



New Ricketts House Resident Associates Peo and Krista Pettersson

New Ricketts House R.A.'s

by Adam Villani

The sun was shining, yet the warm September rain was falling on a rose garden in Swarthmore. Peo ran out into the sultry, wet courtyard, so different from his faraway home country of Sweden. Krista chased after him, sensing that destiny had brought them together. She was not a scientist, but she knew that this strapping young Scandinavian lad had an analytical head on his shoulders. "How can it be raining with the sun shining?" she asked, but she cared not about the answer he gave. When he began to leave, she knew she had to make her move on this shy boy. "It's an American custom to kiss in

a rose garden for good luck," she said, looking at him with dreamy eyes. Peo took Krista in his arms and gave her the biggest kiss of her life.

That's how the new Resident Associates of Ricketts House, Krista and Peo Pettersson, met each other, and though they're not quite so demonstrative now, they love the Caltech undergraduates just as much. Peo (short for Per-Olav), a third-year graduate student in Applied Physics, hopes to be able to give back to the students in Ricketts House the effort and devotion he received from his own R.A.'s back in college. Krista, who is working in the Development office and is a Pre-Med student at

Cal State L.A., wanted to become more involved with the students here.

"I want to make sure each student feels comfortable in Ricketts House," says Krista. Before becoming R.A.'s, the energetic and cheerful Petterssons were living in the Catalina complex, which they thought was a wonderful place, but also that it was very quiet and did not have a sense of Caltech community. They love their new positions and invite all the Scurves to their apartment to chat or play with their feisty 3 month old kittens, Spirit and Flavia. "We've been very impressed with the students here and haven't found any of them to be unfriendly".

Mayo wins Allen Foundation award

by Caltech Public Relations

Biologist Stephen Mayo has been named the recipient of a Rita Allen Foundation Scholar award in recognition of his promise as a bright, young researcher. He will use the grant of \$30,000 per year, renewable for up to five years, to develop techniques in automated protein design. Mayo is the fifth member of the Caltech faculty to receive this award.

Automated protein design is a new idea that merges experimen-

tal biomolecular synthesis with advanced computational chemistry—the use of computers to calculate molecular structures and shapes. The main problem in designing proteins is finding a sequence of amino acids that, when assembled, will fold into a desired three-dimensional structure. In the past, this problem has been left to the ingenuity of the scientist.

But Mayo, an assistant professor of biology, proposes to develop a well-tested algorithm that will automatically create the best possible molecular designs. Starting with a randomly selected sequence of amino acids, the computer will evaluate the compatibility of the sequence with the desired three-dimensional structure. Then it will randomly modify the sequence, recompute the new sequence's compatibility, and compare the two sequences. If the new sequence is closer to the target molecular structure, the algorithm will discard the older one.

If the new arrangement is further from the target structure, the algorithm may keep it anyway, de-

pending on a randomly selected probability factor. This ensures that the computer will explore a sufficiently large number of arrangements to get the best possible solution. After a number of repetitions, the simulation will tend to settle on an unchanging sequence.

Rerunning the entire process with different starting sequences will tend to yield different results, which can be ranked according to their compatibility with the target structure. Mayo will then take the most promising of these sequences, synthesize them in the laboratory, and test their actual properties.

The Rita Allen Foundation was incorporated in 1953 in New York City. The foundation supports medical research in the fields of cancer, cerebral palsy, multiple sclerosis, and the treatment of terminal illness, with special emphasis on the development of effective euphoric and analgesic agents. The Rita Allen Foundation Scholarships program is designed to sponsor young scientists who show promise in areas of special interest to the Foundation.

Beckman ball reported stolen

by Zackary Dov Berger

The golden ball adorning the inner dome of Beckman Auditorium was stolen around July 26, reports the Office of Public Events.

"The ball had been taken before for student pranks," explains Ramanuj Basu, OPE Audience Services Coordinator. "It would mysteriously disappear and then mysteriously reappear. Only this

time it didn't reappear." Basu says it was May when he had last noticed the ball, a metallic sphere painted flat gold.

No member of the OPE staff knows either the whereabouts of the ball—which weighs perhaps ten pounds—or the identity of its thief. The Office would encourage Beckman's balls to be returned and remind the Caltech community that such theft is BOC-able.

New rewards for Caltech cyclo-commuters

by Riley Geary

After years of indifferent neglect by the powers that be, bicycle commuters are finally receiving at least a modicum of support in recognition of their efforts to help keep Caltech's Average Vehicular Ridership number (AVR) above the 1.50 threshold set by the South Coast Air Quality Management District. These are, of course, the folks who require us to fill out a Transportation Survey each spring to determine our cumulative AVR, and who can levy exceedingly stiff fines against the Institute should we fail to meet our mandated targets toward reducing air pollution and traffic congestion.

Based on the figures of last April's Survey, nearly 200 of us ride a bike to and from campus with at least some frequency, and while those of us who cycle do so largely for our own reasons (convenience and efficiency for those living nearby; exercise, environmental concerns, lack of access to motorized transport for those living farther away), we now have a program in place to provide additional incentives for those doing the Ride Thing—incentives comparable to those provided vanpoolers, carpoolers and bus riders.

Starting in June, we have thus far collected some 50 travel logs from participating cyclists, representing over 900 days and nearly 7000 miles of bicycle commuting. Though this represents only a tiny

fraction of the entire cyclo-commuting effort at Caltech, we have nonetheless designated the following Cyclo-Commuters of the Month as part of our new incentive program (awarding each a \$30 gift certificate for a local bike shop, based on both consistency of effort and dedication):

June—Bradley Woods, a grad student living 2.2 miles away and finishing up his Ph.D. in Seismology, managed to ride twice a day to and from CIT for the entire month;

July—Joann Stock, Associate Professor of Geology and Geophysics living 3.0 miles away, rode 26.5 days during the month;

August—Iver Lauermann, a postdoc in Chemistry living 2.5 miles away, rode his standard 22 days (M–F) during the month; and

September—Susan Hough, with the U.S. Geological Survey living 8.5 miles away rides an average of 3 times per week, but has the distinction of longest commute among our initial participants.

In addition, at Wednesday's Rideshare Fair we conducted random drawings among participants for an extra pair of \$25 gift certificates, which were won by Susan Hough and Iver Lauermann as it happened. Participation in the program involves nothing more than the filling out and sending in of monthly travel logs as to how one got to and from CIT each day, along with an initial commuter profile/incentives survey form. Each

see CYCLE, page 10

Trio Classica, a guitar trio presenting music of the 18th century, will perform today at 8 P.M. in Dabney Lounge. Those attending are asked to make a \$5 donation. The concert is presented by the Caltech Y.

The California Tech

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ASCIT BOD meeting October 5th

by Karen Shih

Present: BOD minus Gisela, Dave Derkits, Jennifer Trittschuh, Christy Esau, Stacy Fox, Nestor Ocampo, John McDunn, Mike, Trylæn, Caltech/JPL Racquetball Club, Caltech Anime Society

Meeting began at 10:30.

•**Big T** editors want their salaries. The BOD commends last year's staff for a job well done but feels that a final report should be submitted before salaries can be appropriated. Also, for this year's staff, a compensation schedule/budget for the *Big T* should have been submitted some time last term; the BOD will be expecting that, too. Motion to withhold *Big T* salaries until a final report is submitted passes (6-0-1).

•**little t**—Extra copies are in a bookcase at the top of the stairwell near Dabney #20. Editors, where are you? The BOD would like to talk to you about finances next week; please bring all records and invoices. By the way, good job.

•**CLUE**—Extra copies are available in the Dean's Office and in Ruddock 108, but this is only for a limited time. The CLUE is almost twice as costly this year as last year; eight additional pages are added. Other than that, the editors have no idea why. Motion to approve the salaries but withhold the bonuses passes (7-0-0). The BOD would like to speak to Bo Adler about the on-line availability of the CLUE next week. The CLUE editors would also like to express their gratitude for all who wrote reviews.

•**ASCIT PA system**—The system took its final bow at Frosh Camp; two proposals are presented:

- \$750 for a new 900 watt amplifier with a two-year warrantee
- \$300 to replace damaged parts, but no guarantee on how long

it will be before the BOD will have to shell out more money.

Discussion centered around the carelessness of system users and a way to curb non-ASCIT usage. The BOD generally agreed that the system should be open to ASCIT members, but non-ASCIT members, to date, have comprised of half, if not more, of current users. Further discussion was tabled until next week; the BOD will try to come up with possibly more restrictive policies concerning the PA system that will affect the decision on the expenditures.

•**The Caltech/JPL Racquetball Club** is having a two-day tournament on November 14-15. The Club consists of 25% undergraduates and offers lessons throughout the week (Wed. 5-6, Thu. 5-7, Sat. by appointment). The tournament has received the go-ahead from Business Services and the Athletic Department. The club requests some funding from ASCIT since the tournament will be open to ASCIT members as well. Motion to subsidize \$5 per ASCIT participant passed (7-0-0).

