

Cited both for Research and Teaching Achievements

## Prof Peter Dervan Awarded Dreyfus Grant

1 of 16 in the U.S.

Dr. Peter B. Dervan, assistant professor of Chemistry at Caltech, has been awarded a Camille and Henry Dreyfus Foundation Teacher-Scholar Grant of \$35,000 for his achievements in research and teaching.

The grant is one of 16 made this year by the foundation to outstanding young faculty members throughout the country to help them develop their full potential during the early stages of their careers.

Dervan will use the grant to support research on an exciting new class of small molecules, called "polyintercalators," that bind tightly to DNA. Unlike many complex natural molecules that bind to DNA, these small molecules can be readily synthesized in the laboratory. In addition, they are selective and prefer one specific piece of DNA's genetic code over another. One ultimate aim of Dr. Dervan's research is to engineer such molecules to act as chemical "guided missiles," seeking out and attaching to a specific piece of DNA to alter it or to react with it chemically. Such a molecule could offer scientists an excellent probe of how DNA works.

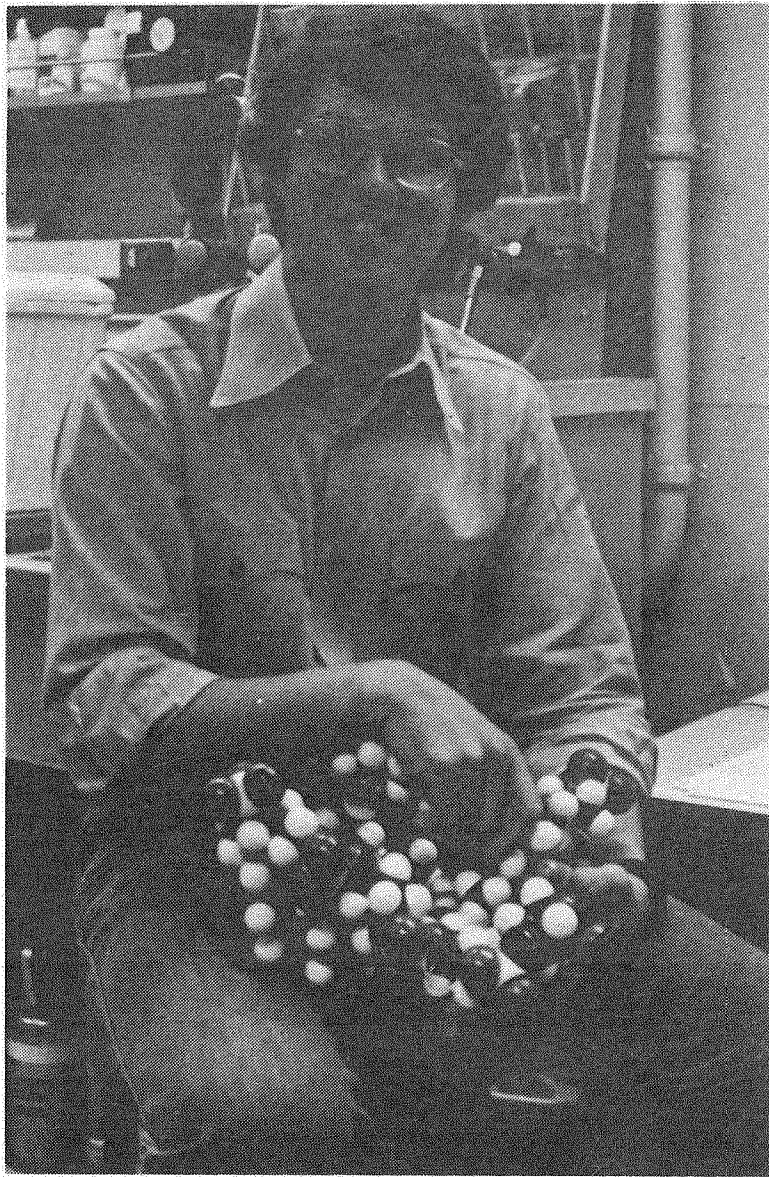
More immediately, their studies on molecular recognition of DNA could help scientists understand better how large molecules such as DNA are recognized by complementary structures such as proteins and may shed light on how they "fit together". Such recognition is vital to all life processes. For example, information in the cell's DNA genes must be recognized selectively and read by proteins for genetic information to be translated into machinery and processes in the living cell.

Certain anticancer and other drugs attack cells by binding to DNA and thus interfere with processes in which the DNA participates. Dr. Dervan's research could aid in the understanding and development of new drugs.

The latest example of a polyintercalator compound, synthesized by Dr. Dervan and Graduate student Michael Becker at Caltech, has a remarkably high affinity for the DNA double helix. Called bis(methidium)spermine, it is shaped somewhat like a staple with two flat prongs. Like a staple, it wedges itself into a long strand of the DNA molecule by inserting its prongs between the individual units that make up the DNA strand. It binds DNA as tightly as many natural molecules evolved specifically to recognize and bind to DNA, and also shows a preference for specific sequences of DNA genetic code.

Dervan came to Caltech in 1973 after receiving his Ph.D. in organic chemistry at Yale University and working for a year as a postdoctoral fellow at the National Institute of Health. Among his fellowships and awards is the Wolfgang Prize in Chemistry as the 1972 outstanding graduate student in chemistry at Yale and an Alfred P. Sloan Research Fellow at Caltech. Sloan Fellows are chosen because of their potential for making creative contributions to scientific knowledge during the early stages of their careers. Dervan is the author or coauthor of over 20 scientific papers.

The energy, enthusiasm, and ability which mark Dr. Dervan's research are also in considerable evidence in his teaching to both grads and undergrads.



This picture conveys some of the enthusiasm which Professor Dervan brings to his teaching, as well as to his research.

Asian Culture

## Dr. Dirks

by D. Korycansky

Dr. Nicholas Dirks is an instructor at the Caltech Humanities department. This year he is teaching the freshman history course, "Introduction to Asia," which discusses Hindu, Moslem, and East Asian civilizations.

Dirks' own area of interest is that of south Asia, particularly India. He describes his work as a combination of history and anthropology. Dirks' thesis work was on the language of Tamil, which was spoken by people known as Dravidians, who entered India from the north about the first and second millennium B.C. Not much is known about the language and those who spoke it. The script is unknown, and the people, who lived in southern India, were defined by language rather than as a racial group.

Tamil is also not a language in the Indo-European group, which contains most familiar languages. The structure of Tamil is separate for spoken and written parts, and both vary according to the caste and region of the speaker, as well as the history of the region.

The course, "Introduction to Asia", looks at Japan, China, and India. The first term uses literature and religion to examine the culture of the area. The second term will discuss contacts between East and West, "from Kipling to Gandhi". It will also include a study of nineteenth century Japan. The third term will look at economic development, nationalism and modernization.

Dirks feels that it is important to study culture rather than solely political or economic history, in that studying culture gives the Westerner an orientation to the region. He said there is a tendency on the part of historians to study solely politics and by anthropologists to study social history and religion, rather than there being an interdisciplinary mix.

Dr. Dirks' own interest in India dates back to his childhood, when he spent a year in the city of Madras. He attended Wesleyan University, and spent two years in southern India for his bachelor's thesis. He studied the small kingdoms of the southernmost portions of India which existed in the eighteenth century, before the British occupation. Dirks also studied the ideas of authority and social relations, as evidenced by records of community organization.

He then attended the University of Chicago, where he received his Ph.D.

As for modern India, with its problems of poverty and overpopulation, Dirks felt that a new approach being made may help. This is the formulation of minimal needs of people in regard to agriculture, health, etc. Dr. Dirks thinks that although India is riddled with problems, it is not dying. He does not think it will destroy itself. There is a vital sense of political responsibility in India—the case is not hopeless.

## The On-goings of ASCIT

I would encourage you to carefully examine the "Survey of the Undergraduate Attitudes Towards Caltech", reprinted elsewhere in its entirety. Originally, this article was intended to discuss the items of business that the BOD felt should be pursued in the ensuing months. The majority of these concerns appear in the survey conducted by the IHC. I will, therefore, allow you-all to peruse the survey this week, and hold my comments until the following week. (They include the usual academic concerns, social problems, relations with the faculty and administration, relations between the houses, and the honor system.) I hope that in a week's time you will be able to peruse the IHC's report.

We are still in the trenches with the publishers of the *Big T*. The finances sound like this: there are 800 copies of the *Big T*. (At a total cost of \$7,920.41) sitting in Ed's room. At present, a total of \$7892.60 rests in various *Big T* accounts. We owe about 400 to companies other than Walsworth. Originally, we had planned to be only one term behind in dues after this

yearbook, and caught up with the next. In fact, before we received 800 screwed-up copies last September, I cleverly signed the contract for next year's book. (Christ, sometimes I could just shoot myself.)

Before I explain how we plan to take care of that little boo-boo, here's a short history of the recent dealings with Walsworth.

When we received the evil 800 in late September, the then editors, Gregg Brown and Sandy McCorquodale, talked the Walsworth account executive, Jim Reed, to let him know about the considerable errors in the *Big T*. On September 22, 1978, a letter from Walsworth Publishing Company, Marceline, Missouri ("In 50 states and 35 foreign countries"), came addressed to "Mr. Sandy McCorquodale, Caltech Yearbook Adviser". McCorquodale considered this to be a moral victory: in the past the letters were addressed to "Ms. Sandy McCorquodale". Mr. Reed said that he would find out why the mistakes were made, then, "Present this information to our adjustment committee and inform you of their decision."

He claimed that "this problem will have my undivided attention until it is resolved."

Bullshit. On November 7, Al Kellner talked with their sales rep, Marsh Hollenberg, to find out what was going on. An answer was not rapidly forthcoming. So on November 8th, Kellner called Cecil Bezoni, an executive at Walsworth, to describe the errors. Big Cecil told Kellner to send over a marked-up copy of the *Big T* so they could see for themselves.

