

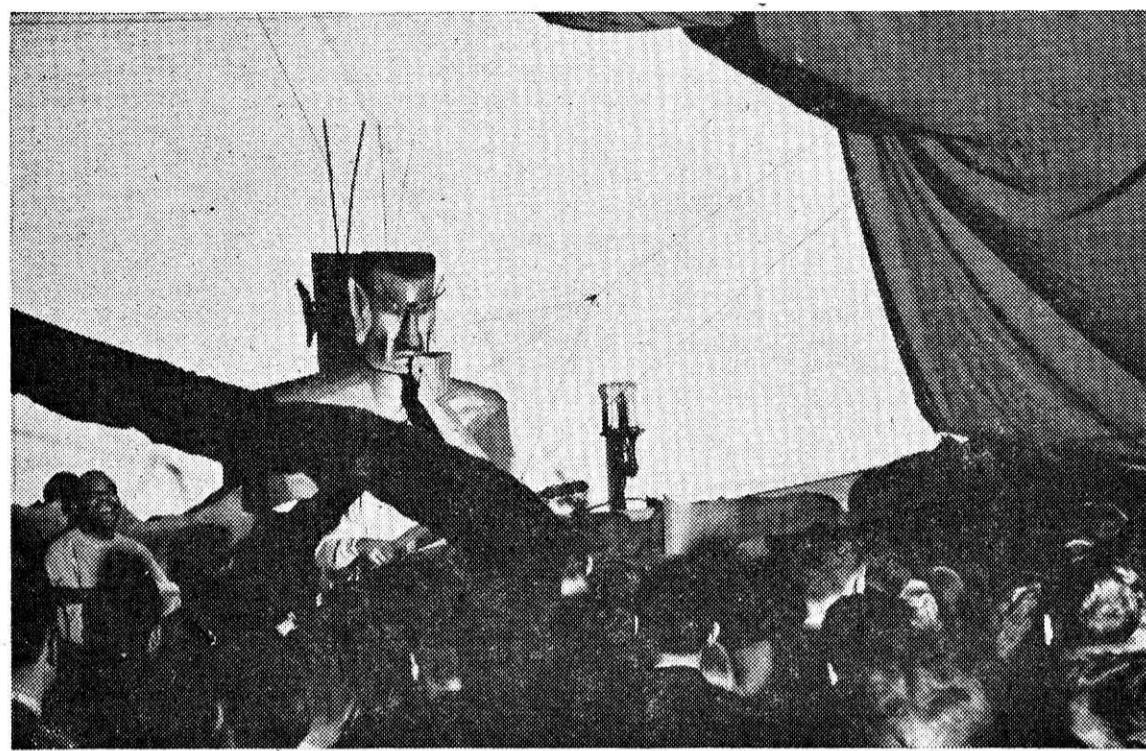
California Institute of Technology

Thursday, November 11, 1948

Volume L.

No. 6

## INTERESTING INTERIOR AT INTERHOUSE



## Couples Crowded Cosily Into Darkened Dancing Dens

Scintillating success of the social season, the annual Inter-House dance, drew one of the biggest crowds ever to fill the house lounges.

### Life Visits

As an added attraction, at last Saturday's dance photographers from Life were very much in evidence. Ralph Crane and Bob Cahn, west coast representatives of Life, dashed from house to house, snapping shots of all the decorations. These are the men who took the pictures of the University of California which appeared a few weeks ago in Life. Although there is no certainty, it is possible that Life will print a spread on the Inter-House dance.

### Much Work

Although practically everyone agreed that, as usual, the dance was almost more work than it was worth, all those who attended were quite pleased at the results of better than two weeks planning and effort. The total man-hours that went into the dance remain yet to be calculated, but in view of the great success of the dance, all of it was effort well spent.

### Blacker Most Spectacular

According to the Life photographers, Blacker's version of the Inferno was by far the most

### Pre-Registration...

The Registrar's office has announced that pre-registration for the second quarter will begin Monday, Nov. 22. All Freshmen and Sophomores are requested to pre-register during the three days, November 22, 23, and 24. All pre-registration should be completed by December 3. Pre-registration cards are to be picked up in 119A Throop.

### Campus Calendar

**THURSDAY, NOVEMBER 11—**  
12:00 Y' Uppercrust Luncheon Club at the Training Table.  
12:15 Throop Club Meeting  
4:00 Math Club 27 Crelle  
7:15 Newman Club, 208 Dabney Hall  
7:25 Y Cabinet Meeting, Dabney Hall  
7:30 Dancing Class, Culbertson

**FRIDAY, NOVEMBER 12—**  
3:30 Water Polo, CIT vs. UCLA at UCLA.  
4:00 Cross Country, CIT vs. Pomona at Pomona.  
7:30 Demonstration Lecture, "The Ecology of Desert Plants," Dr. F. W. Went, 201 Bridge  
8:30 Frosh-Soph Dance, Dabney Hall

**SATURDAY, NOVEMBER 13—**  
10:00 Soccer, CIT vs. UCLA at UCLA.  
5:45 Frosh Football, CIT vs. Redlands at Rose Bowl  
8:15 Varsity Football, CIT vs. Redlands at Rose Bowl

**SUNDAY, NOVEMBER 14—**  
7:00 Y Fireside  
7:30 Caltech Musicals, Dabney Hall Lounge

**MONDAY, NOVEMBER 15—**  
START OF WSSF DRIVE  
11:00 Assembly—Martin Hall, World Traveler and Author, Will Speak on "Students in Europe, 1948."

4:20 Interhouse Bowling, Pasadena Bowling Courts  
7:30 Christian Science Lecture, 206 Dabney

**TUESDAY, NOVEMBER 16—**  
12:00 Y Frosh Luncheon Club at the Training Table  
7:30 Band Practice, Culbertson

**WEDNESDAY, NOVEMBER 17—**  
4:30 Alumni Placement Series, Dabney Lounge  
7:30 Fencing Class, Dabney Dining Hall  
7:30 Orchestra Practice, Culbertson  
9:00 Glee Club, Culbertson

### Pep Rally Set For Friday Morning

A lively pep rally for the Redlands game will be held behind the optics lab in place of the 11:00 assembly on Friday. Hal Halmos, Caltech's athletic director, will speak, and the band and yell leaders will be responsible for building up spirit and enthusiasm.

#### Surprises

The yell leaders will introduce a new yell at the rally. There will also be an entertaining surprise, which is being kept a deep, dark secret until it is presented.

#### Hope

The Redlands game will be at 8:00 Saturday night in the Rose Bowl. A large turnout is hoped for to support the team.

### Newman Club Holds Discussion Meeting

Tonight at 7:15 in 208 Dabney the Caltech Newman Club presents Rev. James D. O'Reilly, in a short address on "The Church and Science."

#### Evolution

Father O'Reilly, a graduate physicist at Caltech, will emphasize the Catholic Church's attitude toward the theory of Evolution.

#### Discussion

After the talk there will be a discussion period. This is a subject of wide interest to all Tech men, and all those interested are invited.

### CE Shortage Seen By Magazine Editor

The dean's office has received information indicating a great shortage of civil engineers. In a letter received from Mr. E. E. Halmos, Jr., Managing Editor of "Engineering News Record," Mr. Halmos says:

"A survey of the pressing problems confronting the construction industry conducted by Engineering News-Record a short time ago, made it apparent that one of the most serious problems is a shortage in the supply of civil engineers."

"We would like to ask your help in providing the industry with a picture of the current actual situation, plus the best estimate possible as to what the future holds in relation to this supply of trained men."

