Bonnnr Wins Tolsman Medal For Contributions

Biologist James Bonner of Caltech, internationally known for his work on how living cells specialize, has been awarded the Richard C. Tolman Medal of the American Chemical Society's Southern California Section.

The medal and citation was presented at a dinner meeting April 11. On that occasion Dr. Bonner will speak on "The Chemical Biologist in the Real World."

According to the citation, Dr. Bonner is being honored for "many contributions to fundamental chemistry, biochemistry and plant physiology... for his outstanding texts in plant biochemistry, and for his efforts as an example to his students..."

Flip-Flop Genes

Dr. Bonner is a scientist of wide interests. He is concerned with elucidating how genes turn on and off, and how they are switched on by chemicals that induce cancer. He is interested in genetic engineering, population problems and food supplies in developing countries. He spends considerable time teaching in Malaysia, helping that country to develop.

Dr. Bonner travels widely as a lecturer and consultant to various government agencies and is active in skiing and alpine organizations. He is the author or coauthor of seven books and has published more than 325 technical papers.

In the 12 years the Tolman Medal has been awarded, Dr. Bonner is the third recipient from Caltech. The other two are Dr. A. J. Hageman-Smith, emeritus professor of bio-organic chemistry and chairman of the California State Resources Board; and Dr. Ernest Swift, emeritus professor of analytical chemistry. The award is named for the late Dr. Richard C. Tolman, a distinguished Caltech chemist.

News Briefs

The Co-ops Need You!

For all those interested in a place to stay over the summer, or who are interested in the co-op in general, there will be an informal discussion on Monday, April 15, at 3:00 p.m. at 297 South Holliston. The purpose of this meeting is to entice people into occupying the houses (i.e., paying the rent) over the summer, and furthermore to give people a chance to find out what the co-op is really like. Rent and utilities run between $440 and $555 per month, and kitchens are available to save money on food as well.

Rummage Sale Sunday for Child Development Center

The Child Development Center will hold a Rummage Sale Sunday for Caltech Families. The sale, a grand Rummage Sale Sunday on Sunday, April 14, from 10:00 a.m. to 4:00 p.m. Come to the center (293 South Chester) and buy inexpensive (Cheap!) things. Extravagant Goodies!!!

Time Enough to Totem or, The Totems of, etc.

An issue of Caltech's literary-art collection, Totem, has now taken over the editor's position. The Totems of, etc. is now Ph 92, and Ay 20 is a theme, or much of anything. But send them along, anyway. Some-thing'll come up. F-Day is 2441834.5

Faculty Board Adds SS Requirement

by Gavin Claypool

Required "social science" courses form the latest twist in the elusive HSS requirement deliberations, due to action by the Faculty Board last Monday. The Board amended the Curriculum Committee's proposal to include a requirement of 27 units from the following areas: Anthropology, Economics (less Business Economics), Political Science, Psychology, or Social Science.

The amendment, moved by Dr. Robert Hattenback, coupled the 27-unit SS requirement with a reduction of the 54-unit requirement of English (now Literature), History, Philosophy, Music, or Art to 27 units. After discussion, the amendment was passed almost unanimously.

Which Way, Bus.埃? A subsequent amendment attempted to change the limit of 27 units of business economics to zero. To support his amendment, Dr. Daniel Kevles gave three reasons: first, that the 108 units would be too few to educate a student for education's sake; if vocational courses were allowed to count for credit,

Continued on Page Six

Tow-Away Zone

SPRINGTIME: when a young man's fancy turns to thoughts of love. Pictured: B&G troll (disguised as Snward & Son truck) engages in illicit activity with ASCIT President (disguised as car). See Mark? We told you he'd be in every issue!

The Best Ears Of His Life

by Edward G. Robinson, the late veteran film star, is shown at right in his last role as Snodd Ruth from the MGM movie, Scaredy Cat.
Superconductors

Copper Alloys Lose Heat

A new class of metallic alloys has been developed by Dr. C.C. Tsuei, research associate in applied physics, that make possible significant advances in the technological applications of superconductivity.

The alloys are composed of about 90 percent copper, a superconductor, and one or two superconducting metals. The copper makes the alloys ductile and pliable. As a result they can be fabricated into useful shapes such as wires, strips, and tubing a reasonable cost, compared with existing materials, which are expensive to fabricate because they are brittle and very hard.

