

Stein Waves

Solar Sound Discovered

by Etaoin Schroedlu

"I'm very surprised at all the interest," said Alan Stein about the publicity being given to the discovery of Stein waves. "Associated Press has picked up on it, our News Bureau has been calling me, and all sorts of people have been asking me about it. I didn't think that Stein waves would be of interest to anyone but myself and Dr. Zirin."

The discovery was made last summer. Stein, a former *California Tech* editor-in-chief and expert photographer, was studying films taken of the sun and noticed concentric dark rings radiating outward from certain areas on the film. "I hadn't ever seen anything like that before, so I took the film to some grad students. They didn't know anything about the rings, either, so we took the film to Dr. Zirin, and neither did he." The phenomenon was unofficially named after Stein, and the name has stuck.

"That's very far out, discovering something and having it named after you, in a field you don't even work in, a week after



Alan Stein - Self Portrait

your graduation," said Stein, a 1971 Caltech grad in physics and English. "It's also rather ironic that all this interest should come up my last weekend on campus." Stein, who has been working on campus since his graduation, returned home to Northern California Sunday to appear in court on charges of resisting the military draft.

The public interest in Stein waves at this time was primarily a result of publicity for a report made by Dr. Zirin yesterday to the Solar Division of the American Astronomical Society.

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Chem 6 Teaches Practical Chemistry

How would you like to blow up the third floor of Millikan Library? Or poison your favorite (?) prof? Or send Harold Brown on a trip (not to Finland)? If you find these prospects appealing, then Chem 6 is for you. Chem 6 is a series of informal seminars designed to give you some *practical* knowledge in chemistry. The seminars will be held at 4 p.m. in 153 Noyes. If you missed the opening seminar on explosives by Jim Ellern, then be sure not to miss the "Rossman Pyrotechnic Show" featuring George Rossman and his straight-man Harry "The Horse" Gray. This seminar will be given Tuesday, April 11, at 4 p.m. The entire schedule of seminars follows:

April 11: G. Rossman, *Rossman Pyrotechnic Show*.
April 17: N. Davidson, *Kinetics of Explosive Reactions as Remembered by a One-Time Kineticist*.

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News Briefs

ASCIT Party-Party Saturday Features Fate

Toads, trolls, and all other random Techers are invited to an ASCIT Party-Party this Saturday night. Festivities begin at 8:30 p.m. in Dabney Lounge. Live music will be provided by *Fate*, and the Fleming House Bar (oh, my poor gut) will serve suitable refreshments. For rides contact John Lehmann 795-6841 ext. 2241.

Telephone Switchboard Remains Open Longer

The telephone switchboard is now open until 8:00 p.m. in the evening and from 10:00 a.m. to 3:00 p.m. on Saturday. The hours were extended because the emergency service couldn't handle the increased number of calls at that time. However, it is more important that you will now be able to make direct dialed long distance calls when the lower rates are in effect and bill them to your

account. This may be done by dialing '5' when the switchboard is open.

The Shadow Still Moves West

Peter Beckman has just claimed he's been writing poetry. Be that as it may, *Totem* Caltech's literary-art magazine, is once again (perhaps still is more accurate) accepting contributions. Anyone vaguely connected with the Institute is invited to submit poems, short stories, photos, drawings, or whatevers. Bring them by the *Tech* office in Winnett, or give them to Philip Massey (Ruddock House).

Olive Walk Concerts Feature Outside Talent

The Caltech Y will begin an afternoon Olive Walk Concert Series from 12:15 to 1:00 p.m. this Friday with an Ice House

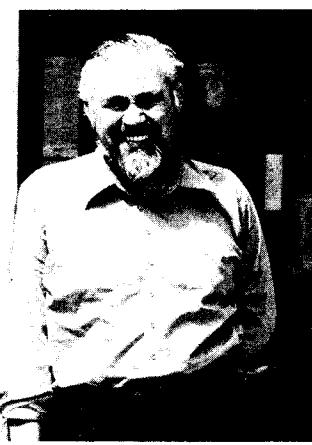
headlining act — folksinger, Casey Anderson. Casey made two European tours this past year — one with "Blood, Sweat and Tears" and has made many television appearances including the "Glen Campbell Goodtime Hour."

The concert series will feature four other folksingers throughout the term including Ron Coden (appearing April 21st) and Chuck Mitchell (appearing May 19th) who are also Ice House headliners. All concerts will be on the Olive Walk and run from 12:15 to 1:00.

Learn to Dive Into Beaches

A new Scuba class — beach-diving techniques — will be offered this term. The course is open to anyone that is a certified diver. If you are not very

Continued on Page Seven



Dr. David R. Smith

Co-op Housing at Tech A Future Possibility

by Ted Michon

Dr. David R. Smith recently visited several colleges around the country to study cooperative housing.

In an interview with the *Tech*, he reported on what he had found at Berkeley, Cornell and MIT. Berkeley, according to Dr. Smith, has had a system of

cooperative housing for more than 40 years. It began when 14 students took over a rented rooming house and hired a cook. Legally, they became a tax-free cooperative corporation that operated along lines similar to farmers' and other cooperatives. The cooperative began purchasing property and has been growing ever since, so that today it is a huge system of over 1000 people and includes several dormitories and other housing arrangements. "By now, you know, it's really a million dollar corporation. They've recently constructed a marvelous apartment, a very flexible apartment complex, so that undergraduates and graduates can live, not in a dormitory, but in small studios with 2 or 3 people sharing an apartment. The costs to the student are 58% of the cost of room and board in the university dormitory, in money, plus five hours a week work." A central kitchen serves all the students with the exception of one or two houses. The work consists of daily upkeep — cleaning tables, maintaining the kitchen, "the obvious kind of thing."

When asked if he had found instances where students had trouble getting everyone to do his fair share, Dr. Smith replied, "No, they don't. I must have been in ten different houses and I sat down and talked to people and I always asked that question. Does it work and how do you get it to work, and do people backslide and if they do how do you handle it? It's simply peer pressure."

Control of the corporation rests in a board of trustees that consists of 23 members. Five of them are adults, 3 chosen from the faculty by the college, another appointed by the Berkeley YMCA, and the last a resident manager. Function of

Continued on Page Six

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Administration Change



Dr. James Morgan was appointed Dean of Students by the Faculty Board at their meeting on Monday. Pending approval by the Board of Trustees, he will assume the deanship at the end of third term.