Mr. Halmos asks for information regarding the present registration of the Civil Engineering Department, the number of men graduated within the last three years, an estimate as to whether the number of graduates will tend to increase or decrease within the next ten years, and the percentage of graduates who have remained in the construction field over the last ten years.

#### Help!

Men are needed to sell ads for the Big T at a ten percent commission. All interested parties are asked to attend a meeting in the Big T office, at 7:30 tonight, Thursday, Nov. 11.

## WSSF Drive Set For Tech; Gardner, Stone Named Leaders

### Talks Feature Research Work In Industries

By Dick King

It's the scientist's day next Wednesday at the Alumni-Beaver lectures. Job recognition finally comes to the more theoretical minded after tending to the practical side of industry so far. But at the next lecture, the fifth in the series, the subject to be presented is "Industrial Research," and the presentee, Mr. Norris Johnston, certainly has an overall picture of his subject.

#### Varied Past

Mr. Johnston's past is more varied than a Navajo Rug. He attended the University of Minnesota, M.I.T., and Caltech, emerging with a Tech PhD in Physics. He has done summer work for G.E. and the Carborundum Company in Niagara Falls. He has been a teaching fellow at Tech, and A.B.I. fellow. He has done research and designing for the Union Oil Co. in Wilmington and the Firestone Co. in Akron, Ohio. He has done production research for General Petroleum Corp. and Socony-Vacuum Corp. in Dallas. He is now Vice-President and Manager of Oil Properties Consultants, Inc. in Pasadena. He should know his research.

(Continued on Page 6)

### Food, Medical Aid, Clothing, To Be Provided Under Fund

Knoepfler, Merrifield, Bruington, Sherriffs, Merten, Long, Madden, and Navarro Chosen to be Aides

Opportunity for Caltech students to help needy university students abroad will be given in the annual World Student Service Fund campus drive, Nov. 15-19.

The WSSF is an international organization which provides food, medical aid, housing, books, and clothing for students in Europe and Asia—students training in engineering, law, medicine, and other vital fields important to the rehabilitation of countries

and continents.

### Frosh Treat Sophs To Mudeo Dance

Expecting to produce a record turnout Friday evening, the muddiest classes in Caltech are cleaning themselves up in the hopes of being presentable by that time. As everyone knows, the Sophs won the Mudeo and the Frosh will foot the bill for the dance Friday evening. The Sophs, led by Earl Hefner, put up a good fight this year and "cleaned up" on the Frosh.

Hal Lomen will be providing the music and the promise is made that all will be pleased with his offering. The program will include entertainment with plenty of refreshments for all. Time—9 to 12 Friday, November 12. Place—Dabney Hall Lounge.

## "Students In Europe, 1948", To Be Topic Of Y Lecturer

Martin Hall, nationally famous world traveler, educator, lecturer, and author will address the student body Monday, November 15, at 11:00 in Culbertson Hall. The topic of this Y forum series is "Students in Europe, 1948."

#### Born in Germany

Mr. Hall was born in Germany, and is a naturalized citizen of the U.S. He has traveled as a journalist for twelve years over Europe and Russia prior to World War II. He actively fought against the Nazi movement in Germany until he was forced to leave and was expatriated. Since then he has lectured and written extensively here.

#### Educated in Europe

As he received all of his education in European universities, he is well qualified to speak on the subject, and he has kept up an active interest in American educational problems as contrasted with those of the Continent.

#### Popular

His addresses are always well given, and he has a tremendous popularity as a speaker. We



Photo by Fabian Bachrach

Martin Hall

are very fortunate in having such a speaker for this subject of vital interest to everyone. It is very worthwhile and educational to attend this assembly as it concerns a topic close to the interests of all.

### IRE Group To Visit Altec-Lansing Corp.

The Caltech Student Branch of the Institute of Radio Engineers is sponsoring another field trip this Friday afternoon, Nov. 12.

The plant to be visited is the Altec-Lansing Corporation, manufacturers of transformers and audio equipment. Those interested in attending should sign up on the bulletin board in lower Throop.

The I.R.E.'s last field trip to Hoffman Television was highly appreciated by all who attended,

### CES Sets Lecture On Aircraft Design

Mr. Hall Hibbard, Vice-President and Chief of Engineering of Lockheed Aircraft Corporation will be on campus this coming Monday November 15, at 11:00 A.M. Mr. Hibbard will speak in 201 Bridge, and his topic will be "Aircraft Design, Present and Future."

There are few men in the country as well qualified to speak on this topic as Mr. Hibbard. This event presents a fine opportunity for anyone interested in this field to get some useful information.

### CIT Wheels Form Management Club

An innovation in academic institutions was inaugurated last week when administrative and supervisory personnel at the Institute met to form a Management Club, believed to be the first such group to be formed in educational fields.

#### Dinner Meeting

The organization meeting was held at 6:30 P.M. Tuesday (November 9) at the Athenaeum. A dinner meeting, it included besides setting up of the organization, an address by Dr. L. A. DuBridge, Caltech President, and Professor Robert D. Gray, Director of the Caltech Industrial Relations section.

#### Committee

The general committee in charge of the first meeting was composed of R. C. Lorman, Wm. H. Bowen, J. N. Ewart, Herman Miller, W. D. Emerson, George W. Green, Glen M. Tallon, E. B. Hugg, R. Edward Moulton, Robert C. Terbeck and S. A. MacAllister.

#### Institute

Dr. DuBridge spoke on the subject of the Institute itself and Professor Gray presented his ideas on "Why a Management Club?"

### Interview Schedule

**NOV. 11 AND 12—GENERAL ELECTRIC COMPANY**—Dr. G. Giddings, along with several representatives, will interview for both New York and Hanford, Washington. MS and PhD's in Chemistry, Chemical Engineering, Physics and Electrical Engineering.

**NOV. 15 AND 16—POTOMAC RIVER NAVAL COMMAND**—Representatives of the Board of U. S. Civil Service Examiners for Scientific and Technical Personnel from the U. S. Naval Ordnance Laboratory, in White Oak, Silver Spring, Maryland, will talk with men for I.R.E. Engineers, Physicists and Mathematicians as a group in 206 M. E. Building at 4:00 p.m. Monday, November 15. Representatives will also be available for consultation Monday and Tuesday, November 15 and 16. See special article.

# The California Tech

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## • CAMPUS BREWINS

Perhaps it was the presence of the Life photographers, or maybe just the fact that every house went all out on decorations this year, but the turnout at the Interhouse dance was tremendous. Undergrads, old grads, faculty, campus secretaries, and everyone who could hobble or crawl showed up, and a gay time seemed to have been had by all.

The nod for best decoration probably goes to Blacker, even though it looked like Hell all night. Throop Club also came through with some dandy kodachromes of attractive subjects. Bob Benton couldn't seem to squelch his frau's insistence that she was one of the more hand-somely endowed models.

**Dick Alexander evidently lost his Oxy queen, Jean Bickford, to Joe Curry, so he showed up with a Scripps maiden, carting her back to the Claremont Convent for a 12 o'clock. Come, now, Alex, everyone knows Scripps girls don't have to be in at 12.**

This was obviously a switch night for dates. Jack Moffatt's Toll Hall Cookie is wrapped up with a C.M.C. man, Bill Bradley's Scripps woman was engaged to someone or other, but the prize for valiant effort goes to Bob Haufe. He had to get his date home by 10:30 because she got a telegram saying that her husband had just gotten shore leave. Tough luck, old man!

A number of underclassmen were wondering just where Doc Eagleson obtained his charming young dancing partner. Not bad! He did a good deal better than Profs. Lucas and E. T. Bell who decided to stag it together. A penny reward is hereby offered for remarks overheard from that renowned couple.