Up to the present time, the most promising superconducting alloys unfortunately are very hard and brittle compounds completely devoid of ductility and hence very difficult to fabricate in useful shapes such as wires, strips, or tubes at reasonable cost. Another drawback associated with the currently available materials is that they are very poor heat conductors and thus are unsuitable for engineering applications. At low temperatures a small amount of heat generated in the superconductor system can cause a relatively large temperature rise. The inability to conduct heat away from the “hot spot” can result in a runaway situation and destroy the superconductivity completely. The material with the most suitable mechanical and thermal properties is copper.

by Philip Massey

Copper Alloys Lose Heat

Continued on Page Eight

Chicano workers are leading a strike and nationwide boycott against Farah pants. They demand that Farah bargain with them over issues of job security, a living wage and dignity—the right to be treated as human beings. You can help their struggle by refusing to buy Farah slacks.

Before the strike, Farah Manufacturing Co., one of the largest manufacturers of men's slacks and sportswear in the country, employed 9500 workers in El Paso and other parts of Texas and New Mexico. These workers, 95% Chicano and 85% women, earned $1.70 an hour or $3500 per year—below the poverty level for a family of four. They were faced with the constant threat of being fired at the whim of their supervisor, promises of raises and promotions based on unmeetable production quotas, no retirement benefits, and inadequate sickness and maternity insurance. The dignidad of the workers was denied by the rigid supervision of their every movement at work and the carcinogenic attitude with which any benefits were administered.

In an effort to gain some control over their working conditions, the workers in the curbing department of the National Labor Relations Board for an election to certify the Armagamated Clothing Workers as their bargaining agent. Farah responded to the union victory in the election by firing active union members, by forbidding all conversations among workers, and by otherwise illegally attacking the organizing effort. Fed up with this continual harassment, 3000 workers walked off the job in May of 1972. Farah's lawyers tried an archaic Texas law requiring pickets to be at least 50 feet apart in order to have 800 strikers arrested, with bail set at an unheard of $400 each. The company has also patrolled the picket line with untrained police dogs in an attempt to intimidate the strikers. The strikers also face the difficulty of supporting their families on $30 a week in strike benefits. In spite of all these obstacles, the workers have persisted in their struggle for over 10 months.

Clearly, the strikers will not be successful without your support since Farah can take advantage of the overabundant supply of cheap labor available in the Southwest. Therefore, the nationwide boycott is crucial—not only to demonstrate sympathy for the workers, but also to supply pressure where Willie Farah feels it most—in his pants pockets. This kind of pressure is demonstrably effective: a $6 million profit for Farah in 1971 has turned into an $8.4 million loss in 1972.
Blood Drive Needs
Your Help Now
by Gary Wakai

It's not too late to sign up to give blood for the Red Cross Blood Drive. However, the actual donation date is tomorrow, so it is imperative that you sign up pronto, if you wish to get it over with quickly.

The blood donation appointments are scheduled for tomorrow from 10:50 a.m. to 3:30 p.m. in the Dabney Lounge. To get an appointment, contact Gary Wakai (136 Page) or Paul Mans (145 Page). You may even sign up by phone - call Lee Cowver at x2374, or if that fails, call Wakai at 449-8111. Or, you may go directly to the bloodmobile and wait for an opening.

Continued on Page Five

BUDWEISER WORLD CHAMPIONSHIPS?
WHAT'S GOING ON?

Oh, happy day. At last someone is doing something positive about the current world shortage of champions. Budweiser is sanctioning five absurd events in which college youths can set records and earn wonderful, big Budweiser patches (7"x6", washable, genuine colors). Besides the breathtaking BUD-CAN HUG above, there are four other ways to be a World Champion. Get details at your favorite beer store where you see the “Budweiser World Championship” display!

Do one, beat the record, tell us about it on a postcard and get your marker pen ready for inscribing your particular specialty beneath where it says “World Champion.”

TO GET YOUR BUDWEISER WORLD CHAMPION PATCH (EVEN IF YOU DON'T SET A RECORD), JUST WRITE YOUR NAME, ADDRESS AND WHAT YOU DID ON A POSTCARD.

