

Sam Hinton Joins Peggy For Concert

Peggy Seeger and Sam Hinton will be presented in concert by the Caltech YMCA on Thursday, October 19, at 8 p.m. The duo will sing in Chandler Dining Hall. Tickets are on sale in the YMCA office, in the bookstore, and in the News Bureau in Lower Throop; seats are \$.85 for students and \$1.25 for non-students.

Ewan MacColl, who was to have sung with Miss Seeger, was injured in an accident and has cancelled his West Coast tour.

Hinton has been a folksinger all his life. Born in Oklahoma, he has lived for many years in various parts of the South, learning the blues songs which are one of his specialties. Hinton has made over 64 recordings for the Library of Congress, as well as having recorded some 100 songs for Folkways Records. During the school year he teaches University of California extension courses in folk music.

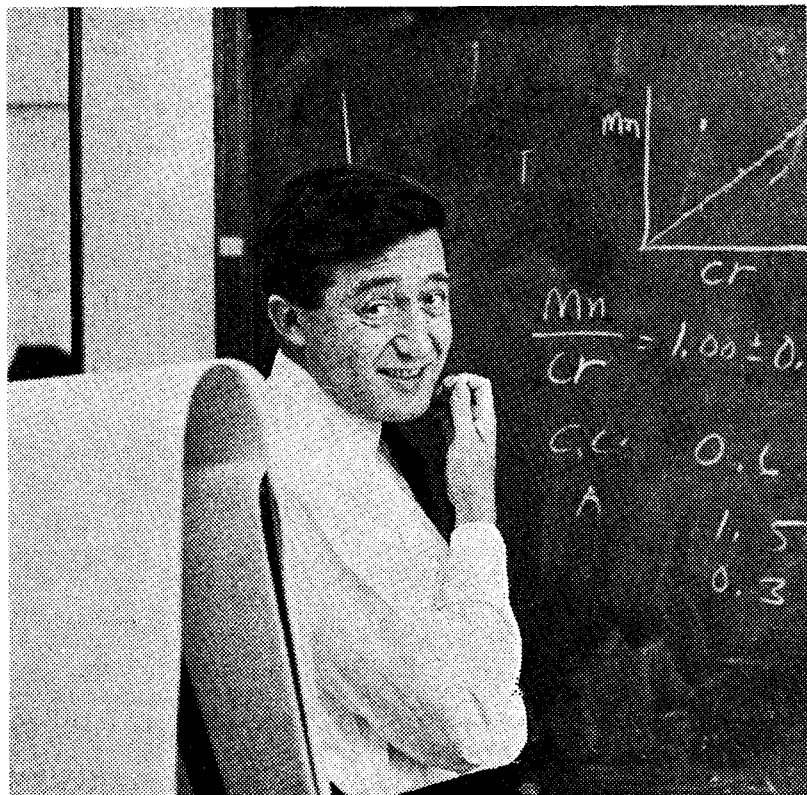
Hinton is no stranger to the scientific way of life: He is Scientific Director of the aquarium and museum at Scripps Institute of Oceanography at La Jolla. When he's not folksinging, that is.

Sands Talks To Diners On Arms Control

Matthew Sands, Professor of Physics, will speak to the Y Diners' Club, Monday, October 16, on his participation in a conference of scientists on disarmament and the increased possibilities of disarmament.

This past summer, Sands, C. C. Lauritsen, Professor of Physics, and Harrison Brown, Professor of Geochemistry, were all participants in an informal conference of scientists from the United States and Russia. This conference was an outgrowth of the conference sponsored by Cyrus Eaton at Pugwash, Nova Scotia. The scientists lived in Stowe, Vermont, a backwoods community, isolated from the rest of society. Professor Sands relates that this isolation forced co-operation and communication among the two groups. As a result, he feels that there is an increased possibility of disarmament because the two groups learned the reason for the rivals position and appreciate the arguments of the other more than they have in the past. He wants the American people to learn of the bettered communications among scientists and to remain optimistic about disarmament negotiations.

The Diners' Club is held every Monday night in Chandler Dining Hall at 6:30 p.m. Students receive a free meal by showing their student body card and receiving a meal ticket for \$1.25. Those who cannot come to dinner are invited to come at seven p.m. to hear Sands speak.



Harrison Brown, Caltech geochemist, who talked to the Geology Club about his trip to Russia, strikes a familiar pose during a lecture. —photo by Joe Munroe

Harrison Brown Tells Geology Club State Of Soviet Science

BY BRUCE ABELL

"To me, the most impressive thing about the Soviet Union is the rate of growth. At times I marvel at it, and other times it frightens me." Harrison Brown, Caltech geochemist, concluded his talk to the Geology Club on October 4 with that statement. Dr. Brown, accompanied by his wife, toured Russia last summer as the guest of, and at the invitation of the Soviet Academy of Sciences. He explained that he decided to accept the invitation (which had been repeatedly offered since 1955 when he met many Russian scientists at the Atoms for Peace Conference in Geneva) when he was assured that he would be able to plan his own itinerary. He had no intention of falling into the all too familiar routine of "youth camps, folk festivals, and power projects."

He submitted a list of desirable stops, including the center for Russian lunar probes; Novosibirsk, a new city planned solely for scientific research; the Tunguska River meteorite fall; and more. He reports that he saw about 80% of these diversified places, being thwarted only when scheduling made certain side trips impossible.

During his trip, which lasted about six weeks, he traveled across most of Russia, from Georgia to Siberia. The Soviet Academy provided him with an interpreter who also took on the jobs of guide and concierge.

Women and Women

As is usual at Geology Club meetings, a major portion of the time was spent in darkness while magic lantern slides (Mrs. Brown's) lit the screen. Accompanying commentary ranged from fashion comments ("The women in Moscow are better dressed each time I visit that city") to technical subjects (50% of all Soviet geologists are women, and 50% of the people in field camps are women. Oohs, aahs, and groans from the assembly).

Russia has an organization of scientific academies that certain-

ly surpasses ours in both numbers and activities. The Soviet Academy is a working organization, not simply honorary. It ranks extremely high in the Soviet hierarchy and is directly responsible to the all-powerful Council of Ministers and to no one else. This is a position of importance comparable to the Foreign Office. Because the Communist Party is the policy branch of the government, about 50% of the scientists are party members. These members bear the dual responsibility of getting the vast amount of work done (the Academy directs all scientific research in Russia) and carrying out official government policies. Recent complaints about duplication of research projects in different sub-groups has led to the formation of a budget committee which is also directly under the Council of Ministers. This committee (which went into operation last summer and controls the purse-strings of over 1000 research institutes) is headed by no less than the Vice-President of the Council of Ministers.

There are 162 members in the Academy. Election to membership requires nomination by a scientific division of the Academy and a vote by two-thirds of the total membership. In a typical election, there are about ten vacancies and 15 people vying for each.

Bare Subsistence?

But the struggle is worth it. Members get an automatic lifetime pension of about \$500 a month (don't forget that the money is a bonus) as well as a rent-free, comfortable house in the Moscow suburbs.

Since 1950, the Soviet Union has tripled the number of trained scientists at work. Russia now has more scientists than the United States, but they are generally not as well trained. In an effort to get diversified projects started, Russia seems to have sacrificed quality of workers for large quantities. Now though, as Soviet science is

(Continued on page 8)

Special ASCIT Vote Held Today

Dance Class Season Ticket Still Bargain

The second in the series of ASCIT Dance Classes will be held Wednesday, Oct. 18, at 8 p.m. Those who attended the class last night will agree on its merits.

The series consists of seven more classes, each one assuming a knowledge of the preceding class. However, it should not be too difficult to catch up with the class at present. Anyone interested in learning how to dance and in meeting girls may see Pete Metcalf, Ray Barglow, or any of the House Social Chairman in order to obtain tickets. Tickets are being sold at \$4.00 for the entire series, or \$.75 for an individual class.

Voting is going on this morning and afternoon in front of Dabney Hall and in the Student House lounges to fill an ASCIT post and two Senior Class offices. The positions to be filled are ASCIT athletic manager, Senior Class secretary, and Senior Class athletic manager.

Nominees for ASCIT athletic manager are John Lindsey and Tom Bopp. Running for secretary of the Senior Class are Ken Larson and Neil Gretskey. The contest for Senior Class athletic manager is three-sided, the nominees being Allen Bernstein, John Newmeyer, and Bill Rowe. Nominations for these positions closed last Monday.

The balloting for these offices will end at about three p.m. this afternoon; the results will be announced sometime this evening.

New RA's Interviewed; Clovis, Davis Like Student House Life

BY BILL PENCE

James Clovis, the new Resident Associate of Lloyd, and James Davis, the new Resident Associate of Page, both feel that the job of the RA is an undefined thing. He is many things at many times to many people. He must be close to the students and their problems yet he must also be a representative of the faculty.

RA Clovis got his B.S. in chemistry at Waynesburg College, Waynesburg, Pennsylvania. He came to Caltech three years ago and is currently doing research in physical organic chemistry under Dr. Hammond. Outside of the chemistry lab, Jim enjoys athletics — softball, basketball, tennis — and bridge. As evidence of his softball playing, Jim sports a cast on his broken left wrist. On the cultural level Jim likes music, especially modern jazz.

Jim Davis, a Biophysics research fellow, is at Tech on an N.S.F. grant. He graduated as a chem major from Mississippi State in 1956 and got his Ph.D. at M.I.T. in 1960. Jim is working with Dr. Robert Sinsheimer on the molecular structure of viruses in an attempt to gain knowledge of genetic makeup. In his spare time Jim also enjoys athletics and, in fact, is often Jim Clovis's tennis partner. Music and singing in the Glee Club round out Jim's outside interests.

Both Clovis and Davis admire the self-governing aspect of Caltech's House system. They feel that this system works mainly because of the high caliber students involved. Clovis, who spent his undergraduate years in a fraternity, recognizes the Houses as more inclusive groups which do not exclude those who are not "neat guys".

