

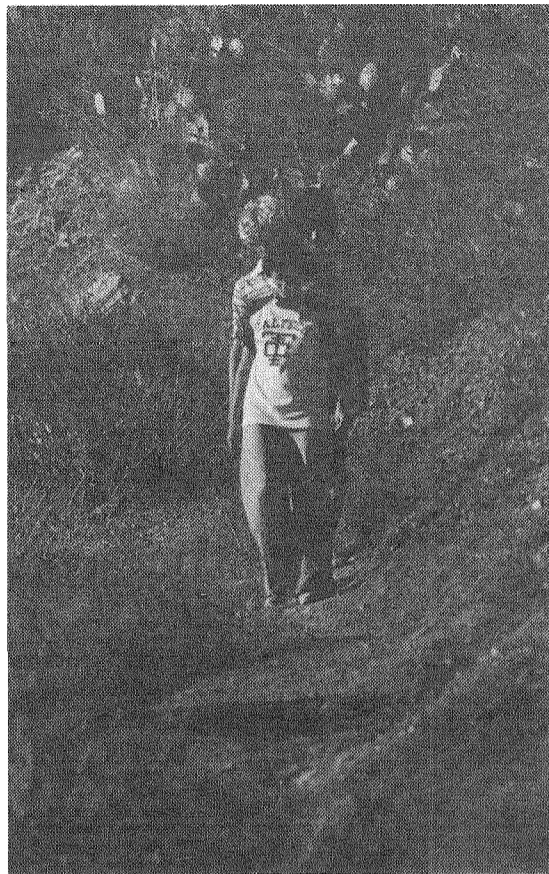
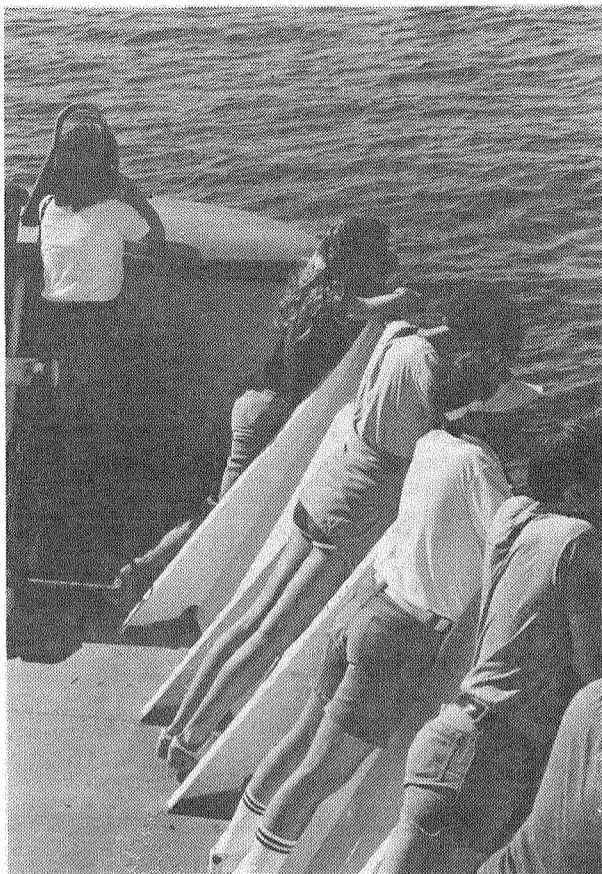
Tech Runners Win Big

by Thor Feat

Caltech's cross-country team swept a four-way meet Saturday at Cal State Dominguez Hills, beating Biola 26-31 and clobbering L.A. Baptist and Cal State. Sophomore Glen George paced the Beavers, coming in second at 27:55. Then were Senior Rob Bourret, third at 28:14, Sophomore Rich Holmes, fifth at 28:55, Junior Bill Gould, sixth at 29:09, and Sophomore Eric Korevaar, tenth at 30:45. This brings Tech's record up to 5-2.

The course at Dominguez Hills was five miles long and moderately hilly. Fast times were expected, but the hot sun slowed everyone down by more than a minute or two. George raced the entire meet hard on the heels of Biola's Wolliscroft. Bourret was in third for almost the whole race, while Holmes and Gould started easily and passed runner after runner during the tough second and third miles to round out a nearly solid pack of Tech runners. Though feeling the heat, Korevaar hung on to finish ahead of Biola's fifth runner, Crofton.

This grouping and the team's experience are combining to produce the best cross-country team Tech has had in several years. "We can have an excellent season if we maintain the proper attitudes and make reasonable improvements," commented Coach Leroy Neal. Tomorrow the team (with the frosh, who were on Catalina last week) will journey to the hot, flat Redlands course to meet Redlands and arch-rival Whittier.



The 1978 Frosh Camp occurred as usual. The frosh got oriented, the upperclassmen got blitzed, the faculty got soused, the wasps got stepped on, the undergraduate women got a standing ovation, Harry got applauded, and Merf got oceaned. The Talent Show was interesting.

Photos: ed. Bielecki

Frosh Camp

by John Avery

Send a kid to Camp Fox. While it may not prepare him for survival in the woods, it will prepare him for survival in the awesome wilderness of Caltech life. From the very beginning of his stay here, your kid will be exposed to the collected wisdom (?) of trained counselors. Faculty, staff, upperclassmen, all speakers at our many and varied assemblies receive their authority from the same source: the experience of having lived, studied, or worked at Caltech.

Whether straight facts or just

plain common sense, the words of the assembly speakers are intended to help smooth the transition to Caltech from the "outside world." Dealing with such subjects as Student Life, Rotation, extra-curricular activities, and the Honor System, their message is serious, their delivery is entertaining.

Entertainment, after all, is the keynote. Camp Fox is supposed to be fun. To this end we have the annual talent show, a peculiar mixture of talent and the exact opposite. Additionally, there is an annual movie for

those so inclined. This year's movie was *The Rock Horror Picture Show*, a cult film of dubious reputation but with definite drawing power, to judge from the size of the audience. For those who did not wish to see it for the first, seventh, or hundred and third time, a "casual convocation campfire circle" was provided, where marshmallows were toasted and "great issues" discussed.

