

Thanks,
Steve, Ken,
Mark, Paul.

the California tech

What? I have to
drop 30 of my 72
units?!

Volume LXXXII

Pasadena, California; Friday, May 22, 1981

Number 29

TOMORROW WAS MONDAY

From Dabney Cheese

By Jim Mayhem
and Paulo Raffaelli
Correspondents from Dabney

"Optical Cheese Processor Stack", the note began, "Mounted behind the spy eye in the door is an array of phototransistors whose inputs are fed into a pattern recognition cheese processor. You must...". With notes, such as Kelvin Wagner's above, seniors let it be known that Ditch Day had arrived at last.

The lack of brute force stacks was made up by the creation of a "ridiculous" stack so named by its creator, George "Welsh Rabbit" Williams. The condition—twenty-two Welsh Rabbits to be consumed before time ran out—was quickly met due to a division of labor. Williams' bribe of one raisin was surprisingly rejected so that his furniture was moved out and four rabbits, feed, and straw moved in.

More orthodox stacks, when broken, did not lead to counterstacks. Wagner's stack didn't survive the day, though this was due to circuit failure (the circuit consisted of phototransistors, a thermister, and a pound of Kraft American Singles attached to the spy eye). The key, said to be "under Millikan Bridge", was O₂(l), N₂(l), or CO₂(s), H₂O(s). The challengers looked on the bust of Millikan, under the bridge of its nose, and found a key, which fulfilled its purpose as a red herring (much to Wagner's delight). Fortunately, the bribe was appeasing enough.

Jim Landon had the most educational stack. All of Landon's clues were based on obscure references to statues, buildings and trees on campus. Did you know that there is a Deoder Cedar on campus that was donated by the Cleveland Wrecking Company?

James Host's stack led from TI-59 programming to *Prince Charles of the Sritthi to Xanadu* to a few hours' worth of classical music on tape. The challengers were unable to stand this combination of taste and tastelessness, so the clues were missed and the stack won.

The score, in general, was:

Seniors. 3333333333333333
Others. aaaaaaaaaaaaaall others



Photo by Ken Gant

Flems Tom Murphy and John Quackenbush enjoying a dip in Davis Finley's swimming pool stack.
(More on page four.)

And Blacker Beaches

By Tricia Stoddard
Correspondent from Blacker

After a great fake on the Wednesday before, the seniors of Blacker House left early Monday morning for a glorious day of beaching.

Most of the stacks they left involved the solution to some cryptic puzzle, or the performance of unusual feats.

Culture fiends John Nye and Bruce Martin forced underclassmen to listen and identify various obscure musical artists. The second

level of Martin's stack involved endless trivia questions about U.S. Presidents and Vice-Presidents.

One senior, so afraid of being restacked, had a bribe so substantial that the little shit avoided being locked out. Ah, but who can say no to lobster, crab, and beef Wellington?

The most memorable stack and restack belonged to Mike Newton. His room could be opened merely by "finding" him. As several frosh got key information much sooner than was expected, they rushed to El Monte Airport, in hope of catching the Cessna, Newton and Les Niles, the pilot, before it took off. Their timing was only slightly off. The plane had just taken off, but with a gleam of froshliness in their eyes, they managed to get the control tower to make the plane turn around. Newton was found, the key was retrieved and the plane continued on its destination.

The frosh spent the rest of the day building a beach in Newton's room (Newton is majoring in beach and is going to grad school in Hawaii). Frosh as they are, they turned down a substantial bribe and finished by writing ALOHA in the sand.

After smoking and drinking their way into or out of senior's rooms, the underclassmen (and women) relaxed with games of Demon and glowingly looked back on the day.

(Anne Erdmann's) was also an acrostic, which directed the

**CONTINUED
ON PAGE 2**

To Ricketts Brute Force

By Edward Suranyi
Correspondent from Ricketts

In Ricketts House, Pat Coin had a bird-watching stack. Mark Randolph a stack which required anyone who wanted to start working on it to promise to continue working on that stack and that stack alone until it was solved. Few people had the guts to possibly forego all other Ditch Day festivities (if the stack was a hard one), but eventually a few people decided to give it a go. Inside the envelope on the door was the explicit location of the key! It might be called a "psychological stack."

Four brute-force stacks were built, of which two (Clark Brooks' and Grace Mah's) were exceedingly well designed. Unfortunately (for the seniors involved), all were broken before noon, although in Grace's case the underclassmen almost had to get in by sawing off the medicine cabinet.

Chris Wendt's stack was a



THE TIPPED COW

EDITORIAL

There are many ways to approach any problem. Let's say for example, that the end of the term is coming near, your lab project is barely started, finals are coming, you only reached the 27th level of ROGUE, thirty-plus pages humanity papers are coming due and you've just started to think about doing last term's homework. What should you do to ace or at least pass this term?

Let's analyze your alternatives. First of all you could do absolutely nothing. But then again that would make it extremely difficult to ace all of your classes, let alone pass them. Besides, why come to Caltech if you don't plan to do anything at Tech (no, rogue is not a valid reason for attending Tech [*Aardvark however claims it is*]).

The second alternative is that you could spend the next couple weeks trying to study and/or understand what your classes have been doing for the past school year. To really understand what is happening, you could try to derive all of the equations presented to you from what you already know. However, considering how much time is remaining, this is an inadvisable alternative.

The third and last alternative is to do the bare minimum to pass your classes. This plan of action implies that you would have to accept all of the wonderful concepts previously presented to you on faith. This mentality would also mean that you would have to accept what advice friends and other Techers say regarding schoolwork without serious questioning it mainly because you know you don't have time to really determine whether what they are saying is true or not. This mentality also means you have to not question anything that would reduce your workload. Just think if everybody did this.

Just remember after reading this that you were for the sake of argument suppose to assume that you were behind in your work.

—Roger Fong

[Note since Tracy is not telling me what is going on with the Rivet and since he seems to know what he is doing, I guess I will just let him be the sole editor of the Rivet.]

Dear Frosh and Sophs

Froshlings and Sophmores:

Ditch Day was Monday, and only two of you showed up at Mudeo! At first I was perturbed by the improbability that my magnetic personality had failed to attract participants. But, it didn't take long to find a better explanation—the monumental task of throwing me in the mud was too much for your feeble minds and bodies to deal with. You do, however, have

another chance! Mudeo is rescheduled for Wednesday, May 27, at 3:00. Be aware of the fact that I, not Fred Vachss (Vachs? Vox?) will be handling this event. The location is near Wilson and Del Mar. Old clothes are suggested, as there is no telling how many of you little wimp-shits I shall choose to hurl into the mud-pit before I leave.

