

Y Sponsors River Raft Adventure

Yes, you too can "do the Grand Canyon" in a raft. Or part of it, at least. Last year The Caltech Y, with considerable help from Gene and Caroline Shoemaker, ran a river trip from Diamond Creek to Pierce Ferry, a distance of some eighty kilometres. And we're doing it again this year, folks. The entire trip (not including recovery) takes five days, and although unfortunately close to mid-terms, is a "chance in a lifetime" opportunity. The cost — \$95 — includes all transportation, all food except for one meal on the way back, necessary fees to landowners (some \$35), and, of course, the thrill of running the river. Diamond Creek is in the Lower Granite Gorge, and about half of the trip is on white water, half is on the backed-up end of Lake Mead.

Lottery

We have 25 places, and if more people sign up than that, a lottery will be held, subject to the following conditions:

1. Preference will be given to those who did not go last year.

2. Preference will be given to students, both graduate and undergraduate, before staff and faculty.

3. The above conditions do not apply to those involved in the organization and running of the trip.

Sign-up sheets will be available from Monday, October 6 in the Y office in Winnett. The trip will leave Caltech on the morning of Oct. 22 and return late on the 26th.

What to expect

If you're still interested, a little history is in order. Gene Shoemaker (Class of '47) has had a long association with the Institute. As of this year, he is based full-time at the United States Geological Survey Astrogeology Section in Flagstaff. Gene has a long association with the Grand Canyon area. After working on the Colorado Plateau for many years, he was one of the U.S.G.S. group that duplicated Powell's second trip down the canyon and re-occupied the photography sites from the pioneering trip nearly 100 years earlier. Prior to that, Gene and Caroline had a long history of recreational river running. Gene's current interests have switched from the rocks of the Colorado Plateau to plans for surveying and eventually recovering asteroids. A colleague from the survey, John Hendricks, joined us last year and will be along again this time. John, like Gene, is an unforgettable character; last year's trip was his thirteenth Grand Canyon run. The Shoemakers and John between them own most of the boats that we will be using; this is why the Y trip is so inexpensive. Last year's trip was great. We had a little rain one day,

but everyone was wet from spray anyway, so that was really no problem. The river is expected to be low again this year, which makes several of the rapids encountered quite challenging — and loads of fun. The scenery is superb, so bring a camera and lots of film. And some waterproof bags.

The Y annual, which will be out soon, contains a description and photographs of last year's expedition, so you might like to stop by the Y offices and look through that. Remember, sign-up begins Monday, October 6. See you there.



Join the Y as they go down the river without a paddle.

The Dorms Are Alive With The

Sound of Stereos

Are you a hard-core audiophile? Do you spend every waking hour dreaming of buying the ultimate stereo system? Even if you don't, you'll probably want to be in Winnett Lounge at noon this Wednesday when James Boyk starts off this season's series of Update Noon discussions with a talk on "Issues in Audio." For several years, James Boyk, Caltech's Artist-in-Residence, has been leading interpretative music classes every Wednesday afternoon and has earned a reputation among the music lovers on campus as being both erudite and fun. Last year he taught EE/Mus 107, a unique class covering the problems of sound reproduction and exploring the field of electronic instruments.

This Wednesday, James Boyk will be sharing some of his expertise concerning stereo equipment. Anyone who has looked into buying a sound

system knows that there are a lot of choices and trade-offs involved. Boyk's lecture will teach you about the differences between direct-drive and belt-drive turntables, about what to look at in speaker specifications, and about hundreds of other things that you (and most stereo salesmen) should learn before evaluating a sound system. So if you're thinking about buying a stereo or just enjoy learning and talking about music, you'll want to be in Winnett Lounge on Wednesday, October 8, at noon.

"Issues in Audio" is just the first of the Caltech Y's weekly Update series which gives you the chance to hear what Tech professors do for a living. Look for articles in the *Tech* and watch the Y calendar on page two of this fine newspaper for upcoming discussion topics.

The following is the program for SURF Seminar Day, October 4, (tomorrow). Noyes Conference Room 153

- 9:30 Introduction, by President Goldberger. In 153 Noyes.
- 9:45 Experimental Studies of Oligopolistic Trade Practices by Jim Angel.
- 10:00 β - γ Circular Polarization Correlation by Kurt Bachmann.
- 10:15 Experiments on the Linear and Non-Linear Evolution of the Helical Instability in Jets by Eric Betzig.
- 10:30 - 10:45 COFFEE BREAK
- 10:45 Crustal Shear Velocities in Southern California by Mark Burnett.
- 11:00 The Development of an Electron Capture Detection System for Characterizing Dispersion in Process Flow Equipment by Randall Field.
- 11:15 Ab Initio Studies on the Low-Lying States of PdO by Susan Gardner.
- 11:30 Synthetic Studies Leading to Novel Organic Structures by Pui Tong Ho.
- 11:45 Spectrophotometric Study of High-redshift Quasars by Don Korycansky.
- 12:00 - 1:15 LUNCHEON Dabney Gardens
- 1:15 X-Ray Characterization of Dicopper (I) 1,4-bis(4-methyl-2-pyridylamino) phthalazine pyrazolate tetrafluoroborate by Andy Liu.
- 1:30 Hemispheric Specialization: Its Measurement and Relationship With Handedness by David Mills.
- 1:45 Extensive $2\mu\text{m}$ Observations of Liller I /MXB1730-335 the Rapid Burster by Richard Pogge.
- 2:00 SMP and Algebraic Manipulator by Steve Rabin.
- 2:15 Existence of Equilibria in a General Model of Two-Candidate Elections by Mark Rosker.
- 2:30 - 2:45 COFFEE BREAK
- 2:45 Locating the Cyclopean retina by Geoffrey Rubin.
- 3:00 High Energy Sputtering of LiNbO by Fredrick Snider.
- 3:15 Characterization of Cloned DNA Sequences Coding For Insulin-like mRNAs by Juanito Villanueva.
- 3:30 An Experiment to Determine the Absolute