Entertainment, advice, and plenty of time for meeting one's fellow freshman in a casual atmosphere, all this is provided at Camp Fox for the benefit of our clients. And the message is clear—enjoy. Camp Fox needn't end upon leaving Catalina.

carbon, water, and other volatile substances. Ra-Shalom is the first earth-crossing asteroid to be recognized as being of possibly carbonaceous composition.

The new asteroid is the third member of a new class of asteroids christened "Ate-type" by Helin. Aten is the asteroid initially coded 1976 AA, discovered by Helin and named after an Egyptian solar deity. It possesses an orbit slightly smaller than that of earth. Helin was also an independent discoverer of the second member of this class, 1976 UA, which possesses an orbit very similar to but slightly larger than that of Ra-Shalom.

Helin and Professor of Geology Eugene Shoemaker have been conducting a search for

Big T's are here But...

by Gentle Ray Beausoleil

When ASCIT surfaced after last year's *Big T* fiasco, we owed the Institute \$10,000 (payable over 5 years) and we were forced to raise the *Big T* price by \$3/year. For the '77-'78 edition, we had high hopes of paying off the printer with the fall '78 yearbook dues, and totally absolving ourselves of financial debts within two or three years. A key point to the success of this scheme was the production of about three relatively inexpensive (\$8000-\$9500) yearbooks so that the collected *Big T* dues (\$3000-\$4000) could be used to bring us even, before the originally projected five years.

The '77-'78 *Big T* arrived more than a week ago, and the net cost to ASCIT is officially \$7903. Unfortunately, the book will not be distributed for at least a month, and, if we have our way, this particular book won't be distributed at all.

Thus far, the volumes of the *Big T* have been deemed completely unacceptable by the several editors, the IHC, and myself. If the BOD approval is received this Monday night, we will begin efforts to convince the publisher to reprint the book at no additional cost to us. If this should fail, we will attempt to obtain from the company, Walsworth, appropriate financial recompense.

see BIG T: Page 8, Column 4

near-earth asteroids under a grant from NASA's Planetary Geology program. Including the latest find, they have thus far discovered five earth-crossing asteroids, one "Amor" asteroid, whose orbit approaches but does not cross that of earth, and seven Mars-crossing asteroids. Another Caltech astronomer, Charles Kowal, has five earth-crossing asteroid discoveries to his credit. A total of 26 earth-crossing asteroids, more than half of which have been found at Palomar Mountain, and 21 Amor asteroids are now known.

The most recent previous asteroid discovered by Shoemaker and Helin was 1977 VA, which is known as one of see 'ROID: Page 2, Column 5

Tech Undergrads Involved

New & Improved Asteroid Found

A Caltech scientist has discovered an extraordinary near-earth asteroid—approximately 2 to 2½ miles in diameter, now about 18 million miles from earth.

The discoverer, Planetary Scientist Eleanor Helin, has named the asteroid in honor of the successful Camp David Mid-East Peace Conference, it was announced last week by Caltech President Marvin L. Goldberger. The name chosen is "Ra-Shalom," a combination of "Ra," the Egyptian sun god, symbol of enlightenment; and "Shalom," the traditional Hebrew greeting meaning "peace."

"This name is chosen to commemorate the Camp David Mid-East Peace Conference, September 1978, during which time this extraordinary body was found," said the official citation naming the asteroid. "May it stand as a symbol of the universal hope for Peace."

The asteroid, the largest member so far of a new class of asteroids that possess orbits largely inside that of earth, has the smallest orbit of any asteroid

ever discovered, taking nine months to circle the sun.

Ra-Shalom was found on photographic plates taken on September 10 with the Hale Observatories' 18-inch Schmidt telescope at Palomar Mountain. It was initially designated 1978 RA. (Asteroids are designated by the year of discovery and a two-letter code indicating the time of the year.) Helin immediately notified astronomers at Lowell Observatory in Flagstaff, Arizona, at the University of Arizona, and at the University of Hawaii, who made observations on subsequent nights to determine the physical properties of the new asteroid. They sought to gather information on its composition, brightness, and rate of spin, and to determine its size. The asteroid was also found to match two observations in 1975 by Richard West of the European Southern Observatory. However, the observations made in 1975 were insufficient to allow calculation of an orbit.

Orbital calculations by Brian Marsden of the Smithsonian Astrophysical Observatory and

James Williams of the Jet Propulsion Laboratory revealed that Ra-Shalom has a perihelion, or closest approach to the sun, of .469 astronomical units (about 44 million miles). It was discovered at its aphelion, or farthest point from the sun, of 1.19 astronomical units (about 111 million miles). The plane of the asteroid's orbit is inclined from that of earth's at an angle of 15.7 degrees, and the orbit's eccentricity, a measure of its ellipticity, is .436. According to Williams, the asteroid will pass within 17 million miles of earth during this revolution. The rapid position measurements required for orbital calculations were carried out by Caltech undergrads Bobby Bus and Ralph Weeks, along with John Faulkner from USC.

Observations by astronomer Edward Bowell of Lowell Observatory indicate the asteroid is approximately spherical and rotates once about every 12 hours. The asteroid's color suggests that it is of carbonaceous composition; it may be related to a rare type of stony meteorite containing

In Memoriam

David Dewey

All The News

Use Some Money?

Scholarships are available to graduate and undergraduate students of Hispanic American background from the National Hispanic Scholarship Fund. Applicants must have completed at least two quarters or one semester of college work prior to the submission of their applications. In addition, applicants must be U.S. citizens and presently enrolled as full-time students. Applications may be submitted between September 1 and October 20. Awards will range from \$200 to \$600. Applications are available in the Financial Aid Office, 208 Dabney Hall.