BOD Moves to Tuesday

by Jim Hugg
ASCIT Secretary

The BOD is clearing away its legalistic duties (appointive offices, budget planning, tax returns, etc.) in preparation for some challenging projects to improve the status quo. Where previous BODs have stagnated after completing budget allocations, the 1972-73 BOD has only just begun.

Because of scheduling problems, BOD meetings have been moved to Tuesday afternoons at 4 p.m. in Winnett lounge. There will be a BOD meeting this afternoon. The first Tuesday meeting is 11 April. This column will no longer include an agenda but will instead report on the decisions and plans of the Tuesday BOD meetings.

The agenda will be sent to each house secretary on Monday and should be posted next to the BOD minutes. Items for the agenda should be submitted to Hugg (Page) by noon Saturday to be considered at the Tuesday meeting.

Coffee Hour Lives!

The ASCIT Coffee Hour will be reborn on Wednesday, 12 April. All ASCIT members, grad students and faculty are cordially invited to join us in Winnett lounge for coffee and donuts. This is to be a glorified bull session, a middle of the week period of relaxation, and a good place for students and faculty to interact. Invite your favorite professor and tell him to bring his secretary and his appetite.

The BOD will be considering several plans for academic innovation, including an ABC—no credit grading plan and a policy to assign no homework during the last week of classes. If you have ideas to contribute, come to the BOD meeting and share your thoughts. Everyone is welcome to observe or to participate. Michelob and potato chips will be served in addition to punch.

There will soon appear a sign-up list in each house for frosh visitation during the summer. Please make yourself available to visit with a frosh to

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NEXT WEEK:
UP TO HIS EARS

Irked U.C.C.

Dear Sir:

Mace them hippies, they're all a bunch of commies anyways. Let me rephrase that . . . Castrate 'em. They're infiltratin' everywhere, even to the sacred halls of Page, blowin' the fumes of that evil weed out in all the alleys — I won't stand for it!! Not in my alley! If they want to smoke that stuff, they can go ahead and do it in their rooms or out behind the B&G buildings — but the alleys? That's going too far. (Hand me my hard hat)

Now me, I'm a biologist, and I know that that maryana stuff does bad things to your chromiums and screws up your progeny.

So the next hippy-faggot that walks through here puffin' on a roofer is gonna get his head (get it? . . . head) bashed in! Well, what can I say . . . ?

A Concerned U.C.C.

The Third Wing

The Prison System

by Nick Smith

"The degree of civilization in a society may be measured by entering its prisons." — Fyodor Dostoevsky

Last week, the surviving Soledad Brothers were acquitted of the charge of murdering one of their guards in Soledad prison. From the time of the murder to the time of their acquittal, the case probably had more repercussions than any comparatively simple case in the history of jurisprudence.

If the state of California is right about the death of a judge in San Rafael, the Soledad Brothers trial has racked up a count of a few million dollars and several deaths. Consider the facts: the state contends that Angela Davis conspired to provide radicals with arms in order to kidnap a judge in order to obtain the release of the Soledad Brothers in order to prevent the

Continued on Page Eight

FRANKLY SPEAKING

Throop Beat

No More Throop Beat

by millikan troll

EDITOR'S NOTEBOOK

The Faculty Board lent its blessings to an undergraduate option in social science. The matter will now go before the faculty, and hopefully the option will be available to students in September.

The Humanities Division has a new poetess-in-residence, Diane Wakoski. She will reside poetically in 319 Baxter during third term, and would like to meet students.

The IHC is discussing the possibility of moving Interhouse Swimming from December (Brrrrr) to April.

THE RUMOR MILL

Dr. Brown is off SALTING Russian tailfeathers again.

Speaking of leaving, Thayer Scudder is off to Africa to study

the Gwembe Tonga. He will be back for second term next year.

Our spies tell us that the Admissions Committee has offered admission to 22 minority students, about half black and half Chicano. More such details will undoubtedly turn up in the next few weeks as the venerable committee finishes its deliberations.

Will the L.A. Times be doing a feature on alley challenges? Well, if they can do Harrison Brown's international jogging, why not?

CABBAGES AND KINGS

With the main occupants of Throop Hall either moved out or preparing to do so, we are forced to bury the "Throop Beat" slug. Sigh. Until we hit on something which combines the almost incompatible qualities of wit and deference, we will experiment with the form and content of this column. Suggestions will be gratefully ignored.

Beware the Ides of April! Your chance to register to vote will slip by very shortly, so high thee ho to thy friendly deputy registrar: Lorne Schacter (Fleming), John Cross (Biology), Karen Current (EE), Jerry Glashagel (Y Office), or Dave White (Crellin) will sign you up. Clever of them to end voter registration just before tax day.

The CALIFORNIA Tech

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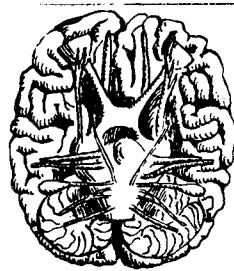
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FOR PERSONAL GOALS, HOWARD!

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from the cerebrum

by Etaoin Schroedlu

Ah, summer, beautiful summer. Finals are just about over, the smog is closing in, and it's time for all good trolls to go back where they came from and find a summer job so that they can afford to come back here in September. Sound familiar? Sure, but *you*, dear reader, j. random troll, of course are not so stupid as to wait until finals week to find a job, right? You'll get to that much earlier, say right after the midterm rush. Well, the Outside World and Bill Nash may have some unpleasant news for you.

The Outside World you all know (by repute, anyway). Mr. William Nash is Caltech's Director of Placement — you can find him in the little office under Throop that helps you find summer or permanent jobs. If you haven't met him yet, consider yourself introduced; you may be getting to know his office a lot better in the next few months.

A Place for Everyone

In the first place, if you're interested in summer jobs, and especially if you're interested in a permanent job, it's already too late. (Just thought I'd let you know.) For those of us who don't plan to hibernate just because of that information, the Placement Office has a file of job openings that people have sent to us. Some of the organizations which have information on file for summer jobs are the Yale Department of Engineering and Applied Science, JPL, the U.S. Uncivil Diservice, Cold Spring

Harbor Labs (for molecular biologists), NASA, the Navy, Lawrence Berkeley Lab, and various miscellaneous groups (which may have something just peculiar enough for *you*). The above openings are not guaranteed; they may have been filled by now. EQL openings have been discussed elsewhere in the *Tech* recently. Good luck.