—Glen "Spudboy" Swindle

THE CALTECH Y..... Fly by

FRIDAY, May 22, 1981, NOON CONCERT. This is Le BoBo's second to last production of the year. He wants to extend a special invitation to the invisible undergrads to bring de sugar outside and enjoy de show. Peter Alsop singing, playing, and scrubbing out on the Quad.

Today and Tomorrow, May 22 and 23—all of those who signed up for the LOS ANGELES COUNTY MUSEUM TRIP should pay their \$1.00 by Noon on Friday. We will be leaving from the Y Office on Friday morning at 9:30. You should bring extra money for lunch, admission, and whatever you desire.

Sometime in the Future, keep your eyes open for signups for the PRE-COLLEGE BACKPACKING TRIP. There will be a variety of skill levels available and the price of the trip will include food and transportation (*like today*).

Monday, May 25, 1981—INSTITUTE HOLIDAY. Just a reminder that your friendly Caltech Y will be closed. Have a great day at the beach and we'll see you all nice and tanned on Tuesday at our regular office hours, 9:00am to 5:00pm.

Solutions/ Solitons From Fred Who?

To the Editors:

Upon reading your article on the KELROF relay, I was perturbed (although not singularly) to note that you referred to the powerhouse Applied Mathematics team as the AMA Solutions. The team name is the Solitons. A soliton is a "1-humped wave" which arises in the solutions of certain non-linear differential equations. Under appropriate conditions, the soliton or solitons become the dominant features in the physical system described by the equation as time progresses. They are significant, as under the effects of dispersion, non-linearity, and even interaction with other solitons, they retain their essential form. This is analogous to the strong Soliton II running team; ten fast masochistic people, able to retain their wonderful entities, under even the harshest of conditions; hence the name Solitons.

Yours truly,
—“Rocket” Fawcett
Coach, Soliton II Team

[Typist's note—We stand corrected, but not without explanation. Many are the times when yours truly has had to decipher articles and news releases delivered in the hand-writing of those of you out there who are completely uncaring whether your pen or pencil makes marks that are complete, legible words in something at least resembling English. While the KELROF news release was at least moderately readable, the 'Solitons' name was inobvious enough that it looked as if it were illegible. Had the KELROF release been delivered in as legible a form as Mr. Fawcett's letter, there would have been no confusion. We humbly apologize to the one-humped masochists of the AMA department.]

“Don’t destroy a fine Caltech tradition, Fred—We all want a Mudeo, Fred—after all, you are the President of the Ju—” OK I’VE HAD ENOUGH OF THIS SHIT.

First I tried to be creative and faked a Mudeo a few months back. This just wasn’t good enough for some folks who were just dying to have a “real” one. O.K., I thought, why not let them have their Mudeo but still break with tradition by holding it on Ditch Day. Nobody bitched, so I figured this’d be fine. Apparently though, all those hardcore Mudeo fiends couldn’t spare 45 minutes or so this Monday and come. You can’t hand me a load of crap this time about insufficient warning. There were flyers everywhere—it was simply that nobody gave a shit. That’s OK, too. I’ve got nothing against a certain amount of apathy, and I’ve dealt with hypocrites before. At least I figured it was done with. Little did I know that the unscrupulous other half of the Junior Class Excomm—Secretary-Treasurer Glen Swindle—would use this opportunity to stage a coup. I played right into his power-hungry little hands. When I came back from the beach on Ditch Day, I found this mutinous bastard had taken it upon himself to re-schedule yet a 3rd mudeo for this year. (Hell, more people showed up at the fake first term than at the “real” one this week, so it certainly counts as one.) In any case there was nothing I could do. When I least suspected it, Swindle had robbed me of my seat of power.

O.K. Glen, I can’t argue with an armed takeover—hope you like the job.

Your dejected Ex-Junior Class President,
—Fred Vachss



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FRIDAY
NIGHT

ASCIT MOVIE

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10:00

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Hall

NEXT
WEEK

Going in Style

Ricketts FROM ONE

underclassmen to Dr. Rossman in the geology department, who had more acrostics to be solved before the location of the key could be determined.

A “vegy stack” made by Jim Kendall required, as one of its parts, several people to eat a piece of raw squash. Then each had to write a 500 word essay on the sensation of eating raw squash, “relating it to Marxian ideology.” The next envelope, when opened, directed these students to make two copies of their essay, and send one to Marvin Goldberger and another to Tom Apostol.

Cecilia Rodriguez made a “treasure hunt” stack that was based on the zodiac.

In the end, every stack in Ricketts House was broken by the deadline. Better luck next year, juniors!

Lezgo Beach!

There will be a beach party for undergrads at Sunney Chan's house near Capistrano Beach on Monday, May 25th (Memorial Day Holiday). A barbecue is planned. Transportation will be provided. There are sign-up sheets posted in the student houses. The buses will leave around 10:30 am and return to Caltech by 6:00 pm.

Lost Keys

A set of about 10 keys was lost about 3 weeks ago. If found, please call Mike at 578-9368.

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ABORTION

DISCUSSION

by Julie Kornfield

Abortion is the central issue of the "Pro-life" versus "Pro-choice" political conflict. Last Friday, the program "Abortion: Rights, Responsibilities, Ramifications" made it clear, however, that abortion is not the only issue involved. The panel of three experts on the abortion issue discussed the history of abortion, the political platforms of the opposing sides, and the implications of current legislative proposals.

Jeanne Nerbonne, a post-doctoral research fellow in the Biology Department, served as moderator. She declared at the beginning of the symposium that its purpose was "the exchange of ideas," and "not to propose any right or wrong answer." Although the panel members opposed the so-called Human Life Amendment, they all supported its purpose—none claimed to have the answers.

The issue is not black and white. As panelist David Dinsmore pointed out in his in-

troductory statement, even the language used in the political rhetoric is poorly defined. The political issue of the Human Life Bill is different from the issue of abortion. To clarify this distinction, he considered the four labels: pro-abortion, pro-life, anti-choice, and pro-choice.

