Bradbury Discusses Need Of Creativity in Writing

Science fiction writer Ray Bradbury spoke yesterday in Dabney Lounge on "Creativity in Fiction." The talk, given during the 110th assembly hour, was presented by the Associated Students of California Tech (ASCIT) Alumni Assembly Committee.

Bradbury began his talk by giving a little background on his life and career. He first became interested, he said, in science fiction when he began reading "Amazing Stories" when he was about 7. He then moved up to "Good" Rogers when he was 8 and began writing science fiction at 12. He continued this interest, and it gave him quite a reputation in high school, as the girls didn't seem to appreciate his youthful fascination with 25 years of age. Now, he says, with the advances in the space age, he likes to say "I told you so." He admits he's now interested in being "a method sadist."

A Blasphemous Age

From his ideas on this age, Bradbury stated that this is the most dynamic and blasphemous age, the most dynamic and blasphemous age because of the tremendous pace of progress, and blasphemous because we are working against God, who has been around for 100 years ago. A century ago people could die of typhoid fever or tuberculosis, but now we tamper with death, old age, or other things which science is working to eliminate.

Bradbury mentioned Herman Melville and Jules Verne as the two most influential science fiction writers in history, because they both dealt with the blasphemous age. Melville, however, was not mentioned, Melville, however, was rather amazed by both Melville and Verne. (Continued on page 3)

Report for 'Realities' Writes Story About Tech

BY RODGER WHITLOCK

After spending last Saturday night at a French grad student's party, Sunday with various faculty members, Monday at the Feynman lecture, and lunch with the great math (Exakto)ist, according to the Frosh Diner's Club, to the French magazine "Realities," arrived at the Athenaeum Library Monday afternoon to be interviewed for the next issue of the California Tech. The result was more than an interview of the Tech staff by Mademoiselle Hunebelle. For 15 minutes, we asked questions on all facets of students life.

Firstly, she asked about the Student House, whether living on campus was usual, how students are assigned to the House, etc. She was rather amused by the number of students that live on campus and the fact that students can live off campus. After several collisions with the language barrier (mitigated as it was by her command of English), we finally explained the methods of our acceptance by Caltech. She found the full faculty members interview of prospective students intriguing, and asked about other contacts between students and faculty members. Here again she was interested in the case with which such contacts can be made: fresh honors, dinner guests, or just walking into a faculty office. Particularly interesting to her was Richard Karp's description of conferring with Ray Owen on the breeding of paradise fish. At first she asked, "For eating?" but finally got the situation right, "Oh, for marriage!"

Dalliance on Tech

After the 15 minutes, we asked her a few questions about her impressions of Caltech. Several things had impressed her. She felt that the Institute was one of the most peaceful places she had ever been, comparing it to the village of Amstel and to a Buddhist monastery she had visited in Bangkok several months ago. Particularly noteworthy to her in this respect was the fact that a student deferment to the end of the academic year, if not qualified for mental, moral, or physical reasons, or if not physically exempt in case of war or national emergency (a new classification); and 3A, hardship or married with child.

2A is the occupational deferment for jobs in the national health, safety, or welfare. An individual can usually get an occupational deferment if he is working under a defense contract. McCormick stated that most boards would agree that teaching would qualify here, but it is still a discretionary matter with the board.

McCormick stated, with regard to 2A deferments, that one registrant's company wrote to the board that the individual was a critical member of the "Skylab" project.

Deferments for conscientious objectors are 1A0, non combating, and 10B and B3 deferments. "The Federal Government never requests deferments, but often Peace Corps service does for a 1A0." McCormick also strongly emphasized the point that all board members of reserves, McCormick added that there were no two ways about it - one of the two would occur.

During the talk and in the question period, afterwards, McCormick discussed the various types of deferments. The one that is deferred to age 26 (this twenty-six birthday), unless present policies will not be drafted.

The most important student deferment is the 2A student deferment. McCormick said that "the law has filtered down so that students are to be treated equally in general." The Selective Service Qualification Test, according to McCormick, is no longer a very important question for importants for deferments. Thus, students who are rejected for a physical passing can, in general, expect to receive a 2A deferment.

(Continued on page 3)

Chinese Scrolls Displayed In Dabney Lounge

A series of 26 Chinese scroll paintings has been put on display in Dabney until February 15. They are the works of the staff and students of New Asia College Hong Kong.

The exhibition and distribution of the works is organized by the World University Service, as a contribution through cultural interchange to mutual understanding between East and West.

