

Rabinowitz, Robinson Vie

Pike Slates Two Major Talks Here

The Caltech Y's first Leader of America, Right Reverend James A. Pike, Bishop of the Diocese of California of the Protestant Episcopal Church, will be on campus next Tuesday, Wednesday, and Thursday, February 13 to 15, to speak to Techmen on a variety of interesting subjects. All the events in which Pike will participate are open to everyone.

Tuesday

Pike's schedule calls for, as is customary, an exhausting round of speeches, discussions, and meals. He will begin his visit on Tuesday afternoon with lunch in Blacker House. He will then hold an informal discussion in the Lloyd House Conference room on the subject of "Radical Left, Radical Right, Radical Center," at 4 p.m., followed by dinner in Dabney House and a public address in Dabney Lounge on "Religion, Science, and Technology," at 8-9:30 p.m. The evening will be completed with a reception at the home of Wes Hershey, at which attendance will be limited. Those interested should sign up in the Y office.

Wednesday

On Wednesday Pike will begin with lunch in Lloyd House; followed by office hours in the Lloyd House conference room until 3 p.m. Students are invited to visit and have an informal discussion on a personal level. This will be followed by a discussion in the conference room at 4 p.m. on the subject of "family planning."

(Continued on Page 2)

Notices

CARNEGIE SPEAKER SET

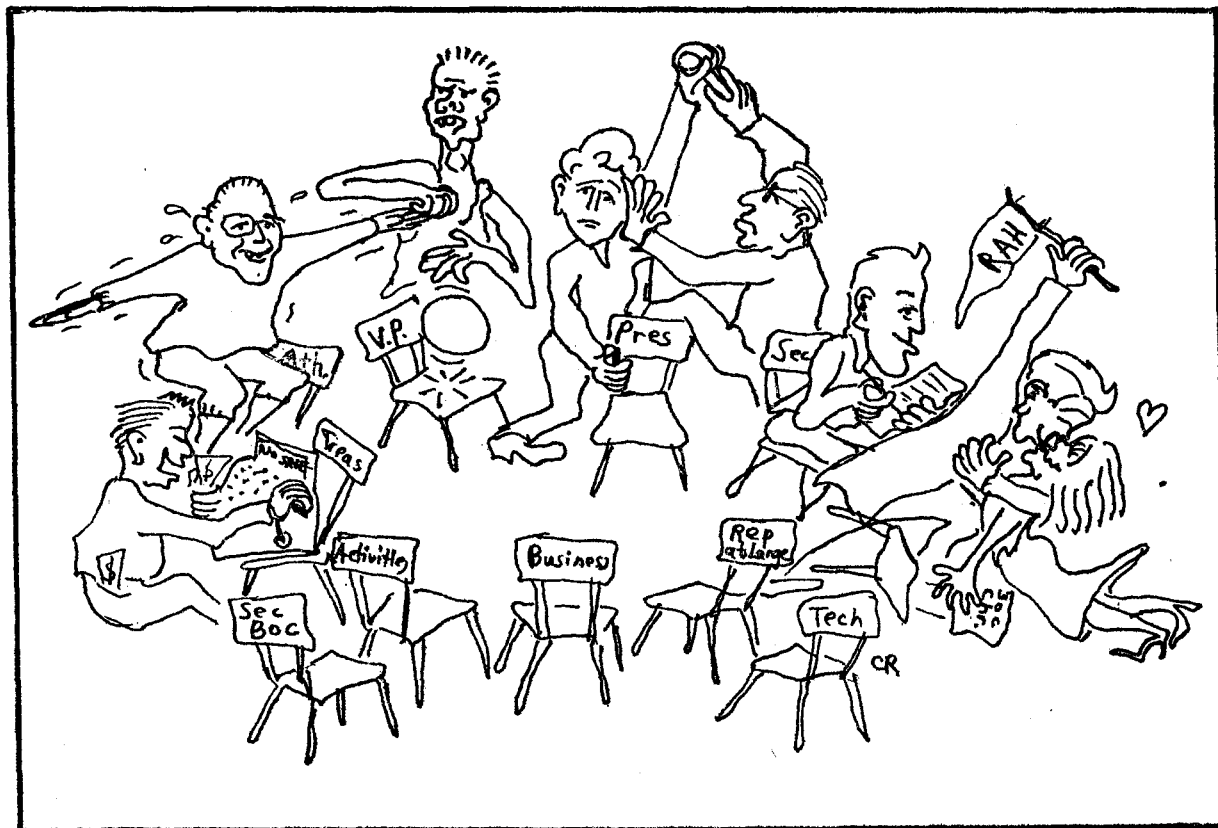
Professor Maurice Albertson, Director of the Colorado State University Research Foundation, will lecture February 14 at 2 p.m. in Dabney Lounge as a part of the Carnegie Technical Cooperation Series. He will talk on "American Universities and Education in the Underdeveloped Countries." Undergrads are welcome.

Y NEEDS PLANNERS

Students are needed to help plan the visit of Sydney Hook, chairman of the graduate division of philosophy at NYU, who will be on campus on the Leaders of America program from April 11 to 13. All those interested in helping should contact Al Green at the Y.

TRAVELERS CHOSEN

The winners of the 1962 Junior Travel Prize Competition were announced recently by Professor H. N. Gilbert. The winners for this year are Ralph Shuey of Blacker, and Robert Causey and Raymond Plaut, non-residents. These three juniors will receive awards covering their expenses for a summer's travel abroad.



Four Posts Lack Candidates In ASCIT Contest

Art Robinson and Larry Rabinowitz have been nominated for ASCIT president, while Tom Bopp is running unopposed for ASCIT vice-president. Other nominees are: secretary, Don O'Hara; treasurer, Jim Sagawa; social chairman, Bob McEliece; athletic manager, Bob Lieberman; IHC president, Larry Gershwin.

Offices for which no nominations have been made are: California Tech editor, ASCIT business manager, secretary of the Board of Control, representative-at-large.

Nominations for all offices will remain open until Monday night, February 12. Candidates will speak in the Houses during the week of February 12 to 16 and statements will appear in the California Tech on February 15. The election rally will be Monday night, February 19, with general elections on Tuesday, February 20. Nominations can be turned in to any BOD member before the deadline.

In other action at the BOD meeting, the deadline for applications for honor keys and certificates has been changed to tonight. Applications should be turned in to Jim Sagawa, Dabney.

In addition, applications for New Student Camp counselors will be accepted until tonight. They should be turned in to Bob Koh, Page. Freshmen are reminded that they are eligible for jobs as counselors.

Tonight Drama Club Reads Three Avant-Garde Plays

"Readings from the Modern Theatre," three creations by highly dissimilar avant-garde playwrights, will be presented by the Caltech Drama Club at 7:30 this evening in Dabney Hall lounge. Admission will be free.

The program will consist of two one-act plays, "The Death of Bessie Smith" and "The Bald Soprano," and a short excerpt from the Broadway comedy "A Thurber Carnival." These are under the direction of Mike Talcott, ex-Techman and Pasadena Playhouse graduate, who will also take a part in one of the plays.

Who Plays Bessie?

Appearing in "Death of Bessie Smith" will be JPL mathematician Cathy Thomas, JPL Secretary Brenda Vacca, Talcott, and Techmen Barry Moritz, Bob Roberts, Bill Hogan and Jon Kelly.

Says Talcott: "Edward Albee's 'Bessie Smith' is a cynical, biting picture of Southern realities. It leads an ostentatiously traditional Southerner through a crisis in her views, in which she is able to awake from the nightmare of history which enmeshes the deep South. Albee is a writer who would like to free man from neurotic and false commitments and allow him to be truly himself."

"All Right"

Alexes Lippman, wife of alumnus and Drama Club prexy Pete Lippman, Brenda Vacca, also in the cast of "Bessie Smith", and Page man Jim Baumgartner will change the mood for a few minutes by submerging Dabney in a typical Thurberian farce: a stuffy executive decides to get rid of his wife so that he can marry his secretary, but meets with classical feminine perversity when he is too honest to attempt to hide his intentions from his wife. Sharing the spotlight with the actors are a sten-

pad, a shovel, and a monkey wrench.

"Bazaar, Brassieres, Bazooka"

Playhouse student Lynn Gar-side, JPL Secretary Kathy Stark, who starred in the Club's presentation of "Camino Real" last Spring, and Alexes Lippman will play opposite Wayne Huber, Don Ellwood and Mike Lampton in Eugene Ionesco's indescribably weird, hilarious, meaningless, and immortal contribution to the theatre of the absurd, "The Bald Soprano."

Talcott's mumbling comment on the meaning of the play was expressed in the words of one of the characters, "Groom the goose, don't goose the groom."