No one is "pro-abortion," as the name "pro-life" might imply of its opponents. Dinsmore asked the audience a few rhetorical questions to illustrate this point. "If I offered you a fail proof, simple, easy form of birth control, who among you would choose to have an abortion once a year instead?" "Or if a pregnant woman told you she would rather carry to term and give her child for adoption than abort her pregnancy, who would encourage her to have an abortion rather than supporting her in her decision?"

"Pro-life," he divided into two meanings. On one hand, it is the belief that human life is special and should be treated as

such; on the other, it is a political banner carried by a group with a broader platform than merely opposing abortion. Dinsmore quoted political surveys, voting records, and specific examples of politicians' conduct to establish some of the planks in their platform. According to both survey's of congressmen and their voting records, "pro-life"/"anti-abortion" politicians tended to be in favor of capital punishment, strong military armament, and the Vietnam War; and they tended to oppose gun control, aid to dependent children, and nutritional support for infants and pregnant mothers. There appears to be a striking inconsistency between "pro-life" beliefs and the "pro-life" platform. Politics does make odd bedfellows.

A "pro-life" commitment, however, is apparent in the platform of the political *opponents* of the "pro-life" movement. Planned Parenthood's purpose is to promote family life, even in non-traditional family structures, and to aid in bearing children by offering counseling on contraception, pre-natal nutrition, and post-natal care of both the mother and child. Many women and feminists are very concerned about abortion—it is disturbing. But they take a different approach, trying to offer more options rather than taking away choices. Maternity

homes, adoption, sex education, research on improving available contraceptives and increased availability of contraception are some of the alternatives that are supported by people who oppose abortion, but adopt a "Pro-choice" political stance.

The choice politically, then, seems to be between authoritarian, New Right political policies, under the label of "Pro-life," and pro-individual, pro-life platform of the "Pro-choice" movement. Thus, in Dinsmore's view, "the issue of abortion is different than the issue of the HLA." Abortion presents deeply personal moral questions about the value of human life. The Human Life Amendment is part of a political movement and needs to be considered in the context of the movement. Only on that basis can political action can be taken.

In the case of the HLA, in fact, political action must be taken soon. The Congress is currently holding hearings trying to determine whether human life begins at conception, giving the fertilized egg a veto power over the adult woman in which it was conceived. Passage of the bill would force women who would want an abortion—even if they are one of five women each day impregnated by rape, or if their life is threatened by pregnancy or childbirth, or if the child

was conceived in incest, or if the fetus is demonstrably terribly deformed—could not obtain a legal, safe abortion in the U.S. Unfortunately, the bill is dangerously near passage. If you thought it was ridiculous that such a bill would ever make it to the floor of Congress—don't laugh it off. When you see circulating petitions or letter campaigns or door to door canvasses, remember that people are concerned about a bill currently in the process of becoming law. If you oppose the platform of the Human Life Bill or are concerned about its consequences for women, make your position known. According to Gallup polls, only 28% of the population supports the HLA. Unfortunately the majority has been silent—28% can pass a law if they are unopposed.

Tovarisch?

The JPL/Caltech Russian Language Club once again invites students, faculty, and friends interested in maintaining and updating their Russian speaking and reading skills to attend one of the club's sessions. The club meets weekly, year round, in room 110, Steele building. No fees, dues, or obligations. Study is on an intermediate level, so prior academic training or familiarity with the language is essential. For further details, please call Larry Mak (JPL 77-5090).

XXX travaganza Isn't

by Glen Swindle

As the word implies, "extravaganza" denotes a spectacular, festive event. However, the occurrence in Lloyd House on Saturday, May 6, could hardly be called spectacular. The Lloyd House Extravaganza traditionally consists of a series of stripteasers parading on a platform in the dining hall in front of a mob of drooling Techers. The Lloyd bar, renowned for its large and varied supply of alcohol, provides drinks for the spectators, and a large stereo system inundates the entire area with pounding music.

When I arrived at Lloyd House a little before 7:00 Saturday evening, I strolled up to the bar and ordered a gin and tonic, only to discover that the bar didn't have any gin or tonic. Unwilling to make further attempts to patronize this pathetic bar, I took a seat near the back of the dining hall. Almost all of the seats were taken, and the entire audience was giving token applause and whistles to any Lloyd twit who crossed the stage. At approximately 7:10 one such twit came out and announced that the show would be postponed to 7:30. Thrilling! Most people groaned and left, being careful to avoid the bar, and returned in fifteen

minutes.

As I re-entered the Lloyd dining hall, I was flabbergasted by the presence of not one, not two, but three or four graduate students. (Shame on you, Grad Turkeys! This was a Saturday night! You should have been home cutting throats!!!) The evening took a turn for the better, when Boston's first LP began playing through the speaker piles. No show could be all bad that featured a little Boston. After most of this album had been played, the lights dimmed and the announcer introduced Rose, who appeared in a flurry of bright red garments (our favorite color) to the sounds of AC/DC—*Back in Black*. Who would ask for more—an attractive woman strutting around to good music? Unfortunately, Rose's complete lack of choreographic skills prevented her from departing from anything but repetitive, crude gestures and motions. The show became boring very quickly.

The second striptease artist showed much more promise, in spite of the fact that she chose accompaniment by Elvis Costello. She had a greater variety of suggestive movements, and would often amuse the spectators by "teasing" a few specific members of the audience seated in the first row.

The final artist appeared in a skimpy nurse's outfit. My hopes fell as I realized that the accompanying music was the Police—perhaps the most worthless band to appear in the last ten years. The antics of this girl failed to compensate for the revolting music, and I departed from this scene of sin, lust, and other pleasantries of life. The only suggestions that I have for the next Extravaganza are to replace the disgrace that the Lloydies call a bar, and to let me select the music.

Tech is Funny, Billie und Ich Says Dr. Clark

by Glen Swindle

The 44th Annual Seminar Day was conducted by the Caltech Alumni Association last Saturday. The day consisted primarily of a variety of lectures given by Caltech faculty and researchers. Among these lectures was a presentation by Dr. J. Kent Clark, Professor of Literature, entitled "Caltech as Comedy." In his presentation Dr. Clark examined Caltech as a subject for musical comedy in an occasionally cynical, although usually playful, manner.