Cross Section for the Nuclear Reaction by Peter Wong.

- 4:00 - 4:20 CINCLUDING REMARKS Vice President Morgan Noyes 153.
- 5:00 - 7:00 INFORMAL GATHERING AT THE ATHENAEUM DOWNSTAIRS BAF

Noyes Conference Room 147 Dr. Bernard Minster Presiding

- 9:45 Enhanced Sputtering of Lithium Niobate by Arlen Anderson.
- 10:00 Sputtering of Impure Ice by Donald Benton.
- 10:15 The Effects of Aminoglycoside Antibiotics on Hair Cell Transduction by Bonnie Blamick.
- 10:30 - 10:45 COFFEE BREAK
- 10:45 Hemispheric Recognition of Facial Expression in the Rhesus Monkey by Anne Erdmann.
- 11:00 Sequence Organization of Genomic Regions Coding for Two mRNA's Which Are Single Copy in the Genome by Joseph Garcia, Jr.
- 11:15 Transit Rates in Muonic Atoms by Ted Hessel.
- 11:30 the Northern Great Valley Gravity Anomaly Data Collection and Modelling by Eric Korevaar.
- 11:45 Preparation and Structural Characterization of a Monomeric Dioxygen Adduct of (N,N'-1,1,2,2-Tetra-methylethylene) - Bis(Salicylidiminato) (3,5-dimethylpyridine) Cobalt (II) by Arlene Keller.
- 12:00 - 1:15 LUNCHEON Dabney Gardens
- 1:15 Hydrogen Ion Transfer in the Catalytic Triad of Alpha-lytic Protease by Jefferey Levy.
- 1:30 The Quark-Oscillator Model of Hadrons by Aneesh Manohar.
- 1:45 Tufa Deposits of Ancient Lake Cahuilla by Michael Nelson.
- 2:00 A Novel Short Wavelength Pass Light Filter by John Porter, Jr.
- 2:15 Atomic Transition Probabilities in Iron by Mark Randolph.
- 2:30 - 2:45 COFFEE BREAK
- 2:45 Optical Properties of Radiation Damage Centers in Diamonds Associated With Nitrogen Impurities by Martin Ruzek.
- 3:00 Examining β -globin Thalassemia at the Molecular Level by Susan VandeWoude.
- 4:00 - 4:20 CONCLUDING REMARKS by Vice President Morgan in 153 Noyes.

LETTERS

Invisible Death In Ph6

To the Editors, I would like to reply to a comment related to Ph 6 printed in the 79-80 TQFR. To quote the comment I am referring to; one person says that there were excess amounts of radiation in labs with no precautions taken. To verbally make such a statement without some corroborating evidence is mildly irresponsible; but to print such an unsubstantiated statement is blatantly irresponsible.

The truth is that considerable precaution is taken regarding radiation in both the Freshman and Sophomore Physics Labs; not only because of the students but because I spend the majority of my time in these labs and have a personal interest in minimizing the radiation levels.

The Safety Office regularly wipe tests the sources and no leakage or migration of radioactive material has ever been reported in the twelve years I have been associated with the labs. All gamma ray sources are contained in enough lead so that the background level from them is no more than twice the normal building background (approximately 30 counts/minute or .01 MR/Hr) at locations where people are working. Over the years, I have personally replaced many of the Co60 sources

we were using with Cs137 sources specifically to reduce the room background level. The net result is that in general the lab background is the same as the building background in spite of the fact that several new experiments using radioactive sources have been added to the lab courses in recent years.

There are experiments, particularly those using collimated gamma ray beams, where the radiation levels are high in specific locations. The people using these apparatus are always cautioned to survey the area they are working in and to make their own independent judgements about safety. This attempt on my part to teach students to make their own judgements about safe levels as a matter of good procedure, may have led some to conclude that this was necessary in the physics labs because there is real danger present.

If in the past, anyone has been misled by our attempts to teach some minimal safety procedures, I sincerely apologize; but in the future I would hope that offhand comments on substantive issues would be at least questioned and investigated, if need be, before being widely published.

Sincerely, D. Skelton

At the Leading Edge

To the Editors, Once again, Caltech deserves recognition for its struggle to promote bureaucracy and inefficiency. Their crowning achievement this past week was a subtle kink in the registration process that is either entirely new or unknown to several of the students here (many of them seniors).