Last week, Kellner called ol' Cecil again, and was informed that Walsworth "probably could not reprint the books". Dave Wheeler, this year's editor, told Hollenberg that ASCIT would consider a \$4000 refund a fair compensation. Hollenberg returned with an offer of \$2000, and Wheeler has threatened to cancel the contract for the upcoming *Big T*.

We aren't totally sure that we can legally cancel the next contract without their permission, but I don't think they'll try and take us to court. If they do—big shit. We'll be glad to see them. In fact, if we receive no response in the next

two weeks, the ASCIT Legal Machine will roll into action, with a little help from our favorite JPL lawyer, Maurice Brundidge.

Well, that's enough espionage for today. Here are a few more notes before we get to "The Big News": In view of all the trouble we've had this past year, we're trying to consolidate our finances and banking. Lately there have been various checking and savings accounts for all of the different branches of ASCIT (the Coffeehouse, Publications, etc.), and they occasionally even kept books. This creates extreme difficulties around income tax time, when Betty Meade attempts to reconstruct our financial shenanigans from the previous year. So hopefully before the next BOD is elected we can consolidate the whole mess into a few accounts and one set of books.

A few of us are trying to help the Dean's Office and the Master's Office to establish a leave-of-absence center, and, separately, a graduate school information center. The first has progressed to a pamphlet and

See ASCIT, Page Two

# ASCIT

From Page One

questionnaire authored by the ASCIT Excomm. I think we can expand this effort to include a document outlining how different schools feel about Caltech transfers (and what they think of pass-fail grading!), and how those transfers are subsequently treated at those schools. Care will be taken to avoid duplication of the work already done in this area by the Dean's Office. Jim Mayer's original concept for the graduate school information center involved a simple idea: when juniors and seniors call or visit a graduate school while hunting for prospects, they can sit down afterwards and compose a little ditty on what they found out and what they thought of the place. Unfortunately, even though Jim offered to pay for calls (but not long-distance visits, so don't get out of hand), there hasn't been much enthusiasm for this project. We hope we can come up with a workable approach.

Can anyone come up with an idea on what to do with that damned barber shop (besides putting in another barber)? The radio station was flushed by the FCC, so we're kicking around ideas like "The New ASCIT Office", a late-night outlet from the bookstore, and a ground-level meeting room to accommodate the handicapped (for Y events, for example). Right now we (the BOD) are leaning toward the third; if you think you've got a better idea, let us know, fast.

Now the big stuff: a few weeks ago, we were pissing and moaning about the social scene in general and the lack of social funds in particular, when Dan Whelan suggested that we attempt to obtain an endowment for ASCIT. A tidy sum of \$200,000 could return from \$8,000 to \$10,000 a year, and we believed that this would come in handy the next time we figured out the social budget. Unfortunately, \$200 grand is hard to come by.

Two weeks ago, an incredible opportunity fell in our laps, and more funds for expansion and creation of ASCIT programs will be merely one of the results. Stan Johnson, a Caltech alum, who has successfully established similar programs at Oxy and Scripps, is considering whether to provide Caltech students with an invested endowment fund. He has spent a great deal of time drawing up guidelines with Dean

Owen to facilitate the creation of the fund.

Ultimate control of the Fund will probably be delegated to the administration and trustees of Caltech. It is his intent, however, that as much as possible, the Fund be managed by students. He suggests (and we heartily agree) that in order to maintain a high level of student interest, the revenues obtained (up to \$2000 or \$3000) be used for "Institute purposes that are at the same time of broad and special interest to the students". The trustees have the ultimate power to terminate the fund, but it is understood that they will not do so as long as the students handle it responsibly.

The purpose of the fund is to provide both undergraduates and graduates with a different type of learning experience. The main objectives:

To enhance students' interest in investments and in the basic techniques of wise investing.

To develop an interest and improved understanding of investment, general economic forces, the importance of managerial competence, and the impact of technological, industrial, and market trends on the value of securities.

To establish contacts between students and the world of finance.

To provide a practical and challenging learning opportunity in the field of business, economics and management.

As a result, there should be an increase in the understanding of many students of the good ol' free enterprise system in the U.S. of A.

The initial objective of the fund is to set up a body of 10-12 students (including 3 grads), who are appointed by the IHC and elected by the student body; they will do the actual investing work, and they are not liable for mistakes. They won't be on their own: various advisory boards will be established, comprised of campus notables such as Dean Owen and David Morrisroe, and they'll guide the students to businesses, brokerage firms, etc.

The project is still in the planning stage; our first try should be ready by the February elections. The IHC, the BOD, and the Excomm will be intensively involved with the administration, the deans, and development in working on this project next term.

See you next week.

-Ray Beausoleil

# Random Numbers

They tell me I've been attacked. Well, I guess that's justifiable. I warned you at the outset that I was not the greatest writer who has ever set pen to paper. I'm not the worst either although I am much closer to that end of the spectrum than the other. I also admit freely that I do my best writing when I am outraged, but I refuse to stay angry at the world just so that the few people to whom it really matters whether or not this column is well written or purely trivial can enjoy themselves. How can I reconcile the opinions of the few who like my column with the opinions of the few who don't? I can't. I knew at the outset that I couldn't please more than a few and that my ultimate accomplishment would be to avoid offending as many people as I possibly could. Seriously, I have come to the conclusion that most people don't really care. My column is like Food Service, if everyone's complaining, no one's complaining to the right people. I know my style is not the best but if I wrote a fantastic article every week you'd soon come to expect it and soon you could even predict the contents. You'd all say "Oh that's just another one of his tirades" and that would be it. No one would notice the content or the message. And anyway, I don't think that that's what my readers want. At least I hope that they're not all so depressed or so serious about life. There is always something in my column. It may not be much, but it's there. Believe it or not, life isn't easy here. I am just like everyone else here, I roll out of bed in the morning and grumble something about not wanting to get up at 7 or 10 or whenever. Do you think that it's easy to sit here and write about nothing? I write because I am "cursed" with creativity. But I also write because there may be someone out there who enjoys or needs this column (you've got to put something on the bottom of the birdcage): After all, if this column was gone, what would you have to complain about? The *Tech* might even become perfect! [Just what is a perfect *Tech*?—ed.] I never really thought that I commented on the "sinfulness" of various aspects of life here, just on occasional thoughtlessness. I don't think that's a sin yet, who knows, maybe it should be. At least if I'm being attacked, it proves that there's someone out there who cares and is willing to speak up. I'll stop writing when my readers stop reacting. As long as you care, I do.

-Duncan G. Mahoney

# Thuncan by P.M.



# PHWH&RR Takes Exception

To the Editor: While I appreciate Chris Juten's kind words concerning the PHWH&RR, I feel his description of our difficulties is unfair to the large number of people who worked much of the week preceding Interhouse—many staying up all or most of Friday night—putting down the track, and particularly to Rob Bourret who was there when we needed him to take over the final laying of the rails. There is no doubt in my mind that had construction not been halted due to technical problems with the cart Rob would have completed the last section of the track. The problem which forced the shortening of the ride was our inability to produce a cart which would handle an eighteen foot drop including a 160 degree turn with a center radius of 44 inches. The lack of such a cart was not due to any one individual or to any group of individuals, but rather reflected our lack of resources compared with the demands of the situation.

I think the large number of people who did an outstanding job helping John Hattick, Scott Bishop, Rob Bourret and myself lay the track deserve to have their work recognized, as do the people who worked hard on other aspects of the PHWH&RR, and I hope they were not too disappointed by the outcome.

(Note: Those beautiful sections of pipe John and I bent should give future Railroaders a big advantage in the construction of a future railroad—hint, hint.)

-David C. Johannsen

# The Caltech Y.....fly by

- Friday, December 1, TOM SAUBER. Bluegrass Music. At noon on the Quad. Bring a lunch.
- Sunday, December 3, DAY HIKE. In the Crystal Lake area. Leave Caltech at 9:00 am. Bring a lunch.
- Tuesday, December 6, DR. PAUL MacCREADY. Speaking on the the "Son Gossamer Condor" and man-powered flight. In Ramo Auditorium at 8:00 pm.
- Wednesday, December 6, UPDATE NOON DISCUSSION SERIES. Dr. David L. Goodstein, Professor of Physics and Applied Physics. Speaking on Physics Italian Style. Clubroom 1 in Winnett Center. Bring a lunch.
- Friday, December 8, CIT WIND ENSEMBLE. Noon Concert on the Quad. Bring a lunch.
- Saturday & Sunday, December 9-10, DECOMPRESSION, Winnett Center, 8:30 pm-1:30 am.

To Brucie H.:  
I love you. Will you marry me?  
Please respond in a unique way.  
Your everloving Lybear.

# The California Tech

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# ASCIT MOVIE

Friday Night  
Baxter Lecture Hall  
7:30 & 10:30

ASCIT Members 50¢  
Others \$1.00

# PATTON UNCUT



SECOND SHOW  
AT 10:30

Next Week:

# THE THREE MUSKETEERS

## Science and Society

—Pat Frantz

The difficulty in consciously imposing limitations on man's technical researches is two-fold: first, it runs contrary to society's historical instincts, and second, it involves points of philosophy that cannot be labeled as "right" or "wrong". The following paragraphs represent my own opinion on this subject.

Man's quest for knowledge has its historical origin in his survival instinct. Facing the elements unprotected, he spent many centuries expending all his time and effort collecting food. Even so, man eventually stumbled onto the secret of controlled fire, and used it to his advantage. From then on the inevitable pressure to consolidate into tribes and expand from there to nations forced him to devote a larger and larger proportion of time to investigating the world about him. The need to grow coincided with a need for new technical achievements. In addition, as man rose above the bare subsistence level he found himself with idle time on his hands; his inquisitive nature found an outlet in searching for new knowledge, and the leisured class became the first scientists.