Since his arrival in 1947, Dr. Clark has composed many musicals dealing with life and people at Caltech. He stated Saturday that all a person must do to accumulate interesting material about our school is "stay awake." Dr. Clark captured and maintained the interest of his audience by including jokes and anecdotes about the many peculiar characters at Caltech and their idiosyncrasies. In one instance, he referred to some of the people here as "put together by IBM on a very bad day."

Not all of the lecture was humorous, however, as Dr. Clark commented on the fine journalistic talents of Mr. Edward Hutchings (*our hero!*—eds.), who coordinates the publication of the *California Tech*. According to Dr. Clark, Mr. Hutchings transformed the journal "Engineering & Science" into

Although many people fantasize about increasing the size of their muscles to do better in sports, the fact is that you are born with a certain number of muscle cells and that is all you will ever have. In biking, your overall efficiency is much more important than your brute strength. If you look at the best cyclists, you will notice that their legs are not at all like those of Eric Heiden (who has 36" thighs).

In increasing one's efficiency, the most commonly made mistake is in the use of handlebars. All better bikes come with "ram's horn" handlebars. This allows you to vary the height of your head by holding different parts of the bar. Although the lowest position, sometimes called the "racing position", gives the lowest air resistance, keeping this position all of the time is not the most efficient. This is because your lungs are constricted by maintaining this position. Also, your visibility is restricted in this position.

Although the "racing position" is fine for downhill coasting and riding into the wind, a better position is maintained by holding the rubber hoods over the brake levers. Most good ten-speed bikes come with a rubber hood and it can always be added to ones that do not. This position allows you to vary the height of your head by bending the elbows outward. This way, you can lower your profile almost as much as the "racing position" but your lungs are not constricted. Also, the bent elbows help absorb shocks of

the front wheel going over bumps.

This position is useful for general riding because you can immediately raise your head and your fingers can reach around and apply brake pressure. Note that the rubber hood will not allow you to use auxiliary levers. Auxiliary levers allow you to brake with your hands in the innermost, top part of the handle bars. This is just as well since this upright position is not any more comfortable for most than the "hood" position. It is also much less efficient aerodynamically and the braking is not very effective. The latter is because these levers provide less leverage and will also flex with pressure. I personally do not understand why they are so popular.

While the method of using the handle bars is very important, the method described is only useful if your bike has been properly adjusted. Note that your handlebar can be adjusted in height and so can your seat but the latter can also be positioned fore and aft. The best way is to find somebody that knows what they are doing. If you are not sure if you are positioned properly on your bike, try comparing yourself to pictures of professional cyclists in biking magazines. Remember that you should be comfortable on your bike.

Well, the weather is beginning to get hot again so remember to use your water bottle or get one if you don't have one. In any case, keep on biking.

CONTINUED
ON PAGE 7

And Lloyd Smashed Loot

By Lee Sunderlin
Correspondent from Lloyd

The most attention-grabbing stack in Lloyd House was that of Chris Lutz and Howard Derby. It was a force stack that involved breaking into their room without releasing a weight hanging over the bribe. The room was covered with wires that, when cut, released a switch, which caused a current to flow through a thin wire, melting it. That wire held a loop of string together, and the loop held up the manhole cover poised over the loot.

The underclassmen tore away the concrete between the mirror in the room next door and the mirror in the stacked room. Unfortunately, as they removed the last mirror, they found that it too had been rigged. The wire melted, the string loosened, and the weight fell, destroying much of the bribe.

[Tech cartoon fans will be sad to know that plans to leave a cat under the weight, with the bribe spared, were not carried

out.]

Sadistic senior Dan Gordon had set up an obstacle course within his room. A key was taped to a remote-control car that had to negotiate the twisting path to the room's window. Weak batteries, poor traction and a lack of steering responsiveness led to failure after failure, as the car fell off the narrow board laced with cones that led to the window, and had to be driven through the route again.

Other stacks showed great ingenuity, but often less reliability. Tom Cowen's maze was only made possible by space age technology (that is, space age rejects). Although entertaining, it made its own passage and walls because of glitches in the photoreceptors/transparency/light system that determined whether one was on the path or off the path.

The bribes turned out to be worthwhile anyway. A good time was had by all, except for the seniors who fell asleep from exhaustion on the beach and got sunburned.

And Page Saloons

By Mark Waggoner
Correspondent from Page

Ditch Day in Page House produced a variety of stacks this year, but alas, no brute force stacks. Eric Korevaar's room was triply protected by a) a liquor stack consisting of 4 gallons of bad wine and 18 bottles of champagne, b) a CS game, and c) clues taped to the bottom of the champagne bottles which indicated (though rather obscurely thanks to Glen George) that the bed frames needed to be wired together. R.C. Colgrove's door had to be blown down after identifying several chemicals. This stack malfunctioned slightly requiring the door to be kicked in and a fire put out.

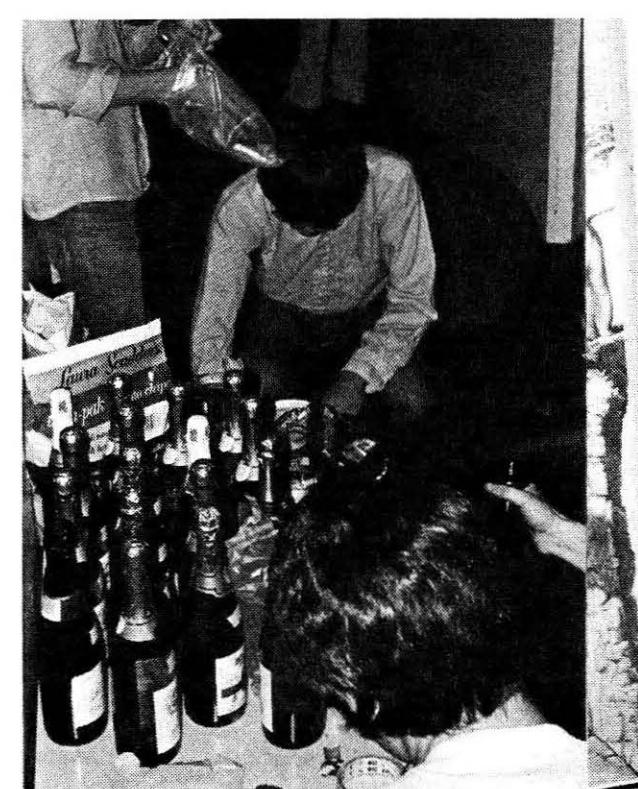
Gary Glassmeyer required a beach picnic before his room could be entered and converted into a small beach and ocean. Stacey Bilski gave the underclassmen a puzzle to solve using clues from around campus. Bronco Bob Brunkhorst's stack never got finished (but the counter stack did, of course). Mike Lucero's stack fell almost immediately.

