendous relief, that those pursuers of gayety had not been exterminated, but had merely gone underground.

One group had been exiled to a region far away—the California Hospital—and there endured intense privation. They were, for some occult reason, issued fig leaves—probably for identification, as they left here fully dressed—and abandoned to the tender mercies of the natives (nurses, in this case). Well fortified for the ordeal was Morrison, but his condition so aroused the professional instincts of the young ladies that they plied him with hot coffee and sympathy until he was abysmally and unhappily sober.

While the evening was yet young, some of the stalwarts were seated at Turner's, where they were surprised to see a large group of the male protagonists stumble in, chase some customers away from a table, and proceed to dampen their grievances with the half-finished beers of the routed tipplers. Eventually three of these seasoned troops, with brew-changed views, hied their reillusioned selves back to the Hospital, and then ogling the maidens there with a beer-cheered eye, proceeded to approach a trio of them with the old line, "Let me take you away from all this. Come, flee with me to Turner's." The sound of this time-worn phrase so melted the deal by giving her sister a free haircut. We trust that this blitzkreig thru the lowlands will be countered by some brilliant strategy on the part of the Dutchman.

Bruce Stowe, a biologist by option as well as action, keeps close to his work. Last weekend it was a young woman from his advanced genetics class that captured his attention; this weekend, a biology teacher from Anoakia was so flattered. Well, if your interest is money, take out a banker's daughter; if it's biology, go see Stowe.

Arthur Cuse had a chance to observe, firsthand, the true courtesy and tact (which one of you gentlemen ordered the Martini?) of his associates as he was seated with them on one of the couches at the Nurses' Dance. These associates, observing a young lady sashaying across the floor toward them, surveyed and evaluated her with split-second accuracy. Observing that she was the same weight and height as Arthur, and almost as good looking, they gallantly (and hurriedly) left the unoberving Cuse in the hands of his Destiny. He'll recover, eventually.

To illustrate the sterile imagination of some of the minnies of this region, we point out a couple of examples of the brush-off technique in use today: Charlie Walker was informed that scheduled tryst was impossible because of the appearance of an "old and unseen for several

years" aunt; "Clutch" Clutz's fever-wracked date pleaded pneumonia the first weekend, and mumps the second. My excuse is that I stood too close to the electron microscope.

Risking their entertainment closer to home, a goodly sized group of ill-disguised (with shoes on) Techmen were in evidence at the Playhouse Friday night to watch a nervous cast (they had heard rumors that the Pasadena Watch and Ward Society had the balcony filled with snipers armed with '03's with telescopic sights) compare various ladies to female canines and utter self-conscious "Hells" and "Darns." Grieviously shocked were ingenues Snider and Stanaway, whose previous contact with the legitimate stage had been confined to high school plays. Worldly Peter Knoepfle's sophisticated laughter was heard as far north as Colorado St., however, and more than made up for these two lads' embarrassed silence.

The stags at the play (Soule, Schroeder, etc.) had their evening brightened by the visions of Eschner's and Royce's dates. Eschner's insisted on being carried up the stairs; Royce's offered to carry him up the stairs.

Dave Mackenzie has been engaging in Quixotic combat with that menace from the Netherlands, the Otter. Back and forth the contest has raged, with first Mac gaining the favor of the fair Agnes, then the Otter nosing him out. Secret reports indicate that Mackenzie has cornered the market on the occasion of its birthday this Wednesday night, and is cinching the deal by giving her sister a free haircut. We trust that this blitzkreig thru the lowlands will be countered by some brilliant strategy on the part of the Dutchman.

Bruce Stowe, a biologist by option as well as action, keeps close to his work. Last weekend it was a young woman from his advanced genetics class that captured his attention; this weekend, a biology teacher from Anoakia was so flattered. Well, if your interest is money, take out a banker's daughter; if it's biology, go see Stowe.

Those to the East (who are, incidentally, becoming more and more abusive toward our alma mater, with each succeeding issue of their slick-paper publication) recently emphasized a Circus theme at one of their jolly (but not excessively) evenings of fun. Lovberg got right into the spirit of the thing, and spent most of the evening in the monkey cage. This was fine for a while, but when it came home-going time he had an awful time getting them to let him out. The evening was further livened by some Schimpissie's blowing of an eight-inch diameter bubble from Fleer's best bubble gum. (Continued on Page 6)

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ON THE RECORD

By Bill Whitney

Guest Reviewers George Abell Sanford Sweet

The Los Angeles Philharmonic Orchestra under the direction of Alfred Wallenstein emerged last Thursday evening to open the second pair of concerts at Philharmonic Auditorium. The program concluded with an excellent reading of Johannes Brahms' Symphony No. 1. The fine work of the string section showed well in the airy, flowing melodies

99 and 44/100 Percent Pure Plant World Created by Phytotron

By Bob Stanaway

Can you imagine what the results would be if an individual could be grown from birth to manhood without ever encountering harmful bacteria or germs of any kind? It probably would produce a different type of reacting body from the ones we normally develop in this disease filled environment.

The Phytotron, alias the new Earhart Plant research Laboratory, located just off campus from the Frosh Chem lab, has made possible just such a germ free world for plants. An even more significant fact, however, is that in this structure is realized the only lab in the world capable of so high a degree of efficiency in studying plant physiology.