At this crude level it can be argued that any new knowledge must needs be helpful, but is there any practical limit to this quest for information? What if future research may be potentially harmful? What if the successful assimilation of new knowledge into society requires a greater level of psychological and moral maturity than society has to offer? Our knowledge grows exponentially, and certainly the above criteria for danger have been met already in the twentieth century; we are no longer able to escape these problems. For instance, the most obvious example involves the study of atomic and nuclear processes. Building on knowledge gained over two centuries, far more sophisticated than any previous work, still it skirted the edges of possible disaster and paved the way for nuclear warfare. Should science have renounced forever the study of atomic processes?

Let's examine the problems posed by any attempt to limit man's search for knowledge; some are practical, some are philosophical. There will always be someone unwilling to go along with the majority of scientific opinion, someone who will research the *forbidden*. He or she believes that the advantages of new knowledge outweigh any risks involved. In today's society, how can one hope to "keep the lid on" forever, in view of the enormous diversity of research and the massive information exchange system extant. Totalitarian control of the laboratories seems the only possible solution. That might be accomplished in this country, but how can we guarantee that a closed dictatorship will not unilaterally research the forbidden? The present state of world affairs pushes us into the space race, the arms race—the knowledge race.

Another practical point is that nowadays the closing off of even a small area of research can have major frustrating effects on large areas of "conventional" science. Thus it is in atomic sciences, where the horrors of nuclear warfare are bound together with advances in energy production, medicine and electronics.

Finally, even if one were successful in limiting the quest for knowledge there is a clear danger of stifling human initiative through these actions. This is pointed out in such novels as *Brave New World* and Clarke's *Childhood's End*, where such a policy is deliberately promoted by an alien culture to thwart human achievement.

Any society which is to grow and prosper in the coming decades must avoid the dangers both of thwarting knowledge and of sowing, in its ignorance, the seeds of destruction. This implies that society must reach a balance between philosophic worries and scientific advantages. In particular this implies that society's decision-making processes must evolve a method for determining the priorities of new research. Such a process will be suggested next week.

### That Magnificent Man In His Flying Machine!

The Caltech Y is bringing Dr. Paul MacCready to Ramo Auditorium at 8:00 pm on Tuesday, December 5, to speak on his latest project in the field of human-powered flight. Dr. MacCready's newest vehicle will attempt to fly across the English Channel and win the second Kramer prize. Dr. MacCready

won the first Kramer prize last year when his vehicle, The Gossamer Condor, completed a figure-8 course in the San Joaquin Valley. The course included clearing 10-foot tall pylons at either end. Dr. MacCready will talk on the design of the "Gossamer Albatross" and review the odyssey of the Condor.

### LOST

A small black fold-up umbrella. Last seen during Interhouse. Please call Grace at 449-9171 or ext. 2173.

### STILL LOST

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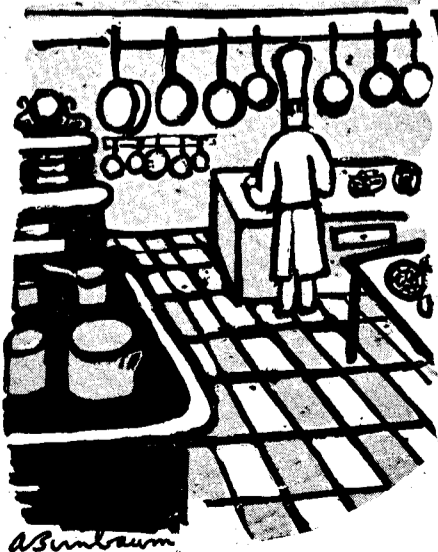
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Attention Graduate Students: Tuesdays are Beer Days. Buy 1 pitcher, get the second one free!

**What's A Long Lance?**

This and many more secrets of the military arts will be revealed as the U.S. Navy and Imperial Japanese Fleet fight the Battle of Empress Augusta Bay Saturday at 7:30 pm in Dabney Hall. New players are invited. Another miniatures simulation game brought to you by the Caltech Gamers.

**Put Yourself Up On the Door!**

Nominations are now open (on Flora's Door in Winnett) for Garage Chairman, little t Editor, little t Business Manager; Senior, Junior, and Sophomore Class Presidents, VPs, Secretaries, and Treasurers. Also, an opening for one Winthrop.

**Pizza!!!!**

The Deans' Office is sponsoring a Pizza Party for all Undergraduate Students on Sunday, December 3 at 12:00 noon by Winnett Student Center.

**Get Away From It All**

Join the Y for a day hike this Sunday at Crystal Lake. Come sign up at the Y office before 5:00 Friday Dec. 1. We will meet at 9:00 am at the quad on Sunday, Dec. 3. Transportation will be provided.

**Exit the Beaver**

On Saturday, Dec. 2, from 9:30-12:00 noon in the Caltech gym, the Caltech Karate Club is hosting an exchange practice and competition with a team from the University of Mexico.

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No Japanese-language is required for classroom instruction. Teaching experience is not required. An orientation is given in Tokyo.

Information on salary, transportation and housing can be obtained by providing International Education Services with a detailed resume and a letter indicating an interest in the position.

Personal interviews will be held in the California area around January 10, 1979.

Selected applicants would be expected to arrive in Tokyo from March through August, 1979.

International Education Services  
Shin Taiso Building  
10-7, Dogenzaka 2-Chrome  
Shibuya-Ku  
Tokyo 150 Japan

# Force Ten from Navarone- A Few Problems, But Well Worth Seeing

*Force Ten from Navarone* stars Robert Shaw, Harrison Ford, Edward Fox, Carl Weathers, Franco Nero, Richard Kiel, and Barbara Bach. For those of you who haven't seen *The Guns of Navarone*, this movie begins by showing that film's spectacular ending. Shaw and Fox perform well in the roles established by Gregory Peck and David Niven in the previous film. The year is 1943, and the characters have gotten back to England after their harrowing escapade in *Navarone*. They are now being sent into Yugoslavia to eliminate the spy who betrayed them in *Navarone*. Harrison Ford already has planned a mission into Yugoslavia to destroy a bridge, and at the last moment he is informed that he must take Shaw and Fox with him.

The movie is a loose adaptation of Alistair MacLean's novel, but this is not what causes the film's troubles. The problem lies in the fact that Harrison Ford and any producer who uses him cannot escape the *Star Wars* hype. Ford does not appear to

have learned any new acting since entering this galaxy, but he is not given much of a chance to prove himself since much of his dialogue is similar to that in *Star Wars*. He has learned to substitute the word "krauts" for "imperial forces", but he is still mumbling to himself about how much he dislikes certain situations. The producers have the bad taste to have Ford pilot a plane and get into air combat against the Germans. The music even resembles the *Star Wars* theme during this scene.

Ford's connection to *Star Wars* also results in the fact that the film can be a pain to witness at times, due to the delighted squeals and squawks from a near horde of teenage groupies. This complaint cannot be pinned on him, but it can be placed upon that sector of the audience that believes this is Han Solo come to Earth to kick bad M.P.s in the groin and to shoot down jerries.

To heighten the interest among the male faction, Barbara Bach, recently of *The Spy Who Loved Me*, appears, rather inexplicably, in a nude scene. In

this film, all the thanks she is given are blows and kicks from both the good and the bad guys.

Carl Weathers is a member of the U.S. Medical Corps who is from such assorted places as Harlem and Harvard. His punch is still as good as it was in *Rocky*. He gets tangled up in the Yugoslavian mess quite by accident and spends a good deal of his time there defending his integrity as a black. However, during the last part of the movie he settles down and works diligently for Ford and the *Navarone* duo.

An immense Yugoslavian rebel is portrayed by Richard Kiel also known as "Jaws" in *The Spy Who Loved Me*. He is not all nice to anyone including Barbara Bach.

There are numerous changes of plan and the action is plentiful. The plot is enjoyable enough and watching Shaw and Ford act is a definite pleasure. It is worth seeing even if you are not an old fan of *The Guns of Navarone*.

—Eve Bennet



Happy  
Chanukah...  
Christmas...  
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## The Caltech Bookstore announces

### A Special Gift Book Sale Now Through December 15

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**Gellman Scores! (He also made some Goals)**



by Bert Frobenius

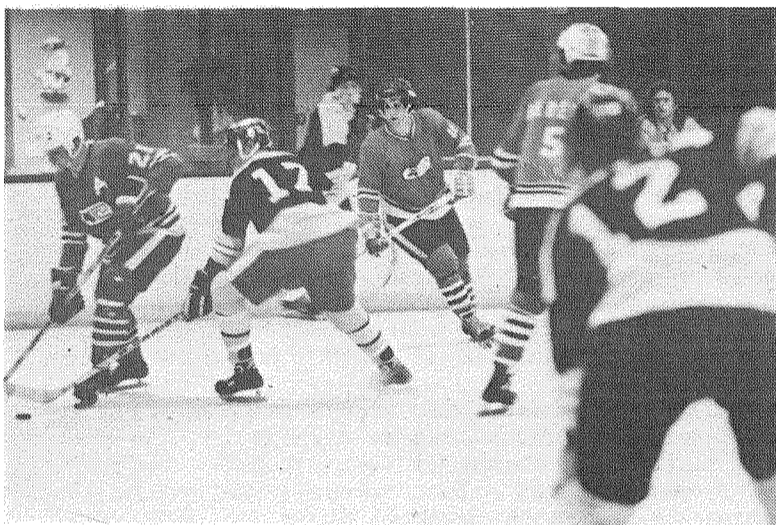
The Caltech hockey club has opened its 78-9 season with impressive victories over U.C. Irvine and Northridge. While the loss of 5'4" Rick Lye has taken away the brutal hitting style which marked last season's play, new Beavers Bardet, Minahan, and Christenson have introduced a slick passing and out-finishing-them style which should keep the Beavers in the title picture the whole season.