•**Student-Faculty Conference**—The conference is slated for February 25th. Approval for this date has been obtained from the upper echelons of Caltech administration. Florais looking into using Beckman Institute Auditorium. There are four subcommittees that will present research findings and relevant proposals at the conference: The Honor System, Quality of Teaching, Core Curriculum, and Student-Faculty Communications. Chairs of these committees will keep the BOD and the student body informed with periodic articles in the *Tech* next term. If anyone (student or faculty) is interested in participating in any of the above subcommittees, please contact Flora Ho, the Director of Academic Affairs in Page 205, MSC 217.

•**Halloween Party**—Anandi has reserved Dabney Lounge and Gardens for October 30th. All houses must contribute maximum manpower and moneypower (the \$200 multi-house subsidy per house for this term) to make it a reality. Anandi will be getting in touch with house presidents as well as house social teams to organize this frightful night of ghouls and goblins. Anandi plans to bring KROQ to Caltech to DJ the event—let's get the show on the road.

•**ASCIT Movies**, we want to talk to you!

•**Mike Brundage**—The new honor system handbook will be mailed to upperclassmen boxes sometime next week. The freshman class has already received it.

•**Moeen**—Doughnuts will be out at 8:00 A.M. every Friday morning in front of Lloyd.

•**Office hours** are 5-6 P.M. every weekday at the ASCIT office in SAC 38.

•**The BOD** will keep the weekly meeting time at 10:30 P.M. on Tuesdays in the MOSH's office.

•**The IHC** will have meetings at 10:30 P.M. on Mondays in the same place.



Ernest Tomlinson

Ernest Explains

Dear Ernest,

When I rotated through the houses, I found the upperclassmen noticeably boring and nonconversational. I realized that this was due to the unremitting social pressure of Rotation; when the week was over, I thought, my housemates would delight and instruct me with their talk.

Now, though, that Rotation is over, I find that my first idea was right: upperclassmen are boring. At dinner they complain about the food; during the day they complain about classes; at night they complain about their workloads. Am I too interesting for them, or are they too boring for me?

—A Frosh

Dear Brandon,

Don't listen to all those old party-poopers. Life at Tech should be just like summer camp, every day of every term. You worked long and hard in high school—now's the time to kick back and party. You'll have plenty of time to work later.

Dear Ernest,

Where does political power grow from?

—Perplexed in Political Science

Dear Rod,

The barrel of a gun, according to Mao Zedong. However, researchers at the universities of Michigan and Tennessee have, in parallel experiments, cultured small but pure amounts of power in a simple saline solution supplemented with occasional infusions of protein. You can try this at home with a Mason jar, some table salt, and a piece of old, rotten meat. Soon those around you will begin to fall to their knees in obeisance.

TONIGHT'S ASCIT MOVIE

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Argentina

Early exit polls in congressional elections indicated that the ruling Peronist party would win in the Buenos Aires province and run close with the Radical Civic Union, the opposition party, in the city of Buenos Aires.

Azerbaijan

Ex-KGB head Geidar Aliyev won the presidential election in Azerbaijan, with 97% of the population voting, and 90% of voters voting for Aliyev. Aliyev was the first secretary of the Soviet Communist Party in the 1970's, and faced two largely unknown candidates. He replaced President Abulfaz Elchibey earlier this year following the Armenian conquests in the disputed Nagorno-Karabakh enclave.

Bosnia-Herzegovina

The Muslim Bosnian Parliament voted to effectively reject the U.N.-mediated peace plan. The plan required the partitioning of Bosnia into ethnic mini-states, and was drafted by Serbian and Croatian nationalists. Bosnian President Alija Izetbegovic said that Bosnia would not accept the plan unless Serbia would return the territories it has conquered. The U.N. warned that rejecting the agreement would probably result in more fighting.

Further fragmentation occurred within Bosnia as Muslim businessman Firkey Abdic declared the northwestern Bihac region to be an "Autonomous Province of Bosnia." There has also been evidence of clashes between Bosnian Serbs.

Belgium

The government-funded Bureau du Plan said that Belgium faces its worst recession since 1981. Its unemployment rate may be over 14% for the next five years.

Cambodia

The U.S. established diplomatic relations with Cambodia for the first time in eighteen years.

China

China broke a moratorium on underground nuclear testing that has lasted over a year, with an 80-90 kiloton blast in the Xinjiang Autonomous Region in northwestern China. Clinton soon ordered the Department of Energy to prepare to resume the U.S. underground nuclear testing program. Senator John Glenn (D-Ohio) called for withdrawal for China's MFN (most favored nation) status.

Cuba

A vitamin distribution program has stopped an eye disease epidemic that has attacked over 50,000 Cubans. The cause of the disease is still unknown.

Egypt

Elections were held for president of Egypt. President Hosni Mubarak is expected to easily win a third term. He is the only choice on the ballot.

France

Georges Marchais, who has been head of the Communist Party in France for over two decades, announced this week that he was retiring.

Georgia

Abkhazian separatists who drove Georgian forces out of the key city

of Sukhumlast week went on to take control of most of Abkhazia. The weapons, troop carriers and tanks of the government forces fleeing Abkhazia were confiscated by ethnic Mingrelians. The ethnic Mingrelians, led by ousted Georgian president Zviad Gamsakhurdia, seized the key port city of Poti. Poti is in Mingrelia and adjacent to Abkhazia. Gamsakhurdia said that Poti was necessary as a supply route to feed Mingrelian Georgians and Mingrelians refugees from Abkhazia. They later captured the village of Khoni and are now close to cutting off Tblisi's access to supplies from Black Sea ports.

Shevardnadze warned that the Abkhazian successes could inflame separatist movements throughout the Caucasus region. Currently, Abkhazia contains not only the rebel governments of Abkhazia and Mingrelia, but the largely self-governing, pro-Russian regions of Adjara and South Ossetia.

Shevardnadze accused hard-line Russian forces of backing the ethnic disintegration of Georgia, and said that over 200,000 Georgians have been made homeless in the fighting. Diplomats in Tblisi, Georgia said that despite the major defeats over the week, there was no political threat to Shevardnadze. One diplomat explained, "Quite honestly, in this situation nobody in his entourage even wants his job."

Germany

Germany looked for support from the Third World in its bid for a permanent seat on the U.N. Security Council.

The Bundestag set up a committee to investigate the Treuhandanstalt, the government agency in charge of privatizing companies formerly owned by the East German government. The committee is supposed to examine where the agency closed any East German companies which could have survived.

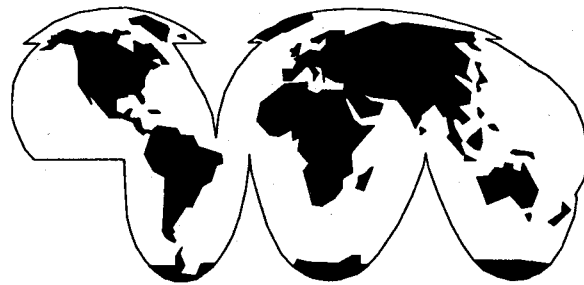
Haiti

Rumors circulated that the Haitian military, led by General Raoul Cedras, and Port-au-Prince Police Chief Michel-Joseph François, were arming enemies of ousted President Jean-Bertrand Aristide for a weekend of violence. The object would be to create enough chaos that Aristide would be unable to return, and to convince the world that only an army could keep order in Haiti. Ousted President Aristide is scheduled to return in a month. Under a July agreement Cedras and François, as well as other high-ranking members of the military and police forces, are to resign by October 15th. But many feel that they will be unwilling to give up power.

India

A magnitude 6.4 earthquake happened in India about 275 miles southeast of Bombay, at about 3:56 A.M. Thursday. There were at least three aftershocks. It is not clear how many people were killed, but

World News



by Momo Jeng

estimates are currently around 30,000. Officials are afraid that epidemics could spread, so the police are having mass cremations without identification of the deceased or funeral rites. This makes the number of deaths very difficult to determine. There are approximately 130,000 homeless survivors.

Prime Minister P.V. Narashima Rao ordered army relief operations involving about 25,000 soldiers and \$3.3 million for emergency operations.

The state of Maharashtra was the most badly hit. The governor has indicated that the collapsed villages will not be rebuilt, and has asked for national and foreign aid to house the homeless survivors, at a cost of \$31 million. Russia and Pakistan have offered aid.

Israel

The Israeli army captured Ahmed Awad Ikmail, commander of the Black Panthers, a PLO guerrilla group. Yassir Arafat, head of the PLO, has ordered a cessation of terrorism against Israel. While the Black Panthers have reportedly agreed to this, Israel says that it has the right to capture PLO members accused of killings. The PLO complained that the arrest violated the spirit of the September 13th peace agreement between Israel and the PLO. The arrests do not seem to have disrupted the preparations for the first stage of Palestinian self-rule in Gaza and Jericho.

