

Bring me

The CALIFORNIA Tech

Brown's pants

Volume LXXVI

Pasadena, California, Friday, November 8, 1974

Number 7

Senior Oak Very Ill; Plans Made to Save

by Alan Silverstein

The old Engelmann Oak Tree between Gates and Dabney is in serious trouble, which you may have noticed if you have a habit of walking into barricades. A large area around the tree has been cordoned off since Monday morning, which as the posted notices explain is due to the imminent danger of the oak toppling over. The action was taken on the recommendations of Dr. Hudson and Dr. Housner of Engineering, who warned Physical Plant on October 28 that the situation was considered to be an emergency and that the tree could fall at any time.

The oak is actually suffering from three separate and probably unrelated conditions which were first noticed several weeks ago. Most seriously, some of the upper limbs are infected with a fungus identified by the Soil and Plant Lab Co. as heart rot, which leads inevitably to slow death if untreated or too far advanced to be cured. All that can be done is to remove the affected limbs; the extent of the infection will not be known until this is accomplished.

Inspection of the tree revealed that it also has oak root fungus girdling the crown. The J. Harold Mitchell Co. reported that the disease is well-developed and advanced, but that the oak is probably not injured fatally or seriously. The fungus occurred because for many years the crown has been buried three feet below ground, a situation that is conducive to root fungus growth. It was suggested that the infected tissues be removed surgically and that in the future the crown be left exposed to air.

As if that were not enough, the old oak has developed a

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THE ENGELMANN OAK TREE is undergoing exploratory root surgery and other treatments after the recent discovery of its diseased condition.

60th Annual Dirt Spree

Mudeo To Redeem Sophs?

by M. Teintze

The sophomore class will have its chance at a comeback this weekend at the 60th annual Caltech Mudeo. The event will be held this Sunday at 1 p.m. on the vacant space, east of New Mudd (fill in your own pun here—it will probably be better than anything we can produce).

Last year's freshman class, it will be remembered, were defeated in what must have been the first impartially-judged Mudeo in many years, although possibly not the last. It will, of course, be the job of the freshman class to see that the sophomores do not make up their loss.

For all you uninformed trolls, the Mudeo is an annual contest, held between the Freshman and Sophomore classes, in one of the most dirty, slimy, messy, wet, God-forsaken places imaginable. Various individual events are traditionally held. They include a

tug-of-war (the object being to pull the opposing team through the pit) a relay sack race, a wheelbarrow relay race, a horse-and-rider event (equally self-explanatory) and a Mudeo Queen and Princess leap-frogging event (the girls from each class) and the grand finale tire spree (accumulation of the largest number of valuable black toroids).

The winning class will be that

Severe Emergency Stumps Tech Editors

As the dreaded deadline doom approached yesterday afternoon, the editors of *The Tech* suddenly realized that absolutely nothing had happened this week that deserved to get the lead news article slot. Efforts were begun to create an event.

Unfortunately, David Smallberg refused to commit suicide. He did point out that there was an earthquake in Altadena that nobody'd felt—because it was only 3.2 on the Richter scale. Careful research uncovered the fact that some rocks at the Throopside are to be manmade,

which is aesthetically unpleasant, and which prompted the letter on page two, but which really doesn't deserve to be on the front page.

After careful consultation with each other, the editors realized that not having a lead article was news! Absolutely nothing newsworthy happened on campus this week (or if it did, it was hushed up so fast nobody found out about it).

Maybe next week.

Math Prof Elected To Royal Dutch Scientific Academy

Dr. Wilhelmus A.J. Luxemburg, professor of mathematics and executive officer for mathematics here, has been elected a corresponding member of the Royal Academy of Sciences of Amsterdam in the Netherlands.

A native of the Netherlands, he received his PhD from the Technological University of Delft. He was a postdoctoral fellow of the National Research Council of Canada at Queen's University, Kingston, Ontario, and on the faculty of the University of Toronto, Ontario, before joining the Caltech faculty in 1952.

Y Copier Thieves Techers?

by Jim Schlaffer

Since October 2nd, the Y workshop, located upstairs in the Winnett Center, has boasted a new Xerox copier, available for campus use at six cents per copy. During the first 28 days of its operation, 4766 copies were made, of which a whopping 1000 copies went unpaid for. Either

cash was actually stolen from the money can or copies were not paid for at all.

The Caltech Y Office Services Committee met on October 29 to deal with this alarming situation. It was decided to require that all copies made after office-hours be charged in order to eliminate thefts from the money can. Further, if the thefts continue, i.e., if members of the Caltech community continue to make copies without recording their name, the number of copies and the account to which it is to be charged, the after office-hours usage of the machine will be discontinued entirely.

This is a clear case of a few
Continued on Page Three

MUSICAL?

Auditions for the 1975 ASCIT Musical will take place tomorrow November 9 in 25 Baxter from 10 a.m. to 9 p.m. If you are interested in being a cast member, in the orchestra, or on the staff or crew, please come to 25 Baxter sometime Saturday. We need singers and actors, (there are non-singing roles in the production), a full orchestra, and lots of help with sets, costumes, props, etc. All faculty, staff and students are welcome. If you have any questions, please call Flora Boyer x2157.

News Briefs

Inoculate Now, Avoid Rush

The Health Center reports that flu inoculations are still being offered and are now available to spouses of employees. The charge is still \$2.00 for each person payable at the Health Center. There is no charge for students presenting their identification cards. The Health Center is open Monday through Friday on a 24-hour basis and Saturday through noon.

If you have any questions, call the Health Center on extension 2394.