I've registered nine times before this one, and all of them were very straightforward, lasting maybe 10 to 15 minutes for the entire procedure. This time, though, I was in for a few surprises.

Early Monday morning, I strolled into Dabney Hall and got into the small line to get my registration package. I walked up to the girl at the desk, and gave my name. She fumbled through the box a couple of times, told me that my card wasn't there, and pointed me to Mrs. Casey's desk. When I got there, I gave my name again, and she told me I'd need an "OK to register" slip from Ramo.

"OK to register?" I wondered as I headed over to Ramo. I wandered over to the line where one picks up their bills. Since there was no wait, it couldn't hurt to try here. The conversation went something like this:

"Hello, I was told I need an 'OK to register' slip."

"You'll have to go to that line over there." she pointed to

a line of about 35 people.

"But that's the line for promissory notes!"

"Yes, that means you owe money from the summer term."

"But I don't need to borrow anything!"

"Doesn't matter."

I stomped off to the line, and I noticed several people I knew who were also grumbling. One of them asked if I'd "been nailed" too. I wasn't sure, but my temper wasn't getting any cooler in the half-hour it took to get to the end of the line.

Once at the desk, I again explained I needed an 'OK'. They searched a stack of papers, produced my bill, told me how much I owed, and asked how I was going to pay. I showed the check for the proper amount. Now all I needed was my #3 card. But I couldn't get that without my 'OK', which I couldn't get without paying my bill, which they wouldn't let me do without my #3 card, which...

Eventually, things were straightened, and I was registered. But it seems inane to subject students to this asinine way of scolding people who didn't pay all of their summer bill before their fall bill. Even one additional line (for all the people needing 'OK's') would have speeded up things considerably, but, then, why should we expect that?

-Michael Walsh

Briefs

Lost: TI-58 Calculator with master library and statistics modules. Call James, 578-9769, x2698A or leave a message at the Dabney House mail box. REWARD.

THE CALTECH Y fly-by

Today, Friday, October 3: NOON CONCERT on the Quad. "88" bottles of beer on the wall. . . Come out today to rock and roll with "88." This program is directed by P. Pat Walp. Bring your lunch.

Monday, October 6: the Colorado River Trip sign-up begins. There are 25 places available for five glorious days of decadence starting October 22 through October 26. Those people signing up this year who had gone on the River Trip last year will be put on a waiting list, and names will be drawn by lottery to fill any extra spaces. Sign up at the Caltech Y upstairs in Winnett.

Wednesday, October 8: NOON UPDATE. "Issues in Audio," featuring James Boyk, artist in residence, lecturer in music. Bring your lunch to Winnett Lounge at noon.

ASCIT *** MOVIE ***

Friday Night

7:30 & 10:00

ASCIT Members 50¢ Others \$1.00 Baxter Lecture Hall

Oct 3

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Oct. 10

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Guitar Classes

Caltech offers Classical and Flamenco Guitar Classes with guitarist Darryl Denning on Tuesdays (beginning October 7) in the Fleming Music Room. The classes are free of charge to Caltech students. Other members of the Caltech community will be admitted if space permits. The Beginning Class meets at 4:30 pm and the Intermediate-Advanced Class at 5:30 pm. Private instruction can also be arranged with Mr. Denning. Classical and Flamenco repertoires will be explored but the techniques gained can be used in other forms of guitar as well. Students should bring their guitars to the first meeting. For further information please call Mr. Denning at 465-0881.

NATIONAL HISPANIC SCHOLARSHIP FUND

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 August 15 and October 15. Awards will range from \$200 to \$600. Applications are available in the Financial Aid Office, 208 Dabney Hall.

The California Tech

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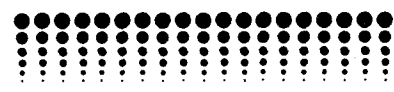
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MORE SPORTS THAN YOU WANT

Bad Luck For X-Country



This Week In Sports

By Gordo

The Caltech Cross Country Teams ran their first meet of the season Saturday afternoon at Pomona. Whittier participated also. In the men's meet, the absence of Glen George (due to academic ineligibility) made the dual match against Pomona another smashing defeat, and led to a very close contest against Whittier. Pomona secured a perfect match against both Tech and Whittier by finishing the first seven runners. Realistically, even had Glen been eligible we would have been passed. Only a great deal of effort, however, in the face of both bad luck and a surprisingly tough Whittier squad, pulled out a close victory. Junior Shawn Larsen was running in fourth position for Caltech on entering the

wooded part of the Pomona course, but due to a wrong turn became temporarily lost. [We all have our bad days—eds.] He emerged behind another Caltech runner and four more Whittier runners. Shawn held on, despite the disappointment, and scored the winning position for Caltech. First for Caltech was sophomore Karl Clausing who ran the course with a 16-second personal record time(PR). Second for Tech was sophomore Vince Cammarata, in his first race in six months. Third, just behind Vince, was senior Eric Korevaar, who is still coming back from injuries over the summer. Fourth was junior Randy Field who has yet to recover his strength after a long bout with a summer

virus. Fifth was Shawn Larsen, who still managed an 8-second PR despite losing perhaps a minute in the Wash. Also competing for Caltech were Paul Eskridge (30-second PR), Dave Drum, Bruce McArthur, Rob Murphy, and Eugene Hu.