Various nations pledged \$2 billion over five years for the Palestinian self-government plan: \$500 million from the U.S., \$600 million from the EC, \$200 million from Japan, \$100 million from Saudi Arabia, and \$50 million from Israel. The World Bank has said that the new Palestinian government will need \$2.4 billion to survive. Further pledges are expected. The package included both grants and loans.

Japan

Faced with poor harvests, Japan has announced that it will buy foreign rice as an emergency measure. The agricultural minister said that Japan has no intention of permanently altering its import ban on rice.

Japan's Justice Ministry recommended making it easier for foreigners to practice law in Japan. U.S. firms say that current restrictions make it difficult for them to crack the Japanese market. Currently there are only 79 foreign lawyers in Japan.

Libya

Libya agreed to allow two intelligence agents, Abdel Basset Ali Megrahi and Lamen Khalifa Fhimman, to be tried in Scotland. The agents are accused of causing

the explosion of a Pan Am plane in Lockerbie, Scotland in 1988, which killed 270 people. The decision came two days before the U.N. Security Council was to meet to discuss tougher economic sanctions on Libya, and a freeze of Libyan financial assets. Exactly when

the agents are to be extradited is not clear.

Mexico

Hurricane Gert hit Mexico, forcing over 20,000 Mexicans to evacuate Veracruz and Tamaulipas. Mexican officials estimate that over 85,000 people have either been left homeless or had their homes damaged, and that tens of thousands of acres of crops have been damaged. The Mexican army is being used for relief efforts.

Russia

Two judges left the Constitutional Court Tuesday, saying that they were temporarily leaving to protest the pro-Parliament leanings of Valery D. Zorkin, the chairman of the Constitutional Court. Zorkin had said that Yeltsin had acted unconstitutionally when he dissolved Parliament.

Thousands of pro-communist demonstrators backed by paramilitary units broke through the police barricades around the Russian Parliament, temporarily ending the siege of Parliament. On orders from Alexander V. Rutskoi, who the Parliament had appointed president, pro-Communist forces took over the office of the mayor of Moscow and the main television headquarters for Russia.

Yeltsin declared a state of emergency and sent troops to secure points in downtown Moscow. He ordered troops and tanks to fire upon the Russian White House, and the Parliament surrendered. Rutskoi, Parliament Chairman Khasbulatov and the Russian Parliament were arrested. Yeltsin signed decrees banning the Communist party and several ultranationalist parties, and shut down several opposition newspapers. He removed many who had sided with Parliament, firing the governors of Novosibirsk and Amur, and closing several local councils. The fighting has left at least 150 dead.

Somalia

During a U.N. military sweep of south Mogadishu five American soldiers were killed and 24 were wounded. This brings the numbers of Americans killed in Somalia to 16. U.S. officials said that the sweep resulted in the capture of a high-ranking official of Mohammed Farah Aidid's Somali National Alliance. The deaths increased bipartisan congressional opposition to the U.S. presence in Somalia, with some members of Congress threatening to cut off funds for further U.S. involvement. A White House official said that the Administration has ruled out an immediate pullout, explaining that such a pullout would neutralize all the work the U.N. has done.

South Africa

The three right-wing white militants accused of planning the assassination of black Communist Party leader Chris Hani pleaded not guilty.

Sri Lanka

Sri Lankan troops used tanks, planes and 9,000 troops to attack the Tamil rebels in the Jaffna peninsula. Hundreds of people died, although the army and rebels give conflicting reports as to the number of deaths on each side. It was the largest Sri Lankan military offensive in two years.

United States

Ellie Nesler was found guilty of being sane. She could get up to sixteen years in prison.

The Senate voted 57-42 to allocate \$640 million for the Superconducting Supercollider, or SSC. The House voted to kill the SSC last June, so the funding for the SSC will have to be determined in a House-Senate conference committee. The vote cut across party lines, with large numbers of Democrats and Republicans voting on both sides.

Interior Secretary Bruce Babbitt expects to launch the National Biological Survey this month. The survey is supposed to give a "complete census of all living things, except people, in the United States."

The NIST (National Institute of Standards and Technology) is introducing an national electronic encryption system. This government standardized encryption is done by \$26 "Clipper Chips," which use a classified encryption system called Skipjack. The code is designed so that government officials can decode any encrypted messages. Federal officials are concerned that privacy might fall into the hands of the irresponsible. Under the new system, federal agents with a court order would be able to decode any message which used the standard encryption. While the FBI and White House say that they would not be able to force companies to use the new technologies, experts say that a series of regulatory actions by government agencies would effectively force everyone to use the standardized government code.

Someone gained access to Mykotronx's confidential financial records and agreements with the National Security Agency and released them over the Internet. Mykotronx is the only company authorized by the government to make the "Clipper Chips" (see above). The person was apparently upset about the plans for a standard government encryption scheme. It appears that the person got the information from typewriter ribbons thrown away by secretaries at Mykotronx.

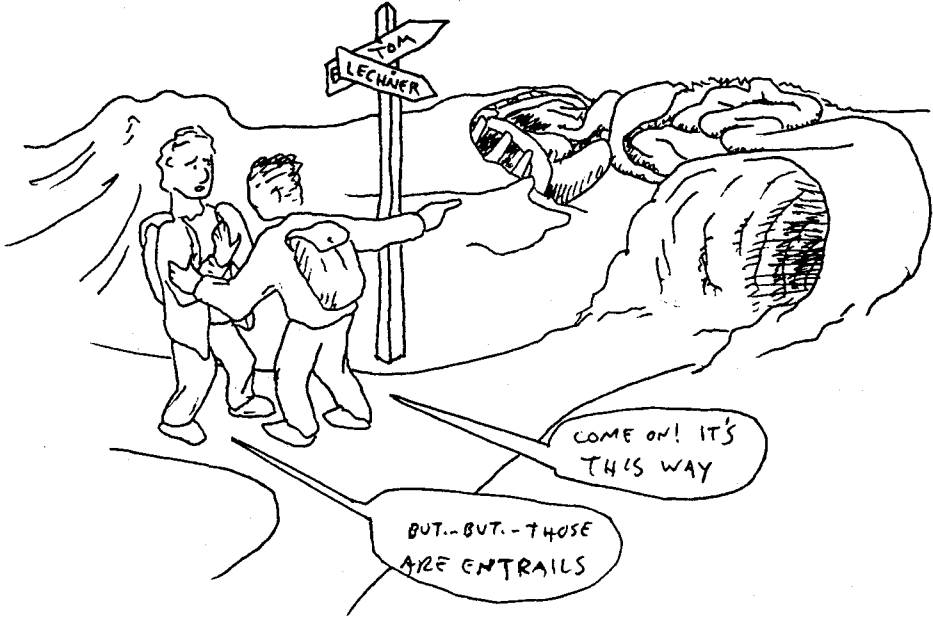
Vatican City

Pope John Paul II issued an 40,000-word encyclical titled "Veritatis Splendor." As expected, it disallowed abortion, euthanasia, premarital sex, and artificial birth control.

Yugoslavia

The U.N. Security Council voted unanimously for six more months of peacekeeping in the former Yugoslavia. It warned Serbia that sanctions would remain in place as long as Croatian Serb forces violated cease-fire agreements in Croatia.

lechner



ADAM VILLANI: MEDIA GUY

by Adam Villani

I was tied up with classes starting and with Rotation this week, so I didn't go out and do anything interesting. Even with no material, though, I fearlessly bring you this column.

Why I hate Rolling Stone magazine

Last year I found a bunch of copies of *Rolling Stone* from 1969 in Millikan Library. While I'll be the first to say that I'm not really into the hippie thing, I will say that I really enjoyed reading these old issues of *Rolling Stone*. It really was an independent, albeit not underground, weekly rock newspaper. They reflected the music industry instead of being an arm of the record companies. For example, editorials urged readers to boycott the Beatles' "Abbey Road" album because of its \$6.98 price tag. Can you imagine the *Rolling Stone* of today urging readers to boycott a U2 album?

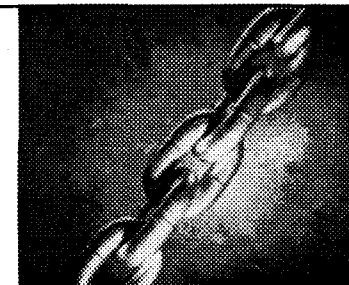
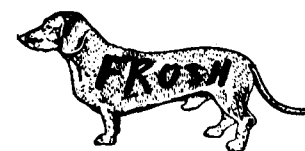
In the September 2, 1993 issue, an article on Mercury Rev begins with, "In a time when the rubric 'alternative' is regularly bestowed on any group whose flannel-shirted guitarist uses a distortion pedal..." and then in a separate article refers to the Cranberries' "Linger" as a "staple on alternative radio." I listened to the whole Cranberries album, and while RS thinks they're "Ireland's most intriguing, angelically aggressive import since Sinéad O'Connor," I was not so moved. The album is a standard, pretentious rehash of material done better by Suzanne Vega. It's not bad, but there's a reason why "Linger" is the only song from it that you hear on the radio.