Weather-Maker

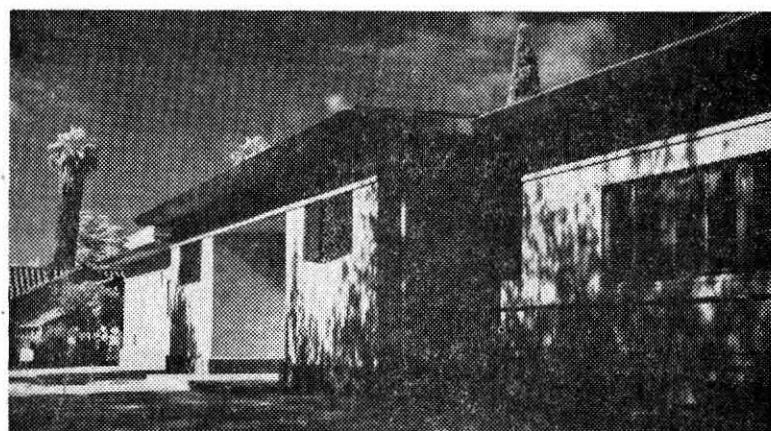
There have been other labs designed in the past which would recreate temperature conditions or moisture conditions individually, but here at Tech the Phytotron is the first able to reproduce all climatic factors such as light, temperature, humidity, gas content of the air, wind, rain, or fog, simultaneously and independently controllable. The elaborate system of sterilization of all plants, growing mediums, and equipment; the intricate air circulatory system; and the air purification unit have given rise to many new techniques in the design of this unique structure.

DDT

Securing the pictures for this article proved to be a trying experience for Bob Parnes, "Tech" photographer, as he nervously watched his camera being bathed in DDT before entering the building. From the personal experience of the reporter, the stuff ruins a good shoe shine too. After sufficient disinfecting and a change of clothes both photographer and reporter were finally admitted.

Air Dust-Free

The construction of this new lab is quite different from any in the past. Having a concrete framework, it is insect proof, and by maintaining an internal positive pressure throughout the entire structure, seepage into the building of contaminated air is prevented. There is only one point at which air can enter from the outside, and that is through a huge filter room in the basement. This consists of a Raytheon Electric precipitator, and a total of 16 two by three foot ionizing units through which the air passes first. The ionizer, charged to 130,000 volts, imparts a charge on all particles moving through it, and then upon passing into the precipitator these charged particles are attracted to alternating plates



charged with 6500 volts. These plates are covered with a thin film of oil, thus making the particles adhere to their surfaces until washed off periodically with water. This system is so efficient that the air is completely dust free upon entering the lab.

Constant Flow

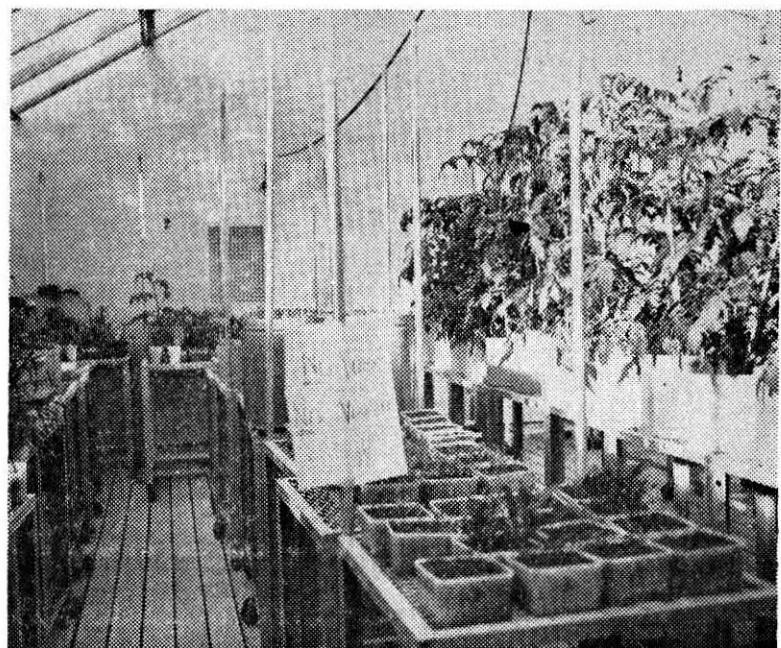
Next, the air is pumped into the different distribution centers, which are independent air conditioning units below each lab growing room. The construction of the air system is such that there is a constant flow of air up through the floor of the growing room with an equal pressure at all points. Then, upon rising to the ceiling, the air is drawn out and down into the room containing the conditioning unit. This room is sealed, and from here the used air is again drawn into the circulation system and mixed with fresh air from the intake line. In this way each growing room is a separate circulatory system preventing mixture of the air from any two rooms.

Conditions Controlled

The controls on the temperature and dehumidifying units are so sensitive that the rooms can be regulated at temperatures never varying over more than a fraction of a degree. In the green houses the problem of keeping the temperature constant, even with the sun coming through a glass roof, was met by the installation of sprinkling units, which keep an even layer of water running off the glass roofs at all times. This film of water filters the long rays (heat rays) of the sun, enabling the maintenance of constant temperature. The run-off water is then returned to the cooling tank, where it is cooled and again returned to the roof. The intricate system of control for the entire building has its operation center in the control room, from which all environmental conditions previously mentioned can be observed and regulated.