And Everyone in a Place.

According to Mr. Nash, the outlook for jobs of any sort is very poor right now. "I don't know when it will improve." Furthermore, this is affecting even Techers now: traditionally, 85% of our non-PhD graduates have gone on to higher education, but quite a few of these are finding that there are not places for them in grad school, which only exacerbates the lack of jobs.

At the moment there are almost no summer openings, according to Mr. Nash, and very few permanent jobs available. What should Techers do about this? "Come in to see us, and try what we have, at least." But don't expect too much. For example, one 'large company' had 800 high-caliber scientists on R&D, and for financial reasons had to re-evaluate the research being done by those men. One-quarter of them were found to be working on projects of limited potential use to the company, and these projects were terminated. The extra scientists were retained, however, working on the other projects. Guess who won't be hiring any new people for a while? Another

Let The People Speak



Since the State of California is nominally a democracy, it would seem appropriate to have the people decide the burning questions of the day. One of these questions concerns the stiff criminal sanctions currently extant against the use of marijuana. Certainly the wishes of the people should be considered in this case.

The chance for such consideration rests largely with an initiative measure currently being circulated for signatures which, if enacted, would remove all legal sanctions on the private use of marijuana. Provisions affecting public use would not be changed: driving under the influence of marijuana would remain a crime, right along with driving under the influence of alcohol or toluene.

Whether or not one feels that marijuana should be thus legalized, we urge all registered voters at least to give the rest of the voters a chance to consider this measure.

—Edward A. Schroeder
Philip M. Neches

point: with jobs so hard to come by, turnover is greatly slowed, and the market isn't very fluid and dynamic any more.

Dreamers!

The Placement Office also offers services to alumni. "We used to have about 30 alumni requests on file; right now we have around 100. This is still a small number compared with the total number of Caltech alumni, but we don't have very much for them. Many of them are older men who were caught in the aerospace situation, and not very many organizations want older men right now."

Any final advice to Techers who want to draw more than unemployment this summer and future years? "Come see us; we'll help you to write resumes on yourself, and find appropriate sorts of openings. Don't be picky on geographical locations for your job unless you really mean it. Don't waste any more time."

Senator, Singer and Whale Upcoming Events

by Peter W. Beckman

Tonight, *Moby Dick* will premiere in Ramo Auditorium with one of the smallest casts in history — one man. Jack Aranson will portray twelve characters in sixteen acts in this theatrical interpretation of the classic work. There will be four performances — tonight, tomorrow, and Saturday nights at 8:30 p.m. and Saturday afternoon at 2:30. Tickets are \$4.50, \$3.50, and \$2.50 for the evening performances, \$3.50, \$2.50, and \$1.50 for the matinee, and \$1.00 for Techers. The performance will start at 8:30 p.m.

WGJB?

April 15th, the *World's Greatest Jazz Band* will come to Caltech. The nine members of the Band have a combined total of over 250 years of experience playing jazz with some of the most famous bands, and their fans include all the members of the Society for the Preservation of Dixieland Jazz. The show starts in Beckman Auditorium at 8:30 p.m. Tickets are \$6, \$5, and \$4; \$2.50 for Techers.

The next afternoon, Beckman Auditorium will present *Music from Marlboro*. Six musicians will recreate some of the superb music presented at last summer's Marlboro Festival. The repertoire will include Beethoven's *Variations in E Flat Major*, Op. 44, Dvorak's *Quintet in A Major*, Op. 81, and Anton Webern's *Six Bagatelles*, Op. 9. Mary Burgess will sing six of Haydn's Scottish songs accompanied by the group. Tickets are \$5, \$4, \$3, \$2.50; \$1 off for students.

from the
history
file . . .

California Tech

25 Years Ago Today *The Tech* shifted over from publishing on Fridays to Thursdays.

20 Years Ago Today . . .

"The power shutdown which darkened the entire campus for 25 minutes Monday was probably caused by a small mouse or rat. Although no remains have been found, it is believed that a

rodent who was prowling in the substation in Throop Hall got a little too close to the 2300-volt bus bar, causing an insulator flashover and a short between all three phases. The main power supply was out of service from 10 p.m. until 1 a.m., although a standby line was soon connected."

10 Years Ago Today: Larry Gershwin, Richard Karp, and J.C. Simpson took over as editors of the *Tech* . . .

"Staged by sympathetic physics grad students, the riot started as an official protest of the ejection of Arnold Leiskar from the Keck Graduate House last week. With amused faculty members and secretaries looking on the students were prompted by Dave Bowman, a Caltech alumnus, into a 'vegetable riot.' *Continued on Page Five*

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"Richard II"**Chamberlain Superb**

by Peter W. Beckman

Chronologically, the continuous series of plays in which Shakespeare records his history of the fall of the House of Plantagenet begins with *Richard II*. This was one of Shakespeare's earliest works, and it has never been considered one of his best. Yet, the current production at the Ahmanson Theatre is magnificent both in concept and execution.

Director Jonathan Miller has done a great job eliminating some of the defects of the original play. The first act has been made much more concise by eliminating the confrontation between the Duchess of Gloucester and John of Gaunt, and by combining the first and third scenes. This allows the plot to get started much more quickly, and saves a fair amount of unnecessary verbalization.

God Save . . . Who?

The sense of drama had been greatly heightened throughout the entire play through careful use of the stage and props. The stage, a vast wooden platform with ramps and stairs leading to it, focuses all of the audience's attention on the actors. Thus, the audience is freed from the extraneous clutter that often takes its attention away from the main part of the play. Props were few, but used to great effect. The glove tossing in Act IV where Aumerle is challenged is especially good, while the mirror scene lends great pathos to the plight of the fallen king.

The play did have some unavoidable faults. The major one lay in the number of characters. Since the play covers a number of complicated politi-

cal maneuvers, Shakespeare added a large number of minor characters who say a few lines, then leave. Their appearances seemed to lead to a great amount of confusion on the part of the audience as to what was happening and who was speaking.