Move That Tuba!

This term, a great Caltech tradition will be revived; the Caltech Marching Band. Our first rehearsal will take place Tuesday, October 3rd, from 7:30 to 9:30 p.m. in Beckman basement. Attendance at this rehearsal by all Band members is vital, as our first performance will take place Saturday, October 7th. If you are interested in becoming a member of this facet of Caltech's music program, either come to the first rehearsal, or contact Ken Shrum, 240 Ruddleock, X2182.

Fresh Lobster!

When the lobster season opens on October 4, the Caltech Kelpers will be ready. At their recent club meeting, they viewed a film on catching the tasty crustaceans.

Upcoming activities include beach dives October 7, 21 and 29. Divers are to meet at the Caltech gym at 8 am on the day of each dive to choose locations and form car pools.

The Kelpers will set out for San Clements Island on October 8, the first Sunday of the lobster season. Accommodations aboard the Scuba Queen will cost \$26 a person.

The featured speaker at the October 5 general meeting will be Greg Peters of Pacific Paradise, San Gabriel. Peters will discuss the setting up and maintenance of cold and tropical saltwater aquariums. The meeting will begin at 7:30 pm at 256 South Mudd Building, on campus just northeast of California and Wilson.

For more information, call Jim Marr at 794-9008. Newcomers are welcome at the monthly club meetings.

Be Secure!

The Campus Security Office would like to remind all students, staff, and faculty to register all vehicles (including motorcycles and bicycles.) Pick up your parking decal in the Campus Security Office, room 204 of building 85 (367 South Holliston) between 8:00 a.m. and 5:00 p.m., Monday through Friday.

Update!

Earthquakes, Immunology, Quarks, White Dwarfs, Free Riders, Namibia, and Neutrinos all come together in the Caltech Y's Update Noon Discussion Series. Held each Wednesday at noon in Clubroom 1 of Winnett Student Center, Update brings Caltech professors into closer contact with the student population. Professors discuss their fields of research: their techniques, problems and conclusions; the students are free to ask the questions uppermost in their minds. Come to Update and be updated on the various research projects currently going on at the Institute.

Book Exchange

Tired of old textbooks lying around? Want to make some money off those old books? Come to the Caltech Y and sell them. The Caltech Y has a book exchange open to all students. If you have any used text books or literary books you wish to sell, bring them in. You decide on a price, and when the book is sold, you receive the money.

Need Work?

Listings for on and off-campus jobs as well as Campus Work-Study jobs are available in the Placement Office, Room 8, Dabney Hall. Stop by and take a look!

Need Summer Work?

Juniors and up in Material Science and Chemistry are invited to submit resumes for Summer employment at 3 M Company, St. Paul Minnesota. Resumes are to be brought to the Placement Office no later than November 2, 1978.

The Placement Staff can assist you if you need help in writing your resume. The Office is located in the basement of Dabney Hall, Room 8.

That Fits

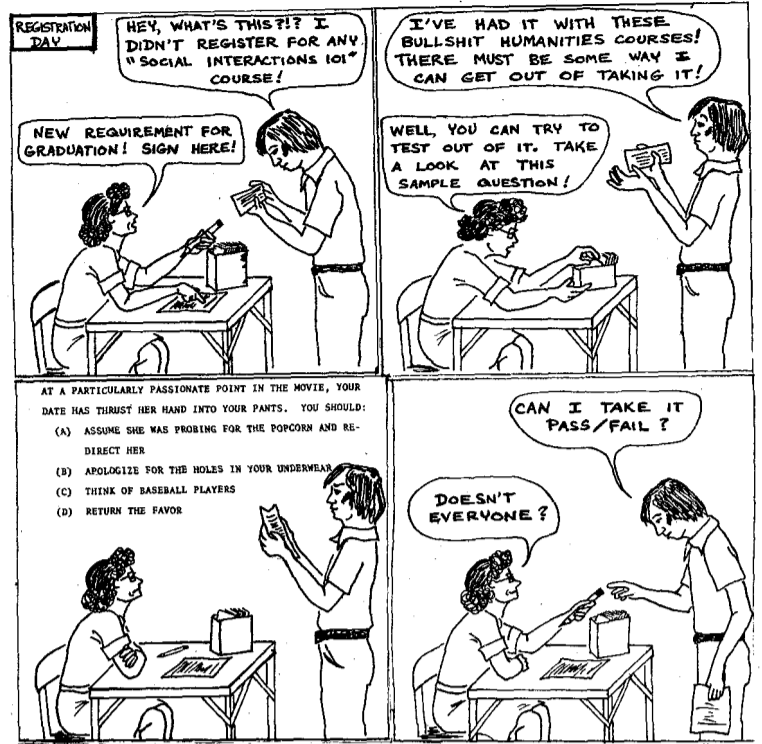
Need PhD Work?

On-campus interviews for permanent employment will officially begin October 9. October-December is reserved for PhD Candidates only; however, there are a few exceptions of several organizations wishing to interview other degree candidates. For further information consult the Placement Office, Room 8, Dabney Hall.

Dragons Slain, Lowest Rates...

The Caltech Gamers will be holding games sessions in Clubroom 1 of Winnett Center every Friday and Sunday evening throughout the school year. Various fantasy and science fiction games are the primary events, primarily Dungeons and Dragons and other similar games. Beginners welcome. 7:30 pm both nights.

Thuncan by P.M.



The View from Outside

Caltech Committee for Community Involvement

One of Caltech's main problems is isolation from the community. This isolation has two major effects: 1) Teachers tend to become unaware of society and their place in society; 2) Teachers tend to have a lousy, unfulfilling social life.

In an attempt to facilitate greater participation of Caltech people in the community; that is, the local community, city, county, state, country, and world (i.e., the total human community); a new campus-wide organization is being formed called the Caltech Committee for Community Involvement (CCCI). Although it is primarily a student group, committee membership is open to faculty, staff, alumni, and anyone else interested. Its purpose is to seek out and publicize possibilities for a wide range of community involvement.