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Frets and Frails

This week the Ice House presents an excellent billing. The featured act, Belland and Somerville, a “wild and wacky duo,” gives an excellent performance of several popular songs. Then their paths diverge. Belland does a very funny dialogue with Somerville, as Somerville sings in the background.

The lead-in people are equally good. Jim Turner starts the show with some good guitar and several good original songs. Bobby Sandler is the second graf, and is billed as a comedian/juggler. He has introduced some interesting variations on the theme, such as how one practices while eating and sleeping. All the juggling is accompanied by a very funny monologue.

The show is excellent, and I highly recommend it. And for all you who are unfamiliar with the Ice House, the prices are very reasonable. The show runs through April 15.

— Karl Kuhlmann

Literary Magazine Seeks Non-Student Subscriptions

from the CALIFORNIA TECH
March 2, 1967

Yes, Totem is again launching its biennial subscription drive. A four-issue subscription to the Caltech community’s collection of literary and artistic creations costs as little as it did in 1967: only two dollars. (“But that was good for six issues!” “Oh, shut up.”)

Copies of the current issue (4 Winter’s Totem) are still available for sixty cents each. Totem is an official publication of ASCIT and is given free to each member.

Send forms c/o Business Manager, Totem, Winnest Center 105-51, Caltech, Pasadena, CA 91109.

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That's

Mr. Spock

on the Left

Bradbury, Robert Bloch, Norman Spinrad, David Gerrold, and Margaret Arsen.

A varied program of other science fiction favorites will be shown in order to round out the program. Fan seminars, an art show, a masquerade, a fashion show, and souvenir auctions are part of the scheduled activities; a well-stocked sales room will supply the needs of a dozen planets (almost). Cost for the weekend is $10 (this does not include a room at the International). Single-day memberships are available for $5. Supporting (non-attending) memberships are also $5. Checks should be made payable to: Equicon '73, P.O. Box 3781, Santa Barbara, Calif. 93105.
Judge Bean, Sleuth Reviews

If the Life and Times of Judge Roy Bean contains a single shred of historic truth I was unable to discern it. To paraphrase the movie’s opening blurb, “If this wasn’t the way it was, it should have been.”

The movie opens with Roy Bean (played by Paul Newman) being mugged and almost murdered by the inhabitants of the only combination brothel-saloon west of the Pecos. He gets his revenge in one of the best shootouts since The Wild Bunch, and justifies his actions with the terse comment, “They were bad men, and the whores weren’t ladies.”

Bean then sets himself up as the only “Law West of the Pecos” with the aid of an outdated lawbook, a posse made up of bandits-turned-marshalls, and an excellent gallows. The rest of the film chronicles his fictitious career and his battles with the forces of progress and corruption represented by the lawyer (played by Roddy McDowall), as well as his spiritual love for Lily Langtree and his more earthly love for the Mexican girl, Marla.

Almost every scene of The Life and Times of Judge Roy Bean is done tongue-in-cheek, and the film manages to take unfair advantage of every western cliché that ever came out of Hollywood. The bad men are not only evil, they smell, eat raw onions, and shoot horses for breakfast. Every character is formed in high relief, and most of them are outrageous parodies of the stereotypes that populated every undistinguished western ever made.

Stylistically, Roy Bean owes much to Butch Cassidy and the Sundance Kid. Both films explore the changing west that made anachronisms of the good guys and bad guys alike. Butch Cassidy took fact and made it into legend, while Roy Bean goes one step further. It takes legend and turns it into something that supercedes legend.

After viewing The Life and Times of Judge Roy Bean, the viewer concludes that it must have been a fun film to make because it sure is a fun film to watch.

--Peter Beckman

Sleuth (now available at the Hutings) is an intricate play on plays. Without giving anything away, praising the tale or condemning it is difficult. Reactions vary little, though the common denominator is contempt. Pauline Kael of the New Yorker Magazine deplored Anthony Shaffer’s play with “The waste wouldn’t be so apparent if Shaffer’s situations and dialogue were genuinely clever.”