A wide variety of styles and compositions is found in the collection. Traditional Chinese calligraphy emphasizes the use of brush and ink and a mastery of calligraphy. A modern type of art. Six of the scrolls are done by faculty members, five by the students of the Fine Arts Department.

The Time Is Here

There is a new device on campus that probably all students are already familiar with. As a hint, it is cylindrical and has a note on it reading "Sloan Automatic Valve—efficient and sanitary—but do not touch.

Now that we have gotten someone curious—and Robinowitz mad—we proceed to the subject at hand: ASCIT elections. There are already familiar with the process of voting. Therefore the philosophy of democracy is the attempt to find historical reality. As an example, there is the story of someone like himself who fought in both world wars and would have a different perspective from the real interpretation of the history of those wars than does the historian. Historical knowledge is based on documents. History can have general laws that govern typical or eventual events from preceding events, but these laws cannot predict future events. Science must be free from value while history must be evaluated by individuals who have definite opinions.

Proposed By-Law Revisions

The following by-laws amendments have been approved for publication on the February 19 ballot:

I. A proposal to place the Tech editor on the BOD, necessitating the following by-laws changes:

Article IV, Section 1: General officers—Insert "an Interhouse Committee Chairman," between the words "Vice-" and "a representative at large.

II. Article IV, Section 2: Insert "a fellow" after "chairman" and re-number the following sections accordingly. The IHC Chairman. The IHC Chairman shall be a member of the Board of Directors. He shall call and preside over meetings of the Interhouse Committee. He shall be chairman of the honor point committee. He shall be responsible for liaison between ASCIT and the various House organizations.

III. Article VIII, Section 2: Nominations—Insert "Intersociety Committee Chairman" between "Society" and "Representative at Large.

Article XII, Section 3: Motion necessary—Delete "the IHC Chairman, who shall serve as a member of the Assembly Committee." (Consistently off) and the "athletic manager.

II. Formal recognition of the Assembly Committee, making the following addition to the by-laws:

Article XII and section 6: Assembly Committee. There shall be an Assembly Committee whose chairman shall be appointed by the BOD. The other members shall be appointed by the chairman. It shall be the duty of the Assembly Committee to publish programs for the 1100 Assembly Hour.

III. Redistribution of the duties of the old position of Business Manager:

Add to Article IV, section 2: Duties of the treasurer: He shall receive and present to the secretary the quarterly and annual reports of the ASCIT publications. He shall have direct charge of all subscription offices and all corporation property.

IV. Transfer of yeild section: Article VI, Section 10 to Article XII, Section 5.

V. Increase the salary of the Interhouse Committee Chairman, making it more nearly equal to the compensation of the Tech business manager, Big T editor and business manager, and little editor.

Catalina Tech

Junior Travel Prize

Cathy Kinseth

April 15th, 1963

Editor's note: This is the second of two travel journals reports. It will be published in two parts, this week and next week.

By K. L. CAUSEY

One day in London, and a man saw rain — it rained. He hates to leave. But just one day it was — at first — and then off again to Oxford and the High Street, traffic jams caused by blacked-out and noisy students drinking champagne even before the test results are made public, quite a change from the blue book blues of some U. S. colleges. Yet Bill Bauer, a former Caltech student who's presently a Marshall Scholar, imparts the sad news: in one Oxford year there have been two suicides, 1, the word manker, probably would suffer from claustrophobia all closed in the University Senate wall surrounded by busy motor-cylinder infested streets, not to mention the ghastly racket of European compact cars.

But Bill was more than nice: he acted as private guide and better buyer. He explained, that in many ways, he shares the Oxford educational system over that of his former school. At other times I talked with various deformed literature students in Oxford past and present praising a highly questionable value for my writing.

Finally after about three days I headed off again. This time the destination was Glasgow, or, rather, Rouken Glen, a better place outside the city. The trip was uneventful except for pouring rain and a faceless wind across the moors, and an almost meaningless connection with the tricky trains of a dying socialized railroad.

Scottish Experiences

Fortunately the weather in Scotland was tolerable, while I was there, a rather rare event, I understand. My stay was with distant relatives, who showed me, among other things, the birthplace of my old friend Bill Burns. One of his appreciation of this poet's genius is certainly vastly accurate; for the man was born. The human desire to sing is easily satisfied, but it's inspiring to know that some will sing in any conditions.