Davis remarked that at M.I.T. the students are remarkably similar to those of Caltech, but

because they have a fraternity-dormitory system, those not in the frats have little group spirit. Both Jims commented on the intellectual environment at Tech. Jim Clovis feels, however, that this rigorous intellectual atmosphere has contributed to an unhealthy cynicism. Clovis, in his own words an eternal optimist, feels that cynicism is easy to resort to at Tech because of the pressures, but he thinks that if a student can survive with an optimistic outlook he will be a better student.

Notices

GEAR TO GO

The BOD, ever responsive to student opinion, is considering a replace-the-gear contest. See your friendly ASCIT officer if you are interested in modernizing Tech's venerable symbol.

SECTION LEADERS WANTED

Section Leaders should be elected in all freshman sections by Friday, October 13. As soon as elected, each section leader should report his name to Dean Strong's office, 115 Throop.

STUDENT SHOP SEEKS MEMBERS

The Student Shop is now accepting applications for membership. Application forms may be obtained from Ken Manly in Ruddock, Bill Reining in Dabney, Bob Bump in Ricketts, or Bill Burke in Fleming. These forms should be filled out and returned to a Shop Committeeman before Friday, October 20.

ARE YOU USING THURSDAY AT ELEVEN?

A committee is studying the advisability of holding regular classes on Thursdays at 11 a.m. Those presently using this hour for some activity should report this fact to the BOD as soon as possible.

INTERHOUSE DANCE SET

The InterHouse Dance has been scheduled for Saturday, November 11. As usual, it will coincide with Alumni Day.

Editorial

Big T

The 1961 **Big T** is running true to form. At last word it was lost somewhere between its editor, Pete Fischer, and the publishers. ASCIT officials have been phoning Fischer, who left Tech last term, but the long-distance calls to New York have done nothing yet except enrich the telephone company.

One can't really blame editor Fischer for his unconcern about the **Big T's** fate; after all, it is partially responsible for his own fate. It simply points up a major fault of the **Big T** as it stands today: It is too big for its own good. It always seems short on staff, money, time, and originality, and long on pages. (Last year's **T** featured "Emty-Space Fillers.") There is much unnecessary duplication throughout the book.

I understand the 1962 **Big T** has a larger-than-average, talented staff. Perhaps that will be a help to the usually-overworked editor. However, I still believe that a study of other schools' yearbooks, a lot of imagination, and a long scissors will both improve the **T** and lighten its editor's heavy load. Currently the **Big T** stands as a series of uninspiring monuments to the lack of originality of its editors.

—molho

Don't Wait For The Profs

At least once a year, the cry rings over the Student Houses, "We never meet the Faculty! We don't know what sort of research is going on at Tech!" There are two good methods for reducing these problems. The first is "go to class." The second is "go to see the Faculty."

The Mountain won't come to Mohammed, as L. McCombs suggested last week. The Faculty Member at Tech is under heavy pressure, generated by the atmosphere here, to do a great deal of research. He also is a member of a committee or two, and may do outside consulting as well. He has more journals, abstracts and research notes to read than could be skimmed in a forty-hour week. He also has class notes and lectures to prepare when he can get the chance. He's just too busy to seek out the undergrad.

However, almost all the Faculty and graduate students at Caltech love to talk about their research, their classes, and their studies. Pushed a little, they may even spill a little about The Life of a University Professor. All you need to do is catch them in office or lab, smile a little and ask a few questions. And if they are out? Then talk to the nearest secretary (often worthwhile by itself) and convince her to give you an appointment with the harried man.

Don't be discouraged if you don't hit it off the first time. Not all the faculty are intensely verbal, and some are actually shy. If you stick to it (i.e., go visit two or three times), you may eventually break through enough to make a friend.

The Faculty are not the only interesting people on campus. Often enough of the secretaries, librarians and graduate students are worth meeting. All you need is a smile and a willingness to listen.

Visiting with the Faculty will give you a "feel" for the sorts of research work being carried on. But if you are interested in trying it a little yourself, it is often possible to work a few hours a week for the Institute, helping on a research project. This is the most effective way to learn what research is like—much more so than working textbook problems.

You've heard this before, but it **works**—for those willing to spend a couple of afternoons wandering about West Campus.

—benson

Letters To The Editors

Editors:

I would like to comment on several points in the thoughtful articles by Larry McCombs on Tech Education (*California Tech* Sept. 28 and Oct. 5). Two of them, the insufficient exploitation of the high faculty-to-student ratio implied by McCombs and the benefits of small, informal, seminar-like classes extolled by him make me feel on the defensive.

The high **faculty-to-student ratio** at the Institute is a result of the strong research interests of the faculty. Many staff members are indeed engaged exclusively in research. Not only are these activities of great importance to the welfare of the Institute and thus to the students, but undergraduates benefit directly, because research tends to keep the teaching alive and up-to-date. In addition, a number of the persons not engaged in formal teaching direct student research both on the undergraduate and graduate level. Many alumni count such research activities, including the resulting personal contacts, among their most valuable experiences at the Institute. The entire staff is thus directly or indirectly of benefit to the undergraduate program. This arrangement is, I believe, of far greater value to the students than would accrue from an increase of the time spent by the faculty in teaching, such as by informal instruction of small groups, when a good job in larger classes is possible.

Small informal classes are best suited to the teaching of **advanced** subjects, which usually are taught in graduate school or possibly on the senior level. For instruction in more elementary subjects I believe such classes to be inefficient. The teaching of these subjects does not suffer significantly from large classes, particularly if there is a follow-up in small groups by well supervised teaching assistants. Instruction of small groups from scratch by experienced staff members is prohibitive in time and personnel, while at best uneven results are obtained if the instruction of small groups is left entirely to teaching assistants.

In conclusion, I agree strongly with McCombs that the initiative in student-faculty relations should be with the students, on a collective as well as on an individual basis.

I also am much in favor of individual libraries for the Student Houses.

—Jurg Waser

Editors:

I should like to compliment you on the quality of the last two editions of your paper. The columns have been well written and interesting. I hope that you shall keep this up for the entire year.

—Henry Abarbanel

Editors:

On October 5, 1961, I returned to my room after dinner and was informed that Tom Bopp had been trying to reach me by phone all afternoon. My roommate, who had answered the phone, told me Bopp had said the message was urgent. I immediately went to the phone and called Bopp. My campaign managers, Al Bernstein and Al Pfeffer leaned over the phone as they said they were anxious to hear the urgent message which Mr. Bopp had to give.

Bopp said, "John, I have thought it over and I am going to run for ASCIT Athletic Manager."

I said, "Well, Tom, I'm going to run anyway."

He then said, "But would you be willing to sit down and have a meeting with me and my manager, Kerry Donovan?"

I said, "Yes, but for what purpose?" And Bopp said, "We will offer you anything you want — the Goldsworthy Trophy — or any athletic job in the school if you won't run for ASCIT Athletic Manager."

I said, "No, Tom, I think it's against the honor system. I won't meet with you. I am going to run anyway and you can be sure that you will face a real tough campaign."

—John H. Lindsey

Editors:

I have heard that our California Tech is one of the nation's top college newspapers. I hope that you, as a person engaged

in journalism, clearly realize your responsibility to tell the truth in what you and your colleagues write. I wish to warn you concerning a most important issue.

The Communists are engaged in a program of world conquest by the most sinister, insidious means. This means of conquest is nothing less than infiltration and subversion into every phase of American life, in fact it is so subtle that uninformed persons can most easily be "duped". The nature of this conflict and the fact that one must know his enemy in order to fight him effectively make it very necessary that people educate themselves in the philosophy, objectives, and strategy of the Communists. These Anti-Communist schools are working toward that end.

If one is to fight effectively against the enemy, he must have enthusiasm and love for his own cause (here his American heritage won through blood and struggle by our forefathers). However, I agree that emotional demonstrations are not a truly effective means of combat. The best means for combat is a knowledge of the facts. There are some bookstores at which such information (much of which is thoroughly documented) can be obtained.

I urge you to consider this situation most carefully. If you have questions, you may see me.

—Charles Flynn

Y Public Affairs Group to Meet

Co-chairmen Roger Noll and Lance Taylor will head an organizational meeting of Caltech's YMCA Public Affairs Commission in the Lloyd House conference room at 9 p.m. Monday, October 16. All parties interested in helping formulate the program for the coming year of this influential commission are urged to attend.

The commission in the past has provided opportunities for Caltech to hear and meet people outstanding in many controversial fields.

California Tech

Published weekly during the school year by the Associated Students of the California Institute of Technology, Incorporated.

Editors

Bruce Abell, Dave Benson, Lee Molho
News Staff

Vernon Bliss, Kris Davidson, Walt Deal, Larry Hall, David Helfman, Richard Karp, Bob Liebermann, Jay Lippman, Pete Lippman, Jock McLeish, Charles Michener, Bill Pence, J. C. Simpson, Evan Suits, Marcia Thamm, Hal Wyman

Feature Staff

Lon Bell, John Berry, John Crossman, Roger Leezer, Dave Sellin, Bill Tivol, Bjo Trimble

Sports Staff

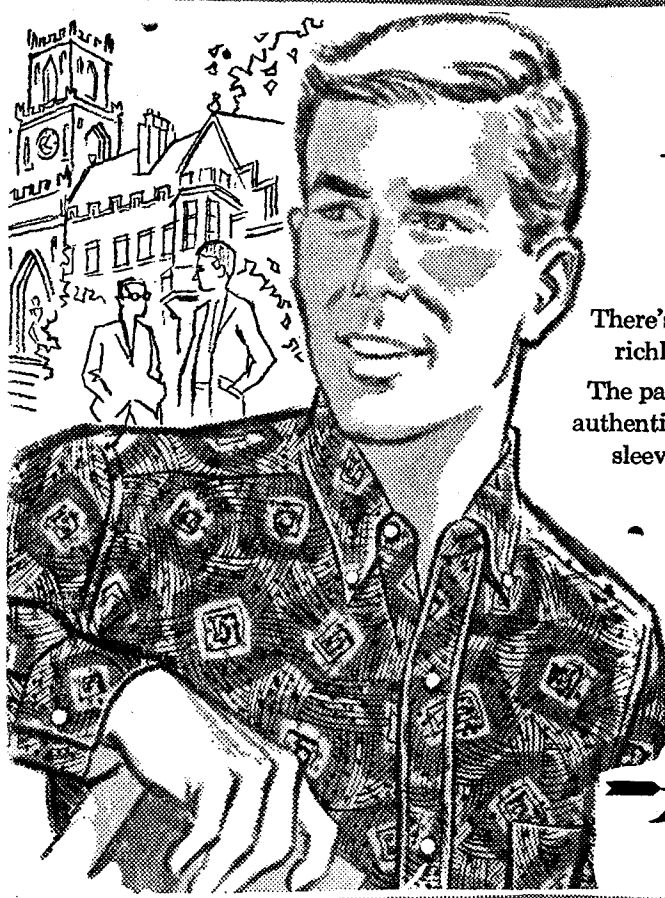
Peter Ford: Editor

Vince Hascall, Steve Hall, Bill Howard, Roger Noll, Julian Prince, Tom Sallee, Bruce Sirovich

Business Staff

William Rosenberg, Manager
Circulation: Howard Monell

The California Tech, 1201 East California Blvd., Pasadena, California.
Member of The Associated Collegiate Press
Second Class postage paid at Pasadena, California
Printed by Bickley Printing Co.
Represented nationally by National Advertising Service, Inc.
Subscriptions: \$1.00 per term, \$3.00 per year. Write: Circulation Manager.