Caucus Your Heart Away

All registered Democrats are invited to attend two party caucuses to be held tomorrow at 9 a.m. The caucus for the 22nd Congressional District will be held at the New revelation Baptist Church, 855 N. Orange Grove, Pasadena and that for the

26th Congressional District will be at Monrovia High School, 845 W. Colorado, Monrovia. For further information call 790-0490 or 794-1284.

Tanketta Tank Tank

There will be an armor miniatures simulation game this Saturday evening at 7:30 p.m. It will be in Dabney Hall Lounge, unless Cowan blew it again. Bring your own armor-piercing shells.

Sunday Afternoon In a Jugular Vein

The battle of the bands will be going on this Sunday, November 10th, from 4-5:30 p.m. in Dabney Lounge. Under the auspices of the Caltech Y, the CIT Jazz Band, the CIT Jazz Sextet, and the CIT Dixieland Band (also known as Yul Gibbons and the Wild Hickory Nuts) will be

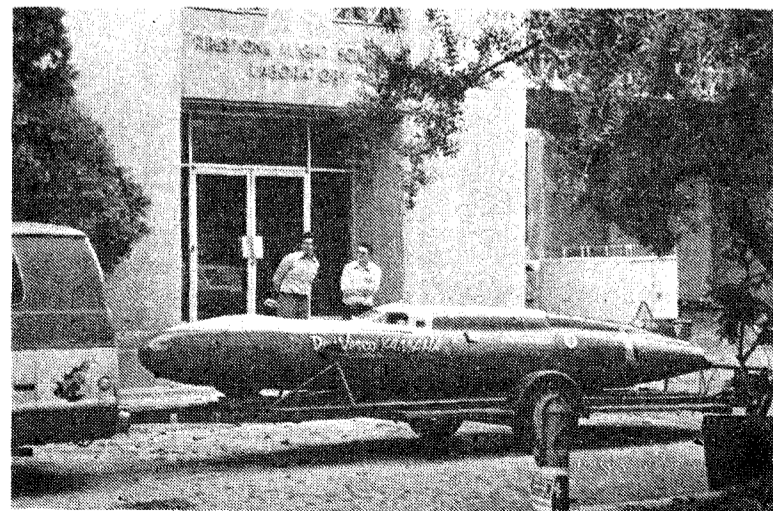
providing some very good sounds.

Clubbing Bridge

If your name has an e or an a in it, and you can play bridge, come to bridge club! Meetings are at 7:30 Saturday evenings in Winnett. Bring your friends, dogs, homework, etc.

More Stimulating Organ Concerts

Jon Gillock will present the West Coast premiere of Olivier Messiaen's *Meditations Sur le Sainte Trinite* on the organ at All Saints Church, 132 N. Euclid Ave., Pasadena, at 4:00 p.m. Sunday, November 8. M. Gillock's debut of the work last fall was hailed as a virtuoso performance of the finest contemporary organ music. Don't miss out on this fine concert!



HIGH SPEED MOTERCYCLE designed using Caltech wind tunnels was displayed on campus last week. Photo by Rich Feldman

Lunch with a Scholar

Philosophizing On Science

by James Llewellyn

The second of the YMCA-sponsored Tuesday Luncheon Discussions featuring Sir George Porter, a Nobel laureate in Chemistry, was a complete success. The purpose of these discussions, to allow a free interchange of ideas between students (and faculty) and the visiting Fairchild Scholar, was achieved. The only complaint voiced by anyone was that the lounge was too small to hold all the people who showed up, approximately thirty of them.

The hour started off with a short introduction by Sir George Porter on the topic to be discussed, "Has Science Any Limitations?"

Sir George started by trying to define science, no mean feat. Basically, he said science is knowledge and pursuit of knowledge, however trivial it seems. This includes understanding what has been discovered, not just cataloguing it.

Next Sir George tackled the "why?" of science. He divided it into two parts. First is the goal of better manipulating nature. This includes economics, politics, and all technological sciences. Secondly, and more importantly, was to discover a meaning to life. Sir George considered all of science as aiming at this goal in the long run.

Sir George then listed several possible limits to science, and gave reasons why they were not actually limits. "No contact with the arts" is a popular criticism of science. This is not really a limit, he explained, as science deals with preprogrammed results. After all, anyone can repeat a correct experiment over and over, but two people producing the same painting independently is highly unlikely.

Another limit proposed was that science cannot prove anything exactly. Sir George, in response, explained that science is an approximation, but one that rapidly diminishes its error. It gets closer and closer to the actual truth.

The last limit brought up was about insuperable barriers. These are questions that science can

never answer. Sir George said that he didn't believe that there were any, but one must take this on faith, and hope that there are not.

A discussion followed in which various views were expounded concerning limits of science. One point brought up was the difficulty inherent in trying to define what was meant by "a purpose in life." No consensus was reached.

Next the attention switched to the question of whether or not art and science were related, and if so, how. There were as

many opinions on this point as people speaking.

Lastly came a discussion on whether moral codes could be derived from science, since it was searching for the purpose in life. Sir George mentioned that a true moral code would be one which dictated human behavior in agreement with man's reason for existence.

The discussion was enjoyable, and enabled many people to meet Sir George Porter, and to discuss with him some of the unanswered questions of our time.

Campus Colloquy

Are The Liberal Arts Justified?

by Paul A. Freund

(Paul A. Freund is perhaps America's most distinguished legal scholar. Professor Freund, a constitutional lawyer and historian of the United States Supreme Court, is the author of The Supreme Court of the United States and On Law and Justice. He is past president of the American Academy of Arts and Sciences, and is presently in his thirty-fourth year as Professor of Law at Harvard University.)