They Came, We Saw

Artists Spend Lively Weekend

BY J. C. SIMPSON

Last Friday the long-anticipated art students arrived at Caltech for a weekend of discussion and argument with Techmen. The weekend was largely unplanned, to leave as much time as possible for individual discussion in House lounges.

All the artists were very eager to discuss their outlook on art and science, and several left with different opinions of scientists in general and Techmen in particular. A good example was Rosalind Greenberg, who stayed at Blacker House.

Scientists Are Humanists

Rosalind said that she found that people here were very intelligent but not pompous, and surprisingly eager to learn about art. Before coming she had held some doubts on that subject. She also decided while she was here that all great scientists are humanists, and said she was interested in possibly teaching an art course here.

"Neat, Neat"

Techmen in general were very

Carter Will Head Blacker Next Year

Blacker has held the first of its two elections for House officers for 1962-63, and the results so far are: After a dead tie and resultant run-off, Bruce Carter was elected president in a close vote. Secretary is Ivars Ambats, while Tom Latham was elected treasurer. The team of Al Pfeffer and Steve Teigland will serve as athletic managers, while Kurt Anderson will administer the official position of Pope of the Church of Blacker. The second election will include the important positions of vice-president, social chairman, and an uncontested team of six running for librarian.

pleased with the artists. Description of various artists seemed to agree. They were "sharp", very intelligent, "on the ball," and "neat, neat." Many were surprised at the artists' knowledge of different aspects of science, and by the artists' very important feeling toward science. Most were very pleased, too, with the artists' willingness to discuss any and all subjects, and by the fact that they were just as interested in Techmen and the scientific standpoint as Techmen were in the artistic.

Few real conclusions were reached, as there were quite a few intense disagreements among the artists themselves, and also within the ranks of Techmen. A majority did, however, agree that for the most part scientists do not really understand art nor do artists fully appreciate science. Other than that, however, the relationship between art and science was a marginal topic and did not anywhere seem to have been analyzed deeply.

Discussions

There were two major discussions, one on Friday night and one on Saturday night. Following small group discussions in the House lounges after dinner Friday night, most of the artists and groups of Techmen drifted into Blacker House for a bull session late into the night.

Saturday night Rosalind Greenberg showed a series of slides in Lloyd House lounge and talked on art appreciation. A very active and interesting discussion followed, in which the artists disagreed with each other as much as with Techmen. The conversation broke up about eleven, after which the artists showed and explained their works in Dabney Lounge. The group broke up about twelve, but Roy Owens continued a discussion about his sculpture long after the others had left.

The artists left Sunday after lunch, and not surprisingly after the response the artists received, many Techmen expressed a serious interest in having them back next year.

Editorial

There's Still Time

We've heard comments on last week's editorial on atmospheric testing to the effect that there wasn't time to write between Thursday and Saturday. There is time to write to President Kennedy on the issue of atmospheric testing so long as no tests have been conducted.

Both Congress and the military have been pressuring Kennedy to give the 'go ahead' order, and the ponderous preparations necessary to test in the Pacific have been started. This increases the necessity of transmitting as soon as possible your views on atmospheric testing.

At this juncture in international affairs, there exists a lull in world tensions, making possible another attempt at disarmament with adequate safeguards. Resuming atmospheric testing will destroy these possibilities through adverse publicity abroad if nothing else.

No arms race in history has ended in other than war. If we resume testing, we are increasing the likelihood of this end. Every step towards the military economy and the dominance of the military mind leads toward the purpose of the military: to fight.

Thus resuming atmospheric testing is not just an issue of international relations or potential genetic damage, but whether we are going to turn toward or away from a warlike posture.

President Kennedy said last September at the United Nations: "... in a spiraling arms race, a nation's security may well be shrinking even as its arms increase."

Columnist Marquis Childs says, "While the decision that must be taken dwarfs every other issue, there is little evidence of public awareness or public opinion that might influence the outcome one way or another."

We again urge you to write or wire President Kennedy.

—benson

African Statesman Views Forthcoming Free Kenya

BY JAY LIPPMAN

Kenya has struggled 37 years for independence from the British; now on February 14 Gikonyo Kiano will go to London to negotiate the date of independence and the nature of the Kenya constitution. Dr. Kiano spoke to the Technical Cooperation Seminar Monday night on the issues, tasks, and prospects that face Kenya on the eve of independence.

Striking and Sincere

Dr. Kiano is a striking man. He was educated in the United States and received his Ph.D. in political science at Berkeley. He is presently a member of the Kenya legislative council. He is obviously a man of great political sense, and he spoke frankly and sincerely about the goals of African nationalism and ideology. He joked and was lightly cynical about his own political goals, but there seems to be no doubt about his serious devotion and dedication to Kenya

independence and African nationalism.

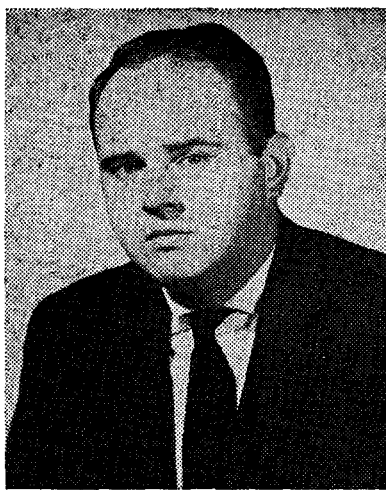
No Apartheid-in-Reverse

There are several aspects to the general problem facing Kenya. Kiano emphasized strongly that the political, economic, and social structure of Kenya will be non-racial. The bill of rights that is planned will contain sections on general rights and the rights of citizens. Citizenship will be non-racial, and they plan to have an independent judiciary with checks and balances in the government to guarantee the basic human rights.

Transition

The biggest problem facing Kenya and apparently Africa in general is the transition to independence from rebels to citizens. "We were united against imperialism, against white supremacy, but what is going to keep us together now?" He expressed the need for a positive dedication and ideology. Two

(Continued on page 3)



Charles F. Gallagher

Expert Sees Rough Future For Algeria

BY MATT COUCH
AND JIM JOHNSON

"Prospero: Abhorred slave, Which any print of goodness wilt not take, Being capable of all ill! I pitied thee, took pains to make thee speak, taught thee each hour one thing or other.

"Caliban: You taught me language, and my profit on't Is... I know how to curse."

So begins Edward Behr's new book, "The Algerian Problem," which was brought to the attention of the International Affairs Staff by Charles F. Gallagher, currently visiting campus as a member of the American Universities Field Staff, during a brief but informative interview about Algeria and the Arab world.

How, Not If

During the brief discussion (which was interrupted by an appointment with a highly placed Institute official) Gallagher stressed that the question in Algeria now is not whether there will be a settlement, but when and how it will be carried out. In analyzing the two logical alternatives to the present depressing situation in Algeria Gallagher concluded that the chances are about three to one in favor of total independence of Algeria from metropolitan France, rather than some sort of partition which would leave the Europeans a coastal strip, reaching probably from Algiers to Oran. If independence is granted, there will, in Gallagher's opinion, almost certainly be an uprising on the part of the European population, led by the S.A.O. (the Secret Army Organization.)

Vigor and Emigration

After the uprising is suppressed, and assuming that DeGaulle isn't assassinated ("All bets are off if he is"... Gallagher), Gallagher says that we

(Continued on page 6)

Pike

(Continued from page 1)

Thursday

Thursday will begin with lunch in Ruddock House, office hours from 1 to 3 in the Lloyd Conference Room, and an informal discussion at 4 on the "Movement for Church Unity." This will be followed by dinner in Fleming, and, at 8 p.m. in Dabney Lounge, a talk on "The Future of Civilization." After the talk there will be a reception at the home of Dr. Rodman Paul. Since attendance at this reception is also limited, interested people should sign up at the Y office.

LETTERS

Talcott Wants Othello At Tech

Editors:

I would like to attempt to bring to Caltech a theatre program similar to the Theatre Group's at U.C.L.A. That is, a use of Institute facilities during finals weeks and vacation in order to bring theatre of professional caliber to the campus.

I submit that the Institute's present expansion program is shrouded in great self-consciousness and trepidation. The outsider senses a vague discontent about the Caltech campus; he senses frustration, despair, and cynicism; emotions indigenous to a prison and not to an Institute whose motto is "The truth shall make you free."

He wonders at the non-productive waste of the highest intellectually equipped student body in the nation.

Broader Horizons?

Can we ameliorate this harsh situation? Can we face the very brutal facts of reality and change them? Is physical expansion without the corresponding intellectual broadening of horizons enough? We must, all of us, face these questions in the coming months, for they comprise the very stuff of which the crisis of Caltech is made. It will take great courage to make Caltech into a great intellectual center, for in doing so, old traditions must be shucked and the nebulous demands of the malcontents must be crystallized into action.

