

Vote Early In  
The Runoff  
Election Today

# THE CALIFORNIA TECH

Now this really is our last issue. I guess we just can't stop pulling now that we've found the hard dirt.

Volume XCI, Number 17

Pasadena, California

February 16, 1990

## Applications Drop

by Roy Lee

The number of applications for universities and colleges across the nation have dropped by five percent last year, according to the Director of Admissions of Caltech Daniel Langdale in an exclusive interview granted Thursday.

Especially evident of this recent decline in college admissions was an ad placed by the admissions department of USC in one recent edition of a USC campus newspaper which was directed toward potential college students.

Although the general trend nationwide has been a decline in the number of applications, Langdale commented that Caltech's own admissions statistics reveal an increase of eighteen percent in the number of applications in the recent past.

Langdale attributed this general decline to the decrease in academic competence of the average American student and secondly to the fact that students are submitting fewer applications every year, a trend which shows no signs of relenting.

While this trend would have a significant effect on community and state colleges, Caltech and other colleges that appeal to the top of the candidate pool would not be affected in any significant way. Langdale explained that to offset such a decrease in enrollment,

community and state schools are enrolling an increasing number of adult students.

According to studies that the College Board has done on admissions, the average number of college applications that a student during the early 1970's and most of the 1980's submitted was seven, while the recent past suggests that this average number has decreased substantially.

Admitting that general academic competence has decreased in the past twenty years, Langdale remained adamant in the view that the number of students attending college has not fluctuated significantly.

A key question popped up during the interview: Did academic institutions place more emphasis on extracurricular activities and being a "well rounded" person in the admissions process in order to divert attention from the decreasing quality of the American educational experience? Langdale answered in the negative and went on to explain that in his many years as director of admissions at M.I.T. and at Caltech, the admissions process has always included such non-academic criteria, but that it is only recently that there has been much publicity on this aspect of admissions.

Recently, the Los Angeles  
continued on page 3



The Tech editors prove once again that nothing is impossible. We have accomplished what others have only dreamt of, the ever elusive FULL PULL!

## Diversity Conference Today

by Elaine Lindef

The issue of diversity will be discussed today at noon in Winnett Lounge during this year's first Community Conference. A panel of eleven members of the community will discuss how much diversity we can achieve at Caltech, and how we can increase our current level of diversity. The panelists will begin with a short introduc-

tion, and then will open the floor to questions. The questions that will be raised by the panel include:

How does the current environment encourage or discourage diversity?

How can we choose faculty, staff and students to produce a more diverse community?

How can Caltech support the

diversity that already exists?

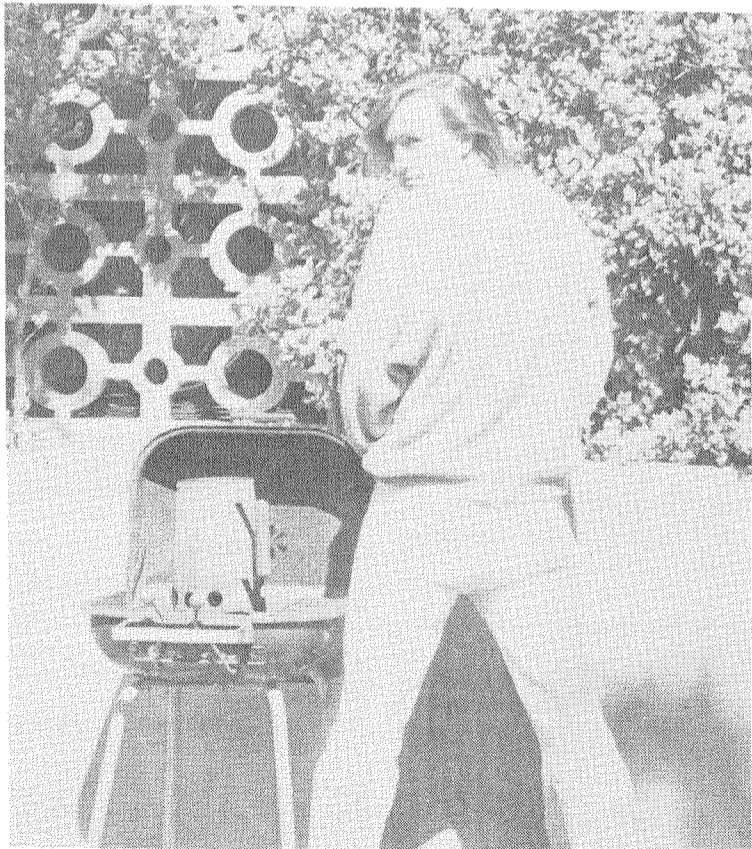
The word "diversity" covers a great deal of territory: sex, race, country of origin, sexual preference, age, hobbies, music preference, academic field... The ways in which the Caltech community can be diverse are almost endless. And yet, we must be similar in some ways, for most of us are scientists. Why is diversity desirable? What kinds of diversity do we want? How can we achieve this while maintaining our identity as a small scientific institution?

All members of the community are urged to come and participate. The goal is to create a lively discussion between all elements of the Caltech community. Toward this end, there will be free food for all who attend. Diversity affects everyone in one way or another. Here is your chance to support the discussion of important campus issues while eating your lunch.

The topic: Diversity (How much diversity can we afford at Caltech).

The panelists: Upi Bhalla, graduate student, Biology (GSC representative); Annmarie Elderling, graduate student, Environmental Engineering; Mary Kennedy, faculty, Biology; Cliff Kiser, undergraduate, Senior Class President; Jenijoy LaBelle, faculty, Literature; Dan Langdale, Director of Admissions; James Lee, faculty, History; Elaine Lindef, undergraduate; Andrea Mejia, undergraduate; Jon Melvin, staff, Engineering; Lucy Regan, graduate student, Chemical Engineering.

photo by Paul Socolow



New ASCIT President, David Geraghty, takes a moment out from his hectic schedule to relieve himself against Page wall.

## Crime and Incident Beat

**CRIME TIP:** Faculty, staff and students are reminded to lock the desk or drawer where purses, wallets and other personal valuables are kept if left unattended even for the shortest periods of time. Last week, two persons, in separate incidents, were identified entering offices and in some cases stealing cash and other items.

2/7 A briefcase containing a removable car stereo was stolen sometime during the day from a Sloan Lab office. The office was left unlocked but unattended for short periods of time.

2/7 A car parked in the Chester parking lot was apparently hit by another vehicle: the turn signal and door had been damaged.

2/7 Caltech security found a solicitor was found selling a newspaper subscriptions at without a permit at 4:55 p.m. He was informed of standard institute policy regarding trespassers and was escorted off campus.

2/8 A business services worker reported a missing purse; security performed an extensive search of the Business Services Building and interviewed construction personnel. Later, the victim told security that the purse had been found: she had left it at home.

2/8 A suspect was found soliciting textbooks in Baxter Lecture Hall. Security advised him that he would be arrested if found again on institute property.

2/9 A Robinson staff member returned to her office at 5:45 p.m. to find a suspect that claimed to be looking for a person from JPL; when the victim responded, the suspect left. The victim immediately noticed that her purse had been opened and cash had been taken.

2/9 A beaker broke in the hand of a Beckman Lab worker; the victim received a laceration to her left forearm. She was taken to Huntington Memorial Hospital by paramedics.

2/9 An informant reported skateboarders on institute property. Security found six youth on skateboards near South Mudd. They were advised that they would be treated as trespassers if found on Caltech property again.

2/9 A suspect was found in a Noyes office, claiming to be looking for a pen. The witness, a staff member, gave him a pen, the suspect then left. Security believes the suspect to be the same person that committed the 2/9 theft in Robinson.

2/9 A witness saw a man who appeared to be a transient using a vending machine in the SAC game room. A search by security revealed no persons.

2/12 A car parked near Crellin was hit, apparently by another auto: the left fender and door was damaged.

2/12 Forced entry was gained to a vehicle in the Chester parking lot. The suspect smashed the car's window, ransacked the glove compartment and took the auto's car cover.

Total dollar value stolen this week: \$377.

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— letters —

**Date Rape Experience**

In Response to date rape:  
I am walking among you. You think I'm normal, or as normal as we can get. Nothing seems wrong. I was 18, a sophomore. I had it all: good grades, a boyfriend, who I shall refer to as John, many friends, even a few close ones. It was break. I was staying on campus to finish an incomplete. A friend of mine was doing the same. I shall call him Jack.

He came over one day to "save me from bookworm." We started to talk. He kept asking me about John. How was he. Were things going OK? What was it like to be apart. Finally I told him that John hadn't called and I really wish he'd drop the subject. He did. He apologized and left.

He returned later to say he was really sorry if he'd upset me and he gave me a hug. I hugged back and told him it was OK. "Really?" "Yes, really." He gave me another hug, only it had more. Then he kissed me. I told him that's not what I meant. We were just friends. He told me I missed John, didn't I? He told me my entire sex life. We were friends, he knew. He told me I missed it, I wanted it. We were friends, just friends...

When it was over he looked at me. Maybe he saw the pain, the anger, the betrayal. His eyes bulged and he got up and left. He just left. I thought we were friends. Now, we are enemies. I failed my incomplete. I failed most of my classes that term. I had planned to stay that summer. I went home. I told friends; they told me in many different ways that I had obviously wanted it. NO! It's true I like sex, it's not true that I want it with every male friend I care about.

It's been almost two years. I've seen three different therapists. I still get chills around men that look like him. I'm still paranoid. I haven't had a good relationship since. I haven't had a sexual relationship since. I still cry at night.

I beg you, men and women of the Caltech undergrad body, go to these talks on date rape. Tech is not some sanctuary from the outside world. It can happen here. It has happened here.

—Anonymous



photo by Keith Langer

Ari Kaplan and Aaron Lipman pump up the jam at last week's Hillel dance in Dabney Gardens.

**SEDS Takes Off With More Events**

by Sonny Arcilla

Caltech SEDS (Students for the Exploration and Development of Space) has scheduled a number of events through April including an astronaut talk tonight and several upcoming trips.

Below are some of the highlights from the Feb. 12 meeting. All events are open to all members of the Caltech community, with first priority given to SEDS members and students.

**ASTRONAUT TALK**

Charlie Walker, three-time shuttle astronaut and President of the National Space Society, will be speaking for SEDS tonight at 8pm in 22 Gates. All members of the Caltech community are invited.

**ENDEAVOR ROCKWELL TOUR**

SEDS and ASME will be sponsoring a trip for forty students will have a chance to go on a tour of the Palmdale Rockwell International facility, including the newest member of the space shuttle family, *Endeavor*. We will be leaving on

Friday, March 2 at 1pm. Transportation is tentatively carpool, but if there is enough interest a bus will be arranged. FREE for carpools. For those already signed up, no open-toed shoes are allowed, females must wear slacks, and shorts are not allowed. They WILL allow photography! (Only 18 spots were left as of Wednesday, Feb. 14)

**JPL TOUR**

The first 80 students to sign up will be taken on a tour of the Jet Propulsion Laboratory on Friday afternoon, April 27. The tour will include bus transportation, a multi-image show about JPL, a flight projects update, a special speaker, and a tour of the space flight operations facility, spacecraft assembly center, and the spacecraft exhibit area. Priority will be given to SEDS members. FREE.

**PALOMAR OBSERVATORY TOUR**

On Saturday, April 14, up to 100 students will be given a

behind-the-scenes tour of Caltech's Palomar Observatory. We are planning on leaving at 9am and returning by 6pm that night. Current plans are to carpool up, but if there is enough interest we may be able to obtain bus transportation. Lunch not provided. Gas will be paid for carpools, and the trip is FREE for carpools.

**CALISTO UPDATE**

James Maxwell, chairman of the CALISTO (Caltech Interdisciplinary Shuttle Transport Organization) committee, will be giving an update on recent developments in the committee. The committee is currently considering designs for four experiments to be flown on the shuttle.

**DOWNEY ROCKWELL TRIP**

Rockwell International's Downey plant holds an open house on the last Friday of each month, and Caltech SEDS will be carpooling on April 27. The open house

includes a multi-media presentation, a tour of a mock space shuttle, and other space-related exhibits. FREE.