Education was once defined by John Maynard Keynes as "the inculcation of the incomprehensible into the ignorant by the incompetent"; but we know that this is a gross canard, because students today are far from ignorant. Are they wise as well as knowing? The student generation insists that learning must be pertinent to their immediate personal problems, to their search, in the current phrase, for their self-identity. This attitude, it seems to me, is one of maturity insofar as it rejects the self as the center of the universe. For we learn to know the self by transcending it. We apprehend the immediate in all its fullness through the light of perspective.

To put the issue more concretely, how can we justify our immediate immersion in the arts and the humanities as something more than a taste for the decorative embellishments of life

which are as irrelevant and incongruous at this hour as Victorian bustles would be in a crowd of mini-skirts? How can a liberal education help to cope, for example, with two of the principle domestic crises of our time—the crisis of the power of confrontation and the crisis of the power of technology?

First, consider the power of confrontation as a form of protest, a reflection of the spirit that demands which have not been heard can be made to be felt, that rational discussion is no longer fruitful and the way to achieve ends is by the force of physical coercion. I do not mean to pursue the theme of civil disobedience, beyond observing that direct disobedience of a morally repugnant law on ground of conscience ("I can do no other") is a less complex moral problem, for all its anguish, than a decision to disobey unrelated laws as a form of political pressure, where the prudential aspects of the choice become highly important. Nor need I labor the point that society will not condone lawlessness whether it occurs on the campuses or in the streets.

But there is a deeper question. Although to suppress these movements is not too difficult as a

Mr. Gul Agha's reply to Dr. Newton's article on word meanings was most interesting and well written, but dangerously unclear to me and doubtless many more readers. I quite understand and totally agree with the concept of word meanings existing out of convention; this convention of word meanings is called language and is the primary vehicle of communication between people.

But as we move on, I read how words such as thief and murderer have acquired negative connotations based on naive notions of "good guys and bad

guys." Am I to consider such connotations to be the result of a "sad neurosis of civilization" and "pathological possessiveness?"

Certainly I am misunderstanding the article. I cannot conceive of the negative connotations of murder being the result of naivete. And yet, in the last paragraph, we are exhorted to change an obsolete moral code with denies basic human dignity. I am certainly in favor of this, but am I to grant the same dignity to Hitler and Stalin that I do to responsible, compassionate human beings?

I truly hope Mr. Agha does not mean what I fear he does; I hope that I am "missing the point." In any event, future clarification is certainly needed here. Let us have more light on the subject—please!

—Dick Beatty

Synthetics Strike The Campus Again

Does the Campus Architect have rocks in his head? Why, after the successful protest against the Throop site being a sterile cement atrocity, do we have to have the site desecrated by artificial rocks made of cement? We got rid of the plastic flowers in the cafeteria. Do we need a fake outdoors in the center of the campus? Doesn't any geologist have an extra rock—even a big one?

—Name withheld by request

The CALIFORNIA Tech

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THE ASCIT FRIDAY NIGHT MOVIE

Pretty Maids All In A Row

7:30 p.m. & 9:30 p.m.
in Baxter Lecture Hall

Admission: 50¢—ASCIT members and their guests; \$1.00—anyone else

NEXT WEEK:

Take The Money and Run

Seismo Lab Makes It To Campus After 17 Years

The end of an era came when the California Institute of Technology's renowned Seismological Laboratory moved this summer from its old-fashioned home in the San Rafael Hills into the new Seeley G. Mudd Building of Geophysics and Planetary Science on the campus.

Some 65 Seismo Lab people, including faculty, graduate students, and staff, and much scientific equipment made the three-mile move to the new building, which, in addition to housing seismology, provides teaching and research facilities for solid-state geophysics and planetary science.

"Our operation has grown so much after 17 years in the 40-room residence that we were terribly overcrowded," commented Dr. Don L. Anderson, director of the Seismological Laboratory and professor of geophysics. "There was no question that moving was a necessity. It has always been a part of the Institute's overall plan for us to be located on the campus, and it's most helpful to be near the rest of the Division of Geological and Planetary Sciences.

"Still," he acknowledged, "leaving the old building evokes feelings of regret. There are many fond memories of the old hilltop home with its solitude, its muraled ceilings, its landscaped grounds and tennis court and its residential atmosphere."

The facility originally belonged to A. C. Thorsen, a founder of a drug store chain, and was purchased and remodeled for Caltech to supplement

the nearby Kresge Seismological Laboratory. The residence was named the Reuben H. Donnelley Seismological Laboratory in honor of the father of one of the donors.

Both laboratories were located
Continued on Page Seven

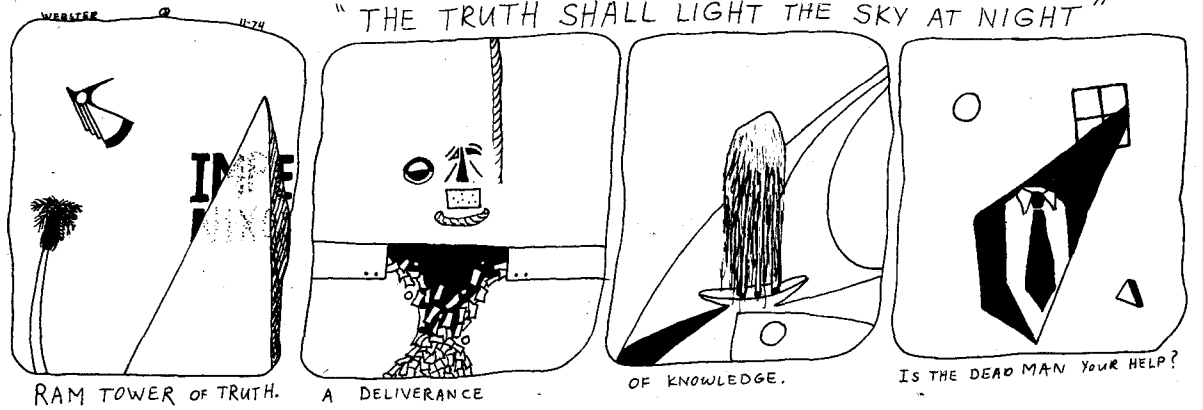
Real World Funnies

Those Who Wonder What The Future Holds. . .

by Silver Fox

After spending more than 75% of my life as a student I suddenly find myself venturing out onto uncharted seas. As everyone knows, there are a lot of differences between being a student, especially at a place like Tech, and an ex-student in, pardon my language, "the real world." Some are obvious, some less so. Many of the differences that I have found may not be ones commonly experienced by other ex-students, but others are probably nearly universal. In the hope that some part of my experiences may be of interest or amusement to those unfortunate, lucky souls not yet beyond the pale, I hereby begin the chronicles of my adventures on the other side.