In the Irvine game Tech started slowly until defensive stalwart George Yates opened the scoring with his 14th career goal in only his fourth year of play. He left the game a few minutes later when the officials refused to let him keep the puck as a souvenir. His absence was hardly noticed as CIT went on to score nine goals before the ending ended. The explosive line of

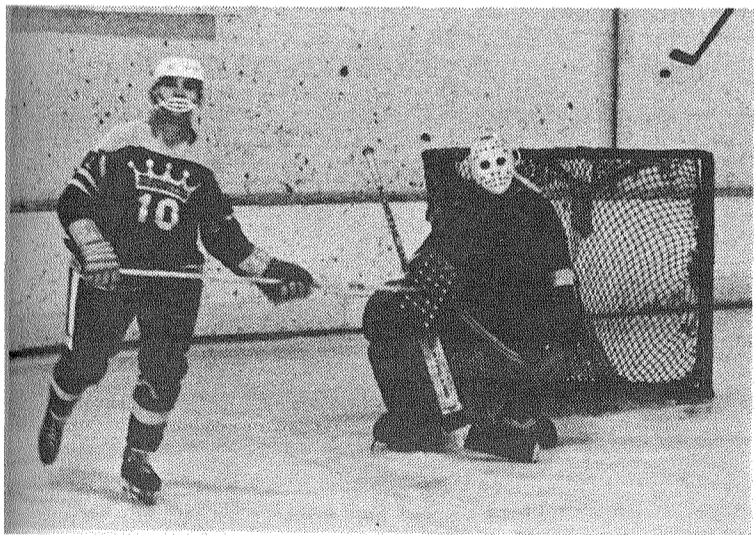
Gellman, Christenson, and Bobroff accounted for seven goals while the Minihan, Bardet and veteran Culick line scored the other.

Back home against Northridge fine defensive play enabled the Beavers to skate to a shutout victory. New goalkeeper Jim Carscadden turned in several spectacular saves to preserve the shutout. Particularly noticeable was the fine performance of the third line centered by Dan Dobkin. Hustling and hitting they staved off numerous attacks and refused to be scored upon. Defensivemen Rothnie, Rogers, and rookies Bernier and Fryzuk also added a new dimension to the Beavers play, moving the puck well out of our own zone and providing some power at the point positions. Standout Gellman picked up 4 goals and 2 ladies during the game.

# The Caltech



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# Teachers' Ideas on Tech

In recent weeks an increased feeling of anxiety and depression has been observed among the undergraduates. Since some of these problems were quite serious and seemed to be widespread, the seven house presidents got together and agreed upon the need for a survey. This survey was to be distributed to all undergraduates by their house president. The purpose of the questionnaire was to determine the existence, extent, and type of problems which appeared to be affecting the students.

The response to the survey was quite good, approximately 70% of the questionnaires were returned. Furthermore, in addition to the numerical data, there were many good insightful comments made. The results are organized by years spent here, which enables various trends to be observed.

It is our hope that this survey will not be taken as a negative commentary on the undergraduate program at Caltech. That is contrary to its intention.

We feel that there are problems which threaten the greatness of Caltech. This survey hopefully determines whether or not these problems exist. If the conclusion is that they do then hopefully these results will yield an initial platform from which to study the problems more carefully. Despite the Time magazine article we do have a winning football team and we are not monsters. The Institute, its faculty and its students are among the best in the world. If there are problems among the undergraduate student body then they should be identified and corrected.

## A Few Lights In The Darkness

"... Several factors mitigate the pain: ... the Honor System; the small student body size which makes it possible ... to get involved in activities like drama and sports; ... little niceties such as the free juke box in Winnett, the WATS line and the free computer accounts."

"... and if things are resolved in terms of social, emotional, and interfaculty relations, then not only will life be more pleasant here at Caltech, but I'm sure that... the average GPA go up ... also that the attrition rate will drop significantly."

"The excellent things about Tech are:

- The Honor System.
- The small size.
- The high academic standards.
- The camaraderie of students.
- The opportunity to engage in research at the undergrad level.
- The 'high-power-atmosphere.'
- The ingenious, creative and humorous activities of Teachers."

"My confidence in myself (academically and particularly socially) has greatly improved. ... So far, this place isn't as much of a horror story as upper-classmen might have one believe. The work is hard, but when it's done, I feel like I've accomplished more."

"I have stayed at Tech this long because of the quality of people I have met here. The faculty and students who have become friends are good friends in every sense of that term."

"This place is not all that bad. You can actually learn something here."

"If it weren't for athletics and the student house structure, I would have left. I like the houses and the athletic attitude (inter-collegiate)."

"I have had some very good professors since I have been here; they were genuinely interested in teaching students as well as in helping students with personal problems. However, some of the others had the attitudes that they were filling a requirement so that they could stay here and continue to do research."

"In all I am having a terrific time here. Even though all my time is spent studying, the work is interesting, and is not busy work. I would not like to see a degradation of academic quality."

## The Darkness

### Regarding Recommending Tech

"As far as recommending Caltech to other people, it would depend on the person. There are some people who are quite happy here, regardless of what other people think."

"Change admission strategy—put more emphasis on whether an applicant is emotionally ready for Tech."

"I would be very careful who I would recommend Caltech to, never any normal people."

"I would not in general keep someone from coming here, but I would only actively advise it in a few cases. The person who comes here has to be highly motivated to a degree where one can maintain an interest in science while trying to overcome a myriad of incidents which could dull one's interest in science."

"I would not recommend Caltech to any of the people who were my friends in high school. I would suggest this place to a very few people who might fit in ..."

### About The Faculty And Their Teaching

"Student-faculty interaction is not as good as is easily possible to achieve ... I believe such interaction can provide many sources to the solution of academic, social, personal, etc. problems."

"Caltech is both a research institute and a school. I think there is a tendency for those in power to ignore the fact that we are also a school and neglect to educate the whole student, such as the art workshops, sport equipment ... Jim Mayer and the 'Y' are two notable exceptions."

"Academics, because it is so hard, blows people away. Non-existence of girls is icing on the cake."

"I feel that there should be more allowance made for a student (esp. a frosh) who fell badly behind at one point and has trouble catching up."

"It is also incredibly frustrating to see so many faculty and administration who think things are fine for the undergrads when in reality this couldn't be further from the truth. Teachers seem fairly insensitive at times to how much work there is to do. I don't even think the teaching is that great ..."

"Have more 'Neat' classes—make analogies to Bi 2 in other options. Low unit, low pressure, classes to excite students."

"'Humanities' as a classification is symptomatic of the tiny box into which the non-scientific academic courses are put."

"An effort should be made to make undergrads feel less like a secondary part of the institute."

"Some important classes are taught in a manner that kills interest in even the most exciting subjects."

"Most problems at Tech stem from two sources: ... b) the callousness of several strategically placed professors ... although some Prof's and T.A.'s are excellent, too many simply do not care how much damage they do to their students with their incomprehensible lectures, undoable exams, etc. Their purpose should be to teach, not intimidate."

"Each course here starts off by saying 'We're here to give you a broad background in science ...' and, with very few exceptions, then proceeds to assume you are in the class because that is your option. The math courses here are for mathematicians, the physics courses are for physicists and last year the Chem 1 course was for chemists ..."

"I think that Dr. Owen is very wrong when he says that this is a small school and the faculty is very interested in the students and that most people like being here. I believe that the faculty is usually not interested in the welfare of the students and are overly concerned with maintaining the standards of Caltech ... A general requirement (Ph 1, 2) for all students should not be at the level of difficulty where 30% of the class flunk out."

"It would help if just one lecturer didn't try to snow his students with B.S."

"The percentage of tenured faculty is far too high to allow the institute to adapt to changing world problems ... The faculty's apathetic attitude toward undergraduates is ultimately detrimental to the students' development as scientists. The general lack of communication between the students and the decision makers can be considered to be the root of these and other problems. This questionnaire (is a) heartening start toward resolving these problems."

"I think professors don't get nearly enough feedback from the students. The students should be encouraged to talk to the teachers more outside of class ..."

"A greater number of days should separate the day when a major exam or midterm is distributed and the day it is due; 2 or more midterms out Friday and due Monday is pretty rough."

"... improvements would be better selection of lecturers for skill in teaching and a wider range of classes, to make some smaller ... and allow more diversity in a schedule."

"The professors here all think we're brilliant and love their subject so much that we'd love to spend all our time doing their homework. This keeps me from taking courses in other options ... The large number of courses that we must take to graduate eliminates the free time that could be used to explore our scientific interests more. This is why many of us lose interest in our field. Being forced to bite off more than we can chew only makes us want to throw up!"

"Bear down on high-salaried Prof's who don't give a damn about undergrads. (I know it's impossible but it's got to be said) ... I feel that the grading system is too high-pressured ... Be stricter about *not* letting extremely well-trained students enroll in low-level courses. More importantly any class (track B physics especially) geared toward the top 5% is downright stupid. Grading on a curve is generally bad—after all the student body isn't random ... Maybe all years should be made pass-fail ... Not enough humanities."

"I feel that more care should be taken in designing homework problems. Many of the homework problems given do not help develop insight into the concepts as much as would be possible, yet take time to do."

### What About T.A.'s?

"Most TA's SUCK!!! They could use a few courses in education."

"Put TA's through apprenticeship so that they know how to correct homework and run a class. Make sure that the TA's know the professor's method of solving problems and terminology (those grad students who spent their UG years elsewhere will not agree on method or terminology and this is confusing to new students)."

"A great deal of care should be taken in choosing TA's, and means for evaluating their performance should be established."

"... some of my TA's are poor, one is pretty good. ..."

"Academic ability should be *least* important criterion in choosing TA's, more emphasis should be placed in competence in teaching."

### The Advisors

"Frosh advisors should be chosen with more care, my advisor is never on campus since he does not teach first term."