SEDS is a relatively new organization on campus open to all members of the Caltech community. Again, all of the above activities are open to members and non-members. Sign up soon, as space is limited for each of the events. If you cannot attend the meetings and would like to sign up for one of the activities or have questions regarding any of the SEDS activities, call Sonny Arcilla at 577-4423.

**Y News Y News Y News Y News**

**Free Lunch and Lecture.** How Do You Get a Cockroach to Take the Pill? by Carl Djerassi. This intriguing lecture by Djerassi, a Stanford chemist and author of *Cantor's Dilemma*, will be held February 27 from 11:30 am to 1:30 pm in Winnett Lounge. The first 30 people to sign up at the Caltech Y will be able to attend.

**Spring Break.** Bob Maher (568-9855) is looking for a co-leader to get together a trip to Mammoth. There will also be a trip to Palm Springs at a three-day cost of just fifty dollars to students. More details later, or contact the Y.

**Decompression.** Decompression is coming! Volunteers can stop by the Y to sign up for work and Decompression T-shirts.

**Broomball.** Get your teams together for the Second Boffo Bonecrushing Broomball Tournament, to be held March 3-4, from 11 pm to 5 am. Teams consist of at least seven members, and must bring a roster and twenty-five dollars to the Y by February 28. First come, first served, with a limited number of teams allowed. Spots are filling up fast.

**Student Fun Fund.** To promote groups of students getting involved in off-campus activities, the Caltech Y has set up a fund, which gives \$50 per group of at least eight students for a pre-approved activity. Limit one usage per student per term. Contact the Y for more details.

**Tickets.** Reduced admission tickets are available at the Y. Current ticket deals: L.A. Clippers vs. San Antonio tickets are available for \$9 (reg. \$13). The game is Sunday, Feb. 25, at 6 pm. Tickets are also available for March and April dates of the L.A. Philharmonic (\$5.00).

The Caltech Y is located on the second floor of Winnett Student Center (the building where the Bookstore is). Our phone extension is x6163.

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**Opinion On Bylaw Change**

by Sonny Arcilla

The ASCIT Bylaws have not adjusted to meet the changing needs of the ASCIT publications, especially the *California Tech*. The bylaws changes published in this issue represent the result of hours of discussion among various individuals directly and indirectly involved with the production of the *Tech*. Not only is it designed to handle the foreseeable financial difficulties, but it is also designed to provide specific incentives to improve the editorial content of the *Tech* as well.

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# The Future of Medicine

by Lindee Goh

Imagine going in to a hospital in the future. The nurse takes a sample of your blood or skin cells. Computers automatically analyze the DNA extracted from your cells and diagnose genetic defects. Foreknowledge of possible illness due to these defects could prevent them from happening. The field of preventive medicine would widen immeasurably given the complete knowledge of the human genetic code or genome. This project, to map the human genome, is one which is currently going on in the labs not only at Caltech but all over the world.

The basic idea behind the enormous task of mapping the human genome, i.e. determining the sequence of the genes found in our chromosomes which encode information for our entire make-up, is

to create a powerful tool for physicians and biologists, according to Dr. Leroy Hood of the Caltech biology department. In an interview, Dr. Hood mentioned that roughly eighty percent of a biology research scientist's time is spent cloning and sequencing genes.

The ultimate goal of the human genome project is to store a complete map, i.e. sequence, of human genes in a computer library where a researcher could access it easily at will, saving time and effort that could be turned to doing the research alone. The library would be "a powerful tool for geneticists," with staggering "implications for fundamental biology and medicine."

There are an estimated 50,000 - 100,000 genes in the human genome. Mapping the human genome would take quite a long time and involve the concerted efforts of

scientists and workers in several fields. The main thrusts of the researchers connected to the project here are: to first develop the instrumentation to do the mapping efficiently and, to create a model system of the human genome through sequencing the genes themselves. New computational tools need to be designed. Scientists in the computer, biology and engineering fields must necessarily work together.

Presently, such cooperation is difficult as scientists nowadays are more focused on their own particular branch of science and thus are unable to "communicate" to people outside their fields. Part of the human genome project here is to begin an interdisciplinary Biotechnology Ph.D. program to produce scientists equally comfortable in computer and biology fields.

# Ape Language Glamorous?

by Ali Mortazavi

The repercussions of ape language research on our definitions and understanding of linguistics and animal consciousness was the glamorous topic of the February 7th Science, Ethics and Public Policy seminar. John Dupre, an associate professor of philosophy at Stanford University, discussed the achievements and numerous criticisms of this line of research in the scientific community.

As an introduction to the philosophical and scientific dilemmas posed by the dedicated efforts of scientists to teach either American Sign Language or some form of an artificial language (e.g. abstract symbols on a computer keyboard) to these apes, he briefly listed some of the major claims and/or results. It has been demonstrated that they can "learn" as many as two hundred symbols; they can use their vocabulary to "communicate" (mainly to ask for more food or fun); and that they can describe their past, coin new words, philosophize (e.g. when and where do dead chimps go?) and joke... The major weakness of these results lies in their scientific validity.

The objective evaluation of the experiment as well as of the results has proven to be extremely difficult for reasons that are unique to this area of primatology. Setting aside the criticism of some on the worth of primate linguistic research by those more obsessed with A.I., there have been a number of facets of this research that have been prone to criticism. The most obvious divergence from the ideal

scientific method is that the observer is not disinterested: all of these men and women have consecrated large parts of their lives to these projects and are eager to prove that apes can "communicate" with humans. In addition to the possibility of inaccurate recording or interpretation of the studied behavior, the more damaging possibility that the observer can unwillingly modify the behavior of the subject has not yet been addressed adequately. Finally, the question of how one should interpret the unexpected reactions of the subject to various stimuli (i.e. is an incorrect answer a joke or the result of fundamental lack of understanding) probes the various philosophical issues that are raised by ape research.

Part of the appeal of this line of work is the fact that it could conceivably help define the relation of language with thought and consciousness, as well as to devise an ethical and moral approach to the

highly controversial subjects of animal research and of animal rights in general. The fundamental point of contention these days is whether the animal is just some kind of mechanical living object (the view of Descartes and many of the critics) or a "conscious" being (the view of Darwin and of all the primatologists). However, professor Dupre's conclusion was that, because of its anecdotal and ultimately unscientific nature, we cannot and should not expect ape language research to answer these philosophical questions, although a "common sense" view of the research does yield to it some significance.

The next SEPP seminar will be Wednesday, February 21, at noon in the Judy Library and will feature a talk by Fairchild Scholar Ruth Schwartz Cowan on "Feminist Ethics and Reproductive Choices." All members of the Caltech community are welcome.

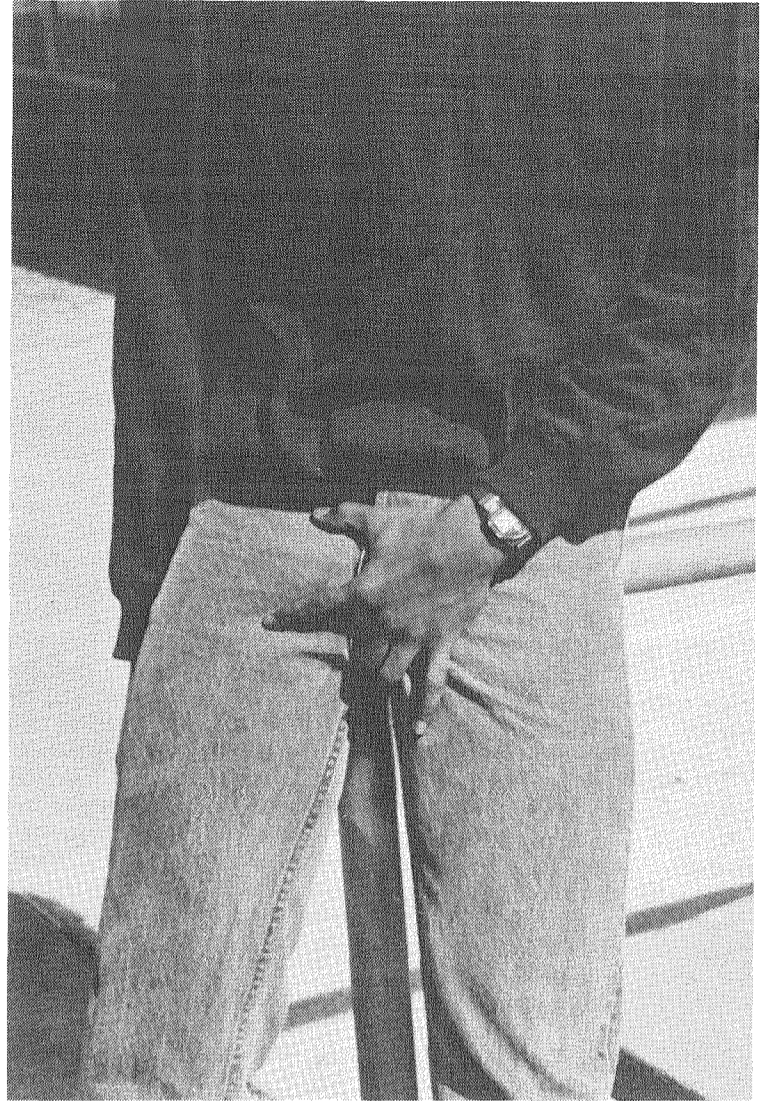


photo by Paul Sorelow

New IHC Chairman, Jack Prater, strikes his favorite pose.

## Admissions

from page 1

Times printed an article which suggested that Caltech's admissions policies were revised to accommodate a greater number of women in each incoming class. Langdale responded to this and other suppositions that this revised policy would lower academic standards at Caltech by describing women as having different values and academic priorities. In addition, Langdale added that diversity was crucial to Caltech, and that women as well as ethnic minorities would be of great benefit to the Caltech community. Langdale speculated that roughly thirty percent of the 1990-91 freshmen class

would consist of women.

Despite recent trends, Langdale maintained the position that over the past twenty or thirty years, the face of college admissions has not changed in any significant ways. "I honestly don't think much is going on. It's a perfectly workable process. I don't think things have changed much."

Regardless of the prospects for national higher education, Caltech seems to have secured a position in the academic world which is unique in the sense that its reputation, prestige, and quality will lure students to its campus for many years to come.

### BOC Rep-At-Large Signups

The Board of Control will be holding preliminary interviews Tuesday for the two Rep. at Large positions. Sign-Ups have been placed in all the Houses and at the Master's Office. They will come down Sunday night.

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# No, Very Little Is Random-J.A.R.

[The following is excerpted from the letters column of *NATURE*, Vol. 343, dated 25 January 1990.]  
SIR—The word “random” is sometimes used in *Nature* and other publications where another term such as “chaotic,” “unpredictable,” “uncertain,” “arbitrary,” or “undetermined” should be used. The use of “random” to describe a process, behaviour or physical system should be reserved for cases where an author can prove the system is random.

The primary definition of “random” is “proceeding, made, or occurring without definite aim, reason, or pattern”<sup>1</sup>. “Apparently random fluctuations”<sup>2</sup> would be better expressed as “unpredictable fluctuations” as there are “structures” and “regularity”.

When “random” is used to denote a selection process<sup>3</sup> or simulation method, close attention must be paid to the implementation of the randomizing process. That the chaotic orbits of a three-body system would upon ejection of a member “randomize the spin orientation”<sup>4</sup> is neither demonstrated in the paper nor an expected result of the ejection. Instead, the spin orientation is deterministic and yet unpredictable. The reason and pattern for the spin orientation are known; it is the limits of observation and the limits of computability that prohibit prediction.

In a statistical sense, “random” is “of or characterizing a process of selection in which each item of a set has an equal probability of being chosen”<sup>1</sup> and is properly used in

*Nature* 342, 128 (1989) when speaking of a “random distribution of orientations” as a metric.