After leaving Burns, I headed off again. This time the destination was Glasgow; or, rather, Rouken Glen, a better place outside the city. The trip was uneventful except for pouring rain and a faceless wind across the moors, and an almost meaningless connection with the tricky trains of a dying socialized railroad.

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Bigger Draft
(Continued from page 1)
and satisfy military obligations.
As incidental facts, McCormick stated that one must get permission to leave the country from his draft board, and the board will issue a permit if permission is granted. Immigration officers are supposed to check for these permits.
In addition, McCormick mentioned that some employers "claim" that their employees get deferments. No employer can keep the list of those employed by him.


each evening of this week, from last Tuesday through tomorrow, in the Student House and meeting various members of the Institute community as part of the YMCA theological student visitation program. This event, made possible by the sponsorship of the Danforth Foundation, takes place during second semester every other year. The purpose of the visit, according to the committee in charge, is to first give Techmen a chance to meet and discuss questions of interest with some students whose ways of thinking are free from the influence of science.

Schools represented by the visiting theological students are Pacific School of Religion, San Francisco Theological Seminary, Church Divinity School of the Pacific, Hebrew Union College, Southern California School of Theology, and Fuller Theological Seminary. From the Pacific, Hebrew Union College, Ritter House, which is staying in Lloyd, Rudderick House is hosting Bill Doby and the Graduate Houses are hosting Bert Mack, both from San Francisco Theological Seminary. Barry Bloom from Church Divinity School of the Pacific is living in Dabney. Roberta House is host to Barry Kogan from Hebrew Union. Dave Himrod will be living in Fleming, and Ned Bachman in Page House both being from Southern California School of Theology. Don Freeman from Fuller will be staying in Blacker.

The visiting students are participating in a number of sundry activities, both planned and unplanned. Primarily they are eating their meals in the Houses and holding general ball sessions with members of the House. In addition they have been meaning about the campus, seeing many of the laboratories and sitting in on a number of classes and lectures. There was even some serious talk among the visiting students about sitting in. With this type of physics lecture today. Highlighting the program this evening will be the visit of each of the visiting students to the home of a faculty member for dinner and discussion. Barry Bloom and Bert Mack will be at the home of Dr. Ray Owen; Ned Bachman and Barry Kogan will be the guests of Dr. Jesse Greensheets, Don Freeman and Roger Ridgeway will be guests of Dr. Robert Lanston; Dave Himrod will visit Dr. Jon Mathews; and Bill Doby will be at the home of Dr. Robert Wayne.

Bradbury (Continued from page 1)
destroys this blasphemy, personified by the whale, while Jules Verne is really more American, and "phlegmatic to the juice of the universe," by operating his remarkable submarine.

Just as in the fact that, in science as much as anything else, the gathering of facts, the cutting and classification was necessary in their application. He said the ability to present these ideas and forms of two or three dimensions together was the reason why we have this ability we are a robot society: "to 2 to 3 billion people, acting by all 50 billion ideas fused into machine combinations is a new science section in which Bradbury likes to work.

Methods.

In explaining how he wrote his short stories Bradbury remarked that they were composed to a major extent in an emotional process. He thinks that everything before and after the creation, the getting it arranged in itself should be an emotional instinctive process. He said that he presents himself with all the facts necessary, then doesn't think about them, and when he gets an inspiration he sits down in this "emotional period" to compose the story. Bradbury commented that he felt this intuitive process was very important, and that people should learn to be comfortable with it.

He said that his "reason for being alive is to explain this age to you in metaphysical terms," so other people will see what the age means. "The space age means, for me, our chance for immortality" in extending our race forever, he stated, and "the regeneration of mankind" to infinity in conquering the universe.

In an amusing question and answer period, one person pointed out that he had to read Bradbury's book "Fahrenheit 451" over 500 degrees before it burned, by Bradbury's expression by stating that, when writing the story, he had called Caltech to find out just how one could tell him, so he called the fire department for this information.

Assignment: design a suspension that "paves its own way!"

The challenge given Ford engineers was to design suspensions that would permit wheels virtually to roll only in a vertical plane but yet suspension systems provide only a partial solution to road shocks. If you are driving on deeply rutted roads you experience better control of the car. The solution? Exclusive Ford. For this ride back as well as up for a smoother ride. Ford's new idea for the American Road. Ford engineers were to design suspensions that would permit wheels virtually to roll with the punches—not just bear the blows. Conventional suspension systems provide only a partial solution to road shocks by limiting wheel recoil to an up-and-down motion. The solution? Exclusive Cushion Recoil suspension design in all Ford-built cars for '63 Cushion Recoil, with cushioning action to keep out bumps, jolts of rough roads, adds to your comfort, safety, and driving pleasure. Even the thump of freeway tar strips is reduced, and if you experience better control of your car. Furthermore, your Ford-built car is spared the wear and tear of road-induced vibration.