### Athletics, Anyone?

"Improve Athletic facilities. Offer more options, e. g. Squash, field hockey, etc."

### The Never Ending Saga of Saga

"Improve food-service. We don't mind paying more."

"The food is lousy ..."

"Food is terrible consistently. Its cost is too high for what we get ... I don't think it is possible to have a food service here like at other schools, mainly because of low volume ... Therefore the people in charge here (if there are any) *MUST* find a different way entirely."

"The food Saga provides is so bad it has given me continued flatulence and constipation for over half a term. If better preparation and selection of the food is more expensive so what? Proper nourishment of hard working students should be a prime consideration of the school."

"Food service reeks; an effort should be made to evaluate

Number of Years at Tech	
N	155
Number of Surveys Returned	155
Males	129
Females	26
1. Now that you are familiar with	
Yes	129
No	21
2. Would you recommend Caltech	
Yes	115
No	29
3. Would you send your children	
Yes	87
No	29
4. When you came here you were	
(1) Enthusiastic	8
(2) More interested	41
(3) As interested	89
(4) Less interested	14
(5) Turned off	2
Average	2.75
5. Do you think that since you h	
(1) More Able	45
(2) Equally Able	98
(3) Less Able	11
Average	1.78
6. Compared with before you can	
have had problems (emotional)	
(1) Very few	18
(2) Some	100
(3) Many	39
(4) Excessive	3
Average	2.17
7. If you are having problems her	
a) Family trouble	
(1)	125
(2)	18
(3)	5
(4)	4
(5)	1
Average	1.29
b) Problems relating to other s	
(1)	74
(2)	38
(3)	31
(4)	8
(5)	2
Average	1.86
c) Financial worries	
(1)	59
(2)	41
(3)	33
(4)	12
(5)	8
Average	2.14
d) Trouble handling the acad	
(1)	15
(2)	53
(3)	44
(4)	42
(5)	3
Average	2.78
e) Lack of motivation for acad	
(1)	40
(2)	45
(3)	34
(4)	18
(5)	12
Average	2.44
f) Problems with the male/fem	
(1)	35
(2)	35
(3)	32
(4)	39
(5)	17
Average	2.80
g) Dislike of the physical enviro	
(1)	79
(2)	45
(3)	16
(4)	6
(5)	6
Average	1.78
8. What do you feel about your	
a) The lectures and/or lectur	
(1) poor	13
(2) Fair	58
(3) Good	62
(4) Excellent	22
Average	2.60
b) The amount of work relat	
(1) Poor	17
(2) Fair	77
(3) Good	43
(4) Excellent	3
Average	2.23
c) The exams and/or quizzes	
(1) Poor	10
(2) Fair	73
(3) Good	54
(4) Excellent	2
Average	2.35
d) The T.A.'s	
(1) Poor	16
(2) Fair	61
(3) Good	53
(4) Excellent	23
Average	2.54
9. Of the faculty you have intera	
you as a person?	
(1) 0-25	41
(2) 25-50	43
(3) 50-75	49
(4) 75-100	16
Average	2.27
10. What do you feel about your	
a) His/her interest in you	
(1) Poor	18
(2) Fair	48
(3) Good	58
(4) Excellent	24
Average	2.59
b) His/her knowledge of course	
(1) Poor	16
(2) Fair	56
(3) Good	45
(4) Excellent	7
Average	2.35
c) His/her helpfulness on perso	
(1) Poor	24
(2) Fair	35
(3) Good	39
(4) Excellent	4
Average	2.23
11. Rank the following ratios (fem	
50/50 2 cur 2 0/100	121
50/50 2 0/100 2 cur	10
cur 2 50/50 2 0/100	8
cur 2 0/100 2 50/50	3
0/100 2 cur 2 50/50	3
0/100 2 50/50 2 cur	1
12. Do you feel that changing the	
reducing the personal problems	
Yes	106
No	45

specifically the quality of various items served, perhaps through surveys or ombudsmen."

"Bad food does not help morale at all! Being forced to pay for lukewarm, unappetizing (because the cooks don't follow directions) food is very annoying."

As Always the Male/Female Ratio Is a Problem

"I could not perceive how bad an approximately 8:1 ratio is in reality."

"... everyone here is also totally immature. They spent all their time in high school studying instead of dating. The fact that there are no girls here doesn't help. GET GIRLS!"

"The relative lack of females here presents only a few problems to the males here. It is possible to slog through 4 years without much social interaction without totalling one's psyche. On the other hand, getting involved in some traumatic relationship with a woman can mess someone up but good. Nevertheless, of the two alternatives, I believe most of us would rather have to deal with the latter than the former. We've all got to grow up sometime, and hiding from women for 4 years is not the way to go about it."

"Male-female ratio is the biggest problem. I'd almost, not quite, say that no girls would be better than the present situation. No amount of warning can prepare a person for the way things are here. I know that my classwork has suffered immensely because of the tension and time taken up trying to even meet girls..."

"The only solution to the male/female ratio problem that I think has any chance amounts to creating another college (90% female, 800 students) next door, with (ideally) communal housing."

"The social life at Caltech is as good as you would expect with the current female/male ratio. Horrible!!... Life would improve if more girls were here or no girls were here."

"The ratio must not be changed if it results in a lowering of academic standards for women."

"Although 50/50 would be ideal, all male would be better for everyone concerned than the present imbalance, which creates tension all around."

"It is often said that increasing the female/male ratio would solve all or many of the social problems here at Tech. However, I do not believe that this is so. The social problem is inherent in the type of people that come here—people insecure in their relations with others and naturally introverted..."

"A 1-2 to 1-4 female student to male student ratio would be nice, but that should not be a factor in admissions."

"Ideally, a 50/50 M/F ratio would be best; the situation would be almost normal. However, the current situation is extremely cruel to the women."

How About Some Socializing?

"There is a lack of opportunities for socializing. Should have programs (social, etc.) with neighboring colleges."

"I feel that interaction with other schools would help many problems: Mixer parties would ease the ratio pressure; seeing what is done scholastically at other schools might help get rid of the feeling by many students that they are not learning much."

"The social life at the Institute among undergraduates is probably the most significant extracurricular factor in the academic performance of students. It does seem that Tech undergraduates are less socially active than persons in their age group attending college... Shyness is a behavior trait of many Techers... I believe that it is desirable for the Institute to set up programs to give Techers social opportunities. Many of them will not take advantage... But I think that enough people will, to make such programs worthwhile."

"There is a smug, self-congratulatory atmosphere (here at Tech), an isolation from both other schools and from industry."

"Most socially inept (or inexperienced) guys and a few 'fun-seeking' girls contributes to a number of guys being seriously hurt and disillusioned, to the extent that schoolwork suffers drastically and severe emotional upsets occur (this has happened to guys I know, and it is serious)."

"It seems to me that house system, because of chauvenism inherent in it, has the effect of closing off 6/7 of the students here from any reasonably familiar contact. Introducing more flexibility into it, such as some kind of exchange program, might give students a chance for more diverse social contact."

What Are We?

"... there is an emotional problem you've overlooked: I don't know how to define it better than 'alienation', a feeling that you're not a real person. Most Techers have this identity problem before coming here, but it gets worse once they're here; and nothing is done to alleviate (it). I off hand don't know of any specific solution, but a change of attitude is definitely necessary."

"Pasadena is a lonely place. Social 'outcasts' created by Tech have no recourse but to become depressed and do poorly in school work. This happened to me and to many of my friends. We do not belong here on anywhere else."

"This place is only right for mature individuals who know that they want a degree in science or engineering. God help a student who has an identity crisis."

"The atmosphere in student houses is scary, soaked skitsy. What people say, think and do have almost no relation."

"The terrible things are: Cruelty of Techers toward selected other Techers."

"... the problems dealing with insecurity. For many Techers, the worst problem to cope with is that of not being the best... some become frustrated while others begin to feel inferior, not living up to the standards they had set for themselves."

"The general atmosphere is anti-intellectual." "The stereotype of Techers as nerds seems to be another problem and efforts to change this should be taken—no more Time articles about 'social monsters'."

We Need Some Help

"Why isn't there anybody around to talk to about problems, like career counselors? Psychiatrists don't fit the bill there. If so many people change options, it might be a good idea."

"It is quite depressing to see:

- 1) UASH flushing 3 friends on the same day. 2) Of the three roommates I have had so far, one has transferred out and the other two have taken leaves. One spent the better part of two days in bed, curled up in a fetal state and staring into space before he left."

"... I am surviving. It is very depressing here, though, because so many people have terrible problems and are extremely depressed. The seniors are amazingly burnt out... Why can't undergrads get an education here in something more than just science (such as how to live)?"

"Make leaves easier—actively encourage to spend a few terms away from Tech at some other school, business, or research institute. Encourage people who hate it here to either leave or help fix things up."

"A closer look should be made at the types of people who 'burnt-out' or leave so that they can be warned initially of the problems."

"The main thing that bothers me at Caltech is watching any friends flame out. There is no reason, no purpose for taking 40% of the students admitted and beating them to the point that they lose all of their confidence and give up."

"The Dean should try to find out what is going on, instead of imagining that everything is peaches and cream. There seems to be a large discrepancy between what Owen thinks and what the situation actually is."

"... but many people I personally know have flunked out or just left. That's very grim, and something is wrong. This place tends to make people feel very stupid, because it operates on negative feedback and because everyone here used to be at the top of their classes."

Those Which Said It Best:

"I think the biggest problem here is people feeling unappreciated. Everyone needs praise, and before they came here they got it by being the smartest one in their high school. Now, most people are average, and get no attention at all. Most are alone. At least those with girl friends know they are special to someone. That's probably why the girls here don't hate it so much as the guys—everyone makes a fuss over them and they are somebody."

"I have some, but since I'm failing Math, I must go do that homework."