Furthermore, they seem to think they hold a monopoly on the definition of "Rock and Roll." From reading RS, one might believe that rock is about using the same mediocre formula every band before you did. Their review of Björk's "Debut" slammed it for being "painfully eclectic" and using a harp (not a *real* rock instrument like a harmonica). While the album is not fantastic, it's a fairly good pop album, and her adventurous choice of instrumentation isn't the reason to criticize it. Criticize the uninspired writing.

What is *not* rock and roll are the fashion spreads, perfume ads, pretentious typefaces, and the fact that 90% of the letters say "Finally, someone notices successful-artist-x's talent as genius. Thank you for being independent." *Rolling Stone* hasn't known what rock is for a very long time.

Mona Lisa Overdrive

This group's self-titled album sounds kind of like a whitewashed version of Nine Inch Nails. You may have heard "Stuck" on the radio, but thankfully most of the rest of the album is somewhat better. They can't seem to figure out if they're writing songs or (over)producing random noise. Please note that there *are* groups that play random noise that I like, it's just that MLO is not that compelling.



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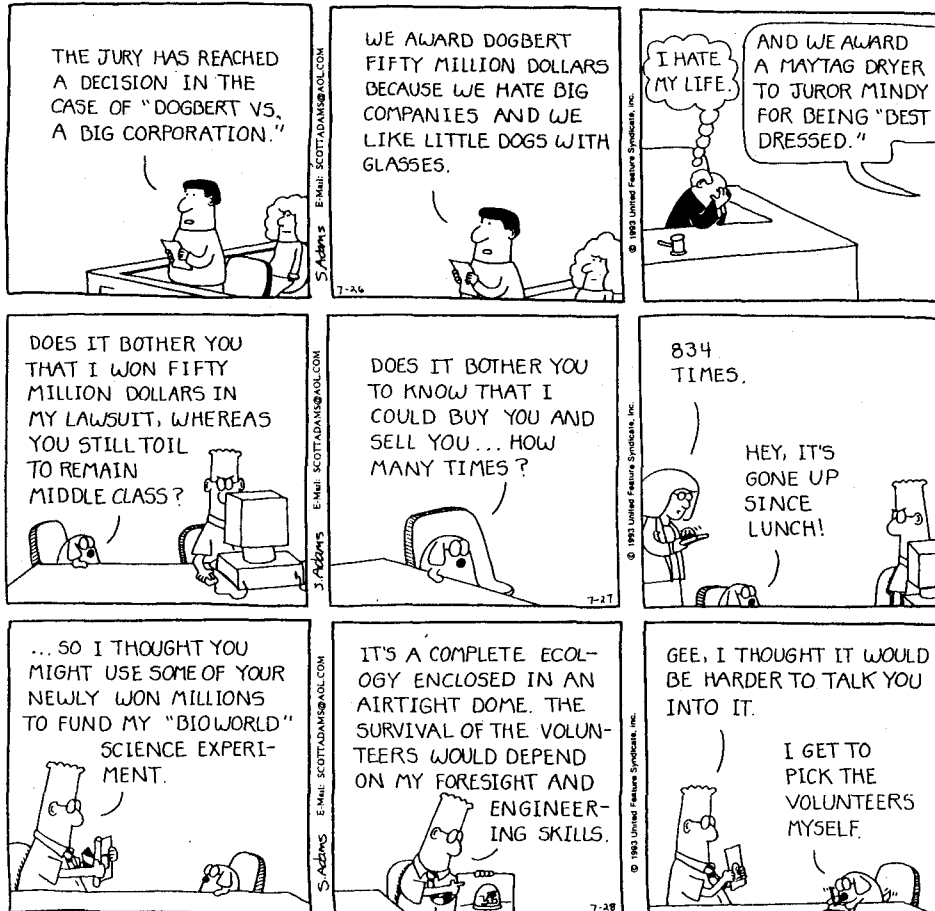
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Bridge Without Sam

by Jeff Goldsmith

Decisions

Playing in a local pair game against unknown opposition, partner deals with our side vulnerable and opens 1♥. RHO passes and I have a decision to make early.

♠K62 ♥9542 ♦1053 ♣KJ7

With this partner, I have only two sensible options. I can bid a normal 2♥, or I can bid a forcing notrump and bid hearts later. Our rule on the choice is that 10-loser hands are supposed to bid 1NT, but this hand feels a little too good for that. Knowing that I am making a mild overbid, I bid 2♥. I'm glad that I supported partner because the auction suddenly gets competitive:

PARTNER	RHO	ME	LHO
1♥	Pass	2♥	2NT
3NT	Pass	?	

Partner's 3NT is natural, showing stoppers in both minor suits. She's either expecting to make it by running nine tricks off the top or she has solid stoppers in the minors without enough length to want to penalize them. That would mean a balanced hand in the 19 HCP and up range. This problem is actually very easy. Passing is clear-cut. With 4-3-3-3 shape, some help in the minors, and sub-minimum values, 9 tricks looks easier than 10. There is very real danger of a ruff in 4♥, too, so I pass 3NT.

LHO isn't done yet. He bids 4♣ and this gets passed around to me. Partner's pass is significant. She doesn't likely have the all offense hand or she'd have bid on to 4♥. She probably has exactly two clubs, likely A10 or AQ. Do I go on now?

I think not. I don't like my hand for offense at hearts, especially since now suits rate to be breaking badly. With 4/7 of my high card in their suit, it must be right to defend. I double, ending the auction. We collect 500 because partner is unwilling to lead or shift to trumps from AQ tight, but was that our best score available? The only way to know is to see if partner would have made 4♥. Let's see.

♠ Q87
♥ AQ1063
♦ KQ4
♣ AQ

N		E
W		
	S	

♠ K62
♥ 9542
♦ 1053
♣ KJ7

The opening lead will be either a club or a diamond. If it is a club, partner will win and take a trump hook. Unless clubs are 7-1 or there are two trump losers, 4♥ will probably make. What if they lead a diamond? Third hand must duck, which will set the hand if the opening leader has three hearts to the King. How should partner play it if the ♦K is permitted to win the first trick? I'd cash the trump Ace and play a club to dummy to lead a trump towards the Q10. As long as trumps are 2-2 or the King is onside tripleton (unlikely,) I'll make the hand. In real life, the 2NT bidder had ♠A ♥J7 ♦AJ862 ♣109854 and 4♥ was made about half the time. Partner would have had no problem. I'm happy with my average for +500, though.

The Caltech Bridge Club meets every Monday night at 7:15 in Winnett Lounge. Everybody is welcome; call Jeff Goldsmith at x2818 for details.

A class for beginners is held Wednesdays beginning October 6th at 7:30 in 74 Jorgensen. Free textbooks and T-shirts will be given to everyone in the class. The winter term subject is "Bidding."

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Dylan & Santana rock Hollywood Bowl

by Jonathan Vos Post

On Saturday, October 2, my wife Christine Carmichael, Caltech EE Professor Rod Goodman (who used to play guitar with Eric Burden & the Animals), and I went to see Santana and Bob Dylan at the Hollywood Bowl. After a frustrating start, the show turned out to be a spectacular success.

Scalped by Ticket Time (it took 5 visits to actually collect the tickets), the seats came to \$95 each, 3 rows back from the main box seats, and with many box seats actually further from the stage. The jammed freeway exit, parking chaos, and long-haired kids in jeans harkened back to the 1960's. At the entrance to the 18,000 seat open-air theater, snotty guards made Chrissie and I throw away our Paul Newman Natural Lemonade and Bristol Farms Organic Papaya-Strawberry Juice, insisting that they were in disposable containers. That policy, of course, forced me to wait 35 minutes on line to buy 4 cups of seriously watered beer for \$5.50 a pop.

The tickets said that the show started at 6:00. When we arrived, a weedy acoustic guitar duo was crooning mellow pop originals with vague images of "standing like burning timber." In the immortal words of Beavis and Butt-Head, "this sucks."

"Should we play another song?" begged the warm-up's warm-ups. "No!" screamed the crowd.

"Too bad. I've always wanted to play the Hollywood Bowl, and I'm not leaving 'til they drag me off with a hook."