UNITARIAN PUBLIC FORUM
Fred Warner Neal
Professor of International Relations, Cosmopolitan Grad, School Speaks On "U. S. FOREIGN POLICY AND THE SOVIET UNION" 10 a.m., Sun. First Unitarian Church, 2393 W. 8th Street.

Donation $1.00

Thursday, February 7, 1963

C A L I F O R N I A  T E C H

Theologians Visit;
Hold Discussions

Eight theological students from California seminaries have been living on campus this week, from last Tuesday through tomorrow, in the Student House and meeting various members of the Institute community as part of the YMCA theological student visitation program. This event, made possible by the sponsorship of the Danforth Foundation, takes place during second semester every other year. The purpose of the visit, according to the committee in charge, is to first give Techmen a chance to meet and discuss questions of interest with some students whose ways of thinking are free from the influence of science.

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Interview

(Continued from page 1)
was the contrast between the rest of L.A. and the campus. And finally, Miss Hunnebelle has a lot more of Caltech to see.

Another thing that greatly impressed her was the intellectual versatility of the faculty members, having spent seven hours talking with Matt Sands of the physics department and an hour with Professor Peyman, this is understandable. Miss Hunnebelle noted that the student body is very obviously all male, considering not only the composition of the students but also the Peyman lecture, but their dress. Apparently, in comparison with students at Stanford and Berkeley, our dress is not very carefree; this is attributed to the absence of women on campus, producing an attitude of "realty care." She also commented on the large percentage of students who were single, and asked what she felt it to be the highest ratio in the world of wearers to non-wearers.

Miss Hunnebelle will be on campus again in a few days. An article about Caltech will be published in June, in an issue of Roommate. Other articles written by Miss Hunnebelle include one on NASA and an interview with Robert J. Oppenheimer. Result: "Cushion Recoil" provides a dramatically smoother ride in 1963 Ford-built cars

The challenge given Ford engineers was to design suspensions that would permit wheels virtually to roll with the punches—not just bear the blows. Conventional suspension systems provide only a partial solution to road shocks by limiting wheel recoil to an up-and-down motion. The solution? Exclusive Cushion Recoil suspension design in all Ford-built cars for '63 Cushion Recoil, with cushioning action to keep out bumps, jolts of rough roads, adds to your comfort, safety, and driving pleasure. Even the thump of freeway tar strips is reduced, and if you experience better control of your car. Furthermore, your Ford-built car is spared the wear and tear of road-induced vibration.

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Big T’ Meets Major Deadline

The 1963 Big T has met its second major deadline on time and has only one more to go, according to Jack McKinley, Big T editor. The second deadline included about 67 pages and was last Monday, February 5, at 10 a.m.

There were 28 pages of the Senior section handed in, 10 pages of the Sports section, and about 29 pages of the Houses section. Senior editor is Al Hindmarsh, sports editor is Dave Hewitt, and McKinley is editing the Houses section.

The total number of pages completed is now 128, including 5 introductory pages, 66 faculty pages, 32 activity pages, 12 sports pages, 30 senior pages, 31 House pages, and 2 advertisement pages.

Sixty pages remain to be submitted at the final deadline of March 29. If this deadline is met, the 1963 Big T will be issued on time about June 1, 1963, for the first time in many years.

Strobe Lasers Developed

Detailed observations of many extremely rapid phenomena, such as the damaging collapse of microscopic bubbles against ship propellers, are possible for the first time because of a strobeoscopic laser light developed here at Caltech.

Dr. Albert T. Ellis, associate professor of applied mechanics, has converted a laser’s random pulses into uniform, repetitive pulses of up to 500,000 a second with power in the beam equivalent to 20,000 hundred-watt bulbs.

“This will provide enough light for the extremely short exposures necessary in taking motion pictures of very fast events,” Ellis explained. “The instrument also will enable us to use the laser pulse, in effect, as a camera shutter for filming at the rate of up to 500,000 frames a second. Exposure times as short as one billionth of a second are possible.”

Dirty Pictures

The resulting film can be pro-

WHAT’S NEW IN THE FEBRUARY ATLANTIC?