"Let the people know what sort of a place they might get into before they are trapped here. The Institute catalogue is supposed to be the most accurate source of information for prospective students, look what it says about Caltech: 'In short, every effort is made to provide the undergraduate student with a well rounded, integrated program which will not only give him sound training in his professional field, but which will also develop character, breadth of view, general culture, and physical well-being.' (p. 106, 78-79 Catalogue)

If you really want Caltech to be like this (at the expense of fewer Nobel Laureates, of course) change your standards of choosing freshmen. I don't remember having been tested on my general culture, breadth of view, maturity, ... as a requirement to get into this place. All I was evaluated on was my grades, consequently only the one-track-minded, immature people get into this place who are good only at science but know nothing about life and in fact don't want to know, their biggest goal is probably to win a Nobel prize. And this makes the community of the entering freshmen abnormal and hard to work with if you want to teach them the way of life. And what do you think Caltech does for them, strives to develop their character, broaden their viewpoints? No way, it burdens them with even more science, 'Yes, forget about life, we want more Nobel Laureates, learn faster and become a member of the chain of information processing.' Well, this might sound like the best way to live to some; but it sure isn't my favorite way of spending my time. What I expected of a good university was a place to grow with people who are also interested in broadening their viewpoints about everything, as well as, of course, science. I expected the university to be a place where I could learn about life from the students while learning about science in classes. And with the way you chose your freshmen you make the first part very hard. If you want to make Caltech the kind of place I would like it to be, chose your students from less bright (but probably more intelligent) students who are more broad-minded, who know more about life and consequently have less problems with life.

But if you want to keep Caltech the way it is (a scientist-manufacturer) at least let the people know what this place can furnish them with. I'm sure you will find smart enough people who are dumb enough to sell their lives for a Nobel prize!"

"Is idealism dead? If even a few percent of the students are not happy or are experiencing difficulties then Caltech's academic officials should be concerned and motivated to act in their behalf. To disregard these students as so much fluff is absurd. After all, those students who are barely able to gain admittance to Tech and thus are likely to be hard pressed to matriculate are still highly capable individuals.

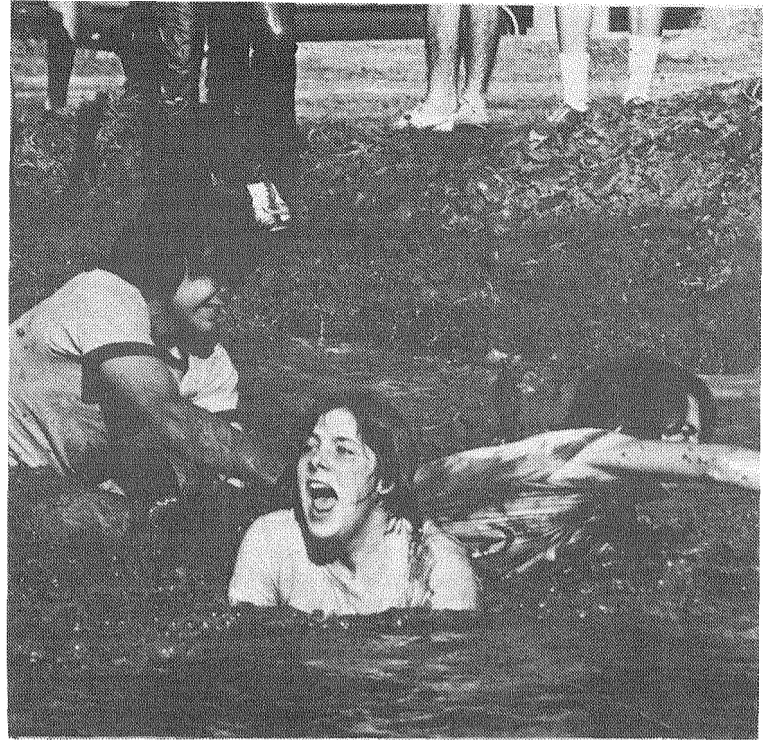
If Caltech is going to be so pretentious as to pick the very best applicants it can find, then it should be responsible enough to try and accommodate all of these individuals rather than act as it does—weeding out the populace as a matter of course. Think idealistically. Is it better for a school to be a tough school to graduate from or a place that can successfully educate its pupils?"

"Caltech is a dehumanizing environment. It recognizes no human aspirations except classwork and provides, intentionally or otherwise, no outlet or room in which to grow, experience or explore various facets of interaction and personality. For a group of people as intelligent, ambitious, and aware (and also shy) as Caltech students, this certainly is a form of purgatory (or at least it has been for me and the many people to whom I have spoken). One of the things I expected when I came here was excellent instruction. Except for a few cases (some of them notable) this has been sadly lacking. Instruction has been slipshod, indifferent, and, occasionally, deliberately confusing. In summary, I would say that Caltech expects the average 18 to 20 year old here to conform to the mold of the fifty year old scientist who breathes science and research. Even if this could be done, it would be far from desirable."

Table with 6 columns: Three N, Three %, Four N, Four %, Too Many N, Too Many %. Rows contain survey data for various questions.



"Thanks for the chair guys, but really now . . ."

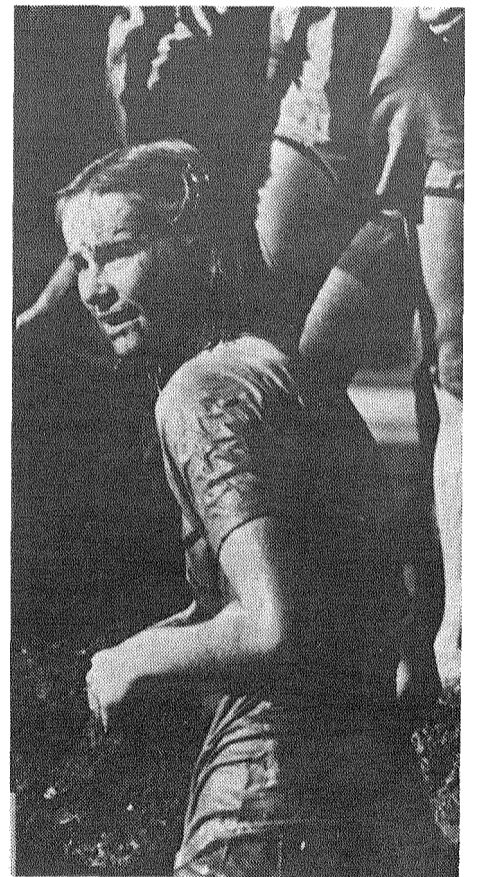


"Hey! This pool isn't heated!"

Photos by  
Alan Loh



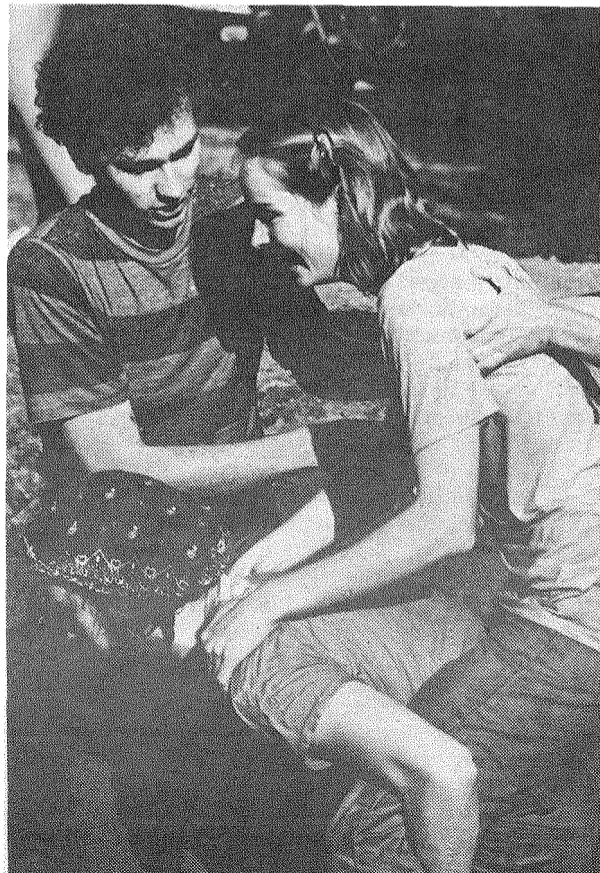
"Hold everything!!!! I just lost my contacts!"



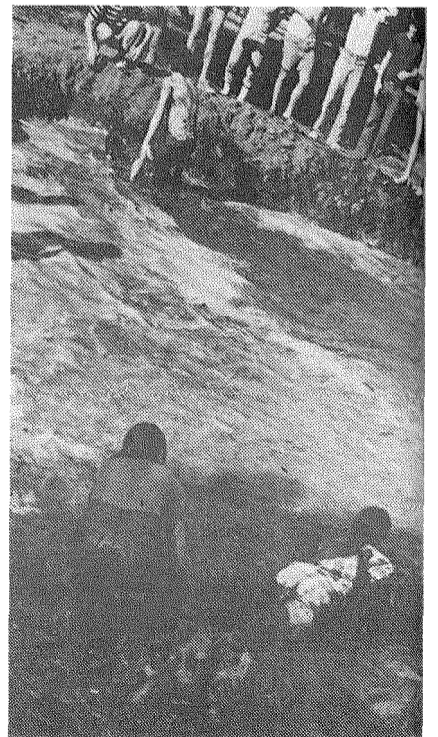
Sophomores fight dirty



Event #69: The Flying Fuck at a Rolling Doughnut



Once more into the breach, dear friends



"What's the Recommended Daily Allowance of mud?"

# THE 78-79 MUDEO



# WHY IS THIS RACE DRIVER GRINNING?



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Three track records!**

And in the SCCA National Championships at Road Atlanta, he took a second place in his C-Production Datsun 280-Z... and a third in the B-Sedan category with his Datsun 200-SX.