Even the use of “random” in statistical analysis and computer science must be viewed critically<sup>5</sup>. Computers are used to generate sequences representing random selections using deterministic algorithms. Some common computer randomization methods produce less than exemplary results. These algorithms produce reproducible sequences that have qualities that emulate “random” behaviour (if such a thing as random behaviour exists). These computer-generated sequences are better termed “pseudo-random”.

If system history influences succeeding states, then we cannot consider it random merely because we do not know the aim, reason or pattern. In dynamics we must carefully consider evidence such as power spectral distribution, trajectory, degrees of freedom, rate of divergence and dimensionality when branding a system “chaotic”. The same burden of proof should apply to those who report a system to be “random”.

—Thomas L. Ochs  
U.S. Bureau of Mines  
1450 Queen Avenue, SW,  
Albany, Oregon 97321

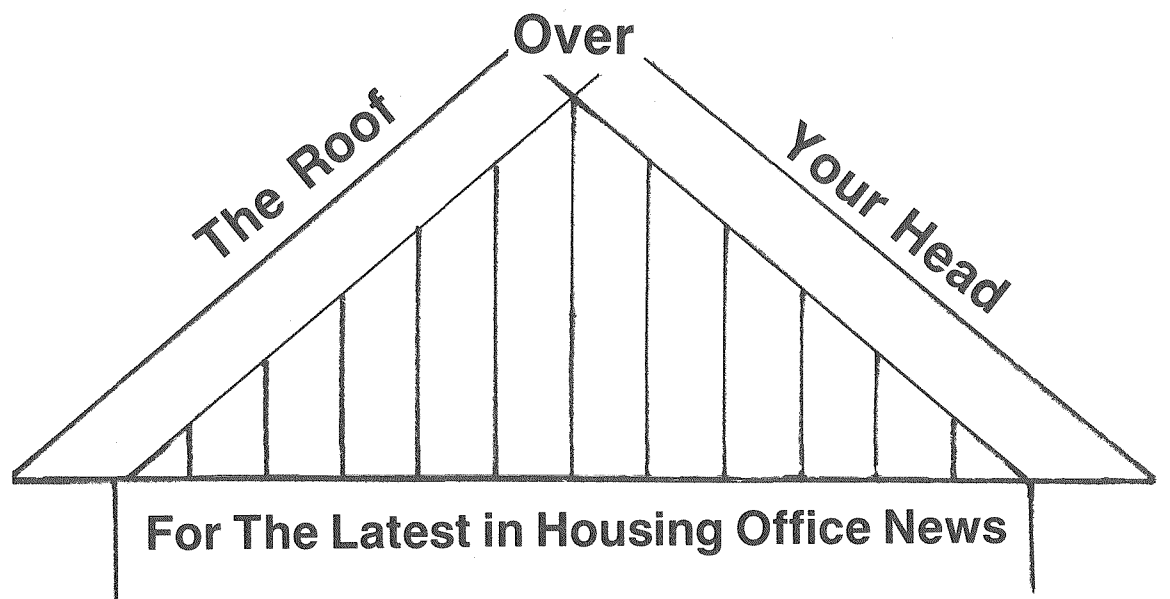
1. *Random House Dictionary of the English Language* 2nd edition (1987)

2. James, I.N., & James, P.M. *Nature* 342, 53 (1989).

3. Shulman, S. *Nature* 342, 4 (1989).

4. Ables, J.G. et al. *Nature* 342, 161 (1989).

5. Park, S.K. & Miller, Keith W. *Random Number Generators, Good Ones Are Hard To Find, Communications of the ACM* 31, 1192-1201 (1986).



by Nancy Carlton  
Combination Lock Policy and Procedure

1. The Master's Office will maintain a confidential list of combinations. The R.A. in each house will also maintain a list and keep the Master's Office informed of any changes. Students are responsible for informing the R.A. of combination changes. The R.A. will in turn, update the Master's Office. Students in Off-Campus Undergraduate Houses will be responsible for providing combination information directly to the Master's Office.

2. The Master's Office will make a combination available to the Housing Office, Physical Plant, etc. only in the case of an emergency. The decision to make combinations available to someone outside the MOSH's Office will rest with the Master or Associate Master.

3. In the case of an emergen-

cy, when the Master's Office does not have a current combination, if it should be necessary to make a forced entry to a room, the occupant will be charged for the necessary repairs.

4. Students will be requested in their housing contract to reset their combination locks to zero or give the Housing Office their combinations. If a student fails to do either of these things he/she will be charged for any labor and/or repair cost incurred to gain entrance to the room after his/her departure.

5. The following steps will assist Physical Plant in carrying out routine maintenance.

a. All Student requests for maintenance should be made through the Housing Office.

b. The Housing Office will contact the student to schedule a convenient day and time for Physical Plant to make necessary repairs. The Housing Office will then call Physical Plant to let them know

when the student has agreed to make his/her room accessible for Physical Plant to enter.

c. If the student needs to change the appointment he or she must contact the Housing Office. The Housing Office will in turn notify Physical Plant.

d. If a student fails to make his room accessible to Physical Plant, or the Housing Office, on the agreed day and time thus prohibiting them from making the requested repair, there will be a set fee of \$25.00.

6. Physical Plant will notify the MOSH's Office of appointments students have no kept so we can help monitor this new system.

7. If routine maintenance needs to be done while students are away on term recesses, students should be notified before they leave and arrangements for entrance made. In these cases the Master will unlock students rooms only if we are certain that the student has given permission before hand.

## Director for Social Activities

Gary Eastvedt

When you vote today for ASCIT Social Director, please consider the following:

How is a frosh supposed to organize an event such as the ASCIT formal when she has never seen one?

How is my opponent supposed to be an active, responsible BOD member when she has never attended an ASCIT meeting and is unaware of the pressing issues?

My opponent claims that she is the better candidate because she is on pass/fail and will have lots of time “to think about having fun and then actually make it happen.” That's nice for third term but what about first and second terms next year when she starts out on grades and finds her free time diminished and her stress level growing?

A junior such as myself who has spent a year on the BOD has already learned to cope with Caltech stress in such a way that his duties on the BOD were not sacrificed. I have also set up my schedule so that my senior year should be relatively boring so I may focus on ASCIT social events.

Are you willing to give \$15,000

(that's one full term of dues - \$20 from your pocket) to someone who doesn't have specific goals or direction for this office other than “the school should have more social events as a whole rather than just house by house” and doesn't know the limitations and resources of this Institute?

As ASCIT Treasurer, I created and controlled a budget of nearly \$50,000 and in my actions have saved ASCIT thousands of dollars from needless waste. Therefore, a budget of \$15,000 would not at all be overwhelming and you are guaranteed that it will be used wisely (because I know whose money this really is - yours).

Many people have been saying

that ASCIT needs new blood. While nothing is wrong with new blood (lots of it has already been elected), wouldn't some old blood with proven leadership, dedication, and fresh ideas be a better choice to help keep the BOD circulating given ASCIT's current situation?

Please don't vote with your hormones.

Aimee Smith

To you students of Caltech who haven't made up your minds about who is going to represent your interests this year as Director of Social Affairs, I have just a few words.

I have a lot of ideas for this year, but it is more important for elected officials to be responsive to

the ideas and suggestions of their constituents rather than simply implement the ones they feel are most important. If I am elected, my first priority will be to learn what the Caltech students want and expect for social events, and implement those ideas.

I'm not pretending to have all of the answers, but I am willing to listen to my fellow students. I have the initiative, the motivation to make things happen. Please consider Aimee Smith for Director of Social Activities.

## what goes on

### NSS President Speaks At Caltech

On Friday, February 16 at 8 pm in 22 Gates, the Students for the Exploration and Development of Space and the California Space Development Council present Mr. Charlie Walker, former space shuttle astronaut and currently the president of the National Space Society. Mr. Walker's talk is entitled “An Individual CAN DO Research and More in Space.” For information, contact Irwin Horowitz at x4121 or 577-1930.

### Y Spring Break Trip

The Caltech Y is sponsoring a spring break trip to Palm Springs, March 16-19. Palm Springs is a year-round resort which every spring break attracts college students from all over the West Coast. The cost is \$50 and includes transportation and 3 nights' lodging. The trip is open to Caltech graduate and undergraduate students. Space is limited to the first 20 people signed up. Details and signups are at the Y.

### NSF Chem Program at USC

A newly-funded NSF program at USC is sponsoring a summer undergraduate research program. Spend normally ten weeks carrying out research in one of the following areas: organic, inorganic, physical, bio-organic, polymer, theoretical, surface, and chemical physics.

Receive a \$2600 stipend. Also included are housing (dorms), meals, medical coverage and a \$150 bookstore allowance.

If interested, stop by the Dean of Students Office, 102 Parsons-Gates, to fill out the application. The deadline is April 15; applicants will be informed of a final decision by April 25. For further information, call Ms. Laurel Luchsinger at (213) 743-2781.

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PHOTOGRAPHY BY RONALD ARTHUR GIDSEG, DESIGN BY MARK HEIMBACK-NIELSEN, PRINTING BY GREENSTREET PRESS

# Folk Music

by Nick Smith

John McCutcheon is difficult to describe. His music is a cross between Woody Guthrie and Bruce Springsteen, only neither one of them played hammer dulcimer. His voice reminds me of the late Stan Rogers, smooth and more melodic than some folk artists, but without the over-produced lifelessness that has ruined some singers.

*Gonna Rise Again*, Rounder Records, is an excellent collection of blue-collar "folk" music. I put in the quotation marks because it's folk music in the *real* sense, that it's about real people and real situations, rather than it being folk music because it's old and anonymous. That means that these are mostly new tunes, many of them by John McCutcheon. He doesn't limit himself to acoustic instruments on the recording, either, including electric guitar and synthesizer accompaniment, in addition to guitar, drums, bass and harmonica on various songs.

The subject matter of the songs is simple: people. People on farms, people working in mines, people struggling against wrong, and people just trying to survive. "The Young Ones Don't Remember" is about an old union miner, seeing younger miners going to work for non-union mines: "And they'll cheer for Solidarity off in some foreign land/But not a one will take the union stand." "Caught in the Crossfire" is a moving song about the real victims of war in Latin America and everywhere else it occurs. "Harriet Tubman" is about the struggle for freedom. "Water From Another Time" is a very moving song about life and the passage of time.

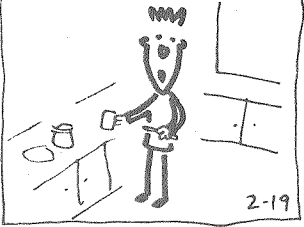
In addition to this kind of music, John McCutcheon is a really fine hammer dulcimer player. One of his earlier albums, *Step By Step*, is one that I recommend to anyone who likes light instrumental music of that kind, since it features McCutcheon and a variety of guest artists on a mixture of hammer dulcimers and synthesizers and other instruments.

John McCutcheon will be performing in Dabney Hall Lounge on Sunday evening, February 18 at 7:30 pm, as part of the Caltech Folk Music Society concert series. Tickets are \$10.00 general admission, but are only \$4.00 for Caltech grad and undergrad students. Make reservations at the Caltech Ticket Office, x4652, or just come by Dabney Hall and buy a ticket there.

Today I was sitting around nibbling on some potato chips.



Steve was making himself some lunch and singing "Tutti-frutti."



The whole apartment was pretty quiet except for Steve's slightly out-of-tune singing.



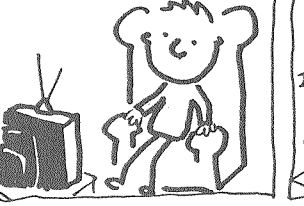
After a few minutes, Tony yelled from the other room, "Will you shut up!"



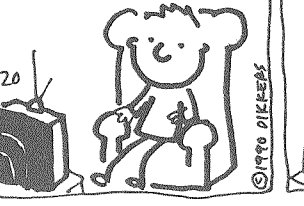
by Jim  
Jim's Journal

Jim's Journal  
by Jim

Last night I stayed up late watching TV.



I had some homework to do for the next day in school.