In a class by itself

There's never been a casual sport shirt so richly endowed as Arrow Batik Prints. The patterns are subtle, imaginative, and authentic. The sleeves come in your exact sleeve length — plus the famous Arrow contour tailoring for a slim, trim tapered waistline fit. Sanforized labeled.

Short sleeves \$4.00
Long sleeves \$5.00

—ARROW—

From the
"Cum Laude Collection"

frets and frails

Baez Blasted, Scruggs Plugged

BY JOHN D. CROSSMAN

After a summer of relatively little folk activity (in Detroit) it is good to be back at Tech where the interest in folk music seems higher than ever. It seems that every other frosh plays the guitar and upperclassmen are turning in increasing numbers to more esoteric instruments such as the five-string banjo. At this point, I would like to repeat my former warning to those who are considering taking up a folk instrument. Cheap instruments are often difficult to play and quickly discourage the beginner. A second hand instrument is often better than a new instrument of comparable price. There are several places in the Los Angeles area where good second hand instaruments are available, McCabe and Kahn in Santa Monica being one. No matter where you buy an instrument, however, take along someone who has experience with it to advise you on your purchase.

As I am typing this column, I can hear the new Joan Baez record (Vanguard VRS-9094) playing in the background. I have only listened to it carefully once and my impression was that it did not quite measure up to her first album. Still a very worthwhile investment. One song that interested me especially was "Railroad Boy" whic his a variant of "Snow Dove," a popular bluegrass number. Miss Baez became very interested in Southern mountain and bluegrass music after the 1960 Newport Folk Festival and includes a great deal of this material in her new album.

Speaking of bluegrass, its foremost proponents Lester Flatt, Earl Scruggs, and the Foggy Mountain Boys, are coming to the Ash Grove (on November 14th, I believe). This is a show that I strongly recommend that you see. Earl Scruggs is the best five-string banjo player in the world and each performance should be a memorable one. If you are interested in the "Scruggs style" of banjo picking, Billy Ray (of "The Country Boys") is giving lessons at the Ash Grove on Saturdays. I am taking from him and will be glad to pass on any pointers I can to aspiring pickers. If there is enough interest, I am still thinking of starting a banjo seminar to share ideas. Anyone interested can leave a note in the "C" box in Ricketts.

Presently appearing at the Ash Grove are Bud and the Kinsmen. They put on an intense, polished show that makes a night at the Ash Grove very enjoyable. An excellent place to take a date.

Pete Seeger (our leader) is ou ton bail awaiting trial in a higher court after being convicted on ten counts of "contempt of Congress." Anyone interested in the case may get a brochure giving "all th facts" from: Friends of Pete Seeger, c/o Harold Leventhal, 200 West 57th Street, New York, New York.

* * * * *

The song I chose for this week is a traditional Irish tune. It can be heard on Vanguard VRS-9083, Newport Folk Festival 1960, Volume 1.

THE GYPSY ROVER

THE GYP-SY RO-VER COME O-VER THE HILL, BOUND THRU THE VALLEY SO
SHA-OY; HE WHIST-LED AND HE SANG TILL THE GREEN WOOD RANG, AND
HE WON THE HEART OF A LA-OY. AH-DI-DO, AH-DI
DO-DAY-DA, AH-DI-DO, AH-DI-DO, DAY-DEE; HE WHISTLED AND HE
SANG TILL THE GREEN WOODS RANG, AND HE WON THE HEART OF A
LA-OY.

2. She left her father's castle gate,
She left her own true lover;
She left her servants and her estate,
To follow the gypsy rover. (Cho.)
3. Her father saddled his fastest steed,
Roamed the valley over;
Sought his daughter at great speed,
And the whistling gypsy rover.
4. He came at last to a mansion fine,
Down by the river Clayde;
And there was music, and there was wine,
For the gypsy and his lady.
5. He's no gypsy my father, said she,
My lord of freelands all over;
And I will stay till my dying day,
With my whistling gypsy rover.



BY JOHN BERRY

There is some confusion as to my last column. First, the purposes of the basic bars are (1) to pander to adventurous taste-buds, or (2) to serve a variety of tastes at a party. I made them up when I was House Bartender at Ricketts, as I did not want to have a large number of liqueurs on hand.

Some basic drinks made by bar two are Manhattans, Old Fashioneds, Collins of various kinds, Sours of various kinds, Ward 8's, Martinis, Gin and Tonics, Rum and Tonics, Gin Rick-eyes, Rob Roys, Daiquiris, Vodkatinis. This is just a cursory list, exhausting neither basic drinks nor the potential of bar no. two.

By special request, I am giving recipes only from bar number one this week. Actually, I was dared to find a good drink using Curacao.

CHATTERLEY

- 1/2 Gin
- 1/4 Dry Vermouth
- 1/8 Orange Juice
- 1/8 Curacao

Shake well with ice and strain into glass.

BRANDY

- 3 oz. Brandy
- 3/4 oz. Curacao
- 1 dash Angostura Bitters

Stir well with ice and strain into glass. Garnish with a twist of lemon.

DERBY NO. TWO

- 1/2 Whisky
- 1/4 Sweet vermouth
- 1/4 Curacao
- Juice of 1/2 lime.

Shake well with ice and strain into glass.

EL PRESIDENTE

- 1 1/2 oz. Dark Rum
- 1/2 oz. Curacao
- 1/2 oz. Dry Vermouth
- 1 dash Grenadine

Shake well with ice, and strain into glass.

There are several good drinks which call for dashes of Curacao, but the terms of the dare were "with Curacao as a major ingredient." So it is fulfilled.

Karp Wins Y Post

After a hard and bitterly-fought battle for the title of YMCA Publicity Chairman, Dick Karp emerged victorious by the margin of a mere eight votes. This election once again illustrates the avid participation of Techmen in campus politics. The final tally of votes: Karp 8, Opponents 0.

THE CAMPUS BARBER SHOP

New Location:
South End of T-4
ALL HAIRCUTS
\$1.50

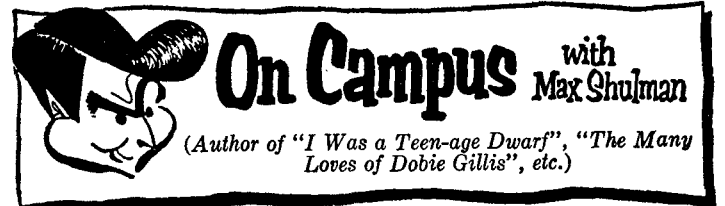
Two Barbers to Serve You

Delegates To MUN Chosen; Tech To Represent South Africa

The Model United Nations Continuation Committee has, after considerable financial finagling, been able to find room on this year's MUN delegation for every upperclassman that applied, a total of seventeen. Representing Caltech and South Africa will be Roger Noll, delegation chairman, and the following delegates: Dave Barker, Matt Couch, Jim Geddis, Les Ingber, Jim Johnson '62, Bob

Koh, Stu Linn, Gary Lorden, Pat Manning, Wendell Mendell, Dave Pritchard, Larry Rabowitz, Bob Ross, Lance Taylor, Hal Thomas, and Francis Wilson.

Each delegate will help finance the activity, so that the student body will pay for only about 60% of the total cost. This will be by far the largest delegation ever taken by Caltech to a MUN, and will be as large as any other at the assembly.



THE TRUE AND HARROWING FACTS ABOUT RUSHING

It is well enough to sit in one's Morris chair and theorize about sorority rushing, but if one really wishes to know the facts, one must leave one's Morris chair and go out into the field. (My Morris chair, incidentally, was given to me by the Philip Morris Company, makers of Marlboro Cigarettes. They are great-hearted folk, the makers of Marlboro Cigarettes, as millions of you know who have enjoyed their excellent cigarettes. Only from bountiful souls could come such mildness, such flavor, such filters, such pleasure, as you will find in Marlboros! For those who prefer crushproof boxes, Marlboro is available in crushproof boxes. For those who prefer soft packs, Marlboro is available in soft packs. For those who prefer to buy their cigarettes in bulk, please contact Emmett R. Sigafos, friendly manager of our factory in Richmond, Virginia.)

But I digress. I was saying that in order to know the true facts about sorority rushing, one must go into the field and investigate. Consequently, I went last week to the Indiana College of Spot Welding and Belles Lettres and interviewed several million coeds, among them a lovely lass named Gerund McKeever. (It is, incidentally, quite an interesting little story about how she came to be named Gerund. It seems that her father, Ralph T. McKeever, loved grammar better than anything in the world, and so he named all his children after parts of speech. In addition to Gerund, there were three girls named Preposition, Adverb, and Pronoun, and one boy named Dative Case. The girls seemed not to be unduly depressed by their names, but Dative Case, alas, grew steadily more morose and was finally found one night dangling from a participle. After this tragic event, the father abandoned his practice of grammatical nomenclature, and whatever children were subsequently born to him—eight in all—were named Everett.)



They Pledged more Girls than they had room for...