Kudos

Overall, the acting was excellent. At the very least each actor was adequate, and most performances were far above this. Special note should be made of Patrick Hines who played the Earl of Northumberland with a great amount of flair, Tom Toner, who portrayed John of Gaunt as the conscience of England, and Sorrell Brooke who gave an excellent performance as Edmund, Duke of York.

Richard Chamberlain really shone in the title role. He played Richard with just the right amount of majesty and madness, and he completely fulfilled Miller's intention of making the audience pity Richard while realizing his unfitness to rule.

On the negative side, the scene where the Duchess of York begs her son's pardon came over rather poorly. Although the scene was obviously done for laughs, the Duchess' part was far overdone, and the comedy would probably have been more effective if it had been done a little less blatantly.

All in all, this fine production is a must for this season's theatre goer.

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Food and . . .**Please Pass Me
A Chicken Thai**

by PMN/CDS

This week your friendly guide to better eating takes you to the very exotic Orient, indeed, to a small piece of Bangkok, Thailand. But don't make your airline reservations yet; you only need get to 5158 Hollywood Boulevard, about two blocks east of the Hollywood Freeway, to find SIAM THAI FOOD.

Thai cooking resembles Chinese cuisine in many ways. Both feature bite-sized chunks of meat and vegetables suitable for chopsticks, and both use rice as the staple. However, Thai cooking employs spices in greater variety (and potency).

A dinner starts with a large bowl of soup: a clear broth with a hint of garlic with strips of meat, vegetables, and wonton (kreplach to our Yiddish readers) liberally added. The soup is a meal in itself.

Then add to a plate of steamed rice any of a variety of dishes. Try pan-fried noodles with shrimp, beef, pork, or chicken; spicy hot beef or chicken curry; ham hock — go with friends and try them all. If you like it hot, ask the waiter

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Drink**The Italian Way**

by Peter Beckman

When someone refers to Italian wines his listeners almost always think of Chianti. This is by far the most famous and most popular Italian wine, and it is easily set apart from others by the raffia wrapped "fiascos" in which it is often bottled.

Common usage has turned Chianti into a generic term that is used for wines produced in locales as varied as Argentina or Australia, but the wine's original home is in the rolling hills of Tuscany. There over 50,000,000 gallons are produced annually. Much of this is pretty poor — *vin ordinaire* at its most ordinary — and the Italian government allows it to be produced with very little supervision.

Raisin in the Sun

Under much stricter control is the "Chianti Classico" that makes up the best of this type. It is made from San Goveto, Cannaiolo, Malvasia, and Trebbiano grapes that are grown in a small delineated area between Florence and Siena.

The wine is fermented by the

"Governo" method. In this process, about 10% of the best grapes are allowed to raisin. Then, they are crushed and added to the already fermented Chianti. This induces a second fermentation and causes a small amount of the carbon dioxide to dissolve in the wine; this results in the fresh "prickle" that is characteristic of fine Chianti.

Angels . . . I see Angels

Other fine Chiantis are produced outside the classic area, and the best of these are marked with a white seal that closely resembles an angel.

The Chianti produced in other countries tends to be rather ordinary red wine that resembles its Italian model very little. Most of the larger producers in California make their Chianti from fairly random grapes to produce a pleasant, uninteresting red wine. A few of the smaller producers, usually of Italian descent, do produce very good Chianti, but usually in very limited quantities, and even these seldom compare to the finer Italian products.

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Fracturing Flick**"What's Up, Doc?"**

by Phil Neches

The critics have said that 1972 appears to be a great year for the movies. I suppose the great success of such serious films as *The Godfather*, *Slaughterhouse Five*, and *Silent Running* bear this out. But never fear! Hollywood will not drown in seriousness, not if Barbra Streisand has anything to say about it.

What's Up Doc is a classic (?) romance between an introverted anthropological ethnogeomusicologist and a professional student and walking disaster area (Barbra Streisand). Besides that, it is a good variation on the comic theme of identical suit-

cases, in this case four of them: one contains purloined classified documents, another a fortune in gems, a third rare mineral specimens, and the fourth Barbra Streisand's underwear.

The movie contains a memorable chase scene through the streets of San Francisco à la Bullitt, which ends with all of the chasees missing the boat, as it were. And the last bit of dialog will have undoubtedly fan appeal:

"I'm sorry about the way I treated you back at the airport and . . ."

"Love is never having to say you're sorry."

"That's the most ridiculous thing I've ever heard!"

See it if you need a laugh tonic on the rocks; it is currently running exclusively at Grauman's Chinese in Hollywood.

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THE CALIFORNIA TECH



Now that this column has a new logo, I feel obliged to rearrange everything. For example, this week, the live theatre comes first:

VOLPONE continues at the Mark Taper Forum of the Music Center until the 23rd of April. The cast is rather varied, including Avery Schreiber and Adam West.

RICHARD II is at the Ahmanson until the 15th. Somewhere on these pages, there is a review by PWB. (Special note: Neil Simon's "The Prisoner of Second Avenue" will open the 1972-73 Season on October 17.)

THE DIRTIEST SHOW IN TOWN is not only the name of a play, but according to some critics it is also a description. This is playing at the Ivar Theater, at 1605 N. Ivar, Hollywood.

GOLD WATCH is the feature currently playing at the Inner City Theatre, at 1615 West Washington Blvd.

TOMMY is still at the Aquarius.

Now that the theatre is out of the way, we have special events of the classical sort, with concerts and exhibitions of dance:

During the week following the 12th, the DOROTHY CHANDLER PAVILION is going to be

very busy indeed. On the 12th, the L.A. Philharmonic plays ballet music by Tchaikovsky. From the 13th thru the 16th, the Philharmonic features guest artist, Isaac Stern, in programs of violin concertos by Tchaikovsky, Mendelssohn and Bartok. Also on the 16th, Roger Wagner conducts a rendition of Beethoven's *Miss Solemnis*. All this is followed by the Ballet Society of Los Angeles and an evening of ballet on the 17th, featuring guest artists from the New York City Ballet.

While all of that goes on at the Pavilion, the AHMANSON is preparing to have the Aman folk ensemble on the 21st and 22nd. And, in all the confusion, I forgot to mention that the Louis Falco Dance Company will be at ROYCE HALL at UCLA on the 15th, Tax Day.