The students and faculty in recent years have demanded greater and wider cultural activity. The Beckman Auditorium program was met with a great body of protests for more cultural activity within it. The visiting art students represented a Caltech need to breathe a little outside air. Can we discern a trend in the above facts? Can we have the guts, administrators and administrators, to admit the need for Caltech to emancipate itself from the limitations of being a great world scientific center and become a great world center of learning.

Wanted: Humanity

To become is a very great problem: it involves change, the bane of the conservatives; it involves an expression of needs in order to shape the form of the change; it involves courage to make the necessary expression. I contend that the California Institute of Technology's only hope of existing as a healthy organism is to seek its humanity, and satisfy its great human potential.

I, as countless others, have been engaged in the past four years in serving the human needs of the Institute. I have found myself here, my career and identity, and I am most grateful. I need an expansion and yet my fate seems inex-

tricably bound to Culbertson Hall and Caltech. I am not asking much — a use of Institute facilities during a normal period of dormancy, for what I feel will be to the deep good of the community. But I am asking. I am trying to resist in my small way what I feel is a disastrous trend, and counter with something constructive.

"Othello"

I have not said anything brightly original — my condemnation of the status quo is by no means new — but at this crucial point in Institute history a call to action is needed.

My plan will be to produce Shakespeare's "Othello" at Caltech this spring vacation and possibly first week of third term with a professional cast. I have the full support and sponsorship of the Caltech Drama Club and Dr. Ricardo Gomez. All that I need is an administrative O.K.

For once in the apathetic torpor of Institute life can voices of opinion be raised? Can we marshal our strength to let ourselves be heard?

I urge that all interested parties centralize their viewpoints by dropping a brief note to Dean Paul Eaton on their feelings to my proposals, both the general one of Caltech's progressing towards a real university and the specific one of having a production of "Othello" this spring at Culbertson.

Mike Talcott

Bill Tivol

Clearly South must not go down on the "Hand of Bridge" shown on page six of the February 1 California Tech. All he must do is shout "no fairies!" and kick Goren in the seat of the pants, because presumably Charlie dealt. No wonder East was so daring in doubling — figuring that since he had more cards than South, and his partner more than North, force of numbers should prevail! This was East's psychology — but that is history.

Incidentally, your column is about the best I can remember the Tech having on bridge, so keep up the good work. It's unfortunate that errors like this have to creep in.

Don Wiberg

So right! South should have one of West's small clubs. Sorry.

Bill Tivol

California Tech

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Question Period



By Steve Schwarz

THE DEVIL'S EYE
at the Sunset Theater

Ingmar Bergman seems to feel it his duty to explain the female sex to the rest of us, much as Milton, in his modesty, chose to justify the ways of God to man. Bergman's efforts, on the whole, have been by far the more entertaining; "Smiles of a Summer Night," his first well-known womenanalysis, may be the best movie comedy ever made. But from there the road seems to have led downward: "Secrets of Women" had its funny moments, but they were too far apart, allowing one to fall asleep in between, and now with "The Devil's Eye" this unpromising trend continues.

Sty In An Eye

According to the subtitles, there is an Irish proverb that goes: "A woman's chastity is a sty in the devil's eye." Today the devil's eye is bothering him because one Britt-Marie (Bibi Anderson) is about to be married with chastity intact — an unheard-of event, to judge from his consternation. To prevent Heaven from winning a point and perhaps setting a dangerous precedent, he decides to call up one of the big guns: Don Juan. Juan (Jarl Kulle) arrives on Earth with his faithful Pablo and an exceptionally mean demon as chaperon, locates Britt-Marie, and applies every charm in the seducers' manual (the prudent student will do well to take notes at this point). But for some unfathomable reason Britt-Marie is looped over her fiancée, a real Swedish meatball with a sliderule, and so at first she won't; then later on she

will, and finally, in what may be the biggest movie disappointment of the year, she won't after all. The ultimate revolting development is that meanwhile Don Juan (contrary to the very definition of Don Juan) actually falls in love with her, and so the forces of evil are routed and virtue triumphs, which is certainly a dull way to end a movie.

Plot is Thin Stuff

If you think you've seen this plot before on television or in a comic book or someplace, you're probably right; it certainly is thin stuff. Now in some of his films ("Wild Strawberries" for example) Bergman has managed to start with less story than this, add his own superb camera-work and psychological insight, and come up with a masterpiece. But this time, I'm afraid, he's strictly out to lunch. The photography is only good-average, and as to the insight into Woman, I'm unenlightened; to be honest, I still don't understand just why she first won't, then will, and then won't. Most unforgivably, the comic material is mostly old stuff. The bedroom comedy is all reminiscent of his previous efforts, and goes like jealous husbands running around in their nightshirts are a lot older than that. Mind you, there are a couple of laugh-out loud places, and a background two-thirds of a smile is always maintained; but from the maker of "Smiles of a Summer Night" and "The Seventh Seal" this is a parvum opus indeed. It seems to me that Bergman is just plain running out of things to say about the boudoir; perhaps now he'll return to metaphysics, that rather different subject in which he certainly is supreme.

graduate
rattle

BY FLETCH MURPHY

Perhaps it would be a good idea of the off-campus graduate students would have a bake sale or something to raise some more money. Just before Christmas, boob-tubes were installed in all of the graduate houses, and it was rumored that the money came from a group interested in eradicating all traces of studying in the Houses. And that it has.

The set in Keck has been burning as steadily as the torch in the Statue of Liberty. None of the residents even knew how to turn it on or off, but all knew how to change channels. But a few days ago it blew up. Pretty soon the unfortunate fellows will have to start snaking again, because they're getting tired of being required to stand up in the other lounges. And you don't want that, do you, off-campus graduate students?

Orangutang in Uniform

Another possible channel for further funds might be a new level of parking beneath the present lot—and an orangutang in uniform to keep undergrads and PCC folk from disappearing into the depths.

Don't You Wish

Everybody Did?

Will the person who took the blue, beautifully flowered soap

dish from 204 Braun please return same. You can keep the soap, but the dish has sentimental value.

INA Win Basketball

There was an INA party last Friday night which was so live, I understand, that many basketballers got back just in time to suit up for the games Saturday afternoon.

The MJ team, without either sleep, or their deposed coach, or a desire to go on living, did manage to score, but didn't break into the double digits. The Math Dept. team looked like the Lakers playing P. S. 91.

In another game, Marks won its opener by breaking Braun's two-game winning streak 64-62. The game is being contested, though. It seems Marks has been accused of recruiting — and leaving the party early. Marks denies both claims.

Happy New Year

Monday was the Chinese New Year and a time for resolutions. My resolutions were to study more, to socialize more, and once a week to be on time for my eight-o'clock class. If I were a judge and the inventor of eight o'clock classes were before me to be sentenced, I'd give him twenty years greasing the fat man who hits the gong in J. Arthur Rank Productions.



BY JOHN BERRY

Public demand and (I admit it) personal laziness have persuaded me to reprint the beer recipe from two years ago. Knowing, of course, that not everyone will be interested, I will include one drink each week.

GOLDEN DAWN

1 oz. gin
½ oz. orange juice
½ oz. apricot brandy
Shake well with ice and strain into glass.

THE COMPLEAT BREWER
(PART I)

N.b., either making it or drinking it has got to be a hobby, or it is too damn much work.

Equipment — The following gear is required of the compleat brewer. (Except you may eliminate the crock if you can keep the family out of the bath tub that long).

| Cost | Item |
|--------|----------------------------|
| \$5.00 | 8-gallon earthenware crock |
| 1.50 | beer hydrometer |
| .30 | 5 feet of siphon hose |
| 4.00 | beer capper |
| 1.25 | bottle filler (optional) |

Ingredients

| | |
|--------|---|
| \$.75 | 5 lbs. corn sugar (alternately regular sugar, not as satisfactory) |
| | 100-lb. bag will cut this cost in half. |
| 1.19 | 3-lb. can of hops flavored Blue Ribbon Malt. (Berg's Malt and Acme Malt in my experience have not proven satisfactory.) |
| .03 | Yeast: Fleischmann's dry pack |
| .65 | 1 gross bottle caps. |

(Brewfly's note: The first 8 gallons cost \$16.17, which is a price that is very competitive with a pony keg of good beer, Michelob for instance. Any batch after that gives you 8 gallons for \$2.63, which price speaks for itself as a bargain.)

Co-op Lecture

(Continued from page 2)

ideas that have been presented by African leaders are "Fraternal socialism" and the "African personality." However, "Mere slogans will not suffice, we need a dynamic ideology."

The political transition presents a problem as the people must abandon rebel tactics of subversion and murder in favor of legitimate political action. Here Dr. Kiano's political sense was evident as he implied the politics of expediency was to be replaced by the politics of legitimacy.