“Now Not to Teach Teachers” The training of American teachers is “unwieldy, slow-witted, bureaucratic... a failure,” says James D. Knoerer. In this incisive, critical analysis.

ALSO

J. B. Priestly: Reminiscences about the author’s service in World War I

R. W. Thompson Associates

Budget Problems?

If you pay over $20.25 for VGIA/2 Ionization Gauge Tubes

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R.I.D.L. Pulse Height Analyzers

CRYOGENICS INC., Instrumentation

TECH Thursday, February 7, 1963
Travel Prize (Continued from page 2)
The majority of people using a bus bless themselves every time it passes a church, and the one who has the opportunity to find in every little village is both a Catholic and a pilgrim.

The question should now be immediate. What did a young poet find in a country of any, he visited in Western Europe. The peculiar social and economic condition of the country; the unachieved and unaccomplished purpose of the young country; the fact that it is a hardly welcome to strangers and the desire to give them the best, was the reason for a mostly unlimited plans of Gull­

The best-known previous

John Huston, Sean Connery, were only slightly marred by the

Larry Anderson, Al Holm, Guy Jackson, and Dave Carroll, under the able leadership of Capt. Rob Serafin, began work with a Leibsta start. In a dazzling display and coordination, this team set a class B record of 22.835, including a 10- second penalty for transgression of bounds.

Thus Ireland in 1962 was an active country, but not nearly as active as England, so naturally I took off first for Wales.

But South Wales, where I was, is mostly full of clouds and fog.

We'll be on the campus on the dates listed below, ready to give engineering and science seniors information on space-age careers in a dynamic and exciting environment.

If you are looking for a company offering assignments on programs of unique interest and career potential, you'll be interested in the advantages Boeing can offer you.

Boeing, for instance, is a major contractor on such advanced programs as the Saturn S-IC first-stage rocket booster, the X-20 Dyna-Soar manned space glider, the solid-fuel Minuteman ICBM, and the B-52H missile bomber, the KC-135 tanker-transport, the C-135 cargo-jet, and the famous Boeing 707, 727 and 728 jetliners. In addition, Boeing's Vertol Division is one of America's leading designers and builders of helicopters.

Research projects at Boeing are under way in such advanced fields as celestial mechanics, solid state physics, nuclear and plasma physics, flight sciences, space flight and propulsion.

Expanding Boeing programs offer exceptional opportunities to holders of B.S., M.S. and Ph.D. degrees in aeronautical, mechanical, civil, electrical-electronic and industrial engineering, and in engineering mechanics, engineering physics as well as in mathematics and physics. Assignments are available in Washington, Pennsylvania, Kansas, Louisiana, Alabama, California and Florida.

Let's go! Start your research on Boeing in a small group where individual ability and initiative get plenty of visibility. You'll enjoy many other advantages, including an opportunity to take graduate studies at company expense to help you get ahead faster.

Drop in to your Placement Office and arrange for an interview. We're looking forward to meeting you!

We're looking forward to meeting you!
Conference Leaders Down Caltech

BY DENNIS MCBRAYER
First place Whittier and sec-

ond place Occidental easily
dumped the Beaver hoopers in
two home games last week.

In winning Saturday's night's
close, 96-66, the Whittier Poets
put on a demonstration of speed
and shooting skill which showed
why they are the league leaders at
present. Whittier's speed was
impressive as their guards stole
the ball on several occasions and
easily scored on the fast break.

Also, the Poet's Steve Hayes
showed why he is one of the
league's top scorers as he hit
seven out of eight shots for 14
points in the first ten minutes
of the game. He helped the Poets
run up a large lead, so that the

Tech Swimmers Defend Crown

Ever since the beginning of
second term the waters of Alumni
Pool have been churning as Caltech swimming teams prepare
for the 1963 season. The turn-
outs have been large and the
workouts performed with enthu-
siasm as last year's SCULC cham-
ions prepare to defend their
title in May against improved
conference opponents. Lending
the returnees from last year's
quad are seniors Jim Shaw and
Pat Manning and Juniors Tom
Crovker, Denny Bentleigeh, Elliot
Harry, Dave Lambert, Mike
McCrimmon, Dave Beth, and
Art Turner. Up from last year's
fresh team are Tod Jenkins,
Ken Kusen, Pete Ryan, Jerry
Nelson, Mel Stephens, Warren
Peaseow, and I. Loke Chang.
The team will sorely miss the serv-
ices of seniors Bruce Chene-
bro, who will leave school dur-
ing third term to go to Europe.
The return to action of Junior
George McBean and Senior Alan
Hills, who are currently re-
covering from assorted ills,
should greatly strengthen the
team.
The freshman team has also
enjoyed a large and enthusiastic
workout. Particularly impressive
to this date have been Larry
(Lonned on Page 7)

make the most
of your summer

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Wisconsin. I am interested in the 1963 summer pro-
gram at Madison, so

□ Please send me your 1963 bulletins on summer
study, including course catalogs and guides to stu-
dent services and accommodation.
□ I can't come to the campus on Feb. 9. All
game times are at 8:00 p.m. with the Freshmen preliminary at 6:30.

