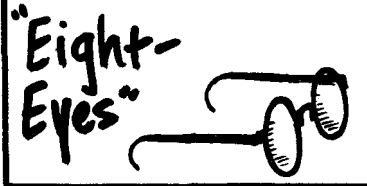


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THE CALIFORNIA TECH



VOLUME LXXXVIII NUMBER 4

PASADENA, CALIFORNIA

FRIDAY 17 OCTOBER 1986

Card-Writers May Lure Oingo Boingo To Tech

by Steve Clinard

Caltech undergraduate students entered the Honda Scooters "Back to School" Bash Promotion by delivering thousands of entries shortly before the official deadline. If successful, the campus will have the opportunity to host a concert by the popular group "Oingo Boingo."

The promotion is a nationwide contest in which the college or high school with the most entries receives the right to present the concert between October 20 and November 20. Entries must be on 3 x 5 postcards containing the name and mailing address of the student and school. The rules stated that each card must be individually validated at a Honda Scooter dealer and mailed to an address in New York.

The night before the deadline, however, organizers in Fleming House discovered that entries could be delivered to radio stations without Honda validation. On the morning of Friday, October 13, members of Fleming, Lloyd, Blacker, and Ruddock Houses began filling out entries on colored index cards purchased in bulk from the Caltech bookstore. According to Brian Daniels of Fleming House, the 52 thousand cards cost \$250 and were paid for by Fleming and Lloyd.

Ricketts soon joined in the effort, as did a few individual members of Dabney and Page. Oingo Boingo albums provided the appropriate music as students developed writing cramps and skipped physics recitation (nothing new for most.) Many of the freshmen finally learned their mailing address.

By 5:30 p.m., Daniels and Steve McNally, also of Fleming, deposited 51 thousand index cards

(roughly 60-70 per Caltech undergraduate) at Pasadena radio station KROQ. Fleming, Lloyd, Blacker, Ruddock, and Ricketts each contributed about 10 thousand apiece. Most of the cards were filled out between 11:00 a.m. and 4:00 p.m. at a rate of about 160 cards per minute.

"It was fun," commented Alex Sugiyama of Ricketts. "There were a few people who spent the whole day filling out cards, but most worked for an hour, left, and came back later. I did about eight hundred to a thousand." Rumor has it that Li Ho, who was unavailable for comment, produced nearly eight thousand cards. Marty O'Brien of Blacker also enjoyed the experience. "I think it was good to get away from work and do something mindless." Steve Bard, on the other hand, replied "Ugghh" when asked about the activity.

According to employees at KROQ, Caltech was the only school in southern California to deliver entries directly to the station. One employee said she had "no doubts whatsoever" that Caltech would win the contest. It is unknown, however, which other schools actively participated in the contest, or how many entries had been received. Although the results won't be known for another week, the students involved are fairly confident of success, assuming that no other, larger schools in the nation employed similar tactics. "Oingo Boingo is primarily a southern Californian band," Daniels remarked. "They aren't as popular elsewhere, so we don't think other schools outside this area will really try to win this. We're sure we've won in this area, so the chances are really good that we'll win."



Flems furiously fill out cards for the KROQ Oingo Boingo contest. Students of all houses wrote over 50,000 cards.

Photo by Theresa Griffie

Meteorites May Be Martian

[CNB]—Caltech researchers have determined that an odd group of eight meteorites may well be pieces of the planet Mars. Although this group of meteorites has long been suspected of having a Martian origin on the basis of their geological characteristics and chemical composition, until now no plausible mechanism has been put forward that can account for their presence on Earth.

In an article in the latest issue (October 17) of the journal *Science*, John D. O'Keefe, a visiting associate in planetary science, and Professor of Geophysics Thomas J. Ahrens have come up with a likely mechanism. They report that a large asteroid or comet, hitting the

Martian surface at an angle, could have boosted pieces of Mars into interplanetary space via a high-speed jet of crustal gases vaporized by the impact.

The meteorites in question are called SNC meteorites because of the places where three of them were found: Shergotty (India), Nakhla (Egypt), and Chassigny (France). Others were found in Antarctica, Nigeria, Indiana, and Brazil. The SNC meteorites are unlike the 10,000 or so others in the world's museums in several respects.

First of all, it's clear that they crystallized from molten rock just 1.3 billion years ago. The asteroids, source of almost all other meteorites, cooled completely

about 4.5 billion years ago and volcanic activity on the moon ceased 4.2 billion years ago. In addition, the SNC meteorites have spent only 2 to 10 million years in interplanetary space, as judged by their cosmic ray exposure times. And the concentrations of noble gases trapped in the meteorites are consistent with what was learned about the Martian atmosphere by instruments on the Viking landers. Finally, the texture of the meteorites shows the clear imprint of having cooled from a melt in a gravitational field, one that must have been far stronger than those found on even the largest asteroids.

But one fact has always argued against a Martian origin for the

Continued on page 6

Gamma-Ray Camera Went Up, Came Down

[CNB]—A 1½-ton camera that can scan the heavens at gamma-ray wavelengths has completed a successful 28-hour flight slung beneath a gigantic balloon over the southeastern U.S. During its flight at 119,000 feet, the camera made the highest resolution gamma-ray pictures ever obtained of stars, galaxies, quasars, and the center of our own galaxy, the Milky Way. Gamma-rays are among the highest energy emissions from astronomical objects and are produced by electromagnetic and nuclear interactions within them.

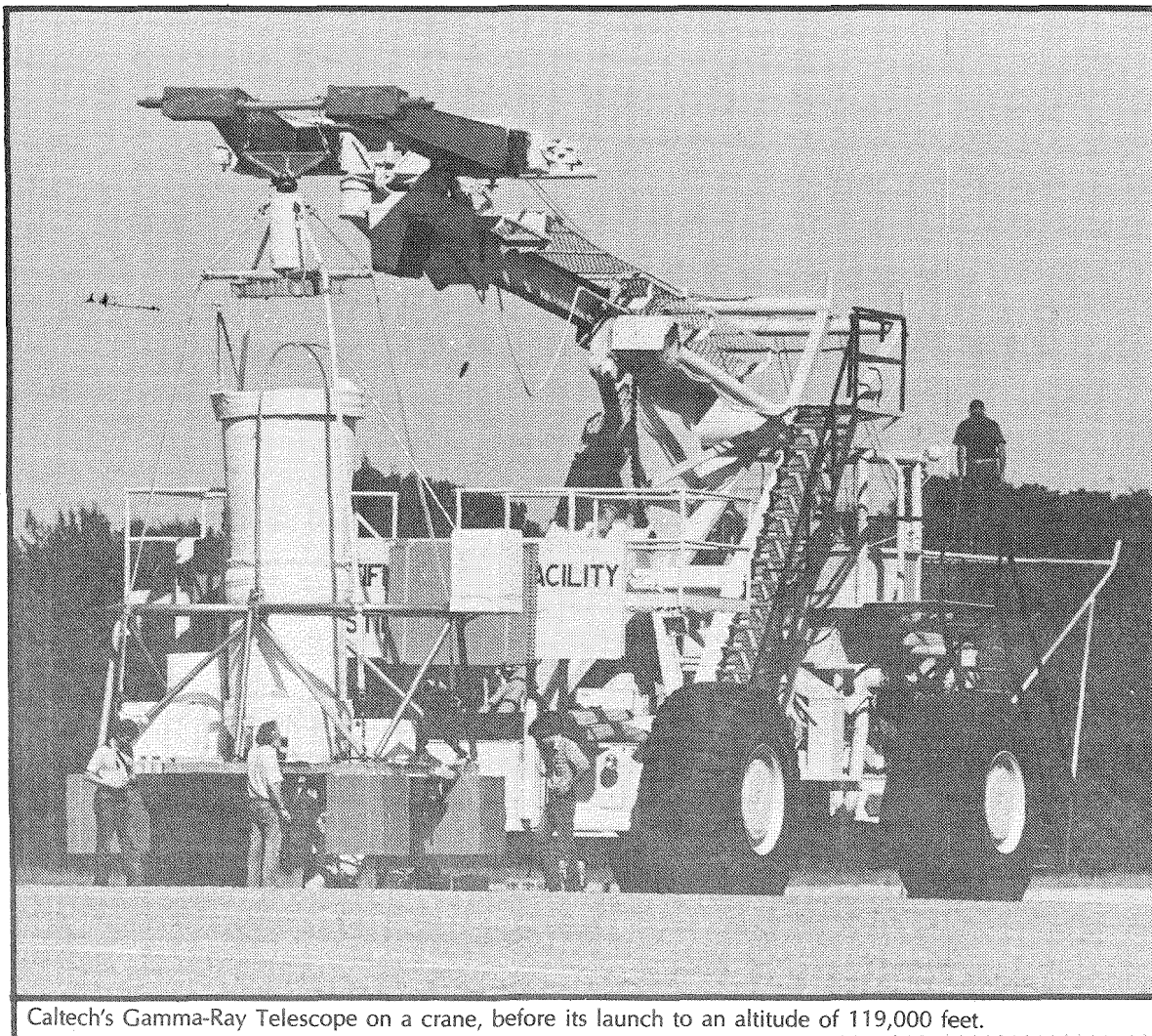
The camera landed at 1:18PM CDT on Thursday, October 16, 1986, after the Caltech scientists and engineers who built the camera radioed a signal to the balloon to fire an explosive bolt, which released the camera to parachute it to earth. The instrument package landed safely in Southeastern Arkansas, where a chase team is recovering it for later flights.

The Caltech launch team in Texas was led by engineer Rick Cook, and the overall project leader was Associate Professor of

Physics Thomas A. Prince. Other team members included staff scientists Alan Cummings and Stephen Schindler; electronics engineers William Althouse and James Weger; and graduate students Mark Finger, David Palmer, and Chris Starr. Development of the gamma-ray camera is a project of the Caltech Space Radiation Laboratory. The project was also aided by the efforts of Edward Stone, professor of physics and chairman of the Division of Physics, Mathematics, and Astronomy. The camera was built almost entirely at Caltech, with major contributions from Caltech's Central Engineering Services.

The Caltech gamma-ray camera is basically a flared cylinder three meters long and one meter in diameter mounted on a pointing platform. The camera's gamma-ray detector is a large circular plate of sodium iodide crystal 40 centimeters in diameter and 5 centimeters thick. Gamma rays striking the crystal produce faint scintillations of light, which are

Continued on page 7



Caltech's Gamma-Ray Telescope on a crane, before its launch to an altitude of 119,000 feet.

LETTERS

Ethnic Supporter

To da Iditer:

I'm a tad annoyed by the way your article on the Rotation Rules made me look like the only supporter of the rules. Remember as IHC Chairman I can't vote. Only the House Presidents vote. I hope this clears things up.

What REALLY annoys me is the fact that the paper is becoming racist again. I suppose Irish-German-Nordic surnames still will receive their stupid little marks of punctuation (i.e., two dots in Fätland, a dash in Jentoft-Nielsen, and an apostrophe of all things in O'Dea). Why then was that BOLD mark of distinction left out of my name. Gómez with a daring, forceful accent to give it the dignity it deserves.

Thanx,

—Stèvè Gómez

The Editors Reply: Stèvè, we're very sorry about what happened last week; believe us, it won't happen again. We hope we've rectified these punctuation problems to everyone's satisfaction.