Positive Neutralism

Pan-Africanism is a tremendous nationalistic force. "We are nationalists because we cannot tolerate dictatorship in the political system." He went on to say that they oppose dictatorship in any form, and will follow the path of positive materialism and independence. The term fraternal socialism means that they oppose all exploitation and are not neutral on freedom and peace. Dr. Kino concluded by saying that they want freedom, economic prosperity, and peace, and that "When you don't understand us, don't blast us."

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THE MANY LOVES OF
THORWALD DOCKSTADER

When Thorwald Dockstader—sophomore, epicure, and sportsman—first took up smoking, he did not simply choose the first brand of cigarettes that came to hand. He did what any sophomore, epicure, and sportsman would do: he sampled several brands until he found the very best—a mild, rich, flavorful smoke—an endless source of comfort and satisfaction—a smoke that never palled, never failed to please—a smoke that age could not wither nor custom stale—a filter cigarette with an unfiltered taste—Marlboro, of course!

Similarly, when Thorwald took up girls, he did not simply select the first one who came along. He sampled. First he dated an English literature major named Elizabeth Barrett Schwartz, a wisp of a girl with large, luminous eyes and a soul that shimmered with a pale, unearthly beauty. Trippingly, trippingly, she walked with Thorwald upon the beach and sat with him behind a windward dune and listened to a conch shell and sighed sweetly and took out a little gold pencil and a little morocco notebook and wrote a little poem:

*I will lie upon the shore,
I will be a dreamer,
I will feel the sea once more,
Pounding on my femur.*

Thorwald's second date was with a physical education major



He did not simply select the first one who came along...

named Peaches Glendower, a broth of a girl with a ready smile and a size 18 neck. She took Thorwald down to the cinder track where they did 100 laps to open the pores. Then they played four games of squash, six sets of tennis, 36 holes of golf, nine innings of one o'cat, six chukkers of lacrosse, and a mile and a quarter of leapfrog. Then they went ten rounds with eight ounce gloves and had heaping bowls of whey and exchanged a firm handshake and went home to their respective whirlpool baths.

Thorwald's final date was with a golden-haired, creamy-browed, green-eyed, red-lipped, full-calved girl named Totsi Sigafos. Totsi was not majoring in anything. As she often said, "Gee whillikers, what's college for anyhow—to fill your head full of icky old facts, or to discover the shining essence that is YOU?"

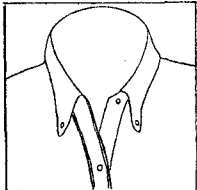
Totsi started the evening with Thorwald at a luxurious restaurant where she consumed her own weight in Cornish rock hen. From there they went to a deluxe movie palace where Totsi had popcorn with butter. Then she had a bag of chocolate covered raisins—also with butter. Then they went to a costly ballroom and did the Twist till dawn, tipping the band every eight bars. Then they went to a Chinese restaurant where Totsi, unable to translate the menu, solved her problem by ordering one of everything. Then Thorwald took her to the women's dorm, boosted her in the window, and went downtown to wait for the employment office to open.

While waiting, Thorwald thought over all of his girls and came to a sensible decision. "I think," he said to himself, "that I will stick with Marlboros. I am not rich enough for girls."

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Marlboro, however, is rich enough for anybody. It takes mighty good makin's to give you unfiltered taste in a filter cigarette. That's the flavor you get in the famous Marlboro recipe from Richmond, Virginia. You get a lot to like.

our man in the Ivy Leagues



BY LARRY MCCOMBS

When my friends bid me farewell in California last fall, they all expressed sympathy and hoped that I'd not fare too harshly in the freezing New England winters. Now they are shivering with freak snowstorms, while I bask in sunshine without a speck of snow on the ground. Coincidence? Listen, and judge for yourself.

It all began when I got a letter from Anna Moore, ex-Westridge-student, now at Smith College in Massachusetts. We exchanged comments on the disagreeable nature of snow, and shortly we formed the Society for the Prevention of Spread of the Ridiculous Belief of the Public in a Fictitious Entity Known as Snow. We began a campaign featuring such slogans as "It's not Snow, it's crystalline fallout!" and "Help Stamp Out Heavenly Dandruff." Anna contributed the campaign jingle:

Snow is very wet and cold.
I hate it.
It can't be bought, it can't be sold.
I hate it.
It makes you thin, it makes you lean;
It takes the hair right off your bean.
I hate it.

But we did not content ourselves with a hate campaign. The idea was brought up that no one had ever seen it actually start to snow. One always looks outside and sees it snowing, or wakes up and finds it snowing, but no one ever see it begin to snow.

Snow Watchers' Brigade

So we formed the Snow-Watchers' Brigade. This brave group of volunteers were organized on a system of shifts to watch the skies, day and night, continuously guarding against snow. Sure enough, the measure has proved effective. One or two light flurries have occurred when a weary snow-watcher has dozed at his post, but no serious incidents have occurred.

Well, almost none. Shortly before Christmas a strong storm deposited some 4 to 5 inches of snow, and we feel that it may be possible that a "White Christmas" extremist infiltrated our ranks. A full investigation of the incident is underway, and I prefer to name no names nor make any specific charges until all the facts are known.

Psychokinetics

Our staff of scientists has so far been unable to explain the success of the snow-watching on a theoretical basis. They are searching for some theoretical explanation based on Willis' Law of Psychokinetics, but have not been truly successful as yet.

Note: For those who missed Pp 1, the introductory course given by the Institute's Department of Parapsychology, we should perhaps here quote Willis' First Law, as stated several years ago by that great traveler, publisher and amateur parapsychologist, Walter A. Willis of Northern Ireland: "Intense concentration upon an object or particular part thereof will cause that object or part to slightly increase in mass, due to the transfer of psychic energy from the concentrator to the object."

The Snow-Watchers' Brigade has organized a fund to bring Mr. Willis to this country for consultation within the year, but in the meantime our own research goes on.

Shift Emphasis

One of our staff scientists, Miss Susan Hereford of Radcliffe College (formerly of Westridge), presented a paper suggesting that the prevention of snowfall here in the East might have disastrous effects upon the weather elsewhere. She suggested that the frustrated snow might be forced to fall upon other parts of the nation.

Needless to say, her predictions have been fully substantiated by subsequent events.

As I write this article (on January 30) a severe storm is brewing outside. After one watcher, wearied by the strain of finals, dozed at the post this afternoon and allowed ¼ inch of snow to fall, we declared a state of emergency and placed a double staggered shift on duty. As of 10 p.m. this measure has proved effective.

Our dedicated staff is even now working upon a plan to divert the unfallen snow into the ocean, but their process is still in a laboratory stage, unsuitable for large-scale operation. Until they can bring it into full production, we must warn the West Coast to beware of our diverted snow. We can only suggest that you form your own Snow-Watcher's Brigade, or risk the consequences.

Good luck.

Play By Tech Prof Based On Classic

BY AL GREEN

Perhaps the first case on record of a man being shunned by his friends for the unpleasant odor which his body exuded is that of Philoctetes, the hero of Sophocles' play of the same name. It is this play which forms the basis for a new drama entitled "Island," written by Dr. Oscar Mandel, Visiting Associate Professor of English at Tech.

Dr. Mandel has adapted "Philoctetes" into a play which raises one of the crucial moral questions of our day: the choice between remaining "clean" of the crimes of society by electing isolation or assuming the responsibility for society by becoming involved in its less-than-honorable activities.

There will be a concert reading of "Island" presented in Dabney Lounge on Friday, February 16, at 8:15 in the evening. The cast will feature Harold Innocent ("Gentleman Johnny" Burgoyne in the Parnassus production of Shaw's "Devil's Disciple"), and Barry Atwater (recently starred in the Los Angeles production of "The Zoo Story"). "Island" will be directed by John Houlton and will feature a musical score by Gene Benton, composed for the play's original production at the Massachusetts Fine Arts Festival in Amherst, Massachusetts, last year.

Following the performance Dr. Mandel will carry on an informal discussion about the play with interested members of the audience. Student tickets to the production are \$.50, adult tickets, \$1.00.

a hand of BRIDGE

BY BILL TIVOL

NORTH

S—Q 10 9 3
H—Q 10 8 6 4
D—A 2
C—Q 6

EAST

SOUTH

S—K 2
H—A 9 7 5 3
D—K 4 3
C—K 7 4

WEST

North-South vulnerable; West dealer.

Bidding

| WEST | NORTH | EAST | SOUTH |
|----------|----------|------------|----------|
| 1 Spade | Pass | 2 Diamonds | 2 Hearts |
| 2 Spades | 3 Hearts | Pass | 4 Hearts |
| Double | Pass | Pass | Pass |

Opening lead: Jack of Hearts

Before the roof falls in on me, I would like to explain that, fortunately, it was my opponents, playing East-West, who are responsible for this bidding sequence, not I. Since their bids are inscrutable at best, I will not attempt to re-create their hands.