The only stacks that weren't broken by the underclassmen were Bill Marshall's obscure references to his home town and Fan Chia Tao's and Mark "Spud" Sheldon's demanding thermal requirements from an aluminum beam.

Overall, Ditch Day was a fun time for everyone in Page House.



Photo by Paul Ste. Marie



Left, Korevaar's liquor stack gets Page Dudes in a suitably altered state. Right, the remains of R. C. Colgrove's door.

DITCH DAY



And Fleming Trolls

By Ken Gant
Correspondent from Fleming

Of the thirteen or so stacks in Fleming House on Ditch Day this year, two of the more interesting ones were set up by Rich Schirato and Jamie Abbott.

Schirato's stack started with a clue written in the "Dancing Man" cipher, out of a Sherlock Holmes story. When solved, with the help of a clue opened a little later, it sent the would-be stack breakers to the Biology Stockroom, where another clue sent John McNally and Mike Oliver running to Lacy Park. Oliver put in a good time, keeping in practice for the half-marathon. Eventually, the clues led them to Throop Clock, where the final instruction told them to pick the lock.

Abbott, along the lines of one of his favorite occupations, wrote a D&D stack, sending searchers all over campus battling such mutations as the dreaded Lat-monster or hordes of Lloydies, or downing shots of whiskey, all the while looking for his key. When the key was found, the bribe was left, and his room left, too, for Dabney House (oops, that was supposed to be Dungeons and *Athenaeums*).

The brute force stack was built by Terry Grant (otherwise known as "cow-tipper") and friends. It was an interesting stack; for three days, they hauled in cement and rebar, put a steel plate over the window, and proceeded to, instead of reinforcing the room, build a cement cow. Tipped, of course.

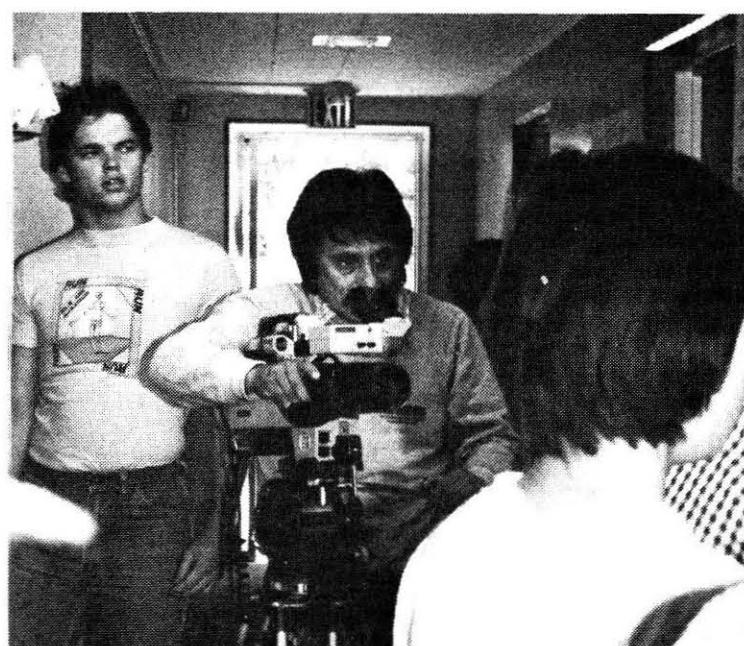
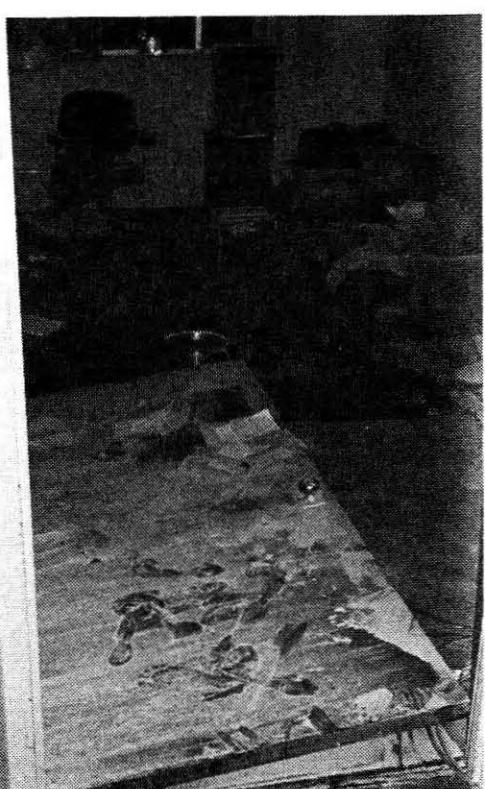


Photo by Ken Gant



Photo by Ken Gant



Photos by Mark Waggoner

Profs Win

(CNB)—Four faculty members here at Caltech have been elected to membership in the National Academy of Sciences in recognition of their distinguished and continuing achievements in original research".

They are Jesse L. Beauchamp, professor of chemistry; William B. Bridges, professor of electrical engineering and applied physics and executive officer for electrical engineering; Norman H. Brooks, the James Irvine Professor of Environmental and Civil Engineering and director of Caltech's Environmental Quality Laboratory; and Hugh P. Taylor, professor of geology.

The four scientists were among 60 new members of the Academy. Their election brings to 55 the number of NAS members at Caltech. The Academy, founded in 1863, is a private organization of scientists and engineers charged with acting as an official adviser to the federal government.

Beauchamp, 38, received his BS degree from Caltech and his PhD from Harvard University. He joined the Caltech faculty in 1967. He has received numerous honors for his work, including a Camille and Henry Dreyfus Foundation Teacher-Scholar Grant for new concepts in teaching and research and other creative ideas in higher education."

A physical chemist, he has conducted extensive research involving ion cyclotron resonance (ICR) spectroscopy as a tool for studying the chemistry of ions in gases. His research team uses a variety of spectroscopic methods to provide insights into the properties and reactions of organic and inorganic molecules and ions in gases and at the interfaces between gases and solids. His work is helpful in predicting and controlling chemical reactions.