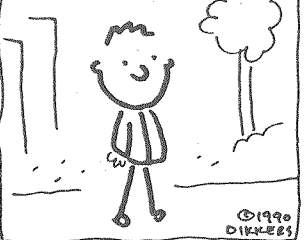
I even kind of felt like doing the homework.



But I just sat there and watched TV anyway.



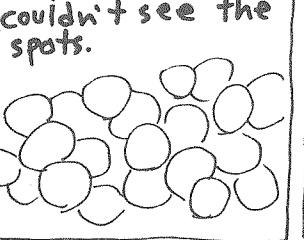
I went to the grocery store today.



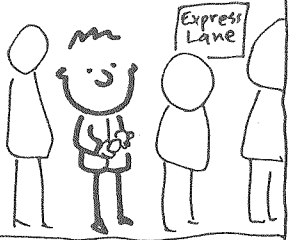
I wanted to buy some oranges. But they had a bad selection.



They all had bruised or molded spots, and were displayed so you couldn't see the spots.



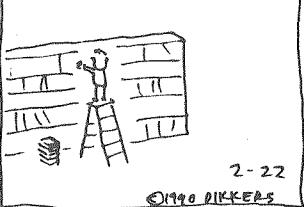
But I managed to find a couple good oranges.



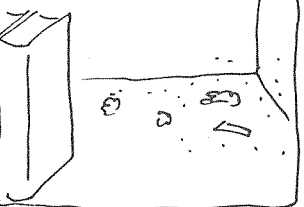
by Jim  
Jim's Journal

Jim's Journal  
by Jim

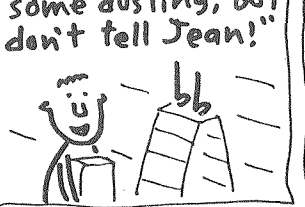
At the bookstore today I was shelving engineering text books.



There was dust and crumpled-up gum wrappers way back behind the books.



Rick, who was working with me, walked by and said, "Those shelves could use some dusting, but don't tell Jean!"



(Jean's the boss.)



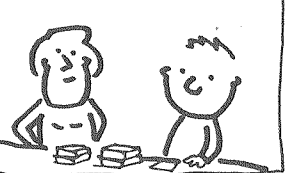
I worked at the bookstore again today.



Somebody was sick and Jean called me in to work.

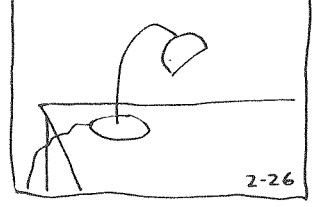


I was doing invoicing when Jean came up to me.



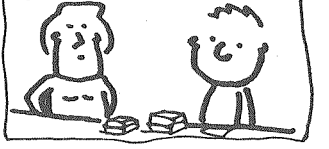
Jim's Journal  
by Jim

The bulb in my lamp burned out today so I bought a new one.

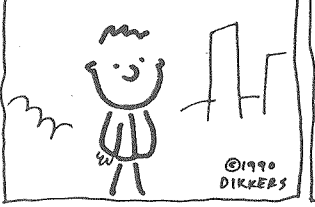


Jim's Journal  
by Jim

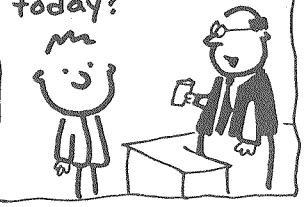
"The shelves in the engineering section are filthy," she said. "Jim, why don't you dust those shelves when you're done here."



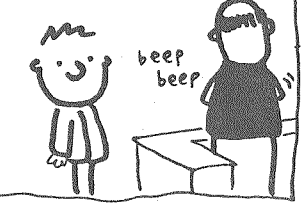
I went to the hardware store.



I found the bulb, brought it to the register, and the man said, "So, will this be all for you today?"



I said yes, and he rang it up.



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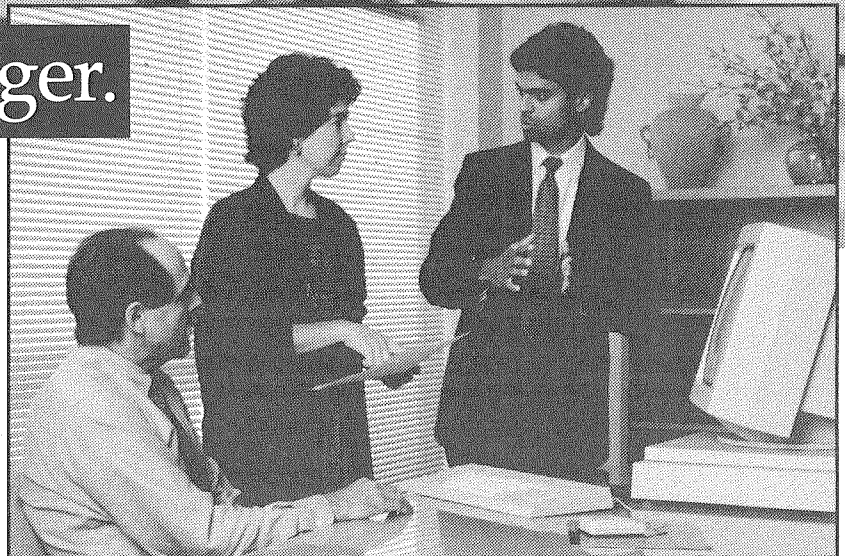
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The Inside World

This Week's **Inside World** was written by:

**Blacker:** Ben Smith

**Dabney:** Tracy Fu

**Fleming:** Brian Duchovnay and Jessica Nichols

**Ricketts:** Joe Dadek, Alex Sugiyama, and Dan Smith

Blacker	25 0 5 0 0 1 5 1 12
Dabney	38 0 1 1 3 2 2 3 12
Fleming	20 0 3 5 0 0 3 2 13
Lloyd	27 0 6 0 4 3 0 0 13
Page	15 0 4 3 0 0 0 0 7
Ruddock	33 0 0 2 1 0 1 0 4
Ricketts	23 1 2 4 2 4 4 4 21

**Dabney**

Uncle Dave has retired from writing the inside world, so he has chosen his favorite nephew to replace him. Nothing has been going on in Dabney this week. So instead of boring everyone with all the details, I got Mr. XY to give me his list of the top ten undergraduate females. (I am not Mr. XY, and I have nothing to do with the creation of this list.)

**The Ten Hottest Undergrad Babes at Caltech**

10. Jessie Haldeman
9. Joanna Wills
8. Monica Oei
7. Jennifer Yu
6. Fiona Lo
5. Jennifer Jungkuntz
4. Pam Abshire
3. Aimee Smith
2. Kirsten Babbitt
1. Maggie Taylor

All of you nice girls out there don't be upset if you didn't make it. This list is strictly meat market rating. Conversely, if you're a real bitch and you're on here, don't be surprised; this list has nothing to do with personality. Before anyone calls this a sexist inside world, wait until next week when Ms. XX gets to present her list of the top 10 undergraduate males.

-Lamebutt Soph

The Inside World

**Fleming**

**STUDY BREAK!!!** Alright you gypsy-dildo, cock-sucking, lame-assed, pieces of shit! Get your hands off your dick and your noses out of your books (Wierse-ma!) and get a life! What does that mean? Fuck homework...weekends are time for Wine, Women, and Song! Speaking of which, that reminds me of Wine and Candlelight last week. That was a blast. Everyone was, as they say, "TRASHED!" And some people's dates even showed up on time. Well anyway, let's kick it right off with a list of the

**Top Ten things Overheard at Wine and Candlelight**

10. Hey, What's this condom for?
9. I'll send you my dry cleaning bill.
8. BOOOOZER!
7. Get out of the gutter, Lee.
6. No Ken, I meant Bud Light.
5. I need a babe. Any babe. ...Jessie?
4. Wait a minute, you're not Kent!
3. Mazurek, you're not going to puke are you?...Mazurek?
2. Hey Lee! Could you pass the rolls?
1. Fucking tits everywhere, Jesus Christ!

Well, enough of that shit. This weekend, in case you're one of the dipshits without a clue to what the hell is going on, you have TWO chances to redeem your worthless life this weekend. The Rockin' Rolling, Hip Hop, Slam Bam, Super Party Weekend kicks off with the Caltech-Oxy Basketball Road Trip. What? Actually driving to see an away game? Yes, its true. Get your butt on the Magic Bus (o.k. van), Saturday at about 7:00, as we head over to Eagle Rock to piss the shit out of the Oxy players, fans, coaches, concession stand guys, and everyone else within earshot. Don't be a pussy! Don't be embarrassed! Be FUCKING OB-NOXIOUS!

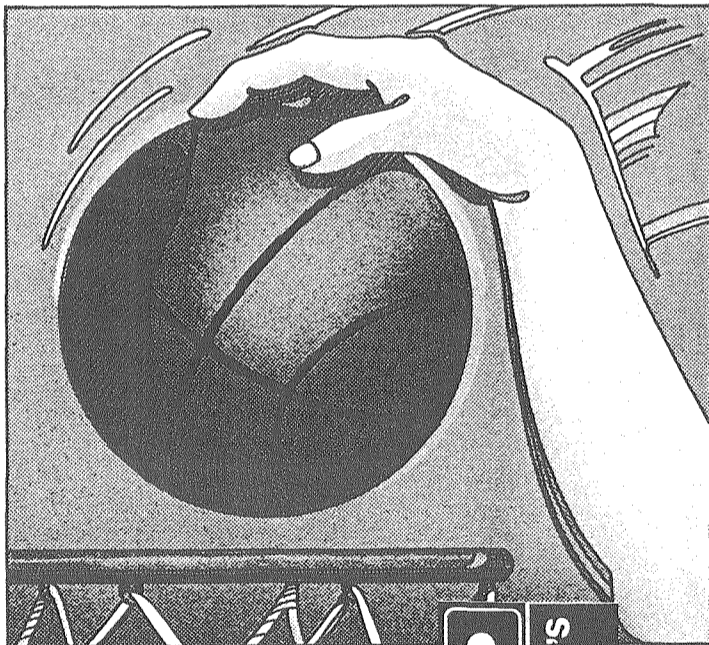
And just in case that isn't enough-or if you have this thing about being seen at an athletic event (K.N. & J.J.!!!)-there is of course the God-awesom President's Day Birthday Bash Party Drink-a-thon, Dance-a-thon, Puke-O-Rama Saturday night. Be there. Get wasted, strut your stuff, hit on some of the FIFTY NAKED SCREAMING BLONDES, and in general BE SOCIAL. The party is at 328 S. Holliston, or wherever the fuck Maddux decides to hold it. Speaking of Maddux, and blondes, its time for the

**Top Ten Tim Maddux Babe Pickup Lines**

10. Hey babe, I've only got three days to live-let's make this the best three days of both of our lives.
  9. Wow! You know, you should be a model.
  8. Baby, we were destined for one another.
  7. Hey babe, I've got big hands and big feet.
  6. You're so sexy when you say no.
  5. Hey babe, wanna make the beast with two backs?
  4. I bet you're even more beautiful with your clothes off.
  3. What?...That's outrageous!...How about 20 bucks?
  2. Hey babe, the world's going to end tomorrow, let's go back to by place and end it with a bang.
  1. No, not thumper the drinking game.
- Oh shit! Gotta go. I think Maddux is pissed. I'll of course see ya Saturday at the game, and then later at the party. Other than that...I'm outta here!