But I digress. I was interviewing a lovely coed named Gerund McKeever. "Gerund," I said, "were you rushed by a sorority?"

"Yes, mister," she said, "I was rushed by a sorority." "Did they give you a high-pressure pitch?" I asked. "Did they use the hard sell?"

"No, mister," she replied. "It was all done with quiet dignity. They simply talked to me about the chapter and the girls for about three minutes and then I pledged."

"My goodness!" I said. "Three minutes is not very long for a sales talk!"

"It is when they are holding you under water, mister," said Gerund.

"Well, Gerund," I said, "how do you like the house?"

"I like the house fine, mister," she replied. "But I don't live there. Unfortunately, they pledged more girls than they have room for, so they are sleeping some of us in the bell tower." "Isn't that rather noisy?" I said.

"Only on the quarter-hour," said Gerund.

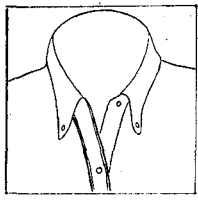
"Well, Gerund," I said, "it has certainly been a pleasure talking to you," I said.

"Likewise, mister," she said, and with many a laugh and cheer we went our separate ways—she to the campanile, I to the Morris chair.

© 1961 Max Shulman

The Philip Morris Company makes, in addition to Marlboro, the new unfiltered, king-size Philip Morris Commander—choice tobacco, gently vacuum cleaned by a new process to assure you the finest in smoking pleasure.

our man in the Ivy Leagues



BY LARRY MCCOMBS

As I was taking my last walk across the Olive Walk, before heading east, Bruce Abell cornered me and with a desperate look in his eye, asked if I wouldn't write a column for the *California Tech* this year. Well, what was I to do? How could I refuse a man with tears in his eyes? So here I am. As for the name of this column — I wracked my brain for weeks trying to think of a clever pun or play on words, but nothing came. So I called it "OUR MAN IN THE IVY LEAGUES." If there's another title up there, it means that somebody else did come up with a brilliant idea. If there's another name than Larry McCombs on the byline, it means somebody is plagiarizing.

Perhaps I should hasten to say — lest my name become synonymous with that of Quising at Tech — that despite believing all the things I said in those two articles, I still like Tech, and if I had it all to do over again, I would still go to Tech. But I do think that there are many things that need improvement, so I sounded off. By the way, before you dismiss this as the uninformed opinion of one graduate, let me say that my ideas as expressed in the article were discussed before publication with one professor, one grad student, one graduate, and one drop-out, all of whom agreed in the most part with what I said (and with a good deal more Bruce elected to blue-pencil lest he stick his neck out to the ankles).

As of this writing, I have had three weeks to begin to get used to Yale, and so far I have found it superior to Tech in only two respects. One is the fact that all the professors are good teachers and lecturers. This is merely a reflection of the fact that at Tech, men are chosen for their research ability, not their teaching ability. But it is nice to enjoy lectures for a change. The other superior aspect is the library. The Yale library is exceeded in size by only a couple of other University libraries in the country (one is at a little country school a few miles away in a suburb of Boston, but we don't talk about that here).

Besides simply having every book and periodical one could need, the library does offer several services which would be useful at Tech. One is a reserve reading room. In this room are placed all books which are required or recommended reading in any courses. During the day they may only be used in the room (books in extreme demand may only be used for two hours), and they may be checked out overnight, though a 50c per hour fine insures prompt return.

Another useful facet of the library's service is the fact that most books are checked out for three months. If they are asked for by anyone else, the library may recall them after two weeks. The Caltech library follows essentially this policy on an unofficial basis, but because it is never stated as an official rule it leads to general confusion and disregarding of all the

library rules.

There is a very pointed joke making the rounds of the foreign students here. It goes like this: A man was walking down a French beach when he paused to watch a lovely girl swimming *au naturel* amongst the breakers. Suddenly she began to struggle and scream. By the time he reached her, it was too late — she was already dead when he dragged her body to shore. He left it there on the beach while he went to report the incident to the police. When he returned, to his astonishment, he found a man making love to the nude body. "Mon-sieur," he shouted, "that woman is dead!" The man leaped up with a horrified expression. "Sacre bleu!" he exclaimed, "I thought she was an American!"

One thing that takes a Californian a while to learn here is
(Continued on page 5)

New Antibiotic Found

An antibiotic synthesized by oat seedlings, perhaps to protect their tender rootlets from fungus infections, has been isolated and is being analyzed by Caltech biologists who are interested in the possibility of extending its usefulness.

The compound is named avenacin, after the Latin name, *Avena sativa*, for oats.

Avenacin was tested by a pharmaceutical firm against 27 different fungi. In the test tube highly diluted doses effectively controlled 16 of them, including the Dutch elm disease fungus that is destroying thousands of elm trees in the Midwest.

Caltech has supplied avenacin to the University of Wisconsin's plant pathology department for a field test against Dutch elm disease. Dilute concentrations of the antibiotic are used for watering the diseased trees. Avenacin is taken up by the roots and is carried to the leaves. The fungus attacks the leaves, causing them to fall.

Harmless if eaten, avenacin is lethal if injected into animals. It breaks open red blood cells, releasing the hemoglobin. Tested in the laboratory against 20 different bacteria, it was ineffective against all but one—the tubercu-

losis bacillus. However, because of its high toxicity, avenacin is not usable as a treatment in its present form.

Work on the interesting substance began here 11 years ago after Dr. Elizabeth Turner, a mycologist from Oxford, came to work with Dr. H. K. Mitchell, professor of biology. She had discovered that oat seedlings contain a powerful antibiotic against *Ophiobolus graminis*. This fungus frequents soils in fields in which oats may be planted and causes the "take all" disease in grain crops.

Working with Dr. Mitchell, Dr. Jacob V. Maizel isolated the substance and identified a chemical component in it that gives a blue fluorescence, which makes it possible to identify avenacin readily. Dr. Hans Joachim Burk-

hardt, research fellow in biology, improved the isolation method and has nearly completed the determination of the chemical structure.

The Caltech biologists have learned that the molecule is a large one, consisting of about 85 atoms of hydrogen, 55 of carbon, 20 of oxygen and one of nitrogen. The molecule is built from five linked components. Four components already have been identified. Dr. Burkhardt, who has a good idea of the pattern of the fifth group, is attempting to verify its structure.

Drugs Sundries Cosmetics Tobaccos
**CALIFORNIA REXALL
PHARMACY**
555 S. Lake SY 2-3156
Breakfast Lunch Dinner

**FRENCH
RUSSIAN**
Native Teachers

**SPANISH
ITALIAN**
Day or Evening

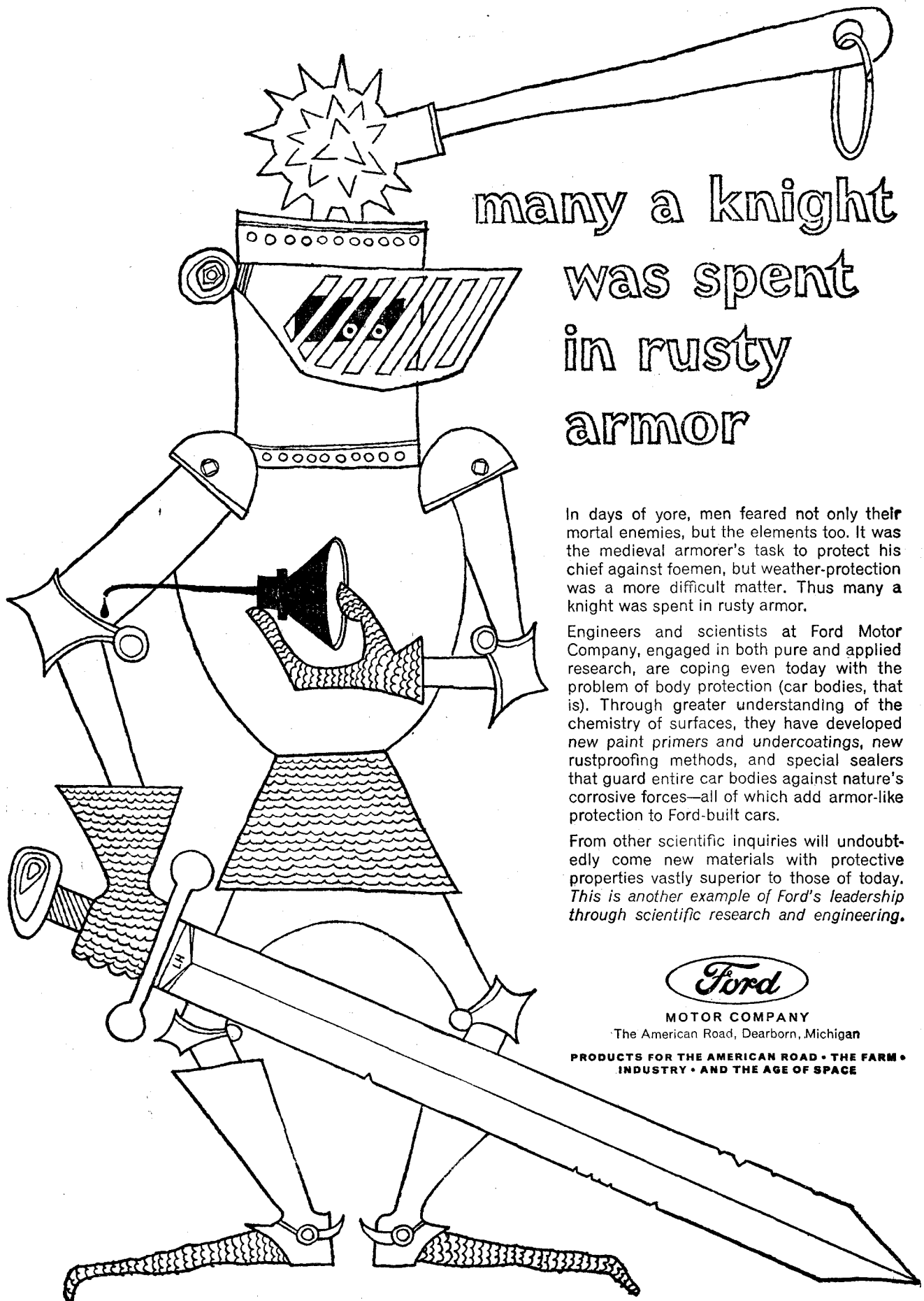
**GERMAN
JAPANESE**
Free Trial Lesson

PRIVATE INSTRUCTION

SMALL CLASSES STARTING NOW

THE BERLITZ SCHOOL OF LANGUAGES

PASADENA, 170 SOUTH LAKE AVE., SYcamore 5-5888



many a knight
was spent
in rusty
armor

In days of yore, men feared not only their mortal enemies, but the elements too. It was the medieval armorer's task to protect his chief against foemen, but weather-protection was a more difficult matter. Thus many a knight was spent in rusty armor.