Bridges, 46, received his BS, MS and PhD in electrical

engineering from the University of California at Berkeley. He joined the Hughes Research Laboratories in 1960 and was a senior scientist there from 1968 to 1977 when he joined the Caltech faculty. He was on leave from Hughes at Caltech as a Sherman Fairchild Distinguished Scholar in 1974-75.

Bridges is the discoverer of laser oscillations in noble gases and he spent several years in research on the engineering development of practical high-power visible and ultraviolet ion lasers for military applications. He has worked on laser isotope separation techniques and on the development of a high-performance space-qualified hydrogen maser clock. He is a member of the National Academy of Engineering and is a fellow of the Institute of Electrical and Electronics Engineers and the Optical Society of America.

Brooks, 51, graduated magna cum laude in mathematics from Harvard College and received his doctorate, summa cum laude, from Caltech in civil engineering and physics. He has developed many of the concepts widely used throughout the world for waste-water and cooling-water dispersal in the ocean.

Brooks has served as a technical consultant on the hydraulic design of the submarine outfalls for sewage disposal for numerous agencies and is a member of the National Academy of Engineering. He has received numerous honors in his field.

Taylor, 48, received his BS and PhD degrees from Caltech and his MA degree from Harvard. He joined the Caltech faculty in 1959, and for the past 20 years has studied the oxygen and hydrogen isotope geochemistry of terrestrial rocks, meteorites, and lunar samples. For instance, he discovered that earth's surface waters may circulate downward into the earth to depths up to five miles. When heated by deep bodies of molten rock, such water convects upward and is responsible for many formations of copper, gold, silver, and other metals in the earth's crust. It is also an important heat transfer process within the earth's crust.

The California Tech extends its congratulations to all four professors.

Prof Named Head

(CNB)—Caltech Professor of Physics Gerry Neugebauer has been named director of Palomar Observatory, effective immediately, President Marvin L. Goldberger has announced.

Dr. Neugebauer, currently acting director of Palomar, will be responsible for the administration of the five telescopes at Caltech's Palomar Mountain site 65 miles north of San Diego. These include the 200-inch Hale telescope, considered the most important telescope in modern astronomy. Besides Palomar Observatory, Caltech also operates Big Bear Solar Observatory in the San Bernardino Mountains, and the Owens Valley Radio Observatory.

Dr. Neugebauer became acting director of Palomar Observatory in July 1980 when Caltech and the Carnegie Institution of Washington—which had combined their astronomical facilities as Hale Observatories—established separate administrations for their telescopes. However, the two institutions continue to share their research facilities fully and to cooperate in scientific research and the day-to-day ac-

tivities of the observatories.

Dr. Neugebauer, who holds a PhD from Caltech, returned to Caltech as an assistant professor of physics in 1962, after work at JPL, where he was stationed while in the army. He has concentrated his research in infrared astronomy, studying such objects as stars in the galactic center, quasars, and the planets and their rings. Besides his astronomical studies using the Hale telescope and other ground-based and airborne instruments, he has also aided in the development of numerous space-based infrared instruments, including the Mariner, Pioneer, and Viking missions to the planets, and the Infrared Astronomical Satellite.

Dr. Neugebauer is a member of the National Academy of Sciences, the American Astronomical Society, the Royal Astronomical Society, and the International Astronomical Union. His

awards have included the NASA Exceptional Scientific Achievement Medal.

Caltech's 200-inch Hale telescope at Palomar Mountain began operation in 1949 after two decades of planning and construction. It was named in honor of George Ellery Hale and has remained one of the most important scientific instruments in astronomy. Major advances using the Hale telescope have included the discovery of quasars and the first determinations of their redshifts; studies to great distances of the expansion of the universe; and the observations of star clusters that enabled better understanding of stellar evolution. The telescope has remained useful as a scientific tool because of the installation of such modern devices as sophisticated electronic sensors that can detect far fainter objects than is possible using photographic plates.



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Leonardo's Hammer

A rare 470-year-old Leonardo da Vinci manuscript, the only one remaining in private hands, will be on view from now through June 7 on the Plaza level of the Ahmanson Gallery of the Los Angeles County Museum of Art. The exhibition of the "Codex Hammer" (formerly called the "Codex Leicester" until purchased by famous rich person, Dr. Armand Hammer) has been made possible by the Armand Hammer Foundation.

The "Codex Hammer" in which among other subjects, Leonardo first theorizes about the future possibilities of steam power and the submarine, was purchased at auction in London last year by Dr. Hammer, and it is his intention to bequeath the manuscript to the Los Angeles County Museum of Art. The British Government granted a permanent export license for the Codex in March.

The 72-page manuscript has been in the family of the Earls of Leicester since 1717; the present Earl, Lord Coke, sold the Codex to help pay government inheritance taxes. It has been shown publicly only twice—once at the Royal Academy or Arts, London, in the 1950s and in January 1981 at the Corcoran Gallery of Art, Washington, D.C., in conjunction with the presidential inaugural.

Compiled between 1508 and 1510 (as were President Reagan's ideas, thus explaining

the connection), the "Codex Hammer" is titled "Of the Nature, Weight and Movement of Water" and contains a collection of notes and 360 detailed drawings on a wide range of subjects including astronomy, cosmology, geology, the effect of the tides and the principles of evaporation and condensation. It is written in brown ink in Leonardo's famous right to left "mirror" writing.

According to Carlo Pedretti, Leonardo scholar and Professor of Art History at UCLA, the "Codex Hammer" was not a book of blank sheets already bound together when Leonardo compiled it. It was an open file to which he kept adding double sheets of four pages each. These sheets were piled up to form 36 folios with a wrapper or cover (included in the exhibition) which eventually came to be sewn together in book form.

Under Professor Pedretti's supervision, the Codex was painstakingly disassembled for museum presentations. He notes that Leonardo probably worked on one double sheet at a time, filling the four pages with related thoughts. Exhibiting each folio sheet this way allows the viewer to follow Leonardo's thoughts more easily than when it was bound in book form.

Each page of the Codex usually contains a main body of writing and marginal drawings or diagrams on the right. Sometimes the drawings are

THE CALIFORNIA TECH

placed at the bottom and sometimes across the page.