Stanley Kauffman in the New Republic said “Some modest cleverness it has, but not enough to justify more than 2½ hours…” Most critics belittled the screen play, but as far as myself, I was caught up in the clues, so much so that I found two or three times as many as Shaffer originally wrote in the play. But then when one goes to see a movie with five other fanatic dope, competition within the ranks to outdo Michael Caine and Sir Olivier obliterates the original movie’s worth.

Some of the extra “clues” we found were in faulty cinematography and poor craftsmanship. Sir Lawrence Olivier’s overacting and Michael Caine’s dismissal of his role keep the action inconsequential, but the search and mystery did keep us from degrading the film till a few hours later. I will not maintain my attention was not held for all of the 2½ hours, but I do think the whole flick would be entirely better if the viewer made sure to sweeten his lemonade with a bit of ‘purple sugar.’

--Etoin Schroedlu

Nana Mouskouri Wows Beckman

“On a Clear Day You Can See Whatever”

Nana Mouskouri by Etoin Schroedlu

“If it weren’t for Nana Mouskouri, Beckman wouldn’t have a program.”

Of course, Beckman and Ramo Auditoria put on a number of great events, but the above Tcher’s comment does serve to indicate the duration and success of the Mouskouri-Tech relationship. And, in their n-th performance here at Tech, last Saturday, Nana Mouskouri and the Athenians worked their magic once again, before an enthusiastic capacity crowd.

Miss Mouskouri and her instrumentalists and backup performers turned legend into something that swelled the walls of the taverna with their dancing, and of such things close to life as the wind, the street scenes, and the wilderness.

Let George Do It

The Athenians also had the opportunity to perform a few songs without Miss Mouskouri, and made the most of the chance to show that they, too, are captivating artists, whether typecasting themselves as various feathered species in numbers based on Aristophanies’ The Birds, or engaging in on-stage banter with the dark guitarist from the Greek highland of Chihuahua, or introducing a song translated from the ancient Greek to modern Greek ‘to make it more easier to understand.’

Miss Mouskouri and the Athenians both showed remarkable dramatic range, from the simple and quiet to the almost overpowering, and an ability to bring to life for the audience even the

“San Francisco Loops”

A completely new show every Tuesday

Caltech students — $1.50 off regular admission with this ad

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Always First With the Best in Adult Movie Entertainment

VENUS Adult Theater

DAILY 11 a.m. to 2:30 a.m.
SUNDAY 12 noon to Midnight

FREE!
Fresh hot coffee for our customers!

Air conditioned for your comfort
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PLUS — SERIES

“San Francisco Loops”

A completely new show every Tuesday

Caltech students — $1.50 off regular admission with this ad

2226 E. Colorado Blvd. Pasadena

For an erotic message call 796-8118

Student rush tickets available for only $1

with valid Caltech ID beginning at 7:45

Beckman Auditorium

Saturday, April 14
8 p.m.
Romero At Beckman

by Marc Donner

Guitarist Pepe Romero will appear with the Los Angeles Chamber Orchestra in the third concert of the Arts of the Guitar series on Saturday, April 14, 1973, in Beckman Auditorium. Mr. Gallager has studied the Far East and Islamic cultures for many years, and has served in many different functions in these areas.

The Air Force Pilot has it made. Air Force ROTC will help you make it.

Here’s how.

If you qualify, the Air Force ROTC will give you free flying lessons. It’ll be in a Cessna 150—you’re started towards the day when you’ll solo in an Air Force jet.

That’s only one of the fringe benefits of the Air Force ROTC Program. Consider this: Scholarships—6,500 of them that cover full tuition. Plus reimbursement for textbooks. Plus lab and incidental fees. Plus $100 a month, tax-free, to use as you like.

Interested? Contact Cal Institute of Technology at 795-6811 ext. 2391

Get your college career off the ground in Air Force ROTC.
Julian Bond Visits Tech

Tonight

by Eric Eichorn

Today and tomorrow Georgia Legislator Julian Bond will be on campus as part of the Caltech Y's Leaders of America Series. He will be speaking on the topic “What’s Next?” tonight at 7:30 p.m. in Beckman Auditorium. Tomorrow at 10:00 a.m. he will be conducting an open discussion with students and faculty in the Y Lounge.