West cannot have a legitimate opening hand if East has a legitimate response; however this is common in duplicate bridge. West's rebid shows that he thinks his opening is sound, but his double of four hearts shows that he is insane. Anyway, the major reason for not showing the defensive hands is to give the interested reader a chance to decide the best line of play for this contract.

Now that the interested reader has had his chance, I will explain how the hand should have been played. South can lose two hearts and the two black aces. From his double, West is marked with the two aces, and he probably has the king-jack of hearts, but he may be doubling on a heart void. So, how can he avoid two trump losers? There are two ways. The first way is to take the diamond on the board and to lead a small trump. If East follows, finesse the nine. West can then have at most two trumps. If he has none, then the nine wins. If he has one or two, the outstanding trump will drop under South's ace.

The second way is to take the diamond in the hand and lead a small trump. If East has all three trumps, one of his honors can be finessed from the board; if West has all three trumps, then he is finessed with the low lead, since South makes both the ace and queen of trumps.

In the actual play—which was, if anything, worse than the bidding—South took the diamond lead with the king and led a low trump. The queen held the trick, and East dropped the jack. Needless to say, South made five.

Algae Considered Air Fresheners On Space Trips

Simple, one-celled microscopic plants that flourish whenever dampness abounds appear more and more likely to become the life-giving companion of astronauts on longer journeys through the solar system.

The plants are algae. It has been determined that comparatively small crops of certain varieties of them growing in a spaceship greenhouse can produce the oxygen to sustain spacemen on six to nine-month trips to other planets, said Dr. Hendrik J. Ketellapper, research fellow in biology and consultant on closed environment systems for spacecraft.

Gas Air Conditioning

"It is feasible to carry in tanks only sufficient oxygen gas for space journeys lasting up to a month", he added. "Beyond that period the size and weight factors make it impractical. The gases in the space ship must be reconditioned so they can be used over and over again. This is the job of algae.

"All plants do this in the earth's atmosphere. The reason

algae are favored for space travel is that they are not large or unwieldy and are perhaps the fastest-growing of all plants," Dr. Ketellapper said. "Also, the weightlessness experienced in space flight does not materially impair their rate of photosynthesis. In addition to removing carbon dioxide from the atmosphere and producing oxygen, they perform vital function—that of providing a balanced food.

Not Tasty, But

"Although not as tasty as ice cream, algae are considerably more nutritious. Normally they consist of 51 per cent protein, 30 per cent carbohydrate and 19 per cent fat, and they contain enough vitamins to sustain humans. If more nitrogen is added to the algae diet, the plant will increase its protein production.

"U. S. Air Force volunteers found algae edible. But if it made up more than 25 per cent of their diet, they were apt to have indigestion," the biologist added.

(Continued on page 5)

IMPORTANT ANNOUNCEMENT TO CANDIDATES FOR BACCALAUREATE AND ADVANCED DEGREES

ELECTRICAL ENGINEERS PHYSICISTS MATHEMATICIANS

Technical representatives of the MITRE Corporation will be conducting interviews on campus

February 9, 1962

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ARRANGE FOR AN INTERVIEW THROUGH THE PLACEMENT OFFICE.

THE MITRE CORPORATION

P.O. Box #208 - Bedford, Massachusetts

Ricketts Leads IH Football; Lloyd, Page Fight For Second

BY BOB LIEBERMANN

The second week of the inter-house football season ended last Monday. The week's activity consisted of eight games, some close, a few not so close, and all important. Ricketts, the first week's leader, continued its dominance of the scene with a clutch victory over Dabney (27-13) and a relatively easy win over Fleming. The battle for the all-important second-place rung in the standings raged on as twin triumphs. Page defeated Ricketts and Lloyd both recorded the not so close games. Lloyd, Blacker and Fleming in two of loser only to Ricketts, overwhelmed Ruddock and scored a surprisingly easy victory over Page (18-2). Dabney, rated an outside chance for a second-place tie based on the outcome of its game with Lloyd, managed to eke out a 19-12 victory in a hard-fought game over an inspired Ruddock team. In the other game of the week, Fleming defeated Blacker in a game that very well could have gone either way.

Ricketts is First

With only five games remaining to be played, the final standings of the Houses appears to be

fairly well outlined. Ricketts, of course, will occupy the initial spot that it has dominated throughout the season: this presumes a Ricketts victory over Page which seems relatively assured from past performances. Considering it a foregone conclusion that Dabney will whip Blacker, the occupancy of second-place depends entirely upon the outcome of the Lloyd-Dabney game. A Lloyd victory would assure it a second-place followed in order by Page and Dabney. A Dabney victory, however, would precipitate a three-way deadlock for second between Lloyd, Page, and Dabney. The scramble to avoid the cellar positions will continue as Ruddock faces both Blacker and Fleming in the final days of the season.

| Standings (2-5-62) | | |
|--------------------|-----|------|
| | Won | Lost |
| Ricketts | 5 | 0 |
| Lloyd | 4 | 1 |
| Page | 4 | 1 |
| Dabney | 2 | 2 |
| Fleming | 1 | 4 |
| Blacker | 0 | 4 |
| Ruddock | 0 | 4 |

Close Conference Race In Swimming Predicted

BY TOM SALLEE

The swimming team is now starting to get into serious pace work as they prepare for their first meet with Santa Monica City College on Feb. 23. At present Coach Web Emery is not too optimistic about the team's prospects for the coming year despite the presence of eight returning lettermen as well as some excellent sophomore talent.

Web Won't Guess

With graduation hurting the championship Beaver squad of 1961 Web sees the conference title up for grabs and refuses to make predictions. Both Oxy and Redlands will be stronger this year owing to excellent sophomore talent and CHM will be improved but not the threat of either of the others. Web has a knack for turning out winning teams, so it is early to count Tech out of the race, however.

Leading the returning lettermen is senior Gary Turner who picked up conference gold medals in both the back stroke and the individual medley, and Bruce Chesebro, junior sprint star. Others returning for last year's championship squad are Jim Shaw in the backstroke, Alan Huber and Pat Manning in the breaststroke, Art McGarr in diving, Mickey Newton in breaststroke and freestyle, and Jim McCoy and Steve Mastin in freestyle.

Up from last year's freshman squad, Dave Seib looks like he may be the man to fill the big gap left by Gary Tibbits in the distance events. Other promising sophomores are D.D. who is looking very strong in the butterfly, Art Turner, conference frosh backstroke champion last year, George McBean, record-setting winner of the 100 yd. freestyle in this year's InterHouse Swim Meet, Doug Lamber and Elliot

Harry in breaststroke and butterfly, Mike McCammon in the distance events, and Tom Crocker in breaststroke and freestyle.

Freshman Team

Freshman prospects at present are unknown, but it looks like it may be a pretty good year for them. The biggest weakness is that no one is swimming the butterfly at present. In other events we have: Evan Suits, Ted Jenkins, and Melvin Stevens for freestyle sprints; Hugh Maynard, Ken Kunen, and Peter Ryan for distance events; Warren Peascoe in backstroke; Jerry Nelson, Bob Gillon and J. Chang in the breaststroke; and Charles Smythe diving.

Dabney Leads Trophy Race; Fleming Second

Blacker defeated Fleming in basket ball last week to gain possession of the Discobolus trophy. The loss left Fleming in second place by one point behind Dabney. The Darbs lead the race with a total of 15 points. Lloyd had the next challenge and Blacker accepted ping-pong. The match was to be played this week.

The current trophy standing excluding the Lloyd-Blacker contest are:

| HOUSE | POINTS |
|----------|--------|
| Dabney | 15 |
| Fleming | 14 |
| Blacker | 4 |
| Ricketts | 4 |
| Ruddock | 2 |
| Page | 2 |
| Lloyd | 1 |

Season of Wins in Tennis Seen

BY COACH JOHN LAMB

The Caltech varsity team is beginning to work in earnest for its first league match scheduled for Saturday, February 24, at Redlands.

We have an unusually large number of candidates for the team and have the task of cutting the squad to working size before the season opens.

Among those returning this year are: **Dick Hess:** We hope for his usual reliable game and look for improvement in his serve. **Dave Owen:** Dave should have a fine year, especially if we can bolster his forehand. **Frank Curtis:** If "Flashy" Frank can make up his mind to work he could be the key to a winning season. **Ted Gibbs:** Ted had one of the best won-lost records on the team last year. We look for improvement this year. **Bob Hearn:** Another "old reliable" who should win a high percentage of his matches. **Alan Limp:** With a year of frosh tennis behind him, Alan should improve his won-lost record as he will probably play easier competition.