Sterilization

Sterilization of the incoming growing medium, sand and gravel,



is accomplished by a series of air tight bins which open both to the outside and to the interior of the building. Washed sand and gravel of various sizes is dumped into these bins from the outside and the doors are shut tight while steam is pumped through the medium, after which it is removed on the inside of the building.

Slop Culture

Various materials are used as a growing medium, among which are washed sand, gravel, and mica (vermiculite). These, all being inert and quite porous allow a rapid passage of the watering solution past the plant roots. The advantages of this sort of watering are: (a) Mineral salts in the nutrient solution used to feed plants don't have a chance to crystallize on the roots. (b) The large grain size allows large air spaces and easier root growth in the medium. (c) Comparison and analysis of plants is facilitated in that each is grown in a homogeneous and inert medium. This type of cultivation is known as slop culture.

(Continued on Page 4)



Story Contest For College Writers

Caltech writers attention: The fourth annual College Writers' Short Story Contest has just been announced by TOMORROW Magazine. First prize is \$500; second, \$300, and third, \$200. Manuscripts will be judged by the editors of TOMORROW and the editors of Creative Age Press.

The prize-winning stories will be published in the spring and summer of 1950. All other manuscripts will be considered for publication as regular contributions and paid for at Tomorrow's regular rates.

Entries should be addressed to College Contest, Tomorrow Magazine, 11 East 44th Street, New York 17, N. Y. The deadline is January 15, 1950.

Eligibility

The contest is open to anyone taking at least one course in any college in the United States. This includes undergraduate, graduate, special extension, and adult education students. No application blanks are necessary.

Manuscripts should not exceed 5000 words. Any number of manuscripts may be submitted by a single student. Each entry must be marked College Contest and bear the writer's name, his home address, and the name and address of the college he is attending. All entries must be accompanied by a self-addressed, stamped envelope.

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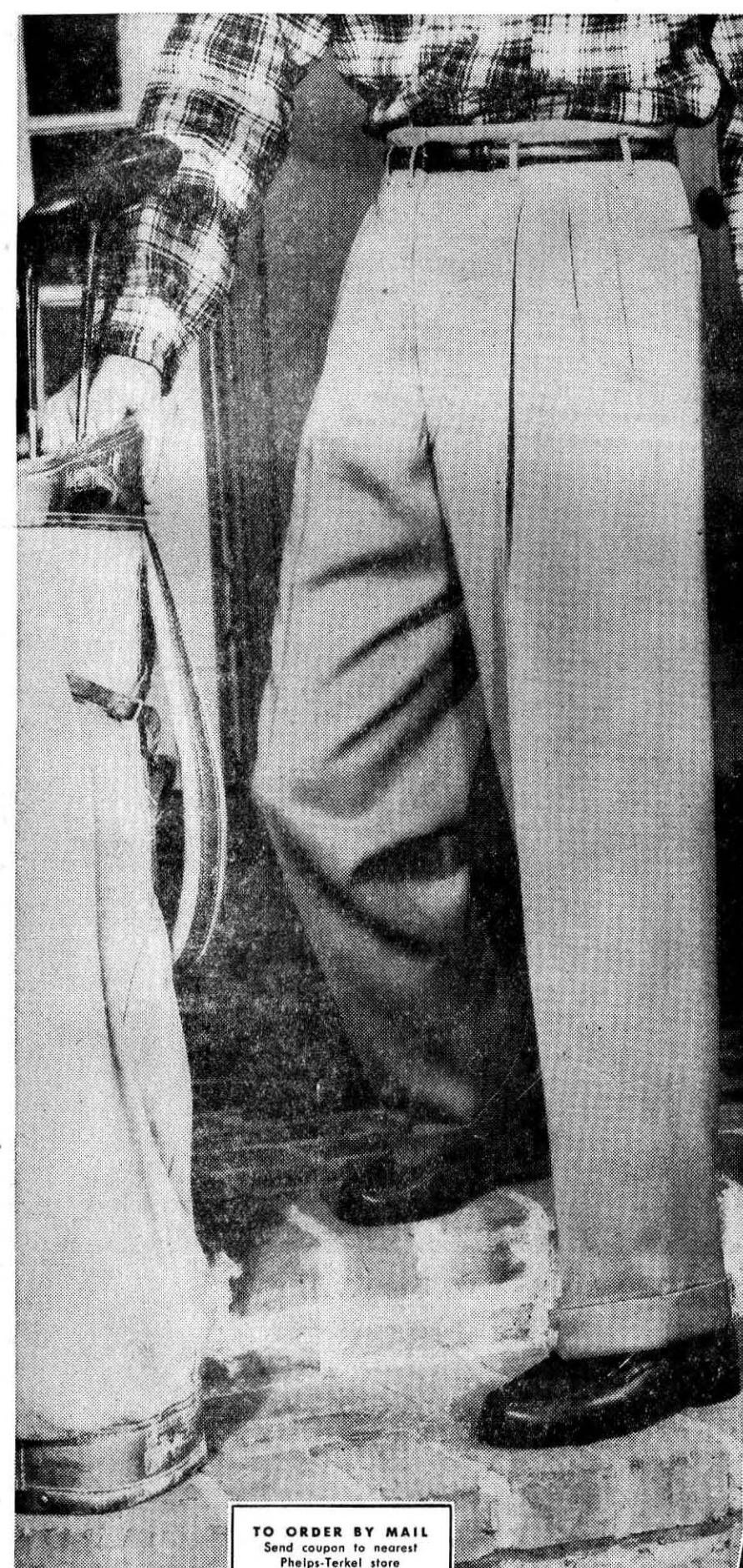
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"Big Game" Fever Breaks Out

By ETAOIN SHRDLU

Dispatches from around the world:

PALLID ALTO, California, Nov. 16, 1949.—Big game fever has broken out on the local campii, as student raids, brought on by the irresistible current of interest that precedes the Big Game (which decides this year who shall be rated 57th strongest team in the nation), commenced early today.