In addition to the Codex, a sheet of studies by Leonardo which has previously traveled with the Armand Hammer Collection is being shown. Professor Pedretti has discovered that the watermark on the sheet is identical to at least three pages of the "Codex Hammer", placing it closer to the Codex in date than previously thought.

Following the presentation in Los Angeles, Dr. Hammer hopes to exhibit the Codex throughout the world. The manuscript will be exhibited at the Royal Academy in London later this year.

Admission to the Los Angeles County Museum of Art is \$1 for adults; 50¢ for senior citizens, students with I.D., and young people 5 to 17; free for museum members and children under 5. Regular hours are Tuesday through Friday, 10 am to 5 pm, Saturday and Sunday 10 am to 6 pm. The museum is located at 5905 Wilshire Boulevard, two blocks east of Fairfax Avenue.

The Three 'D's?

What do dancing, drama and dentistry have to do with each other? In an attempt to answer that question, the Caltech Drama Department's final student production of the year will be the short play called "The Fatal French Dentist", and a student dance program. "The Fatal French Dentist", a one-act comedy by Oscar Mandel, is directed by Larry Friedrich and stars a group of experienced student actors. The dance program consists of a variety of dance numbers ranging from belly dance and traditional folk dance to modern jazz and tap dancing. The combination of the two productions promises to make a short, entertaining show. Performances will be Thursday and Friday, May 28 and 29 at 8:00 pm, and Saturday, May 30 at 2:00 pm. Tickets are \$1.00 for Caltech students and \$3.00 for the general public. [ed note: I'll see you there for you know who, Mr. Peabody.] [typist's note: These editors are getting a little weird.]

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Coaches In Review:

coming

going

By P.G. Hephzibah

Several new coaches joined the Caltech athletic program this year. Lin Parker replaced Bob Davies as the leader of the mighty football team. Coach Parker is also the head coach of the wrestling team and is the volleyball instructor. He is very gregarious using a friendly personality and a good sense of humor to establish many good athlete-coach relationships.

Joining Parker as first year coaches are Mike Poizner and Mark McCleave who did a fine job coaching basketball this year.

Women's soccer also has several "rookie" coaches. Head Coach John McNally and assistants Bryan Dunkeld and Dave Maruit have helped to turn women's soccer into a very successful program as evidenced by the team's current 5-5-2 record.

While all of these coaches are first year coaches at CalTech, John Lamb will be retiring after 36 years at the helm of the Tech Tennis Team.

Coach Lamb's name has been synonymous with tennis ever since coming to Tech in 1945. Since then he has coached 535 varsity tennis matches (winning 141), and he has taught over 5,400 students (an average of 150 students a year). Caltech's tennis team was fifth in the conference this year beating La Verne and Whittier twice each for a 4-15 season record.

Coach Lamb graduated in 1935 as captain of the San Diego High School tennis team. He was number 1 singles as a Freshman at U.S.C. where he was captain of the Frosh Team. Prior to his coming to CIT, he coached Stanford to the Pacific Coast and National Collegiate Championships. Both the current Caltech student body and the thousands of alumni who learned the fundamentals of tennis from Coach Lamb would like to thank him for a job well done and wish him a happy retirement.

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Venereal disease is not limited to gonorrhea (covered last week), but includes Syphilis, Herpes and non-specific urethritis. It is important to be alerted to the alarming VD increase and the injuries that result.

Syphilis, whether it is known as "sif", "Lues", "pox", "old Joe", or "bad blood", untreated can result in heart disease, blindness, paralysis, mental illness and death. It is caused by a germ called *Treponema pallidum* which is transmitted from the body of an infected person to a well person. The germs require warm, moist tissue for survival and will die when exposed to air. After intimate contact with an infectious individual (one who has an open Spirochete-containing sore) the germs can begin to grow. Incubation period is 10 to 90 days.

The first stage Syphilis (Primary) is extremely contagious from 10 to 90 days after exposure lasting 1 to 5 weeks. Early symptoms include the development of a chancre—a painless sore that will generally occur at the area where the germ enters the body. The sore "heals" within 1 to 6 weeks and disappears with or without treatment. The disease remains and progresses. 80% of females and 40 to 60% of males do not recall their Primary chancre because they are painless, hidden, or so inconspicuous that they are ignored. Painless swelling of the lymph glands (usually in the groin) may occur.

The second stage (Secondary) syphilis occurs from 2 to 6 months after exposure. The germs flood through the bloodstream and becomes a total body infection. Signs and symptoms include a rash, sore throat and patchy baldness.

The Latent Stage is after healing of the secondary rash (2 to 8 weeks); the person is free of outward clinical signs. The secondary rash may appear and the person is again contagious.

Late stage syphilis occurs about 15 to 25 years after infection. The dormant germs can become active and begin to destroy cells, tissue and organs.

resulting in permanent damage.

A simple blood test for syphilis will turn positive, usually 7 to 10 days after the sore "chancre" appears. It will remain positive from then on if the disease is present. Syphilis is cured with antibiotics.

Herpes is a virus and there are two Types—I and II. In general, Type I herpes is found mostly in sites above the waist and Type II below the waist. The manifestations of herpes depend somewhat upon where the site of infection is. Herpes Type I commonly infects the lips, mouth and occasionally the skin of the trunk, arms and eye, but may infrequently infect the genital area. Herpes Type II commonly infects the cervix, vulva, vagina and urethra in women and the penis and urethra of men.

Human beings are the reservoir for the herpes virus. It is usually contracted by close bodily contact with a person who has the herpetic sores or blisters. Kissing and sexual contact play important roles in transmission. The incubation period is from 2 to 12 days. Herpes infections can reoccur. Once a person is infected with the virus it keeps living in the tissue. Many events (emotional and physical stress, physical agents, fever, other infections, menstruation, sunburn, etc.) can cause activation of this latent infection.

Typically the herpes virus initially produces a thin walled

tiny blister that is filled with fluid. These blisters may occur in crops and eventually they rupture and leave a shallow painful ulcer. Later pus or a dried crust may form over the herpes ulcer. When the blisters are present or while the ulcers are weepy or wet, this is the greatest time of infectivity.

Diagnosis is made by a culture of secretions and cells from the herpes sores.

Currently there is no cure for herpes. There is no safe medication that will rid the body of this virus. It will continue to live in the tissues of the body for many years. There are medications available that can give relief of the symptoms only such as pain, itching, and secondary bacterial infection. Prevention again is the best cure, avoid close contact with individuals who have active infections.