About all that could be seen all evening of Jack Ottessa's

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## Support The WSSF

During the course of the year you are asked to give to many causes. The Red Cross, the Community Chest, the March of Dimes, all these and many others ask for your help. But among these there is one that is the specific duty of college students to support.

The World Student Service Fund is the responsibility of College and University students of this country. This fund is set up to aid the students of other lands, to help them when they cannot help themselves. Your money means books, food, and supplies to the students of other nations. Without these things these schools would be unable to continue at all.

This drive is supported by the faculty and students alike. Elsewhere on this page you may read what Dr. DuBridge has to say about the W.S.S.F. Read it carefully.

The reasons are many and the need is great, so give what you can to the W.S.S.F.

—J.A.H.

## DuBridge on WSSF

The events of the past year have emphasized again the great importance of rehabilitating educational, scientific and cultural activities in the war devastated countries of Europe. Though much progress has been made it is still true that the universities of continental Europe are struggling against most serious and difficult conditions. The helping hand extended to the universities directly by students and faculty of American universities can mean more than all the dollars made available under the Marshall Plan. Educational and cultural contacts between countries are not provided by governments but through the people. The W.S.S.F. offers an opportunity for the men and women in American universities to extend a helping hand directly to their colleagues abroad and this effort deserves the support of every student and teacher in this country.

Dr. L. A. DuBridge, President  
California Institute of Technology

November 3, 1948

## • THE FRONT BURNER

### "The Play's the thing"

Hamlet has withstood the efforts of one night stand companies, musty English teachers, and now, the movies, to still remain the most fascinating play ever written.

### Popular Triumph

Laurence Olivier can mark up another popular triumph with his film version of Hamlet. In spite of the often harmful cutting of Shakespeare's lines, and the insertion of a few hammy Hollywood "epic" scenes, the artistic camera work, settings, good musical scoring, and excellent acting, more than compensate in making up a near-masterpiece.

### Ghost Scene Effective

The most effective scene was Hamlet's encounter with the ghost of his dead father. The dark and gloomy roof of Castle Elsinore is shrouded with fog as Hamlet and Horatio with pounding hearts (the screen seemingly expands and contracts) await the phantasmal appearance of Hamlet's murdered father.

### Drowning Scene Emphasized

Another effective scene was the actual picturization of Ophelia's drowning, perhaps the only feature Olivier could be proud he added. A voice, presumably the Queen's gives

(Continued on Page 6)



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## • YOUR CAMPUS

Those foul-smelling ill winds temperature.

blowing no one good which have been traced to the Kerchoff Biology Labs will probably be a thing of the past, now that the new Biology annex is in operation. The new building will house the department's guinea pigs, hamsters, rats, mice, and other experimental animals.

### Underground

The annex, an all-underground built beneath the parking lot near the corner of Wilson and San Pasqual Streets, occupies 7,000 square feet of air conditioned floor space and cost over \$100,000 to build.

### Reorganization

The new labs and animal quarters were installed for two purposes, primarily: (1) to provide more comfortable, cleaner, and better regulated quarters for the small experimental animals that are a vital part of the institute's research programs in biology and chemistry; and (2) to release much needed space for other biology projects by this localization and reorganization of animal quarters.

### Improvements

The main features by which the biologists hope to improve Kerchoff's formerly rank reputation are: a push pull fan system for ventilation which will insure a slight pressure differential between the annex and the rest of Kerchoff, so that airborne litter, smells, etc., will be confined to the annex; and a modern furnace for disposal of wastes.

### Temperature Controls

Special temperature and moisture controls keep each of the animals quarters at the temperatures at which they are most comfortable. For instance rabbits like cool huts, while rats and mice prefer a normal room

temperature.

A unit air-conditioning system in a special room is also being used for housing the animals used in work with radioactive tracers. Dr. Borsook, eminent food technologist, using these animals in his work on animal metabolism, and Dr. Campbell of the Chemistry department hope to further research in immunochrometry by their use.

### Research Programs

Among some of the other special research programs being carried on in the new annex are a study of inherited blood characteristics, under the direction of Dr. Owens, head of the annex, and Dr. Taylor's research program on antibody characteristics and pneumococcus.

### Tank Room

Drs. Van Harrevelt and Wierstra, nerve physiologists, will use a special tank room to study invertebrate life. Applications of the Biology department's findings on neurospora (bread mold to the layman) to animals will be tested in a special room. Research on synthetic antigens and antibodies, protein synthesis, and nerve and muscle physiology, about completes the picture of the studies being carried on in the new addition to Kerchoff.

### Separate Rooms

Various animals used for each of these research programs will be housed in separate rooms, especially planned to facilitate cleaning and feeding.

The 96 rabbits, 300 (at press time, reports from all precincts is 400) guinea pigs, 700 mice, 400 rats, and 50 hamsters which constitute the animal population at present in the annex, do not represent an addition to the animal population of Kerchoff, according to Dr. Owens.

## Sunday Musicale Program

Valse Trieste .....	Sibelius
Harold in Italy .....	Berlioz
Trio Number One .....	Brahms
Cello Concerto No. 1 .....	Saint-Saëns
Midsummer Night's Dream Overture .....	Mendelssohn

## HAROLD O. GRONDAHL

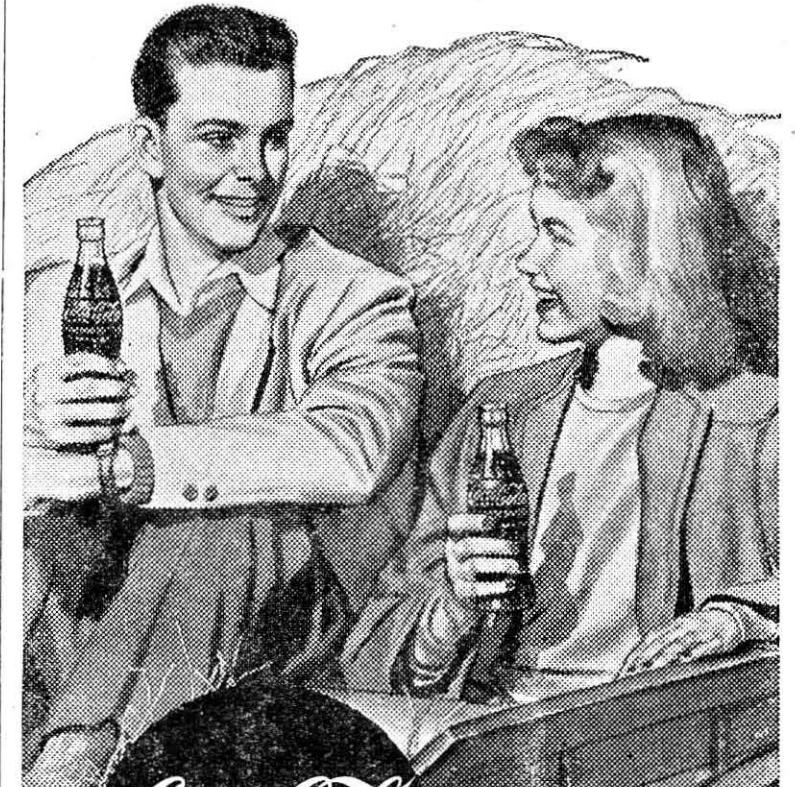
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## Authenticity Tests Discussed In Talks

The first in a series of YMCA Forums for the 1948-49 season was held Monday evening, featuring Mr. F. W. Van West, noted art critic and restorer. Mr. Van West drew from an extensive background in presenting his material which was chiefly concerned with the methods of detecting fakes from masterpieces.