At 6:57, the dreadnought three-man percussion of Santana fired up like an artillery barrage in Mogadishu. The Latin Quarter of the crowd went berserk, pounding on the wooden benches with frenzied fists. Carlos Santana cut through the heady sounds of polydrums, rhythm guitar, bass, and keyboards with soaring, sweet, pungent solos, but the songs (performed before a colorful mural of children and angels) were all arranged the same way. Except, that is, for a couple of break-dancing children on stage and several interminable, noodling, self-indulgent solos on drums and bass.

"Two legends—one night!" screamed the ads. Carlos Santana's guitar playing is justifiably a leg-

end, but the group needs to diversify. His between-songs preaching about why kids should not "hang out with Depression" but should "fly with their two wings of enthusiasm and imagination" was very much a throwback to the earnest counterculture of the 60's, as was his Lennon-esque dream of a "world without flags, boundaries, or wallets."

My wallet had already been emptied for the tickets, the watered-untill-hardly-able-to-bubble beer, and the \$15 parking. The intense whiff of joints being covertly passed elsewhere added the same, old 60's aroma. Close your eyes. Like, wow, man—it's 1963 again when Dylan first performed in the Bowl as a guest artist with Joan Baez. And where is Saint Zimmerman, anyway?

At about 9:15, after the children and angels had been rolled up and carted away, a more modest set of instruments was rolled out. Legend #1 strolled on stage to moderate applause. His hair was as curly as ever, down to his collar. His wild west gambler's suit bore wide pin-stripes of gold, shining on his lapels like general's stars.

Backed by acoustic bass, acoustic rhythm, and keyboard drums, a relaxed Dylan launched into a low-key and respectful traditional number, "You're Gonna Quit Me," which was answered by equally traditional and respectful applause.

Switching to electric guitar, the stand-up bass replaced by a Fender, he surged—"Ooh, Mama, can this really be the end?"—into a rocking "Stuck Inside of Mobile With The Memphis Blues Again." Keeping the energy high, he punched through an eerie "All Along the Watchtower," then "In Time," and then a song I didn't recognize. No question at all, Dylan still had it. His backup wasn't The Band, but they cut crisply from blues, to country, to rock, and back again. I hope Santana took notes on how to throw one change of pace after another, and how to dig deep for rich veins of style.

Switching back to acoustic instruments, Dylan sang a ballad of pirates and high seas. He growled

and clawed through a tough and timeless "Gates of Eden," then switched back to acoustic for a plaintive, yet fast-moving "Don't Think Twice, It's All Right" intercut with his second and more effective harmonica solo. Dylan and his lean, mean backup had by now completely won over the crowd, reported as 14,500, as the full moon rose over the concert shell.

Dylan rocked through a blistering, new "God Knows." Youngsters in the audience were impressed by this dude in his 50's who could be as unintelligible as Nirvana, as energetic as the Red Hot Chili Peppers, as hoarsely mournful as Leonard Cohen. He kicked out the jams on "Maggie's Farm," with one stick of harmonic dynamite after another, and at 10:20 P.M. left the crowd on their feet, screaming for more. After five full minutes of chaotic howling and clapping, Dylan stepped back on stage, the spotlights burned, and he cruised through a sardonic "Ballad of a Thin Man." Dylan played each song as if for the first time, teasing, tantalizing, experimenting, and pouncing on the groove.

The audience, transported, would not let the concert end. Legend #1 had kicked Legend #2's butt. A few wet blankets slunk away to beat the traffic, but 14,000 souls stayed for the rich, haunting "It Ain't Me, Babe," as the show closed to a rhapsody of imperfect love, perfectly performed.

All night long, my dreams were filled with echoes of melody and lyrics. Paul Simon, Billy Joel, Sting, and Elvis Costello get a lot of credit as sophisticated wordsmiths, but Bob Dylan stands head and shoulders above the rest, a national treasure who has stripped away all the nonessentials.

I'd love to credit Dylan's tight, four-piece band by name, but flashing my press pass to no avail, seeking a photo or press release, I was told by operations, "We don't have anything," and at the artist's entrance by Dylan-badged roadies, "Neither band is really, you know, into publicity."

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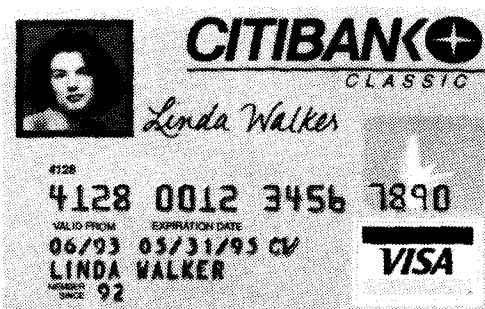


No known picture of Washington smiling exists. Economists believe Washington was unhappy because he felt he could have received a better deal on war supplies. If he used a Citibank Classic Visa card, he would have been assured of getting the best price and probably would have been happier. (Artist rendering of how he would have appeared on the dollar)

for domestic flights.² Savings on mail order purchases, sports equipment, magazines and music also abound. Maximize these savings with a low variable interest rate of 15.4%³ and no annual fee, and you can significantly improve your personal bottom line (especially if one's *net* income tends to be pretty *gross*). Put another way, one might even have enough savings to reinvest in a CD or two (the musical kind, of course). ¶ On the way to the record store, or any store for that matter, take stock of the 3 services concerned with purchases made on the Citibank Classic card. **Citibank Price Protection** assures one of the best prices. See the same item advertised in print for less, within 60 days, and Citibank will refund the difference up to \$150.⁴ To protect these investments, **Buyers Security™** can cover them against accidental damage, fire or theft (ordinarily causes for Great Depressions) for 90 days from the date of purchase.⁴ And **Citibank Lifetime Warranty™** can extend the expected service life of eligible products up to 12 years.⁵ ¶ But perhaps the features which offer the best protection are your eyes, your nose, your mouth, etc.—all featured on **The Photocard**, the credit card with your photo on it. Carrying it can help prevent fraud or any hostile takeover of your card. (Insiders speculate that it makes quite a good student ID, too.) Even if one's card is stolen, or perhaps lost, **The Lost Wallet™ Service** can replace your card usually within 24 hours. ¶ So never panic. As we all know, panic, such as in the Great Panics of 1837, 1857, and 1929, can cause a downswing in a market. But with **24-hour Customer Service**, there's no reason for it. A question about your account is only an 800 number away. (Panic of the sort experienced the night before Finals is something else again.) ¶ Needless to say, building a credit history with the support of such services can only be a boost. You're investing in futures—that future house, that future car, etc. And knowing the Citibank Classic Visa card is there in your wallet should presently give you a sense of security, rare in today's—how shall we say?—fickle market. ¶ To apply, call. Students don't need a job or a cosigner. And call if you'd simply like your photo added to your regular Citibank Classic Visa card. Here's the number: **1-800-CITIBANK, extension 19.** ¶ The Law of Student Supply and Demand states, "If a credit card satisfies more of a student's unlimited wants and needs, while reducing the Risk Factor in respect to limited and often scarce resources—with the greatest supply of services and savings possible—then students will demand said credit card." So, demand away—call.

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Cross Country tears up the field

by Tom Dmukauskas

On October 2, the Caltech Cross Country team descended upon La Mirada to participate in the Biola Invitational. The race was the largest of any that Tech will compete in this year featuring 150 runners in the men's race and 137 in the women's. Competition ranged from Division I schools all the way down to NAIA, so the races were scored in two separate divisions. Caltech took advantage of its Division III status and both the men and the women finished in the top half of the field.

The men led off the day with a 9:30 A.M. start, and Andy Zug made sure that he finished before 10:00 A.M. by setting a blistering pace which gave him a 27:18 on the 8K course, good enough for 18th place overall and 2nd place within Caltech's division. Jesse Shue rebounded from last week's illness to place 60th with a time of 29:14. He was followed by Ned Bowden (69th in 29:37), Schuyler Cullen (74th in 29:51) and Tom Dmukauskas (96th in 30:31). This performance earned the men 4th place of the 11 teams

in their division, though they actually walked away with the 3rd place plaque because of a scoring glitch. Bowden was not pleased with the results, however, since he missed an opportunity to have his picture taken with NCAA Division I champion Suzy Favor-Hamilton. He later remarked, "If I had known she was going to leave so soon, I would have had some incentive to run faster!"

The women's team also did well. Cailin Henderson was first among the Techers, finishing the 5k course in 21:35, good enough for 50th overall and 12th in the division. Ginger Garcia was next in 61st with a time of 22:12, followed by the rapidly improving Tessa Miller (67th in 22:26), Gretchen Larson (73rd in 22:47) and Betsy Barton (85th in 23:17). As a team, the women finished in 5th of the 10 in their division, but more importantly, they closed the 16 point gap between Tech and Cal Lutheran to only 2 points.