Bond was elected to the Georgia Legislature in 1965, refused seating by that body—ostensibly because of his views on the Vietnam War—in 1966, elected again to fill the empty seat, refused seating again, elected again, and ordered seated by the U.S. Supreme Court.

At the Democratic National Convention in 1968 he successfully challenged the regular Georgia delegation, charging that blacks were not being represented. He won half of the seats for his Georgia Loyal National Democrats.

Pyramids

Continued from Page One

20% of the pyramid has been surveyed using this method. If a secret chamber is discovered in the pyramid it may well hold one of the greatest archaeological treasures of all time.

Return Of Smokey Sports Menu

Thursday, April 12

Dinner--Harvey Myrd

Col State Dominguez Hills

Away

Home

Bowl

Monday, April 3

3:00 p.m. Track

Track

Friday, April 13

1:30 p.m. Track

Fornar---Pitzer

Saturday, April 14

12:01 p.m. Baseball (doubleheader)

Home

Away

1:30 p.m. Varsity Tennis

1:30 p.m. JV Tennis

Occidental

Occidental

Home

Away

Tuesday, April 17

3:00 p.m. Band

Band

Occidental

Home

Away

Pomona College

We the undersigned students of the California Institute of Technology endeavor the candidacy of Dr. Robert Oliver

doctor of City Director. Further we encourage the Caltech community to exercise this opportunity to voice their opinion in our local affairs by voting this April 17th.

Mark Richard Johnson

Gary Frankel

Bryan C. Jack

Dr. Robert Oliver

Gavin D. Claypool

J. Haywood Robinson

Eric H. Eichorn

Frank Hobbs

John S. Denker

Norris Krueger Jr.

Frank Hobb

Donald L. Baker

Douglas B. McIntyre

Todd A. Boroson

Brad A. Reinick

Richard E. Peterson

James F. Battey, Jr.

Robert Cohen

Gary Wakai

Gaywood N. Robinson

with strong support

Philip M. Neeches

The audience, warmly appreciative throughout the concert, joined in the action during the hard-clapping numbers, and refused to let the performers leave the stage until repeated curtain calls and an encore had been forthcoming, and at least a semi-standing ovation had been bestowed upon Miss Mouskouri and the Athenians.

All in all, a swinging night at Beckman Auditorium. And the best part is that if you missed it, you're certain to get another chance soon.

We have four lawmakers whose legislative careers spanned two decades or more and successfully challenged the regular Georgia delegation. One was Julian Bond, who refused seating again, elected again, and ordered seated by the U.S. Supreme Court.

Today and tomorrow Georgia Legislator Julian Bond will be on campus as part of the Caltech Y's Leaders of America Series.

Dr. Robert Oliver

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At the Democratic National Convention in 1968 he successfully challenged the regular Georgia delegation, charging that blacks were not being represented. He won half of the seats for his Georgia Loyal National Democrats.

A remarkable example of good jazz played as it should be; those who were not can do no better than to watch for the next appearance of this group.

The highlight of the evening was a solo by Christlieb on tenor sax on an announced medium-tempo jazz tune in the second set. The solo began modestly in tempo and volume, then built relentlessly to a climax of 32nd notes infused with more controlled tension than this reviewer has ever heard. The applause lasted more than halfway through the next chorus, the magnificence of that solo left Jim Hughart, the bassist, whose task it was to solo next, at a complete loss.

Responsible Background

Hughart on bass and Larry Bunker on drums rounded out the group. They soloed competently, but more importantly, combined with Foster to provide a perfect, sensitive, responsive background for Foster's and Christlieb's melodic wizardries.

The only defect in this group, if it be a defect at all, is their failure to progress. Stylistically, this was indistinguishable from their Pilgrimage Concert of a year ago. Fischer is a talented composer and arranger, (having written), but for some reason has not directed his composing energies toward the advancement of his instruments. Foster's most impressive outing was "Air on a G String" by Bach, played straightforward on soprano sax, with only pizzicato bass and sustained organ accompaniment. He soloed ably on all the jazz tunes, most notably "And Miles to Go" on alto clarinet and "Lennie's Penny" on alto sax.

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Continued from Page Four

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Kleinsasser Does It Again!