Page Unspirited

To the Editors:

Recently I had an argument with a friend who claimed there was no school spirit here at Tech. I argued that, even though there aren't crowds at our athletic events as there are in interhouse athletics, there is a pride and loyalty to Tech.

Last week my point was proven. Students from the whole campus got together and worked for a goal benefiting all of Caltech. All the houses got involved in trying to bring Oingo Boingo to Tech (not to any one house). All the houses—that is except Page.

Just like last year, when six houses planned a prank on the

freeways (spelling CALTECH with cars), Page refused to get involved in any campus-wide activity.

I just want to know why Page never gets involved. Are they just apathetic? Lazy? Do they hate the rest of the campus so much? Or maybe only some houses—and they aren't big enough to overcome it for the common good.

The answer, I think, is clear—Page sux.

—Adam Slovik
Fleming 1-57

P.S. Look for results of the Oingo Boingo contest next week. Final count of entries—51,350. School with the most votes wins. Caltech won the L.A. region, but national contest results have not been determined.

The Editors Reply: It has been brought to our attention by members of Page House that Mr. Slovik's assertion is false; they claim that Page filled out at least 500 cards. Expect a letter next week.

Censor the Tech?

To the Editors:

The ASCIT Board of Directors held their weekly meeting this Tuesday night in the master's office. The minutes of the meeting that are distributed give a quick view of what transpired at the meeting. But, as of Wednesday night, the minutes leave out one slight detail of the meeting.

David Bruning brought up a subject that did not make it into the minutes. He thought that the BOD should take up the matter of overseeing the editorial integrity of The California Tech.

This topic came up in response to the tasteless letter by Ron Goodman in which he berates the Institute for improving the South

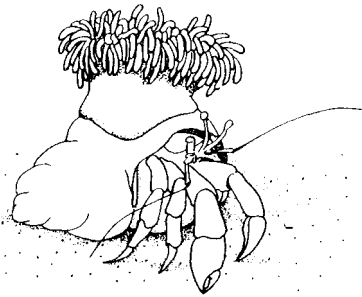
Houses without first consulting him. The editors of the Tech chose to print the letter without editing several crude remarks that Mr. Goodman included in order to get his point across.

The question here is not whether Mr. Goodman should have used vulgarity where acceptable English failed him. Nor is the question what class of newspaper the Tech editors wish to print. Rather, we must question whether we want our Board of Directors scrapping the ideals of the First Amendment of the U.S. Constitution.

Reasonable people do disagree as to what is acceptable for print in a newspaper representing the Caltech undergraduate community. But if the ASCIT BOD are going to deliberate a censorship panel, they owe it to us not to hide their deliberations from the Caltech community.

If, by the time of this writing, the Directors choose to print a complete copy of the meeting's minutes, then I thank them for bringing their proceedings out into the open. I hope that the members of the BOD realize the danger in setting up "Advisory Panels" or "Editorial Boards" that truly serve as no less than censorship committees.

—Michael Keating

Student Attitudes Polled
The Survey Said—

According to a survey recently commissioned by the National Association of College Stores, the nation's college students are more conservative in their attitudes about a wide range of subjects than the generation which preceded them. This survey, which the NACS calls "the most penetrating survey of college student attitudes ever undertaken," was conducted by Simmons Market Research Bureau, and was aimed at finding out just what America's 12.5 million college students are all about. This was especially important to the NACS, since those students account for around \$20 billion in discretionary spending per year.

Based on responses from 4,349 randomly selected students who were willing to answer a 29-page questionnaire, the following data emerges:

Fifty-six percent think sex before marriage is *always or sometimes* wrong. [The italics originate with *the Tech* to denote lumping together of two or more categories, without proper breakdown.] 95% believe sex outside marriage is *always or sometimes* wrong, and 69% prefer postponing marriage until they have achieved other goals.

Seventy percent believe that cigarettes are harmful, and 48% indicated they would not even date someone who smokes.

Eighty-four percent think cocaine is harmful, and 62% believe marijuana use is also "unwise," but only 10% feel that way about alcohol.

Seventy-three percent favor the death penalty, and 69.9% think abortion should be legal.

37% of those responding considered themselves Republicans, 31% independents, and only 28% Democrats.

Doctors, scientists, and professors are highly respected by students, but reporters, government workers, and politicians had poor public images, with 60%, 47% and 70% (respectively) of students having little or no trust in these professions.

Sixty-nine percent of the students said religion was important to varying degrees in their lives, and 26% said they attended religious services at least once a week; 51% attend at least once a month.

The survey also provided an insight into financial habits of students, including the fact that 48% live off campus, and in effect run households.

Fifty percent of the respondents get more than half of their discretionary income from their own earnings, and 58% of those said they earned over \$2,000 last year, while 25% earned over \$5,000.

When it comes to discretionary spending, 61% said they had \$100 per month or more to spend. Nineteen percent in that group has between \$150-249 and another 19% spend \$250 or more. Largest dollar expenditures by students during the

school year were at the college store, with a median of \$248.61.

Ninety-six percent said they spent more money on clothing during the past school year than on any other category—with a median expenditure of \$187.40. Four percent of all discretionary income was spent on health and beauty aids.

In other survey highlights, 56% have and use bank credit cards, 41% have borrowed money to attend college, and 86% have savings accounts. College students are owners of high-priced items as well: Sixteen percent have a new car, 39% purchased a used car; 78% own a television set, 66% a stereo system; 36% a 35mm camera and 17% a computer.

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Editorial:

On Keeping Those Trustees Happy

Two weeks ago, we ran a letter by Ron Goodman, in which he expressed his disgust at the results of the South house renovation, and heaped some abuse on those who donated the money for it. Now, I'm a great believer in freedom of the press, as I hope my initial editorial upon assuming the mantle of Editorship made clear. In that editorial I said that I was not in the habit of keeping certain four-(and other)-letter words out of the Tech at all costs. It was with such thoughts of the First Amendment that we (that's me and Josh, not the editorial "we") decided to run Ron's letter complete and uncensored.

A few days ago Clea Bures and Pam Feldman (ASCIT and BOC presidents, respectively) pointed out to me that our own California

Tech is mailed out weekly to each and every Caltech trustee. This changes the situation somewhat. The colorful, hyperbolic language of Ron's letter, while something that Techers are used to, might quite well cause problems for some of our fine trustees. Ordinarily, we could of course counter with the assertion that the Tech is written for the students of Caltech and no one else, but there is the fact that Ron's letter constituted an attack on those who funded the South House renovation.

Remember the early-seventies incident wherein a student-made banner reading "Impeach Nixon", hung from Millikan, caused a donor to cancel a million-dollar grant to Caltech? The frosh should all be familiar with this, as it was

discussed during the honor-system talks at Frosh Camp. This involved only one donor, not many as in the current case (even though Ron addressed his attack to one imaginary trustee), but I'm sure the parallels are obvious. Does this put Ron in the position of the student who made the banner, and the Tech, and its editors, in the position of the people who hung the banner from Millikan? Luckily, no potential donors have reacted with outrage yet, and nothing might come of it. But who knows?

The purpose of this has been to share with our vast audience some of the tricky aspects of editorial policy, and to let you all know that the next letter we get that contains the likes of "yea, the Trustees of this Institute are like unto diseased baboon pancreases, may their souls rot in the Pit for eternity" might just get cut to ribbons by us. Not that we have anything against depictions of primate viscera, it's just our healthy fear of the BOC. Thank you for your support.

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FEATURES

Love Toads Explained Social & Sexual Relationships

by Huy Cao

If you weren't at frosh camp this year, you're probably puzzled by vague allusions to "love toads." A talk entitled "Social Relationships and Sexual Awareness at Caltech" given at the camp by Robert Iles, a psychotherapist unaffiliated with Caltech, discussed sexual choices and managing relationships.

Dr. Iles discussed some problems of college-age students. Adolescence, he explained, is a time when the transition to adulthood takes place. Adolescents learn social skills and experiment sexually. This can be very positive if we are really sure of our own wants and intentions.

Sexual tendencies are natural, such as the desire to touch others. Dr. Iles talked at length about gay tendencies, explaining that, like straight desires, gay desires aren't chosen. He said that the environment that we sexually experiment in has an affect on our sexual preference. If we sexually experiment in an environment with many people of our own sex, we're more likely to have gay experiences.

One major point of the talk was that we should be straightforward in our relationships. He stressed the need to talk freely on the sexual level. We should be assertive, said Dr. Iles, but then again, we mustn't let ourselves be "talked into" anything unless, of course, we want to.

To illustrate the points more realistically, skits were performed. The first one was about asking for a first date: Mark Carlin wanted a date with Heidi Anderson so, after much inner debate (spoken to the audience) and small-talk to Heidi, he finally asked. The point conveyed was to ask if you want a date. The second skit, performed by Doug Roberts and Nancy Drehwing, was set in the back of a car. He wanted to "do it" (they had been dating a long time, of course) and was discussing it with her before going on. This skit took a longer time, apparently because she also wanted to get more intimate, but didn't want to appear to be easy. The message in this skit was to discuss relationships openly, so that each person will understand the other.

Dr. Iles also showed two films, both amusing but less obvious in meaning. The first portrayed an overly aggressive woman on a first date with an overwhelmed man, in a humorous reversal of stereotypical gender roles. The second film, *Love Toads*, has been more appropriately called "horny amphibians." Some characterized it as the work of somebody who liked seeing two stuffed animals engaging in all sorts of sexual positions.

"The purpose of the talk," Associate Dean of Students Jeanne Noda said, "was two-fold: to provide information on sexual rela-

tionships and preferences, and to provide some food for thought as freshmen get to know each other."

The freshmen themselves had varied opinions. "It was informative," said Rob Grothe. "The speaker discussed the right things, was excellent, and really knew his stuff." But he added, "*Love Toads* was awful. I couldn't have a stronger outcry against that."

Huan Lin thought the talk was "okay", but that "it was embarrassing at times."

Many freshmen thought the talk was interesting but useless. "I didn't get anything out of it," Tom Capellari admitted.

Frosh Cathy Cretsinger stated the opinions of many when she said that "most of the talk wasn't relevant to life at Caltech." This was especially the opinion of most of the upperclassmen who were there. Jean Tang, senior, said "The talk was mainly sex education. The freshmen didn't seem to know the purpose of the talk and weren't made aware of social situations that could happen here." Junior Chris Nolle similarly stated that, "Although [the psychotherapist] had lots to say, he didn't touch on specific Caltech problems. The implication of the [male/female] ratio was missed. . . This was the consensus of the upperclassmen I've talked to."

Heidi Anderson, a sophomore, stated that Dr. Iles should have toned down on the sex. "He talked a lot about sex, but not about normal day-to-day relationships." She, and almost all upperclassmen interviewed, thought the talk was more relevant to her now than it would have been as a freshman.

While the talk was intended for freshmen, they seemed to get the least out of it. They either thought it was irrelevant, or else liked it more on the intellectual level. The upperclassmen, for whom the talk was not specifically intended, seemed to get much more out of it. "The freshmen haven't been here long enough to have much to go on. The talk makes more sense to upperclassmen who already have background," said Chris Nolle.