Determining the authenticity of a painting is done today by scientific methods, including chemical analysis of the pigments and strength testing of the canvas. Numerous slides illustrated many of the earlier copies and originals of such great masters as Raphael, Vermeer and Rembrandt.

Mr. Van West is a former student of Hofstede de Groot, one of the greatest Dutch critics and restorers. During his lifetime, Mr. Van West has collected an impressive group of extremely valuable paintings, some of which, it is hoped, will be on display in Dabney Lounge in the near future.

## Techmen To Get Word On Civil Service Jobs

Representatives of the Board of U. S. Civil Service Examiners for Scientific and Technical Personnel of the Potomac River Naval Command with headquarters at the U. S. Naval Ord-

nance Laboratory in White Oak, Silver Spring, Maryland, will be on campus Monday and Tuesday, November 15 and 16, for the purpose of talking with any men who are interested in possible employment in the government professional service.

Seniors will be particularly interested in the announcement of an examination for P-1 Engineers, Physicists, and Mathematicians. Juniors will be particularly interested in the announcement of an examination for Student Aides of grade SP-5 for training positions during the summer of 1949. Men appointed from this examination may be given leave of absence to complete their college course and may then return at P-1 level without further examination. This examination for SP-5 is open to men, expecting to

complete their Junior year before June 30, 1949, who are taking engineering, mathematics, or physical science courses.

Dr. H. M. Trent and Mr. C. W. Elkin of the Naval Research Laboratory will be available in the Placement Office on Monday and Tuesday, November 15 and 16, for consultation where information is desired. At 4:00 P.M. on Monday, November 15, these gentlemen will meet in Room 206 ME building with all those who are interested in the government professional service.

Positions to be filled as a result of these examinations are all under the Potomac River Naval Command. This is an excellent occasion for men to find out more about opportunities in Federal Civil Service in the technical field.

Vermeer and Rembrandt.

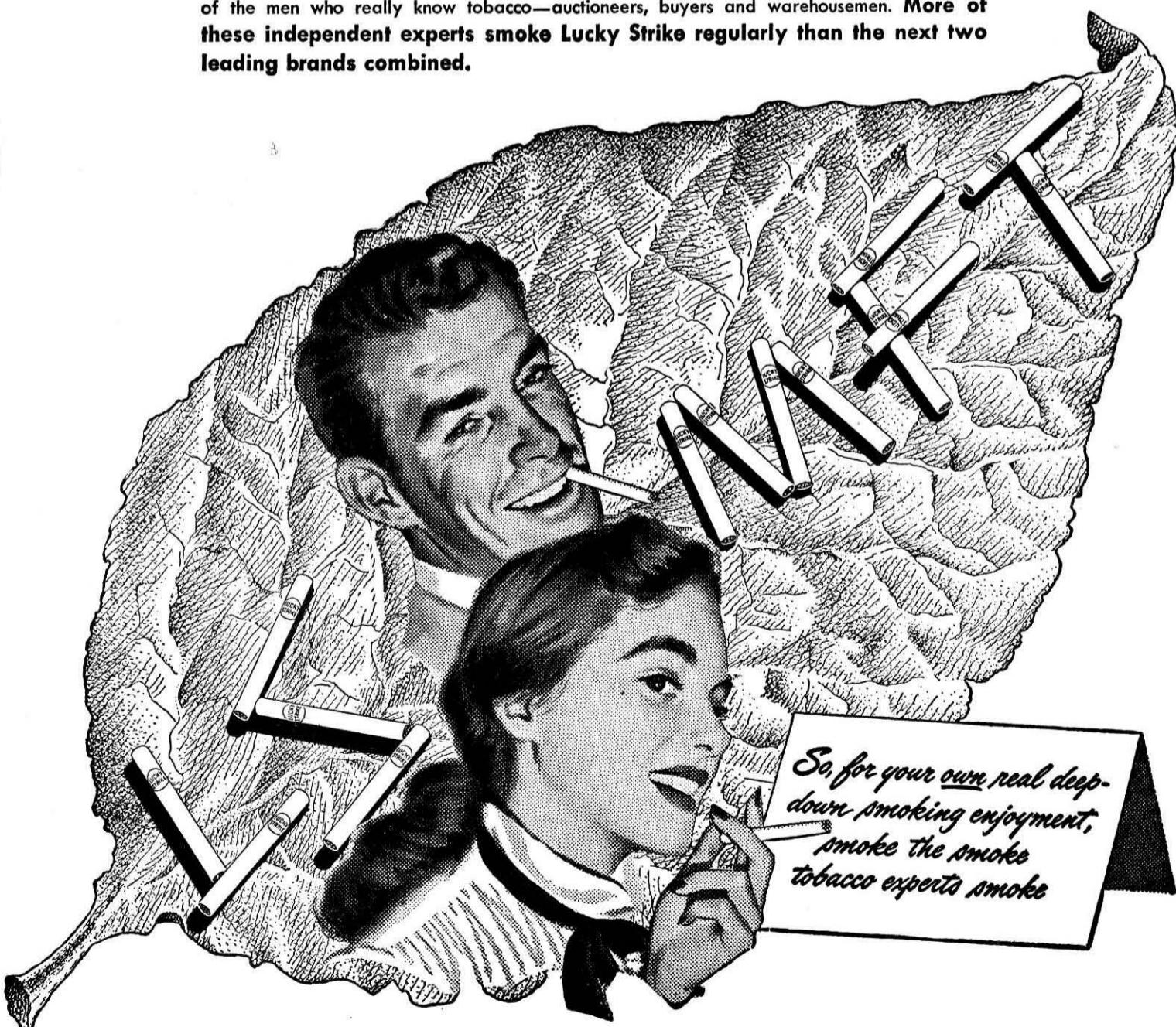
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## THE EVENING CONCERT

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Program for the Coming Week

THURSDAY, NOVEMBER 11, 1948

THE TESTAMENT OF FREEDOM (From Writings of Thomas Jefferson), by Randall Thompson. Harvard Glee Club and Boston Symphony Orchestra conducted by Serge Koussevitzky (24).

SPECIAL

OPENING CONCERT—LOS ANGELES PHILHARMONIC ORCHESTRA

Direct from Philharmonic Auditorium

IN MEMORIAM, by William Grant Still

SYMPHONY No. 3, by Aaron Copland

Intermission

SYMPHONY No. 7 IN C MAJOR, by Franz Schubert

(Program subject to last-minute changes)

FRIDAY, NOVEMBER 12, 1948

OVERTURE ON GREEK THEMES, by Glazounov. Minneapolis Symphony Orchestra conducted by Dimitri Mitropoulos (13).

SYMPHONY No. 4 IN E FLAT MAJOR (Romantic), by Bruckner. Saxonian State Orchestra conducted by Dr. Karl Bohm (58).

ARTUR SCHNABEL PIANIST.

SONATA No. 29 IN B FLAT MAJOR (Hammerklavier), by Beethoven (40).

SATURDAY NOVEMBER 13, 1948

THE MAGIC FLUTE, by Mozart. Soloists, Chorus and Orchestra of Berlin State Opera conducted by Sir Thomas Beecham.

MONDAY, NOVEMBER 15, 1948

FIDELIO—OVERTURE, by Beethoven. London Philharmonic Orchestra conducted by Felix Weingartner (6).

SYMPHONY No. 3 IN C MAJOR, by Sibelius. London Symphony Orchestra conducted by Robert Kajanus (32).