NSU—nonspecific urethritis is a bacterial infection of the male genital tract. Symptoms may include burning on urination, frequency, and a white milky discharge.

Diagnosis is made by a urinalysis and culture. Antibiotics are also the drug of choice for cure. NSU can also destroy body tissue and may cause serious complications unless treated.

Early treatment is the rule, and in most cases VD can be treated easily and effectively if treatment is started in the earliest stages. But again, I must stress the importance of prevention. The condom can be effective in reducing the risk

of venereal infection if applied properly, retained through the entire period of contact and removed carefully. Modern prophylactics offer a high degree of sensitivity and when combined with spermicidal foams offer a high degree of effectiveness for birth control also. The need for protection from venereal disease is at a peak today, so it seems simply a matter of good sense to rely on prophylactics. Thorough washing with soap and water and urinating after sexual relations, while not an absolute insurance against VD, may be helpful and is recommended.

If you have any concerns or questions, feel free to contact the Health Center, x6393.

Watch next week for helpful summer tips!

—Lynnette K. Wilmeth, R.N.

Health Center 1-8

something palatable.

The presentation ended with the playing of a few taped songs, which exemplified the concept of using Caltech as material for musical comedy. The first two songs, "That's Not Gneiss" and "Richter Scale," took shots at geologists. These were followed by a number of other songs, including "A Nice Girl Like You," which was based on the admission of women to Caltech. Dr. Clark's sarcastic humor was most obvious in a comment that he made toward the end of his interesting presentation: "Let me assure you that the professors are as flaky as ever."

Clark

FROM THREE

Y Hike?

can do away with 132 feet of Mt. Stanford then our phallic symbol will be bigger than theirs.

This leaves us with the last trip, a trans-Sierra hike being planned by Mark Maier. If you are interested in this most unique trip, contact Mark through the Y office in addition to signing up for the trip.

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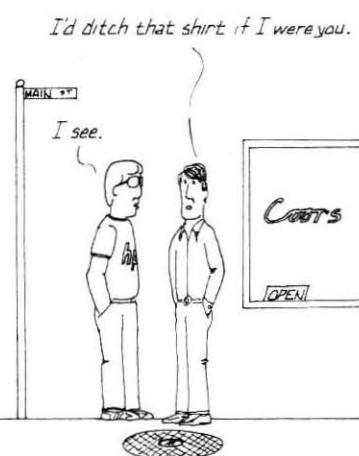
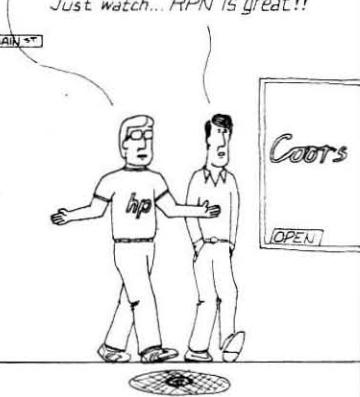
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r. duke

hymie

* stuff that didn't fit anywhere *

Shrinkmanship

David S. Viscott, M.D., will speak in Beckman Auditorium on Friday, June 5, at 8 pm. Dr. Viscott, author of *The Making of a Psychiatrist* and *The Language of Feeling*, will speak on "The Feeling Cycle". This lecture by Viscott, who also hosts radio pop psychiatry programs, is presented by the Pasadena Mental Health Association and the Caltech Faculty Committee on Programs. Admission: Patron Circle, \$15.00; general admission, \$6.00; students \$3.50. Call the Caltech Ticket Office at 356-4652 for information.

Are You Graduating?

Please remember to return your questionnaires concerning your plans after graduation to the Placement Office as soon as possible...especially before you leave campus. The office is in Room 8, Dabney Hall. If you don't have one, drop in and give them the information directly or phone x6362. Thank you.

GSU

There will be a meeting of the Caltech Gay Student's Union on Friday, May 22 at 9:30 PM in Room 218 Baxter.

Activity File Update

Friday, May 29 will be the last day for clubs and organizations to submit information for the Winnett Center Activity File. Forms were mailed to contact persons at the end of April. The file is used by the editors of both the undergraduate and graduate student handbooks in preparing their publications for the opening of school in September. If you wish your group to be included, please return the form to 105-51. If we overlooked you, ask Theresa (X6157) to send you a form. Thanks!

Free Every Tuesday

In conjunction with "Anti-Static", the current exhibition, artist Mark Lere will informally discuss his artwork at noon, Tuesday, May 19th, in the gallery. Lere's sculpture and drawings encompass the notion of water and fountains in an image that defies natural properties of such. FREE. Bring your lunch. [Note: If you think that we were somehow remiss in not printing this announcement BEFORE May 19th, we can only state that we received the announcement after last week's issue went to press, and with a heading that clearly states "For print in Friday, May 22 edition". We don't explain them, we only print them.]

More Tuesdays

Artist Dan Douke, whose popular "Boxes" are currently installed in Baxter Art Gallery will be in the gallery at noon next Tuesday [Note: We think this means the 26th, but after that last announcement, we're not making any promises.] to talk about his artwork. The Caltech community and public are invited. (Is that really PAINT or packaging tape?)

Summer Job

There is a summer job opportunity for an undergraduate in X-ray Astrophysics research. Includes work with the IBM 370/VAX computers. If interested, call Steve Pravdo, x6675, or come to 332 Downs.

Frosh Camp

There will be a meeting next Thursday, May 28th, somewhere in Winnett at 4:00 pm to discuss plans for next year's Frosh Camp. Everyone is invited. Students who be at Frosh Camp are especially urged to attend. Goodies will be provided.

Tute Your Bi

The list of Biology tutorials (Bi 23) to be offered next term is now available outside the Biology Office, 156 Church, and outside Rm. 12, Beckman Labs. The tutorials are staffed by Biology faculty, postdocs and grad students. They provide an opportunity for learning through personal contact in a small group situation and cover a broad range of subjects. Bi 23 may be taken for up to 6 units; grading is pass/fail. For details, see Ron Konopka, Rm. 12, Beckman Labs.

Nominate Yourself!

Nominations for class officers are now up on Theresa's door. This is your chance to make sure Ditch Day and the Mudeo are run properly (or, in the Mudeo's case, run at all).

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