For the third time this season, Al Kleinsasser broke the mile record in Caltech’s dual mile against Cal Lutheran last Saturday. Kleinsasser, running his usual solo race, lowered his month-old mark to 4:12.5. The Beavers were defeated in the dual competition.

Kleinsasser ran his first lap in 61.4 while opening up a twenty-yard lead. The double victory highlighted an outstanding day for Kleinsasser, who finished the afternoon by running a 51.5 anchor leg on the Beaver mile relay team.

A.D. Who?

Complete with his fan club of Tchers, friends, and cousins, plus spotting his Lee Evans hairstyle, Haywood Robinson was the team’s other two-event winner. Robinson opened the day with a fast opening leg on the 440 relay team and finished with a fine leg on the mile relay team. In between he won the 100 yard dash in 10.0, and the 220 in 22.6. Considering the condition of the track, Robinson’s times are remarkable. In style, Robinson is proving to be Caltech’s A.D. Davis.

Greg Griffin had another excellent afternoon. He placed third in the mile with a personal best of 4:29.6. Griffin has established two personal records in this event this year. He also competed in the 3 mile race and won with a time of 15:02.8. Running against only one other competitor, Griffin was forced to run by himself after 100 yards, winning by 660 yards over the Cal Lutheran entrant.

The Beaver relay teams had a difficult day, losing both the 440 and mile relays. The Baton passing in the quarter-mile event left something to be desired and resulted in a time of 44.1. The team was made up of Robinson, Hoit, Steubs, and Almquist. The mile relay team finished with a 3:31.8 mark and was made up of Almquist, Robinson, Hoit, and Kleinsasser.

Classified Ads

HELP WANTED

Group Worker. Part-time position for graduate student or faculty member in Jewish organization. For interview contact Howard Charish, ACSW, (213) 444-4584, 686-0631.

Summer positions as Counselors and directors at Jewish Day Camps in San Gabriel Valley June 18 through August 17. For interview contact Howard Charish, ACSW, (213) 444-4584, 686-0631.

TRAVEL

Third year of CHARTER FLIGHTS to Europe for Caltech/JPL. Contact Dr. Mandel, x 1078 or 476–4543.

CHARTERS YEAR ROUND

No more club fees! 50 Departures, also NYC, Japan & Australia. Youth Fares, too. Since 1959: ISTC, 323 N. Beverly Dr., Beverly Hills, CA 90210, (213) 275–8180.


REAL ESTATE

For artsy people or bookish people! 2 bedroom, 2 baths, huge living room, fireplace, modern exterior. $27,000. Bette Rice, Dickson Realty, 798–9181.

MISCELLANEOUS

Abortion thoughts? Feel alone? Call us! We’ll help. 24 hr. free confidential service. 444-4292. Birth control or selling something? You too, can take out an ad in the California Tech!!! $1.50 per inch plus 25¢ per letter artsy quarter mast. fids. Bring ad copy to the Tech office, or phone ext. 2154. O.K.

Vote for Bob Oliver

April 17

for City Director
from District 5

Pasadena

A “Grade A” Candidate

Bob Oliver is an Associate Professor of Economics at Caltech, a member of the Caltech Y Board, and chairman of the program committee for Beckman Aud.

Any Techer registered to vote in Pasadena who voted in last November’s election can vote for Bob Oliver on April 17. Polling place is at 101 S. Hill Ave.
Discobolus Trophy Comletes Rotation

by Bob Kieschefer

In marked contrast to the two-house domination of Discobolus competition in 1971-72, the trophy has visited the masterpieces of all seven houses this year. The houses are currently so well matched that no house has successfully defended the trophy since the third weekend of second term.

All of the highlights have been on the athletic fields. In legal maneuvering not seen since May, 1972 (remember the Dow­sett Plan?), Ricketts' defeat of Blacker in volleyball was disal­lowed because it occurred during the last five days of first term. And when five houses forgot to challenge the Scorves, Fleming captured the trophy on the first weekend of second term, having lost it to Ricketts in the previous legitimate contest.