Pressing these players will be a group strong enough to win from many college teams: **Bob Ruddick** is a fine doubles player and an improving singles player. **Ray Plant** is much improved and the hardest worker on the squad. **Roger Leezer** was number two frosh last year and a potentially fine double man. **Francis Wilson** is a fine athlete and good competitor. He will make the doubles players work for their jobs. **Joel Yellin** is back after a year's absence and has fine potential. **Ed Medof** was good as a frosh and scores very well. **Elliot Bradford** has good strokes and needs to steady his game to become a more consistent scorer.

With luck, Tech could finish near the top of the conference standings this year although Redlands must be conceded the best bet until someone comes along to beat them.

Cagers Beat La Verne; Outplayed By Whittier

BY RICK WEINGARTEN

The Caltech basketball team split a pair of games this week, beating La Verne 72-66 there, then losing to Whittier on their own floor 79-53.

Noll Sets Record

Tech showed a strong offensive game against the La Verne five as Noll, who has been red hot lately, came through with a 26 point game. This sets a new record for (get this) non-conference, away games. Also hot was Dick Burgess who had his best game to date and scored 14 points. Tech was behind at the half by five points but caught up in the second half with the clutch foul shooting of Volker Vogt and the first six point play in Tech's history. The six point play needs explanation. Noll scored on a three point play and a technical foul was called at the same time. Bopp converted the technical free throw, and Tech took the ball out of bounds. Then a quick pass to Noll set up points five and six, all with the clock hardly ticking off a second. In this same series of plays Roger scored seven

points in a total of twenty-six seconds.

Whittier Just Too Much

The Whittier game was, as last time, simply a case of a much better team being on the floor. Although Steve Hayes, who usually is a ball of fire against Tech, scored only nine points, the rest of the Poet team came through with enough outside shooting to riddle the Beaver defense. Dean Gerber showed much improvement over his past few outings and the Beaver shooting was at a respectable average; but the Whittier rebounding was just too much. High point man for Tech was Noll with thirteen points.

| High Scorers for Weekend | |
|--------------------------|----|
| Noll | 39 |
| Burgess | 21 |

Algae

(Continued from page 4)

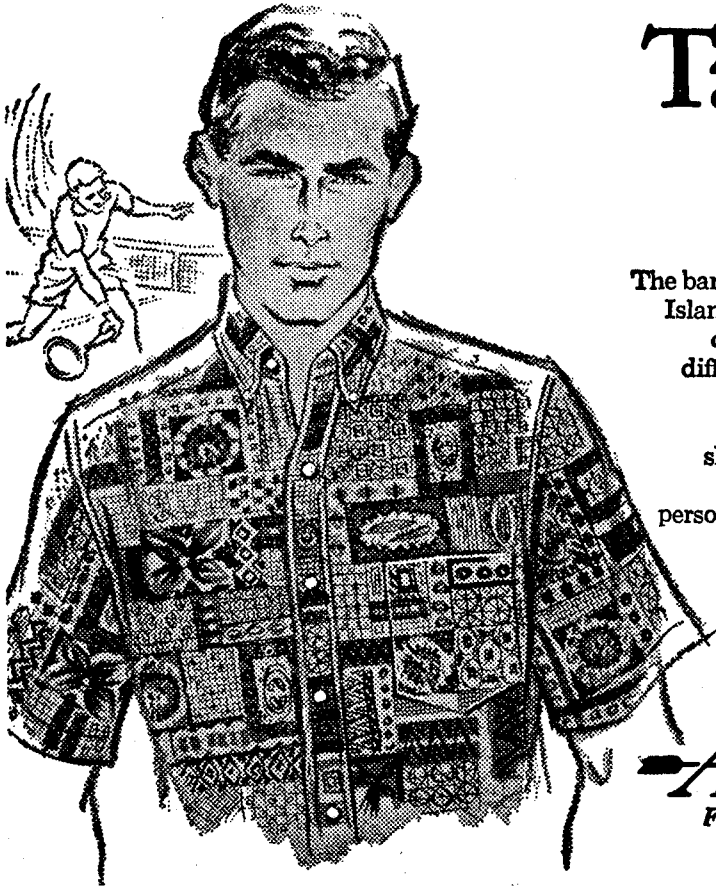
Chlorella Wins
"Many scientists are agreed on which of the more than 17,000 varieties of algae might be the most efficient space traveler. It is a strain of Chlorella, which is favored in the algae race for space because it is highly prolific. It produces its own weight in food every day. The grater the growth, the more the oxygen production."

The particular strain grows best in a temperature of 102 degrees Fahrenheit, which is a higher optimum temperature than for most varieties, the biologist said, pointing out that this is an advantage because a major problem in spacecraft is getting rid of excess heat. Plants functioning best under higher temperatures require less air conditioning.

Space Garden

Dr. Ketellapper estimated that a "space garden" of about five square yards of algae would be sufficient to supply enough oxygen for each astronaut. The algae would be grown in water-filled transparent tanks a few inches high and would be exposed to sunlight through a heavy glass or plastic porthole.

(Continued on Page 7)



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AUFS

(Continued from page 2)

may expect a rather vigorous regime, not entirely to our liking, to develop in Algeria. This regime will probably be a harsh, self-reliant, secular socialist state, led by a nebulous group of "self-made men" not afraid to take drastic action to achieve their goals.

Ideally, independence will be preceded by some kind of 'transition period', probably involving massive emigration of Europeans to metropolitan France. In the light of recent intercommunity warfare, Gallagher guesses that as large a proportion of the Europeans as eighty percent might emigrate.

No Tea Dance

As terrible as the present chaos in Algeria has been—characterized by hideous tortures, loathsome brutality, and over a million killed or missing—an even worse situation would develop if the French Army were to be immediately removed from Algeria. The resulting debacle would make the Congo crisis look like the Frosh Tea Dance.

Only in the unlikely event that the European community in Algeria can be convinced that the only viable long-run solution to the Algerian dilemma lies in total independence from metropolitan France can we reasonably hope for a peaceful solution to the problem. This may be too much to hope for, but...

"Prospero: The rarer action is in virtue than in vengeance. My charms I'll break, their senses I'll restore, And they shall be themselves."

Schedule

Gallagher's schedule for the remainder of his stay on campus follows:

At noon today he will attend the Graduate Sack Lunch in the 'Y' Lounge. This evening he will speak at an Athenaeum lecture on "North Africa 1962."

Friday, February 9, he will speak to Professor Gilbert's 8 and 11 a.m. Ec 100 classes in 101 Dabney, winding up the day with dinner at the home of Mrs. Thomas F. Brady.

Saturday, February 10, Gallagher will dine at the home of Mr. and Mrs. Harold Gertmenian, rounding out the weekend with a talk Sunday to the Inter-Nations Association discussion group entitled, "Tunisia and the Algerian Rebels."

Monday, February 12, he will discuss "The Role of Literature in Arab Nationalism" at the 4 p.m. Humanities Faculty Seminar, and, following that, appear at the Upperclass Dining Club in Chandler.

Tuesday, February 13, Gallagher will speak to the H 5 class at 11 a.m. on "Algeria, The Arab World, and France." After appearing at a 2:45 p.m. Westridge School Current Events Class, he will return to Tech, and at 7:30 p.m. attend Dr. Munger's H 124 class.

Wednesday, February 14, Gallagher's last day on campus, he will lunch with the Geology Club in 151 Arms and probably sit in on the 2 p.m. Technical Cooperation seminar. Wednesday evening he is scheduled to dine at the home of Dr. and Mrs. Charles Crede. Next week the report on the Gallagher interview will continue with a discussion of pan-Arabism and the United Arab Republic (a grandiose plan for an Arab state, now including only Egypt).

Moon Craters Steeper Than Expected

The first man on the moon may find that its surface is much rougher than heretofore supposed, Caltech's lunar research team predicts. Using new shadow-study techniques, the group has found unexpectedly steep walls in lunar craters and mountains.

The group also has estimated that a sizable part of the moon — one half of one per cent of its surface — is always in shadow, and that most of this perpetually shaded area is near the poles. These areas may serve as "cold traps" that would collect and retain volatile substances, such as water vapor, released by chemical action during the moon's evolution, the team said.

The finding of steep slopes on lunar mountains and craters contradicts recent reports that there appear to be no steep walls or cliffs on the moon and no slopes of more than 10 per cent inclination.

The Caltech team, whose work is supported by the National

Aeronautics and Space Administration, includes Dr. Harrison Brown, professor of geochemistry; Dr. Bruce Murray, research fellow in space science, and Howard Pohn, research assistant. They selected parts of the moon's north, south and equatorial regions for study.

They found that the maximum slope of the mountain Piton was more than 34 degrees and that of the crater Mosting exceeded 37 degrees. These slopes are considered unusually steep, even on the earth. Observing a rugged area in the region of the crater Argelander, the group found that the average gradient of slopes in the roughest one per cent — 250 square miles — of it was greater than 37 per cent.