I am by nature, like 99+% of humanity, an unconscionably lazy soul, with a proclivity to lie abed to all hours of the day and spend the rest of my time in such frivolous pursuits as keeping abreast with the latest in sci-fi or awakening students to the joy of the "Fear" of the Ride. (Detailed in a previous issue, that



exploit has become legendary. Ed.) Not that I have managed to more than occasionally indulge those tastes. Anyhow, it was obvious that if I were to start indulging those tastes now I would have to give up other pleasures of which I am even fonder, like eating.

So as my student days ground to a close I undertook a search for A JOB! Not just any job, of course, but one suited to my budding talents and skills as an XXXX engineer. Of course there are no jobs right now for XXXX engineers, as any newspaper could tell you. Four years at YYYY University and a year at Caltech had conditioned me to performing the impossible, however, so I was little fazed. Moreover I suspected I had an ace up my sleeve (or some equivalent metaphor): I knew from the above-mentioned newspapers and other sources that women in engineering are rumored to be much in demand. So, being one of that favored one-percent, I set forth with some hope.

More about the long saga of

my job hunt in a later issue. For now suffice it to say that I found employment as an engineer within commuting distance of Pasadena, which for some inexplicable reason is where I wanted to find a job. I finished my schoolwork toward the end of September, and the following week set forth to do battle with whatever monsters, giants and windmills awaited me in the strange world of industry, and to sample its delights. The first giant that I jostled with was getting to work at eight o'clock in the morning.

Like D&D?

This giant has turned out to bear a strong resemblance to a windmill, in spite of being a first cousin to that horrible ogre, eight o'clock classes. The principal cause of this transformation appears to be the fact that people who are employed are not expected to troll until all hours of the morning and beyond on reams and reams of homework. It is far, far easier to be someplace at ungodly early hours of the morning after a full night's sleep than after only two or three hours of sacktime, although not considerably more desirable.

The first delight I discovered involved the realization that one's employers actually expect you to stay home when you are sick. No tests for which you must drag yourself out of your deathbed or risk flunking the course. No homework that piles

up while you fight off double pneumonia and a broken leg. No pulling three all-nighters as soon as your fever goes below 100 to make up for all the work you missed. Just stay home so you don't give your germs to anybody else, and get lots of rest so you can get well and come back to work again. You even get paid while you're sick!

That brings up the biggest, and best known advantage of employment, the paycheck. Not too much need be said here. Just let me comment that it is strange to realize that you are paying more in taxes than you were earning, and living on, the year before. At the same time, expenses do go up. No more student discounts. No more wearing blue jeans everywhere. And although the health center's service is somewhat more limited than before, it is free. You win some, you lose some. Monetarily, a job wins out over school hands down, but not as much as it seems at first glance.

On that cheery note I shall start to wind down my overly lengthy monologue. Don't breathe that sigh of relief yet, however. More episodes to yet to come in future issues . . .

Copier

Continued from Page One taking unfair advantage of the rest of the Caltech community, forcing the curtailment of an indispensable student service.

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TOPICS:

"SCIENTIFIC DISCOVERY AND CREATIVITY"

Dr. John Gowan, Professor of Education, Cal State Northridge

"IMPLICATIONS FOR THE SCIENCE OF CREATIVE INTELLIGENCE"

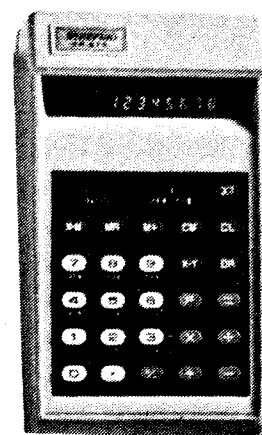
Walter Koch, Caltech Alumnus; Former Senior Scientist, Re-Entry Physics Projects, General Motors

TUESDAY, NOVEMBER 19, 7:30 p.m.

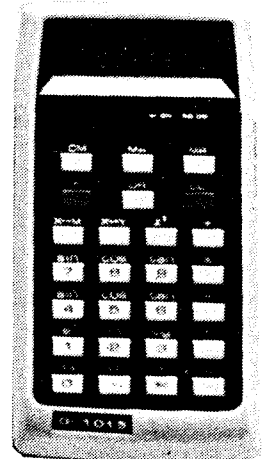
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This week the *Tech About Town* goes schizoid. In the first section we shall deal with the real world, and then in the second we shall revert to goings-on on campus.

The Huntington Library is open again, and their new exhibit is good. Very good. It is forty etchings by Rembrandt from the Huntington Bodman Collection. There is no hurry, as the exhibit runs through January, but as you may wish to see it several times, why not view it when you go down to work as a volunteer gardener in your spare time? I'm quite serious, as the Huntington is looking for some help, and it's a fine way to escape from Tech if you're into flower tops.