As dawn broke three convertibles circled about the Quad calling out, "You are all just old green peas." Stung to the quick, infuriated, literally beside themselves with rage, the local students hotly denied these accusations and answered with a rousing chorus of "Cheaters never prosper."

Pitched Battle

A pitched battle followed in which one local student, Agamemnon Swineface, was injured when struck in the jaw by a rooter's cap. The student also complained to local police that his fraternity pin was missing after the battle had subsided. Also missing was co-ed Anastasia Ginch, a friend of Swineface, who was reported as wearing the pin at the time of its disappearance.

Escape

LEAVENWORTHLESS, Kansas, Nov. 16, 1949.—Prison officials here today disclosed that Rocky ("Big Game") Fever, thrice-convicted lifer, had broken out. Fever complained of an overdose of Sal Hepatica and was allowed to depart for a room in which to rest (known in Leavenworthless as the Rest Room). There, standing ankle deep in water, he pulled the chain and disappeared in the swirling torrent. Several volunteer pursuers followed him shortly thereafter, but no word has been received of either.

BALNARABY, South Africa, Nov. 16, 1949.—Big Game Fever has broken out in the nearby village of Punta, where all of the some 100 residents shuddered their rifles and went in search of elephants.

Music Festival Opens at USC

Music lovers are awaiting four outstanding concerts in the third annual Festival of Contemporary Arts at the University of Southern California.

Highlights of the Festival will be the appearance of Benjamin Britten, noted young English composer-pianist, and Peter Pears, tenor, in Bovard auditorium at 8:30 p.m., Nov. 30, on their first American concert-recital tour.

Britten will conduct the Pacific Coast premiere of his Saint Nicolas cantata with Pears as soloist. The SC madrigal singers, a cappella choir, concert choir, glee clubs and symphony orchestra will be under Britten's baton. They will be joined by the St. Luke's choristers, a boy's choir of St. Luke's Episcopal church, Long Beach. Nearly 200 voices will sing the cantata, which relates the Saint's life story.

Britten's three-act comic opera, "Albert Herring," will be produced in Bovard auditorium Dec. 9, 10, 12 and 15 for the first time on the Pacific Coast as another SC Festival feature.

Tickets

Tickets for both the cantata and opera at 60 cents, \$1.20, \$1.80 and \$2.40 are available at the University ticket office.

Two free public concerts will also be given during the SC Festival.

Eight members of the faculty of the SC School of Music will present a chamber music recital at 8:30 p.m., Nov. 20, in Hancock auditorium. Lillian Steuber and John Crown, pianists, will play Igor Stravinsky's Concerto for Two Pianos.

Ingolf Dahl, pianist, and Stephen De'ak, cellist, will play Dahl's Duo for Cello and Piano.

The University symphony orchestra will play in Bovard auditorium at 8:30 p.m., December 14, under Mr. Dahl's direction with Mr. De'ak as cello soloist. The orchestra will feature the Los Angeles premiere of Symphony No. 1 by Prof. Halsey Stevens of the SC School of Music faculty.

Autumn Theme of Hospital Dance

At Blacker's exchange with the California Hospital lassies Friday night, the girls were the ones to provide the place, decorations, entertainment, and refreshments. Despite a slight difficulty in getting the sexes mixed at first and keeping them mixing during the course of the evening, the Blacker men were quite pleased with the dance, the theme of "Autumn," and the cider and doughnuts.

Redlands

Blacker was well represented at the game and at the informal record dance in the Commons immediately afterward. Redlands certainly has some nice buildings but there was a lack of unescorted females as was sadly noted by several Blacker stags.

For the fellows who couldn't make it to the game and for those who returned to the house after the game, an informal record dance was held in the lounge.

Coming

Blacker's Barn Dance on Nov. 19 and the ASCIT Formal on Dec. 3 are the main topics of conversation around the house now. Fellows, get your cars back together as soon as you can to prepare for these.

Thespians Amuse Darb Socialites

Last Friday night the Darbs kept up their magnificent social schedule with a theater party at the Pasadena Playhouse. The local thespians produced "For Love or Money," an unsophisticated comedy by F. Hugh Herbert. Although the play bogged down a little in the fifth scene in an attempt to become serious, this defect was more than made up for the byplay in the other scene. It is possible that some of the more tender young things in the group found the play a little rough on the edges. An unreliable source has reported that coffee was served during the intermission, but there has never been any verification of this report.

Post-play Dance

The evening was finished off with dancing in the dark Dabney lounge. Much credit is due to Win Royce for his successful organization of the occasion.

Next Saturday evening the ice of the Pasadena Winter Gardens will be graced by the Dabneyites and their dates. A deicing party will follow in the Dabney lounge. Liniment and other suitable medication will be available. There may even be some dancing.

WHAT'S THE MATTER, NO GRIPES?

(Continued from Page 2)

the students themselves couldn't agree on whether it represented their case accurately.

Dr. Clark asked the question as the meeting adjourned: is the lack of attendance on the part of the students an indication that they don't consider the committee worthwhile; if so, why waste the faculty's time with it?