Rapidly moving on to clubs, it is time to mention that:

DONTE'S, at 4269 Lankershim, features jazz, nightly, but that their features change too fast for me to remember who is playing there this week, so you can look it up yourselves.

THE ICE HOUSE, at 24 N. Mentor in Pasadena, has the Hello People this week.

SHELLY'S MANNE-HOLE has the Donald Byrd Sextet and Shelly himself until the end of this week, at 1608 N. Cahuenga.

TROUBADOUR, at 9081 Santa Monica Blvd., has John Kay, formerly of Steppenwolf, and the Credibility Gap, formerly of KRLA and KPPC, from now until Sunday.

PALOMINO is a country-western club at 6907 Lankershim, and is going to have the Everly Brothers on the 13th, 14th, and 15th. Linda Ronstadt, who tore the place apart a few months ago, will be appearing there soon.

WHISKY A GO GO has whoever they have decided to have, on the Sunset Strip.

Last, but not least, we hit the old concert trail:

The SANTA MONICA CIVIC is swarming with concerts this month. On the 8th, Chase, Hamilton, Joe Frank and Reynolds fill up the stage rather completely. On the 11th, the J. Geils Band and Edgar Winter appear, followed by Humble Pie and Sweathog on the 15th.

Deep Purple and Buddy Miles will be on stage at the ANAHEIM CONVENTION CENTER on the 15th.

Joan Baez appears in another of her two-dollar admission concerts at Pauley Pavilion at UCLA, on April 22nd.

Ordinarily, I would not mention a Bobby Sherman concert, but this one is for charity, therefore: Bobby Sherman appears at the Pasadena Civic on the 15th in a benefit concert for the Huntington Hospital Cardiac League.

Richard Harris appears at the Huntington Hartford in a series of concerts of music and poetry and things, April 11th to 16th.

Last and possibly least is the appearance of Jim Bailey, female impersonator, at the Dorothy Chandler Pavilion on the 14th. (A possible field trip for the Gay Discussion Group?)

—Smithnik

More Tech History

Continued from Page Three

The students chanted names of vegetables on the dubious theory that the blend of sounds gave the optimum representation of a bloodthirsty mob."

5 Years Ago Today: The PME saw LBJ defeated in a bid for re-election by a Republican team of Romney and Reagan (?).

"For the scientist must take nothing for granted; he must question and ponder. And if the student fails to manifest this critical thinking in his formative stages, he will never develop them while immersed in the paradigm of knowledge. We might also add the note that the meek student who finds himself with a Cong bullet between his eyes is hardly destined for a noteworthy career."

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John Binkley, Director of the Foothill Free Clinic, and bipartisan candidate for Congress, presented his views to

Dirty Dave

Continued from Page One

the 5 is to provide continuity in the leadership and lend credibility in the business community. The other eighteen members are all students elected by the students. "There's an absolute majority of students."

At Cornell, Dr. Smith found not a system of co-ops, but rather a dozen or so that are mostly independent. Only organization of the various co-ops is in collectively buying food, which provides quantity discounts. The co-ops were as varied as they were numerous. Among them was what Dr. Smith considered the most successful he had seen. This was a house originally founded by upstate farmers to provide low cost housing for their children. Ownership now rests in a board of trustees made up of alumni. Despite this, Dr. Smith found a strong sense of ownership among the house residents. Equally remarkable were the rates residents pay: \$8.50/week for a double, \$13.00 per week for a single... in contrast to university rates of \$900/year for room. This does not include board, although it does allow kitchen privileges, and does also require 1 hour of work per week plus 10 hours per semester for major repair work, done as a group. The house was coed and beautifully kept up.

Dr. Smith also found two houses at Cornell that were unattractive, outwardly dirty and unkept, and whose residents were indifferent about it. He points out that in each case the houses were owned and repaired by the university. When asked what made the difference between a successful house and a failure, Dr. Smith felt the key lay in responsibility and control. Where the students clearly were in charge, the system worked whether the housing was rented or owned by a board of trustees or alumni, students and/or faculty.

The situation at MIT was much the same. The best ones were those that were owned by the students.

What about the status of cooperative housing at CIT now?

"One of the problems in the past has been an outright refusal on the part of the Institute to rent houses owned by the Institute to undergraduates." Institute houses are necessary because they tend to be the

closest, and proximity to the campus is considered desirable by most students. Now, however, the Institute would be willing to rent a house on an experimental basis to a group of students if they were to assemble a working co-op. Dr. Smith suggests this would probably be done on the Berkeley model in which the corporation has a board of trustees with some institute membership but an overwhelming majority of students. The relationship between the institute and the co-op would be purely that of landlord to tenant, Dr. Smith hopes. "Personally, I would not be in favor of the Institute holding any connection to it other than basic ownership... What we need to get it started is a group of people to get together and say, 'Yes, we want to get together and so it'... The commitment really has to come from the students."

Chem-6

Continued from Page One

April 24: J. Ellern, *Toxicology of Commonly Encountered Chemicals*.
May 1: D. Hounshell and A. Ellis, to be announced.
May 8: G. Gerrans, *Hormones*.
May 15: James R. Soares, J. Ellern, V. Miskowski, *Stimulants and Depressants*.
May 22: V. Miskowski, *Addictive Drugs*.

For further information see Art Ellis (210 Ruddock) or Doug Hounshell (55 Fleming).

Herbicides For Fun And...

Continued from Page One

highlands where an ethnic minority, the Montagnards, live. Short-term effects have been noticed, of course, including starvation and malnutrition. Dr. Meselson's group was unable to substantiate claims of birth defects being caused by the herbicides; uncertain data indicates increased defects during the time of maximal herbicide use, but these could be from other causes. The North Vietnamese have made charges of chromosomal damages resulting from herbicidal use; originally American scientists had discounted these charges, but more recent information indicates that a poison impurity in the herbicides is fatal in the incredibly low concentration of one-half part in ten to the tenth, and this chemical may result in birth defects and other undesirable results; no one is certain

yet.

Nice of Us

Since Dr. Meselson's study, the United States has stopped its use of herbicides and defoliants in Vietnam (publicly, anyway). Further work is also being done into the effects of this program on Vietnam, so perhaps we will have some more definitive results in the future. In the meantime, half of Vietnam's mangrove forests, one-third of the dense forest land, and somewhere below five percent of the cropland (almost all belonging to the Montagnards) of Vietnam has been destroyed, for the time being at least, by American chemistry. Dr. Meselson's details and graphic slides helped to show his audience in an immediate way the results of this program. Perhaps that knowledge will help to keep such activities from happening again.