Engineers and scientists at Ford Motor Company, engaged in both pure and applied research, are coping even today with the problem of body protection (car bodies, that is). Through greater understanding of the chemistry of surfaces, they have developed new paint primers and undercoatings, new rustproofing methods, and special sealers that guard entire car bodies against nature's corrosive forces—all of which add armor-like protection to Ford-built cars.

From other scientific inquiries will undoubtedly come new materials with protective properties vastly superior to those of today. This is another example of Ford's leadership through scientific research and engineering.



MOTOR COMPANY

The American Road, Dearborn, Michigan

PRODUCTS FOR THE AMERICAN ROAD • THE FARM •
INDUSTRY • AND THE AGE OF SPACE

a hand of BRIDGE

By DAVID SELLIN

NORTH

S—A K 6 4 2
H—J 4 3
D—3
K—A K 10 4

WEST

S—J 10 5 3
H—A 9
D—K Q 10 9 8
C—7 5

EAST

S—None
H—8 6 5 2
D—J 7 6 5 2
C—8 6 3 2

SOUTH

S—Q 9 8 7
H—K Q 10 9
D—A 4
C—Q J 9

South dealer; East-West vulnerable.

1 S	2 D	3 C	Pass
3 H	Pass	4 NT	Pass
5 D	Pass	6 S	Pass
Pass	Pass		

Opening lead: King of diamonds.

The bidding is fairly straightforward. When North hears his partner open, he is immediately looking for slam in spades; for, as responder, his long spade is worth an extra point and his singleton diamond is worth three points. Thus his hand totals nineteen. But he is in no hurry to get to slam and simply bids three clubs to force his partner for a round. Happy to hear that his partner has a heart suit which promises to cover some of his losers, he checks for aces and bids six spades.

South sees at once that the contract is cold barring a four-zero spade split. However, he can still make the contract if West has the four spades by drawing the first round of trump with the queen in his hand. He goes down if East holds all of the outstanding trumps. And South is in luck, he can finesse West out of his jack and ten of spades, ruff his long diamond, and give up the ace of hearts for six spades.

Yale Report

(Continued from page 4)
the fine art of being a pedestrian amongst hostile motorists. In California, of course, cars will stop for any person in the street, though pedestrians scrupulously obey signals and avoid jaywalking. Here pedestrians completely ignore the signals and crosswalks, even when a cop is standing right there watching them. And the motorist do have a certain sporting attitude — they consider it bad form to increase speed when a motorist enters the street. However, they would never think of slowing down or swerving. A guy could get killed before he got rid of his California habits! Of course, it could be worse — and it is in Cambridge. I was there last weekend and found that in that city the motorists as well as the pedestrians ignore the lights. Boston has one great advantage over LA, though — its MTA. Despite the story of poor Charlie, I found that I could get just about anywhere in or near Boston for 20c with not more than a few minutes of waiting. I wholeheartedly agree with those people who keep insisting that LA needs an efficient rapid transit system.

One thing I enjoy about New England is the vast abundance of history in the raw. Everywhere one goes are signs telling about the historic events that occurred on that very spot. One could learn most of American history without cracking a book. And just to prove that I'm a true Techman at heart, while in Cambridge last Sunday I sat on

the spot where George Washington took command of the American Army in 1775 — and I studied quantum mechanics!

You think the California Chamber of Commerce doesn't do a good job? Today a student from Korea moved into the room above mine. When he learned that I was from California, he asked, "It is sub-tropical climate, is it not?"

Modern physics in a nutshell: "What we can't measure doesn't exist!"

I was expecting great Ivy League conformity of dress here, but such sophisticated drabness seems to be limited to the undergraduates. They all wear dark suits, narrow striped ties artfully blown back over the shoulder, light blue shirts with button-down collars, and most ride bicycles. The grad students, on the other hand, wear anything from the most formal to the least. My beard and California grubby clothes attract little or no attention.

During the last rainstorm I acquired the Yale habit of carrying an umbrella. I still feel a bit awkward about it — in California nobody but little old ladies carry umbrellas! But it's much handier than a raincoat which collects all the rain from the rest of your body and deposits it neatly on your trousers just below the hem of the raincoat.

Incidentally, the fringes of Hurricane Carla which reached here were considered quite a storm by the local residents. In Pasadena it wouldn't even be

considered a mild shower and breeze!

I originally headed east with bearded Bill Kern and somewhat-bearded Mike Talcott in Bill's Model A roadster. I and Mike's dog, Penny, occupied the rumble seat together with a huge pile of baggage. Tied on behind were sleeping bags and a large red gas can. The pith helmets worn by all the party (except Penny — they didn't have her size) completed the quaint picture.

Because of a highly souped up Model B engine, the buggy would cruise at 65 mph with ease, and we had great fun sailing down the highway, passing people with their eyes agog. Unfortunately, a fuel line broke just before we reached Needles, and though we fixed it quickly and went on again, the gasoline spilled about the engine compartment did as gasoline is wont to do in the presence of hot objects and burst into flame.

I was driving at the time, sharing the front seat with Mike and Penny. When the floorboards suddenly became a sheet of flame, Michael demonstrated his rapid reflexes by calmly clambering onto the back of the seat behind me, holding Penny above his head and shouting various advice and imprecations. But I was really calm, cool, and admirably collected. I stopped the car, killed the master ignition switch, set the handbrake, turned off the fuel valve under the dashboard tank, and got out to attempt to deal with the fire under the hood.

(Continued on page 8)

YMCA Sets Member Drive; Plans Poll Of Techmen

Next week workers for the ever-proselytizing Caltech YMCA will fan out searching for new members and urging old members to join again.

The most prominent feature of the annual Membership Drive will be a poll of the undergraduate student body. The poll will measure the breadth of participation in previous Y activities, and have individuals indicate areas of interest in the arts, public affairs, and philosophy. Results will be used to indicate areas in which the Y should concentrate, and as a basis for inviting students to participate in personally-interesting facets of Y activity.

Orientation of the various college YMCA's across the nation varies from one of rather strong emphasis on religious activity to that of our Caltech Y where attention is placed more on

problems such as arms control, civil liberties, student-faculty relations, folk singing, or visits to artists.

Members of any, or no, religious faith are invited to join. Membership is free and requires only that one care sincerely about the social problems and moral concerns of mankind.

ALVIN'S Photo Supplies

Finest Camera Store
With Competitive Prices
Processing +
504 South Lake
SY 5-4327

HAVE A BALL. Every semester has its bright spots—and you can enjoy them even more with a refreshing glass of Bud®. Where there's life ...there's Budweiser®



KING OF BEERS • ANHEUSER-BUSCH, INC. • ST. LOUIS • NEWARK • LOS ANGELES • TAMPA

WISH I HAD A SMOKE

YOU WON'T WHEN YOU TRY THIS

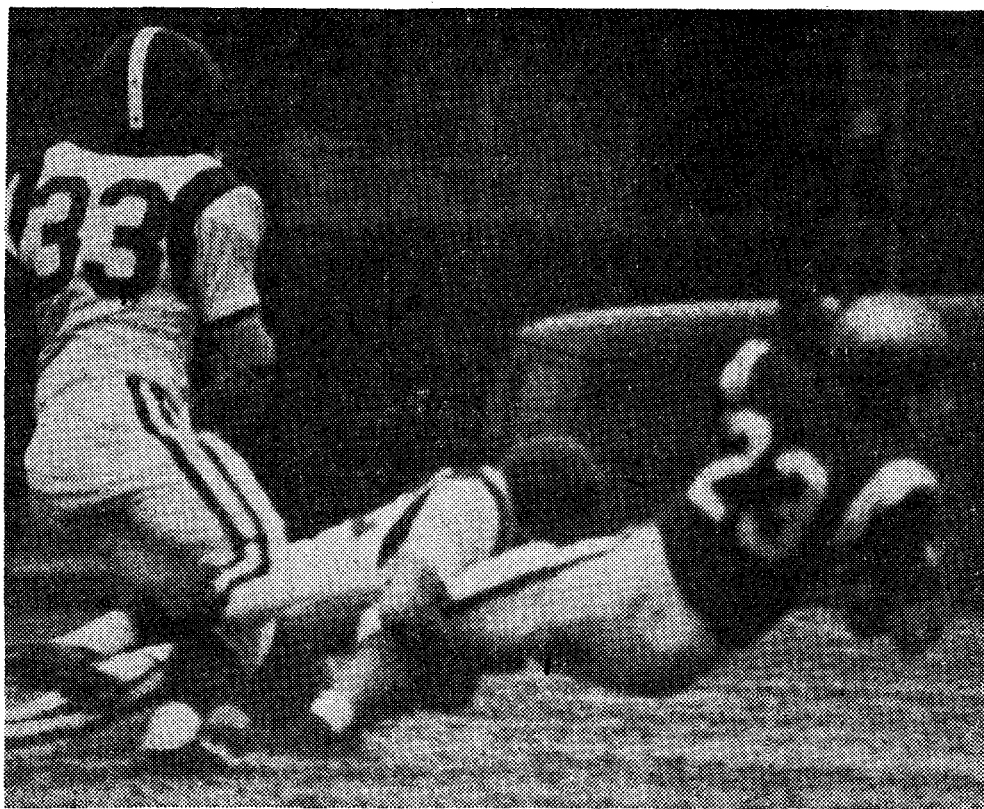
SAY—THIS COPENHAGEN TASTES GREAT

IT'S A MAN'S WAY TO GET REAL TOBACCO FLAVOR

DATED FOR FRESHNESS

TRY A PINCH OF REAL TOBACCO TASTE

SPORTS



Hascall going down after substantial gain.