The Flers defeated Blacker and Lloyd before losing to Page in table tennis. Then, following a two-week rain delay, Dabney beat Page in softball. In succeed­ ing weeks Ruddock, Ricketts, Blacker, and Lloyd have won the trophy. The results of the second and third-term contests are:

- Fleming def. Blacker (softball)
- Fleming def. Lloyd (handball)
- Ruddock def. Fleming (table tennis)
- Dabney def. Page (softball)
- Ruddock def. Dabney (volleyball)
- Ricketts def. Ruddock (soccer)
- Blacker def. Ricketts (softball)
- Lloyd def. Blacker (football)

The current challenging orders and point totals are: Lloyd, (5); Fleming (20), Page (20), Dabney (6), Ruddock (6), Ricketts (8), Blacker (6).

Beavers Split Doubleheader

by Ray Spears

CIT and the Lighthouse Institute for Fourquare Evangelion Bible College won one game each of a doubleheader played Saturday afternoon at plush (carpeted restrooms) Quigley Field in Com­merce. Led by the strong hitting of Bob Pleva, Tech put in a fine showing in both games, winning the first 12-6 on 12 hits and being edged 11-10 in the nightcap.

The first game started slowly with Pleva and John Dillies attempting unsuccessfully to cor­pose LIFE by stealing home and second on two errors by LIFE's, but both were tagged out. LIFE was somewhat more successful at stealing bases and Tech was behind 1-0 when John Ellis, Rick Mitchell, and Tom Howell started a rally of walks and steals in the third inning. Pleva drove in a run from second on a stolen base, and Tony Durizio hit a sacrifice fly to left field to bring home Pleva. LIFE recovered from this set­back, but was not able to come back when Pleva drove in two of three runs in the fourth inning on a double to right, and Howell brought two more home with a triple in the fifth. Other RBI's were credited to Dilles, Phil Gschwend, Ellis, and Mitchell. The winning pitcher was Bob Pleva.

Seminar for P.E. Credit?

The current challenging orders and point totals are: Lloyd, (5); Fleming (20), Page (20), Dabney (6), Ruddock (6), Ricketts (8), Blacker (6).

THE CALIFORNIA TECH

Superconductivity

Continued from Page Two

while retaining its ideal mechan­ical and electrical properties. He found that by adding only 5 percent niobium and 1.5 percent tin to the copper and applying appropriate thermal and mechan­i­cal treatments he could form "copper" wires that have essentially the same mechanical and thermal properties as that of pure copper except that it is superconducting.

Up to about 60 k, the alloy superconducts, which is about the same as for one of the most common high-temperature super­conductors composed of three niobium atoms to one of tin. This compound, however, has a thermal conductivity about one thousandth that of copper and is extremely brittle.

In Your Own Home

These new alloys were pre­pared by a conventional metallur­gical method of melting the metal in the second inning with runners on first and second and one out, but intentionally dropped it to calling a batter out. The umpire trotted out an "intentional drop" rule similar to the infield-fly rule, calling it a foul ball and elon­gating it into long filings after rolling. At this stage, the tin is still dissolved in the copper. By heating (annealing) again, the tin atoms diffuse out of copper and

appropriate amounts of copper, niobium, and tin together form an ingot. The ingot was then rolled into wires and heated to moderate temperatures for a few days. This is a very simple manufacturing process for wires and for producing ordinary copper wires. These copper-rich alloys ex­hibit superconductivity because the niobium atoms form particles uniformly distributed in the copper-tin matrix and are elon­gated into long filings after rolling. At this stage, the tin is still dissolved in the copper. By heating (annealing) again, the tin atoms diffuse out of copper and toward the niobium filaments and form superconducting niobium-tin compound. Thus, by this simple process, Dr. Tsuei has manufactured fine-bu­minium wires inside the copper!

Extremely Large Dinosaur Found

in SW Colorado

A palentologist from the University of Utah has uncovered the remains of what he thinks may be the largest dinosaurs ever lived. The April Science Digest reports that James A. Jensen uncovered bones belonging to a plant-eating dinosaur of the Stegosaurus family whose size he estimates to be over 50 feet tall, 100 feet long from nose to tail and about 80 tons in weight. These meas­urements were deduced from a study of two matching shoulder blades, the pelvis and the vertebrae of this creature which he found in southwestern Colo­rado. "This is by far the most enormous creature ever known to walk upon the earth," he says. "Such an animal was on the earth today, it would have to stoop over to look into a third story window."

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