

OXY
SWIM MEET
TOMORROW — PCC

CALIFORNIA TECH

California Institute of Technology
Pasadena, California, Thursday, April 19, 1951

ICC - TV
AT WHITTIER
TOMORROW NIGHT

No. 24

Volume LII

Five School Play Tomorrow Night

ICC Presents Series of "TV" Shows
Cuse Concocting Corny Confection

The second I.C.C. show in as many years will sparkle behind the footlights tomorrow night.

Featuring individual shows by Caltech, Chapman, C.M.C., Scripps, Pomona, Occidental, Redlands, and Whittier, followed by a two hour dance, the affair will be a full evening's entertainment.

75c Cents Per Head

Tickets for the affair, which starts at 8:00 p.m. are 75 cents apiece, and will also get you into the dance. All the proceeds above expenses are going to the World Student Service fund. The affair is either stag or drag, but don't forget the dance.

Music will be by Keith Williams and his band, the group that played for our last ASCIT dance at the Riviera. Tickets can be purchased in any of the five houses, in the bookstore, or at the door.

Musical Comedies

The shows are practically all of a musical comedy nature, the two exceptions being those of Tech and Redlands. Redlands is again featuring Dan Boone, this time in a heartfelt stomach deodorant commercial program.

Caltech's show, emanating from the pens of Cuse and Max Shulman, has been hailed by Cuse as the greatest drama yet to hit the T.V. borscht circuit. Entitled "The Happy Home Life of Bleachy and Dogwood," the skit is a parody on the comic strip Blondie by Chic Young.

Tech Actors

Featuring such great names in Tech show business as Chuck Bates, Dave Hanna, Dick Tracy, Bill Blodgett, Jess Weil, and Pete Verdier, the show will make anyone feel at home.

Involving such things as a dead dog, a payoff in a mumbly-peg championship tourney, and a frustrated housewife, the play is said to carry a message for everyone.

Broadcasting Club

A group of students would like to form a broadcasting club to present weekly programs over a local Pasadena station in cooperation with the ASCIT and the YMCA. Only those sincerely interested in radio program writing and presentation should apply. See Barney Engholm or Mike Mecherikoff (Ricketts) immediately.

Jr.-Sr. Garden Party Set For May 6

Juniors and seniors are getting their dates in anticipation of the Junior-Senior garden party to be held on May 6. The time has been set at 2:30 p.m. and the place is Dabney lounge and garden. La Verne Boyer and his orchestra, who have played for many previous Caltech dances, will supply the melody for this affair.

Annual Affair

The dance, an annual affair, is held by and for the upperclassmen and faculty. Here in a social rather than academic atmosphere, the upperclassmen meet the men who have been their instructors. Present will be department heads and the writers of the text books that the juniors and seniors have been using or at least have bought in the past few years.

Dress will be sport or informal for both the men and their dates. Refreshments consisting of punch and French pastries will be served.

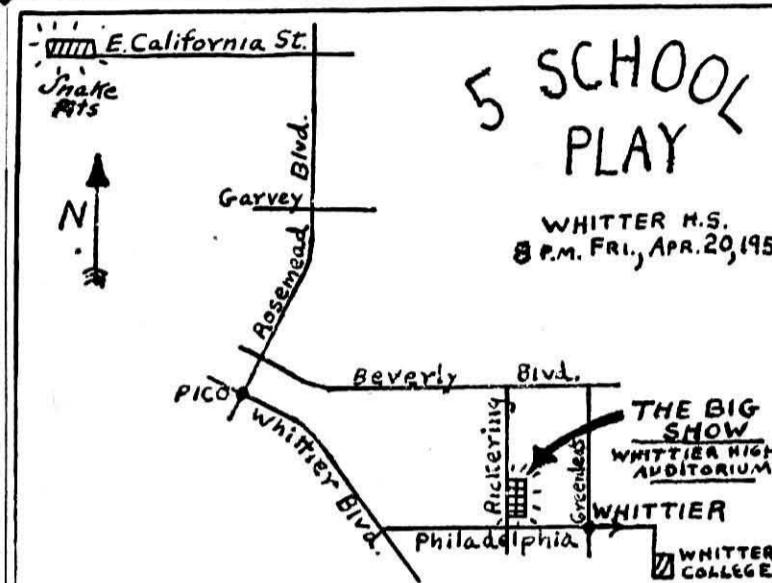
Campus Calendar

FRIDAY, APRIL 20
11:00 Assembly, Culbertson hall.
1:30 Golf, Whittier Varsity at Whittier.
3:30 Track, Pomona Varsity and Frosh at Tech.
4:00 Swimming, Oxy Varsity and Frosh at Oxy.
8:00 I.C.C. Show, Whittier.

SATURDAY, APRIL 21
9:00 Art Class, 04 Mudd.
1:30 Tennis, Chapman Varsity at Tech.
2:15 Baseball, Whittier Varsity at Whittier.
2:30 Baseball, Oxy Frosh at Tech.

TUESDAY, APRIL 24
4:00 Beginning Music Theory Class.
5:00 Advanced Music Theory Class.
7:30 Band Practice.

WEDNESDAY, APRIL 25
7:30 Orchestra Practice.