—photo by Bruce Sirovich

Weak Defense Plagues Beavers In Opener

By PETER FORD

Caltech's Beavers struck for a touchdown early in the first quarter and then went on to suffer a humiliating defeat at the hands of Azusa Saturday 43-14. The visitors' victory at Tournament Park can be attributed to the fine passing and ball handling of their quarterback Tom Nelson who took effective advantage of the Beaver's shaky defense.

The game was a penalty-ridden maze of mistakes and sloppy football played by both sides. The fact that Azusa already had two games under their belts was probably the determining factor, for their defense had already been tested for weak spots. Weak spots showed like sore thumbs in the Beaver defense: The tackles were sloppy when they were made (most were missed); there seemed to be no stopping Nelson's short passes to right end Dick Mann; and too many long passes were completed to keep the visitors score down to accessible limits.

Scoring

The scoring went as follows. After receiving the kickoff from Tech, Azusa fumbled into the arms of Beaver guard Evan Hughes. A run by Geary Younce and a pass caught by end Frank Ridolphi put the Beavers in a position to score and Younce carried the ball over into the end zone from the seven yard line to give Tech a six point lead. Azusa scored first on a short pass in the first quarter which had been set up by a spectacular 50 yard pass play. Azusa scored next to make the score 14-6 early in the second quarter on a series of short pass plays. A pair of long passes set up the visitor's third TD at the end of the second quarter to make the score 20-6 at halftime. During the third quarter the

Caltech defense toughened up a bit and forced Azusa to make their first punt which carried to the Tech eight yard line. The Beavers bogged down deep in their own territory and the visitors recovered a blocked punt on the Caltech 29-yard line. Stopped on the ground, the visitors took to the air for a thirty yard pass play, which set up their fourth tally to make the score 28-6. In the fourth quarter, a Caltech drive bogged down in Azusa territory and the visitors took over on downs to drive 80 yards for their fifth TD (36-6). Caltech's second score came as Vince Hascall scampered 30 yards into the end zone to culminate a 65 yard drive. The conversion made the score 36-14. The final TD of the game came when Azusa's Jerry Lyde carried the ball through the entire Tech team for a 65 yard touchdown run.

Despite the unevenness of the score, some bright spots showed for Tech. The interior of the defensive line played well, and the rushing of fullback Ed Cline and halfbacks Younce and Hascall showed the potential of developing into a fine running attack. Unfortunately, a much stronger aerial attack than was shown Saturday will have to be developed in order to keep opposing defenses honest.

Next Game

The Beavers meet a rugged Pomona squad Saturday afternoon at Pomona for Tech's second game this season. A much improved performance over that of the Azusa game is expected as the team irons out some of its defensive difficulties.

The freshman football team plays its first game of the season Saturday morning against Oxy. Game time is 10 a.m. at Tournament Park.

Emerymen Victorious Over PCC and Alumni

The Caltech Water Polo team continued its winning ways last weekend defeating Pasadena City College 15-10 on Friday and the Alumni in their annual clash 14-12 on Saturday. Bruce Chesebro contributed a total of 16 points in the two games and seems well on his way to being a repeat selection for All-Conference Forward. The team as a whole looked much better and played more alert brand of ball.

The PCC game could better be described as a rout than a victory, despite the score.

At the end of six minutes the Beavers led 7-0. At this juncture the entire first string was pulled out and the second and third teams sent in to give battle. Not until the end of the third quarter, with the score 9-9, did coach Web Emery put the starters back in. Scoring for the Beavers were Chesebro (6), Mitchell (4), Manning (3), and McCammon (2).

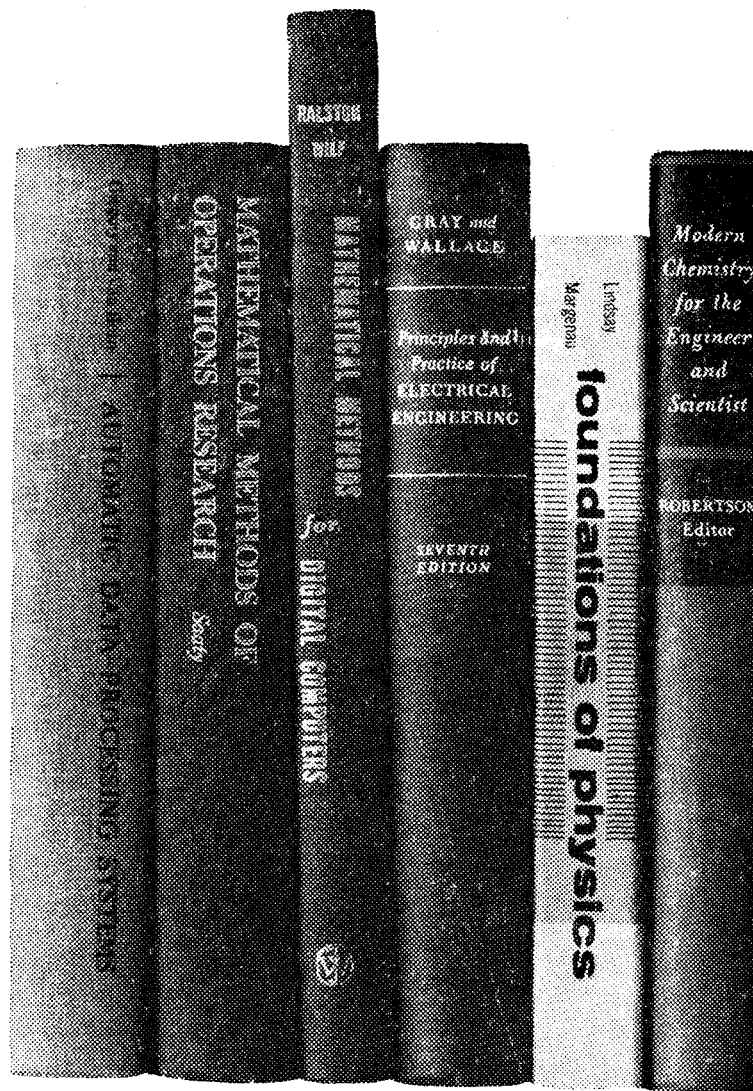
Alumni Game

In the Alumni game the stamina of the varsity proved to be too much for the veterans

who had a great deal of trouble keeping up. The Alumni were also hampered by the lack of an experienced goalie. Had Don Weiburg (all-conference goalie, 1958) been there it might have been a different story. The varsity had troubles of their own when four starters fouled out in the third period, but the substitutes proved adequate to the job of winning the game.

The varsity built up most of its lead in the third quarter and went into the final period leading 14-7 and despite a rash of scoring by the Alumni in the final two minutes were able to hold onto the victory. Chesebro was high scorer for the varsity with ten points, while Garman (class of 1954) contributed seven points for the Alumni.

The Frosh squad took its traditional first-game defeat from Santa Ana 32-0 in the second game on Friday. Considering the fact that this was their first game individually they did not do badly and we expect to see them winning before the season is out.



SYSTEMS

ENGINEERING can start here... or here... or here... or here... or here... or here

If you are completing studies in engineering, economics, math, science or business, have maintained high averages and are interested in a rewarding professional career, IBM Systems Engineering may be just the career for you.

An IBM Systems Engineer studies problems in industry, science, business and government, and then organizes the most effective electronic data processing techniques and machine systems to solve them. The problems are fascinating and exciting—and include automation of: process control and manufacturing operations, inventory control, document preparation, highway planning, weather forecasting, and complete business control

systems for utilities, transportation, banking and insurance, to name but a few. New techniques of automatic data processing are making headline news almost daily.

Your present training, combined with one of the most comprehensive training programs conducted by any company, prepares you for this fast-growing, dynamic new profession. Openings exist in all principal U.S. cities. All qualified applicants will receive consideration for employment without regard to race, creed, color or national origin. For more information describing the opportunities at IBM, see your College Placement Director or, if you desire, write or call—

You naturally have a better chance to grow with a dynamic growth company. **IBM.**
DATA PROCESSING



Beaver Chips

By Noll

Azusa Wasn't Kidding

It happened just like I said it would—Caltech taught lowly Azusa a football lesson. After only three plays, the Golden Beavers grabbed the football and marched down the field for a score, forging into the lead. Unfortunately, Azusa was willing to be taught and to learn the lessons fast, proving that College Board scores aren't everything. The Azusans even went on to learn a few things by themselves—like how to launch a passing attack (they couldn't have learned that from us—after the game Barker's uniform was spotless: all green). Azusa quickly found out that by blocking out rushers their quarterback would be able to stand for a few seconds, perhaps even get the pass away. Caltech never did learn this—when Barker got the ball, the interior lineman would turn and look at him to see what he was going to do, or sometimes just lie down to rest. Soon Barker, too, would be lying down, but he did it to serve as a mattress for five Azusa linemen.

The Caltech secondary had a tough time with the clever Azusa pass patterns—two receivers running straight down the field, with Receiver A coyly batting the ball across the field to Receiver B. It looked more like volleyball than football.