This weekend at the Ice House you can see the multi-talented Tim Morgon and Harold Oblong, who was half of the late and much mourned Times Square Two. Monday has Elizabeth Doubleday, soprano, and the

remainder of the week features Ian Whitcomb, humorist and ragtime pianist. Admission at the Ice House is \$2.50 Friday and Saturday, \$2 on Monday, and \$1.50 the rest of the week.

The Los Angeles Master Chorale opens their season tomorrow at the Music Center with a program featuring Brahms' "Schicksalslied" and the Faure "Requiem." Exchange vouchers are available at the Music Center to enable students to buy tickets for only \$2. At the neighboring Mark Taper Forum the sold-out production of "Juno and the Paycock" will form cancellation lines at 7:00 p.m. (1:30 p.m. for matinees) for fanatics hoping to get in through the inevitable cancellations. Also, at the Dorothy Chandler Pavilion this Wednesday (busy week they're having) the New York City Opera opens its eighth annual visit with a benefit featuring the tremendous Birgit Nilsson in Puccini's "Tosca." The season

includes twenty-eight performances of fourteen different operas, unfortunately featuring too much Puccini. Other composers do include Debussy, Monteverdi, Verdi, Strauss, and Gilbert and Sullivan, as well as Cherubini, so look into it. It is, for all its faults, well worth your time and money.

Before we proceed to the campus, a quick word for those of you who panicked last Sunday evening. Dr. Demento is now doing his show (yes, the same one) Sunday evenings from the studios of KLOS. The good doctor's unique brand of hysteria can continue to distort us all, just a bit farther along on your tuner.

It's a damn busy week at Caltech. Tonight Spectrum VII opens its production of Ibsen's "Ghosts," a true masterpiece. "Ghosts" concerns itself with both the Ibsen theme of the

inescapability of one's past and the immorality of Victorian morality. Directed by Shirley Marneus (you can compliment her in Public Affairs), "Ghosts" promises to be a polished performance worth far more than the Caltech Student admission of \$1. It plays tonight, tomorrow, and next Thursday, Friday and Saturday.

Sunday will have two concerts. One is the Coleman Concert, the Quartetto di Roma, performing the work of Brahms, Mozart and Faure. The Quartetto di Roma is regarded as the world's foremost piano quartet, and with good reason. The concert begins at 3:30 p.m. At 4:00 p.m. the Caltech Y presents in Dabney Lounge an "Afternoon of Jazz," with Bill Bing directing the twenty-piece Caltech Jazz Band, plus the Caltech Jazz Sextet and the Dixieland Band. If you know of a way to

see both concerts, do let me know.

Monday has a Watson Lecture at 8:00 p.m. in Beckman, "Seeing With an Infant's Eyes," by John D. Pettigrew, M.D., Assistant Professor of Biology here at Caltech. Friday in Beckman you can see the pianist duo of Paul Hersh and David Montgomery. They will present music by Brahms, Shubert, Carl Maria von Weber, and much of the ragtime you've lately come to love so well. Tickets are six, five, four and three dollars, with the usual twenty percent discount for Techers.

Hold on, because we're not quite done. Tuesday morning the

Continued on Page Six

NOW THRU SUNDAY

Syreeta


Jac Mason

Nov. 12-14: Love with Arthur Lee
Nov. 15-17: Linda Ronstadt

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audience

Nine years ago, Dale Wasserman transformed Cervantes' *Don Quixote* into the arresting *Man of La Mancha*. Using the vehicle of Cervantes/Quixote, Wasserman portrayed the theme of society's inability to accept the individual while affirming the ability of the persona of truth to survive regardless of the fate of the carrier. Thus Senor Quihana died, but Don Quixote lives on.

Wasserman has now written a new play which portrays *exactly* the same theme. This time, the vehicle is Ken Kesey's *One Flew Over the Cuckoo's Nest*. The result is absolutely dazzling. Gone are the obscuring romance of post-medieval Spain and the romantic characters. One finds oneself confronted with the stark realities of contemporary American society, with all the absurdities that this implies. Black humor reigns supreme in the insane asylum as the head nurse slowly destroys some very nice

people who have been led to believe they are insane, all in the name of Society's notion of sanity. Don Quixote, the American anti-hero (truly), appears as Randall P. McMurphy, a Vietnam hero discharged for insubordination, who is later committed for violence and rape, not necessarily in that order.

Mc Murphy tries to create some living space for himself and his fellow inmates and, of course, gets lobotomized for his efforts. In the process, one man dies, another is cured, and the audience becomes very involved. For the plot itself, Wasserman sticks closely to Kesey's novel. The most noticeable difference is in the character of Nurse Ratchet, who becomes more sure of herself and also more of a hard-nosed bitch.

The current production at the Huntington Hartford is an excellent one. The cast, set, lighting, wardrobe, make-up, and tech-

nicals are all that one could ask. The technicals are, in fact, extremely impressive. It is unfortunate that one cannot say as much for the sound. The fuzziness of the amplification was most damaging to Rockne Tarkington, who played Chief Bromden. His recorded soliloquies are crucial to the play but difficult to understand through the speakers.

Salome Jens is very creditable as Nurse Ratchet, supplying all the castrating pressure of society, though she does perhaps personalize this function a bit too much. Tarkington does a beautiful thing as the Indian who is completely dominated by the corporate machine. John Savage and Val Bisoglio are both excellent as voluntary inmates of the asylum. There is, however, no question that the star is William Devane. He is the very essence of Mc Murphy, and in no line does he deviate from the man Wasserman wishes us to understand.

The production at the Hartford runs through the eighth of December, Tuesday through Sunday, at prices from \$8.50 to \$4.50. A better piece of new theater may not be in Los Angeles for some time to come.