Blood Donations

A Red Cross mobile blood collection unit will be in Dabney Lounge on Tuesday, April 24, from 2 to 7 P.M. to receive blood donations from Tech personnel. The unit is equipped to handle 160 pints and only about 80 persons

have signed up, so more contributions are needed. If anyone is interested in giving blood, including students, faculty, and personnel, please see Dick Libbey, Kent Stratton, Earl Hefner, Fred Wood, or the Institute Personnel Office.

Athletic Awards

Presented at

Last Assembly

Presentation of athletic awards was the business carried on at last Friday's assembly. The awards were presented by Coach Carl Shy, who presented the Vesper Trophy, the All-Conference Award, and the Varsity letters; Coach Ed Preisler, who presented the Frosh numerals; and Coach Don Garman, who gave the all-league water polo awards.

Vesper Trophy, for improvement, moral influence, sportsmanship, and scholarship to Norman E. Gray.

All-Conference Award to Thorne J. Butler.

Varsity lettermen: Thorne J. Butler, co-captain; Alfred W. Sereno, co-captain; John D. Gee, Norman E. Gray, Leon C. Michaelson, Harry Patapoff, Edward A. Stern, David F. Stevens, Donald K. Tautz.

Senior Service Award, Dean C. Daily.

Manager, Mell D. Cassidy.

Frosh Numeralmen: Fred C. Anson, captain; Lee A. Henderson, Curtis C. Johnson, Robert D. Lynam, Charles R. Plambeck, Richard S. Smith, Hugh P. Taylor, Bruce J. Watkins.

Manager, Cornelius V. Sundt.

All-League Water Polo Awards: first team, Wilbur J. Barnmore; second team, Richard M. Libbey, J. Morgan Ogilvie, Richard P. Von Herzen.

Student Shop Officers Chosen

The Caltech student shop held its annual election meeting last Monday. Elected to the shop committee, the governing body of the shop, were Henry Richter, Jerry Ross, Dud Wagner, Herb Henrikson, Ed Gauss, Teddy Einwohner and Bill Gardner.

After the general meeting the committee convened, and from its membership chose Richter shop foreman, Ross as assistant foreman, Gauss as secretary-treasurer, Gardner as purchasing agent, Wagner as maintenance head, Henrikson as training head, and Einwohner as publicity man.

Pictured above is a group of alumni at the on-location lecture about the synchrotron given as part of the alumni seminar last Saturday. The old grads spent the day on campus looking at new developments and listening to lectures, with a traditional student house lunch to top off the day.

Big Foxhole!

Synchrotron Needs Power

by Duane Marshall

The typical answer to the question, "What are they building over there?" seems to be "grmmigph...synchrotron."

The construction in the past has more or less been kept down to an inconspicuous rumble but has picked up to a large degree in the near past. The cause of this increase in activity seems to be the excavation of a hole under the floor of the building for a power supply able to give what the synchrotron needs for giving an electron half billion volt speed.

200 Incher Ground Here

The building now being used for the construction of the synchrotron was originally built for the purpose of grinding the 200-inch mirror in use at Palomar. After the mirror was finished and carted off, the Institute offered the use of the building to the government for atomic and nuclear research.

The Atomic Energy commission is backing the research program with 1 1/4 million dollars over a three-year period.

Hole in Floor

Some of the construction features are worth noting. To dig the hole for the power supply room to be located, they had to go through the existing concrete floor. A neat bit of cutting was done with a diamond wheel to accomplish this.

At present there is a small caterpillar tractor running around in this hole pushing dirt and digging up to one side of

the hole, where it is loaded onto a vertical bucket conveyor which loads it onto another conveyor which carries the stuff out to a truck. The question is raised... How does the Cat get out of the hole it has dug itself into?

Sound Traps on Intake

Sound traps will be used on the ventilation intakes and exhaust to make life pleasant and quiet in Fleming and Dabney.

Cooling towers may have to be erected on top of the building to furnish a cooling system for the magnet... it is expected that about 3000 amps will be running through the magnet coils.

Magnet From Berkeley

The magnet was originally in Berkeley and is a 1/4-scale model of a magnet which will be used to accelerate protons.

By next fall it is expected that the synchrotron will be in full swing and able to accelerate electrons to 1/2-billion volts.

(Continued on Page 4)

Newshawks Wanted

Do you want to see your name in print (honorable)? Would you like to be one of the molders of public opinion? The Tech needs men interested in all phases of journalism including news and sports writing, copy reading, writing, and layout. The staff meets every Monday night to correct the articles written over the weekend and to lay out the pages. If you are at all interested, see Chuck Benjamin in Ricketts 56 or come down to the Tech office in lower Fleming Monday night.

College Qualification Test May Help Defer Techmen

PCC To Give Hillbilly Play At Assembly

Caltech Selected as Test Center; Forms Available at Draft Boards

All registered undergraduate students, including seniors who are contemplating going on to graduate schools, are strongly urged by the Deans to take the Selective Service College Qualification Test. Cards requesting assignment to a time and place for taking the test became available on April 12 at all draft boards.

Inasmuch as scores on this test will be important considerations in deferment applications, and inasmuch as such scores may eventually be required for deferment, failure to register for the test might be regrettable, Dean Eaton stated.

Three Dates

Announced test dates are May 26, June 16 and June 30, the time and place to be determined by Selective Service. The Institute has been designated as one (No. 111—Pasadena) of the test centers.