Congressional Candidates To Speak

by Etaoin Schroedlu

Among the upcoming Caltech YMCA attractions are a continuing Candidates' Day, a visitor from the U.S. State Department, and, in the far future, a conference on Genetics and the social problems which further development in genetics will produce.

Wednesday has been declared Candidates' Day by the YMCA, at least until they run out of candidates. Yesterday John Binkley, the Democratic candidate for the 20th Congressional District, was on campus. April 12 and 26 the Y will sponsor Republicans Eric Stattin and Carlos Moorhead, respectively. Stattin and

Moorhead are among the Republican candidates for the 20th District seat. As a change of pace, on April 19 the candidate will be Baxter Ward, who is running for the County Board of Supervisors.

"Foreign Policy"

Next Thursday, April 13, interested Techers will be able to discuss 'How Foreign Policy is Made,' with Theodore L. Eliot, Executive Secretary of the U.S. Department of State. We are told that 'everything which goes to Rogers is cleared by Eliot,' so if you want to find out what *really* goes on in the State Department, come to Winnett Lounge at 4:00 p.m. next Thursday and join in

the fun.

Eliot is also giving a dinner talk in the Athenaeum at 6:30 that evening. Anybody particularly interested in attending may contact Jerry Glashagel at the Y office and try to con him out of an invitation.

The Genetics conference will be May 6, and featured speakers will include California Senator John Tunney and Caltech Biology Division Chairman Robert Sinsheimer. Participants will be invited from many different groups. The Y is looking for people to help make arrangements for the conference; anyone who is interested is entreated to contact the Y office.

Mythical Play Starts Series

Spectrum Productions made their public debut with Molière's *Amphytrion*, presented in a new English version by the company's founder, Dr. Oscar Madel. Dedicated to the revival of theatre in Pasadena, Spectrum hopes to stage plays of high literary merit as an important step to this goal.

The choice of *Amphytrion* for Production 1 was a good one in some respects. The story (Jupiter was up to his old tricks again, making a cuckold of a mortal) was not complex, so the characters did not have to unravel part of the plot with every single line. Richard McNally, in the role of Sosia (Amphytrion's servant) made full use of the opportunity. His soliloquy upon his first appearance was well-executed and entertaining, particularly the rehearsal of his battle repartee to Amphytrion's wife.

Mercy, played by Mike Olton, also used his freedom with good results. Disguised as the servant, Mercury and Sosia had a fine go-around, for Jupiter had ordered his messenger to prevent the servant from entering the house. Faced with the impossibility that another Sosia exists, the real servant is so boggled that he exclaims—in

words that would delight any relativist—"My feet are firmly planted on the ground! But where is the ground planted?" Mercury succeeds so well in confusing and abusing the poor man that he is virtually incomprehensible to Amphytrion when he returns from the battlefield.

The weakness of the plot had an opposite effect on the major characters. Having only the roles of a raging husband, a confused wife, and a prolific god to fill did not leave much room for expansion. The first two players were adequate, but Abel Franco deserves recognition for his portrayal of Jupiter. His dramatic announcement of the impending birth of Hercules nine months hence was well done, and accentuated by his "emcee," the unmasked Mercury.

Amphytrion was an entertaining play; what it lacked in depth it made up for in appeal. If the sole purpose of a play is to entertain, then I think *Amphytrion* succeeded. I will certainly look forward to Spectrum Production 2.

—Gavin Claypool

Corona On Steins

Continued from Page One

"Newly-discovered, gigantic waves radiating in expanding rings from sunspots probably are sound waves—they behave like them," said Dr. Zirin. The waves are 'running' rather than standing waves, the first such discovered on the sun. Originally, it was thought that the waves might be magnetic in nature, but further investigations have led to the conclusion that they are sound waves.

"We believe that the waves are carrying away the energy generated by umbral flashes (of light)," said Dr. Zirin. "These waves should give us a whole new picture of the energy-production in sunspots. There's a great deal of energy going into them." The waves are of extremely low frequency and are visible only under exceptionally good conditions, preferably in large, stable sunspots or sunspot groups.

Genial Dean At Beckman

by Gavin Claypool

While most Techers were either on their way home or desperately trolling, Dr. Robert A. Huttenback brought some underplayed facts of the British Empire to the attention of a fair-sized audience in Beckman Auditorium. Speaking about *Racism and Imperialism in the British Overseas*, Dr. Huttenback reviewed the history of three former British possessions: South Africa, Australia, (with a quick look at New Zealand), and Canada.

In Natal (the British area of South Africa in 1860), indentured Indians from the nearby subcontinent were used on the sugar plantations. Since conditions there were a multiple of times better than the hovels of Calcutta or Bombay, most of them stayed when their service was up. By 1894, there were 40,000 Europeans—and 43,000 Indians.

The Indian businessmen were driving white men out of business by the 1880's. In retaliation, the Europeans struck back in three areas, those being immigration, franchise, and business, in a pattern to be often repeated. First, an annual tax of three pounds for immigrants was established. Later on, an education test was used to prevent "undesirables" from entering. In many cases, the tests given to Indians required them to be fluent in an European language—not necessarily English. Next, they disenfranchised anyone who did not own property. Finally, to operate a business, one had to obtain a business license. White merchants made up the licensing board, so it was child's play to block their Indian competitors. When Natal joined the Union of South Africa, the various legislation was adopted for that country.

Kill Wabbits

The opening of the final continent, Australia, was accomplished in the second half of the nineteenth century with the aid of cheap Chinese labor. Assorted restrictions were enacted to stem

Continued on Page Eight

More News Briefs**Continued from Page One**

experienced or if you have not dived for a while, this course is an excellent way to improve your skills. There will be an organizational meeting on Friday at 3:45 in the gym.

There will be a Scuba Club dive at 8:00 Sunday, April 9 at Wood's Cove (just south of Laguna). Directions to Wood's Cove are posted in Winnett and on the bulletin board across from the swimming office in the gym.