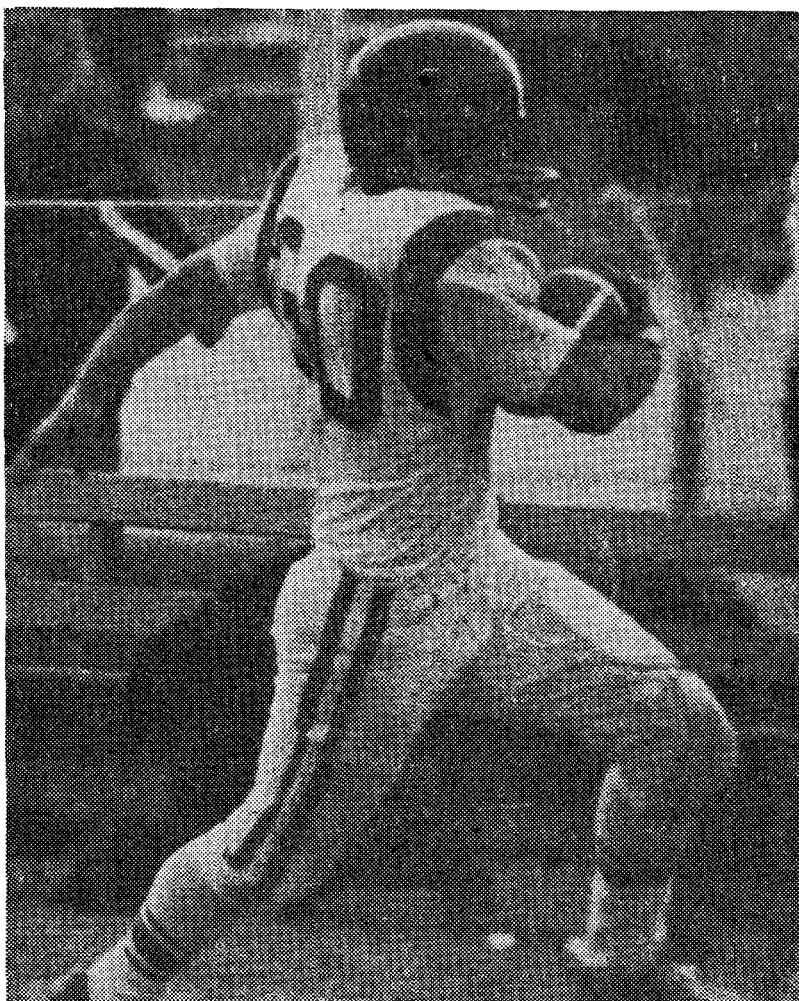
Next week should be exciting—Pomona walked all over Azusa. But then we've had the experience of one game under our belts. And it might be smoggy—nature turned against us Saturday and brought beautiful football weather.

At least there's satisfaction in knowing that Arndt was wrong—Azusa didn't win by 27 points. By the way, anyone want to give me 40 points if I bet on Caltech this weekend?

Basketball Season Starts

Varsity basketball coach Ed Priesler announced this week that this year's cagers will begin practice next Monday. With several returning lettermen, including Captain Dean Gerber and last year's two best scorers, Tom Bopp and Roger Noll, the Beavers look to a fine season—perhaps even a championship. Other returning lettermen include Dave Barker, Gerry Clough, and Mike Perlman. The season opens the first weekend in December. For the first time in several years, the team will play during Christmas vacation in order to stay in shape for the conference games in January.

Coach Priesler invited anyone interested in playing, including freshmen who intend to go out for frosh ball, to attend a preliminary meeting Monday at 4 p.m. in the chalk talk room in the gymnasium.



—photo by Bruce Sirovich

Azusa wasn't kidding.

Soccermen Tie Biola In First Contest 2-2

By BILL HOWARD

To the excited screaming of a hundred coeds last Saturday, the Caltech varsity soccer team tied Biola College 2-2. In the first minutes of the game, Biola scored a goal, soon followed by a kick into the goal by Joel Kwok which unfortunately did not count due to an off-side call on a Beaver soccerman. Kwok, the left wing man, shortly thereafter tied the score with a goal which did count.

In the second half, Caltech kept good control of the play with skillful passes and good team cooperation, but later became taxed with fatigue. Kwok, troubled earlier by cramps, scored again in this half to tie the score after Biola's second goal.

The team, although demonstrating enthusiasm and coordination in their game, was nonetheless disappointed at not winning. Among those seeing action, were Don Weiberg, goalie, Mike Forney, George Seielstad, and Wes Shanks at the fullback positions, Tom Latham at right halfback, and George Agyropoulos at center. Herb Chen and Jerry Davis took the insides positions, and Dave

(Continued on page 8)

IH Softball Nears Climax

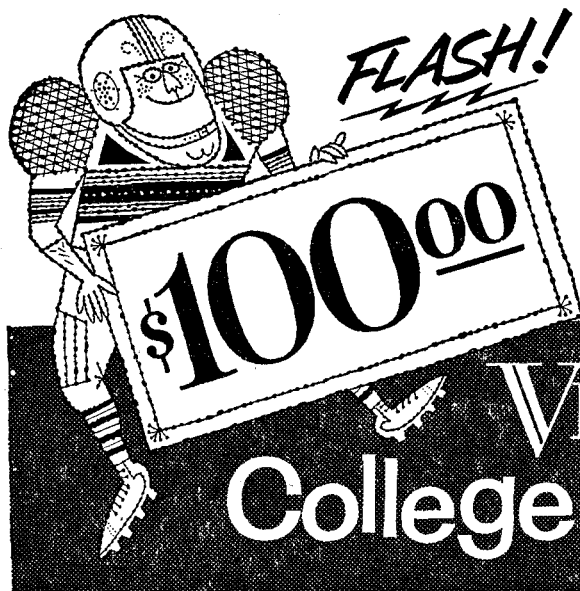
By JULIAN PRINCE

Fleming, with a 3-0 record as of Monday, emerged as the team to beat for the InterHouse softball championship as the first half of the schedule was completed. They have displayed the best hitting of any team and very solid fielding. Not the least of the Flem's assets is the experienced pitching of Alan Zame. This team, which can perhaps best be characterized as a team which does not beat itself, possesses the only undefeated record in the league after beating Page, Dabney, and Blacker in succession.

The main challenge for the softball crown should come from the two teams tied for second place, Lloyd and Ricketts, both of whom have yet to play the leaders. The men from the new House have good fielding, fast improving hitting, and steady pitching from Joe Christensen. They are a fast-developing team which lost its first game to Ricketts before defeating Ruddock and Blacker. The Rowdies possess an excellent pitcher in John Kessler and a well-balanced if inconsistent team. They can give anyone trouble when they are "hot" but they are not always "hot". This fact is witnessed by their loss to Dabney after beating Lloyd and Ruddock. Of the other teams, Blacker, led by pitcher Steve Teigland, who is the best pitcher in the league when he is "on", should finish well.

Despite the unpredictability of InterHouse sports in general and this year's softball in particular, I will go out on the limb and predict that Fleming will emerge as the softball champs. However, the Fleming-Ricketts game Friday and the Fleming-Lloyd game Monday should be close, exciting, and interesting. In any case, they should offer

(Continued on page 8)



TO ALL STUDENTS OF CALTECH

CAN YOU USE A HUNDRED BUCKS?
That's what you can win in every one of

VICEROY'S Big College Football Contests

IT'S EASY! Just pick the ten winning teams, predict the scores—and you're in the money!

FLASH! ONLY STUDENTS ON THIS CAMPUS ARE ELIGIBLE!

SECOND CONTEST OCTOBER 21st

All you have to do is clip the coupon, pick the winners and predict the scores—then figure out how you're going to spend that hundred bucks!

**Only VICEROY'S Got It...
At Both Ends!
Got The Filter! Got The Blend!**

Only Viceroy's got the **Deep Weave* Filter.**
Viceroy's Deep-Weave Filter is made of vegetable material that's pure and safe.

* Reg. U.S. Patent Office



Here are the Contest Rules — Read 'em and Win!

1. Any student or faculty member on this campus may enter except employees of Brown & Williamson, its advertising agencies, or members of their immediate families. All entries become the property of Brown & Williamson—none will be returned. Winners will be notified within three weeks after each contest. Winners' names may be published in this newspaper. You may enter as often as you wish, provided each entry is sent individually. Contest subject to all governmental regulations. Entries must be postmarked or dropped in ballot box on campus no later than the Wednesday midnight before the games are played and received by noon Friday of the same week. The right to discontinue future contests is reserved.

2. Entries must be in contestant's own name.

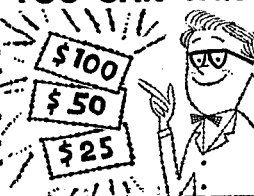
On the coupon in this ad or on an Official Entry Blank or piece of paper of the same size and format, write your predictions of the scores of the games and check the winners. Enclose an empty Viceroy package or a reasonable rendition of the Viceroy name as it appears on the package front. Mail entry to Viceroy at the Box Number on the entry blank or drop in Viceroy College Football Contest Ballot Box on campus.

3. Entries will be judged by The Reuben H. Donnelley Corp. on the basis of number of winners correctly predicted. Ties will be broken on the basis of scores predicted. Duplicate prizes awarded in case of final ties.

4. Winners are eligible for any prize in subsequent contests.

LOOK! HERE ARE ALL THE PRIZES YOU CAN WIN!

1st PRIZE \$100
2nd PRIZE \$50
3rd PRIZE \$25



5 other prizes of \$10 each.
PLUS a free carton of Viceroy's to every contestant who names the ten winning teams—REGARDLESS OF THE SCORES!

(Attach Viceroy package or facsimile here)



Viceroy College Football CONTEST NO. 2

Here are my predictions for next Saturday's games.
Send my prize money to:

NAME _____ CLASS _____
(PLEASE PRINT PLAINLY)

ADDRESS _____

WIN	SCORE	WIN	SCORE
<input type="checkbox"/> U. C. L. A.	_____	<input type="checkbox"/> Pittsburgh	_____
<input type="checkbox"/> L. A. St.	_____	<input type="checkbox"/> Fresno St.	_____
<input type="checkbox"/> Long Beach St.	_____	<input type="checkbox"/> Calif. Poly.	_____
<input type="checkbox"/> Iowa	_____	<input type="checkbox"/> Wisconsin	_____
<input type="checkbox"/> Michigan St.	_____	<input type="checkbox"/> Notre Dame	_____
<input type="checkbox"/> L. S. U.	_____	<input type="checkbox"/> Kentucky	_____
<input type="checkbox"/> Calif. Tech.	_____	<input type="checkbox"/> La Verne	_____
<input type="checkbox"/> Oklahoma	_____	<input type="checkbox"/> Kansas	_____
<input type="checkbox"/> Michigan	_____	<input type="checkbox"/> Purdue	_____
<input type="checkbox"/> Air Force	_____	<input type="checkbox"/> Maryland	_____

Contest open ONLY TO STUDENTS AND FACULTY ON THIS CAMPUS.
Mail before midnight, Oct. 18, to Viceroy, Box 94-C Mt. Vernon 10, New York

More Ivy

(Continued from Page 5)

Unfortunately, Bill was equally calm. When he had clambered out of the rumble seat, he also carefully turned off the fuel valve — or thought he did. And so we watched while the engine gaily burned up, having saved \$1.39 in our preparations by not buying a fire extinguisher.