I ask you the same question, gentlemen, have you no need for an organized gripe board with a large number of faculty members: Do your elected representatives who failed to show up or send proxies feel that way?

Here is a list of the men who were sent notices of the meeting who neither went themselves nor sent substitutes:

Stan Boicourt	Noel Reed
Dallas Peck	Bert Snider
John Nobles	Ulrich Merton
Ollie Gardner	Earl Hefner
	Bill Bradley

Next time a student-faculty relations committee meeting is announced in the California Tech ask one of them for his voting proxy and attend the meeting. Any question you may care to ask about the school will be answered by a faculty member who is quite apt to have the straight word. Your interest is needed if we are to save the student-faculty committee from destruction by our own apathy.

Don Shepard

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(Continued from Page 3)

Smog Burns

Smog control is one of the serious problems confronting the men doing research in the phytotron. As effective as the air purification units are, they apparently won't stop smog from entering the building and burning the plants. This unforeseen difficulty will have to be dealt with before many research programs can be started. Tobacco, and other plants that are especially susceptible to smog burn are being grown, and an attempt is being made to determine the effect of smog on plant life.

Photo Period

The effects of photo period (hours of sunlight) are also being studied. In conjunction with this it has been found that, all other factors being equal, the night temperature is extremely influential in plant growth.

Another project in process is an attempt to discover the most favorable growing conditions for sugar beets. From these few examples one can well imagine the importance this research might have in our future agricultural economy, besides giving basic information on plant biology.

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Dabney Wins; Shinmen Downed in Spirited Game 3-2

With all of the interhouse basketball games but one rained or muddled out, Tournament Park courts are bound to be busy with pattering little feet all this week.

Dabney on Top

Rainless Monday provided the opportunity of the important Dabney-Blacker hoop thriller as Dabneymen fired ahead in the red hot race by downing their co-leaders in a 26-21 triumph. The Green Shirts got off to an early lead and with the able aid of Brewer, Martin and Hickey, Dabney was in command until the end.

Games Ahead

Particularly important in games to come is the Dabney-Fleming engagement, which will probably decide where just about everybody finishes. Then, too, the Blacker-Throop game is apt to be a spirited tussle.

Interhouse basketball standings:

House	Won	Lost	Pct.
Dabney	2	0	1.000
Blacker	1	1	.666
Fleming	1	1	.500
Throop	0	2	.000
Ricketts	0	2	.000

Egad!

Billie—What are you doing with that letter on your sweater? Don't you know you're not supposed to wear that unless you've made the team?

Millie—Well?

Tech Rolls

The fourth period saw the Tech team really get down to business. Price started the ball rolling by blasting a well-aimed shot past the goalie into pay dirt. Then, a few minutes later, Williamson, having taken the

ball the length of the field, passed into Carel Otte, who ably headed it in for another tally. Unfortunately, time ran out before we could score another.

Everyone is well satisfied with the way the team played, since we showed an immense improvement over any of our previous games. This improvement took the form of an aggressive game. Prior to this battle, the team had shown the tendency to wait for the ball to come to them. However, Friday, everyone was rushing the ball. Halfbacks Martin MacKenzie and Baggerly charged the opposing line so that they didn't have time to aim their passes too accurately. The forward line did the same thing when it came to the opposing fullbacks. This resulted in our having possession of the ball a large part of the time.

Thanks, Rooters

Last Friday was the first time that the team had ever had more than four Tech rooters watching them. The feeling that at least part of the student body was behind them undoubtedly accounts for some of the spirit shown by the team. This weekend we play USC, Saturday morning at 10 o'clock in Tournament Park, and rooters that show up might very possibly be rewarded by witnessing Caltech's soccer team win.

Egad!

Then there's the girl who was supposed to be having an affair with a handsome boarder but it turned out to be just an ugly rumer.

*"My cigarette?
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of course!"*

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Tech Bows to Redlands In Final Conference Tilt

The Engineers were forced to accept the bitter truth that Redlands just has a better team than we. The Bulldogs earned all four of their touchdowns while the Beavers couldn't even muster enough energy to put over their customary single goal.

Passes Score

Four beautiful long passes were responsible for all the Bulldogs' scoring. Each one was for at least 25 yards and three were carried over the goal line by the receivers. The fourth, coming in the last quarter, was good for 71 yards, from the Redlands 25. Dwight Schroeder picked up 5 yards on the receiver, finally bringing him down on our 4 yard line.

Tech Offense

Woody was the big gun on the Engineer offense, consistently making yardage through the line. Baker, switching from half-back to full, also showed up well.

The sharpest Beaver play was a well-executed criss-cross on a punt return which deluded the whole Redlands team. Bain Dayman took the ball, faked to Schroeder, and made forty yards to carry the ball well into Bulldog territory.

Redlands showed how a good passing attack works. They completed 13 out of 18 for 298 yards. What made it so effective was the receivers' speed that enabled them to get in behind our secondary to catch the long ones.

Tucky Wong, the mighty mite, was in good form on the ground, accounting for a good portion of (Continued on Page 6)

Beavers Hope For First Win

In its last football encounter for 1949, Caltech finds itself opposed by Cal Poly at San Dimas. The game is an early one, starting at 7:30, and will be played on the Pomona High School field.