The Inside World

Blacker: Nothing much this week save dweebs with remote-control CD players and Wagnerian discs. The Black Bug moves on, minus a leg. Football w/Dabney this Sunday.

—Arex!

Dabney: We were fucked up, all of us. Except the bartender, who was dismantling a polypeptide. The student-in-residence was attempting to exercise his creative assertiveness but was prevented by an amorphous blue penis emerging from the head of a creature depicted photographically in a book next to him. That was me, you see. Tom watched me write.

"Let me shake your hand," is the next sentence," he said. I wrote it down. "No, that's 'n-e-s-t-s';" he spelled it out. I decided not to change it. Tom said, "Close quotation." "No, not yet." "Wait. . . O.K." He said all of that. He was fucked up. Everyone was fucked up. Adam came up and said, "I don't think the *Tech* people will appreciate this gratuitous usage of the word 'fuck.' I don't think he was fucked up.

We had a house meeting. (In my pants!) The frosh were impressionable. Or perhaps impenetrable. They have not yet been fucked up. We got a unicycle. We talked about elitism, parasites, not being Darbs, suicidal nonstudent BNG PNG's, and a whole lot more. Look at all you get. But wait! There's more! Now how much would you pay? . . . They saw me write that, just now. I know what you're saying. That's stupid. Weird, esoteric Inside Worlds are so clichéd. They just take up space. A cop-out.

I know. Fuck you.

—Jug Rappapappanopolopolis

Fleming: Oh, what a week it was, and the term has only just begun.

The party Saturday night at 328 was such a huge success that Dwight Berg, Brian Damage's evil twin (come to think of it, has anyone seen these two in the same place, at the same time?), was caught with his pants down in Buttcheese's room.

The big Red Softball Machine is rolling over opponents, obviously spurred on by the dinner announcements of the inimitable John Josephson.

Speaking of winning (if all goes well), the Mystic Knights of the Oingo Boingo will be playing at Tech thanks to an incredible six house effort led by Damage and Slovik. The lads turned in 51,000 votes to KROQ last Friday, so keep your fingers crossed.

Scott Bradley (Bradd Scott?) was floated at dinner Monday night for being a weenie.

Interhouse Theme: Castle Egglestein. Get out there and build it, frosh.

—Al Fansome

Lloyd: In an occurrence completely unrelated to the unfortunate Zanelli incident, Basseem Mora got on the waiters' bad side. Hang in there, dude. You're almost half done with your sentence.

After frosh Elections (yeah, like it already happened before I wrote this) the door got jammed or something. The frosh got all wet, and several upperclassmen probably got showered.

We beat Ruddock in softball Wednesday. If it weren't for the Inning from Hell, we'd be 3-0 right now.

As Earl previously announced, yesterday was Tie Day. Does "lead balloon" mean anything to you, Earl? Well, maybe next week.

Drink of the Week this week is the Daughter of Alien Beings. Take one teaspoon of Maxwell House Instant, and add 2/3 cup of water and 1/3 cup of creme de cacao. Microwave on high for 2 minutes. Good to drink by the fireplace with your 35-year-old girlfriend.

—Skeeter and Jethro

Page: As initiation 1986 pulls to a close, Page House is chagrined to say that this is without doubt the wimpiest, ugliest, most slovenly inept heap of a frosh class that it has ever been our misfortune to accept. And it was mere chance that this poor little group of incompetents managed to shower all but 3 of the Page Gods (AKA Sophomores) . . .

Welcome aboard frosh, and congrats to those of you elected to frosh officers. Hey Carver, watch what you do with that stick.

continued on page 4

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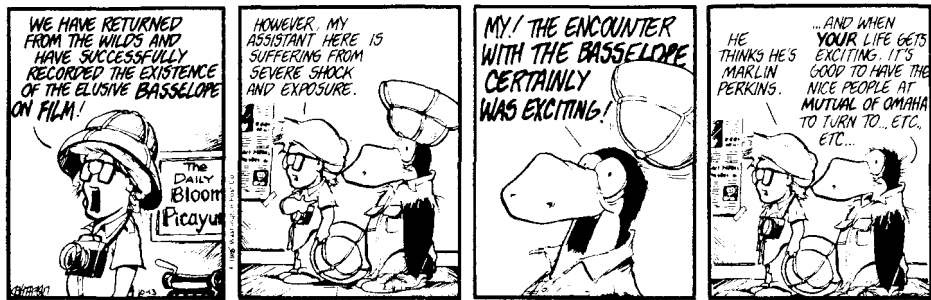
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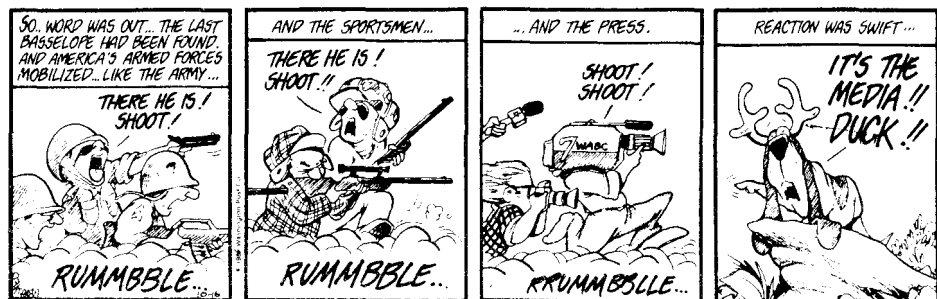
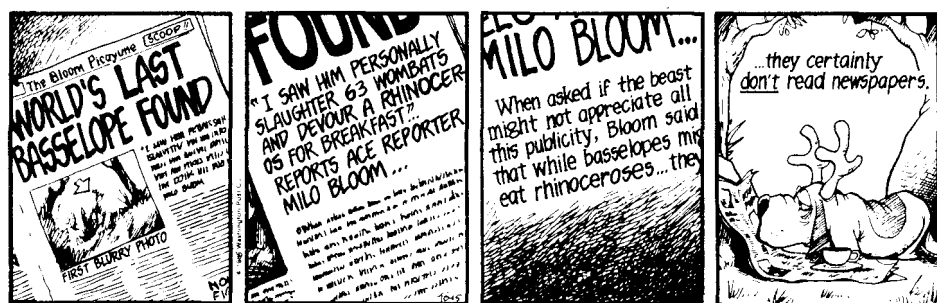


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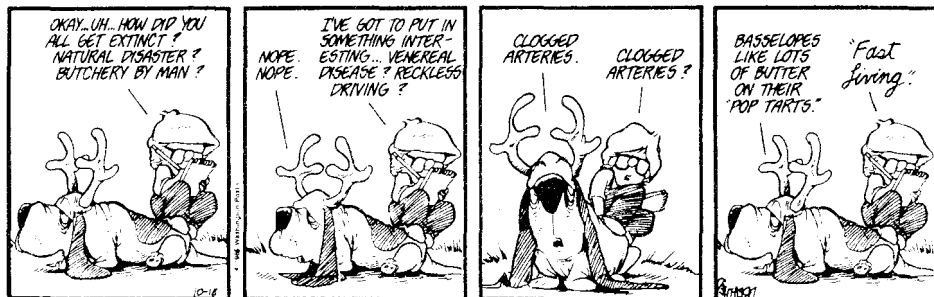
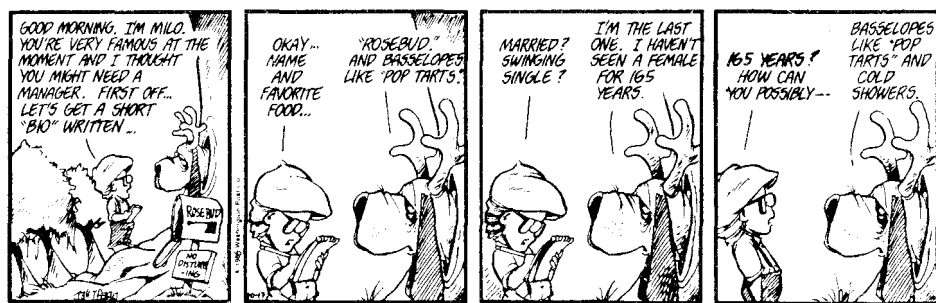


By Berke Breathed

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THE CALTECH Y



More Inside World

From page 3

Question of the week: what color is Konstantin going to repaint his car? And will the Mich alley money cover the bail?

After a disorganized start, the Greased Frosh Races/New Security Guard Initiation was held on Sunday, Oct. 12. The Force, Page House's brilliant Sophomore alley, emerged undefeated and claimed the alley trophy.

And now! The Page House return volley in the War of the Blank Verse (for our neighbors across the Olive Walk with the blank minds).

"Woe to him who would attempt the Bard's work,
Unskilled of meter, unlearned of verse
And more banefully still, completely dumb.

We want a verse that's blank, not one that's lame.
Mourning the elegy of Sydicate,
The Antibard sang of LN enemas,
Latent Homosexuals and the Cannon.

In true Fleming addiction the oversex'd
Herd plac'd their Cannon, their vicarious Tool,
At the center of their imagin'd world.

Oh, how their insular world was disrupt'd
When the Cannon, true symbol of pissing pow'r,
Was painted pink, then stolen, then fired off!

Oh, how relieved the herd, how happy the house
When Syndicate leaders mov'd to allow the flems
to continue their inbreeding undisturb'd."

P.S. H-Blatz is dead. Now heavy metal will get the point.

May THE FORCE Be With You,

—David Richard Holk

Ricketts: Can it be true? Were my eyes deceiving me? Sophomores at a brakedrum pile, of all things. And what a pile it turned out to be, lasting a whopping 25 minutes, during 23 of which the brakedrum was within ten yards of its starting point. The finish arrived with dizzying speed, however, as the underdogs proved that they had learned something from their previous thrashings, and pulled a fast-break across the goal-line. Then it was Miller time for the sophomores and laundry time for the frosh.

Speaking of dizzying speed, Andrew Kaluzniacki, madman of the sophomore class, set out to prove his hard-headedness during El Pile. Executing a jacknife dive into the turf which earned him a perfect score from the judges, 'Drew walked away the victor over the ground, only to be taken to the hospital for drug screening. Chocolate-covered espresso beans are suspected.

In other news, our fireplace is still logless, the frosh still can't play füssball, and the Great Ricketts Thief-Chase is on. When caught, we suspect this person will fall down the Crud stairs two or three times while attempting to escape. Ricketts house now has 28 frosh and counting, as Rob Williamson and Geoff Pilling are now bouncing baby Scurves. Lock your doors, add your classes, and PLAY SOFTBALL.

—Shithead 1 and Giggles

Ruddock: Greetings from Ruddock—Home of Gods, Warriors, Men who can take it, Women who can handle it, and Shower Curtains which are feeling a bit homesick. Yes, Hassle Week is over and the frosh though the frosh tried valiantly they didn't get the Pledge Master, but they did learn how to water the Court of Man & found a use for last year's shirts (Vax's idea?) Welcome to Ruddock, frosh. (Even if you didn't earn an additional 2 million points stealing the cannon). Oh well...

There's a softball (software?) game today against Fleming. Be there to support the Big Blue Machine. Hopefully we'll do better than against Lloyd—we lost by 1 run but gained stitches. Games next week on Tuesday and Wednesday.

If you're interested in playing GSC volleyball, go talk to Lloyd or Tung.