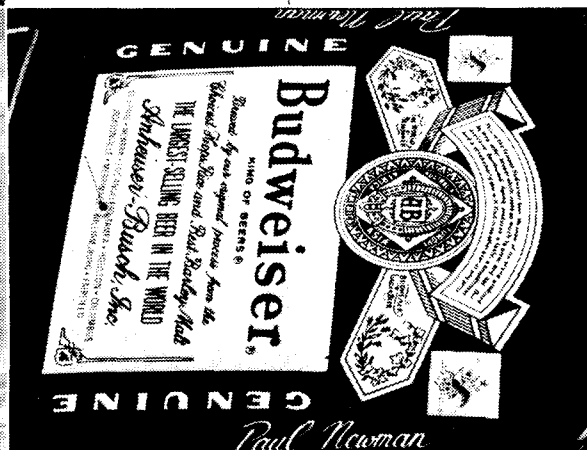
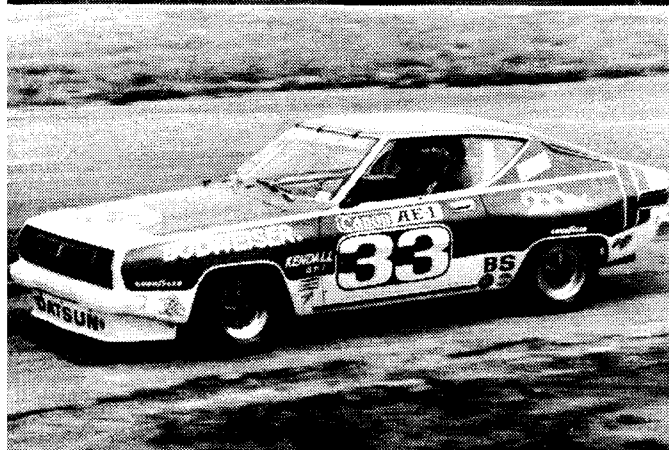
Naturally, we congratulate him for his super season and wish him even greater success in '79.

*"Way to go, Paul!"*

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# Eat, Drink, and Be Merry...

Vacation time is all too quickly approaching, so I felt it appropriate to discuss a few more restaurants since some of us are stuck in the area and must provide nourishment and entertainment for ourselves. So, to mention a few:

### American Food

**The Old Virginia Inn**, 119 Pasadena Avenue, South Pasadena. This place recommends that you "Enjoy the Personal Touch." If their waitresses are an example of this "touch", I'd rather have a slap in the face. In short, the service is TERRIBLE. The food is alright, but not worthy of the \$7-\$10 prices. The patrons consist mainly of those past forty who have forgotten how to try out a new place and who come mainly for the alcohol anyway.

**Marie Callender's Pies**, 2300 E. Foothill Blvd., 792-3109. This is a thoroughly pleasant place. The rustic menu offers full

dinners, a variety of hamburgers, bean soup with cornbread, quiche lorraine, and, of course, lots of pies. I haven't had anything here that wasn't delicious. Their hash-browns are topped with bacon and cheese and worth the few minutes delay for them. Entire pies are also available for carry out. The prices are a trifle high, but you do receive quality food and service. Often there is a wait to get in, but the line moves quickly, since this is a large place. However, I don't recommend trying to go there any day at noon.

### Italian Food

**Bono Corso's** on North Lake Avenue. This place is worth mentioning only so as to warn one against it. The spaghetti is served with a thin tomato sauce and the prices are not cheap. Do not visit this place unless you hear from a reliable source that it has drastically changed of recent.

**Shakey's Pizza Parlor**, 2180 East Foothill Blvd., 793-1169. This is a fun place to go to—it's designed for families. Therefore, there are lots of games to play with while you wait for your pizza. They offer many types of pizza: chorizo and jalapeno, salami, pepperoni, sausage, mushroom, anchovy, canadian bacon, black olives, canadian bacon and pineapple, and fresh tomatoes. I come here mainly because of the fresh tomatoes. These are marinated in vinegar and Italian spices and placed on your pizza when it pops from the oven. There is a salad bar at \$1 a head. Weekdays from 11-2 there is an all you can eat consisting of pizza, fried chicken, and salad, for around \$2.50. A medium pizza can run you anywhere from \$3.40 to \$6.90. They have thin and thick crust varieties.

**Tripoli Italian Cuisine**, 442 East San Bernardino Road, Covina, 332-8871. This place

has both Armenian and Italian food. The atmosphere is very pleasant—there are lots of old wicker-encased wine bottles hanging around and the owner comes by to make sure that you're having a good time. The food is very good and prices are moderate. It is a little far away, but worth dropping by if you are in the area.

**Pellegrino's**, 101 South First Avenue, Arcadia, 446-0155. Since I last wrote about this place, I have tried their pizza. I am here now to rave about it. The crust is delicious. It's thin in the middle and thick at the edges. Although Pellegrino's has an excellent atmosphere and although it is certainly a classier joint than Shakey's and although the pizza is better than Shakey's, the prices are lower. The antipasto is very good. A small bowl which serves two is \$2.

### Mexican Food

**Casa Colonial**, 968 East Colorado. Although this place is

in the neighborhood of pool halls and karate schools, the atmosphere is relaxed. The food is very good and not expensive. They have a few original ways of serving Mexican food.

**Mijare's Mexican Restaurant**, 145 Palmetto Drive, Pasadena 792-2763. Open 11 am-9 pm every day. This place is interesting in that it seems to be an old converted house. They have good food, a large menu and medium prices. I prefer to go on a sunny day because there is patio dining and I enjoy tossing crumbs to the sparrow and vultures. [Don't ask me, just work here.—ed.]

### Sandwiches

**Lucky Boys**, No. 2 at 531 E Walnut; No. 4 at 640 S. Arroyo Pkwy. I hesitate to mention them because, surely, every Techer must know of them already. However, I feel obligated to give my opinion on some of their foods for the benefit of those of you who are trying things other than the standard double cheeseburger. The onion rings are good and I've noticed that they are less greasy at No. 2. The tacos have lots of meat and come with a slab of tomato, a hunk of lettuce and some grated cheese. They are lacking in hot sauce, however. The coleslaw is of the creamy variety and is pretty good. The much-advertised fresh fried zucchini is terrible. The fried chicken plate consists of half a small fryer, a box-bottom full of french fries and a half cup of coleslaw. The chicken is not bad—the batter is similar to that on the onion rings. The sandwiches are undoubtedly loaded with meat but I find them to be bland. The ones with barbeque sauce are better than those without. If you go to No. 4 and like milk, run over to Trader Joe's and buy a quart for 40 cents rather than pay Lucky Boy prices.

**Pasquali's**, 1938 East Colorado Blvd., 449-9860. This one just recently opened up. It has a rare feature which is brisket of beef. It is served hot and juicy on light rye bread. This is a change from Stottlemeyer's and is certainly not more expensive, but it does have a smaller selection.

### Everything

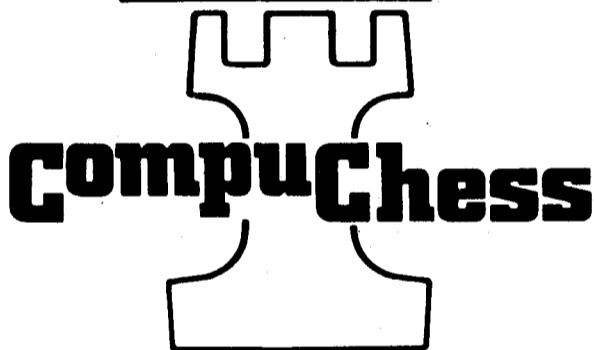
**Glendale Galleria**, on Brand between Broadway and Colorado in Glendale. This is a nice shopping mall which has a separate "alley" of food stands. In the middle of them all are lots of tables and water fountains. Among the food specialties you may find there are: seafood, mexican food, oriental food, fruit, wine and cheese, ice cream, frozen yogurt, popcorn, hot dog and Swedish sandwiches. Elsewhere in the mall are located: Tiffany's Bakery, Hickory Farms, Carls Jr. and Bob's. This is a great place to go shop and eat.

—Eve Bennet

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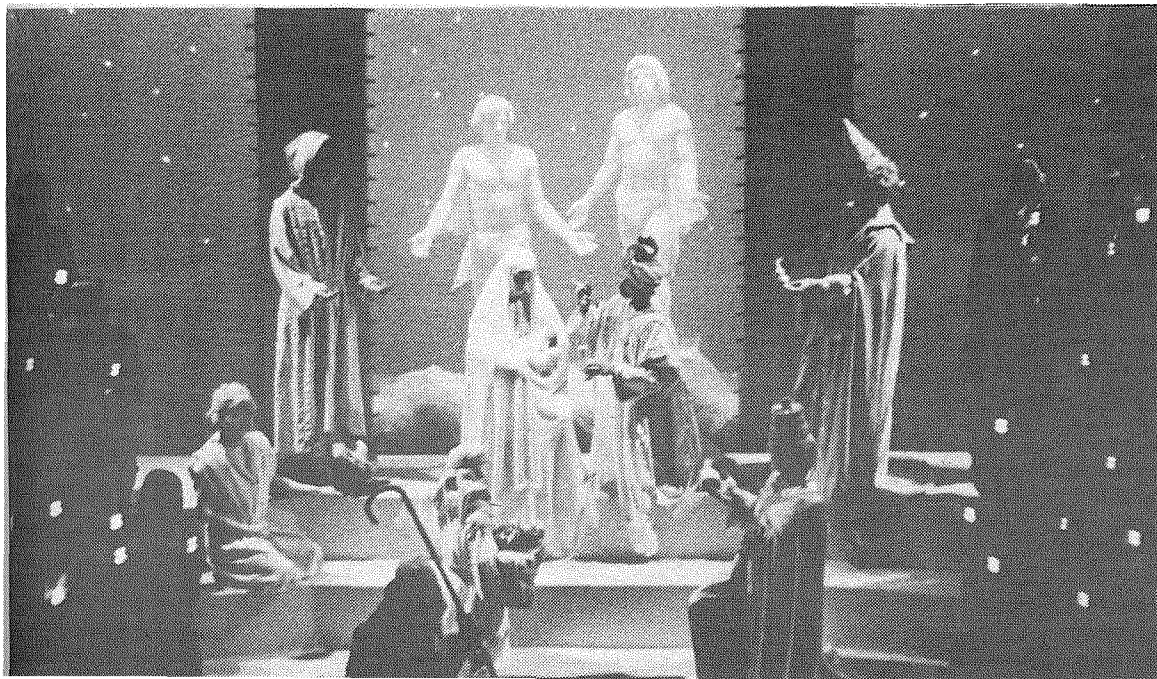
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**ERA for angels??**

**Festival of Light**



by Flora Boyer

The Caltech Glee Clubs, under the direction of Olaf M. Frodsham and Monica J. Roegler, will present their annual celebration of Christmas and Hanukah, the FESTIVAL OF LIGHT, this weekend. The performances will be Friday, December 1 at 8 pm, Saturday, December 2 at 4 pm and 8 pm, and Sunday, December 3 at 4 pm.