The Women's Team forfeited its matches, because we had only four runners; five are necessary to score in meets. The four who ran, however, did encouragingly well. Sophomore Julie Kornfield was Tech's first runner with a fine race, despite her last-minute arrival from Catalina. Karen Close, also a sophomore, came in second, three seconds after Julie, while turning in a fourteen-second PR. Third was freshman Carlotta Paulsen, who surprised everyone with her fine race. In fourth position was junior Sue Gardner, providing a fine performance despite a late training start. The women were fairly competitive with Whittier and Pomona, and they have the opportunity for a good year if they can get a fifth runner.

The teams are off this weekend, and their next race will be October 11th, here against Redlands, Occidental, and the everpresent Whittier.

Hopefully by this time the men's team will have improved with the return of such runners as Glen George and Brian McLain, and the return to health and arrival of Steve Stahl, Lewis Collins and Steve Baur.



Men's Results

CIT 50	vs	PP 15
CIT 27	vs	Whittier 29
PP 15	vs	Whittier 50

Women's Results

CIT 50	vs	PP 15
CIT 50	vs	Whittier 15
PP 21	vs	Whittier 38



(Cross country meets are won by low score. First runner in a match scores one point, the second runner scores two, and so forth.)

Soccer Club:

Saturday, October 4, 10AM, Here:

Caltech vs. Trade Tech

Soccer:

Saturday, October 4, 10AM, at Pomona Pitzer:

Caltech vs. Pomona Pitzer
Wednesday, October 8, 3:00PM, at Occidental:

Caltech vs. Occidental

Football:

Saturday, October 4, 2PM, Here:

Caltech vs. Pomona J.V.

Women's Volleyball:

Saturday, October 4, all day, at Redlands:

J.V. Tournament

Thursday, October 9, 7:30 PM, at La Verne:

Caltech vs. La Verne J.V.

Water Polo:

Saturday, October 4, 10:30AM, Here:

Caltech vs. Alumni

Wednesday, October 8, 4 PM Here:

Caltech vs. Loyola



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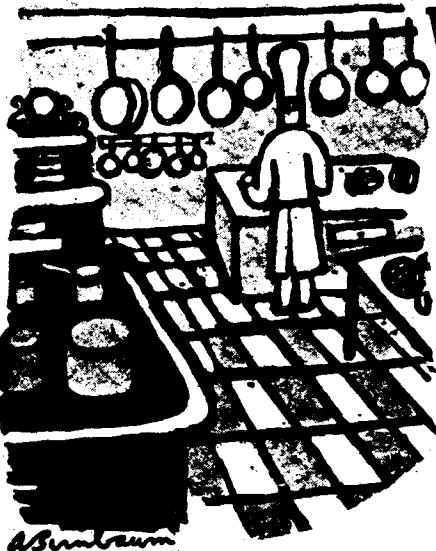
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Hello to the Student Houses! Watch for specials!

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or the Entire Month of February:
A Free Root Beer Float to all Seniors

Attention Graduate Students: Mondays and Tuesdays are Beer Days. Buy 1 pitcher, get the second one free!

ENTERTAINMENT

MOVIES plays SPECIAL EVENTS

Ordinary People Is An Extraordinary Film

by Hutch

Ordinary People is a powerhouse movie. That doesn't mean it's a blockbuster, which implies a cast of thousands, a budget of millions, and a plot with all kinds of scope and sweep. In fact, everything is pared down here. The scale is small, the mood somber, the action confined. This is the first film to be directed by Robert Redford and it's in character—honest, sincere, straightforward, riveting. But it's got one thing that never was displayed by Robert Redford the actor, and that is a powerful amount of emotion.

These are ordinary people, but an extraordinary thing has happened to them. Before the start of the picture, Buck, the older son and golden boy in the Jarrett family, drowned in a boating accident. His younger brother, Conrad (Tim Hutton), survived. Tortured by guilt, Conrad tried to slit his wrists and ended up in the hospital under psychiatric care. Now, several months later, he is back home, trying to cope with mother (Mary Tyler Moore) and father (Donald Sutherland) in their plush and proper home in the Chicago suburb of Lake Forest.

It is not easy. Mother is all surface perfection—cheerful, competent, and controlled. If she feels deeply about anything she is not going to show it, except that she makes it all too clear that she idolized her older son and hasn't much left to give the younger. Father, a tax lawyer, is trying to break through to his wife and son, but doesn't quite know how.

At the same time, young Conrad is trying to reestablish a normal life in high school. The pressure quickly gets to be too much for him and he begins treatment with a local psychiatrist (Judd Hirsch). *Ordinary People* shows how the three troubled Jarretts try to work out their relationships, and how this changes their lives.

Based on the best-selling novel by Judith Guest (it was her first novel, and she simply mailed her manuscript to a publishing house, where it was miraculously picked up out of the slush-pile), the screenplay by Alvin Sargent seems even stronger than the book. It has some psychiatric sessions that have rarely been handled better on the screen, and some of the sharpest observations of suburban society since *The Graduate*, and it has two smashing performances by Hutton and Moore, two solid ones by Hirsch and Sutherland, and a charming

one by Elizabeth McGovern as a high school girl who befriends Hutton.