House social event this weekend: the GAAC, by Waynus, Sunday afternoon. Until then, alley standings are: 4... forget the rest.

Hey everybody! Nik got a date... and don't forget the house meeting Tuesday night to talk Interhouse budgets, the historian's new Lamborghini, and the grand opening of Victors of Pasadena.

—Betsy the frosh

P.S. And yes, Wayne, things do grow in the shade.

CALTECH BOOKSTORE'S ANNUAL FALL SIDEWALK SALE

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BOOKS BY THE POUND

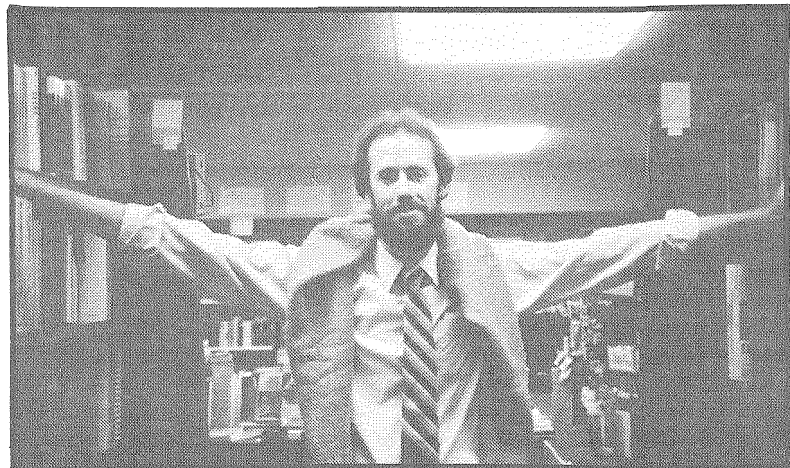
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This space contributed as a public service.

THIS YEAR PUT AN END TO YOUR DEADLY HABIT.



Great American Smokeout—Nov.20



Book-buyer Bill Kros defends his domain against ever-shrinking space.

Photo by Joey Francis

Bookstore Man

by Amanda Heaton

Reading and writing and arithmetic: the purposes of college. But these activities require equipment: books and paper, pencil and pen. And the most convenient place for students to find such things is the Caltech Bookstore.

In order to provide these necessary items, the bookstore must make choices. Bill Kros, Book Buyer and Assistant Manager, selects books and organizes the store.

"I buy all the books—the course books, the reference books (mainly science oriented), the literature section books, the science fiction and mass market books," he said. "We sell mostly science books, obviously. Last year we sold 3700 physics books just off the general shelf, not required for classes. We sold close to 8000 computer-related books."

In addition to supplying textbooks, however, the bookstore tries to offer a variety of reading materials.

"They've got a good science fiction selection," sophomore Paul Searcy said. "I buy a lot of stuff there—textbooks, pens, pencils."

"I've gotten stuff in there for specific classes and some science fiction," junior Lisa Giaimo said. "And when a new Far Side or Doonesbury or Bloom County

book comes out they'll have it before anybody else."

Although few people pay careful attention unless they have a specific problem, choosing the books poses many problems.

"The bookstore is cramped for space," Kros said. "In my opinion, we could easily double the size of the bookstore and still fill the shelves with books and sell them. In 1972 there was an Ad Hoc Committee on the bookstore and they decided that the bookstore needed more space. And everyone agreed. But there was no money so nothing was ever done. Now, 14 years later, we're basically in the same boat."

The literature section, a collection of classics chosen based on their appeal to college students, wanes even more than other areas due to the lack of space.

"All of the non-science sections have to suffer," Kros said. "Apparently, before I came (August 1985) the store had experienced great difficulty selling literature books, so the person before me decided to cut back inventory drastically. But I feel that a college store should have a decent literature section; you ought to be able to go in and buy some Faulkner and Hemingway. But now, I'm basically stuck."

Continued on page 6

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Martian Meteorites

From page 1

SNC meteorites, and that is their relatively pristine condition. In order to escape from Mars, large boulders must somehow have been accelerated beyond the Martian escape velocity of 5.05 kilometers per second (11,300 miles per hour). At first glance, the most likely mechanism for this would be the impact of a comet or asteroid nearly perpendicular to the Martian surface. Such an impact would have caused a small amount of material to be ejected from Mars. However, any such material would have been vaporized or at least thoroughly melted. Some SNC meteorites do show evidence of shock-induced melting, but this melting is not nearly extensive enough to accord with the direct impact model.

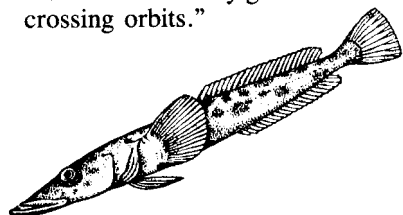
Another possibility is that the material ricocheted off Mars after a grazing meteorite impact. But O'Keefe and Ahrens have determined that although such meteorite impacts certainly occurred on Mars, they would not have launched material past escape velocity.

Ahrens and O'Keefe's work involves the study of the response of materials undergoing high-velocity impact. In the Helen and Roland Lindhurst Laboratory of Experimental Geophysics they have four powerful guns capable of accelerating projectiles to high speeds. When the largest of these, a 106-foot-long, 35-ton light gas gun, is fired, the entire building shakes, and a one-ounce plastic and tantalum bullet attains speeds as high as 7 kilometers per second (16,000 miles per hour). According to Ahrens, this gun produces impacts with dynamic pressures as high as any occurring anywhere in the inner solar system.

Using the data gathered from the gun, O'Keefe and Ahrens built "equations of state" that describe the behavior of various materials under various impact conditions. These equations were then fed into a computer program that simulates the effects of meteorite impacts on the Martian surface.

The results of these simulations indicate that the best way to launch material from Mars involves neither perpendicular nor extremely shallow impacts. Rather, material is most likely to be accelerated past escape velocity if the impact angle is between 25 and 60 degrees from the horizontal. Such impacts vaporize the crustal rocks, trapped water, carbon dioxide, and other gases trapped in the Martian crust and produce a jet of hot gas that can reach a velocity of 20 kilometers per second. This is sufficient to sweep rocks ranging up to one meter in diameter off the surface of Mars, at speeds greater than 5 kilometers per second, without damaging them in any appreciable way.

Although these rocks escape the Martian gravitational field, says Ahrens, "they probably don't get a high enough velocity to escape the solar system, and they go into orbit around the sun. Objects that are launched into somewhat eccentric orbits become perturbed in orbit as a result of the very slight gravitational effects of the planets. Probably most of these objects go into Mars-crossing orbits and, in time, fall back to that planet. But a small number leak out of the zone around Mars and eventually go into Earth-crossing orbits."



Bookstore Man

From page 5

Although few students know about the literature section specifically, the section has survived because of people who buy books while browsing randomly.

"Last year we sold 3500 science fiction books and 1300 literature books," Kros said. "That's actually pretty good, compared to years past—literature is booming."

Kros has also promoted the literature section among the humanities professors.

"We have almost no advertising budget, obviously, given the nature of this stuff," he said. "I have a PC that I keep track of the inventory on and I printed out an Author-Title-Publisher listing and gave it to humanities faculty members who I thought might be interested. When the section nearly disappeared, the humanities professors were dismayed that their subject areas weren't being supported."

Aside from the constraints of space, the bookstore has a great deal of flexibility in the types of books it buys.

"Obviously, we have some history of what sells—if we've sold one we probably need to order a one," Kros said. "The tricky thing is that some stuff goes in cycles; some books are very popular in the

fall and won't sell at all in the spring."

With science-related books and textbooks, Kros can make choices fairly easily.

"Anything they publish that's of interest in a subject area they send us a copy or two of," Kros said. "We'll normally order almost anything that comes out in theoretical physics, and we'll buy two or three copies of most engineering books."

"In textbooks, of course, I don't have a choice—I don't want a choice. We get a requisition from the professor saying what books to order and about how many people are going to be in the class."

For other types of books, Kros uses different sources of information.

"I get mountains of material from the publishers," Kros said. "That's my primary source. We also see suggestions all the time from people in the form of special orders. And sometimes people will just come in and say, 'Why don't you have this?' I tend to be eclectic about it—I would rather err on the side of having a book that no one finds interesting."

The bookstore also offers drug-store-type supplies for those who don't want to venture off campus.

"It's a convenient trap," Lisa Giaimo said. "I've even gone so far

as to buy clothes in there because I didn't have anything else to wear."

Despite the convenience, however, many people object to the cost.

"It's overpriced," Paul Searcy said. "It's ridiculous to buy shampoo and stuff there—\$8 for a bottle of Head and Shoulders or whatever."

Although prices frequently come under attack, the bookstore actually has little flexibility in setting its charges. An outside contractor provides the drug store items, while book costs prohibit other discounts.

"Prices are basically set by the publishers and that's how we price things," Kros said. "Years and years ago, the Institute offered discounts on books for students and faculty, and the bookstore lost a lot of money. Any kind of meaningful discount would bankrupt the store."

"We aren't in it for the profit; we're here to serve the students. But the publishers are in it for the money. And college and scientific publishing is one of the most profitable businesses around."

Nevertheless, the bookstore does occasionally offer discounts.

"We do occasionally promote books by discounting them," Kros said. "Asimov's newest Foundation novel, for example, we have at 40% off because it's only out in

hardback but we wanted to give students the opportunity to buy it. We don't make anything off it, of course, but its nice."

Students have also objected to the high cost of paper supplies.

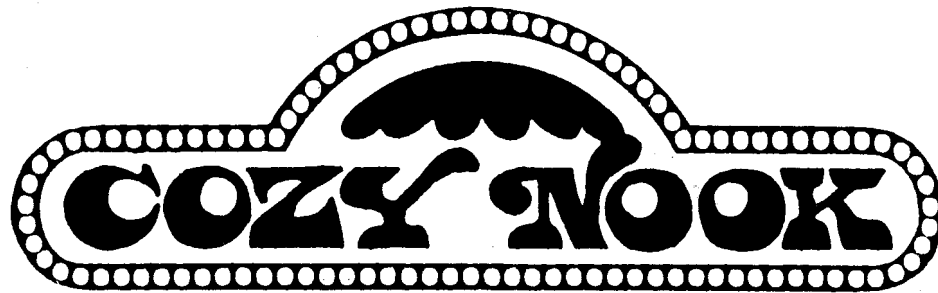
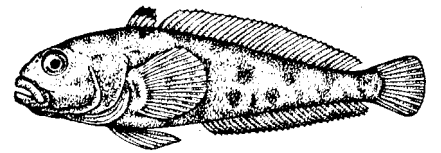
"We buy quality paper," Kros said. "We know it won't bleed, it won't show through too much. You won't find that quality paper at a lower price. Bookstores all over the country take a lot of heat about filler paper. But our experience is that whenever we buy lower quality paper we take even more heat."

Some students agree that the convenience justifies the costs.

"I think the bookstore is great," Giaimo said. "Anything they charge extra for is worth it."

In addition to offering convenience, the bookstore tries to provide better service than other stores.

"The stuff you find in the bookstore is stuff you might not find anywhere else," Kros said. "The books are especially chosen to appeal to Caltech students."



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Gamma Camera

From page 1

detected by photomultiplier tubes behind the crystal.