Next Up: Southern Cal College Invitational—Saturday, October 9th at 9:00 A.M. in Costa Mesa.



photo courtesy Jim O'Brien

Freshmen Radhika Reddy (left) and Gretchen Larson (right) schmoozing with nine-time NCAA Division I Champion Suzy Favor-Hamilton at the Biola Invitational

WE'VE DECIDED TO USE THIS SMALL, LEFTOVER SPACE TO INVITE YOU TO THE WEEKLY MEETING OF THE CALIFORNIA TECH STAFF. THE MEETING IS HELD EACH FRIDAY AT 12:15 P.M. IN THE COFFEEHOUSE. FREE PIZZA IS SERVED.

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Sports Results

Women's Volleyball	Tuesday, 10/5	vs. L.I.F.E. Bible College	won, 15-10, 15-8, 15-7
Cross Country	Saturday, 10/2	Biola Invitational	Men's: 4th place Women's: 5th place
Soccer	Wednesday, 10/6	vs. Pomona-Pitzer	lost, 1-6
Water Polo	Saturday, 10/2	vs. Cal Poly San Luis Obispo	lost, 13-22
		vs. Claremont J.V.	lost, 7-16
		vs. Occidental	lost, 4-18
		vs. San Diego State	lost, 7-25
Go*	Saturday, 10/2	vs. USC	0-5

*thanks to Jin Zhang

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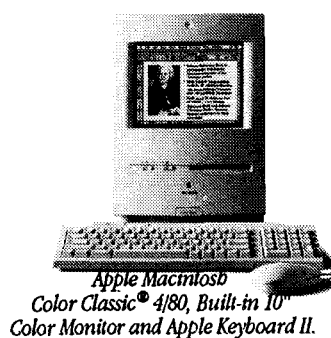
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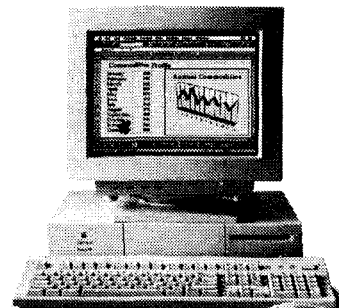
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by Gypsy Achong

Good news: There have been no reported thefts so far in October.

Crime Tip: Lock your bike to an immovable object, not to itself. Otherwise, bikes can easily be carried away, lock and all.

9/18 5:00-5:30 P.M. Two cameras containing pre-wedding film were stolen from the dressing room in Dabney Hall while a wedding ceremony was in

progress. A reward of \$50 has been offered for the return of the cameras or film, no questions asked (call Security office at x4701 for more details).

9/26 9:00 P.M. The rear window of a vehicle parked on Catalina Ave. was smashed out. A garage door opener for the #1001 E. Villa apartments (Caltech off-campus housing) was stolen. The incident was reported to the Pasadena Police Department.

9/26-27 6:00 P.M.-8:40 A.M. An Oldsmobile Cutlass Sierra was stolen from the garage of the #1001 E. Villa apartments. It seems probable that the garage door opener which was stolen earlier in the day was used to get in. \$1500

Total this week: \$1500

Suggestions sought for commencement speaker

by Daniel Maskit

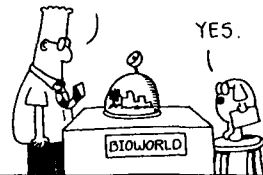
I know it seems a long way off, but this year's commencement is on June 10th, and I need your help in planning it. I am the Graduate Student Council representative on the Convocation Committee. We are currently drawing up a list of suggested speakers to submit to President Everhart. We have come up with a tentative group to choose from, and I would like graduate student opinions as to whom they would like to hear speak this year. Please send e-mail to me at danielm@scp, and tell me which of the following people you would like us to invite. If you prefer to use campus mail, my mail code is 256-80. If you think we should invite someone who isn't on the list, you

can tell me that too. The list is:

- Bruce Babbitt, former governor of Arizona; presently secretary of the interior
- Al Gore, vice-president of the United States
- Seamus Heaney, professor of poetry at Oxford and Harvard
- C. Everett Koop, former Surgeon General
- Dr. Jonathan Miller, most recently known for a TV series on the brain he did for PBS (American public television)
- Mary Robinson, president of Ireland
- Tom Stoppard, playwright
- Sheila Widnall, secretary of the U.S. Air Force, and the highest-ranking woman in the American military

Thank you for your assistance.

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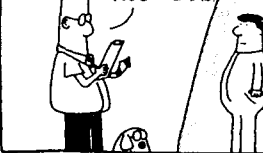


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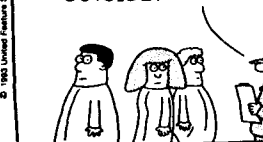
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continued from page 1

Cycle

log returned provides an additional chance to win a prize in our quarterly drawings; and the more participation in the program we can demonstrate via the logs, the more funds become obtainable for enhancing our potential prize pool. Therefore, if you live off-campus and ride a bike to Caltech at least occasionally, and are interested in the program but haven't yet received one of our mailings, drop me a line and I'll put you on our list: Riley Geary, Caltech Cyclo-Commuter Coordinator, 252-21, riley@bombay.gps.

Bust of Justice returned

by Adam Villani

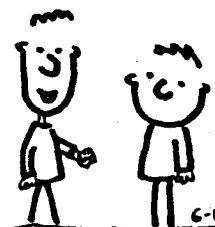
This last Sunday, the morning of Freshman picks, the Ricketts House pot was defiled with a poster of the smiling BOC chair, Mike Brundage, holding the fabled Bust of Justice. Although the Bust had originally been owned by the Board of Control, it had been presiding over the Ricketts frosh welcome ritual, Frosh Wash, since the late 1980's until last year when former BOC secretary Nathan Frei ruthlessly absconded with it.

Sunday afternoon, though, Mr.

Brundage left a puzzling clue for the Scurves to decipher. It was not until after Frosh Wash had started that the intrepid Scurves managed to unscramble the words "whirling blades of death" which led to the hiding place of the Bust. A little late for the frosh, the Bust of Justice was joyfully paraded back into Ricketts Courtyard. Senior Brian Trotter explains that "the Bust was unloved in the hands of the BOC, who would taunt it for being so ugly. Now it is back in Ricketts House, where it is beloved."



Today Tony came by and said, "Hey, Jim, you're gonna love this..."



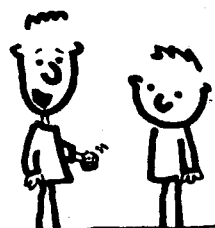
He had a little rubber puppet thing that was just a face that contorted when he moved his fingers.



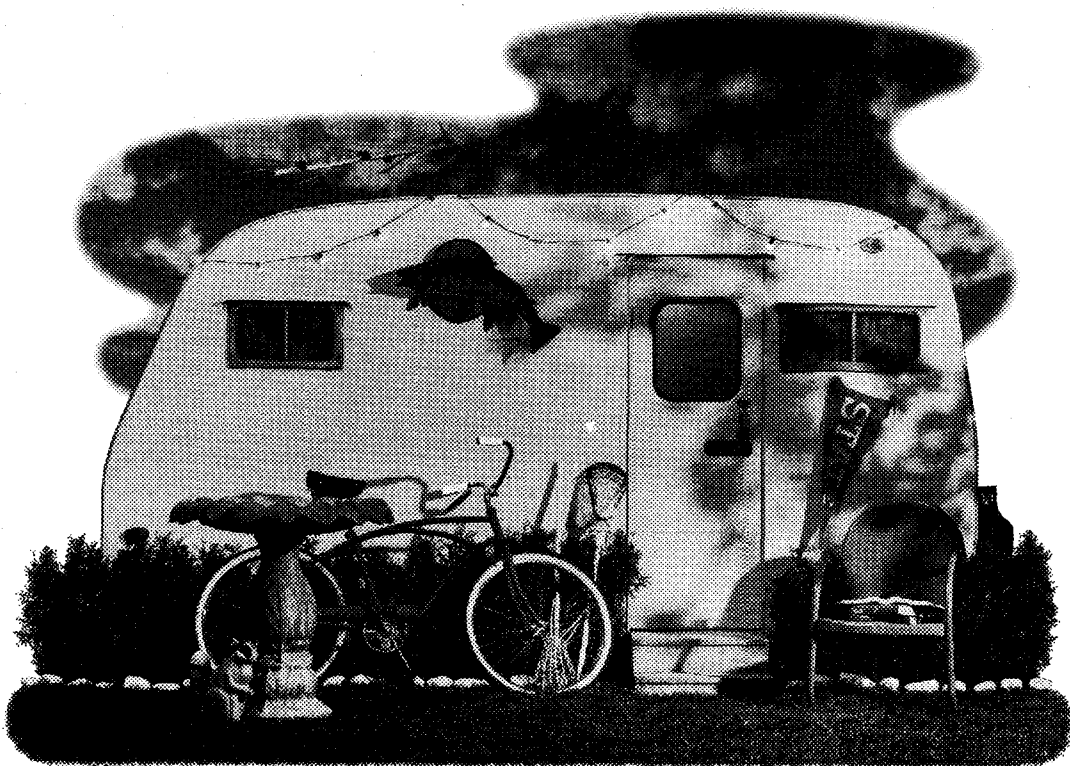
Tony growled when the face looked angry, hollered when the face's mouth was wide open, and had fun making silly faces with it.