The Duke and Buddy No. 2

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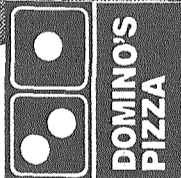
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*"And in today  
already walks  
tomorrow."*

Samuel Taylor Coleridge

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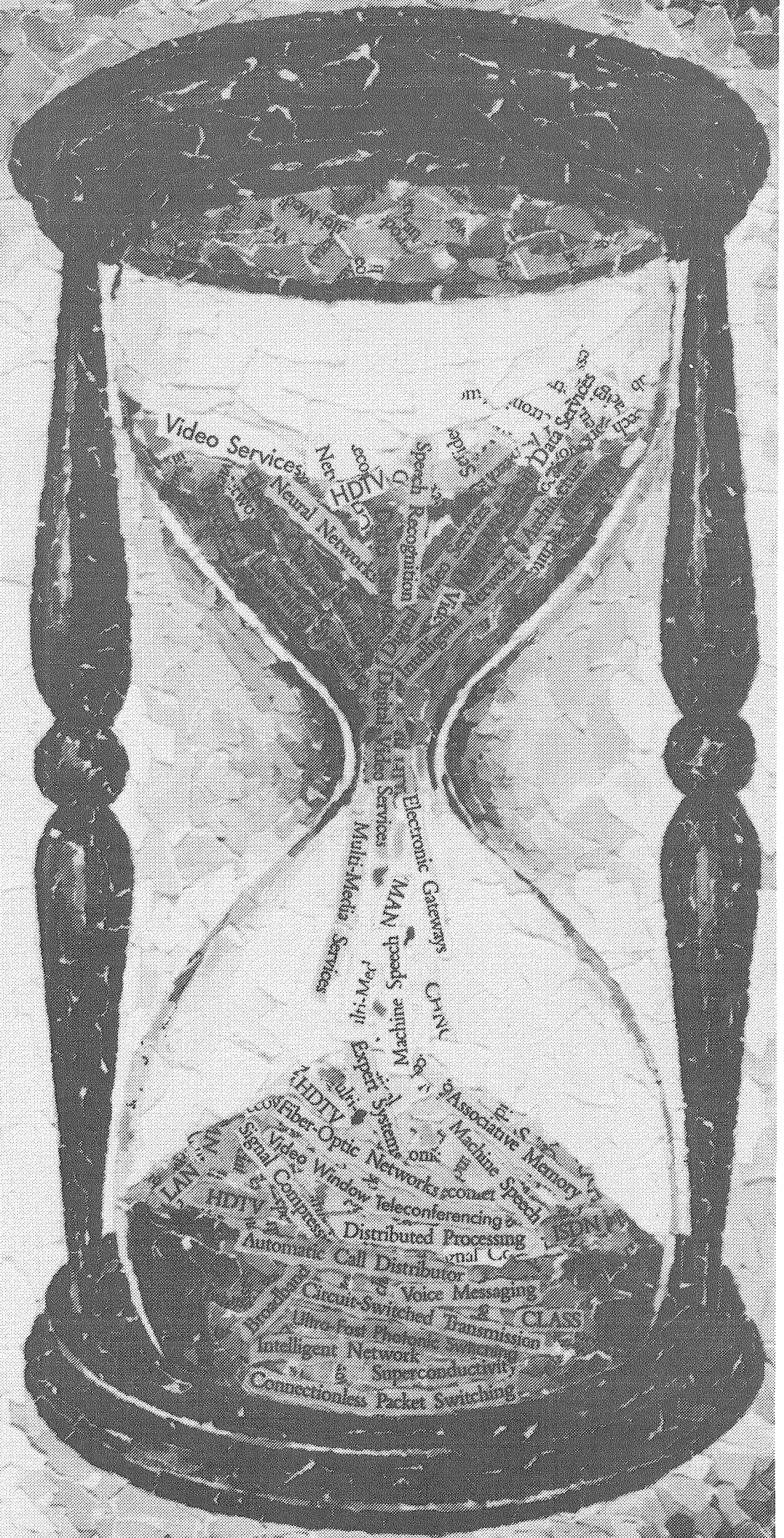
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**Blacker**

**The Insideout World of the Nut Hovse Inning Club**

The path stretches before you into the woods. Birds chirp in the distance. A warm sunbeam splashes over your body. The murmur of a brook completes the aura of tranquility.

WHAM, an orange and black shape slams into you. It bounces back and stands next to your prostrate form. "Sorry about that," says a cheerful voice. You look up and see Tigger.

"I say, come on!" calls Tigger down the trail. He bounces around and comes back to you.

"I suppose you want to know what's been happening. Let's see. Well, Pooh, Kanga, and Owl couldn't make it on the expedition to the north pole. I think Roo was sick or something. But me and Rabbit went.

"After I tore Rabbit away from his friends and relations from Page, Fleming and Lloyd, we set off. The moon was full and Rabbit's green Impaler was ready. Tiggers never get lost so we got there, but Tiggers forget about gas and well... we got there. (Remember the town of Mono Lake has one building and no gas.) But near a large body of water called Tahoe, near the Alpine meadows and in the Valley of Squaws, on a mountain peak, we found the north pole. It is a strange pole, for it is about this high [Tigger indicates four feet] and was stuck into the snow. At the top was some kind of grip and nearby were two flat pieces of wood with strange attachments and the word "Rossignol" on them. While I bounce down the mountain, Rabbit fell and rolled. And we hurried home."

"So that's where you are," calls out a young voice.

"Christopher Robin, look who I found," calls Tigger.

"Well who is it?" asks Owl.

"My name is Evan and I'm going around looking at all the forests. Then I'll write about my favorite ones," you say with a big smile, "By the way I'm trying to find out what a six man lift is."

"Well," says Owl, "that's almost as hard as spelling TUESDAY."

"I think it involves six people, but I don't know. Go talk to the waiters, the greedy birds in the six pine trees. They'll be happy to tell you."

"Hey, Tigger," calls out Roo, "look at this newspaper that we found."

Piglet spreads the paper out on the ground. "Well, what does it say?" he squeaks.

Owl makes a big production of clearing his throat and looks at the paper. "Malathyon," he announces.

"I told you not to blame me if it rains Malathyon tonight," says Eeyore in a mournful voice, "not that I can control the weather, but I seemed to get blamed anyhow."

"No, Eeyore, it's not your fault," soothes Pooh.

"It's those pesky birds, declares Rabbit. They keep dropping those things. Maybe they won't come back this way next year or we can free them of these droppings"

"Is there anything else?" asks Roo.

Owl looks at the paper and clears his throat.

"I'll do it," says Christopher Robin. He looks and begins reading aloud. "It says Happy UnBirthday Karen!"

He continues, "Hey Pooh it says that on Blacker phone night, a group of moles tried to call you and got your answering machine."

"But I don't have a telephone," answers Pooh.

"And it says that if Kanga continues to leave obscene messages, the Federal Bureau of Inane Answers will remove her phone rights.

"But I didn't. I'm most sweet and innocent," says Kanga.

Christopher Robin turns the page. All of the animals gasp. You lean over and look. On the left hand side is picture of a naked man. It says, "Harry Grey-Chem mate 1973-1990" On the right hand side is a similar picture of a female, but more test tubes cover her anatomy. It reads, "Mary Rodgers. Gotcha. Chem mate Feb 1990."

Christopher Robin immediately crumples the newspaper.

"This is trash. Can you get rid of it?" he asks of you. You nod.

"Come one guys," says Tigger, "Let's get to Eeyore's place. I want to cut those flowers, what are they called?"

"Classes o Caltech," says Owl.

"Yea cut the Classes o Caltech, which are only found in dreary, boggy places," agrees Tigger.

"Don't forget the fertilizer," reminds Pooh.

"Yea, I guess I have to do that work for the classes we will miss. Oh well," says Tigger.

"My Tummy is saying that it is eleven o'clockish and..." mumbles Pooh. "Let's get going," says Christopher Robin, "Nice meeting you Evan."

Tigger bounds away along the trail. The other at a more sedate pace. Soon their voices fade away. The sounds of the birds and the brook come back to you. You get up and walk back to you motorcycle and ride away from the heathen world.

-Tigger

**Ricketts**

Da dah duh duh, da dah duh. Da dah duh dah DAH dahduhduduh...

This is Jeopardy! Now entering the studio are our three contestants:

An undergraduate, originally from New York City, please welcome Alex the Oxymoron!

From Ricketts House, at the California Institute of Technology, L. D. Ricketts!

And substituting for our defending champion P. N. G. Darb, who could not make it tonight, from north of the Olive Walk, please welcome instead, Jay Random Lloydie!

Now for the first round, the categories are: Holidays, House Presidents, Substitute T.A.'s, Coffeehouse, Administrators, and Really Easy Questions. Let's start off with our first question. What category to do you want, Jay?

"I'd like Coffeehouse for \$300."

The answer is: The coffeehouse waiter who drives away potential customers by refusing service when they wear bathrobes. Yes, L. D.?

"Who is Dave Jeitner?" Correct! "I'd like House Presidents for \$400."

The answer is: The house whose president came closest to being strapped down to a table and having his head shaved with a rusty machete within the last week for having overstepped his non-existent authority and still feels sensitive about the issue... Yes, Jay?

"Ruddock." I'm sorry, please watch your phrasing. Yes, L.D.?

"What is Ricketts?" Correct! "I'll take Really Easy Questions for \$100."

The piece of classical music played at 7a.m. at the end of every term. Yes, Alex.

"What is You Gotta Fight for Your Right to Party by the Beastie Boys?" I'm sorry, that's incorrect. Yes, Jay?

"What is the Ride of the Valkyries?" Correct. "I'd like Substitute T.A.'s for \$500."

This former Dabney president ran excitedly out of CS11 promptly at 6p.m. after confirming the delivery of flowers to his mystery Valentine's date. Yes, L.D.?

"Who is Jon Hampkins?" Correct. Another 500 for L.D. This brings the totals to L.D. \$1000, Alex -\$100, and Jay is trailing with -\$300. But all of this can change easily after these messages. Da dah duh duh, da dah duh...

Every kid in your neighborhood is playing Tetris on Gameboy. You can be cool if you play Tetris, too. Remember, you're nobody if you don't play Tetris. Buy Tetris today and insure your popularity forever.

Welcome back. Now let's meet some of our contestants. Jay, it says here you're the president of a club. Tell us about it. "Well, I'm the founder and president of the North House Phys 12 Throats Society. We conspire to insure that everyone in the South Houses gets really reamed in the Phys 12 grading curve. We will not rest until every Scurve is driven out of Physics."

Well, I wish you luck in your endeavors. Now back to the game. L.D., you have control. "I'd like Administrators for \$200."

The answer is... the Daily Double!!!! How much do you want to risk L.D.? "\$500" The answer: This office generated a memo which included unnecessary examples of the Institute drug policy specifically designed to antagonize two student houses.

"What is the Vice President for Student Affairs?" Correct, L.D.! Your total is now \$1500. "I'd like Holidays for \$400."

The answer is: This holiday causes the minority of undergraduate males with love interests to gloat gratuitously while the rest are reminded of just how much second term bites the IWOG. Yes, Alex?

"What is Valentine's Day?" Correct. Ding-Ding. Well that's all the time we have for this round. Let's look at the scores: L.D. is in the lead with \$1500, followed by Alex with \$300. In last place is Jay with -\$300. Unfortunately for Jay, we cannot advance him with a negative score. We'll be back after these messages with L.D. and Alex for Final Jeopardy with our topic of... People Unclear on the Concept.

Buy OtterWater Beer. You'll lose weight, improve your musculature, and have fabulously beautiful women with tremendous cleavage with throw themselves at your dog. You'll get promotions, win the lottery, and vastly increase the size of important portions of your anatomy. Buy OtterWater Beer or live a life of celibacy.

Welcome back to Final Jeopardy. L.D. and Alex have made their bets, so let's see the answer: This froosh is excited at the prospect of working on portions of the upcoming TACIT production, Camelot, not realizing that this insures s/he will flame most incandescently.

Da dah duh duh, da dah duh, da dah da dah DAH da duhduduhduh...

And now, let's see how our contestants responded. We'll start with Alex, who risked only \$1. Your question: Who is Becky Warner? No, I'm sorry, that's not only incorrect, but now Leah will track you down and rip your lips off for calling her 'Becky'. But you're not out yet.

L.D. bet all \$1500! His answer is: Who is DAD? Judges? The judges say that DAD is a correct synonym for Dan Dilling, so L.D. wins with \$3000! He also gets a lovely copy of our home game; a box of Rice-a-Roni, the San Francisco treat; and the opportunity to come back tomorrow as our champion. Alex gets a single of Weird Al Yankovic's I Lost on Jeopardy and a Boot to the Head. That's all for tonight. Until next time, this is Guru Trebeck.