If you have not registered for the test, it is advisable to do so at once.

The nearest Selective Service Board where cards may be obtained is at 35 S. Raymond Ave., Pasadena. You will be required to show evidence of being registered under Selective Service. Your ASCIT card will identify you as being registered here. If you have a Selective Service number, take it with you when you apply.

Terminal Date Undecided

No terminal date for issuance of cards applying for the test has been announced. Apply as soon as possible, if you are registered and between the ages 18 and 26, even though you are a veteran, are married, or have other deferment at the present time.

This may not seem necessary to the veteran now, but conditions may change. Although the test applies to Selective Service deferments, Dean Eaton believes that reservists who plan to stay in school should also take the test. It will take only three hours and is a general aptitude test, requiring no preparation.

Deferment Status

At the present time, students are eligible for deferment to continue school next fall in the following cases:

Undergraduate—Minimum of 70 on the Selective Service aptitude test, or ranked in:

1.—Upper 1/2 of freshman class.

2.—Upper 2/3 of sophomore class.

3.—Upper 3/4 of junior class.

Graduate—Minimum score of 75 or ranked in upper 1/2 of senior class.

Dean Eaton wishes to stress the fact that requirements for deferment are subject to change at any time. Therefore, to best insure the opportunity of finishing school, all registered undergraduates should apply for the test.

Musicale Plans Noon Concerts

The Musicale has announced the program for the noon concerts for the remainder of the month to be given in Dabney lounge.

The program is as follows:

Friday, April 20th—Haydn, Trio for two flutes and cello in C major; Reigner, Trio for flute, harp, and cello; Beethoven, Quartet, op. 59 No. 1.

Monday, April 23rd—Mahler, Symphony No. 4; Hindemith, Sonata for solo cello.

Tuesday, April 24th—D'Indy, Symphony No. 2; Debussy, Suite Bergamasque.

Wednesday, April 25th—Verdi, Forza del Destino (excerpts).

Thursday, April 26th—Scriabin, Sonata No. 4 in F sharp major; Bach, Goldberg Variations.

Friday, April 27th—Handel, Sonata No. 4, D major, Vi, Pa.; Beethoven, Quartet, op. 59 No. 2.

Monday, April 30th—Mahler, Das Leid Von der Erde.

Public Speaking Subject of Films

Do you have butterflies in your stomach when you are called on to say a few words before an audience?

What to do about this and other basic problems in public speaking will be graphically demonstrated in a series of new educational training films to be previewed in Culbertson hall at 4 p.m. today. Faculty, students, and the public are invited to attend. There will be no admission charge.

Prepared at NU

According to Dr. McCrery, who received these films for preview from the National Safety council, the series was recently prepared by the School of Speech at Northwestern U. The series was designed to give efficient, basic training in effective speaking to industrial and technical personnel who have occasion to

communicate with the public.

This very active organization is also considering a program for gathering material on graduate schools throughout the country. This would enable the graduating senior to find more easily the graduate school most fitted to his needs.

Officers Named By Tau Bates

Elections highlighted the week for the Tau Beta Pi's. Barclay Kamb was elected president for the coming year and Howard Preston vice-president. Other officers are Teddy Einwohner, corresponding secretary; Pete Verdier, recording secretary; Boyd Israelsen, treasurer; James Gay Helmuth, cataloger.

Poll to Repeat

It has been reported that Tau Beta Pi will continue with the Alumni Interview program which they carried out last year so successfully, and also with the Instructor Rating Poll.

This very active organization is also considering a program for gathering material on graduate schools throughout the country. This would enable the graduating senior to find more easily the graduate school most fitted to his needs.

Secretary's Report

Little T Editorship

All persons interested in becoming editor or co-editor of the 1951-52 Little T are urged to submit their applications to Dave Hanna or Jim La Tourrette immediately.

As the present issue of the Little T states, this is a salaried position: The first \$400.00 net profit shall go to the editor or editors as the case may be. Any profit over this amount shall be split evenly between the editor or editors and the corporation—not bad pay for a summer's part-time job. Ask Duane Neverman for details on what the work entails.

Class Elections

The Board of Directors appointed Don Stewart as the new Election Chairman. This suggests that class elections will be held soon—prospective politicians take note. The exact date will be set at the Board meeting this week.

Dates

There are several important dates that should be on your social calendar. They are:

April 20: 5-School Show
May 3-4: ASCIT Play
May 12: ASCIT Dance

—Jim La Tourrette,
ASCT Secretary

Who Dealt This Mess

By John Rogers

Playing No-trump Bids

One of the worst errors which a player can make at a no-trump contract is that of locking himself out of either his own or dummy's hand. For in such a situation, all of the good cards in that hand would be worthless. This week's hand illustrates one method of avoiding such a lockout:

S 7,5	N	S 10,8,6,4
H 8,6,2		
D A,K,9,4,2		
C 9,6,5		
S K,J,9	N	S 10,8,6,4
H 7,7		
D 10,6,5	W	E H Q,10,9,3
C Q,J,10,4,3	S	C 8,2
S A,Q,3,2		
H A,K,5,4		
D 7,3		
C A,K,7		
BIDDING		
N	E	S W
—	18	P
2D*	P	3N P
P	P	

The Bidding

South's hand is too weak for a two spade opening bid, and too strong for a one no-trump opener. The jump to three no-trump on the second bid permits north to bid slam if north has more than just a mediocre hand.