One might expect the moon to be rugged. There are no rains and no atmosphere to disturb its landscape.

However, Dr. Murray said that the battered appearance of some of the pox-marked surface may indicate "erosion" of some kind. It may be caused, he ex-

plained, by fine dust, meteorites and even protons (the nuclei of atoms) "raining" onto the moon-space from space.

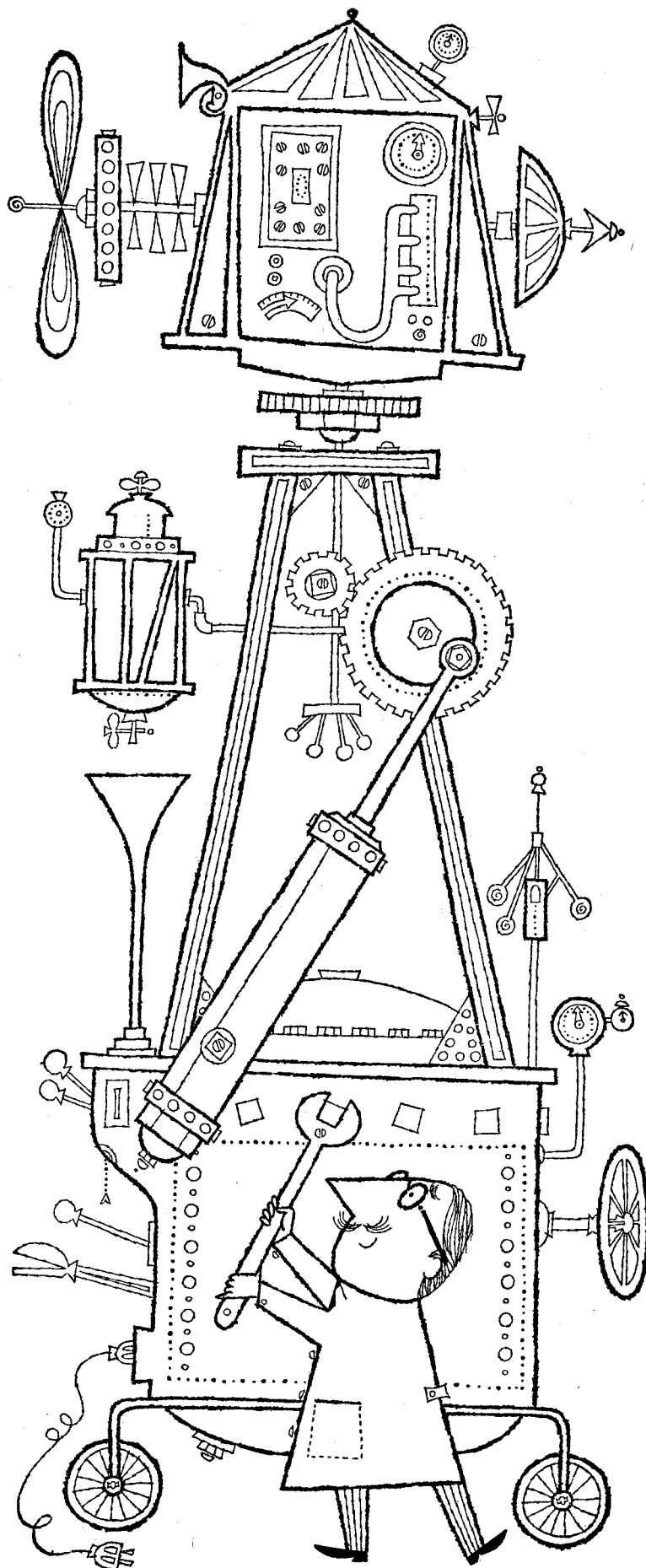
Indications are that the moon is covered with a layer of dust at least a fraction of an inch thick. This is determined by measuring how quickly the temperature drops when a shadow reaches a given area. The lunar temperature ranges from about 250 degrees Fahrenheit in sunlight to minus 240 degrees in the shadows.

The lunar team's studies were made by measuring shadows of craters and mountains in relation to the angle of the sun, and to the changing patterns of the shadows. Most of the studies were from the excellent lunar photographs taken through the 100-inch telescope at Mt. Wilson Observatory by the late Francis G. Pease between 1919 and 1929. These pictures were supplemented by other photographs and the findings were checked photometrically with the 60-inch telescope at Mt. Wilson. Photo-

metry is a light intensity measuring technique.

The group determined that while a lunar mountains cannot produce permanent shade, a crater can. As the morning sun rises over the moonspace, the crater shadows shrink until the afternoon, when they begin to grow again. These shadows never disappear. Because of the position of the earth in relation to the moon and the sun, man never can see any of the moon's permanently shaded area from the earth and must await the development of space probes to study the permanently shaded areas directly, Dr. Murray said.

The lunar lab group not only is interested in learning about the moon for its own sake, but also in learning more about the earth. Dr. Brown believes that the moon may hold the key to questions about the early history of the earth and solar system because it has been virtually unchanged since it was formed. It may still bear a record of those earlier times.



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Basic studies in these and other fields are just part of a continuing program of progress aimed at reinforcing Ford's leadership through scientific research and engineering.



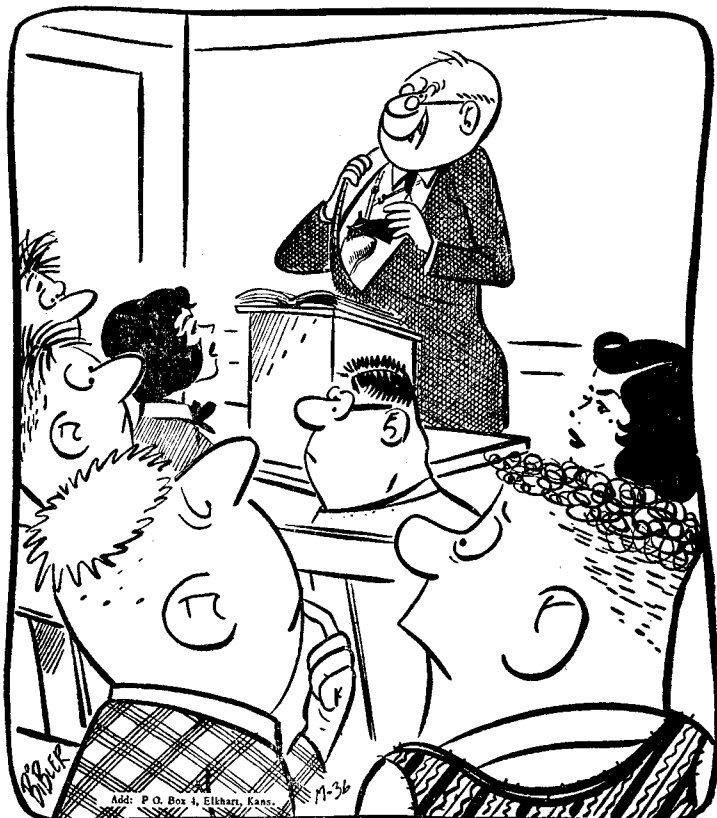
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LITTLE MAN ON CAMPUS

by Dick Bibler



"I'VE WAITED FIVE YEARS FOR SOMEONE TO ASK ME THAT QUESTION."

Grad Dean To Interview

Students interested in graduate study in business administration are invited to talk with Harold R. Metcalf, Dean of Students in the Graduate School of Business of the University of Chicago on Tuesday, February 13.

Dean Metcalf will be on campus from 9:30 a.m. until 1 p.m. to discuss graduate programs of study leading to the M.B.A. and Ph.D. degrees at the University of Chicago. He will also explain the scholarship program and career opportunities in informal interviews arranged by Dean Eaton.

Regardless of their undergraduate major, students who expect to receive the bachelor's degree or its equivalent are eligible to apply for admission to the School.

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Tech Has Two Peaks Named

BY BOB GREENWALD

Another chapter in the heritage of Caltech has recently come to life with the unearthing of important historical data concerning an ignominious mound of real estate, 9138 feet high, located in the San Gabriel Mountains and known as Throop Peak.

It appears that in the early 1900's there existed a rugged hiking trail from Azusa up the San Gabriel Canyon to Rincen, Coldbrook, and Crystal Lake. Someplace out in the wilderness, the hardy adventurer is faced with the choice of two trails: one west to Islip and one east to Hawkins and to Throop peak, the second highest peak in the ridge dominated by Baden Powell Peak (easily located on any map of the area, if such exists).

Throop Peak

In 1936, an itinerant mountaineer came across a very old register book atop the mountain which had been there for over 30 years. It appears that about 1901 or 1903, a group of our hardy predecessors from Throop College climbed the peak, made a sketch of the mountain in their notebook, wrote the immortalizing words, "This is Throop Peak, not the mountain to the West," and signed their names.