Cal Poly is one of the weaker teams in this area, not having much of the power of its big brother at San Luis Obispo. Perhaps this is our chance to win a game. A victory tomorrow night, together with the tie with La Verne earlier in the year, will give us a season record a little better than last year when there was only a single win.

Where

Pomona High can be reached by going out Foothill to the first street past the first stop light on the other side of the neon La Verne sign.

SPEAKIN' SPORTS

with Mike

Baby, it's cold outside. But not near as cold as it was at Redlands last Saturday as startled Beavers felt the icy truth of a 28-0 defeat. Turnabout in its development, the game showed very well in the first quarter and only a pass slip-up in second was outwardly noticed. It seems to me that in almost all our other contests we showed more of our real strength in the last half while starting slowly. The worst part of our defeat, however, is the realization that again we end with a goose egg in our SCIC win column.

Next Year?

We're losing a raft of good men this season. Namely, Carson, Blom, Marks, Tyson, Baker, Schofield, Schroeder and Dayman will have jerseys hard to fill. An inspiring rumor has it that triple-threat Chuck Norman will throw away his sweet potato shovel next year and rejoin us. Let's hope so.

Gripes

Those of us that read the "literary masterpiece" in the program of the Redlands game must surely consider the source before passing judgment. As an ardent program propaganda reader, I can sincerely say that I have never come across such a poor excuse for a pre-game discussion. Believe me, when "sportsmen" have to go so far into the bottom of the barrel for information to write about, then it's time to quit.

Hardwooders

That beat little group of men that come draggin' into the houses just a bit late for dinner is a good indication that basketball practice is rounding out its second week. Even with several men still out for football, Coach Shy can boast more than two complete teams out each evening, putting their all into preseason workouts.

Fall Athletic Banquet

The annual Fall Sports Banquet will be held again at the Brookside Park Golf Club, next Monday night, Nov. 28, 6:30. Awards will be made to Varsity and Frosh in Football, Cross Country, Soccer and Water Polo. The entree is steak!

**"A Man Hasn't
a Chance in an
Arrow
White Shirt!"**



Quite right, young-man-about-to-live-in-a-cave!

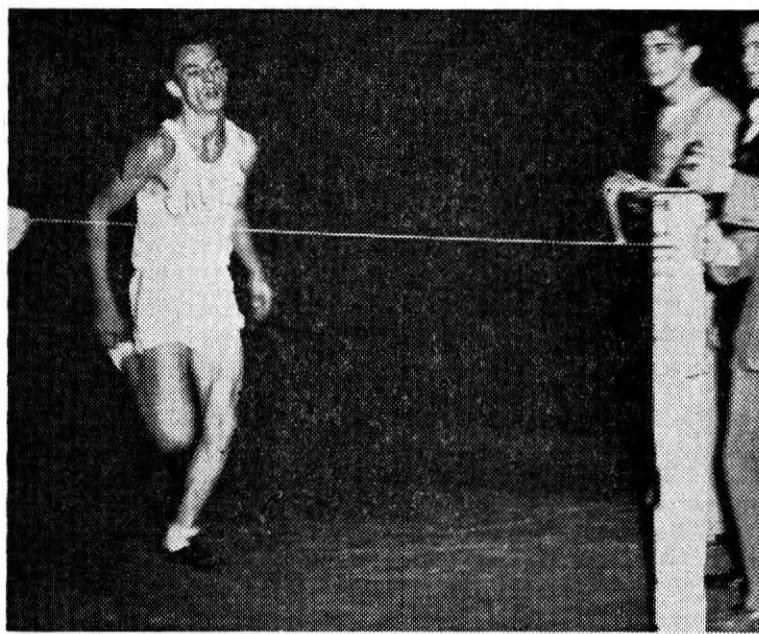
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Beaver Sports

HIT THAT TAPE!



Pete (the Leather-junger) Mason hits the tape to take first place in the Tech-Pomona cross country meet last week. The Sagehens managed a tie, however, with the Beavers, 28-28.

Countrymen Knot Basketmen Open Sagehens, 28-28 Season Tuesday

A tying score of 28-28 was the outcome of the cross-country meet between Caltech and Pomona last Friday afternoon.

Teams Even

The meet took place on the Tournament Park course, and was unique in that the last mile was run in near darkness. Pomona revealed an evenly balanced team, grabbing third, fourth, fifth, seventh, and ninth, while Pete Mason and Bill Pilkinson annexed first and second places, respectively, for Caltech.

Lombard, Brown, and Stokes snatched the three places for Pomona, while Bob Cobb in sixth, Brad Houser in eighth, and Mike Sellen in eleventh finished out the Caltech scoring. The winning time for the meet, a distance of three miles, was 16:56.6.

Meet Bulldogs

This week's meet, which is to be run at Redlands, portends another battle. Redlands possesses a strong team, which lost to Pomona by the narrow margin of three points. The run will be over a 3 1/4-mile course, the greatest distance for the Caltech men thus far this season.

Next Tuesday at 4:15 the Caltech hoopers will meet, in their first tilt of the season, the L.A. State College quintet. The contest will be staged at the Pasadena Armory and, much to our delight, we have been informed that the team will no longer have to run through the traditional obstacle course of army trucks.

Chapman Next

The boys from L.A. will be one up on us in that they will have had the experience of one game this season. Incidentally, that game will be against Chapman tomorrow at the LACC gym. Tech will meet Chapman next Wednesday at 8:15 in the Chapman gym. There will be a Frosh preliminary at the Wednesday night session.