The Play

The opening lead is the queen of clubs, which south takes with the ace. Declarer now sees that, in order to make the contract, he needs four diamond tricks. In order to take these tricks, two conditions must be fulfilled:

1. The six outstanding diamonds must be split equally between the two defenders;

2. Declarer must have an entry to dummy's hand.

Obviously if south leads the ace and king of diamonds and then follows with a low one, he will be able to set up the suit, but he will never be able to play his remaining diamonds. The method, then, is to let the defenders take the first diamond trick.

After this is done, declarer will be able to lead his last diamond to dummy, where the ace and king will clear the suit, and the last two cards will be good.

These four diamond tricks plus south's three aces and two kings add up to the necessary nine tricks.

THE SPACE BEAVER

by Al Lewis

After a brief slack period, the science fiction book business is again booming, with nearly a dozen new books in the past month. A rundown by publishers:

From Doubleday we have **Solution T-25** by Theodore Du Bois, and after-the-atom thing about a superchemical weapon and two recent magazine serials, Isaac Asimov's space opera "Tyrann" from **Galaxy**, republished as **The Stars, Like Dust**, and an expanded version of John Wyndham's **The Day of the Triffids** from Collier's.

Thud-and-Blunder

Fredric Fell's offerings are: **Every Boy's Book of Science Fiction**, ed. by Donald A. Wollheim, an anthology of thud-and-blunder science fiction of about 1930 vintage, featuring such old-time stalwarts as Jack Williamson, Miles J. Breuer, Bob Olsen, and the like.

The Four-Sided Triangle by William F. Temple, the first American edition of a highly-regarded English tale concerning two men in love with the same woman. They create a robot duplicate of the woman to solve their problem. Then the woman—or is it the robot?—commits

THE SQUARES' CIRCLE

(Editorial Note: The following letter was received by the editor of the Tech last week in all seriousness and has not been changed, even for the spellings. We thought it might be of interest to any similar aspiring scientists on campus as an incentive to further research.)

1411 W. 7th St.
Los Angeles 17 Cal.
April 14 1951
California Inst. of Technology
1012 California
Pasadena Cal.

Dear Sirs:

This is to tell you that I have discovered a new type of light unit, ray, or method of utilizing a particle of light already known and named. This unit of light becomes visible to the eye under the three following conditions. First, within a range of temperature between one and two hundred twelve degrees Fahr. Second, by the use of reflected light from another source. Third, this new particle becomes visible on a dark background by the appearance of small units or particles of light radiating outward very rapidly from a central point.

Because this radiant action of the particles? are visible to the unaided eye, I am of the opinion that this phenomena can be recorded on film and projected in moving pictures in order to study this action advantageously.

Since I am not a well known scientist, I suggest that you introduce me to a better known party that is interested in radiant energy and share the honors, provided this light unit proves to be of value to science.

Will call if you are interested.

Yours Truly,
ARTHUR DIX.

wrote a number of works for guitar, especially for his friend, Mr. Segovia. Also on the program will be the first Los Angeles performance of Ernst Toch's "Madrigal" for String Quartet.

Los Angeles Music Festival

As a final word, we must remind our readers that there are yet many fine musical events to come. For example, the Los Angeles Music Festival at Royce Hall on May 29, June 5 and 12, will present concerts by the Los Angeles Festival Orchestra under the direction of Academy Award Winner Franz Waxman.

Featured works will be the Verdi "Requiem," and first Los Angeles performances of Bernstein's "Age of Anxiety" Symphony, and Mahler's Third Symphony.

The last Chamber concert sponsored by the Los Angeles Music Guild will feature the world-famous guitarist, Andres Segovia, with the Paganini Quartet, at the Wilshire Ebell Theater next Thursday evening.

The varied and interesting program will include Castelnuovo-Tedesco's Quintet for Guitar and Strings. The Italian composer



Sunday morn. H-m-m-m.

Drab, Drab

Appropriately enough, last Friday the 13th turned out to be exchange night for four houses. Frank "Better None Than Few" Ludwig envisaged the sad spectacle of merely 18 Oxytines gracing the proposed Dabney exchange, heaved a poignant sigh and called the whole thing off. This allowed Goerke to go to Pomona with a clear conscience and allowed the rest of the wolves to go to Jackson's a little earlier.

But Blacker, Throop, and Ricketts opened their doors wide to the night winds, and exchanged. The brothers Sokol, Verdier, and "she'll be ready in five minutes" Kitching, plus others, showed at Throop, insuring an interesting evening with local talent. Ricketts had a postcard exchange, and Blacker dealt with Whittier.

Social Charm

Blacker's exchange was about as alive as the morgue during a mortician's holiday. Both men and women slithered through the darkness, not trusting themselves to speak. "Soup Pot" Orville took a femme on the standard campus tour, while Welch again pinned corsages on the girls. Cuse greeted the hard-working Whittier social chairman with a hearty "UGH!" and took off for Ricketts. And at midnight, just at the time when Cinderella turned into a pumking, Boppert took four sleeping girls back to Quaker town.