"Isn't this just the greatest thing?" he said.



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Jim's Journal

Mr. Peterson was taking a nap on the floor today.

She was sleeping in a spot where the sun was shining through the window.

She stretched herself out and then turned up on her back.

Then suddenly she looked at me and said, "Pleeeep!"

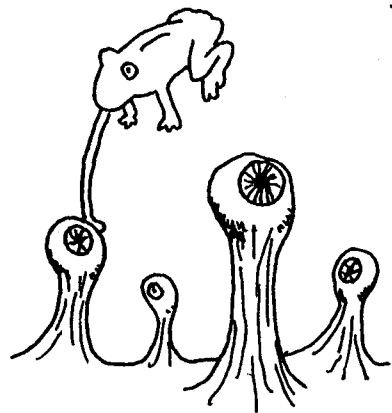
Jim's Journal

I worked at the copy store today.

I had to get up really early to work the morning shift.

I was tired, and just stared into space. I didn't pay attention to what I was doing.

If I relaxed enough, and blocked out all my senses, I could almost sleep standing up.



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PRIME LOCATION - LARGE STUDIO CONDO with view windows, 1115 E. Cordova St., (2 blocks from Caltech), security building, all-electric, partially furnished, pool, patio, 2 car spaces. \$675/month, utilities partly paid. Call Ray at x6331 or (818) 792-9053.

COZY BUNGALOW STUDIO APARTMENT, 1718 Huntington Drive (near Marengo), South Pasadena, partially or full furnished, utilities paid. \$500-520/month. Call Ray at x6331 or (818) 792-9053 (home).

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1973 VW SUPER BEETLE. Well-maintained, reliable. Beige. \$1000 obo. Call Karen at (818) 548-0652 (preferred), or x6827.

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LOST-

GOLD BALL last seen hanging from the ceiling in Beckman Auditorium. Anyone with information should call Ram Basu in Public Events at x3667.

ROOM FOR RENT-

COZY NORTH SAN GABRIEL HOME, two rooms available - each with private entry. Kitchen, laundry, and utilities included. 10-minute drive to campus. Ladies only. \$400 unfurnished, \$425 furnished. (818) 292-1972.

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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.

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- Canon 101 keyboard
- Logitech mouse, Canon mouse pad
- Energy star compliant (EPA)

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- Microsoft Windows V3.1 (Value \$75)
- Microsoft Works for Windows (Value \$115)
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486DX-50MHz \$1825

C:M

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- Microsoft Windows 3.1
- Microsoft Works V2.0
- MicroFax by Phoenix

One Year Road-Side Warranty

\$1595

Canon

NoteJet 486

- 486SX-25MHz
- 4MB ram up to 12MB
- PCMCIA II slot
- 80MB IDE hard disk (135MB, 185MB option)
- 1.44MB Floppy drive
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- Canon hand held trackball
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- Microsoft Windows 3.1

One Year Road-Side Warranty

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135MB HD \$2395

185MB HD \$2595

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- 1.44MB Floppy drive
- 9600 Fax/2400 modem
- Carrying case
- Logitech trackball
- Microsoft DOS 6.0
- Microsoft Windows 3.1
- Win fax lite

One Year On-Site Warranty

\$1650

MITAC

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- 1.44MB Floppy drive
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- Media Vision Pro Audio Spectrum \$180
- MITAC Multi-Media W/Sound Galaxy Pro & 5 CD, Mitsumi CD ROM, Speaker \$395
- Media Vision fusion CD 16, Sony CD \$495

Fax/Modem

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- 14,400 Fax/14,400 Modem (Rockwell) \$158
- 9600 Fax/2400 Modem (Int.) \$59

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- Coner 250MB W/3M tape \$195
- Coner 4320RT 2GB (Int.) \$965
- Coner 4320RT 2GB (Ext.) \$1195
- Colorado DJ1-10 120MB \$155
- Colorado DJ-20 250MB \$195
- Colorado 120MB (Ext.) \$315
- Colorado 250MB (Ext.) \$385

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- 14" SVGA 1024 (.28) \$245
- 14" SVGA (.28) Non-interlace \$275
- 14" VESA SVGA (.28) 72Hz NI \$295
- 15" SVGA (.28) NI, Low radiation \$465
- 17" SVGA 1024 (.26) NI \$795

* Note: asterisks indicate new announcements.

Notices

* **The Health Center has arranged to offer flu shots** to students this year. Dr. Stuart Miller, Medical Director at the Health Center, has requested that students interested in receiving the flu vaccine contact the Health Center in order that sufficient doses of the vaccine will be available for those who request it. The best time to be vaccinated is between October 1 and November 15. Please call the Health Center at x6393 for information regarding times these shots will be available. Cost for this service is \$5, which may be charged to the student account. Available to students only.

* The Humanities and Social Science Division will commence its **German Film Series** for the 1993-1994 academic year on Thursday, October 14 at 7:30 P.M. The first screening will be "Reinheit des Herzens." Admission is free.

* **Poetry Sought for Book**—General poetry is being accepted for the Western Poetry Association's 1994 poetry book entitled "Poetry: An American Heritage." Poets are invited to send one or two original poems of 24 lines or less on any subject. Poems with a point of view or statement are preferred. Mail submissions to: Western Poetry Association, P.O. Box 49445, Colorado Springs, CO 80940-9445. There is no reading fee.

* The **Museum of Contemporary Art (MOCA)** is offering a membership plan designed especially so that students can enjoy the benefits of a MOCA membership at an affordable price. For only \$20 a year (regular membership is \$45), full-time students can become members. Student membership includes free admission for one, free weekend parking, and a 10% discount at the MOCA Store. For more information call (213) 621-1776. Proof of full-time enrollment with the application is required.

* **1993 JPL Arts & Crafts Fair**—The Child Educational Center (CEC) at JPL is having a Fair on October 15-17 on the JPL Campus. There will be entertainment, food, children's activities, and free admission and parking. Proceeds will benefit the CEC.

* Mark Russell will present **"The Laughter and Song of Politics"** on Friday, October 29 at 8 P.M. in Caltech's Beckman Auditorium, Michigan Avenue south of Del Mar Blvd.

* **The Caltech Anime Society** will be showing several movies on Friday, October 8th and Saturday, October 9th in the S.A.C. TV room. Showings will begin at 7:00 P.M. on both evenings. For more information contact Roy Jones in Ricketts Room 45 or at MSC 673. Announcements will be made before the feature showings on both Friday and Saturday explaining future club activities.

* The Los Angeles Branch of the Orton Dyslexia Society and the Los Angeles Chapter of the Learning Disabilities Association of California are holding their **3rd Annual Free Information Fair and LD Walkathon** on Sunday, November 14, 1993 at Los Angeles Pierce College in Woodland Hills. Registration for the LD Walkathon begins at 8:00 A.M., the Free Information Fair opens at 9:00 A.M. For a free brochure and information call (818) 725-3777.

The Flying Karamazov Brothers will present their production **"Juggle and Hyde"** on Friday, October 22, at 8:00 P.M. in Beckman Auditorium. Tickets are priced at \$27.50, \$25.00, and \$22.50. Caltech students (with I.D.) can purchase half-price tickets in advance and Rush Tickets for \$7.50 beginning Friday, October 22 (subject to availability). Caltech faculty and staff can also receive discounts on tickets bought in

Events and Notices

advance or on Friday, October 22. Tickets can be purchased at the Caltech Ticket Office, located just north of the Beckman Auditorium parking lot. Call x4652 for information. Individuals with a disability should call Deborah White, x4688 (Voice) or x3700 (TDD) Monday-Friday for information and assistance.

Elizabethan Events—Caltech Public Events' 1993-94 season opens on Saturday, October 16 with an Elizabethan fair at 4:00 P.M., followed by the California Shakespeare Festival's contemporary production of *Hamlet* at 8:00 P.M. in Beckman Auditorium. Tickets can be purchased at the Caltech Ticket Office.

The Emerson String Quartet will give a Coleman Chamber Music Concert on Sunday, October 17 at 3:30 P.M. in Beckman Auditorium. Fifty free tickets to this concert are available to Caltech Students with I.D. (limit two free tickets per I.D.). Tickets available at the Caltech Ticket Office beginning Tuesday, October 12.

The Chamber Orchestra at St. Matthew's, conducted by Thomas Neenan, will perform on Sunday, October 10, at 3:30 P.M. in Dabney Lounge. The concert is open to the public, free of charge.