The main activity of the Committee will be to prepare and update a posted calendar of events which anyone may use in order to find activities in which he or she would like to be involved. Information concerning the time and place of organizational meetings, party meetings, campaign activities, rallies, demonstrations, fund raisings, volunteer programs; self-help programs, benefits, parades, and so-forth will appear on the calendar as an easy reference. (A more detailed description of the posted events will be kept elsewhere.) Activities of the CCCI may expand depending on how much people want to be involved.

Thus, the CCCI is to act as a switchboard operator between Teachers and the outside world. The Committee will maintain a neutrality on political issues although it may publicize information concerning political stands of outside groups. Individual Committee members may express political opinions, but their opinions will be independent of the CCCI.

An organizational meeting will be held on Tuesday, October 3 at 7:30 pm in the Y Lounge on the second floor in the Winnett Student Center. The nature of the Committee will be discussed in greater detail. I encourage anyone to come who is bored with Caltech society and wants to become involved in something other than Caltech, yet doesn't have the time and energy to search for it on his or own initiative. Also, those who want to become activists should join. I'm all excited about CCCI, aren't you?

NOTE: There was an error in my last week's article. The fifth paragraph should read: I believe an integrated and complete individual is one who lives according to his or her concept of quality; and since an individual is an active being relating to others, that is, to society, an individual acts to effect the quality of life of society. When an individual becomes aware of his or her effect on society, he or she realizes the extent to which his or her life is a political struggle.

-Robert Tajima

'ROID from Page 1

the two best candidates to date for an unmanned exploratory mission. The asteroid, discovered last November, possesses an orbit outside that of earth and at such a low angle of inclination that relatively little energy would be required to boost a space probe from the earth's orbit to the asteroid's.

The discovery of Ra-Shalom provides further evidence, said Helin, that there is probably a sizable population of near-earth asteroids, some of which might in the future be practical sources of materials for construction of solar power stations or other structures in space. It also indicates that a previously unsuspected class of asteroids may exist whose orbits are entirely inside that of earth.

The CALIFORNIA Tech

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The Caltech Y.....fly by

- TODAY
 - Friday, September 29, THE BELLIES, at noon on the Quad The Diane Weber Belly Dancing Troupe
- Tuesday, October 3, DR. MARVIN L. GOLDBERGER
 - New Institute President, in an open discussion at NOON in Winnett Center Lounge. Bring your lunch.
- Wednesday, October 4, NOON UPDATE SERIES
 - Dr. Thomas J. Ahrens, Professor of Geophysics speaking on "The Geology of the Earth's Core." Clubroom 1 in Winnett, at noon. Bring a lunch.

Sing a Song of Gilbert & Sullivan

The Ambassador "POPS" continues with "The World of Gilbert and Sullivan", a potpourri of favorite arias, songs and patter from the great Savoy Operas, on Monday evening, October 9 at 8:30 pm at Ambassador Auditorium in Pasadena. The incomparable style of the D'Oyly Carte company is present in the exceptional performances of former leading members, Thomas Round, tenor, and Donald Adams, bass, in company with Evette Davis, soprano, and Anna Cooper, contralto and baritone John Cartier. The program runs the gamut of the Gilbert and Sullivan repertoire and includes selections from such favorites as *H.M.S. Pinafore*, *Patience*, *Iolanthe*, as well as the more rarely performed *Ruddigore*, *Princess Ida*, *The Yeoman of the Guard*, *The Gondoliers* and *The Sorcerer*. Ian Kennedy is the Accompanist and Musical Director.

Ticket prices are \$9.50, \$8.50 and \$7.50. The box office and Phone Charge (577-5511), are open Monday through Friday, 9 am to 5 pm; Sunday, noon to 5 pm.

Women's Club Meets

The Caltech Women's Club extends a cordial invitation to all women associated with Caltech, including JPL, Huntington Library, and Hale Observatories—and especially student's wives and female students—to join them at the President's House, 415 South Hill Avenue, on Thursday, October 12, from 2 to 4:30 pm. This first meeting of the year, "Doris DuBridge Day", is named after a former first lady of Caltech and is dedicated to welcoming newcomers to Caltech. A notable newcomer this year is Mildred

Goldberger, wife of the new President of Caltech.

The afternoon tea will have a Mediterranean theme and the program will include a welcome by Eva Ewing, President; notes on Doris DuBridge by Vicki Davis; music by Nick Ariondo, accordionist, and his guitarist; and information on the Club's activities.

The meeting was planned by Vicki Davis and Betty Babcock. Hostesses are the 1977/78 Board Members: Roxana Anson, Ellen Wilts, Pam Scott, Barbara Moore, Velma Muhleman, Loretta Keller, Phyllis Barnes, Greta Davidson, Jane Caughey, Teri Papanastassiou, Mary Niell, Judy Raichlen, Janna Harkrider, Mary Fiorina, Phyllis Hudson, Nancy Whitham, Yvonne Goddard, and Barbara Jennings.

Babysitting is available for a nominal fee and reservations should be made by noon on October 10 with Barbara Moore, 798-4254.