Since I was due at Yale in a few days, I hopped a bus and made the long trip in boring but efficient fashion. Meanwhile Mike and Bill saw the country in style (they managed to repair the car in one day) and arrived here some two weeks after I did. Needless to say, car and beards made a great impression in New Haven as they had across the country, and the intrepid quartet (don't forget Penny) were reunited for one day before Mike and Bill went on to New York.

* * *

A word of advice to those new to Pasadena. If you like live theater, but can't afford the Playhouse mainstage or the other professional theaters, look up the programs at the student theaters at the Pasadena Playhouse. There for 75c or \$1 you can see a fairly good production of some worthwhile play most any night after the season gets

Discobolus Competition To Begin

Composition for the Discobolus Trophy begins this week-end with a football game between Fleming and Dabney. The Flems took the Trophy from the defending champions, Ricketts, when the Rowdies neglected to accept their challenge within the allotted time. Dabney, well down on the original challenging order list, took advantage of the other Houses' failure to challenge and now has the opportunity to get off to a fast start in the Discobolus race.

The original challenging order was:

Fleming
Ruddock
Page
Blacker
Dabney
Lloyd
Ricketts

Ruddock has the next challenge.

underway. Just call the box office and ask what's playing in the student theaters.

* * *

Somehow, Yale has a spirit and tradition that is lacking at Caltech. I don't think it's necessarily better, but it is interesting for a change. As for instance the inscription over the bar in the Old Heidelberg near the campus: "For God, For Country, For Yale."

HARRY'S ★ ★ CAMERA

COURTESY DISCOUNT TO ALL
CALTECH STUDENTS AND FACULTY
910 E. California Mu. 1-1388
Free Parking

UNITARIAN PUBLIC FORUM DR. ASHLEY MONTAGU

Distinguished Writer, Educator, Anthropologist; Speaks on
"FREEDOM AND THE INDIVIDUAL"
Friday, October 13th — 8 P.M.
First Unitarian Church, 2936 West 8th Street, Los Angeles
Donation \$1.00 Question Period

Y Plans Year

In order to start planning this year's program, the Caltech YMCA held a retreat at Laguna Beach last weekend.

Some new programs which may be put on are day conferences on technical assistance, disarmament, race relations and men-women relations (coed, of course). The Y may also set up a tutoring service for Negro students in the area to help prepare them for college. This would also give Techmen a chance to learn some teaching techniques.

More girls will be invited to Y programs and occasional open houses afterwards. Conferences are being planned with Scripps and San Diego State. Sex lectures and discussions may be brought back as well as the coed Folk Festival.

Civic Concert Set

Beethoven's 7th Symphony, Richard Strauss songs sung by Maralin Niska, and Ravel's Rhapsody Espanol will open the Pasadena Symphony season this coming Sunday, October 15. The concert will be at 8:20 p.m. in the Pasadena Civic Auditorium, which is near Green and Marengo. As usual the admission will be absolutely free, but seats are reserved. The Y will order a block of tickets as soon as it knows for sure how many tickets will be used. Contact the Y for further information.

Brown Talks About Trip

(Continued from page 1)

becoming more sophisticated, there will probably be an emphasis on better-trained scientists.

The Russians seem to be able to work out the difficulties involved in matching the number of graduates in a particular subject with the number of jobs to be filled each year. Since the numbers are kept up to date, student advisors see to it that proper majors are chosen, often over the objection of the student. Job placement is different from our own in only one significant aspect — there's no changing fields after graduation. Since the top students get their choice of all the available jobs, the poor low man may find himself stuck on some five-year exploratory project in the frozen east. Not a bad incentive for snaking.

The U of S

On the other hand, there are some good jobs in Siberia. The Russians are now building a new city on the site of Novosibirsk. There will be 14 separate research units when the center is completed, as well as a scientific university to train workers. In two years the population will be 35,000, and eventually 50,000. This of course isn't the result of predicted urban population trends, but good old Russian people-planning. Determined people, those Reds. The whole project was conceived only three years ago.

Naturally, there must be some added incentives to get people to leave the relative comfort of western Russia for the isolation and chill of Siberia. A simple

thing like a little extra living space is considered a major incentive.

In a brief question period following the talk, Dr. Brown was asked what the status of intellectual freedom was in Russia. His reply was that the freedom, while limited by our own standards, has been increasing ever since Stalin's death and that it will presumably continue to increase in the future, barring any major ideological changes in the Soviet science structure.

Soccer Opener

(Continued from Page 7)

Oslas at right wing shared the front line with sharpshooter Joe Kwok.

Saturday morning, Bob Huttenback and a sturdy group of the elderly school of fine soccer players joined some alumni and grad students against the JV soccer team players in the first of the weekly games that will continue through the season. Anyone interested in the game is invited to come out on Saturday mornings and participate.

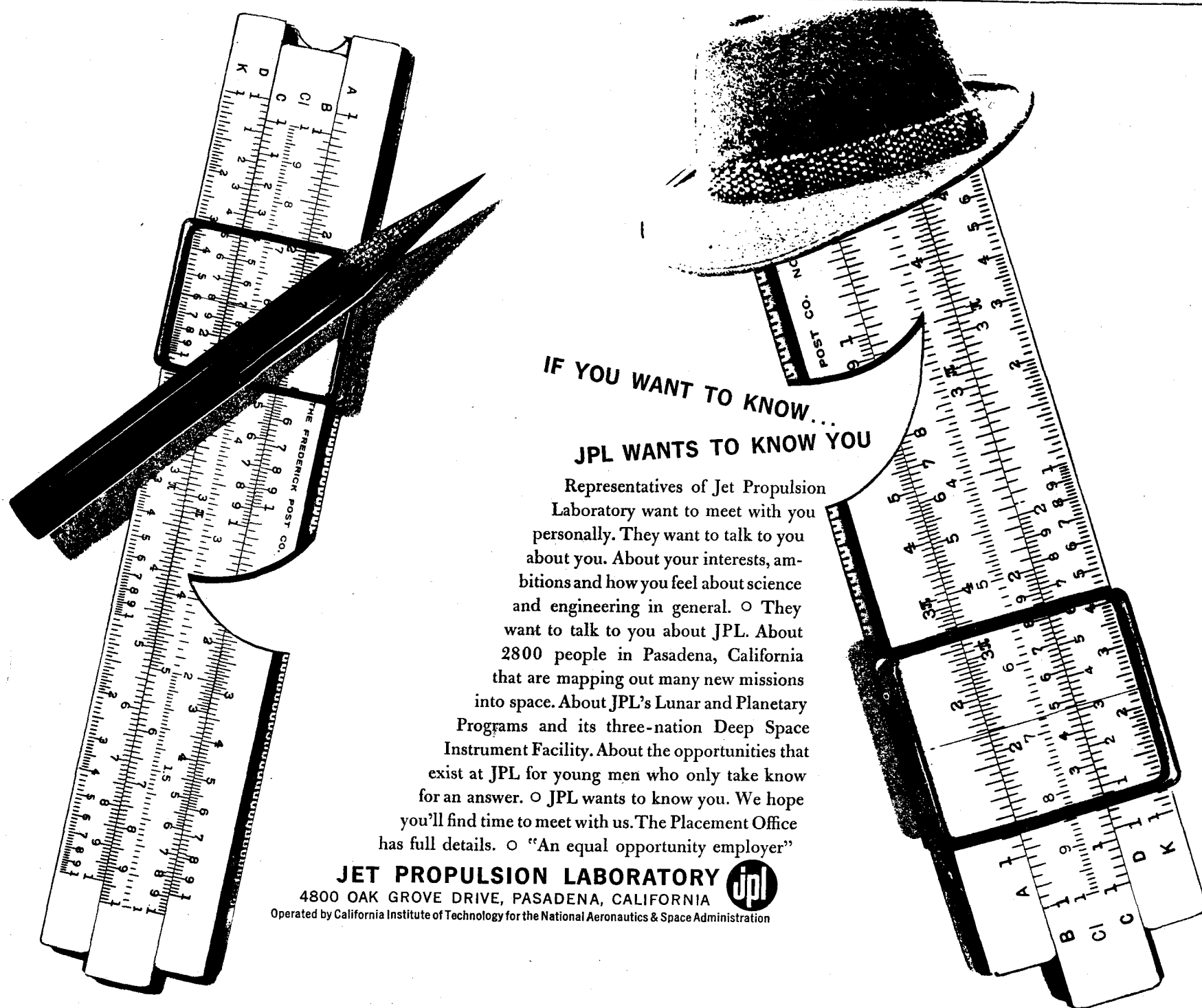
IH SOFTBALL

(Continued from page 7)

a fitting climax to the softball competition and they should amply repay in entertainment anyone who wanders out to T.P. to watch them.

The standings after Monday's games were as follows:

Fleming	3	0
Lloyd	2	1
Ricketts	2	1
Blacker	2	2
Page	1	2
Dabney	1	3
Ruddock	1	3



IF YOU WANT TO KNOW...
JPL WANTS TO KNOW YOU

Representatives of Jet Propulsion Laboratory want to meet with you personally. They want to talk to you about you. About your interests, ambitions and how you feel about science and engineering in general. ○ They want to talk to you about JPL. About 2800 people in Pasadena, California that are mapping out many new missions into space. About JPL's Lunar and Planetary Programs and its three-nation Deep Space Instrument Facility. About the opportunities that exist at JPL for young men who only take know for an answer. ○ JPL wants to know you. We hope you'll find time to meet with us. The Placement Office has full details. ○ "An equal opportunity employer"

JET PROPULSION LABORATORY
4800 OAK GROVE DRIVE, PASADENA, CALIFORNIA
Operated by California Institute of Technology for the National Aeronautics & Space Administration

ON CAMPUS INTERVIEWS →