Subsequent climbers in the intervening years had just about filled up the book, and so it was removed and replaced with a fresh one. The old one supposedly still resides in the historical files of the office of the Forest Supervisor, where it endures as a lasting testimony to the vigor and fierce determination that set the precedent for life at Caltech.

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Nutritious Algae

(Continued from Page 5)

"The light-catching area must be adjustable to compensate for the changing intensity of sunlight at different distances from the sun because the rate of oxygen production is dependent upon light intensity," the biologist said. "One must filter out the two extremes of the solar spectrum — infrared and ultraviolet light. Ultraviolet increases the rate of mutation and infrared is absorbed only as heat."

All the algae cells should be exposed to sunlight, but only part of the time, Dr. Ketellapper said. Algae die in full sunlight. Diffused lighting increases the efficiency of the plants.

Space Gardeners

The astronauts would be required to perform gardening chores. Crops of algae, which grow by dividing, would require daily harvesting to maintain a healthy growth rate. The indigestible cellulose walls or shells of the harvested algae could be ruptured and their nutritious interiors either eaten by the astronauts or returned as food for other algae.

The plants also must be fed. They require only water, light carbon dioxide and minerals such as nitrogen, phosphorus, magnesium, sulphur and calcium.

"There is less chance of a physical atmospheric system — one consisting of oxygen carried in tanks — going wrong than a biological system," Dr. Ketellapper declared. "But this is largely because we have had more experience with the physical system."

"In using algae, we should put a safety margin into our system. I would advise four or five smaller 'plots' of algae rather than one large one. Thus if an infection should attack one plot, the others could be salvaged. Perhaps we also should carry along a tank or two of oxygen."

"The algae system can be developed into an efficient one," he emphasized. "If you should want to stay away from the earth as long as three to five years it will have to be very, very efficient and reliable."



Brewing



Brunt Busted

Llewddman Brunt must think 1962 to be leap year. Recent date with sexiwench, ending at local ice milk parlor, found date paying for repast. Brunt finances total to exactly twenty-seven cents. Perhaps dishwashing apron would be in order next time.

Nightmare Girls

Toad reports that Scurve uglwench contest is progressing nicely. Billiousman-wench is still in first place, though threatened by Onerous-wench. Morbid is still trying to enter contender. Latest reports indicate that last Morbid-wench lowered Lake's purity score by 27. Blind date service is not available.

Snake Stuck

Scurvesnakealley had a chance to live up to its name last weekend. Scurvefrosh, waking early,

indulged in pre-dawn physical activity — to wit: moving dance floors. Frosh tire of sport when all floors are neatly braced in front of aforesaid alley. Last seen, Beak notices Mad Turk descending sheer wall of alley. Evidently all of alley does not live up to name.

Blush Buried

Floyd Snow party was smashing success. Reports from Bashed Beak indicate that all were seeing white stuff. After weekend, Llewdder Brewed Blush found four feet by fifteen feet by seven feet pile of white water where spirit-car should have been. Buried treasure hunt strikes red. Frozen Spirit is finally thawed and removed. Luck smiles on Owl.

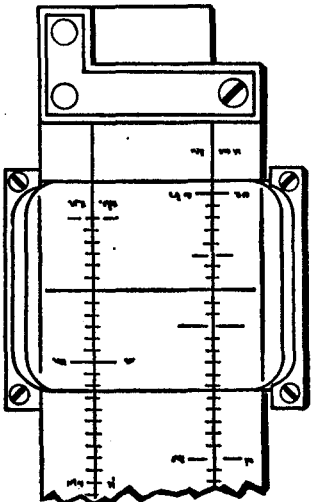
Making of a Bed

Passing frosh impressed when he hears Toad say to wench,

"How would you like to come over tonight and help glue my bed together?" Follow up by Beak indicates that Toad, creating reclining pad in room, has procured sheets of foam rubber for mattress, which must be laminated. Wench did not show, but Toad reports that bed was nicely glued together — with contact cement.

SUMMER JOBS IN EUROPE

WRITE TO: AMERICAN STUDENT INFORMATION SERVICE, 22 AVE. DE LA LIBERTE, LUXEMBOURG



ELECTRICAL ENGINEERS

LENKURT ELECTRIC CO. is conducting on-campus interviews

Thursday, Feb. 22

LENKURT ELECTRIC CO. is one of the world's major specialists in multiplexing and microwave radio equipment for telephone, telegraph and high speed data transmission; a principal supplier of this equipment to the telephone industry, and a leading authority in development of electronic communications.

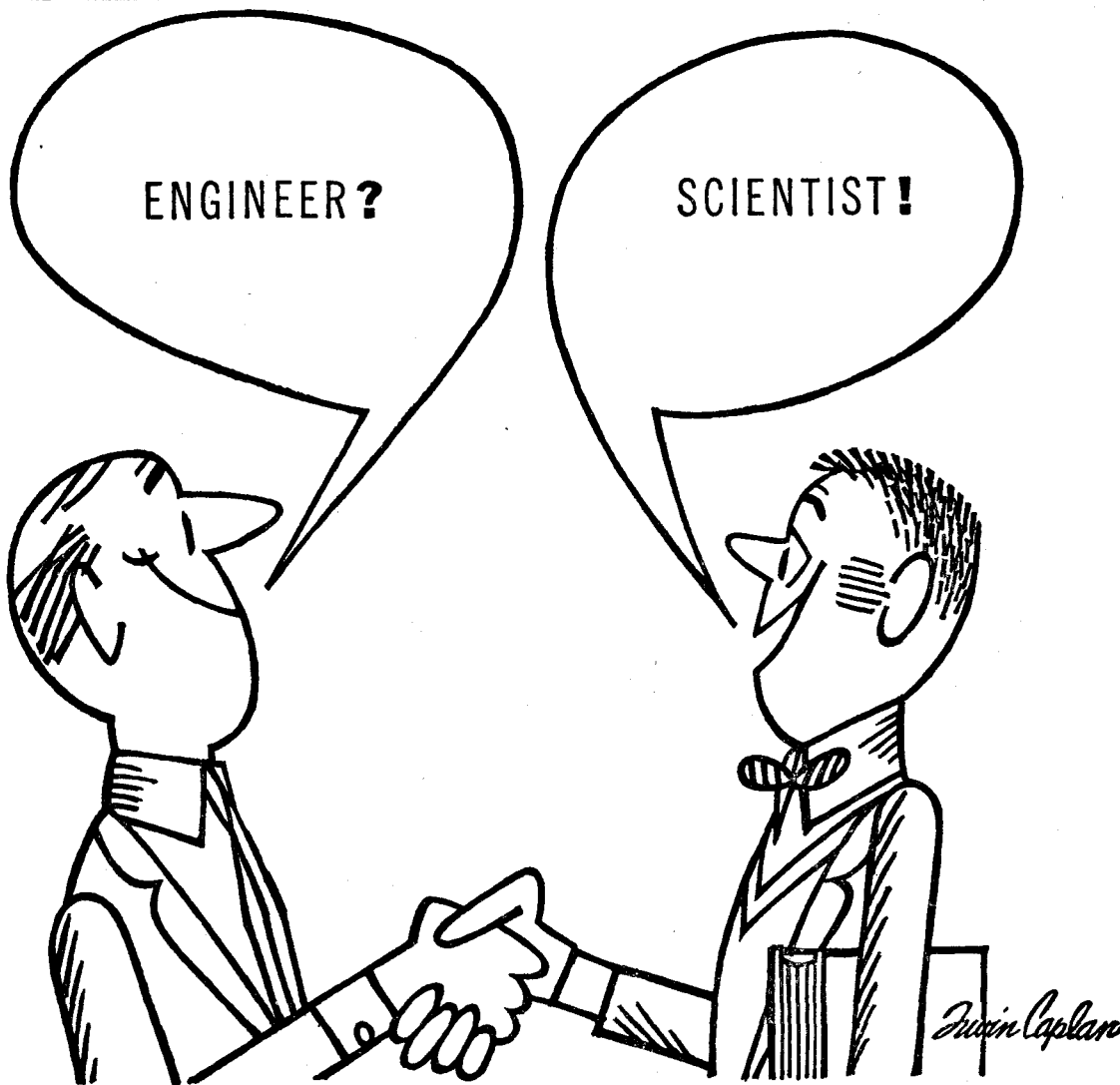
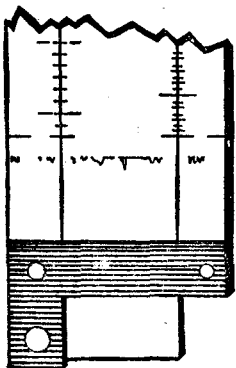
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Wednesday through Friday — February 14, 15 and 16

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