Pickers & Singers Wanted For Spring Fair

Pasadena's Sequoyah School will hold its annual Spring Fair on Saturday April 29 on the Neighborhood Church grounds, corner of California Blvd. and Pasadena Ave. Besides the usual

art work, crafts, games, refreshments, and entertainment, the fair this year will feature a folk music contest Saturday night with prizes of cash and records. Groups and individuals are invited to participate. If you are interested, see or call Bill Wood, 203 Kerckhoff (Biology), ext. 1902.

Red Cross Bloodmobile Coming

The Caltech Bloodmobile will be in Dabney Lounge on Friday, April 14, from 10:50 a.m. to 3:30 p.m. Members of the Caltech Community are urged to donate blood. Donors will receive lifetime credit in the Red Cross blood bank for themselves and their families. The demand for blood of all types constantly exceeds supply, so every pint is needed. If you are between 18 and 65 and are in good health,

you may give a pint of blood every 84 days.

Appointment cards are being distributed in the student houses; these may be returned to the Personnel Office in 109 business Services or to Greg Simay in Ruddock. Please indicate your phone extension and the time slot for your appointment. The slots are each 20 minutes long, beginning at 10:50. It is not necessary to fill out a card in advance, but it will be helpful.

Republicans Wanted: No Experience Needed

The Caltech YMCA is bringing Republican candidates for the 20th Congressional District to campus April 12 and 26, and would like to have some local Republican sympathizers come out and host these candidates. Contact Jerry Glashagel in the Y office if you are interested.

Caltech Hillel Presents Talk and Film on Israel

Caltech Hillel is screening a student-made film, "Israel: A Day and a Time," Sunday evening, April 9, at 6 p.m. in Clubroom One. Discussion will follow this controversial film in which Israelis are interviewed on living in Israel. Refreshments will be served.

On Sunday evening, April 16, 6:30 p.m., in the penthouse patio of Keith Spaulding, Avraham Gover, a grad student in applied physics, will speak on the recent history of *Eretz Yisrael* — the land of Israel. This will be the first in a series of talks on Israel.

AbsurdiTEE Gimmick Car Rallye Presented April 8

For all you gimmick rallye enthusiasts in the audience, there will be an Elysian Fields Rallye

Club rallye this Saturday, April 8. Dual starting points are at the Sepulveda Dam Recreation Center on Balboa Blvd. in Encino, and the Montgomery Ward's parking lot off Rosemead Blvd. in Rosemead. Admission will be discounted a dollar to \$2.50 per car upon presentation of a Tech I.D. There will be a trophy for each 7 cars.

For those of you not familiar with skill-gimmick car rallyes, there will be a Beginner class, and also a First-Timer class for those who qualify. Gimmick rallyes operate on logical principles and observation and deductive skills, which makes them a natural for Techers (in theory). Registration of vehicles is from 6:30 to 9:00. Try your luck at a gimmick rallye, but don't tell them you're part of the Expert Ascit Team. Further information at 449-9631.

Chinese Film Series Continues Monday

The Caltech Chinese Students Association has been showing a series of films from or on China. The series takes place once about every two weeks, and the programs consist of full-length movies and/or assortments of documentaries on many subjects. Because of frequent schedule changes at late dates, announcement of shows often come out very late, with the result that not many know about the series.

The next show will be on Monday, April 10 at 7:20 p.m. in the Baxter Humanities Lecture Hall. The feature is *Red Blossoms on Tien-shan Mountain*, a story about how a woman leader of a minority production team wins acceptance from her fellow team-mates. The film is in color, and is dubbed in English. Free.

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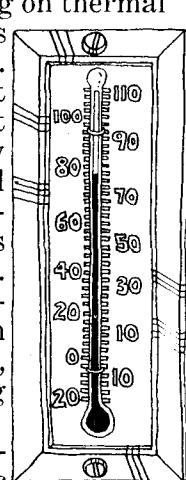
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So utilities are spending millions of dollars on dilution control systems, cooling ponds and cooling towers to comply.

But, in addition, utilities are sponsoring basic research on heat exchange and its ef-

fect on aquatic life. More than 97 utilities have been financially involved in over 300 such studies.

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created new wintering ponds along water-fowl migration routes. Florida,

is using it to grow shrimp and lobster. In Texas, it's increasing the weight of commercial catfish by as much as 500%.

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Listing these benefits is not to beg the issue. Thermal effects remain a tough problem to solve at many sites. Each plant must be considered individually, in its own environment, and this is being done.

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If you are concerned too, we'd like to hear from you. Write General Electric, Dept. 901-CN, 570 Lexington Avenue, New York, N.Y. 10022.



Just 2 Hits This Week

Baseball Victim of Silent Bats

by Gavin Claypool

Anybody got some hits? After this week's play, Coach Ed Preisler might be willing to buy, borrow or steal some. Caltech has manged only two singles in the last three games, both in the nightcap against Occidental Saturday. The Beavers dropped both ends of the doubleheader to the Tigers by the score of 12-0, and were blasted 19-0 by the Whittier Poets Tuesday.

Andy Castillo pitched nine innings of hitless ball for the Poets, yielding only two walks and hitting a batter. The offensive attack of 26 hits was highlighted by Jerry Nerio's two home runs. The high point for the Techers came in the third inning. On a double to left, John Ellis threw to Bob Pleva at short, who relayed the ball to catcher Phil Gschwend in time to tag a Poet at the plate. Gschwend then threw to Rick Mitchell, who caught the batter trying to advance to third.

Besides the hitless streak of 10 innings, the scoreless streak of 24 innings, and the losing streak of six games, the Techers have a modest streak of three games in a row that they've come up with a double play. In the opener Saturday, Pleva, Jack Stemple, and Doug Schladweiler made one, and Brian Luke and Schladweiler finessed the other in the nightcap. Both came in the second inning.

Nineteen Beavers went down in order in the first game before Walt Smanski was safe on an error. Schladweiler forced him at second, and John Ellis grounded out to end the game. Pleva and Schladweiler singled in second game, unfortunately not in the same inning.

Occidental	100 212 6-12 11 1
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Occidental	500 202 3-12 11 1
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Whittier	502 124 4ix-19 26 0

The Third Wing: Prison

Continued from Page Two rather disliked by the prisoners they guard. This has something to do with the fact that some prison guards tend toward sadism, violence, and other things that would be illegal except when done to prisoners.