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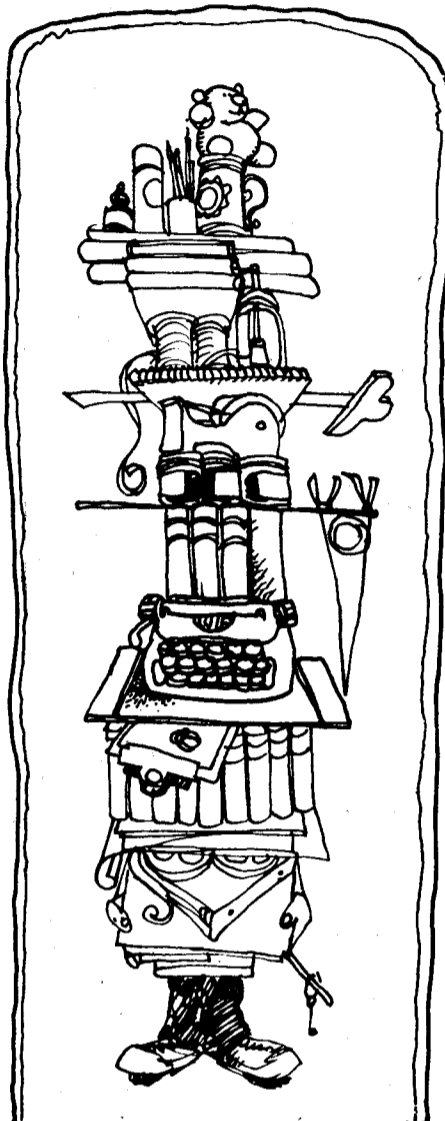


Welcome Back!

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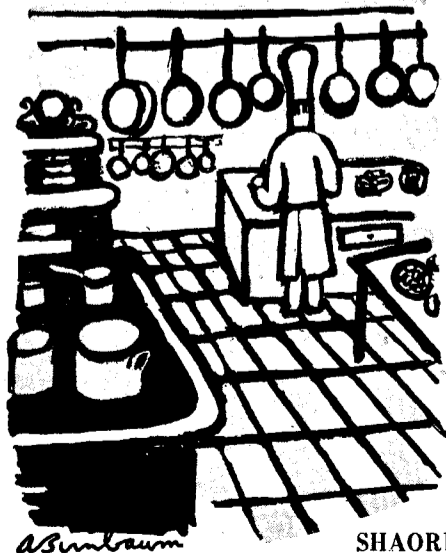
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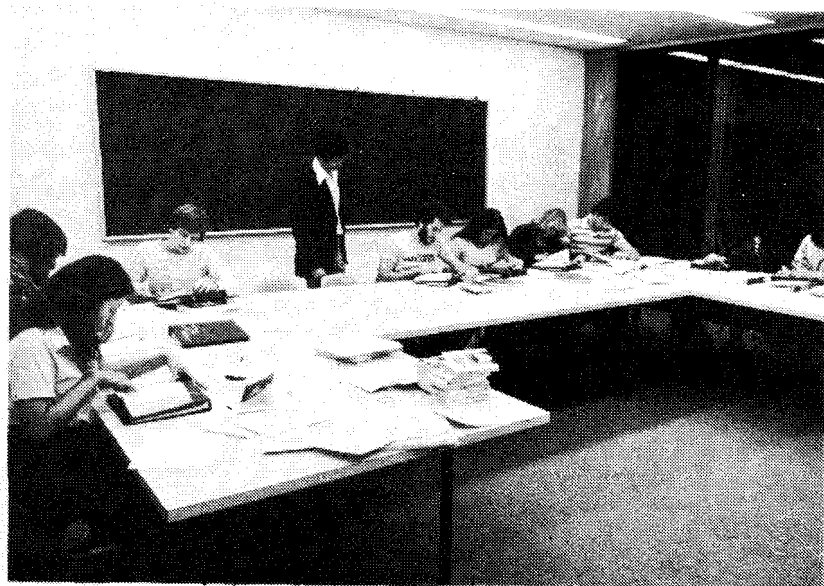
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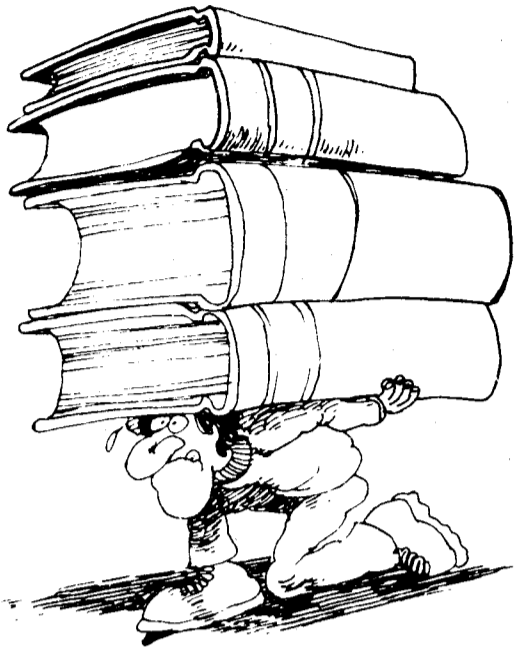
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No authenticated periodic reading proficiency evaluations