Root Beer Orgy

The Ricketts exchange was at

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Chuck Benjamin, Editor-in-Chief

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FACULTY ADVISER

Prof. G. R. MacMinn

least gay, with the participants at various stages of hilarity. Sooner or later, almost everyone showed up in Ricketts, and the root beer flowed like wine. Pete Price wound up the evening with a tall, sultry woman, and a trip to Fisher's. Babe Karasawa and Marv Hyman rat-raced around a blonde siren. Hanna looked in, shook his head, and went down to San Diego. And that was the evening.

Smile, Please

Saturday night came the clash of giants, the Annual Dabney-Ricketts Brewery Ball at Mountain Oaks. It was the same thing, but with a new twist—this time it was photographed. The bright lights discouraged the cosmopolitan atmosphere that usually prevails at these functions, and practically blinded the combatants in the Acme Trophy struggle.

Dabney Bettors Bottles

Dabney won, spilling nary a drop on their natty green house coats, while the Ricketts crew sudsed out about a man behind. Comments were heard on the

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1851-1951

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FPCI has two new books. **The Toyemaker and Others** by Raymond F. Jones is a collection of fair-to-good novelets, mostly

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Thindlads Top Poets 69-62 In Close Meet

**Beavers Win In Distances, Field;
Pomona Meet Here This Friday**

It had to happen sometime, and at last the Tech track team won a meet, aceing out Whittier 69-62 Saturday. The weather was ideal, the track in good shape, and Bert's boys bounced back from the trouncing by Oxy in fine shape.

The meet was a coker down to the final wire. Tech took a 6-3 lead with Mason's win in the mile, but couldn't stem the tide of the 440, 100, and 880.

Field Events Score

When the field events started to roll in, however, Tech crept up, finally in the discus, Mason's win in the two mile, and Waid's win in the broad jump.

Two Point Lead

At this point Tech was ahead by two points and needed three to cinch the meet. Inspired by the thought, Kliegel, Irwin, and Waid swept the lows to put the meet on ice. Fortunately, we didn't need the relay.

Outstanding Marks

Other outstanding marks were Middlebrook's 160' 4½" in the javelin, closely followed by Stefaniades, and Tautz 12' vault, followed by Riggs. Bill Irwin also turned in a creditable 16.8 in the high hurdles.

Pomona

Tomorrow afternoon, rather than Saturday, Tech will meet Pomona. The teams are almost

(Continued on Page 4)

Buttin' In

by Butler

On Monday afternoon Tech had the distinction of appropriately mixing science with athletics. The incident revolved around the now-perennial discussion of whether a pitcher really throws a curve or is the batter a victim of an optical illusion?

Any Doubters

If anyone still doubts that a man can toss a curve ball, there are some 200 guys on campus who witnessed Norm Gray pitch several curves while cameras recorded the throws for posterity.

How Started

It seems that this sudden interest in curves resulted from an argument between Grad Student Ed Kurtz and Dr. Eugene Cowan. As a good physicist, Dr. Cowan was sure that curves are

(Continued on Page 4)

Netmen Lose To Oxy, Beat Poly

The fourth week of the term brings L.A. State and Chapman here for tennis matches. L.A. State met Tech at 3:30 yesterday and Chapman will play the second round of the conference with us Saturday at 1:30 p.m.

Practice

Caltech's Beavers defeated Cal Poly 5-4 in last week's practice match. Since this match was played in the middle of the week when labs conflicted, it proved to be good practice for those holding lower positions on the Varsity ladder.

Singles—

Frank Belmont (CP) def. Jim La Fleur (CT) 6-3, 6-1.

Henry Goerke (CP) def. Marv Hyman (CT) 6-3, 6-1.

Tom Emery (CT) def. Wally Henke (CP) 8-6, 6-0.

Dick Ireland (CT) def. John Wilson (CP) 6-3, 7-5.

Fred Howarth (CP) def. Bob Wood (CT) 6-4, 6-1.

Clare Markey (CP) def. Alex Dessler (CT) 2-6, 6-4, 10-8.

Doubles—

La Fleur-Baier (CT) def. Bellmont-Henke (CP) 6-4, 6-2.

Emery-Ireland (CT) def. Goerke-Wilson (CP) 6-4, 6-4.

Wood-Hyman (CT) def. Howarth-Markey (CP) 4-6, 6-1, 6-1.

Close Match

Caltech gave Oxy a good fight

(Continued on Page 4)

Baseballers Win Over Chapman

The Varsity baseball team coasted to a 15-9 victory over Chapman last Saturday. Winslow started on the mound for Tech. He pitched good ball for three innings, when Hedrick took over. Winslow gave up four hits, but only one run. Hedrick gave up five hits and two runs in the three innings he pitched. Gray pitched the last three innings of the game, allowing only three hits, but the team did not give him any support and Chapman got six runs.

Fast First Inning

The Beavers started right off in the first inning by scoring nine runs. In that inning the Tech team got seven hits, while Chapman made two errors. The first eight men were up before there were any outs.

The game went along very smoothly as far as our defensive play was concerned until the sixth inning when two substitutions were made and the rest of the team was shifted a little. Up till this time they had made only three errors, none of which let in any runs.

Poor Eighth Inning

From the sixth on the team made eight errors. Five of these were in the eighth inning when Chapman got six runs.