CLIFFORD CURZON, PIANIST.

CONCERTO NO. 23 IN A MAJOR FOR PIANO AND ORCHESTRA, K. 488, by Mozart. National Symphony Orchestra conducted by Boyd Neel (24).

NIGHTS IN THE GARDENS OF SPAIN, by Defalla. National Symphony Orchestra conducted by Enrique Jordà (24).

SERENADE FOR STRING ORCHESTRA, by Suk. Czech Philharmonic Orchestra conducted by Vaclav Talich (27).

TUESDAY, NOVEMBER 16, 1948

BEAUTIFUL GALATEA—OVERTURE, by Suppe. Boston "Pops" Orchestra conducted by Arthur Fiedler (6).

MANFRED—SYMPHONIC POEM FOR FULL ORCHESTRA by Tschaikovsky. Indianapolis Symphony Orchestra conducted by Fabien Sevitzky (59).

LOUIS KAUFMAN, VIOLINIST.

CONCERTO NO. 3 IN B MINOR FOR VIOLIN AND ORCHESTRA, by Saint-Saëns. Santa Monica Symphony Orchestra conducted by Jacques Rachmilovich (24).

DER ROSENKAVALIER—SUITE, by Richard Strauss. Philadelphia Orchestra conducted by Eugene Ormandy (24).

WEDNESDAY, NOVEMBER 17, 1948

OVERTURE DI BALLO, by Sullivan. City of Birmingham Orchestra conducted by George Weldon (9).

SYMPHONY No. 4 IN E MINOR by Brahms. Philadelphia Orchestra conducted by Eugene Ormandy (37).

IGOR GORIN, BARITONE (33).

PAGLIACCI—PROLOGUE, by Leoncavallo.

ATTILA—DAGLI IMMORTALI VERTICI, by Verdi.

QUEEN OF SHEBA—LIFT THINE EYES, by Goldmark.

KHOVANTSCHINA—ALL IS QUIET IN THE CAMP, by Moussorgsky.

NONE BUT THE LONELY HEART, by Tschaikovsky.

VIUT VITRE (Ukrainian Folk Song).

KASBEK (Caucasian Folk Song).

MOLITVA (THE PRAYER), by Gorin.

CAUCASIAN MELODY, by Gorin.

GRAND CANYON SUITE, by Grofe. NBC Symphony Orchestra conducted by Arturo Toscanini (31).

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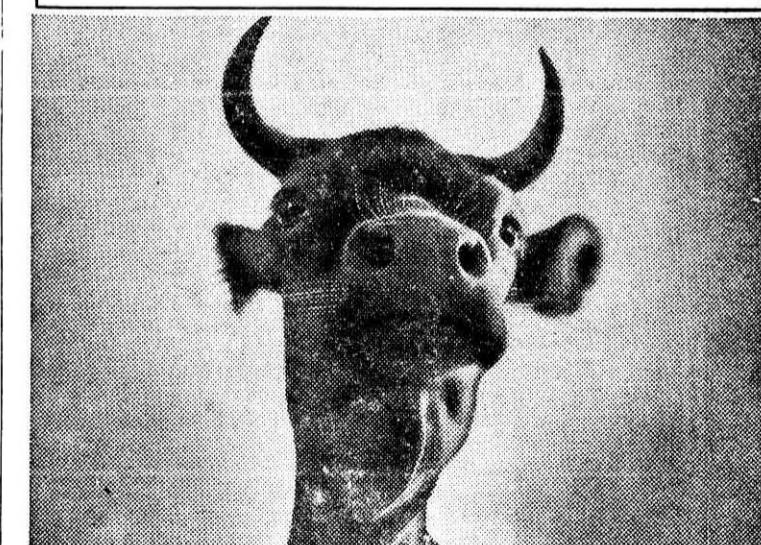
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## Concert Set By Musical Groups

Under the leadership of their new director, Mr. Lauris Jones, the Caltech orchestra and glee club are off to a promising start. Their first concert as musical organizations will be given at assembly on Friday, December 3rd.

### High Time

It is certainly high time that Tech has an organization that can distinguish itself in the rather non-scientific field of music. Contrary to the past practice of having glorified jam-sessions for rehearsals, the orchestra and glee club are this year rehearsing with a definite goal in mind. The selected pieces are rehearsed from time to time until they attain a fair standard as music. This involves a little sight reading, concentrated work on bad spots, and general working over of pieces each week. This technique has been remarkably successful in producing good results.

### Many Members

The membership in both organizations has also improved since last year. The combined groups have an approximate membership list of seventy, and this includes quite a good number of men who do not have to be forcibly torn away from the books.

### More Needed

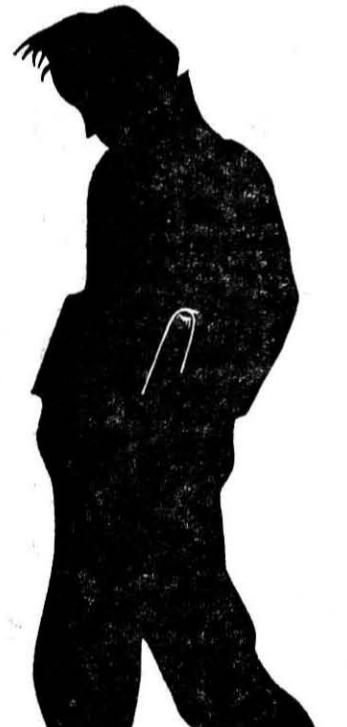
One point of emphasis in this year's membership drives is that all people are invited to participate. In this way the organizations can be filled out enough so that more ambitious numbers can be worked on.

As an example of the repertoire being gradually developed, the orchestra is planning to feature the first movement of Mozart's Symphony No. 40. Naturally a lot of effort has gone into such an ambitious work, especially in the string section. (Incidentally, there is never a surplus of violins.) Similarly, the glee club has a fairly good distribution of voices, but a few boys who could reach, stretch, or falsify an A would certainly receive a lot of persuasion to join.

### Assembly

The assembly will probably consist of a couple of orchestra numbers, a couple of glee club songs, and perhaps a joint piece

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MINISTER

## Sterling, McCreery Speak At Meeting

Two members of the Institute staff will be among those to address the 25th session of the Institute of World Affairs, to be held at the Riverside Mission Inn from December 5 to 8. Dr. J. E. Wallace Sterling, director of the Huntington Memorial Library, will speak on the subject, "The Struggle in Europe." Dr. Henry F. McCreery, of the history department, will be heard on the subject of "Western Union." Although not among those participating, Dr. Robert E. Millikan, chairman of the Caltech Executive Council, is a member of the Institute's board of advisors.

### Conflict of Two Worlds

Government officials and 31 authorities from twelve Pacific Coast universities and colleges will discuss the general theme "The Conflict of Two Worlds," according to Dr. Rufus B. von Kleinsmid, Chancellor of the Institute. The speakers will include, the Rev. T. Raymond Jones, pastor of St. James Episcopal Church, South Pasadena, who will give a report on the Lambeth Conference in England at the opening evening symposium on December 5. Senator Elbert D. Thomas of Utah, Bohus Benes, former consul for Czechoslovakia and brother of the late Eduard Benes, and Douglas H. Schneider, acting chief of the Public Affairs Staff of the Department of State, will be among the speakers.

### Colleges Represented

In addition to Caltech, U.C., Stanford, Arizona, U.S.C., Washington, Oregon, U.C.L.A., Redlands, Pomona, Whittier, and Occidental will also be represented, according to Professor Mark N. Goodnow, of U.S.C., who is executive secretary of the Institute.

or two. Also, Mr. Jones is looking for a man with some vocal training to sing a solo with the orchestra. Anyone interested is asked to contact him sometime during the Wednesday night rehearsals.