-Chris Harcourt

Colorado Campsite

Pasadena Entertains World

On January First, Pasadena will again entertain and delight millions of viewers with the world famous Tournament of Roses Parade. As a prologue to the 1975 spectacle, a special entry (our fifth medallion) will be a true reproduction of the first parade entry back in 1890.

Through the medium of precious and semi-precious metal, Pasadena's 100th birthday celebration will provide a permanent record of the city's colorful history, growth and leadership. The theme adopted for the project is "100 Years of Leadership" in: Government (Pasadena City Hall); Technology (NASA/JPL Mariner 10); Education (Caltech); Culture (Huntington Library); Entertainment (Tournament of Roses float) and Sports (Rose Bowl). The reverse side of each medallion is an elegantly designed and sculptured work encompassing the two symbols for which Pasadena is most famous internationally—a

"Crown of the Valley" expressed in a bouquet of 29 roses. These delicately sculptured designs reflect the artistic talents of the Jacques Cartier Mint in Toronto, Canada.

Of special interest is the Caltech Medallion which is the third in the series of six. The medallion design depicts the Alpha Helix and Palomar framed inside the famous arches of the Atheneum which are indicative of the lovely architectural structure throughout the campus.

Caltech has made a special arrangement with PCM for a 10% discount on all items. Included in *The California Tech* of two weeks ago was a placemat with a stamped coupon to validate this offer to Caltech's faculty, alumni, staff, students and family.

As the holiday season nears, these items will make beautiful gifts. The limited edition of 3,500 sets of the pure silver (100 grains, .999 fine) medallions are continuing to be popular with both Pasadenans and numismatist/collectors as well as with those who see them as a good hedge against continuing inflation. They are available in 2" pure silver, 1 1/2" bronze and 3/4" silver or gold plated silver charms. The supply left as we approach the end of the Centennial Year is extremely limited, so the time to buy is now!

The City of Pasadena feels that it is a great honor to pay tribute to Caltech.

Help Save The Editor

The Current issue of *Engineering and Science* magazine (October-November 1974) is in short supply and high demand. If you're through with yours, the Publications Office would appreciate your returning it to Ed Hutchings, 1107 San Pasqual, Mail Code 1-71. Another scarce issue is March-April 1974.

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Soccer Loses To Pomona, Whittier

Last Saturday the soccer team played host to Whittier in a 5-0 loss. The Tech team was damaged by the loss of ace goalie Steve Trimbürger early in the game. This game possibly marked the highest incapacitated player to eligible player ratio the team has ever experienced, with some players taking tests, and at least eight players slightly broken.

On Wednesday the Beavers traveled to Pomona for a game under the lights. The most interesting part of the game was the lighting system, which allowed excellent play at mid-field, but left the goalie in the dark. While Pomona went on to win 3-1, the Tech goalie had distinct problems seeing two of the Pomona goals before they arrived at the net. The Tech goal was scored with four minutes left in the game by Joel Okazaki. Tech had the Pomona box under heavy attack when Okazaki took the ball on the right wing and slammed it just inside the upper left corner.

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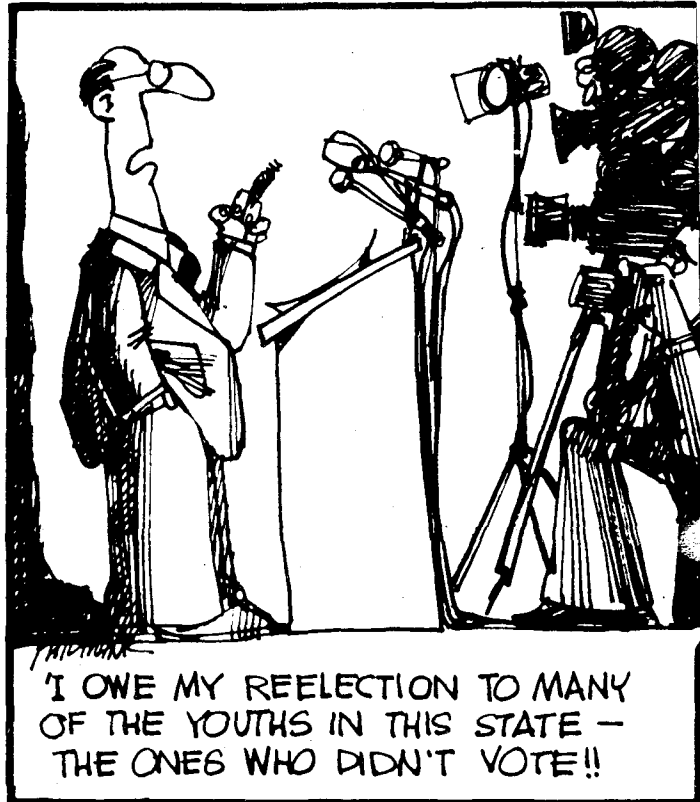
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Root Rot

Continued from Page One critical lean to the south that could lead to its toppling in heavy rains or high winds. Mr. Schmitz of the Grounds Dept. explained that the tilt could be caused by the root fungus having weakened some of the support of the tree, or just because all the limbs are to the south and the proximity of a steam tunnel to the north has inhibited root growth in that direction. In any case, the immediate danger was sufficient to warrant barricading the area and steps will be taken to temporarily shore up the two main south limbs in the near future.

Assuming the heart rot fungus has not progressed too far, in which case nothing will save the tree, all of the diseased limbs will be removed back to healthy wood, to check the spread of the infection. Some other limbs may also be pruned off to remove weight, but Mr. Schmitz said

these will be kept to a minimum, and that the two largest limbs are not infected and won't be removed for weight reasons. The root fungus will be treated as mentioned above and the hole around the base of the tree will be left open, covered by a metal latticework of some sort.