Whittier Saturday

Next Saturday the Varsity will take on Whittier there. We hope to see them get another league victory that day.

Golfers Still Seeking Win

Pomona, with what is reported to be its strongest golf team in many a year, ignominiously whipped the Beaver golfers in a match held Saturday at the Redhill Country Club. Outscoring the Techmen 16½-1½, the Sagehens ran into little trouble.

This week's match finds the clubswingers meeting Whittier at the Hacienda Country Club Friday at 1:30.

PASADENA BOWLING COURTS

970 East Colorado

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Swimmers Versus

Oxy On Friday

Tankmen Outswim Redlands, Try For Conference Championship

By Jesse Weil

Tomorrow afternoon in Oxy's pool the two most powerful swim teams in the SCIC will meet to decide the conference championship, or at least a share of the top place. Final results in the championship race will depend on the second Oxy meet, to be held a week and a half later.

Both teams have defeated all other conference competition by similar scores. A comparison of times shows the Beavers to have

definite edge in the sprints and relay. The Tigers are strong in the back, breast and medley, while the distance races are fairly even. The winner will have to fight hard for his victory.

Three Wins

In the last two weeks the aqua-men have taken three conference meets, all by large scores. A week ago Friday, Redlands fell by the score of 51-24. Tech took all the first places but those in the diving and the backstroke.

The only close race of the whole meet was in the backstroke, won by Jim Bleeker of Redlands in 2:42. Weil of Tech went out fast in his first 100, building up a yard lead, but Bleeker came through with a terrific last length kick to take the record.

Poets Whipped

The following Tuesday Whittier came up here, only to receive a 60-15 shellacking. Reserves replaced many of the regulars in the line-ups, but still the Poets could do nothing more than a first in diving and a couple of seconds.

Redlands Again

Everyone had a field day at Redlands last Saturday, with almost every member of the squad turning in his best time of the season. Again the Beavers won, this time 55-20.

Improve

Houser was astonished that he had cut eight seconds off his 440 time when he wasn't pushed and "felt lousy" besides. Connor was gratified at finally breaking three minutes in the breaststroke. All in all, it looked like a good premonition for the big one with Oxy tomorrow. See you there. Results:

Caltech, 60; Whittier, 15
Medley: Caltech (Ogilvie, Reed, Cagle)
3:53.3.
220: Houser (CT) 2:37.2.
50: Libbey (CT) 26.2.
Diving: Gillies (W).
100: Libbey (CT) :02.4.
200: Baier (CT) 2:52.9.
200 Breast: Reed (CT) 3:06.9.
440: Houser (CT) 5:57.0.
400 Relay: Caltech (Haire, Cagle, von Herzen, Libbey) 4:24.1.
Caltech, 55; Redlands, 20.
MEDLEY: Won by Caltech. 3m. 29.3s.
220 FREE STYLE: 1—Von Herzen (CT);
2—Houser (CT); 3—Luley (R). 2m. 34.4s.
50 FREE STYLE: 1—Libbey (CT); 2—
Perry (R); 3—Haire (CT). 25.7s.
DIVING: 1—Oosterhouse (R); 2—Stanaway (C); 3—Merton (CT).
100 FREE STYLE: 1—Von Herzen (CT);
2—Libbey (CT); 3—Perry (R). 58.2s.
BACKSTROKE: 1—Connor (CT); 2—
Reed (CT); 3—Schmidt (R). 2m. 59.3s.
440 FREE STYLE: 1—Houser (CT); 2—
Scott (R); 3—Wymer (CT). 5m. 49.7s.
RELAY: Won by Caltech. 4m. 4.8s.

Campus Interviews on Cigarette Tests

Number 17... THE OWL

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—so what?"



"Speoty cunicularia" — Speo, for short, majors in the classics. But in this case, he's dropped his Latin leanings and slings American slang with the best of them. He comes right out "cum loudly" whenever he voices his opinion on these quick-trick, one-puff cigarette tests. They're a snub to his high I.Q. He knows from smoking experience there's just one intelligent way to judge the mildness of a cigarette. It's the sensible test . . . the 30-Day Camel Mildness Test, which simply asks you to try Camels as a steady smoke — on a pack-after-pack, day-after-day basis. No snap judgments needed. After you've enjoyed Camels — and only Camels — for 30 days in your "T-Zone" (T for Throat, T for Taste), we believe you'll know why . . .

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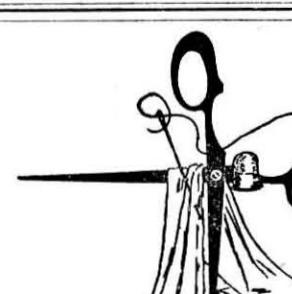
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MEN'S WEAR

Music Theory Class Instituted at Tech

The newly created music classes taught by William Kline will meet once a week at 4 and 5 o'clock on Tuesday afternoons.

Mr. Kline is from East Los Angeles Junior College and also directs the student orchestra on Wednesday nights.

Classes at 4 and 5

The beginner's class, which is at 4, will study the basic fundamentals of music—the scales, simple harmony, etc. The 5 o'clock intermediate class will study slightly more advanced material.

Although no credit is given at present, students hope that in the future these may become accredited courses.