The future plans for the organizations are rather indefinite. They depend almost completely on the quality of performance. With a good orchestra and glee club there is no limit to the possibilities. But a good organization is going to take the enthusiastic support of all capable of participating, whether expert, beginner, or one who has not practiced for a long time.

## Blacker Socialites Plan Light Sports

The river Styx has melted into the ground and the Devil's Eires are out. Blacker is again calm after Saturday's "Evening in Hell," but memories of the most successful Interhouse Dance in years will linger on.

Blacker now reorients itself for a social calendar primed with variety. Friday evening Blackerites will vie with their dates for honors in miniature golf and pingpong at a local resort. Saturday night, of course, the Redlands game, and Blacker House will return to a post-game record dance.

## Marry Not An Engineer

Verily, I say unto you, marry not an engineer, for the engineer is a strange being, possessed of many devies; yea, he speaketh eternally in parables which he calleth "formulas," and he wieldeth a big stick which he calleth a slide rule; and he hath but one Bible—a handbook.

He talketh away of all stresses and strains, and without end of thermodynamics. He sheweth always a serious aspect and seemeth not to know how to smile; and he picketh his seat on the car by the springs therein and not by the damsel beside him. Neither does he know a waterfall except for its power, nor the sunset except for her specific heat.

Always he carrieth his books with him, and he entertaineth his maiden with steam tables. Verily, though his damsel expecteth chocolates, when he calleth he opens the packages to disclose samples of iron.

Yea, he holdeth his damsel's hand, but only to measure the friction, and he kisses but to test viscosity. For in his eyes shineth a far-away look which is neither love nor longing—but a vain attempt to recall a formula.

There is but one key dear to his heart, and that is the Tau Beta Pi key; and one love letter for which he yearneth, and that an "A"; and when to his damsel he writeth of love and signeth with crosses, mistake not these symbols for kisses, but rather for unknown quantities.

Even as a boy he pulleth a girl's hair to test its elasticity, but as a man he discovers dif-

## Sophs Clean Frosh In Annual Mudeo

The sophomores came through as usual to win the annual Mudeo, held in Tournament Park last Tuesday. The score was first announced as 5-2 in favor of the sophs, but the final score turned out to be 7-0.

The freshmen were at first awarded a victory in the two point horse and rider contest, but it seems that the judges were a little confused, and this event ultimately went to the sophomores. The frosh, managed by Jim La Fleur, were momentarily ahead in the tire spree, the only other event worth two points. But Earl Hefner's experienced sophomores eventually won out.

The second year men had little trouble in the wheelbarrow and sack races, aided by a year's experience and, possibly, slightly firmer ground. But in the tug of war, the game freshmen held their own for a time, even after several had been pulled into the mud.

The losers will observe the traditional custom of paying for the Frosh-Soph Dance.

## Inspiring Exhibits Mark GE Lite Show

The General Electric Lamp Department, under the auspices of the AIEE, CES, and Electrical Engineering Department, will present a demonstration entitled "Light Sorcery" Dec. 2 in Culbertson. This program tells about the first days of modern light and the progress of research.

Among the awe inspiring exhibits is a "ukelelite," music played by ultraviolet light, shadow photography with invisible light, and light that is many times brighter than the sun's surface. Lightning bolts and bonfires in bottles, and lighting a cigarette with 10,000 volts are among the spectacular displays by the G.E. group. All students are invited.

ferent devices; for he would count the vibrations of her heart strings and reckon her strength of materials; for he seeketh ever to pursue the scientific investigations, and inscribeth his passion in a formula; and his marriage is a simultaneous equation involving two unknowns and yielding diverse answers.

—Swiped

## Schussing

with the Shoose

Flash! The fireplace at the hut may be fixed. Warren Schlinger was working on it this last weekend, and after some time and the removal of several strategically located bricks it seemed as though the fireplace was operating as it should and not smoking everyone out of the hut.

### Plenty Done

We did accomplish a lot of work this last weekend. The new generator is ready for the winter. We have for those persons who just have to study, the assurance that they can study in ease at the hut now. With the electric lights now installed it is far brighter in the hut at night than it is outside at high noon. There is a shed over the generator with hinged walls that permit operation without having to remove the entire cover.

### Plenty Wood

With the wood that was cut this weekend it appears that we have enough for the winter. Let's hope so, for in all likelihood there won't be any more formal working parties before the skiing season formally opens. It may be in two or three weeks! There is a new floor on the back woodcutting room that makes it fairly difficult now to fall through to the ground beneath. And, hear this: the biggest news of all is that we are sporting new, smooth toilet seats in our twin heads. What other mountain ski club can make that statement?

### Hut in Shape

The last big work item accomplished on last weekend was the complete cleaning up of the upstairs sleeping quarters. All of the mattresses were taken outside and cleaned well, and the bunks and floor were well dusted and swept. We still don't have our running water, but the hut is in by far the best condition going into a new season that it has ever been in.

The Ski Club policy for hut fees this winter will be about the same as last winter. The charge for club members is \$.25

## Fleming Shuts Out Dabney In IH Baseball

Behind the 2-hit pitching of Norm Gray, the Fleming baseball aggregation rolled to an easy win over a hapless Dabney nine in the opening game of the Interhouse baseball season. The Big Red jumped into a 6-0 lead in the first inning and was never threatened.

Hits by Barnes, Gray, Richartz, Darling and Shore sparked the Fleming attack which netted 14 tallies in four innings.

### Drinkward, Hickey

Dabney pitcher Cecil Drinkward and catcher Mal Hickey played outstanding ball for the boys in green but Dabney was not able to halt the blistering assault that the Reds turned on.

per night, and the charge for non-members is \$1.00 per night. Any member may bring his wife or date to the hut for \$.25 on just one membership.

Once the season begins there is going to be a hut manager appointed every weekend and over vacations to make certain that all of the hut fees are collected and brought back to school. Also, he will have the general duty of seeing that the hut is kept clean. But, all of the members in the past have been very observant of the hut practices, and there has seldom been any trouble.

### New Lift

All of the cement foundations are in for the new chair lift at Snow Valley, and the steel construction is about to begin. It looks as if we will have the new lift before the winter is gone.

### Get Membership

Remember, get your Ski Club memberships now. We have been putting a considerable amount of dough into improvements, and, frankly, we need the cash. Remember, our Club membership includes F.W.S.A. membership and the subscription to the Skier that goes along with it. Get your little blue card now!

## HOUSE JACKETS

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### Talkin' It Over With The Goon

Once again the Raymond St. Armory became the scene of the beginning of a what should prove to be a glorious year for the men in Orange and White. The only discouraging factor was that only fourteen men answered the first roll call. This is a disgrace. Out of all the stellar performers in the last Interhouse League only about three showed up at the ice box for the first work out.

#### Good Season

It seems as if everything, except the turnout of men, is pointing for a victorious season. The Hustler broke down and bought new sweat suits and uniforms that will make us the best dressed team in the league beside the best playing team. The squad has a private dressing room instead of changing between the cooling coils in the hall. Carl Shy has a new secret weapon in his offense that will terrorize the opposition. Big double headers with Oxy have been scheduled at the new PCC gym. The athletic office has promised us a bid to the Garden if we are undefeated for the season. The one missing link is that not enough men are turning out. Of course the squad will be aided by Manual and Baker when the pigskinners turn in their suits and Libby with the polo boys play their last chucker. But we want YOU out there.