The key component of the camera is its unique "lens," which consists of an array of 1,000 small lead hexagonal blocks, arranged in a pattern that created a series of apertures through which the gamma-rays pass. Each of the apertures in this mask is like the hole in a pinhole camera, creating a separate image of the sky on the sodium iodide crystal. The hexagonal blocks are arranged, or coded, so that a computer can unscramble the faint overlapping "images" of the gamma-ray source,

combining them into a single, more intense image. The entire 300-pound mask rotates at one revolution per minute, causing the view of a source to be turned off and on at every point on the detector. This "chopping" or modulation of the source signal allows precise subtraction of the large gamma-ray background.

The result of this "coded aperture mask" system is a camera that can divide up the field of view into 1,000 separate parts, or pixels. Most previous gamma-ray detectors were essentially "gamma-ray buckets," able to identify only a general direction for celestial gamma radiation. The best resolution previously obtained by such devices was by a University of New Hampshire system that could

resolve the field of view into 35 pixels.

In its flight, the gamma-ray camera went through a series of preprogrammed observations, its motorized pointing system bringing it to bear on one astronomical object after another. The pointing system uses the earth's magnetic field, detected by an internal magnetometer, as its guide. The data was recorded digitally on a series of eight commercial videotape recorders and was radioed to the ground.

The objects to be studied included:

- The Crab Nebula, the remains of a supernova or exploded star that has a spinning pulsar in its depths;

- Geminga, a mysterious object

that is among the brightest objects in the sky at high-energy gamma-ray wavelengths;

- the quasar 3C273. Quasars are distant and luminous extragalactic objects that may emit a substantial fraction of their energy at gamma-ray wavelengths;

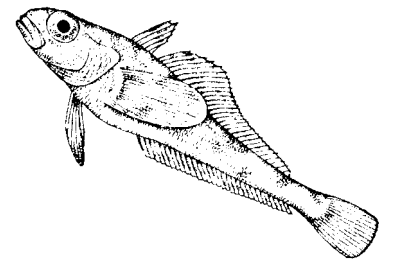
- the center of our own galaxy, the Milky Way. The galactic center very likely harbors a massive black hole and should show gamma-ray emissions from the region near the black hole;

- Cygnus X-1, believed to be a binary star system in which one of the objects is a black hole; and

- Cygnus X-3, believed to be a double-star system with a neutron star that emits ultra-high-energy cosmic rays and gamma rays.

The gamma-ray camera studied

the spectrum of gamma rays being emitted from these objects with energies ranging from 30,000 electron volts to 5 million electron volts. Such studies will yield insights into very high energy particle interactions going on within the objects. Development of the camera was funded by NASA, Caltech, and the Ralph B. Lloyd Foundation.



The Twenty First Century Overture

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WHAT GOES ON

Road Hockey

The Caltech Canadian Club is starting its 1986-87 road hockey season. We play on Saturday mornings at 9 am in the parking lot north of Watson. If you would like to play, come on out! We have spare sticks. Non-Canadians welcome too. For more info, call Malcolm Butler, x4666.

Another Kind of Troll?

The Caltech Gamers would like to introduce you to the *less* familiar kind of troll, a kind that avoids sunlight, talks in grunts, eats disgusting things, lives in holes...hmm, maybe there isn't such a difference after all. Anyway, stop by Clubroom 1 of Winnett on any Friday night to join in an evening of science fiction and fantasy games, and to get together to schedule things that can take place on other days or nights. The Gamers have been involved in activities ranging from the simple playing of games to actual design and publishing. Undergrads, grads, faculty, staff and total strangers welcome.

Folk Volunteers?

The Caltech Folk Music Society is looking for volunteers to help set up for concerts, move chairs, transport equipment, etc. In return for your help, you will get free admission to our concerts. If interested, call Rex Mayreis at 793-8775 or write to the Folk Music Society at 138-78.

Bridge, Bridge, Bridge!

Bridge is back! At least the Bridge Club is. Here's your chance to have fun, meet new people and play. We play duplicate at 7:00 pm on Monday nights in the Red Door Cafe. Beginners to experts, faculty, staff and students all welcome. We are ACBL sanctioned, so you can earn master points! Don't miss out on the game of the '80s: Bridge! Questions: Call Jeffrey (x4544, 793-0814) or Jennifer (x4302) or write Jeffrey Pugh, 205-45.

Jazz Improv Class

There is going to be a jazz improvising class. It will be taught by a woodwind player who has agreed to teach the class on a "pay as you go" basis. This non-credit class will meet Saturdays from 10 am to noon, in the Instrumental Music Office. The office is located in the basement of Winnett Student Center, just across from the Student Shop. All members of the Caltech community are welcome. All levels of proficiency are encouraged to attend. For further information, please call Bill Bing at (213) 684-8964, or just attend the first class which will be on October 11.

Want to Join a Band?

In case you haven't heard, the Caltech Jazz Bands and Wind Ensembles have started to rehearse. But there is still time to join these groups. Just call Bill Bing at (213) 684-8964 for further information.

College Fiction Contest

Playboy magazine is now accepting entries to its annual College Fiction Contest, open to all registered college undergraduate and graduate students. The writing competition offers a cash prize of \$3,000 and publication of the winning short story in the October, 1987 issue of *Playboy* magazine.

Entry deadline is January 1, 1987, and full rules are available in the October issue of *Playboy*, and may also have been sent to the Humanities office (there is some doubt at this writing).

Straighten Those Knees!

Walkers Club of Los Angeles holds a Racewalking Clinic at the Caltech Track every Thursday evening at 6 pm. Walkers at all levels are welcome. Racewalking is good aerobic exercise that is not hard on your joints, it's fun, and it doesn't look funny.

And for those who really want to spectate (or better yet, to participate), the Rockport Grand Walk, featuring the American, Mexican and Canadian racewalking teams, will take place on Saturday, November 1 at the Rose Bowl. Lest you should be intimidated, the Grand Walk also includes a 5K "All Comers" race and a 5K Fitness Walk.

If you want to compete, want to learn how to walk all over again, or are merely curious, come out some Thursday or call (818) 577-2264 for more information, or contact Kate Hutton at 252-21 (x6959).

... And EE Scholarships

The Northrop Corporation has established a \$3,000 scholarship at Caltech for the 1986-87 academic year. The scholarship is open to juniors in Electrical Engineering with at least a 3.3 GPA and a career interest in the defense aerospace/electronics industry. The applicant must be a U.S. citizen, a resident in geographic proximity to the Northrop facility and must not be a concurrent recipient of another company's scholarship.

Applications are available in the Financial Aid Office at 515 S. Wilson. The deadline is 4:00PM Friday, October 31.

(If you are receiving need-based financial assistance, receipt of this scholarship could lower your "self-help" aid by as much as \$1,750.)

Med Scholarships Too!

The Army Health Profession Agency is offering 350 scholarships to students planning to attend medical school. To qualify you must be a full-time student, a U.S. citizen, and under the age of 35 when you enter medical school. Students who accept the scholarship will become members of the Army Reserve and required to attend 45 days of Active Duty Training per year they are in the program. The scholarship pays 100% tuition, books and fees, and provides a monthly stipend. There is no obligation attached to submitting an application. Deadline is December 1 for 1-4 year scholarships. To apply write to:

U.S. Army Health Professional Support Agency
1600 N. Broadway, Suite 300
Santa Ana, CA 92706-3954
or call collect (714)836-2355. Additional information is available in the Financial Aid Office at, you guessed it, 515 S. Wilson.

Harpichord in Dabney

Harpichordist Patrick Lindley launches his 37th season of free Dabney Lounge Chamber Music Concerts, Sunday, Oct. 19 at 3:30PM.

Works by Scarlatti will be included on the program.

Lindley received his Masters of Music Degree in Harpichord from the New England Conservatory of Music. He was the recipient of the Frank Huntington Beebe Scholarship for study with Tom Koopman, Gustav Leonhardt and Nadia Boulanger in Europe. In addition to performing in over 30 states in the U.S., Lindley has performed in England, Scotland, Germany and the Netherlands.

Admission to this concert is open to the public, free of charge. For information, call x4652.

Truman Scholarship

Sophomores interested in a career in government are eligible to apply for the 1987 Harry S Truman Scholarship. Each scholarship covers eligible expenses of tuition, fees, books, and room and board, to a maximum of \$6,500 annually. To qualify you must be nominated. To apply for nomination you must be a full-time student, have at least a B average and be in the upper 1/4 of your class, be a U.S. citizen or U.S. national, and have selected a major related to public service.

Applications are available in the Financial Aid Office, 515 S. Wilson, and must be returned to the office no later than November 14, 1986.

GEM Fellowships

The National Consortium for Graduate Degrees for Minorities in Engineering, Inc. (GEM) is accepting applications for its fellowship program which will provide 125 fellowships to minority students in engineering for 1987. Application is open to those falling into the groupings of American Indian, Black American, Mexican American or Puerto Rican, who are U.S. citizens. At the time of application, the minimum academic requirement for the student is enrollment in the junior year of undergraduate study in one of the engineering disciplines. Those presently in their senior year or recently graduated are also encouraged to apply.

Each fellowship participant must work as an intern for a member employer in the program and must complete the academic work for the master's degree at one of the member universities. There are 50 member employers and 50 member universities in the program at this time. The fellowship includes a stipend of \$5,000 per academic year plus a salary for summer internship as well as free tuition.

Applications must be received by December 1, 1986. Awards will be announced by February 1, 1987. Information and applications may be obtained from: GEM, P.O. Box 537, Notre Dame, IN 46556.

CIC Fellowships

The Committee on Institutional Cooperation Minorities Fellowship Program is offering 40 fellowships to members of underrepresented minority groups seeking PhD degrees in a wide variety of fields in the areas of Social Sciences, Humanities, Sciences, Mathematics and Engineering. The member universities are the midwestern Big 10 plus the University of Chicago. (If you don't know who's in the Big 10, find a sports section—this is football season).

Each CIC Minorities Fellowship is for four academic years. For 1987-88, each award will pay full tuition plus a stipend of at least \$7,000. The eligibility is kind of complicated, so contact them as early as possible. Application deadline is January 7, 1987. Write: CIC Minorities Fellowships Program, Kirkwood Hall 111, Indiana University, Bloomington, IN 47405, or call toll free (between 6 am and 1 pm Pacific time) (800) 457-4420.

Renaissance Meeting

The Caltech Medieval/Renaissance Society is having its first Fall meeting this Sunday (Oct. 19) at 3PM in the Y Lounge. All members of the Caltech community are welcome; refreshments will be served. Contact Amy Carpenter (794-2612) or Doug Bloomer (578-9769) for more information.

SPORTS



What a Sight—Bibi Jentoft-Nilsen cruises on auto-pilot in the cross country meet against Whittier and La Verne. See story, page 9.

Volleyers Score

by Joe Dink

Improvement is the key word for the women's volleyball team these days, since the club continues to play better and better as the season wears on.

Last Friday, Caltech began a long volleyball weekend by traveling to Redlands. The Beavers fared well in this contest, and barely lost a hard-fought first game 16-14. Tech was downed by Redlands fairly quickly in the next two games of the match.

Saturday, Tech faced Pacific Christian at home with high expectations. These expectations were justified to a certain extent as Tech handily defeated P.C. 15-8 one game, and were narrowly beaten in an earlier game 15-11.