25 at First Meeting

The first meeting of this course was last Tuesday afternoon, with 25 in attendance. Instruction started with elementary notation. At 5, all but the advanced group left and the discussion turned to minor and major scales and triads.

Prerequisites for the advanced group are knowledge of notation and some understanding of minor and major keys, scales and triads.

SYNCHROTRON

(Continued from Page 1)

The magnet will have to set up 5000 gauss to do this.

Billion E. V. Planned

The present power supply is only capable of whooping up 200 gauss and 20 million electron volts, but future plans set the final synchrotron ratings at a full billion electron volts.

PUBLIC SPEAKING

(Continued from Page 1)

make talks to their fellow workers on practical problems related to their jobs.

However, while the films are intended for such use, emphasis is almost entirely on teaching such workers simple techniques of public speaking which are of considerable value to everyone.

Hour and a Half

The showing time of the preview will be approximately an hour and a half. The six subjects, all of which will be dealt with in Thursday's showing, include the following: "The Power of Speech," "Butterflies in Your Stomach," "The Key to Good Speaking," "On Your Feet," "Now You're Talking," and "Making Your Speech Pay Off."

THINCLADS

(Continued from Page 3)

evenly matched and a good meet should result.

100: 1—Konzelman (W); 2—McQuarrie (W); 3—Kershner (W). 10.4s.
220: 1—Smith (W); 2—LaTourette (C); 3—Lawrence (W). 23.2s.
440: 1—Smith (W); 2—Lawrence (W); 3—LaTourette (C). 52.4s.
880: 1—Jones (W); 2—Aagaard (C); 3—Parnet (C). 2m. 3s.
MILE: 1—Mason (C); 2—Waltmire (W); 3—Dickenson (C). 4m. 38.8s.
TWO MILE: 1—Mason (C); 2—Waltmire (W); 3—Pilkington (C). 10m. 16.6s.
120 HGH HURDLES: 1—Irvine (C); 2—Kriegel (C); 3—Doane (W). 16s.
220 LOW HURDLES: 1—Kriegel (C); 2—Irvine (C); 3—Wain (C). 25.8s.
JAVELIN: 1—Middlebrook (C); 2—Kershner (W); 3—Stefanides (C). 160ft.
4½ in.
SHOT-PUT: 1—Green (W); 2—Heacock (C); 3—Woody (C). 40ft. 1in.
POLE VAULT: 1—Taft (C); 2—Riggs (C); 3—Knudsen (W). 12ft.
DISCUS: 1—Woody (C); 2—Heacock (C); 3—Craven (W). 123ft. 1in.
BROAD JUMP: 1—Waid (C); 2—Konselman (W); 3—Macrorie (W). 21ft. 9 7/8 in.
4-MAN MILE RELAY: Whittier, 3m. 32.9s.
FINAL SCORE—Caltech, 69; Whittier, 62.

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Open Evenings

ACS Chapter Elects Officers, Gets Smog Clue

At the regular monthly meeting of the American Chemical Society student chapter, the following officers were elected for the coming year: Henry Richter, president; Rodger Baier and W. T. Webber, vice-presidents; Dick Kriger, secretary, and Steve Rawn, treasurer. A talk was given by Dr. Haagen-Smit of the biology division on "The Chemistry of Smog."

Student Regional Meeting

An announcement was made concerning the coming student regional meeting to be held at UCLA Saturday, May 5, afternoon and evening. This meeting will feature student speakers from the participating schools (Caltech, Occidental, Pomona, USC, and UCLA), and an address by Dr. Pauling in the evening on "Recent Advances in Structural Chemistry." The chapter will be represented by Jim Ibers, who will talk on his own research project.

A committee was formed under the chairmanship of "Moose" Levy to write a new constitution for the group.

FROSH SPORTS ROUNDUP

(Continued from Page 3) broad jump, and seconds in the high jump and high hurdles. Other top scorers were Kirkpatrick and Munn with 13 1/4 and 11 1/4 points respectively.

Munn's 23s. flat 220 is the best time record in a Tech conference meet this year, and Gene Kaiser's shot put of 38' 10 1/8" is his best effort this season and is 8" better than the winning put in the Oxy Relays.

Swim Meet Close

The frosh swimmers traveled to Redlands on Saturday, only to lose, just as they did the week before, by the margin of a few yards in the last relay. The final score was 31-25.

Diamondmen

A hapless baseball team fell before Pomona last Wednesday, 8-1. The game was marred by eight Tech errors. However, Bob Salkeld is to be commended for his fine pitching. He struck out 10 men and, while walking but 3, allowed only 7 hits.

That's all for last week. Now let's get out there and support the track team against Pomona this Friday.

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SY. 3-1853



Dr. Eagleson Hosts Y Fireside

Last Sunday evening the first Y Fireside of the term was held at Dr. Harvey Eagleson's home. So much enthusiasm was aroused for the affairs that another Fireside with another prominent faculty member will be held next Sunday.

The Y has planned to have some excellent speakers this coming week at the luncheon clubs. Oliver Prickett of the Pasadena Playhouse will be the guest of the Frosh Luncheon Club meeting Tuesday noon.

Wednesday noon, Dr. George Hedley, chaplain of Mills College, will be the guest speaker for the Graduate-Faculty Luncheon Club. Dr. Hedley will also be the guest of the undergraduate group meeting at 7:30 that evening at the Y residence, 391 So. Holliston.