Like *Kramer vs. Kramer*, which was about ordinary people too, *Ordinary People*

gets a grip on its audience that never lets go. The audience we were in seemed to be holding its breath for an hour and a half. It is a completely absorbing picture.

Drama Club Acts

The Drama Club will hold a meeting next Wednesday night at 7:30 in Winnett's Clubroom 2. We will elect a new secretary and discuss this year's plans and goals. All officers are encouraged to attend.

Auditions are being held today (Friday), in the Drama Office, (north side of Winnett), from 2 to 6 PM for scenes from a play written by

continued on page 5

If you thought the Beer Float was good, wait 'till you taste this:

Milk Steak
(Also called *Steak Shake*)
1 T-Bone Steak
1 = Cup Water
1tbs. A1 Steak Sauce
1tes. Salt
1 Raw Onion (diced)

2tbs. Catsup
(Herbs & Spices, I suggest pepper, garlic, chives, and nutmeg)
Dice steak to a fine grain. Toss in bowl while adding salt, onion, and catsup. Place mixture in blender and slowly add the water while blending. Pour in glass and garnish with A1 and nutmeg. Drink with straw.

Classified Ads

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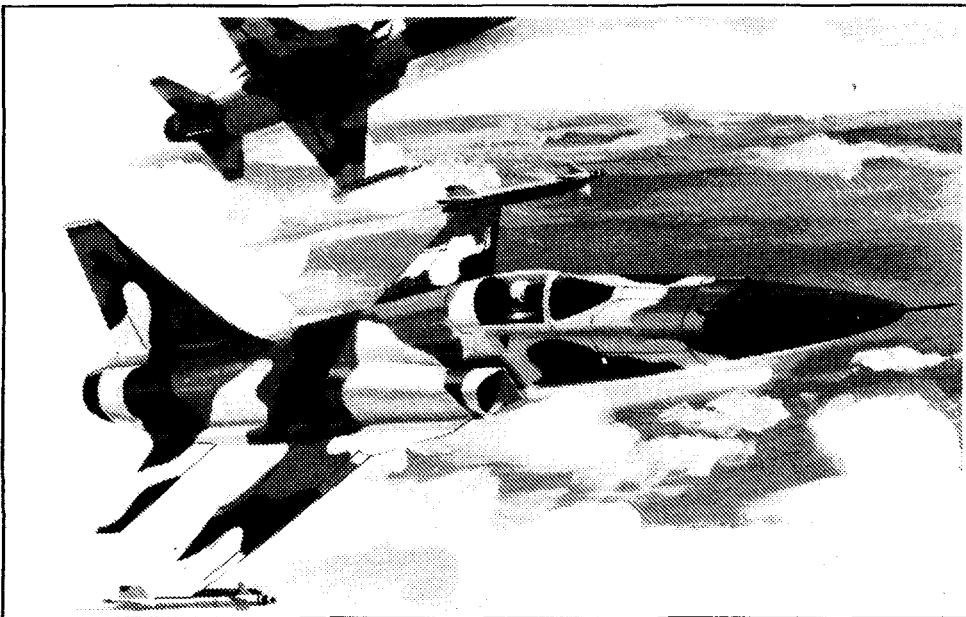
ON CAMPUS INTERVIEWS October 17

Newest Northrop Fighter Advances F-5 Family March 24, 1980 - Hawthorne, California

The new generation of Northrop's F-5 family of low cost tactical fighter aircraft, the F-5G, was announced at Hawthorne today, stepping up a nearly 20-year evolutionary program for the company. The single-engined F-5G was conceived to meet world defense needs today and through the 1990's, and offers an affordable, supportable defensive system that keeps pace with the changing requirements for national security.

October, 1980

Northrop Aircraft is still designing and building high-performance aircraft today in the company's mile-long, modern complex in Hawthorne, California. For 40 years, we've promoted the people associated with our products and furnished one of the finest benefits packages available in the industry including educational reimbursement for employees in an accredited graduate study program; a convenient savings plan - for every dollar invested, Northrop contributes 50 percent; and generous vacations - including a week long Christmas holiday. In addition to a creative work environment you'll enjoy Southern California's year round recreational paradise. And, Northrop's recreation club sponsors many enjoyable activities such as skiing, golf and fishing.



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Scholarships

NATIONAL SCIENCE FOUNDATION GRADUATE FELLOWSHIPS FOR 81-82

The National Research Council will again advise the National Science Foundation in the selection of candidates for the Foundation's program of Graduate Fellowships. Panels of eminent scientists and engineers appointed by the National Research Council will evaluate qualifications of applicants. Final selection of the fellows will be made by the foundation, with awards to be announced in March 1981.

Eligibility in the NSF Graduate Fellowship Program is limited to those individuals who, at the time of application, have not completed more than 20 semester hours/30 quarter hours, or equivalent, of study in any of the science fields listed below following completion of their first baccalaureate degree in science. Subject to the availability of funds, new fellowships awarded in the Spring of 1981 will be for periods of three years, the

second and third years contingent on certification to the Foundation by the fellowship institution of the student's satisfactory progress toward an advanced degree in science.