However, the team also

displayed a Jekyll & Hyde personality during this match by losing the other two games by scores of 15-0 and 15-3.

The following individuals sparked Tech's successes on the day: Linda Schlueter, whose outstanding serves highlighted yet another great performance on her part; Nicole Vogt, who had many excellent hits at key points in the match; and Courtney Smith, who played an excellent match.

As far as future matches go, the only scheduled match this weekend is a home contest against Whittier. Attendance was surprisingly good at last Saturday's match, so keep up the support by coming to the gym this Saturday at 2:00 pm to catch volleyball action, Caltech style.

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We're a diversified Fortune 250 company engaged in selected areas of the energy and specialty chemicals and materials businesses with research facilities in suburban Boston and in Texas. We're looking for M.S. and Ph.D. level research engineers and scientists to join our expanding R&D and venture activities related to materials used in the electronics and chemical industries.

Get to know more about us at an informational meeting on Tuesday, October 21 from 4:00 to 5:30 p.m. We will be interviewing qualified candidates on Wednesday, October 22. Contact the Career Development Center for more details.

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Saturday 11:00; 12:30; 2:00	Saturday 12:30	Saturday 12:30

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(in New Jersey 609-734-1539).



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SPORTS

Soccer Boot Two Chances -Noca Scores Hat Trick

by Joe Pele

The Caltech soccer team lost two matches this week to conference opponents. The first loss came Friday night against the Whittier Poets by a score of 2-1. Then on Wednesday afternoon the Booting Beavers dropped another close one to Occidental, 4-3.

In Friday's match against the Poets, the Beavers played a lethargic first half and went down quickly by one goal. By the time Caltech woke up at half-time, they found themselves in the hole by a score of two goals to one. In spite of the second-half awakening, the Beavers were unable to even the score.

Wednesday afternoon's meeting between Caltech and Occidental lived up to its advance billing as the Match-of-the-Week. Oxy initially took a quick two-goal lead on several Caltech mis-cues. Oxy held this advantage to half-time.

Caltech charged out aggressively in the second half, exerting a

physical presence that was lacking in the first period. The number of Oxy players limping on the pitch began to approach the number of lame Tech-ers. Paul Cabral, Derek Ney, and Michael Keating all came to life in this half.

But Flavio Noca sparked the brightest fire on the field. Noca took the ball with thirty minutes left in the match and a half-dozen Oxy defenders between himself and the goal. He sent the defenders into dizzy spells with his magical ball control and dispatched the ball neatly under the keeper and into the net. Caltech had narrowed the margin to 2-1.

Occidental then scored what appeared to be the icing goal with 21 minutes remaining, sending the score to 3-1. But they apparently had forgotten Caltech's Italian icemelter, Noca. Even sillier of them, they forgot the route he had taken to the goal. With Bill Foster drawing a defender out to the flanks, Noca retraced his steps to the Occidental goal to keep the Beavers within striking distance, three goals

to two.

With twelve minutes to go in the half, Caltech pulled up to even the score. Quite predictably, it was Flavio Noca dancing the ball into the net. The Occidental goalkeeper fashioned his own method of stopping future attempts by Noca. Immediately following his third goal, Noca left the field with a severely bruised thigh muscle.

The Caltech Beavers would not die easily. But neither would the Occidental side. With under a minute remaining in the game, Occidental put the deciding goal into the net. Even a flying Van Eric Stein, Caltech's spectacular goalkeeper from Ruddock House, could not pull down the killing shot. And once the referee blew the final whistle, Noca's magic could not save the Beavers.

Tomorrow, Caltech will play their third conference opponent in the past eight days as the Pomona Sagehens bring their coop to Beaver stadium. Game time is 10:00 am.

Cross Country 'Caltech Pizza!'

by Speed Demon

This past weekend at beautiful Bonelli Park on a cool and drizzly autumn morning, Caltech's men and women Cross Country runners put it all on the line. It wasn't enough to go out and win one for the Gipper, or better yet, for the glory of this esteemed institution of higher learning.

No, this meet was far more serious than that. We're talking large with extra cheese and pepperoni, or large with canadian bacon and pineapple, or extra large with mushrooms, sausage and green peppers (no anchovies, thank you!). This particular race was all about *free pizza!*

Coach O'Brien is not above a little bribery to elicit some strong performances from his charges. The deal was simple. If the Caltech runners could defeat both La Verne's and Whittier's men and women, the coach would be buying. The team was primed and ready to savor the sweet smell of victory, to taste the spoils that

belong to the victors.

That morning, fifteen minutes after the scheduled departure time, the coach rolled in mumbling something about those damned 24-hour ready tellers that only give out small denominations of bills. His pockets were quite noticeably bulging with cash as we headed off for Bonelli Park.

The Course

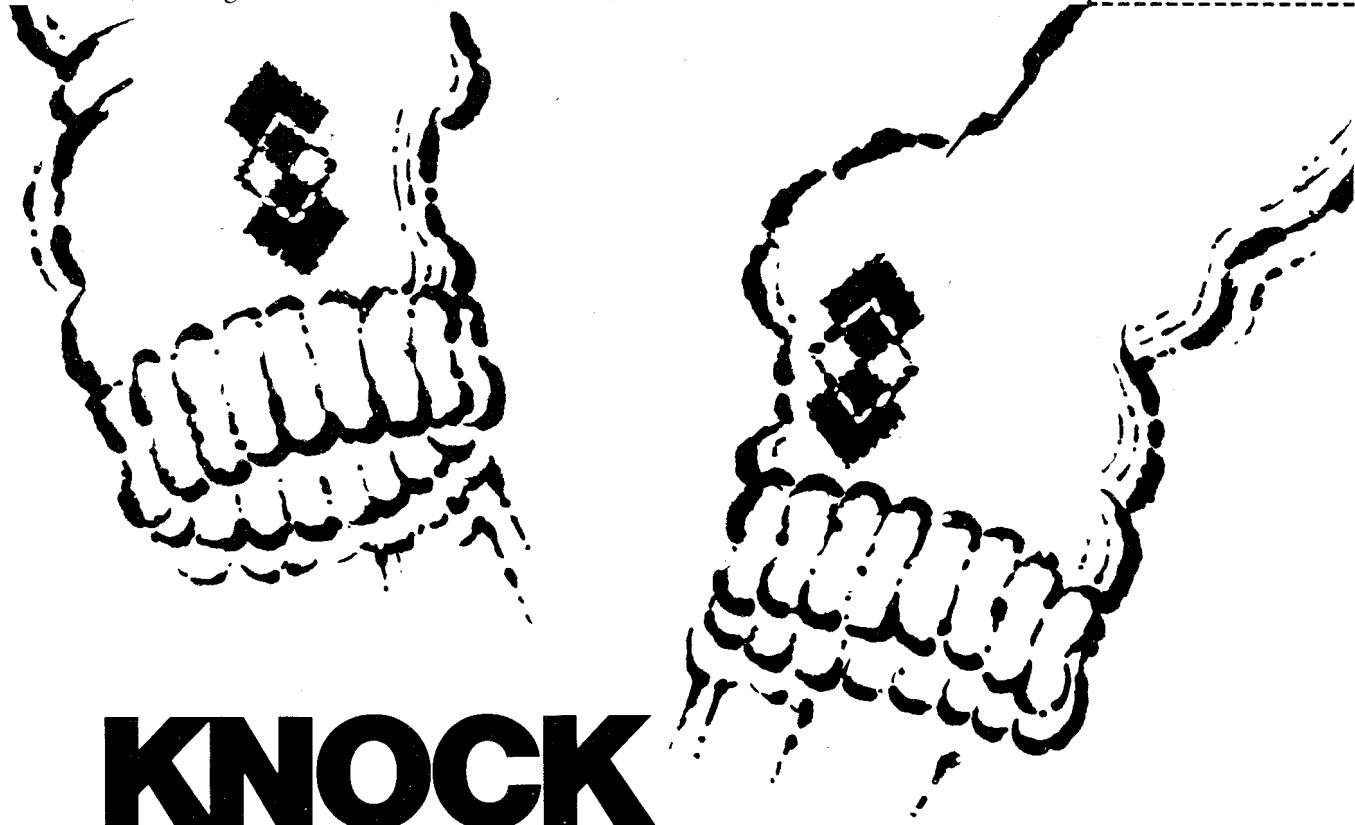
Unlike last year, the course was properly marked, and nobody got lost out there. La Verne usually tries to gain an advantage by having the opposing teams guessing "which way do we go" at every turn. Needless to say, this tends to slow the pace just a tad.

The men's race went pretty much according to plan with the mighty hungry Caltech team defeating Whittier 17-44 and knocking off La Verne 24-35. Essentially, it was a blowout of Whittier and a competitive contest with La Verne that wasn't decided until the last mile of the race.

Edging La Verne

In his best performance of this season, John Gehring averaged 5:30 per mile and raced La Verne's Danny Morse right to the wire, finishing fourth overall in 27:32. There was a gap between Caltech's first and second runners as Alex Athanasopoulos and Chuck Lee

continued on page 10



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We'll even send you a pair of future socks for practice. But don't drag your feet—you must request your entry form before December 31, 1986; and mail your entry by January 31, 1987.

Together, we can find the answers.

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CALTECH public events

UNIQUE PRODUCTION OF MOLIERE'S "LE MISANTHROPE" STAGED IN FRENCH

Moliere's 'Le Misanthrope' will be presented entirely in French by the Compagnie Claude Beauclair, Saturday, October 18 at 8 P.M. in Beckman Auditorium.

The French company is dedicated to bringing the works of Moliere to audiences around the world in the original language of the plays. In 'Le Misanthrope' they expose the friendships, loves, jealousies, social structures and psychological realities of this charming comedy.

Chamber music fans will have a treat on Sunday, October 19 when harpsichordist Patrick Lindley will give a free Dabney Lounge Chamber Music Concert. Mr. Lindley has selected an all Scarlatti program.

After receiving his Masters of Music Degree in Harpsichord from the New England Conservatory of Music, Mr. Lindley was the recipient of the Frank Huntington Beebe Scholarship for study with Tom Koopman, Gustav Leonhardt and Nadia Boulanger in Europe. In addition to performing in over thirty states in the United States, he has concertized in England, Scotland, Germany and The Netherlands.

CIT student tickets to 'Le Misanthrope' are priced at \$6.25-5.00-3.75. CIT faculty and staff tickets are priced at \$10.50-8.00-5.50 for advance sales and 'Techtix' - half price tickets (\$6.25-5.00-3.75) - will be available on Friday from noon to 4:30 P.M. by visiting the Ticket Office just north of Beckman Auditorium. (Limit 2 discount tickets per CIT I.D.)

For further information about the exciting Caltech Public Events, call campus extension 4652.

SPORTS

X-Country

from page 9

came blazing in at 29:13 and 29:28 respectively. Once again Jeff Willis and Ray Hu battled each other tooth and nail, photo-finishing with a mere .03 seconds between them at 30:52 to complete the scoring.

The next two runners to cross the line were both freshmen who have been showing steady improvement despite some nagging injuries. Ron Rogge finished as sixth man in 31:23 with Andrew Stevens rounding out the top seven in 31:40. Close behind Stevens (one second) was Sophomore Transfer Ted Sande.