In a memo to Mr. Rector, the Physical Plant Director, Mr. Schmitz stated that the Engelmann Oak is considered irreplaceable and that all efforts will be made to insure its survival.

Tech About Town

Continued from Page Four fifty free and fifty discount (one slim dollar) tickets are available for next Sunday's Coleman Concert, the Guarneri String Quartet. This world-renowned group will play works by Beethoven, Mozart and Alban Berg.

That's all. For this week. See how easily you can screw yourself while recovering from mid-terms?

—Chris Harcourt

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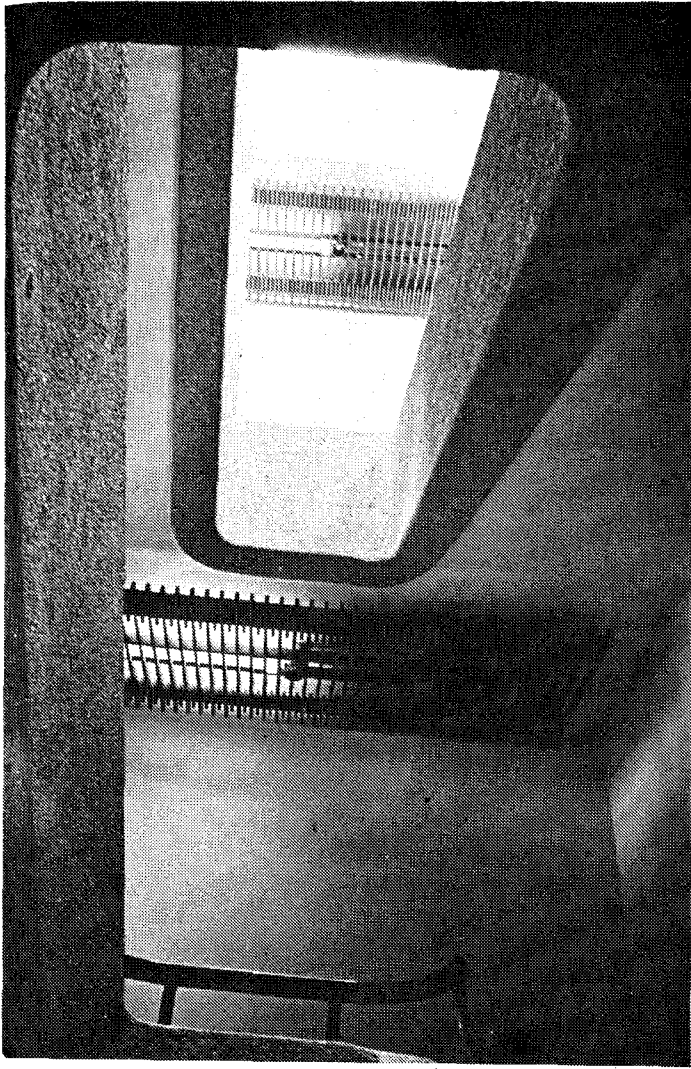
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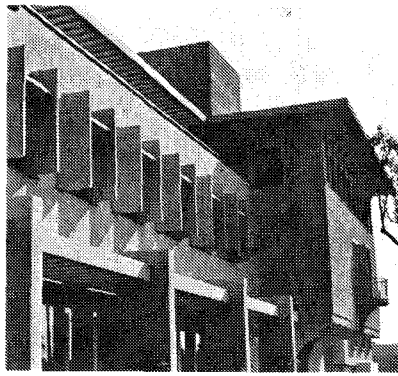
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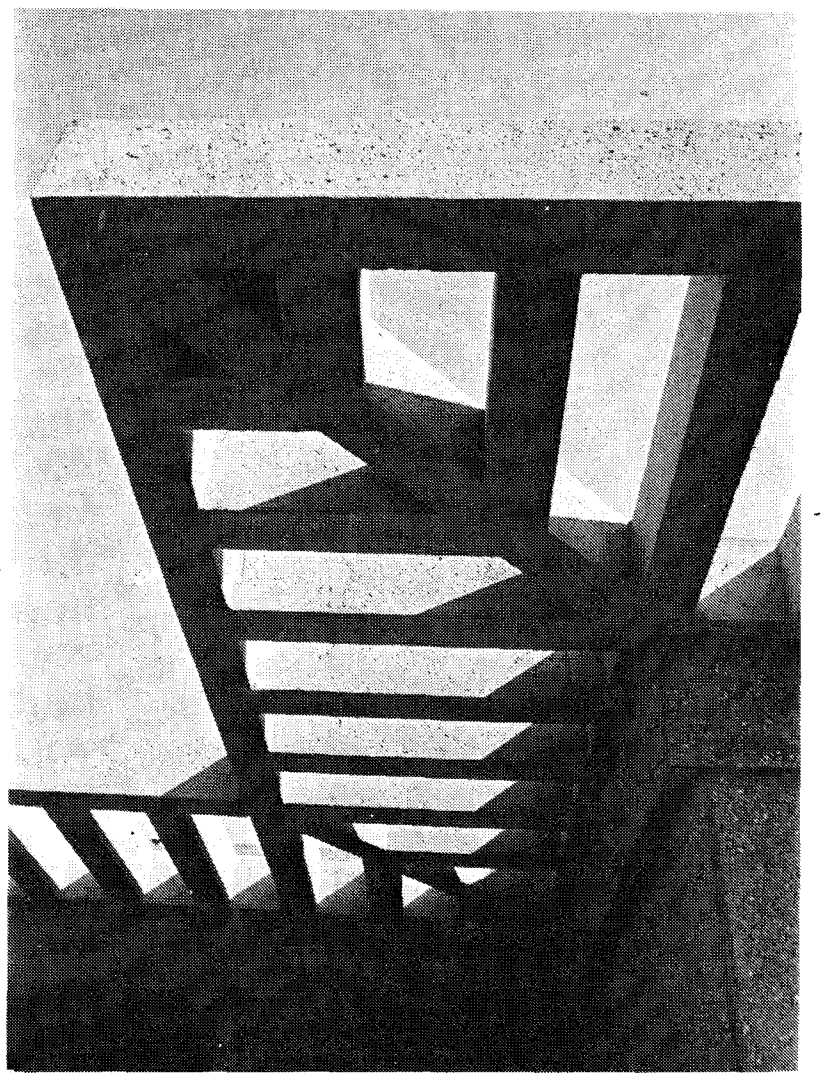