These fellowships will be awarded for study or work leading to master's or doctoral degrees in the mathematical, physical, biological, engineering, and social sciences, and in the history and philosophy of science. Awards will not be made in clinical, law, education, or business fields, in history or social work, for work leading to medical, dental, or public health degrees, or for study in joint science-professional degree programs. Applicants

must be citizens of the United States, and will be judged on the basis of ability. The annual stipend for Graduate Fellow will be \$4,800 for a twelve-month tenure with no dependency allowances.

Applicants will be required to take the Graduate Record Examinations designed to test aptitude and scientific achievement. The examinations, administered by the Educational Testing Service, will be given on December 13, 1980 at designated centers throughout the United States and the certain foreign countries.

The deadline date for the submission of application for NSF Graduate Fellowships is November 26, 1980. Further

information and application materials may be obtained from the Fellowship Office, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418.

International Computer Programs has announced the third annual ICP Scholarship competition. The award will be made to a computer science or computer technology student for the 1981-82 collegiate school year. The scholarship will consist of one-year's tuition plus education expenses up to a maximum of \$5,000

continued on page 6

Drama

from four

Caltex employee Steve Douglass. Performance is set for October 17, 18, & 19 in Ramo Auditorium.

"After Magritte", a comedy being produced by Marty Sirkin, also scheduled to open Oct. 17th, is in desperate need of crews. Please see Marty in Lloyd, 578-9294, stop by the Drama Office, or come by Gates at 1:00 PM on Saturday and help build sets.

This year's musical, *Candide*, will have auditions on Saturday and Sunday, Oct. 25th and 26th, from 12 to 5 PM at a place to be announced. Separate dance auditions for those interested will be from 10:30 to 12 AM. Watch for further news.

Candide needs many people to fill staff positions, but especially needs a producer, preferably a sophomore or junior who could carry on the "tradition." Anyone interested in work on sets, costumes, props, lights, or general production should come by the Drama Office, or contact the current business manager, Jeff Eriksen, at 792-0801, X2252, or M.C. 286-80. The Drama Office phone is X2259, M.C. 2-51.

The Theatre Arts Program has a monthly newsletter. Drop us a line at the office if you wish to receive a copy.

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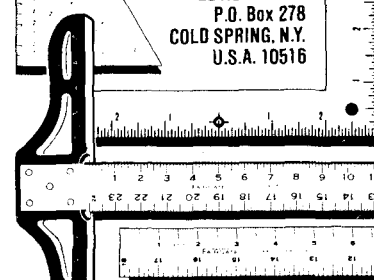
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An original essay will be the final test.

Applications will be available through the financial aid office, 208 Dabney. The deadline for filing scholarship applications is November 15, 1980.

Mail Applications to:

Sheila Cunningham
Editor
International Computer Programs, Inc.
9000 Keystone Crossing
Indianapolis, Indiana 4620
(317)844-7461 or(800)428-6179

YOUTHGRANTS NOW AVAILABLE

The Youthgrants program of the National Endowment for the Humanities will offer over 100 cash awards across the nation this fall to young people in their teens and early twenties, including many college and university students, to pursue non-credit, out-of-classroom projects in the humanities. The deadline for submission of completed applications is November 15, 1980.

The grants, which offer up to \$2,500 to individuals and up to \$10,000 for groups (\$15,000 for certain high-cost media projects) are intended primarily for those between the

ages of 15 to 25 who have a ways to go before completing academic or professional training.

If you are interested in the program, a copy of the guidelines should be on file at the campus Placement Office or the Office of Contracts and Grants.

PLASTIC INDUSTRY

SCHOLARSHIP College and university students may win up to \$1,000 in Scholarship Awards by coming up with an original and practical idea based on the use of polystyrene foam. The Fourth Annual EPS Scholarship Awards Competition, sponsored by the Expanded Polystyrene Division of The Society of the Plastics Industry, challenges inventive minds to design workable, worthwhile new products using expanded polystyrene as an important element.