The Women's Races

The Caltech women were left with the task of beating only Whittier because La Verne had only three healthy runners and would therefore forfeit (takes five to score as a team). The job was a dirty one, but somebody had to do it. So, with Bibi Jentoft-Nilsen and Jennifer Low sporting their niftiest headbands, and Jarita Holbrook stuffing her raggedy bandana into her shorts, they were off. There was some comfort in knowing that Whittier's number one runner was taking the Graduate Record Exam. However, so was Clea Bures (Caltech's number one runner). Sounds like a stand-off to me.

Unfortunately, the Caltech women were also without the services of Vicki Lane (Caltech's number two), who was nursing a sore foot and leading cheers from the sidelines.

The Race

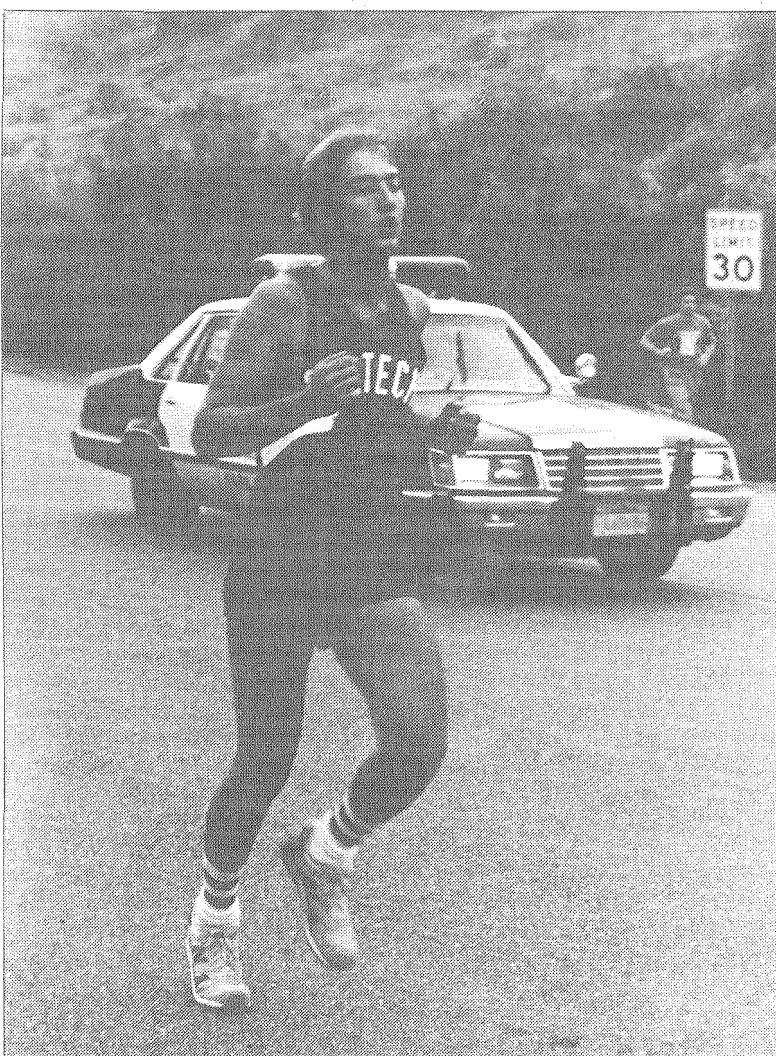
At two miles the picture is clear. Caltech must move up on Whittier during the last mile in order to win. Whoa! There goes Margi Pollack overtaking one Whittier runner and staying ahead to the finish with a time of 26:13. Then Jarita and Bibi go after the same runner but can't quite catch her, finishing in 26:56 and 27:02 respectively.

As this drama continues to unfold, Christina Garden jets past a Whittier runner, and with Carmen Shepard towing her along toward the finish, it's a one point difference between the two teams. With less than 200 yards remaining, the strain begins to take its toll as the Whittier runner surges ahead to the finish barely in front of Carmen (27:13.5) and Christina (27:13.8).

Celebration

Alas, the final score was Whittier 26, Caltech 31. Looks like the old Coach was off the hook. Sort of hard to distinguish the look on his face afterward -- grin or grimace? It can be assumed that he was very proud of both the men's and women's efforts since the team went to get pizza afterwards anyway. Not so fast! He wasn't that proud, as each table paid their own tab.

Ami Choksi (29:54), Dee Morrison (31:49), and Miriam Yee (32:01) all finished ahead of Whittier's fifth runner. Jennifer Low



Caltech's Michael Chandler, mistakenly used his most blazing pace in last week's cross country meet. He was clocked well in excess of the thirty-mile-an-hour speed limit and was promptly cited.

finished gamely in spite of falling down one of the hills. Jen, you are beginning to form a habit there (cf., Y backpacking trip).

In summary, the men have moved up in the Conference standings to fifth place and currently have a 5-4 winning record overall. The women have moved out of the basement of SCIAC by laying claim to sixth place. It's a long way to the penthouse, but this team is on its way up!

This Saturday Caltech hosts Pepperdine U., Masters College, and Cal State San Bernardino at Lower Arroyo Park. Takeoff time is 10:00 am and any support or otherwise wild and obnoxious cheering will be greatly appreciated. Come out and see the *Orange Crush* crush!

Beavers Rip Vic'vil' Raiders

by Mike Lupica

The Caltech Battlin' Beavers Football Team collected their second win of the season, beating the Victorville Raiders at Caltech last Saturday. The game demonstrated the development of the Beavers' offense with the final score being a definitive 40-16.

The Beavers dominated the Raiders in the early going, accumulating a 20-0 lead before the visitors put six points on the board with a pass to their tight end.

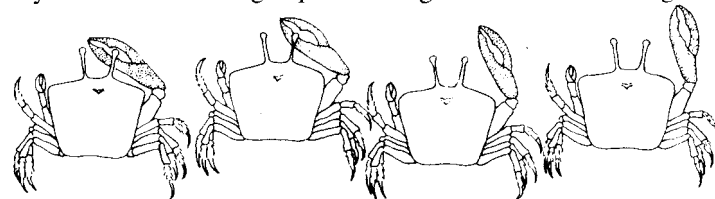
In every phase of the game, the Caltech squad dominated their obviously inferior opponents and demonstrated much improvement since their close season opener on the fourth of October. The Beaver kicking game has shaped up since last week, with Huw Davies nearly scoring a 42-yard field goal in the third quarter, and the speedy Tony Thomas showing up on

kickoffs.

As always, the Beaver defense was solid, yielding few yards to their opponents. Dwight "Butch" Berg continued his quest for the elusive Rookie-of-the-Year award with his second interception in as many games. This one came in the fourth quarter as the Raiders struggled to stand, being down by the score 40-16.

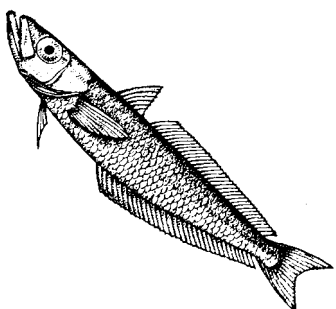
Tomorrow the Beavers go on the road for the first time this year to play at Rio Hondo Leadership Academy in Alhambra. This game will also mark the first night game for the Caltech team in more than four years. The game begins at 7:00 pm and should provide Coach Parker's squad with some tough competition.

Don't forget next week's game is at Caltech against the University of La Verne. Be out there for the Big Beaver Homecoming!



WEEKLY SPORTS CALENDAR

Day	Date	Time	Sport	Opponent	Location
Sat.	10-18	9:30 am	Cross Country	C. S. San Bernardino, The Masters & Pepperdine	Caltech
Sat.	10-18	10:00 am	Soccer	Pomona-Pitzer	Caltech
Sat.	10-18	2:00 pm	Women's Volleyball	Whittier J.V.	Caltech
Sat.	10-18	7:00 pm	Football	Rio Hondo Leadership Acad.	Rio Hondo Academy
Sat.	10-18	All Day	Water Polo	C.I.T. Classic Tournament	Caltech
Wed.	10-22	3:00 pm	Soccer	La Verne	Caltech
Wed.	10-22	4:00 pm	Water Polo	Occidental	Caltech
Wed.	10-22	7:30 pm	Women's Volleyball	Christ College	Caltech
Sat.	10-25	9:30 am	Cross Country	Claremont-Mudd-Scripps	Pomona-Pitzer
Sat.	10-25	10:00 am	Soccer	Redlands	Caltech
Sat.	10-25	10:00 am	Water Polo	Pomona-Pitzer	Pomona-Pitzer
Sat.	10-25	1:00 pm	Fencing	U. C. San Diego	Cal Poly Pomona
Sat.	10-25	2:00 pm	Women's Volleyball	Redlands J.V.	Caltech
Mon.	10-27	3:00 pm	Football	La Verne J.V.	Caltech



The Fish Report

Did you know that nine out of every ten anglers surveyed said that they really did not care what Warren Emery looks like in Speedo swim trunks?

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“ NORTHROP. ONE OF THE 100 BEST COMPANIES TO WORK FOR IN AMERICA ”
The 100 Best Companies to Work For In America; Levering, Moskowitz and Katz.

ON CAMPUS

October 23

Check with your Placement Office about signing up.

WHAT GOES ON

Discussion Group

On October 28th there will be a gay and lesbian discussion group, for lesbian and gay people and others related to lesbian and gay people and interested in their issues. *All members of the Caltech community are welcome.*

This is a monthly discussion group focused on lesbian and gay topics such as the coming-out process; being gay or lesbian at Caltech; relating to parents and other close relatives; dealing with internal and external homophobia; integrating one's religious beliefs with one's gayness; the AIDS crisis and its effect on the gay and lesbian community; gay-lesbian political activism.

The group is sponsored by the Caltech Counseling Service and the Caltech Y and will be led by Dr. Bruce Kahl (of the Counseling Service). It will be held in the lounge of the Young Health Center on the fourth Tuesday of each month from 7:30 to 9:30 pm for the rest of the school year. Refreshments will be provided.

This group is *not* a therapy group—it is a discussion group with emphasis on sharing of information, mutual education and support and consciousness-raising.

For further information call x6393.

Freedom of Smoking?

Philip Morris Magazine, a quarterly devoted to issues related to smoking, will sponsor a major essay competition on the First Amendment and encroachments made upon its protections.

Guy Smith, publisher of the magazine, said the prize structure "reflects the importance of the issue." First prize is \$15,000; second prize, \$7,500; third prize, \$5,000; fourth, \$2,500 and 50 state winners of \$1,000 each.

The competition is open to anyone over 21 years of age. "We are seeking essays from writers—that is anyone who cares to put their ideas on paper—that explore the inherent dangers in efforts to curtail our commercial free speech," Smith said. [For those of you who don't know, there are efforts afoot to control tobacco advertising, comparable to the current controls on the advertising of hard liquor.—Eds.]

The essays will be judged by an independent panel of distinguished editors, writers and journalists. The deadline for entry is January 1, 1987 and the winners will be announced in early 1987. Entries must be 2,500 words or less and sent to Philip Morris Magazine, 120 Park Avenue, New York, NY 10017.

\$100,000!