Items found at frosh camp—The Deans' Office has a blue and white sleeping bag and a pair of Nike tennis shoes that were turned in from Camp. Please come to Room 102, Parsons-Gates Bldg. to inquire.

Work for the MOSH—Need some extra \$\$? We have a job for you. Help the Master of Student Houses, David Wales, entertain students and faculty at the Master's House. Great benefits! See Amy in the Residence Life and Master's Office for more details.

The Residence Life Office is looking for reliable students to work part-time in our office (work study preferred). The position includes answering phones, running errands, and helping with various projects. Please see Amy in the Residence Life Office for more information.

"Tigris Expedition"—On Friday, October 8, 1993, Norman Baker will narrate this Armchair Adventures travel film, which follows the voyage of the "Tigris" from the Persian Gulf to the Horn of Africa. Tickets at the Caltech Ticket Office.

Events & Services

Adult Children of Alcoholics, a 12-step group meets on campus every Tuesday from 12 noon to 1:00 P.M., in Spalding Lab room 114. This group is open to any student, staff, or member of the faculty who grew up with family alcoholism and other problems. For more information call Dinah Lee Schaller at x2961 or x8331.

Caltech Alpine Club "Sit and Chat"—Bring a sack lunch to the patio outside the north end of Keck Laboratory on Wednesdays from 12 to 1. Talk about mountains, the weather, and outings, past and future.

Pasadena YWCA Rape Crisis Center—Survivor Support Groups Forming (Adult Survivor, Adolescent Survivor, and Adult Survivor of Child Sexual Assault). The goals of the groups are: to reduce feelings of isolation, empower women, expose myths about sexual assault, and enable members to build support systems. These are peer-support groups, and do not profess to be

"therapy groups," but therapy and healing do occur. Cost is free; nominal donations are accepted but not demanded. Contact the YWCA Rape Crisis Center at (818) 793-5171.

The Caltech Gay/Lesbian/Bisexual Support Group meets the first and third Tuesdays of each month in the Health Center Lounge. This confidential meeting is open to all Caltech community members looking for a supportive context in which to address questions and concerns about sexual orientation including coming out, being out, self-discovery, coping with families... We begin with a focus topic but move to whatever is feeling most relevant to the group that night. Refreshments are served. For information, call 356-8331.

Pasadena YWCA Rape Crisis Center—Self Defense for Women. Classes held monthly. Saturdays from 12:00-4:00 P.M. September 25, October 16, November 6. \$25 per session (Sliding Scale, no woman turned away for lack of funds).

Caltech Y ExComm Meeting—The Y invites anyone who wishes to co-sponsor an event to attend on the first or third Monday of each month.

Caltech Hillel/Jewish Community Weekly Meeting—An informal gathering, every Thursday at noon in the Y lounge. For information call Cathy Konigsberg at (213) 259-2859.

Friday Prayer—Prayers organized by Caltech Muslim Students are held in the Caltech Y lounge at 12:30 P.M. every Friday.

Mass—Thursday at 8:15 A.M. in the Y lounge and Sunday at 10 A.M. in Winnett lounge. Sacrament of Reconciliation (confession) is given 20 minutes before masses. Refreshments are served after mass.

Bible Study and Discussion—Every Wednesday at noon in the Y lounge. Bring your own lunch. For more information call Mike Gerfen at 356-4886.

OpenLine—A group made up of students, staff, and faculty from many different departments on campus, and from a variety of ethnic and cultural backgrounds. We are both an action group and a discussion group. Our agenda is very flexible and is solely determined by what people in the group suggest. Drop by any meeting and say hello! We meet from noon to 1 P.M. on Tuesdays in the Y Lounge (2nd floor Winnett, feel free to bring your lunch!). Remember, we *always* welcome new people, at any time of the year. Hope to see sometime! For more information contact Gary Mines at x6542 (gam@zhmeia.caltech.edu).

Baby Furniture Pool—The Caltech Service League loans out baby furniture to students and postdocs on Wednesday at 324 S. Chester from 10 to 11 A.M. For more information call 952-1631.

Israeli Folk Dancing—Sundays in Winnett lounge. Beginning instruction starts at 7:30 P.M., intermediate at 8:00 and open dancing goes on from 8:30 to 10:30. For information call Nancy Macmillan at 795-3655. Admission is \$2.00.

Scottish Country Dancing—On Wednesdays in Dabney Lounge from 8 until 10 P.M. Beginners are welcome and no partners are needed. For more information call David Hills at 354-8741.

Music with James Boyk—Pianist James Boyk gives a performance each Wednesday from 4:30 to 6 P.M. in Dabney Lounge. The performance is open to the public and free of charge. Feel free to come late or leave early. For more information call x6353.

Lectures & Seminars

* **The Evolving JPL—An Institutional Perspective**—Kirk Dawson, the Associate Director of the Jet Propulsion Laboratory, will present a talk on Monday, October 11, at 12:00 Noon in Room 180-101 at JPL.

Redefining Femininity: The Checkered Career of Mme. Du Châtelet—Mary Terrall, a visiting scholar at UCLA, will speak on Wednesday, 20 October 1993 in the Judy Library at 4:00 P.M. There will be refreshments.

Scholarships, Internships, & Competitions

For information on the following scholarships, please contact the individuals listed at the end of each scholarship.

* **The American Scandinavian Foundation of Los Angeles (ASF/LA)** will distribute five \$1,000 scholarship awards to upper division and graduate students enrolled in accredited schools in the Greater Los Angeles Area. Students must have a demonstrated interest in Scandinavia. Applications, transcripts, and recommendations are due by **March 15, 1994**. Applications are available in Financial Aid.

The Society for the Advancement of Material and Process Engineering (SAMPE) has begun its 1994 Undergraduate Award Program for students pursuing a BS in engineering. The awards are for recognition of past and present college scholastic and technical achievement and future potential. Applicants must have at least one semester of grades in that program by February 1, 1994. Applications must be postmarked by **February 1, 1994**.

The 54th Annual William Lowell Putnam Mathematical Competition will be held on Saturday, December 4, at 8:00 A.M. The competition is open to regularly enrolled undergraduates, in colleges and universities of the United States and Canada, who have not yet received a college degree. No individual may participate in the competition more than four times. Various prizes are awarded, including the Elizabeth Lowell Putnam Prize to be awarded to a woman whose performance on the competition is deemed particularly meritorious. **Sign up in Sloan by October 11.** "As usual we hope many participants will enjoy a day of math problems and donuts."

66 Fellowships will be awarded by the Howard Hughes Medical Institute for full-time study toward a Ph.D. or Sc.D. degree in the biological sciences. Awards are for three years, with extension possible for two additional years of full support. Fellowship awards provide an annual stipend of \$14,000 and a \$12,700 annual cost-of-education allowance. For more information or for copies of the Program Announcement or Application, call (202) 334-2872 or write to the Hughes Fellowship Program, The Fellowship Office, National Research Council, 2101 Constitution Avenue, Washington D.C. 20418.

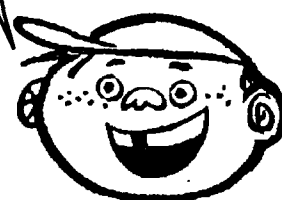
The Northrop Corporation is offering two \$3,000 scholarships at Caltech for the 1993-94 academic year. The scholarships are available to students enrolled full time as freshmen through seniors in Electrical, Mechanical, Aerospace, Computer Science, or Manufacturing Engineering. Applicants must be U.S. citizens and may be a concurrent recipient of another company's scholarship. Resumes and transcripts must be received by the Financial Aid Office at 515 S. Wilson by 5:00 P.M., **Friday, October 22nd, 1993**.

The Data Processing Management Association is offering two scholarships for \$1,000 each provided by the Bert A. Monaghan Scholarship Fund. Applicants must have financial need and have made Computer Science their major career goal. The Scholarship Committee must receive the application by **November 19, 1993**. Talk to the Financial Aid Office for more details.

The American Society of Mechanical Engineers (ASME) Loan Program has begun for full-time students enrolled in the 1993-94 academic year. Applications must be postmarked no later than October 20, 1993. All applicants will be notified in mid-December 1993 whether or not they have been selected to receive a loan for the 1994 Spring term.

United States Department of Energy: Integrated Manufacturing Pre-doctoral Fellowships—The United States DOE is offering twelve three-year fellowships for study toward the Ph.D. degree. Eligibility is limited to citizens, nationals, and permanent resident aliens of the United States, who will have received a master's degree by the fall of 1994, but evidence of equivalent post-baccalaureate professional industrial experience may be offered by the applicant in lieu of the master's degree. There is a stipend of \$20,000 per year, and up to \$15,000 per year will be provided toward tuition and fees. Selection is merit based. Contact: Fellowship Office, National Research Council, 2101 Constitution Avenue, Washington, D.C. 20418, or call (202) 334-2872. Initial application date is **November 5, 1993**.

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