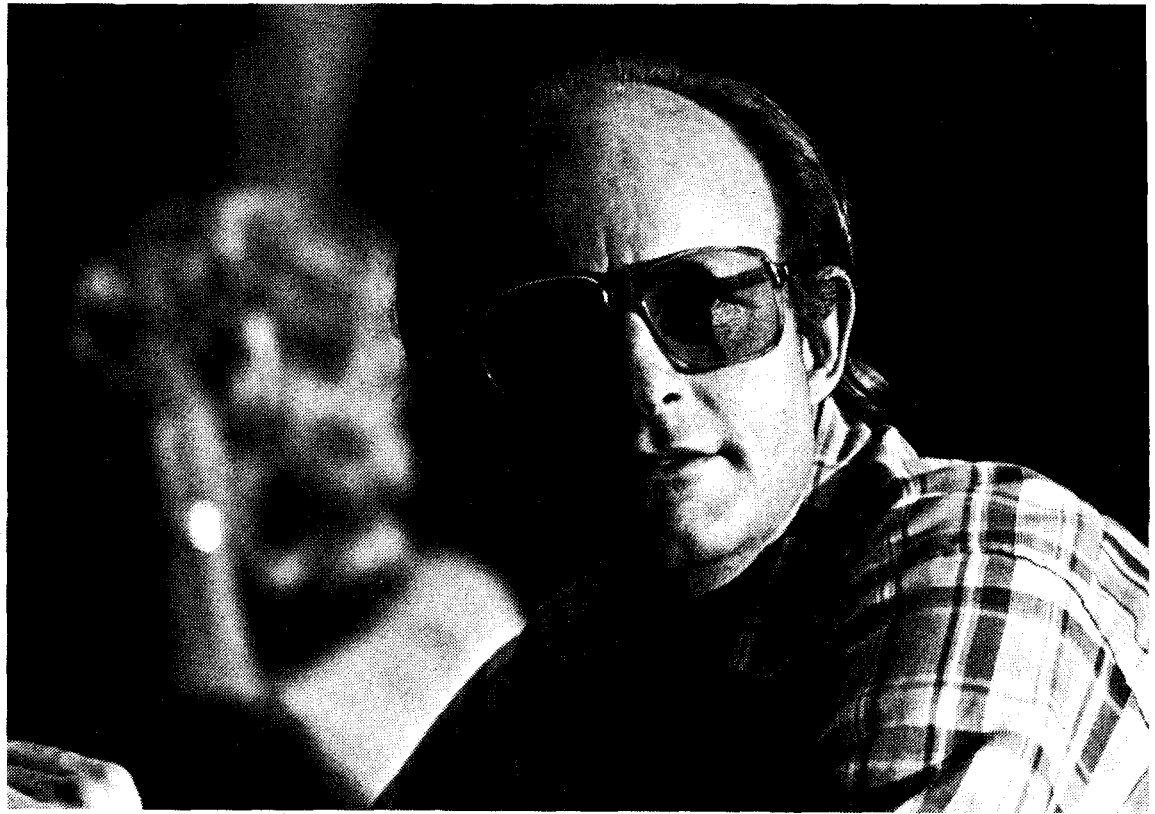
The EPS Scholarship Awards Competition offers three cash prizes -- \$1,000 First Award, \$500 Second Award, and \$200 Third Award. Honorable Mention plaques are given for Fourth and Fifth runners-up.

A brochure describing the contest requirements, and including a preliminary entry form, is available from the Dean's Office or by writing to: *The Society of the Plastics Industry*, 3150 Des Plaines Avenue, Des Plaines, IL 60018.

The competition will be judged during the Expanded Polystyrene Division Annual Conference March 5, 1981.

Swedish Club Scholarship

Swedish Club of Los Angeles, Inc. is sponsoring scholarships for the academic year, 1980-81, for full-time students of Swedish ancestry. The deadline is November 1, 1980, and further information may be obtained in the Office of Financial Aid, 208 Dabney.



Hi, I'm your friend Dean Whales. Want some advice? Take Lit 15. The folks who run this rag now can't count past 8 pages.

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Tuesday, October 14**

For information about opportunities in California, Utah and New Mexico, take time to review the Signetics Recruitment Binder which you will find in your Placement Center. Or, write to Signetics College Relations, Opportunity CP-80, 811 East Arques Avenue, Sunnyvale, CA 94086. We are an equal opportunity employer. Permanent residency visa preferred.