No known newsletters generally disseminated to their graduates

No known discounts on books

No known graduate placement programs

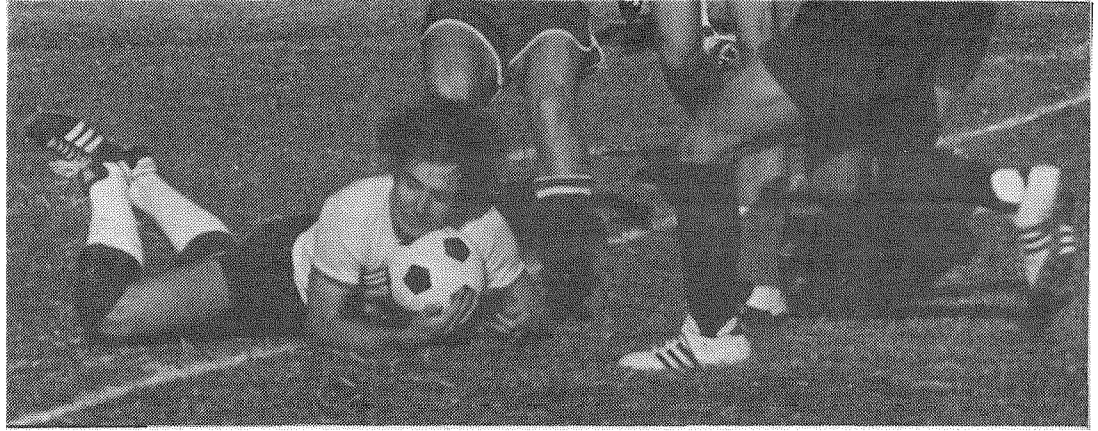
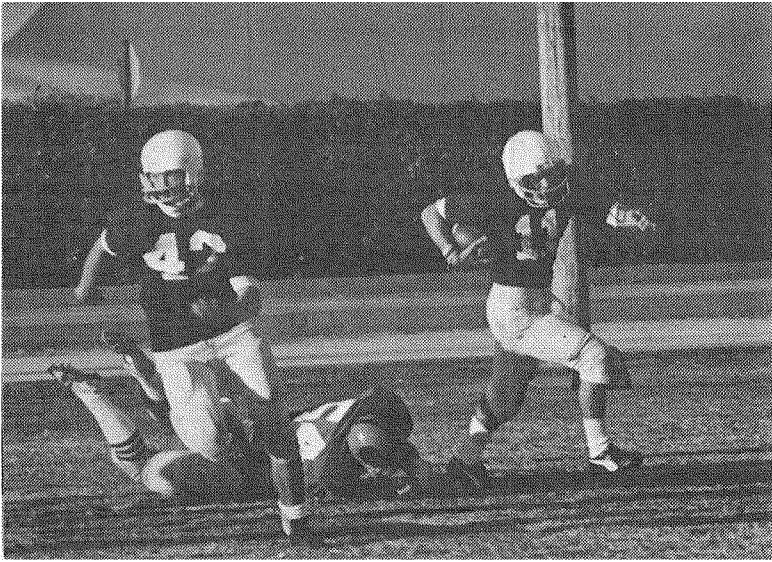
Some companies have a contractual obligation with a finance charge



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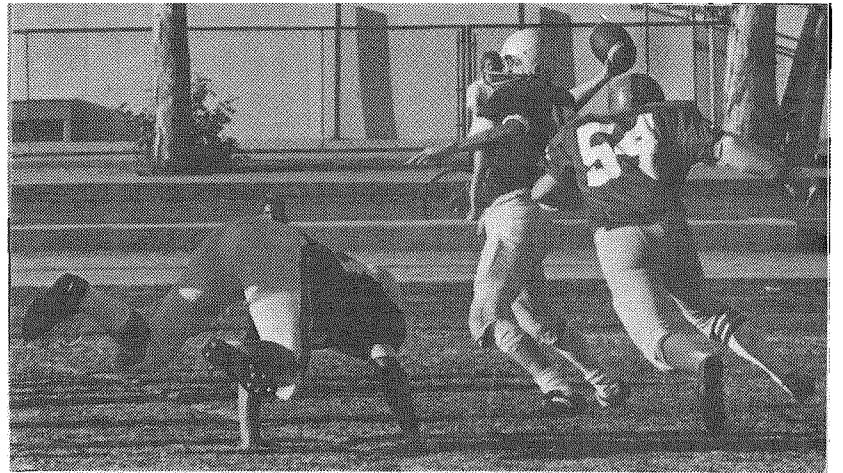
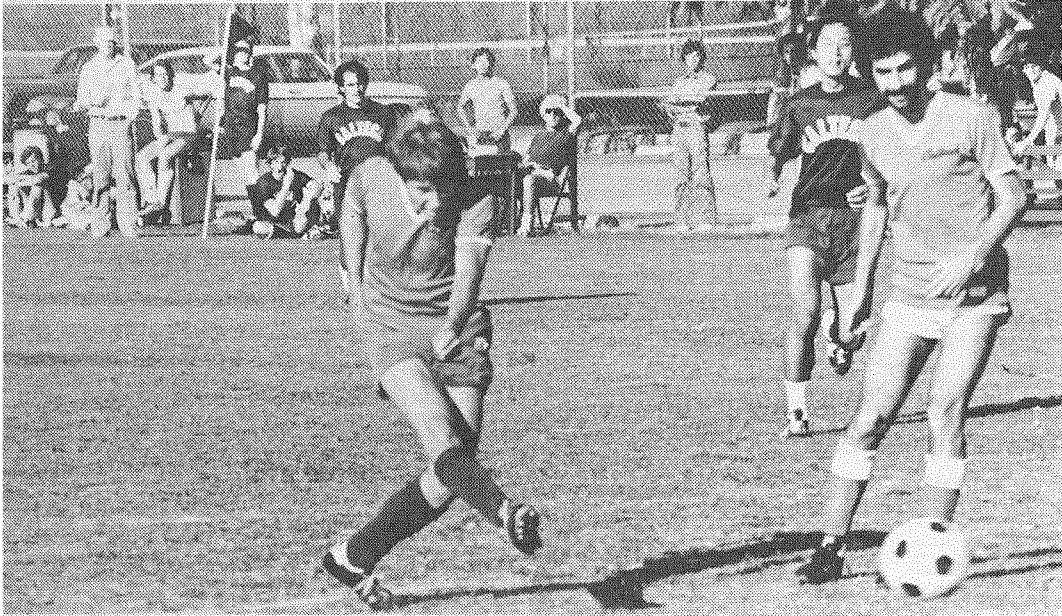
*Known exceptions are Michigan and California