For all you aspiring investment bankers out there, now's your chance to get some hands-on experience in buying and selling stocks by joining the Caltech Student Investment Fund (SIF). The SIF is a portfolio of stocks, bonds and cash presently worth about \$120,000 which is managed by Caltech (undergrad and grad) students. Investment policies and decisions are completely under the control of the student board, which meets on a weekly basis to discuss current investments and long-range strategies. The only prerequisite for participation in the SIF is interest: anyone wanting to learn more is invited to attend our next meeting (Wednesday, October 22 at 5:00 pm in the Millikan Board Room) or to contact Wesley Boudville, Chairman (x4873) or Alex Becker, Vice-Chairman (449-2565).

Skeptics Lecture

Lavanam will give a lecture titled, "Fighting Superstitions in India" in Beckman Lecture Hall this Saturday, 25 October from 7:30 to 8:30p.m. This talk is co-sponsored by the Southern California Skeptics and The Caltech Y.

Chicano Scholarships

The National Chicano Council for Higher Education is offering 20 fellowships to juniors who are interested in pursuing a doctorate and academic career in a science-related field. Each fellow is sponsored for 3 years. Sponsorship amounts vary. Applicants must be Hispanic citizens of the U.S. for further information call (714) 856-6463 or write: Dr. Eloy Rodriguez, Director, NCCHE Science Fellowship Program, International Chicano Studies Program, School of Biological Sciences, TR56, University of California, Irvine, CA 92717. Application Deadline is November 15, 1986.

Swedish Scholarships

Scholarships for \$500-\$1000 are available for 1986 from the Swedish Club of Los Angeles. Qualified applicants must be full-time university students living in Southern California, of verifiable Swedish descent, strong academic qualifications, economic need, and be U.S. citizens or permanent residents. To apply, send your résumé to:

R. W. Jackson
1250 E. Walnut St., Suite 210
Pasadena, CA 91106
Deadline is November 14, 1986.

Misanthrope at Beckman

Moliere's comedy *Le Misanthrope* will be performed entirely in the 17th century classical style and in French by the Compagnie Claude Beauclair, Saturday 18 October at 8pm in Beckman Auditorium.

The Compagnie Claude Beauclair, from France, is dedicated to bringing the works of Moliere to audiences around the world in the original language of the plays. In *Le Misanthrope* they have made an effort to expose the real situations suggested by the play and to throw light on friendship, love, jealousy, social structures and psychological realities.

CIT student tickets are priced at \$6.25/5.00/3.75. Rush tickets at \$6.00 go on sale the day of the event. Faculty and staff tickets are \$10.50/8.00/5.00. Faculty and staff who visit the Ticket Office between noon and 4:30pm Friday can buy tickets at the student rate. I.D. is required, and only two discount tickets per I.D!

continued on page 8

A WORD FROM "PYTHON" PISCOPO EX-WRESTLER ABOUT MILLER LITE



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WHAT GOES ON

Announcements for *What Goes On* must be submitted on an announcement form (available outside 107 Winnett) or on a plain piece of paper. Please indicate the date(s) you want the announcement to run. Send announcements to 107-51, or put them in the mail slot in the door of 107 Winnett. Announcements must be received by the Tuesday prior to publication.

Russia Trip

Interested in visiting the Soviet Union over spring break? The 2nd year Russian instructor at Caltech, George Cheron, is planning to repeat the previous years' highly successful trips. The cost is \$1400 (includes everything: air fare, hotels, meals, tour guides). Open to students, faculty, staff and their friends. A group roster will be drawn up at an orientation meeting next Wednesday, October 22, at noon in Dabney 2. For more information, call x3615.

Watchen Sie Deutsch?

There will be a showing of the German movie *Warum Lauff Herr R. Amok* in Baxter Lecture Hall at 7:30 pm on Monday, October 20. The movie, shown in conjunction with L 132, was directed by R. W. Fassbinder, and has English subtitles.

"With his wife and child Mr. R. lives respectably like his neighbours in a comfortable modern apartment with TV and other gadgets and his own little garden. The routine of his daily life runs smoothly, without any physical or psychological complications. Returning from work one evening, he kills his wife, child and a visiting neighbor, irrationally and inexplicably compelled. Shortly before the police arrive he hangs himself."

Watson Fellowships

Essays for Watson Fellowships are due **TODAY**, 17 October! Seniors interested in these exciting travel awards should talk to Deans Gary Lorden or Jeanne Noda as soon as possible.

Slave Labor

Blacker Hovse, in a desperate attempt to raise money, is auctioning the services of a limited number of Moles for one day (and one day only!). Stay tuned for details, but the auction is likely to be held *next* Friday the 24th with "services being rendered" the 25th. Need your car washed? Ever wanted your Interhouse to be built by servile Moles? Here's your chance! Start saving your cash... Faculty welcome also... extent of services is within limits of good taste, morals, local and state regulations. Rent-a-Mole is coming soon to a campus near you, so be ready! Batteries not included. Void where prohibited.

U.N. Anniversary

The United Nations celebrates its 41st anniversary Saturday, October 25. The United Nations Association will sponsor a special luncheon at the Athenaeum, followed by a presentation, to commemorate this occasion. A very limited number of tickets have been subsidized by the UNA to only \$2.00 per person. Fortunately, if you come to the Y Office today (Friday, 17 October) or, if this is impossible, Monday, you can still reserve a seat. For more information, call x6163 or -better still- stop in in person. But hurry... before it's too late.

Adventure On High Seas

Another ever-popular Y day trip to Anacapa and other channel islands sails next Saturday, 25 October. Only a few spots are left on this large yacht. Be one of the lucky few who will have the time of their lives. Come on down to the Y Office, second floor of Winnett, and reserve space now through Monday, 20 October. The wind awaits you!

Top Women

Caltech students are invited to participate in GLAMOUR Magazine's 1987 Top Ten College Women Competition. Young women from colleges and universities throughout the country will compete in GLAMOUR's search for ten outstanding students. A panel of GLAMOUR editors will select the winners on the basis of their solid records of achievement in academic studies and/or extracurricular activities on campus or in the community.

The 1987 Top Ten College Women will be featured in GLAMOUR's August College Issue. During May, June or July, the ten winners will receive an all-expenses-paid trip to New York City and will participate in meetings with professionals in their area of interest. The deadline for submitting an application to GLAMOUR is 19 December, 1986.

Books Real Cheap!!!

The Friends of the Pasadena Public Library are having a "clean-out-the-warehouse" sale of books, magazines and records this Saturday, October 18, starting at 9 am. The sale, which will be held at the parking lot just across Walnut from the Pasadena Central Library (285 E. Walnut), has an admission fee of 25¢, and each book, record or magazine costs 25¢. The material ranges from rare treasures to total junk, but it's well worth taking a look. The sale is less than 2 miles from campus, and the 267 bus on Del Mar will take you directly there.

Pet Registration

Undergraduate students are required to come into the Housing Office to register pets, agreeing to the terms and conditions specified on the registration form. Students who registered pets last year are required to re-register their pets this year. Thank you for your cooperation!

Squaredance

For millenia, man has celebrated the harvest with dancing and merrymaking. Join us for a squaredance on Oct. 23, at 8:00 pm in Winnett Center. We'll have a professional caller and refreshments. Admission is free! Sponsored by the Caltech Latter-Day Saint Student Association.

Teaching Awards

Remember that prof last year who was JUST COOL? Remember that TA whom you could call at 4 am for help? Now is the time for them to be recognized. The ASCIT Director for Academic Affairs is currently taking nominations for the 1985-86 Teaching Awards. Send your nomination, course number, and a brief explanation of why you think he/she deserves the award to: Teaching Awards, 1-60. Nominations must be received by Friday, October 24. (Frosh and G1's: sorry, wait until next year.)

Bio-Trolls Needed

Want to teach motivated high school students on Saturdays? Call Lee Browne at x6207. He needs biology and genetics teachers.

Aero Association Meeting

The Aero Association of Caltech (the Caltech/JPL flying club) will hold its fall general meeting on Monday, October 20, 7:30 pm in the Salvatori Room, South Mudd. At 8:30 pm, there will be a presentation by WW II veteran fighter pilot Fred Arnold, author of the best-selling book, *Doorknob 52*. He will be speaking about his experiences flying P-38 fighters in North Africa. All persons interested in flying (in any of the club's four aircraft), learning to fly, or the presentation are invited to attend. For more information call Steve Philipson (957-7495)

Mineral Show

The Mineralogical Society of Southern California will present their 55th annual Gem Fair and Mineral Show in the Pasadena Convention Center, 300 East Green Street, on 1 and 2 November. Hours are 10a.m.-8p.m. on Saturday and 10a.m.-5:30p.m. on Sunday.

Nearly 100 exhibit cases by well known museums, institutions, private and commercial collectors will feature outstanding rare mineral specimens, 500 million year old fossils, gemstones from the world over, expertly crafted jewelry, decorator items, mining memorabilia and artifacts, rare, old and new books relating to these subjects—and more.

53 retail and wholesale dealers will have a wide selection of related items priced for the beginner to the most ardent collector.

Noted speakers will give talks and slide presentations all during the show. Door prizes will be given out to lucky show visitors. The Pasadena Show promises to be an informative and entertaining journey into the fascinating world of minerals, fossils and gems. The public is invited. Admission is \$3.50 for a full day of fun.

Fall Blood Drive

The blood drive will be held in the Winnett Student Center Lounge on Tuesday, 28 October from 9:45AM to 2:30PM, Wednesday, 29 October from 12:15PM to 5:00PM, and Thursday, 30 October from 8:30AM to 1:00PM. There will be a contest between the Graduate and Undergraduate houses to see who can donate the most pints of blood, with a half keg of beer or an equivalent amount of soft-drinks to the house with the highest percentage of donors. Make appointments in advance by calling Rosie Pieters-Emerick, x6374.

CCF Meetings

Hey! Everyone is welcome to come to Caltech Christian Fellowship meetings on Wednesday nights at 8:30 in the Millikan Board Room. The Fall I-V Conference at Catalina Island is coming up soon (Oct. 24, 25 and 26). Everyone who wants in on this incredible opportunity must contact Janice Peters as soon as possible! (x6078)

Macintosh Users Group

The MacValley Users Group announces that its October general meeting will be held on Tuesday, October 21 at 7:30 pm in the cafeteria of Burbank High School at Burbank Blvd. and Third St. in Burbank.

Karen Farr of Microsoft Corporation will introduce the new integrated program, Microsoft Works.

For further information, call Ruth Stever (818) 848-1277.

FOCAL Dinner & Talk

The books and libraries of the missions and presidios of old California will be the topic of a talk by expert Dr. Norman Neurberg, who will speak at the fall dinner-meeting of the Friends of Caltech Libraries on Thursday, October 23. The meeting, which will take place in the Athenaeum, will begin with a 6:00 pm reception. Dinner will begin at 7:00, with Dr. Neurberg's talk at 8:00. The cost for the dinner-meeting, which is open to the public, is \$20 per person.

In his talk "Books and Libraries in Hispanic California: From Do-It-Yourself Medical Books to Racy French Novels," Dr. Neurberg will discuss how the Spanish colonists brought precious books with them to establish the first libraries in California.

Reservations can be made by calling FOCAL at (818) 356-6411, or writing FOCAL, 1-32, Caltech, Pasadena, CA 91125.

continued on page 11

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