Judging from the lineup and from the smiles on Coach Shy's face, we should be in for a couple of good games this week. The probable starting lineup is: LG—Cox, RG—Sereno, C—Butler, RF—Patapoff, LF—Grey, with depth and support aptly supplied by Montgomery, Tautz, Peacock, Daily and Bowen. Let's all go see these boys in action next Tuesday afternoon, 4:15, at the Armory.

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Caltech Watermen

Score 6-1 Triumph

Engineers Victorious Over Loyola
As Libbey, Boicourt, Barmore Shine

The Tech Tanksters tripped Loyola in a one-sided skirmish last Thursday by a tally of 6-1. This marked Caltech's third win of the season as against only one defeat at the hands of the Oxy Tigers. Previous victories were over UCLA Frosh and Compton J.C. Control Game

The Engineers displayed a considerable reversal of form from last week's debacle, playing a steady, even game all the way through. Caltech never lost control of the game, and the defense was considerably better than usual.

Scoring honors were shared by Libbey, Boicourt and Barmore, each of whom tacked up two points for the Beavers.

Frosh Meet UCLA

The day previous to the Varsity victory the Beaverbabes tangled with the UCLA Frosh at the P. C. C. pool. Although they came out on the short end of an 8-4 score, the Tech Frosh showed a very creditable performance. In the first few minutes the Uclans took advantage of our Frosh inexperience to sink four quick points at the outset. The game was relatively evenly fought from then on.

Friday

Tomorrow the Tech mermen meet Muir at the P. C. C. pool at 4:40 p.m. This will be the first competition between the two teams, and, since Muir is an unknown quantity, this engagement promises to be an exciting one.

CIT	LOYOLA
Barmore	Shannon
Hall	Maas
Van Herzen	Grant
Stearns	Sullivan
Boicourt	Nieholt
Reinecke	Ivers
	Mattson

Goals: CIT—Boicourt, Libbey, Barmore

(2); Loyola—Shannon. Subs—CIT—Johnson, Armstrong, Eschner, Laff, Howell, Dyer, Scott; Loyola—Robbins.

High marks also were turned in by Woody Brattnob (T), 200

games and 546 series; Clinton Lew (T), 194—485; Jim Allison (D), 462; and Ralph Stone (R), 453.

Stone Cracks IH Bowling Mark

Sid Stone led his Ricketts kegging mates to victory Monday at the Pasadena Bowling Courts by slamming the pins for a league-record 559 series. He put together games of 202, 158 and 199 to accomplish this feat. Ricketts captured all of their eight games to lengthen their lead to ten games over second-place Throop, who won three this week. Dabney advanced by winning seven, and Blacker won two, as Fleming failed to score.

Cross Country

Friday on the home two-mile course the Frosh harriers downed Pomona by a 24-32 margin to remain undefeated (although tied with Oxy) in league competition.

Calvin of Pomona was the winner with a time of 11:55.2, followed closely by Techmen Dewey Marshall, second;

Hank Pollet, fourth; Terry Thomas, fifth; Francis Scott, sixth; Ed Stafel, seventh; and Dave Twining, tenth.

Football

The big news this week, however, is the Saturday night 19-7 win over the Redlands Frosh. This column's hat is often to each and every player of the squad who went into the game with a "we're going to win this one" spirit and showed our opponents that Tech isn't always

(Continued on Page 6)

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ON THE RECORD

(Continued from Page 2)
monic Orchestra, although their improvement is considerable, well in step with that of the entire orchestra, which, for the first time in a number of years has shown itself worthy of rank among the leading orchestras of the nation.

—George Abell

An engaging production of *Gilbert and Sullivan's "The Mikado"* was given Friday and Saturday nights of last week by the Musical Arts Theatre of Pasadena at the Shakespeare Club Auditorium. The performance was repeated Wednesday night at Eliot Junior High and is to be given again at Los Feliz School Friday and Saturday of this week.

The beautiful tenor voice of Robert Kidder was the outstanding feature of the performance. As Nanki-Poo, the disguised son of the Mikado of Japan, he also contributed a liberal amount of acting skill and stage presence to the production. Most of the other vocal performances were of uneven quality, as was that of the 18 piece orchestra; but the comical antics of Robert Dowty as Ko-Ko, Lord High Executioner, and the sophisticated snobbery of Walt van der Veen as Poor-Bah, Lord High Everything Else, added to the evening's merriment. Especially eyecatching were the colorful costumes displayed by the cast.

The Musical Arts Theatre is a non-profit amateur group organized to promote musical comedy and light opera in this area. Either *Frim's "The Firefly"* or *Gilbert and Sullivan's "The Gondoliers"* is to be produced next season.

Rehearsals will be held on Tuesday evenings at the Eliot Junior High Auditorium beginning January 10, 1950. Auditions for chorus, orchestra, and principals are open to the public and new members are cordially invited.

From the orchestra's performance of the past week, it is obvious that the addition of several of Caltech's finer instrumentalists would benefit the theatre greatly.

—Sanford Sweet
Concert Schedules

Nov. 17-18
L. A. Philharmonic Orchestra
Alfred Wallenstein, conducting
The Tempest—David Diamond
Septet, Op. 20—Beethoven
Symphony No. 4 in G Major—Mahler
Philharmonic Auditorium
Thursday 8:30 p.m.; Friday 2:15
p.m.