#### Gridders Practice

The Varsity and Frosh footballers are back in uniform after passing enough mid-terms to stay eligible. Fatty Long (the

(Continued on Page 6)

### CALTECH BARBERS

on California Near Lake

### Leather Lungers Eke Out Second Place Against SC

In a gallant show of speed, the Caltech varsity Cross Country squad took a hard fought second from USC last Tuesday in Tournament Park. Except for the fact that Caltech and SC were the only contestants, this would be a good showing.

#### Fast Squad

SC showed up with a very fast squad and proceeded to wax the varsity leggers by taking the first seven places. Nash, of SC was conspicuous at the finish line, taking first place with a time of 10:53.8 for the two mile run. The next four men, all from SC, tied.

#### Good Old Brown

Caltech was not altogether out of it however. In the eighth position, who should it be but Brown! When he got there, he was a trifle lonely standing around with those seven USC runners.

#### Score

When the score was finally tallied, Caltech came out on top. High score that is. If these were some other sport except cross country, the score would look good.

**USC—15.**

**Caltech—54.**

### Tennis Exhibition MONDAY, NOVEMBER 29

at

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### Tech Keglers Host Trojans

Caltech's bowling team will tangle with the men of Troy in a special match at the Pasadena Bowling Courts this Sunday evening, November 14, at 7:00 p.m. A close match is in prospect as U.S.C. boasts a strong team and is out to avenge two defeats at the hands of Tech last year.

Our lineup for the meet will be as follows:

Name	Ave.
1. Ray Heggland	174
2. Carl Fox	163
3. Andy Check	162
4. Bob Benton	165
5. Woody Brattnber	163
Sub. Sid Stone	159

Andy Check is a newcomer to the regular team as he came through with a blazing 584 series this Monday to boost his average eleven pins and win himself a spot on the team. This team totals 847 pins which is within a few pins of S.C.'s reputed total. The aggregate total of these men in the IH league this week was 2577 pins, or an average of 172 per man.

### Writers Wanted

With the opening of the basketball season the sports staff has several openings for men interested in writing the cage games. You do not need to have had experience; we will show you all the ropes. If you have any desire to do a little writing come down to the Tech office on any Monday night. Here is your chance for glory and a by-line.

### Beaver Polo Team Drops Close Match To Occidental 3-2

Last Friday, Caltech's water polo team suffered a heart breaking defeat at the hands of the Occidental Tigers. The boys from Eagle Rock came out on the long end of a 3-2 score, blasting the Beavers' hopes for a sweep of the two game series.

#### Beavers Score

Dick Libby scored the first goal for Tech only to have the "Black and Orange" come from behind in the second quarter to score twice. Mike Hall tied the game up during the same period and the score remained tied until late in the fourth frame when the Tigers broke the ice with another tally which proved to be the winning margin for the Oxy aquamen.

#### Strong Defensive

The game was marked by strong defensive actions by both teams. Tech's goalie, Ed Reinke, played a brilliant game, making 21 saves out of 24 goal attempts. The two guards for the Engineers, Bob Stert and Bill Harris, put on an excellent exhibition of guarding, foiling many an attempt to score by the Tiger tanksters.

The Oxy backfield kept scoring threats by the Beaver forwards impotent by their breaking and sprinting after the ball.

The Engineers will make their yearly pilgrimage to the Bruins lair tomorrow.

### Beavers, Bulldogs Tangle At Bowl

#### Both Teams Point For First Win

#### In League Tilts; Enter On Even Basis

Anxious to enter the win column in league competition, Mason Anderson's spirited Engineers host the University of Redlands Bulldogs Saturday night at the Rose Bowl. Both clubs have taken trouncing from the other three conference teams by almost identical scores. Each squad has an equal chance to win and both want to win very, very much.

Redlands has taken the conference crown for three consecutive years and was a preseason favorite to come out on top for the fourth time. But the Bulldogs have definitely failed to live up to their reputation, having lost every game so far this year. The roaring Oxy Tigers handed them their latest defeat by a score of 28-6.

#### Weak Defensive

Coach Cecil Cushman of X, Y and Z formation fame, had bright hopes when twenty lettermen reported for practice in September. But Little All-American Ted Runner, whose passing arm last year created a conference championship for the Bulldogs was absent from the roster. And the effect has been astounding. All of their opponents have rolled up huge scores, with the 55-0 defeat by the Hawaiian Warriors as an example. The Bulldog defensive strength has not shown any resistance as yet.

#### Take to Air

However, the Bulldogs do have aerial potential in Flowers and Simmons. Last year Flowers pulled down Runner's passes from almost any position and with Simmons tossing, anything can happen.

#### Out for Win

The Beavers are pointing for this game, since this decides who takes over the cellar spot. And with Chuck Norman back after his injury in the Oxy game, the picture looks mighty bright for the Engineers. With a week layoff, the team should be in top shape. With those two stalwarts Bass and Hibbard, in the line the Bulldogs offensive will have plenty of trouble. Men such as Carson, Walquist, Marks, Blom, and Darms will give the Engineer forward wall a lot of striking power. Probably the only man missing this Saturday will be Roland Berner who is still suffering from a punch delivered in the Oxy game. Filling out the team will be Galloping Bill Sylvies, Bob Funk, and Don Baker.

This game promises to be a (Continued on Page 6)

### DUPONT Digest

For Students of Science and Engineering

### They said, "You can't do it!"

#### But Du Pont scientists developed a synthetic rubber with superior properties

"Synthetic rubber is an impossibility at any price!" declared a noted European scientist a number of years ago. And most people were inclined to agree because for more than a century chemists had been unable to duplicate natural rubber.

Du Pont scientists knew that all rubber had bad qualities as well as good. "Why struggle to duplicate its faults?" they asked. "Why not find a new chemical compound with all the good qualities of rubber, but none of the bad?"

They took as their starting point a discovery by Dr. J. A. Nieuwland of Notre Dame in connection with the polymerization of acetylene. By modifying this process, they made monovinyl acetylene. Adding hydrogen chloride, they made a new chemical compound called chloroprene—a thin, clear liquid at low temperatures. Like isoprene, it polymerized to form a rubber-like substance. But the new material, now known as neoprene, required no sulfur for vulcanization and was superior to rubber under many service conditions.

Today neoprene production is measured in millions of pounds a

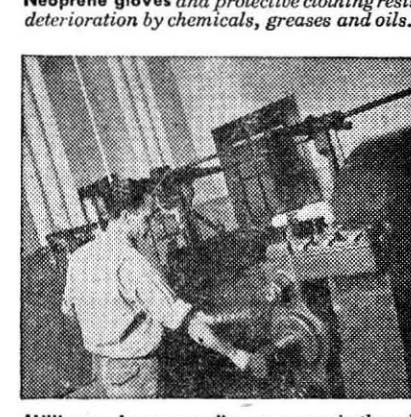
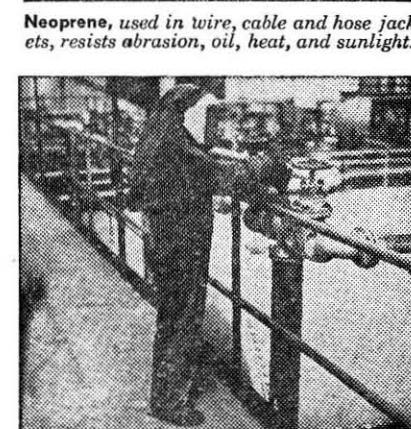
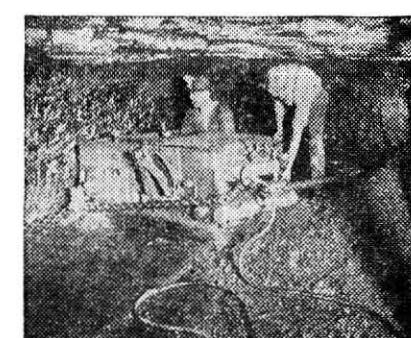
year, even though it is priced higher than natural rubber. Hardly an industry is not now using it, for such good reasons as these: neoprene products resist deterioration by oils and greases. They stand up under exposure to direct sunlight. Their aging and flame-retarding properties also are superior to those of rubber.