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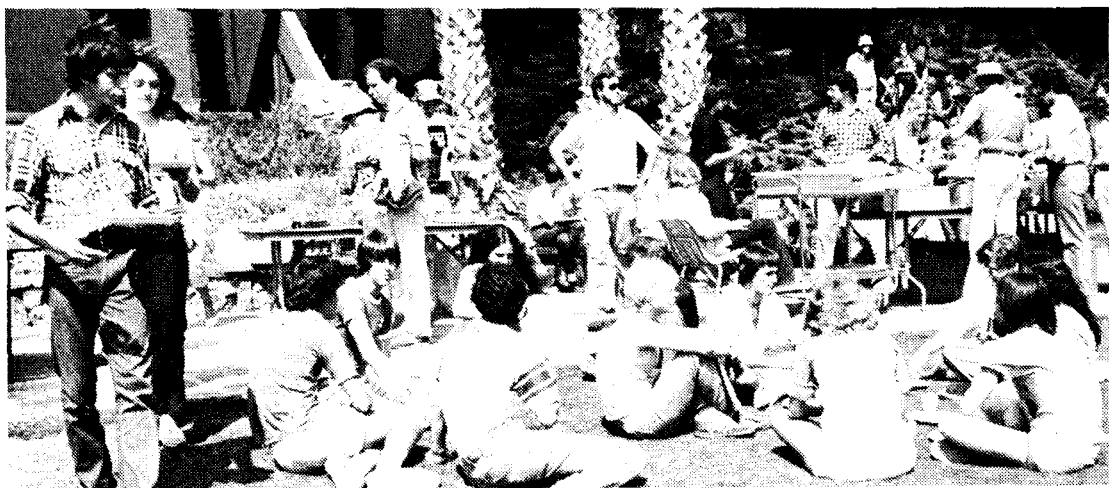
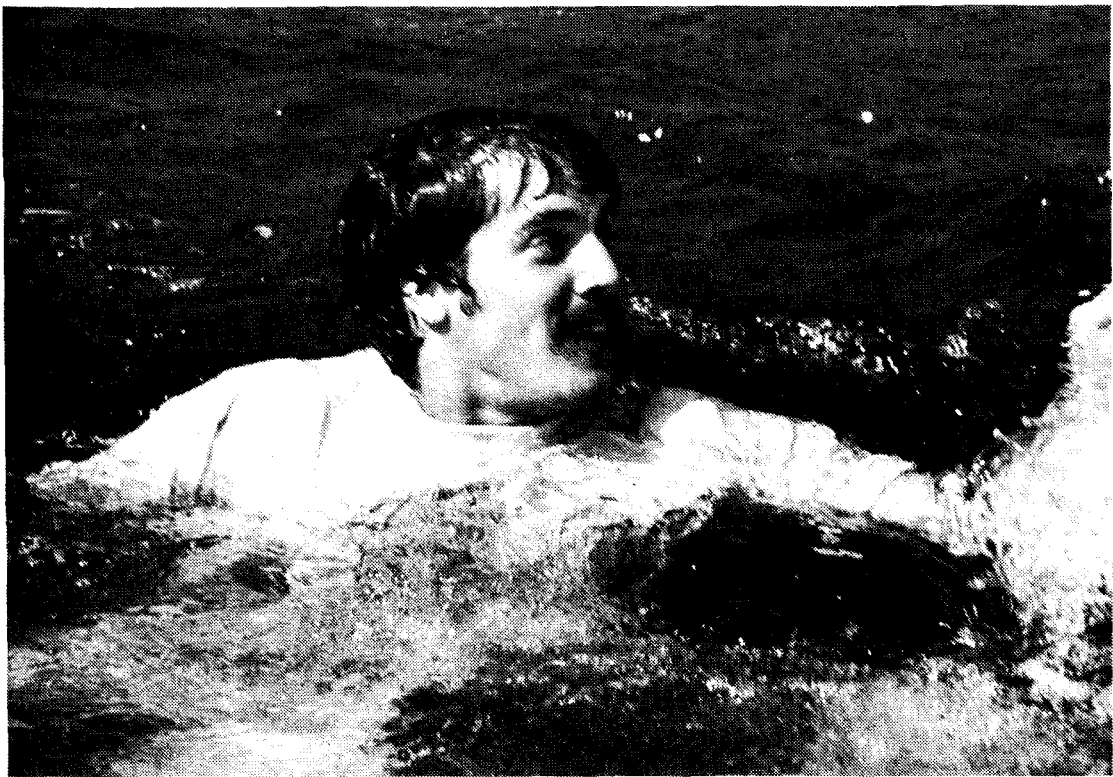
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The Bridge to Tomorrow

The charter meeting of the Caltech Bridge Club will be held Thursday, October 9, in Winnett Center. The club will sponsor weekly ACBL-sanctioned duplicate games, intercollegiate matches, trips to regional and national tournaments, and rubber bridge activities. For people who do not play bridge(?!!) but would like to learn(!!), there will be beginning classes and novice games. Membership is open to all JPL and Caltech students, faculty, staff, and their families. If you are interested but cannot come to the meeting, contact Ernie Cohen(x2180, Lloyd 221).

W6UE In Pasadena

The Caltech Amateur Radio Club, is looking for new members. If you are interested in the exciting world of Ham Radio, contact Sam Sjogren in Ricketts House (1-59). Meetings will be in Winnett, Tuesdays at 10pm., upstairs.

Goods and Services

Find out about the materials and services available at Millikan Library. See sign-up sheet on the first floor Millikan for library tours during the week of October 6, or call Nancy McLaughlin at Circulation(x2412) for further information.

Watson Fellowships

Seniors: the deadline for Watson Fellowship essays is October 24. Seniors wishing to apply for these travelling fellowships should come to the Deans Office and talk to David Wales or Chris Wood about their plans.

Don't Shoot Comrade

An informal Russian language study group seeks Caltech students or staff interested in brushing up their Russian language speaking and reading skills.

Study is on an intermediate level, so previous academic study or some advanced familiarity with the language is essential. There is no fee for instruction or materials.

The group meets every Thursday evening in the Steele conference room (110) from 7 to 9 p.m.

For further details, call Larry Mak (JPL, ext. 57-5090)

Marshall Scholarship

Applications are now available for 1981. Marshall Scholarships are open to all U.S. citizens, and are used for up to two years of study at any British university. Selection is based on academic achievement, strength in major field course-work, other activities and achievements, and letters of academic and personal reference. The deadline for application for the 1981-1982 scholarships is October 22, 1980. Further information may be obtained from the Office of Financial Aid, 208 Dabney Hall.

Games People Play

If you're looking something to do to fill the long, empty hours between homework assignments, Caltech Gaming Society meets every Friday, Saturday Sunday night at 7:30 Clubroom 1. (That's upst at the south end of Winnett Student Center.) Friday Sunday we play (improved, we think) version of D&D. A new series of games starts this week come and see. On Saturday play board games, card games, naval and space miniatures. Newcomers are welcome anything we do, and there many activities for beginner as well as the experienced gamer. For more information, contact Dabney Berge (Dabney House) or just come up on a weekend evening.

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