Nov. 20
Coleman Chamber Series
London String Quartet
Quartet Op. 76, No. 2—Hadyn
Italian Serenade—Wolf
Paraphrase on "De Camptown
Races"—Foster-Collins
Landscapes—Bloch
Quartet Op. 67—Brahms
Pasadena Playhouse

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CAMPUS BREWINS

(Continued from Page 2)

Oh, boy!

Mike Sellen, who is still faithful to CMC's harem out there (and for good reason) found himself alone and rideless after the Circus deal at Scripps—and at the wrong end of the line. His trip home, via the thumb, was interrupted at Glendora by two attempts to gain lifts from the local constabulary—each attempt being followed by a thorough chewing out. He finally walked through the hospitable little settlement.

Mammoth complexity developed Monday night, involving Schroeder, Dyer, Willis, phone calls, and three girls. They became so involved that all six are going to ride together, and hope that everything works out.

Ricketts paid tribute last week

Nov. 22
L. E. Behymer Series
Yehudi Menuhin, Violinist
Sonata in F Major—Beethoven
Sonata No. 3 for Violin Alone—
Bartok
Concerto for Violin—Paganini
L. A. Philharmonic Auditorium

Nov. 23
Music Guild Series
American Art and New Art
Quartets

Prelude and Fugue—Toch
Quartet No. 14—Milhaud
Quartet No. 15—Milhaud
Octet—Milhaud
Octet in E Flat Major, Op. 20—
Mendelssohn

Wilshire-Ebell Theatre, 8:30

Nov. 23
L. A. Philharmonic Orchestra
Benjamin Britten, conducting
Peter Pears, Tenor Soloist
Pasadena Civic Auditorium

to "Mert" Merten, who through some quirk became father of a bouncing baby boy. The notice came from some church in Los Alamos, N.M., and Mert's frantic denials avail him naught.

Bill Bradley has made the page 14 headlines again—this time by joining his date in a duet at the plush Cocoanut Grove. **VARIETY** has kindly taken no notice.

TECH BOWS

(Continued from Page 5)

Redlands' land yardage.

Injuries

Unfortunately, the Engineers were struck by injuries again. Don Barrie hurt his knee seriously and is probably out for the season. Craig Marks renewed an old leg injury and may miss the game with Cal Poly.

Statistics:

Caltech	Redlands
11. First downs	12
120. Total net yards	487
107. Net yards rushing	189
13. Net yards passing	298
16. Passes attempted	18
3. Passes completed	13
3. Fumbles	4
2. Lost ball	4
Score by quarters:	
Caltech	0 0 0 0
Redlands	0 7 14 7-28

IRE Plans Trip To Television Center

The IRE will conduct a field trip to the ABC Television Center, 4151 Prospect Avenue, L.A. The trip will be made on two days, Friday, Nov. 18, and Tuesday, Nov. 22. The groups will meet at the entrance to Tournament Park at 12:45. A sign-up list is posted in lower Throop. All who are interested in television are invited to attend.

ROTARY OFFERS

(Continued from Page 1)
by the 65 Rotary Clubs in this Rotary District. Final selection of Fellows will be made by a Rotary International committee early in March.

Qualifications

1—May be male or female, must be between the ages of 20 and 28 inclusive, and must be in good health.

2—Must have, or expect to have by the end of the current academic year, a Bachelor's degree.

3—Must have a thorough knowledge of the language of the country in which he proposes to study, a high scholastic standing, strong moral character, a capacity for leadership and a basic international mindedness.

4—Must be sponsored by the Rotary Club of the city in which he has his permanent residence.

BIOLOGY FELLOW

(Continued from Page 1)
the Philadelphia Academy. The 1949 award was made to Dr. Spencer for "his distinguished studies on the occurrence of visible mutations in native Drosophila (Fruit Fly) population; for his determination of the frequencies of iso-alleles in natural population; for his contributions to population genetics with its bearing on problems of taxonomy and evolution; and for his stimulating undergraduate teaching that has inspired able young men to go on to scientific careers."

FROSH DEFEAT

(Continued from Page 5)
third quarters both teams showed improved defense and there were no additions to the score. Late in the fourth quarter Tech Frosh marched to scoring position. Pat Fazio carried the ball over, but the TD was called back and a fifteen-yard holding penalty assessed against Tech. Redlands then took over on their own 25. Two successive passes brought them to the CIT 13 and two plays and a penalty later they scored their only touchdown of the game. Their try for extra point was no good.

Caltech took the kickoff and again marched the length of the field. The count stood fourth down and two yards to go for a touchdown when Kubic punched through center for the third CIT touchdown. Fazio's kick was no good, and the score stood until the end of the game 19-6.

Starlets

Outstanding for the CIT Frosh were Fazio, Kubic, and center

FROSH SPORTS ROUNDUP

(Continued from Page 5)
on the short end of the score. Incidentally, the grapevine informs us that this is the first game won by the Frosh since the 1941 Redlands game (7-2). It also informs us that there was no Frosh football for a few years in this period but this is irrelevant. Also a plaudit or two for Coach Preisler and line coach Manny Bass for a job well done. With the experience the Frosh have gained this year, they should be an asset to the Varsity next year.

Water Polo

In water polo, the mermen suffered an 8-4 defeat at the hands of the UCLA Frosh last Wednesday to put the lone mark on the week's deficit column. Al Haire put Caltech's four counters through.

Neil Stefanides. "Stef," as line backer, was in on at least half of the tackles. Against eleven such men, another team would have very rough going.

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Dick Powell

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