Da dah duh duh, da dah duh, da dah da dah DAH da duhduduhduh...

-The Physics Messiah, the Buckaroo, and the Timelord

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If this interests you, please register at the Career Development Center to interview with a Vitesse representative (a Caltech graduate) on Wednesday, February 21. We look forward to meeting you.

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# what goes on

# scholarships

Submit announcements for *What Goes On* on forms available outside the Tech office (SAC room 40A) and in the copy/mail room (SAC room 37), or use a plain piece of paper. Send announcements to 40-58, or put them in the IN box outside the Tech office. Indicate the date(s) the announcement must run. Announcements for the current issue must be received by 5 pm Tuesday and should be shorter than 75 words. Announcements will be published as space becomes available and will be chosen according to size and interest to the Caltech community. Announcements for commercial events unrelated to Caltech will not be published.

## 2nd Annual Health Fair

The Caltech Health Center, in conjunction with Student Affairs, will be hosting its 2nd Annual Health Fair on Friday, April 6, from 12 noon to 4 pm on the Winnett Patio and inside lounge.

Students, faculty, staff and their families are invited to attend. Freebies include: healthy foods, health tests (cholesterol, vision, hearing, body fat, blood pressure) and much, much more! Plan to attend and enjoy a festive event, while obtaining valuable health information.

## Horse History 5a

The Caltech Non-existent Equestrian Team is showing part 5 of "The History of the Horse" on Monday, Feb. 19, noon-1 pm. As usual our big screen presentation will be in Baxter, Rm. 19—all are welcome. Bring your own lunch. If any questions, call Liz at x4514 or Victoria at x3828.

## Style in Music

A new course (MU23, *Style in Music*) will provide an excellent although condensed 1500-year survey of Western European music. This is a perfect introductory course for anyone contemplating taking any of the more advanced Music History courses in the future. Format: Lecture, discussion and guided listening. If you ever wondered how your favorite classical music evolved this course is for you. Any questions: call Prof. David Britton, x4072. Being offered this spring.

## A Free \$50.00

If you and your friends have a great idea for a fun event but are lacking the necessary resources, come by the Caltech Y for a potential \$50.00!! Events must be pre-approved through Brian Redin, student events coordinator.

## SPECTRE Blake's 7-a-Thon

There will be a showing of *Blake's 7* episodes in Rm. 36 SAC on Saturday, Feb. 17, starting at 7 pm. We will show the second half of season 1 (6 episodes). Sponsored by SPECTRE, the Caltech Science Fiction Club.

## CLASSIFIED ADS

♡ ♡ ♡ PERSONALS ♡ ♡ ♡

**ARIE, I LOVE YOU** from here to here, using Einstein's General Theory of Relativity. I love you a googol. I just plain love you. Happy Valentine's Day. Your little scientist, Sharon.

**WANTED: A LITTLE** penguin lust. Icelandic flightless waterfowl with fondness for cuddling, peppermint patties and cappuccino sought. Be my Valentine and I promise you a bouncy, bouncy fun time. Love Tigger.

### ANNOUNCEMENT—

**THE BIG BANG**, as the beginning and center of time and space, can act as an absolute reference. Relativity is based upon the lack of absolute reference. Absolute quantum time unites physics.

### HELP WANTED—

**DESPERATE SECRETARY SEEKING** engineer to design timer with tape playback capability that is linked to time settings. Plan to market. Call Carol (818) 281-4039 evenings before 10; days (213) 282-2186.

**A RESPONSIBLE NON-SMOKER** to take care of a 6-month-old child at our home in Pasadena, Mon.-Fri. 7:30 a.m.-5:30 p.m. (somewhat flexible). Either live-out or live-in possible. Salary negotiable; references requested. Call (818) 577-1781 evenings 6-8 p.m.

### SERVICES—

**ELLEN'S SILKSCREENING** South Pasadena. Custom printed tee's, sweats for clubs, fraternities, etc. (818) 441-4415.

**RATES** . . . . . \$4.00 for first 30 words; . . . 10¢ for each additional word. Send written ad with payment to 40-58. Deadline is 6 p.m., Monday before issue. No charge for on-campus lost & found.

## Regal Dollars

The February 21 meeting of the Caltech-JPL Numismatic Society will feature a talk by James W. Hanner on "Collecting World Crowns". "Crown" is a term used to describe a coin made of silver and the size of a silver dollar. Historically it has been the most consistent coin denomination with little variation in size and weight since the late fifteenth century.

During the evening the regular offering of door prizes will be augmented by special attendance prizes of an American and Canadian silver dollar.

Meetings are held the third Wednesday of each month at 7:30 pm in Rm. 168 of the Church Lab on campus. All Caltech students and staff and their faculty are invited to attend.

## Science, Ethics & Policy

On February 21 at 12 noon in the Judy Library in Baxter, professor Ruth Schwartz Cowan, visiting Fairchild Scholar, will speak on the topic of "Feminist Ethics and Reproductive Choices." Bring your lunch.

## Folk Music Concert

On Sunday, February 18 at 7:30 pm, folk music singer and songwriter John McCutcheon will perform in Dabney Hall Lounge. This concert, part of the Caltech Folk Music Society series, is \$10 for the general public, but is only \$4.00 for Caltech undergrads and grad students. Advance ticket reservations at the Caltech Ticket Office, x4652.

## Contemporary China

H 161—*Introduction to Contemporary Chinese Society*, will examine the origins of the socialist revolution in China and discuss the formation and the nature of the post-1949 social and economic institutions in China. Topics covered include: the origin of the Chinese socialist revolution, the formation of the socialist planned economy system, party organization and social control, the Cultural Revolution, family and individual life, and the development of economic and political reforms from 1979 to 1989. Instructor: Feng Wang. MW 10:30-12.

## L.A. Clipper Tickets

The Y now has 20 tickets for Sunday, February 25 at 6:00 pm, against San Antonio. Come see David Robinson and enjoy a great night out. Tickets are \$9 (regularly \$13.00)

## AMTRAK to Universal Studios?

Come by The Caltech Y for discounts on AMTRAK trips to San Diego, etc., and on special rates for Universal Studios Tours.

## New Music Class

Looking for a fun class to pre-register for? Try a new music class—"Music of South Asia." It is an examination of the intellectual and artistic foundations of the music of the Indian subcontinent, including India, Pakistan and Bangladesh. Classical as well as folk and popular forms will be featured, focussing upon the modern-day theory and practice of the art music of the North and South. Lectures will be illustrated with audio-visual recordings, slides, and guest presentations. No musical background required. See the 1/26/90 edition of *the California Tech* for more details. Call Prof. Catlin at x3614 if any questions.

## Caltech Climbing Wall

There will be an Open House for the Caltech Climbing Wall on Wednesday, February 21st, at 7:30 pm. All interested Caltech people (undergrad, grad, staff and faculty) are invited to attend. Since the Wall is a traversing wall, users will never get more than a few feet off the ground, and no ropes are required. We plan to have some climbing shoes available to borrow, but bring your own if you have them, or at least wear sneakers. The location of the Open House will be the east side of the Brown gym, accessed from the outside. The Wall is not open for use until the Open House. Please direct any questions to Paul Miller (301-46, x4455). See you there.

## Trash Club

Are you interested in driving recyclable plastic and aluminum to a local Pasadena recycling center, once a month? The time commitment is approximately 60 to 90 minutes, and would require either the use of one's own truck or driving the ASCIT van. If interested, please contact David Mackay, x6114, 164-30 CNS.

## Cockroach Birth Control

Professor Carl Pierassi, a celebrated Stanford chemist, will be speaking on "How Do You Get A Cockroach to Take the Pill?" on Tuesday, Feb. 27, from 11:30 am to 1:30 pm in Winnett Lounge. A FREE lunch will be served only to the first 30 non-chemistry grad students to sign up at The Caltech Y by Monday, Feb. 26 at 5:00 pm.

## L.A. Philharmonic Tickets

The Caltech Y now has L.A. Philharmonic tickets at \$5 each for the following dates: March 2, 10, 14, April 1, 6, 22, 27. Come by the Y for venue info.

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## Scholarship Listings

The Financial Aid Office has applications and/or information on the following scholarships. All qualified students are encouraged to apply. The office is located at 515 S. Wilson, 2nd floor, phone x6280.

The Gloria Fecht Memorial Scholarship Fund is offering a scholarship of ranging from \$1500-2000 to a young woman attending a university in California or Arizona. Applicants must have an interest in golf and financial need. Applications must be mailed on or before March 1st.

The Coors Veterans' Memorial Scholarship Fund is offering scholarships ranging from \$2,000 to \$5,000. Applicants must be sons or daughters of Honorably Discharged Veterans, active military personnel, or American service personnel Killed in Action, Missing in Action, or Died in the Line of Duty. Applicants must also be under the age of 22 as of March 15, 1990, have completed a minimum of one semester of college with a minimum 3.0 cumulative GPA. Deadline is March 15, 1990.

The Energy Exchange of Greater Los Angeles will award scholarships of \$1,000 each to students entering the junior or senior year of college September '90. Their major must be engineering or computer science with a GPA of 3.0 both overall and within their major. Applicants must be U.S. citizens and demonstrate excellent oral and written communication skills. For applications contact the Financial Aid Office at 515 S. Wilson Ave. Completed applications are due in the Financial Aid Office by February 23.

The Rotary Club of Los Angeles is offering a \$2,000 per year scholarship to current sophomores and juniors who are U.S. citizens or permanent residents. You must have a 3.0 GPA. Deadline to submit applications to the Financial Aid Office is March 5, 1990.

The Planetary Society actively encourages science students through a variety of programs. The Mars Institute Contest is open to students in both high school and college, and college undergraduates are eligible for the College Fellowship Awards. For entry details write to: The Planetary Society, Scholarship Department, 65 N. Catalina Ave., Pasadena, CA 91106. Deadline for completed applications to be received by The Planetary Society for both the Mars Institute Contest and College Fellowship Awards is April 16, 1990.

Got any good ideas for a Martian speedometer? In the international mission to be launched to Mars in 1994, Soviet wind-driven balloons will carry scientific instruments in a gondola and in an international guiderope (affectionately called "the snake"). The Planetary Society invites ideas for solutions to design problems of the "snake". For more information contact Dr. Bruce Murray, The Planetary Society, 65 N. Catalina Ave., Pasadena, CA 91106 or call (818) 793-5100. Deadline for entries to be received at The Planetary Society is today, February 16, 1990, so you'll have to hand-carry your entry.

Women's University Club-American Association of University Women is offering merit scholarship gifts for the 1990 summer session and fall regular session. Must be a U.S. citizen, a resident of L.A. county or an adjoining county, and currently enrolled in a graduate degree program in a local accredited university. Must have a minimum 3.75 GPA in a program of at least 8 units completed in semester preceding application. Show participation and leadership in groups or committees at the university or in the community. Must be available for an interview. Deadline for application is February 23, 1990.

California Council of the Blind is offering a number of awards to applicants who will enter or continue studies at an accredited college or university in either undergraduate or graduate status. Awards will be granted on the basis of academic scholarship and other factors including financial need. Deadline for application, transcripts and records is June 1, 1990.

The San Fernando Valley Chapter of the Ninety-Nines, The International Organization of Women Pilots and the Jim Hicklin Memorial Air Rallye are sponsoring aviation career scholarships. Applicants must be interested in furthering their education in an aviation-oriented field (career pilot, flight instructor, aviation mechanic, aerospace education, etc.)

The San Joaquin Valley of the Society of Petroleum Engineers will be awarding scholarships to qualified applicants who are enrolled as full-time undergraduate or graduate students in engineering or energy-related disciplines at an accredited college, university or local community college. The completed application, question section, and an up-to-date official transcript should be submitted to ARCO Oil and Gas Company no later than March 31, 1990.

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Here's a great idea... join the Philharmonic's free Student Frequent Buyer Program by calling **(213) 850-2050**, buy 3 tickets and get a fourth ticket **FREE**.