Many people have objected to the California Supreme Court ruling against the death penalty, but few of these have noticed what the rest of their ruling means. For example, although it ruled that the death penalty was a cruel punishment, it also seemingly ruled that chemically altering the mentalities of criminals is not unusual. The court ruled that anything that has the purpose of rehabilitation or reformation is probably permissible. That has a nice ring to it, but in the past few years, rehabilitation has included dosing prisoners with thorazine (a strong tranquilizer), anectine (a paralytic agent) and doing various electrical and physical surgeries, ranging from shock therapy to lobotomies. Are these things really good? Here are some pros and cons (no pun intended):

In favor of these methods are the likelihoods of curing various chemical or glandular imbalances which contribute to a violent or unbalanced nature. There are many criminals who probably could benefit from various forms of psychotherapy, or who might

need such before being released. Also, such treatments might reduce the amount of violence that exists in prisons now, or be required as part of a sentence for a crime that no longer carries the death penalty. After all, something drastic has to be done in the case of someone in prison committing further major crimes against guards or other prisoners.

Against these methods are problems involving the personal rights of prisoners. Do prisoners have rights, and if so, what are they? Can a person be treated for a mental illness against his will? In the case of the more drastic treatments, electroconvulsive shock therapy or lobotomies, these questions become even greater, especially with the chance of a mistake, for these processes are not very reversible.

In other words, does a prisoner have rights concerning his mentality, or does the state have a right to do anything it feels necessary to insure that a convicted felon does not repeat his crimes? These are in conflict, a conflict which must be resolved. On the one extreme we have the problem of releasing criminals back out into the world who are not reformed, but who have served their sentences. On the other extreme we have a 1984ish situation of state mind control of those convicted of considered crimes. It is a nice

Oxy Defeats Golf in Close Match

The Tech golf squad came very close to upsetting Occidental last Friday, but the Tigers finished on top, 28-26. One less stroke in the right spot would have reversed the outcome.

Setting the pace was Roger Goodspeed, who shot a 76. Jim Simmons was second for the Beavers with an 81. Another handicap for the Techers was the lack of a sixth man. Oxy received six free points by the forfeit.

As promised last week, the scoring for golf is as follows: There are 54 points possible. Thirty-six of these are earned through man-to-man competition. The No. 1 men compare their scores, and 2 points each are given for the man with the lowest score on the front nine holes, the back nine, and all eighteen. One point each is awarded for a tie. This procedure is followed for the next five pairs of men.

The remaining 18 points are divided up via the "best-hole" method. The No. 1 and 2 men for each team compare their scores, taking the best score on each hole. Then points are given as for the man-to-man competition, with pairs from each team competing. The No. 3 and 4 men and No. 5 and 6 men do likewise.

Got that? Well, don't worry about it. But if you would like to get some golf practice, P.E. credit, fame and fortune (?), come on out for the team. Contact Roger Goodspeed in Ruddock for further information.

British Overseas and H-Back

Continued from Page Six the influx from the north, such as: 1 Chinese for every 10 (later 500) tons on a ship; Chinese were not eligible for naturalization, and so on. Chinese were banned from the gold fields, limited in their working hours and forced to work on only the first floor of factories, where they would be visible through windows. In the 1890's the anti-Chinese movement was supplanted by the more general anti-color movement, marked by legislation in 1896 against all colors.

Following the California Gold Rush, many Chinese immigrants to America moved north to

crimes. And remember, the state gets to decide what actions are to assume that your government will always be good and incorruptible, but it isn't too bright. I seem to recall Executive Order 9066, which made it a crime to be Japanese for a few years.

A lot of work has to be done in reforming the structure of modern prisons. Maybe a lot of thinking needs to be done about criminals and crime in general. Remember, anyone may be a criminal and anything can be made a crime. It's all a matter of definition.

Beavers Win First Track Meet, 70-58

by Bob Kieckhefer

Third term started well for the Caltech track team, as they broke their three-meet losing streak with a 70-58 victory over UC San Diego last Saturday. The Techers, who won 10 of the 14 individual events, were led by three runners who received two victories apiece: Haywood Robinson, Charlie Almquist, and Alan Kleinsasser.

The meet started futilely, as both teams were disqualified in the 440-yard relay. Kleinsasser and Almquist soon put Tech ahead, however, with victories in the mile run and the 120-yard high hurdles. UCSD men won the shot put and the high jump, but Charles Thoelle kept Tech ahead with a win in the javelin throw.

UCSD tied the score at 26-26 with a win in one of the closest races of the day, as Tech's Greg Hoit was edged by 0.3 seconds in

the 440-yard run. UCSD never took the lead, however, as Techers won the next seven events: Robinson won the 100- and 220-yard dashes, Kleinsasser was first in the 880-yard run, Almquist took the 440-yard intermediate hurdles, Doug Herbert and Monte Ragland placed first and second in the discus throw, Gary Stormo won the long jump, and Greg Griffin took the 3-mile run.

UCSD men won the mile relay and the triple jump, but they could not overcome Tech's lead of 66-48 after the 3-mile run. Stormo led the Techers with 11 points; Kleinsasser, Almquist, and Robinson scored 10 apiece.

The trackmen's next meet will be held in Tournament Park at 1:30 Saturday afternoon, against Pasadena College. Come on down and "see how they run . . ."

1 Order of Brussel Sports

	Saturday, April 8	
12:01 p.m. Baseball	Whittier (2)	Home
1:30 p.m. Varsity Tennis	La Verne	Away
1:30 p.m. Track	Pasadena College	Home
	Tuesday, April 11	
3:00 p.m. Baseball	La Verne	Home
	Thursday, April 13	
3:00 p.m. Varsity Tennis	Occidental	Home
	Friday, April 14	
1:00 p.m. Golf	Pomona	Away
	Saturday, April 15	
12:01 p.m. Baseball	La Verne (2)	Away

Interhouse
Basketball
Starts
Tomorrow

Kentucky Thai

Continued from Page Four about some of the dishes not on the menu. We especially recommend the beef in oyster sauce, a dish which combines subtle spices and an excellent, rich sauce.

For the dessert, the waiter can tempt you with several authentic concoctions of coconut, sugar, and sesame seeds.

Now for the best surprise of all: dinner comes to about \$2.50 to \$2.75 per person, with all of the goodies described above.

Good eating!