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At DuPont, research is continuous. Some of it is designed to develop new products or processes; some to improve existing products or processes; and the balance is fundamental research to uncover basic facts without regard to immediate commercial use. Each of ten manufacturing departments has its own research staff and is operated much like a separate company. In addition, the Chemical and Engineering Departments, which are not engaged in manufacturing operations, conduct research in the interests of the Company as a whole.

A typical Du Pont research team



May include physicists, chemists, chemical and mechanical engineers, each of whom brings specialized training to bear on a specific phase of the subject. The man who joins one of these teams finds himself associated with some of the ablest minds in the profession and receives the opportunity and friendly support needed to make fullest use of his capabilities.



BETTER THINGS FOR BETTER LIVING  
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The new research man has frequent contact with experienced supervisors. Here M. Hayek, Ph. D., Indiana '47, discusses data obtained in an experiment with F. B. Downing, left, a member of research supervision, and M. B. Sturgis, a research group head.

#### What you want to know about Du Pont and the College Graduate

"The Du Pont Company and the College Graduate"—newly revised, fully illustrated—describes opportunities for men and women in research, production, sales and many other fields. Explains how individual ability is recognized and rewarded under the group system of operation. For your free copy, address: 2521 Nemours Building, Wilmington 98, Del.

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**WSSF DRIVE SET**

(Continued from Page 1)

As Americans, we cannot regard human beings as pawns in the game of power politics; this is a strategic time for the reaffirmation of our commitment to relief and reconstruction on a humanitarian basis. Universal brotherhood and the search for truth are not only morally and intellectually valid but realistic and inescapable. They are the only basis for one world.

World Student Relief, which is a non-governmental international organization working without reference to race, nationality, religion, or politics, relates the relief efforts of thirty-four member nations. It works through national committees in university centers.

Reported needs are investigated by the Executive of W.S.R., located in Geneva, Switzerland, and all budget allotments and expenditures are carefully reviewed by the Executive Committee. Allocation of aid is carefully determined by the particular character of the need reported, and the number of students who will be helped. W.S.R. representatives supervise the distribution of all relief goods within the receiving country.

Approximately fifty per cent of the funds administered by World Student Relief are raised by American students and professors through the annual World Student Service Fund campaigns in American colleges. The rest of the W.S.R. budget is raised by similar student campaigns in eighteen other nations which survived the war without being occupied, or which have made relatively rapid recoveries since the war.

It is estimated that 400,000 students in Europe and Asia must receive material education this year or else abandon their education. The WSSF is asking \$1,000,000 from the million and a half students and professors on American campuses to meet this year's needs.

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**Rowdies, Dabney****Top IH Bowling**

Team standings remained unchanged this week in the Inter-house Bowling circuit as all houses came up with even or near-even breaks on wins and losses. Fleming fared best as they won five while losing three, Dabney, Ricketts and Throop all had four-four records, and Blacker won but three of their games. Current house standings in the Goldsworthy trophy race:

House	Won	Lost	Pct.	Ave.
Ricketts	22	10	.688	153
Dabney	19	13	.594	127
Throop	17	15	.531	147
Blacker	12	20	.375	133
Fleming	10	22	.312	128

High team series this week went to Blacker No. 2 as they amassed a total of 2129 pins to nose out Ricketts No. 1 by one pin. High game honors were taken by Ricketts No. 2 with a 769 score.

Andy Check of Ricketts led the field this week with a terrific 584 series and 224 game. Woody Bratnaber of Ricketts was second with 204-559. Other big scores were: Ray Heggland of Throop, 194; Jerry Matthews of Throop, 194; Blouke Carus of Ricketts, 188; Gene Mooring of Throop, 186; Win Soule of Ricketts, 180; and John Kostelac of Throop, 180. Warren Waters of Blacker posted three identical scores of 111 for the most unusual series of the afternoon.

**TALKIN' IT OVER**

(Continued from Page 5) thinnest fat man in captivity) has finished curing up the whiskey tenor via the liquid treatment (not orange juice). He has been rumored to have been just a wee bit out of shape Monday. Looks like Berner got slugged a trifle hard by some tough Tiger and the doc says "Lay off for a couple of weeks or get punchy playing." Even at that our line should be strong enough to rough up Redlands and make it mighty hard for the Bulldog backfield to make yards on the ground.

**Beavers Favored**

This should be the big winner of the year. It's the battle for the basement and that's a heck of a place for the team to wind up. Some of my agents say that the spirit out on the practice field is not a high as it should be and that's a bad sign. There has got to be plenty of fire and go in a team to win a ball game even if they are playing Scripps.

**Bass, Hibbard**

Bass and Hibbard have been approached by scouts for the All-American under 200 pound football team that is to play teams from Canada, Mexico and Central America around Christmas time in Gilmore Stadium. It couldn't have happened to two more deserving men. Both should be right on top when the Little All-American picks come out, and if not it will only be because Andy has purposely soft-pedaled

**BEAVER, BULLDOGS**

(Continued from Page 5) terrific one, and should feature plenty of passing and open play. This is the Beavers' only chance to finish off the season with a conference win and we think they will come through. Remember Saturday night at the Rose Bowl. Kick-off 8:00. Let's have a good crowd for the game of the season.

REDLANDS	CALTECH
Flowers	RE
Heaslip	RT
Graves	RG
Hubbard	C
Duncan	LG
Mockler	LT
Nicholson	LE
Hammond	QB
Hacklemann	RH
Simmons	LH
George	FB
	Hibbard
	Marks
	Bass
	Funk
	Norman

**TALKS FEATURE**

(Continued from Page 1)

**Same Place, Same Time**

The weather may change, but the time and place of the seminars don't. It's still Wednesday afternoon at 4:30 at Dabney Lounge, with informality still the keynote.

**No Lecture**

There will be no lecture one week from Wednesday, November 24, since the next day is Thanksgiving. This leaves nothing to hold anyone here on that afternoon.

the ballyhoo to save the boys a few extra hard knocks.

Don't forget men, Saturday the thirteenth is unlucky for Redlands at the Rose Bowl.

**Part Time Jobs****FRONT BURNER**

(Continued from Page 2) proves the original.

**Supporting Players**

Almost every one of the other supporting actors would merit an Academy Award, so well are they casted. Particularly good are Jean Simmons as Ophelia, Felix Aymar as the meddling Polonius, Norman Wooland as Horatio, and Stanley Holloway as the Gravedigger.

**Musical Score**

Another point in the movie's favor is the fine musical score. It, together with the settings seem to catch each scene's mood even if the often altered script does not.

**Simplification**

As a whole it seems that Olivier attempted to carry to the mass of the movie-going public, his impression of Hamlet as a "steel engraving rather than an oil-painting", by simplifying some of Shakespeare's more subtle ideas. Where he succeeded, he followed closely the spirit of the original play; where he failed, he injected the touch of Hollywood unrealism.

Man to prepare cars for painting and clean up in service station. A few hrs. weekday afternoons and all day Saturdays.

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