## FEBRUARY SPECIAL 2 TICKETS FOR \$5.00

**This Week!**  
Thu., Feb. 15, 8:00; Fri., Feb. 16, 1:30; Sun., Feb. 18, 2:30  
**Libor Pešek**, conductor  
**Emanuel Ax**, piano  
Mozart: Symphony No. 32  
Strauss: Burleske for Piano and Orchestra  
Mozart: Piano Concerto in A, K. 488  
Strauss: Also sprach Zarathustra

**Next Week!**  
Fri. and Sat., Feb. 23 and 24, 8:00; Sun., Feb. 25, 2:30  
**André Previn**, conductor  
**Jessye Norman, Florence Quivar, David Gordon, Gary Lakes, James Johnson**, vocal soloists  
**Hans Hotter**, speaker  
**Los Angeles Master Chorale**  
**Pacific Chorale**  
Schoenberg: Gurrelieder  
Upbeat Live free pre-concert discussions 1 hr. before concerts (except Mercedes-Benz Celebrity Series) and Symphony Preview for Fri., Feb. 16, 12:00 noon.

For the whole scoop, just call **(213) 972-7211**.

Seating at the discretion of the Box Office, subject to availability. Artists, dates, and programs subject to change.

# LOS ANGELES PHILHARMONIC

# Chem Students Lose

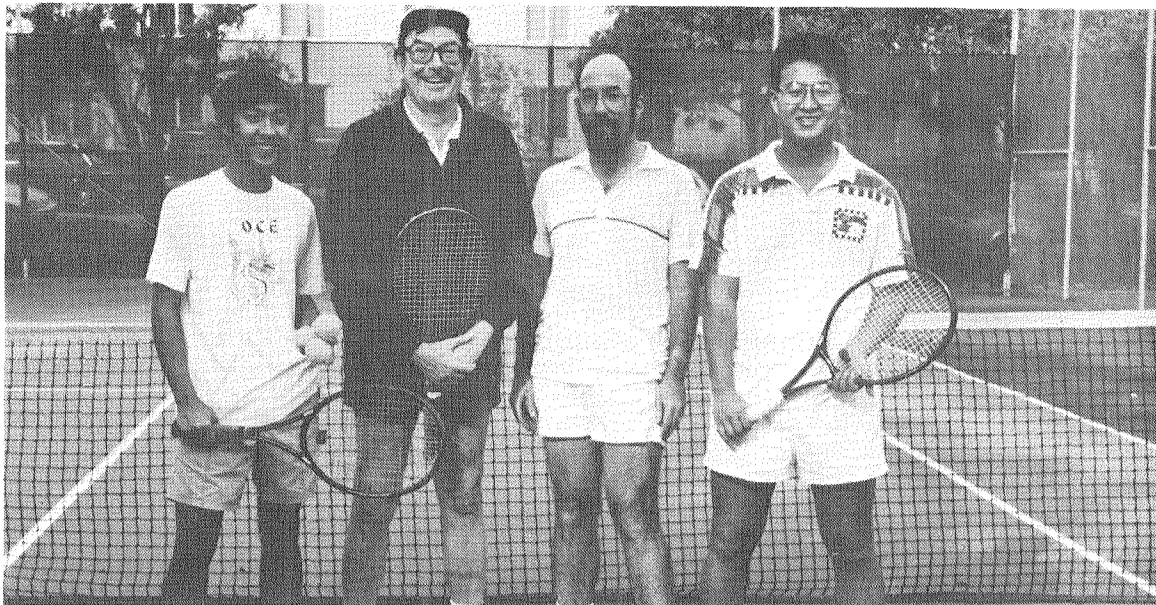
Some time ago, a couple of freshmen prayed to play a little tennis. They looked up to that great periodic chart in the sky, and it said, "I send you Harry. Play wisely and if all else fails, be nice so you don't fail." (chem, that is) So the two humble servants challenged the ChemGod himself, and he agreed.

The two servants were called Son and Seung-Wan; The Gods: Harry Gray and Jay Labinger. Thunder and lightning struck, and little remained of the two lonely humans.

Will the prayer go out again? Surely man can be up with the

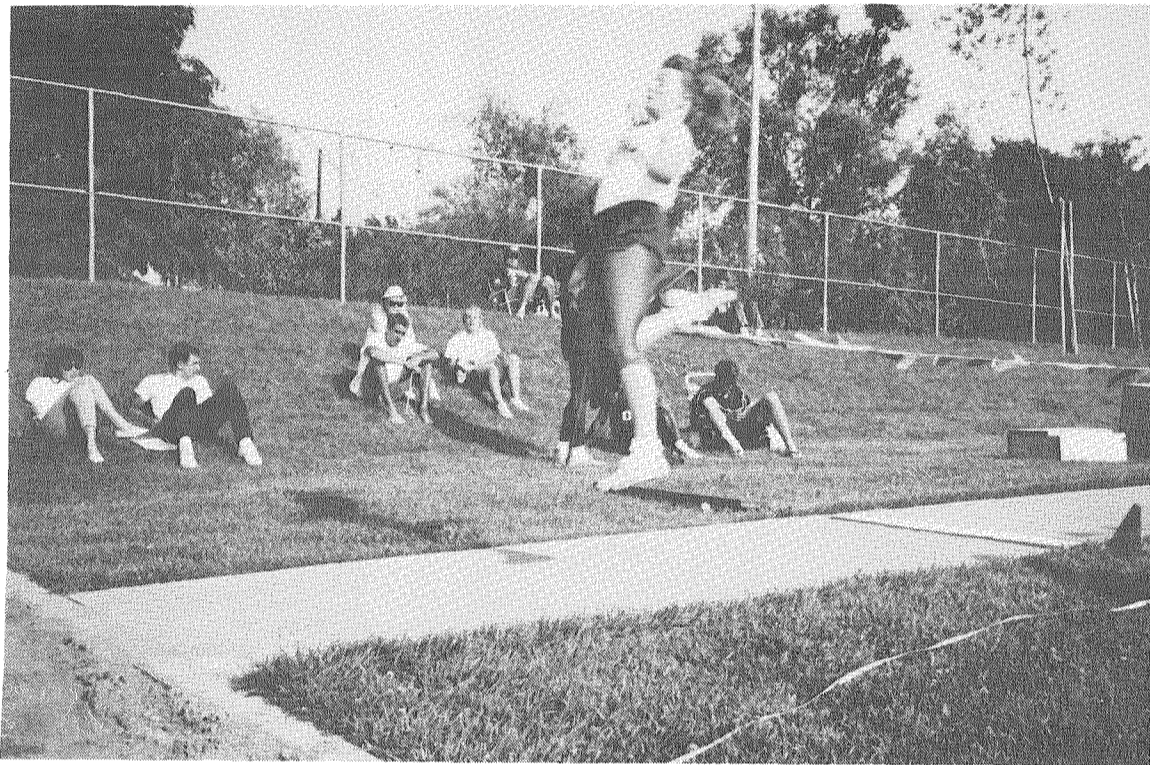
Gods! But can frosh? That is the question. No freshman pair has touched Harry Gray in tennis in years, not even winning a set. The challenge exists, but the real mystery is—"Are there any brave freshmen out there?"

No real tennis team article this week. ThunderChris, accidentally inhaling too much aluminum dust from machine shop and Shoe-Goo II fumes while fixing his tennis shoes, plus staying up too late trying to figure out why he has a headache after pulling an all-nighter, takes this week off.



Frosh #1 Son Nguyen, ChemGod Harry Gray, Jay Labinger, and Frosh #2 Seung-Wan Hwang after their intense doubles.

photo by Chris Ho



Liz Warner flies in the long jump during last Saturday's meet.

## Track

from page 12

got the" Montz took second place with a time of 3:35.4.

In the Discus Throw, Freshman Jeff Martin chucked the heavy frisbee 110 feet 11 inches and took second place. In the shot, Harkness threw 42'9.5" to win.

Moving on from the throwing type stuff to the jumping, we find some more noteworthy performances by the field event people. Dave "I'm not injured anymore!" Park jumped 20'10" (just under 9 feet short of the world record) to capture second place.

In the triple jump, Dave Park hopped and skipped his way to third place with a jump of 40'4.25".

In the pole vault, Dudey skied to second place with a vault of 12 feet.

**Noteworthy Performances for the Women**

Liz "Tough as Nails" Warner

kicked some serious tail in her races. She was second in the 100 (13.4) and second in the 200 (28.0).

In the 800, Golda Bernstein blasted a 2:45 to finish in fifth place. Maria "Those guys walk when they get around corners" Toronto made her collegiate track debut finished in 3:17.

Jubilant Jennifer Remine threw the javelin, discus, and shot. While Jennifer was the thrower for Tech, Liz was the jumper (2nd in the long jump and triple jump.)

### Special Highlight of the Meet

Disqualification of the Claremont "Banana Relay" 400 team. Also Albert Ho didn't break his pole.

### Things to Look Forward to in the Near Future

A weight man relay team consisting of "Yessss" Tsai, Harkness, Martin, and Andre Ohanissian.

# bylaw changes

## TECH PROPOSAL 1

Replace Article XIV, Sections 8-9 with the following:

**SECTION 8.** The salaries, commissions, and bonuses of the Editor, Assistant Editors, and Business Manager of each publication will not be paid until the Board of Directors has approved payment. No commission will be paid until payment for that advertisement has been received, unless specifically approved by the Board of Directors. Salaries may be withheld by the Board of Directors, in whole or in part, for unsatisfactory performance by the Editor, or failure to submit on time the required financial reports or for gross financial negligence by the Business Manager.

**SECTION 9.** Compensation schedules for the *California Tech*, *Big T*, and *little t* must be submitted by each publication to the Board of Directors for approval. The schedule must be submitted within a month after the Editor and Business Manager of that publication have taken office. If either is replaced before their respective term of office ends, the schedule must be resubmitted within one month after such replacement has taken place. The schedule must include the following: salaries, commission rates, and possible bonuses; descriptions of duties for all paid positions; and a payment schedule. The salaries, commissions, and bonuses will be paid from the respective publication's funds.

**SECTION 10.** Salaries and bonuses for the other publications will be paid from corporate funds.

(a) *Course Listings of Undergraduate Education (CLUE)*. The Editor will receive a salary of three

hundred dollars (\$300) with a possible bonus of one hundred dollars (\$100). He may appoint a maximum of two (2) Assistant Editors, who will each receive a salary of fifty dollars (\$50).

(b) *Totem*. The Editor will receive a salary of one hundred dollars (\$100) with a maximum bonus of one hundred dollars (\$100). A group of corporation members may hold this position.

(c) *Undergraduate Research Opportunities Handbook*. The Editor will receive a salary of one hundred dollars (\$100).

**SECTION 11.** Satisfactory performance by the Editor and Business Manager of a publication will usually require that the publication be available by the date specified in this section.

(a) *Big T*—ten (10) days after the day of general registration first term of the next academic year.

(b) *little t*—the day of general registration first term.

(c) *CLUE*—the day of general registration first term.

(d) *Undergraduate Research Opportunities Handbook*—the day of general registration third term.

[Current sections 10-14 will be renumbered if this amendment is passed.]

## TECH PROPOSAL 2

A. Replace Article VIII, Section 1 (first paragraph) with the following:

**SECTION 1.** Nominations for the offices of President, Vice President, and Editor of the *California Tech* shall open at 8 a.m. the second Wednesday of second term, and shall close at 5 p.m. the following Tuesday.

B. Replace Article XIV, Section 11 (first clause) with the following:

**SECTION 11.** The Editor of the *California Tech* takes office upon installation of the corporate officers;

## TECH PROPOSAL 3

Replace Article IV, Section 13 with the following:

**SECTION 13.** Office of the Editor of the *California Tech*: The duties of this office are specified in Article XIV. A group of corporation members may hold this position.

## TECH PROPOSAL 4

Insert a new section after Article XIV, Section 1 as follows:

**SECTION 2.** The Business Manager of the *California Tech*, the Editor and Business Manager of the *Big T*, the Editor and Business Manager of the *little t*, the Editor of *Totem*, and the Publication Darkroom Chairman are appointed by the Board of Directors.

[Following sections will be renumbered if this amendment is passed.]