Light is the spiritual focus of the presentation. The ritual lighting of the Menorah and the Christmas candles unites the Hanukah story and the Nativity scenes. The cast of 105 students and 15 staff members sing and recite carols, hymns, traditional songs of the season and prayers, accompanied by the living tableaux illustrating the dramatic events of the Jewish and Christian holy days.

Four of Caltech's choral groups—the Men's Glee Club, the Women's Glee Club, the Chamber Singers and the Apollo Singers—will be performing, as well as the Brass Ensemble. The Men's Glee Club, under the direction of Mr. Frodsham, is enjoying its 65th season. Fifty-five men strong, they have toured all over the United States

and Europe. The Women's Glee Club, a newer organization under the direction of Mrs. Roegler, has grown in size from eight women to thirty in eight years, and will be touring for the first time this season. The Chamber Singers, a mixed group under Mr. Frodsham's direction, performs different types of music than the two larger groups. The Apollo Singers are conducted by Joseph Fuchs and sing music written for a small male choir. The Brass Ensemble is a part of the Caltech Brass Ensemble, directed by William Bing. They will entertain those attending the concert with Christmas carols before the event begins.

Several other people will add their contributions to FESTIVAL OF LIGHT. Shirley Marneus, librarian in the Public Affairs Room and director of Spectrum Productions and the Caltech Musical, will be the narrator. Charles Carter has designed the costumes and directed the tableaux scenes. Don Lee White from California State University, Long Beach, will be the organist, with assistance from Shawn Hall, graduate student in Mechanical Engineering. Murray Mathiesen, from the cast of *Battlestar*

*Galactica*, donated his time to help with some of the narration. Soloists include Marcia Whitehead, staff member in the Development Office; K. Jeffrey Eriksen, graduate student in Bioinformation Systems; and Dave Rumph, junior in Engineering.

Some of the numbers performed will be "The God of Abraham Praise," arranged by George Klump for the inauguration of Dr. Goldberger; the "Dreydl Song"; the "Introit," by Franz Liszt; "Away in a Manger"; "The Holly and the Ivy"; "O Holy Night"; and "Silent Night". Prices are \$5.50, general admission, \$4.95 for Caltech faculty and staff and \$4.40 for Caltech students (limit of two tickets each). For information, call 793-7043 or ext. 1652.

**TODAY IS DROP DAY**

See Fence Run! Run, Fence, Run!

Christo's 24-mile long white curtain ribboned the hillsides of Marin and Sonoma counties, and disappeared into the Pacific after four years of struggle, opposition from the state bureaucracy, and 3 million dollars. The Baxter Art Gallery Support Group is proud to present to the Caltech community the Maysles Brothers' (of *Gimmie Shelter*) film, "Running Fence", which after three years of shooting, documents in color Christo's monumental feat and subsequent triumph which furthered his

international acclaim. A second Maysles' film, "Valley Curtain", will be shown covering Christo's earlier socio-environmental art project in which he spanned an area of the Grand Canyon with an orange curtain. The controversial events are outstandingly portrayed in two interesting and visually beautiful films—films of our times that should not be missed. They will be shown in Baxter Lecture Hall on Wednesday, December 6 at 8 pm. Admission is \$1 for Caltech students and Baxter Gallery Support Group members and \$2 for the general public.



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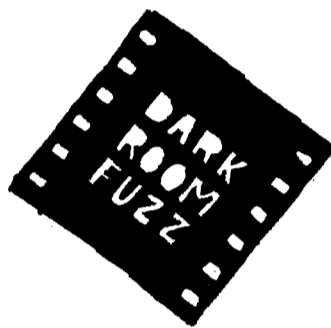
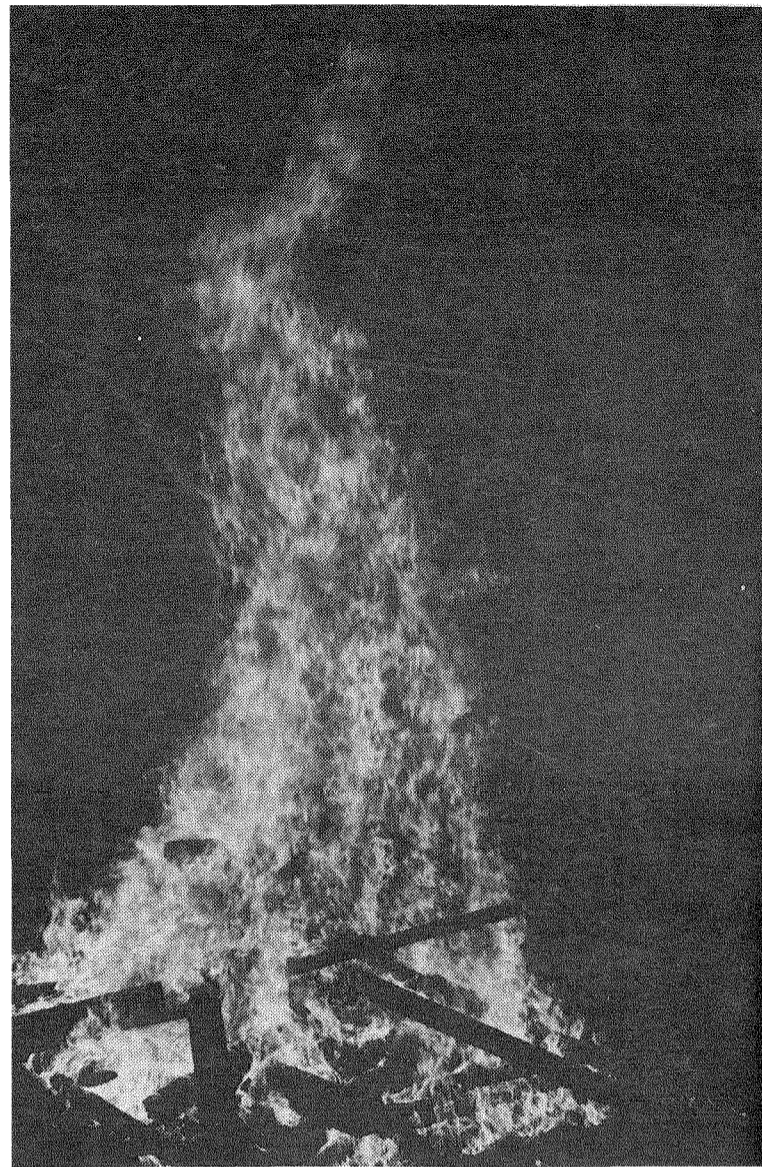
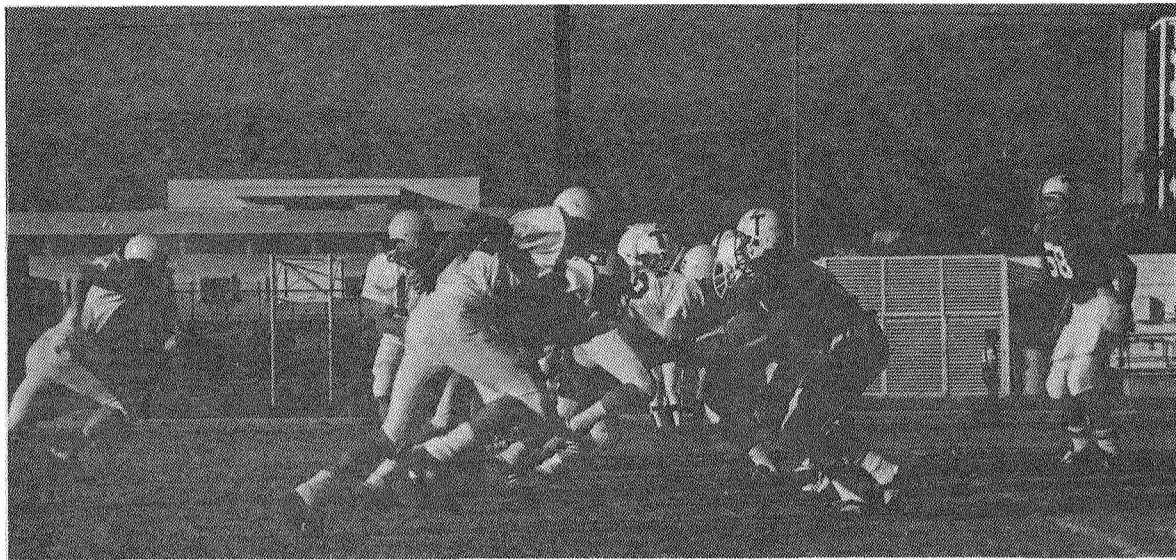
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# BEAVERS BEAT TECH

Photos by  
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