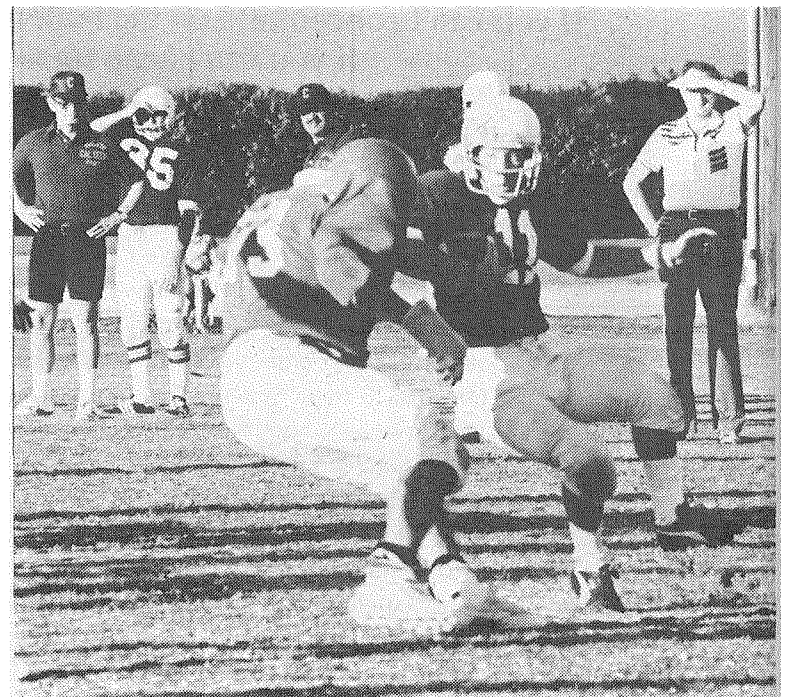
Photos by ed. Bielecki

the Caltech Soccer Club

The Caltech Beavers vs.



& the Valley Freelancers



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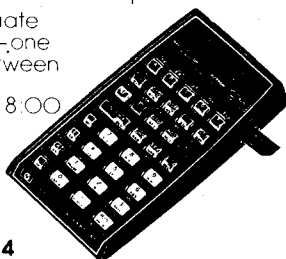
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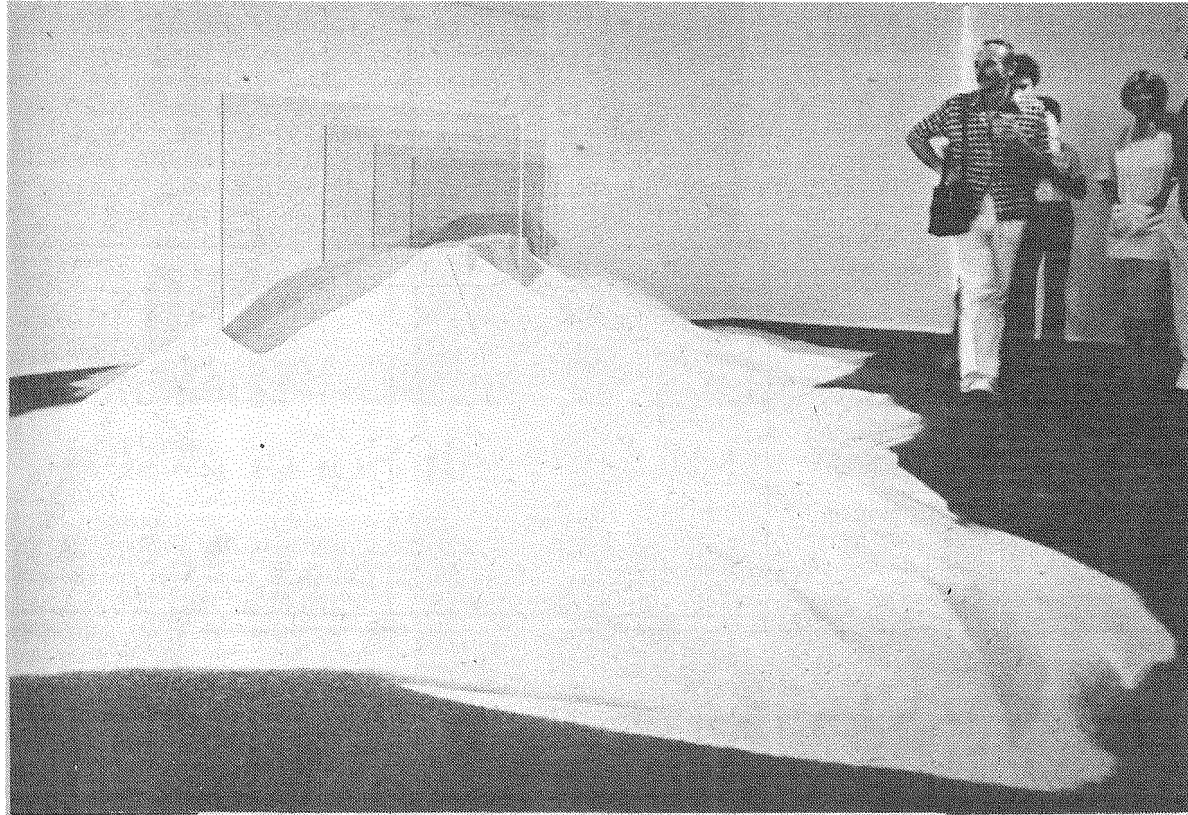
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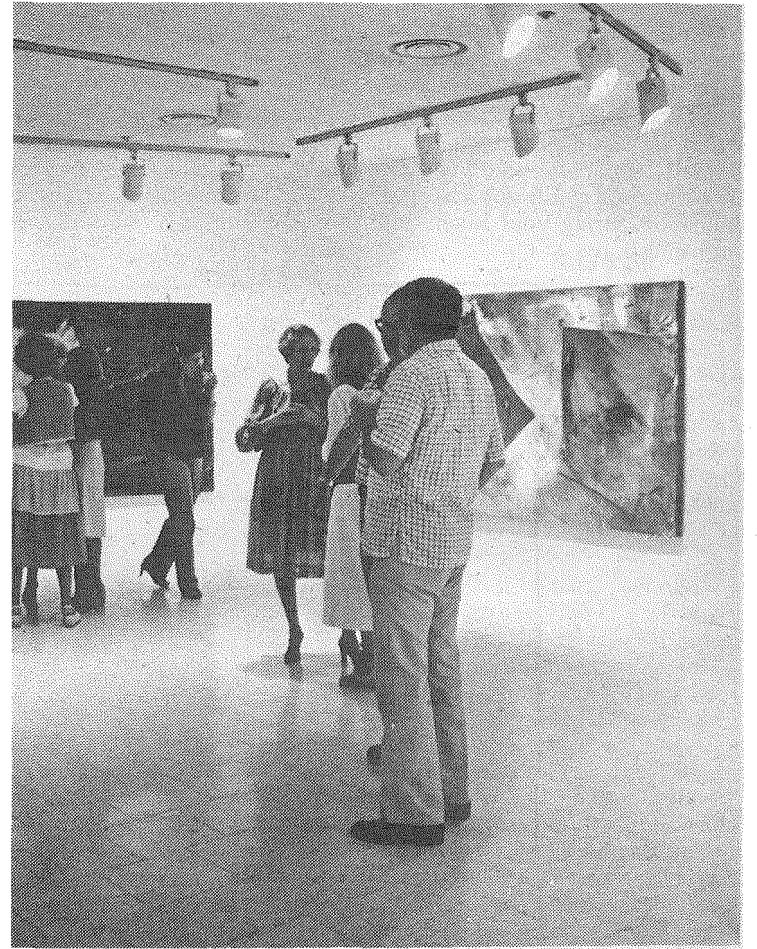
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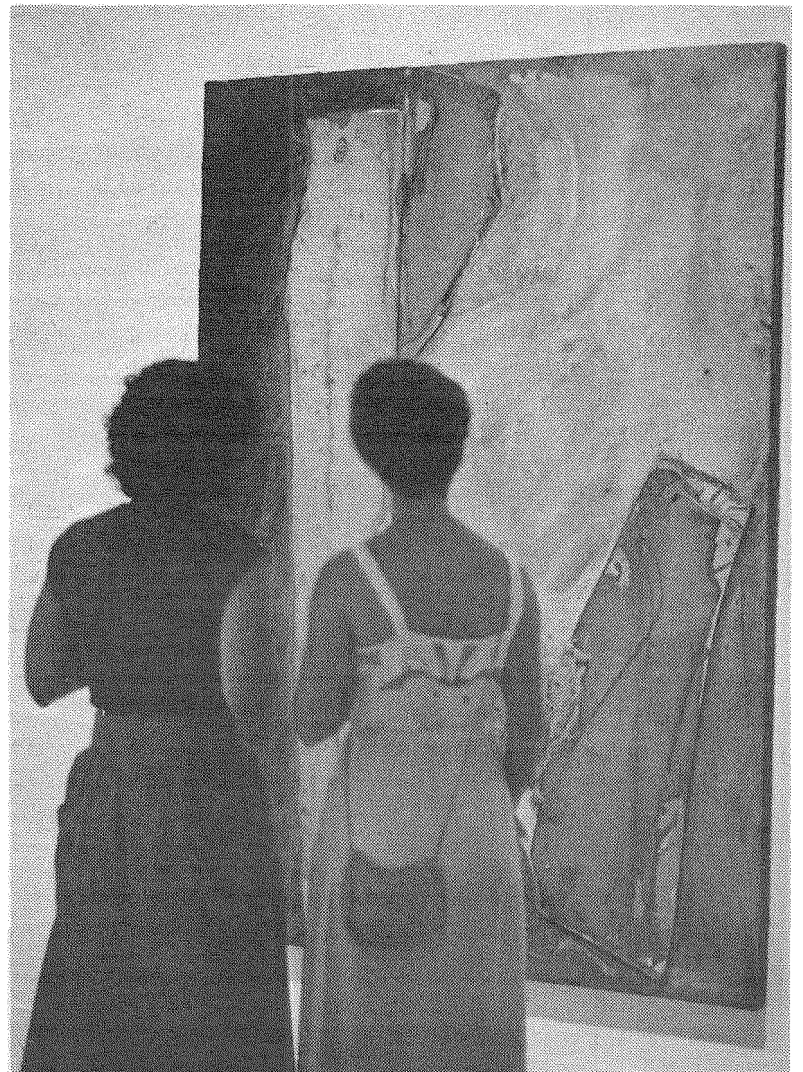