Thursday evening, the Y Cabinet will meet as usual at 7:15 at the Y residence.

NETMEN

(Continued from Page 3) last Saturday but was defeated 5-3. Baier-La Fleur did not get a chance to impress Occidental with their new base-line technique, because the match was called on account of darkness. Palmer Smith came up against the No. 1 man of the conference, Jack Simpson, and managed only one game per set. Our three wins are credited to Jim La Fleur, Berk Welch, and the Welch-Emery third doubles combination.

Eager

The match got a late start because both teams were overanxious to play each other. Oxy came over to the Caltech courts and impatiently waited for the Tech men, who were in the same situation at Oxy's courts. After thorough diplomatic dissertations, the match got underway on Oxy's courts.

CAMPUS BREWINS

(Continued from Page 2) spectacular bottle work of the Darbs, but several members of the team were noticed nervously polishing off evidence as the race ended. Flamers ended in a tie with four class A's on each side.

In His Finals

Ted Polk, making his final appearance with the Rowdies, was in top form, and Charlestond until the very foundations shook. A most ebullient evening. However, the Head Dabney Crew Trainer never did show up at the dance, being sacked out following a Whittier date followed by a night of poker. Stewart of Dabney made it to the dance, and was observed to have spent a pleasant evening among the fumes.

Class

In Blacker, things picked up considerably with a theatre party. Einwohner got caught with a woman in the alley; Peyton had a date, and Pyatt effected a reconciliation at Oxy.

Sanford (By God, I'm going to grad school) Sweet has been dating the daughter of the President of Boston University. Guess where he's going to school.

Off Campus

Big extra-curricular function of the week was Chuz Howard's cocktail party. Bumb was there, and Hefner and Stefanides stopped by on the way to the Oxy formal. Stef drank ginger ale in honor of his girl's being elected Fang Queen. (The Fang, to you who don't know, is a cheap piece of copy sadly behind the leader in the field, Caltech's own HOT RIVET.)

???

Mason was seen making sandwiches for a mountain trip for two Thursday night. He was seen dragging in from the hills Friday noon. What goes on?

Rumors have it that Pilkington bought two things this weekend . . . a marble headstone and a motorcycle.

THE SPACE BEAVER

(Continued from Page 2) from *Astounding*, which includes: "The Toymaker," "The Model Shop," "The Deadly Host," "Utility," "Forecast," and "Children's Hour."

The Undesired Princess is one of the best of L. Sprague de Camp's superbly logical fantasies from the old *Unknown*. It tells the story of a modern businessman kidnapped into a fairytale kingdom in a parallel world, which parallel world is governed by strictly Aristotelian logic. Once there he defeats a dragon, wins the hand of a fair princess, and, of course, half the kingdom at boot. But all the hero wants to do is get home.

The princess is good (which means she is very, very good) and intelligent (she wrote an encyclopedia) and she gives the hero an inferiority complex. So he sets out to find the one man who can return him home, gets into scrape after scrape, and acquires kingdoms right and left. Eventually he winds up with the whole works. Also included is a short story, "Mr. Arson."

Moon-Rocket

From Fantasy Press comes the long-delayed *Dreadful Sanctuary* by Eric Frank Russel, one of the best science-adventure stories of recent years. It concerns one John J. Armstrong, millionaire backer of the 18th moon-rocket (the first 17 were failures) who gets the idea that someone has been sabotaging rockets.

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Richard G. Jackson (left), B.S. in Ch. E., Columbia 1942, and Gregory L. Laserson, Ph.D. in M.E., Columbia 1949, test an Infrared Gas Analyzer which may be used to continuously analyze and control any infrared absorbing gas in a mixture.



Fred R. Studer (left), B. Met. E., Rensselaer Polytechnic Institute 1950, examines a Pressure Strain Recorder with Allen R. Furbeck, E.E., Princeton 1939.

When the plant was being designed, engineers were aware of the importance of detecting accidental contamination of the cooling water. In fact, the whole question of getting into production hinged on the problem of dealing with plant effluents.

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from ultraviolet gas analyzers and multivariable recorders to nylon denier gages—play a vital part in improving production methods. Many of them not only "observe" continuously, but automatically correct anything that goes wrong.

Research engineers at work

The term "research engineer," by the way, is a loose one. It may refer to an electronics engineer working on a new photo-multiplier circuit—or a physicist using his optics and spectrophotometry in designing a color-matching instrument. It may cover the activities of a physical chemist developing a continuous turbidimetric analysis—or a mechanical engineer evaluating a pneumatic servomechanism.

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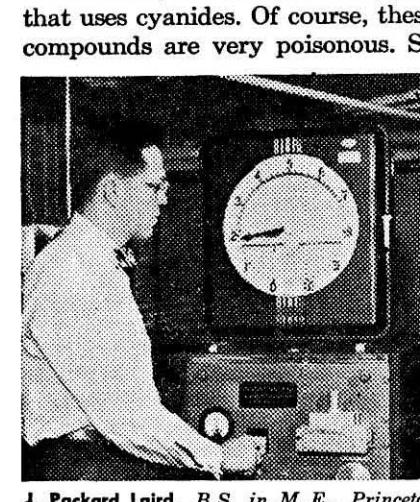
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