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Seismo Lab

Continued from Page Three
in the San Rafael Hills so that certain seismological instruments could be anchored in solid granite in order to record earthquakes accurately. The instruments at Kresge are still operating.

In the 17 years during which Donnelley housed seismologists, it has seen many great men and

major advances in seismology. Among the distinguished scientists who have worked at Donnelley are Charles F. Richter, now professor emeritus and originator of the earthquake magnitude scale that bears his name; Beno Gutenberg, director of the lab from 1947 through 1956 and who discovered that the earth's outer core was molten; Frank Press, also a director of the lab, a

pioneer in earthquake prediction and now head of geology and planetary sciences at MIT; and Hugo Benioff, inventor of seismological instruments used throughout the world.

Facilities in the new building are named after two of these men who are no longer living—the Hugo Benioff Conference Room and the Beno Gutenberg Reading Room.

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The CALIFORNIA Tech SPORTS Cross-Country Takes Third in SCIAC



Page Eight

Friday, November 8, 1974

Leading For A While...

Redlands Drowns Tech Poloists

by David Angulo

With Redlands initially defending the goal on the deep end of the pool, Wednesday's water polo game became the first conference game in which Caltech led at any point. Rudd Desiderio made the first goal, Redlands scored the second and Howie Bubb made the third to give Caltech a 2-1 lead at the end of the first quarter.

A bit of exciting action was seen at the end of the second quarter after Redlands had evened the score 2-2. With two and one-half minutes left Sean Leloy was in the clear for a shot. Tech goalie, Dan Hale, swam forward to meet Leloy but Leloy got in a shot over Hale's head. The shot was short but was floating towards the goal when Doug Mehoke recovered it, two inches from a Redland score. However, Doug was surrounded by three Redland tankmen, so he threw the ball out of the pool. Bubb finished the scoring in the first half, again leaving Tech in the lead 3-2.

Easier to Defend?

In the third quarter, Tech was again defending the goal in the shallow end which is theoretically easier. Even so, the Caltech team only made one goal

to Redlands' three. Redlands' Chuck Werner committed some obscure "major foul," giving Caltech its only score on a foul shot by Russ Desiderio. Both teams started fouling like some kind of contagious disease. At this point, the scorekeepers looked like a couple of bees buzzing around as they turned over the team foul numbers, recorded team and individual fouls, yelled warnings and blew the horn twice to indicate that two players, Doug Mehoke and Jim Rowson, had fouled out and would have to be replaced.

Redlands scored two points during this period. It looked like the score would be tied at the end of three quarters when, with one second remaining, Chuck Werner threw a high lob from 3/4 of the way down the pool. The gun went off as the ball reached the apex of its flight but the ball went in so Tech went behind, never to recover the lead.

Fouls and Females

Tech's next score followed three more Redland scores and

by Dave Sivertsen
The Caltech cross-country team finished its regular season last Saturday at the conference meet, with its best record since 1960. Winning the conference meet on their own tough, 4.3 mile course was track powerhouse Occidental, with five of the first seven places. Second was Pomona, and Tech finished third, beating Claremont, Redlands, UC Riverside, and La Verne.

Kennedy of Oxy placed 1st in a time of 21:29. Highest finisher for Tech was Greg Griffin, 5th in 21:59. Also scoring for the

Beavers were Rick Debus, 18th; Steve Kellogg, 19th; freshman Jeff Poulin, 20th; Joe Arpaia, 22nd; and freshman Larry Newman, 33rd. Running JV were Larry Bridges, Dave Sivertsen, and Duane Gray.

Caltech's overall record was 6-4 in duals, 3-3 in conference, and third in conference. Coach Leroy Neal considers the team to

have great potential, as it consists of one senior, and the rest sophomores and freshmen. He looks forward to a potential 2nd place finish next year in conference.

This coming Saturday, the team will run in the NAIA District III Finals at Biola, a prerequisite to qualify for the NAIA Nationals in Kansas.



TECH HOCKEY STARS during action at local ice rink. Photo by Chris Wheeler

Fleming Still Beats

On October 26 Fleming beat Lloyd in a handball Discobolus challenge. Fleming won 1st, 2nd, and 4th singles, each by a score of 2-0, at which point the contest was terminated. In the only other game played Lloyd beat Fleming in 3rd singles.

Last Sunday Fleming defended the Discobolus Trophy against a Ruddock soccer challenge. Ruddock didn't have much of a chance, as Fleming could have started eleven men from the soccer team. Big Red left their first team in for most of the first half. The first goal came when Richard Atwater kicked in a

cross pass from Anthony Sneed. For the second goal Arvid Croonquist headed in a corner kick. The last goal of the half was scored by Jim Hickey with a straight shot on goal.

In the second half John Dilles scored for Fleming on an untouched curving corner kick. Next Klaus Engelhardt scored with a shot from the left wing. Russ Desiderio made the sixth and final goal for Big Red with a left-footed kick in front of the Rudd goal.

This week Dabney challenged Fleming in Softball, Basketball, and Pool. Fleming accepted in Basketball.

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