Sand & Glass



*Photos by
Yin Shih*

at Baxter



Gallery

Memorial Service

David Dewey, BS '77, was killed from a fall in Eaton Canyon. His body was found on Tuesday, Sept. 19. A memorial service will be held at Lake Avenue Congregational Church (393 N. Lake, 795-7221) on Sunday afternoon, October 1, at 3 pm.

The Truth Shall Make You...

New Institute President Marvin L. Goldberger will be in Winnett Lounge on Tuesday, October 3 at noon for an open discussion. Bring your lunch and your questions.

Down the Drain!

The annual Water Pollution Control Federation Conference from October 1-6 is in Anaheim this year. Conference registration is at the Anaheim Convention Center. During the conference, there will be an informal student luncheon planned for Wednesday, October 4, to give students an opportunity to discuss general employment prospects in water pollution control with representatives of firms and agencies in this field. Details will be available at the Anaheim Convention Center, Conference registration desk.

Pssst!

The belly dancers are here in the Quad today at noon. Pass it on.

and All That Doesn't

Tee Kew What?

Copies of the '77-'78 Teaching Quality Feedback Report are available in the Dean's Office. (Faculty members should be getting theirs in the mail.)

Show It!

You, too can be a projectionist for the ASCIT Movie. In addition to cash benefits, there is on-the-job training and instantaneous feedback on sub-standard performance. For more information contact Jimmy at X2171.

BIG T from Page 1

Essentially, the problem centers around gross publishing errors and overall amateurish production on the volumes we have received. In addition, it appears that Walsworth has, without our permission, edited the actual text of the book: An

action which is (to the best of our knowledge) expressly forbidden by our contract.

The BOD meeting will be held this Monday night at 10:30 in the Y Lounge. Students are invited to attend: A Big T and the corresponding originals will be made available there.

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