# Athletic Manager

Miguel McDonald

Hello, my name is Miguel McDonald and I want to be Caltech Athletic Manager.

I have been involved in Caltech athletics for as long as I've been here. I play soccer for Caltech, and also do a bit of running and fencing on the side. I'm not very good

at any of these; I just go out to do the best I can, to learn a little, and to have fun. I am able to cheer on the rest of the team when I'm not playing, and often go spectate at sports I'm not even in. I have also been on the Blacker horse athletic team for a year, trying to get people out to go to our Interhouse games. Usually I succeeded.

In high school I lettered in four different sports, and was usually the unofficial team manager. I have experience in positions of responsibility, having been a referee and an assistant coach for the local city soccer league. And twice I had to go and intercede for teammates whose letter jackets had mistakes in name or letter on them.

My personal philosophy on sports is to make it an enjoyable experience; winning is nice but not the only goal. I feel that this reflects what I have seen here very well.

Please vote for me on Monday. I think I have what it takes to do a good job. Even if I am not elected, I will still be around, playing, cheering, and organizing.

Thank you,  
Miguel McDonald

## HAPPY HOUR at the dentist?



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sports

# Club Homeboy Wins Meet

The Caltech off-season cross country team hit the trails Sunday in the SCA/TAC 5K Cross Country Championship at Griffith Park. Club Homeboy, running under the assumed name of Team Blarney for TAC championship considerations, dusted all competition.

This course, unlike NCAA course was a real cross country course. There were water jumps, barriers, ramps, and hills so grueling, your car wouldn't make it to the top.

Club Homeboy consisted of Dan Flees, Scott Kister, Chris Campo, Mark Lyttle, and Paul Socolow. The top three finishers determine the team score. Dan, Chris, and Mark went out blazing, trying to psyche out the other runners. Meanwhile, Scott and Paul were hanging back, sizing up the

course.

When a woman passed Kister, he decided it was time to move. The downhill dasher took advantage of a downhill section, and strided past the woman, who happened to be the first American woman finisher in the LA Marathon.

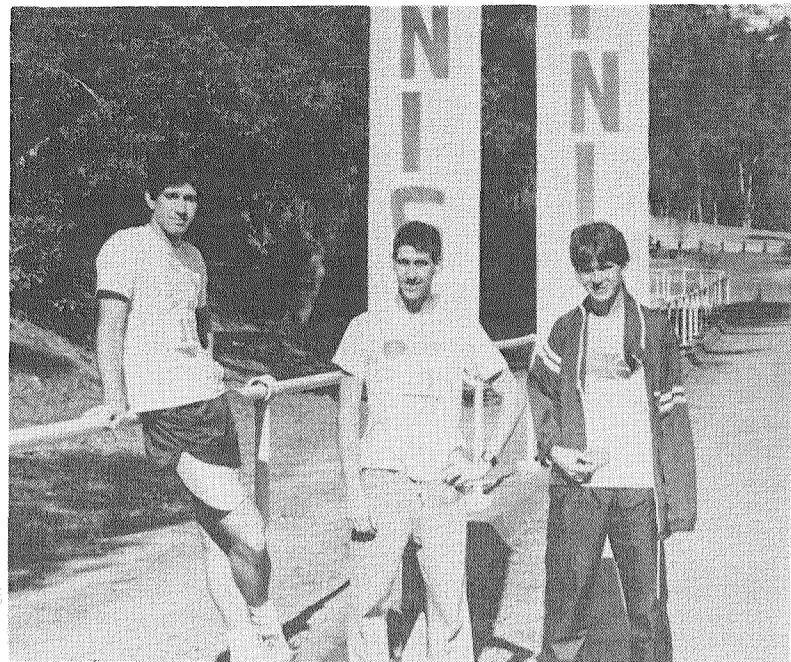
Flees continued his blistering pace, but Lyttle and Campo succumbed to the monster hill. Paul continued to hang back, saving it for the sprint finish.

Flees finished in 20th place overall, finishing in a time of 20:11 on the tough course. Kister, who was passed back by the woman with a half mile to go, gutted it out to pass her and finish 23rd in a time of 20:37. Campo, however could not summon up his fabled finishing kick, and was beaten by her.

Chris finished 25th in 20:41. Lyttle pulled a Felix and paid for his early pace, finishing in slightly over 23 minutes. Paul was not on form the entire day until the final 100 yards, when he kicked past all those weekend road warriors.

While other runners were running around the water jumps, the members of Club Homeboy jumped right over or through the water. Instead of stepping over the barriers, Club Homeboy hurdled them. This intense aggressive attitude payed off, as Club Homeboy won the SCA/TAC Team Championship.

The race was won by William Musyoki, the number four ranked road racer in the world, according to Runner's World. He was followed closely by a world ranked Kenyan steeplechaser.



Dan Flees, Scott Kister and Chris Campo celebrate the victory of Club Homeboy in last weekend's SCA/TAC cross country championship.



photo by Keith Langer

Pamela Katz Rosten plows down a member of the opposing team in last Sunday's soccer game.

# Men's Track Team Wins By DQ

by Chris Campo

The Caltech Track and Field Team made its fiery orange debut Saturday, February 10, in the Caltech Invitational I. The meet, hosted by Caltech, was a victory for the men. Tech scored 149.5 points to Claremont-Mudd-Scripps' 141, Biola's 87½, Masters' 47, Christ College's 42, LaVerne's 15, Whittier's 12, and Life Bible's 10.

The women fared not quite as well, finishing third with 60 points. Claremont-Mudd-Scripps had 145, Biola 82, Cal Lutheran 50, Christ College 40, LaVerne 19, Mount Saint Mary's 18, Masters 8, and Whittier 4.

### The Men

A number of Techers put forth admirable performances at the meet. Rob Whitely in his debut collegiate performance ripped an 11.7 in the 100 to finish in fifth. Teammate Dave "Power 106" Park wasn't far behind in 11.8 at 7th place. Atulya "Mr Lloyd ultimate player" put in a respectable 12.2 for his season debut, tying Andre Ohanissian's PR.

In the 200, Brady "You know, he's pretty fast" Montz scored a 23.7 to capture fourth place. Teammates Rob Whiteley and Todd McLaughlin both ran 24.1 to capture the sixth and seventh spots in the race.

In the 400 the Montz man made yet another appearance in the top spot for Tech, blazing a 53.7 to capture third place.

Moving up to that gut-wrencher of a race called the 800 meters, we find freshman John "Angus" Freeman capturing seventh place in a time of 2:04. Freeman also ran the 1500 meters, finishing 4th in 4:14.8. temamate Mike "Harry" Mahon also did well in the 1500, turning in a time of 4:35 to capture 12th place.

In the 5000 meter race, Chris Campo finished in third with an unimpressive 17:12. Teammates Alan Thompson, Willie Watson, Derek "Robut [sic]" Slye, and Matt "Meow" Fetterman captured the

next four spots with times of 18:56, 19:02, 19:26, and 21:17 respectively.

in the only "real man's" race on the track, the 10,000 meter race, "Iron" Mike Ida gutted out a 43:29 to capture third place.

Paul "JC" Socolow blasted a winning 59.6 in the 400 meter hurdle race, which was one hurdle short. Teammate Greg "Howdy" Dudey finished close behind in 61.1 in third place.

In the 3000 meter steeplechase, Scott "Hoops" Kister was victorious in 11:45.

The Tech 4x400 team, consisting of "Angus" Freeman, "Jesus" Socolow, "Howdy" Dudey, and "I continued on page 11

# Claremont-Mudd 72, Caltech 39

	fg	fg	3pfg	ft	rebounds		A	TO	Pts
	m-at	perc	m-at	m-at	df	of			
Swanson	9-21	42.8	0-0	4-9	3	4	1	1	22
Karceski	4-8	50	2-5	1-2	7	0	1	3	11
Creath	3-4	75	0-0	0-0	3	2	0	3	6
Oslakovic	0-5	0	0-3	0-0	1	0	6	3	0
Ralph	0-5	0	0-3	0-2	1	0	1	5	0
Kollmorgen	0-2	0	0-0	0-0	2	1	0	2	0
MacLeod	0-1	0	0-0	0-0	1	1	0	0	0
Duncan	0-1	0	0-1	0-0	1	0	0	0	0
Philippakos	0-0	0	0-0	0-0	1	0	0	0	0
Wiberg	0-0	0	0-0	0-0	1	0	0	0	0
Totals	16-48	33.3	2-12	5-13	21	8	9	17	39

# Whittier 98, Caltech 46

	fg	fg	3pfg	ft	rebounds		A	TO	Pts
	m-at	perc	m-at	m-at	df	of			
Swanson	9-14	64.3	0-0	6-7	4	2	1	1	24
Creath	4-5	80	0-0	0-0	1	1	0	3	8
Ralph	2-9	22.2	1-5	2-3	0	3	2	7	7
Ahle	2-6	33.3	1-4	0-0	2	0	4	8	5
Kollmorgen	1-2	50	0-0	0-0	1	0	1	5	2
MacLeod	0-0	0	0-0	0-0	0	1	0	0	0
Totals	18-36	50	2-9	8-10	8	7	8	24	46

## WEEKLY SPORTS RESULTS

Day	Date	Sport	Opponent	Results
Sat.	2-10	Swimming (M-W)	U.C. Riverside	Men 98-118, Women 40-95
Sat.	2-10	Track	Caltech Invitational I	Men: Caltech 145½, CMS 141, Biola 87½, Masters 47, Christ College 42, LaVerne 15, Whittier 12, Life Bible 10 Women: CMS 145, Biola 82, Caltech 60, Cal Lutheran 50, Christ 40, LaVerne 19, Mt. St. Mary's 18, Masters 8, Whittier 4
Sat.	2-10	Baseball	Pac. Coast Baptist Bible College	8-4
Sat.	2-10	Basketball	Claremont-Mudd	39-72
Sat.	2-10	Tennis (M)	Occidental	0-9
Sat.	2-10	Tennis (W)	Mt. Saint Mary's	9-0
Wed.	2-14	Basketball	Whittier	46-98

## WEEKLY SPORTS CALENDAR

Day	Date	Time	Sport	Opponent	Location
Fri.	2-16	9:30 am	Swimming (M-W)	SCIAC Championship	Cerritos
Fri.	2-16	2:30 pm	Baseball	Whittier	Whittier
Sat.	2-17	9:30 am	Swimming (M-W)	SCIAC Championship	Cerritos
Sat.	2-17	10:30 am	Tennis (W)	Redlands	Redlands
Sat.	2-17	11:00 am	Baseball (2)	Whittier	Caltech
Sat.	2-17	11:00 am	Track	Pomona-Pitzer Invitational	Pomona-Pitzer
Sat.	2-17	2:00 pm	Tennis (M)	Claremont-Mudd	Claremont-Mudd
Sat.	2-17	6:00 pm	Basketball (JV)	Occidental	Occidental
Sat.	2-17	8:00 pm	Basketball (V)	Occidental	Occidental
Sun.	2-18	12 noon	Swimming (M-W)	SCIAC Championship	Cerritos
Mon.	2-19	6:00 pm	Basketball (JV)	La Verne	Caltech
Mon.	2-19	8:00 pm	Basketball (V)	La Verne	Caltech
Tue.	2-20	2:30 pm	Baseball	Pac. Coast Baptist Bible College	Caltech
Tue.	2-20	3:00 pm	Tennis (M)	La Verne	Caltech
Wed.	2-21	3:00 pm	Tennis (W)	Pomona-Pitzer	Caltech
Fri.	2-23	2:30 pm	Baseball	La Verne	Caltech
Sat.	2-24	11:00 am	Baseball (2)	La Verne	La Verne
Sat.	2-24	12 noon	Track	CIT Invitational II (The Sequel)	Caltech
Sat.	2-24	1:30 pm	Tennis (M)	Whittier	Whittier
Sat.	2-24	1:30 pm	Tennis (W)	Biola	Caltech
Sun.	2-25	10:00 am	Fencing	C.S. Fullerton & U.C.S.B.	C.S. Long Beach

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