Wrestlers Lose to
Long Beach State J.V.

In their second match of the
season, the Caltech wrestling team
was defeated by a strong
Long Beach State J.V. team, 21-
11. The Long Beach team brought
only 8 men, and was therefore
forced to wrestle some of them
twice in this semi-official match.

Akira Yoshida, Andy Kampe,
and John Letcher scored the 11
Caltech points. Yoshida con-
trolled his man during the first
period, and pinned him with
half a minute left in the second.
Kampe and Letcher both wrestled
Salt Boggs of Long Beach.

Condensed from Page Six CALIFORNIA TECH
Ricketts Wins Football Title; Lloyd Leads Trophy Competition

As expected Ricketts won the football crown and nearly doubled their point total by the Interhouse Trophy competition to move into second place. Lloyd House retained its first place position in the trophy race by taking a third in the football.

Ricketts played Ruddock a week ago Tuesday and won 35-12. Ruddock's defense played exceptionally well against the Scarves, holding them to their lowest score of the season. Ruddock's offense also deserves mention for scoring two touchdowns against a Ricketts' defense which had allowed only three other touchdowns this season. Ruddock took fourth place.

On the last day of season, Fleming took a close game from Page, 19-13. Fyling without team leader Bob Christie, Fleming trailed cellar-dwelling Page at the half, 13-7. The Flems scored in the third quarter on a long drive to tie the score and won the game via a long pass from Roger Korus to Don Green.

Blacker House played Dabney in the left flat. Andersen, John Walter, Bill Scott of Lee Myers at linebacker and Dabney was held at bay until the fourth quarter, 13-13, to keep possession of the discobolus trophy. The first half was dominated by Page as the Dabney offense proved totally ineffectual. Jerry Thomas at center was the key man taking the ball in the left flat for the first touchdown toss to Jerry Green in the left flat.

Blacker took sixth.

The final interhouse football standings are:

<table>
<thead>
<tr>
<th>Ticket</th>
<th>Won</th>
<th>Lost</th>
<th>Tie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ricketts</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fleming</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Lloyd</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ruddock</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Blacker</td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Page</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Dabney</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Interhouse track competition follows closely on the heels of football, the preliminaries in some of the track events were held yesterday. Today the field events are scheduled and on Friday the finals of the track events take place.

Dabney, Page Tie Discobolus Football

Dabney tied Page in discobolus football Sunday afternoon, 13-13, to keep possession of the discobolus trophy. The first half was dominated by Page as the Dabney offense proved totally ineffectual. Jerry Thomas at center caught a series of short passes from John Mowrey to spark the Page offensive drive. Both Page touchdowns were made on running plays with Mowrey carrying.

Dabney was held at bay until the fourth quarter by outstanding defensive play on the part of Lee Myers at linebacker and Tom Resney at safety. In the last quarter, Dave Barker finally completed a long pass to Bob Scott in the end zone for the first Dabney touchdown. Then with only minutes left the Green Men came roaring back behind Barker's running to set up a short touchdown toss to Jerry Green in the left flat.

The standings now are:

<table>
<thead>
<tr>
<th>House</th>
<th>Trophy Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dabney</td>
<td>11</td>
</tr>
<tr>
<td>Lloyd</td>
<td>11</td>
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<tr>
<td>Ruddock</td>
<td>10</td>
</tr>
<tr>
<td>Blacker</td>
<td>9</td>
</tr>
<tr>
<td>Ricketts</td>
<td>6</td>
</tr>
<tr>
<td>Fleming</td>
<td>5</td>
</tr>
<tr>
<td>Page</td>
<td>3</td>
</tr>
</tbody>
</table>

More Swimming

(Continued from page 6)

Amsden, John Walter, Bill Owens, Pat Miller, and Steve Dolchleman. In addition to several good individual performers there is a great deal of depth which should combine to make this year's frosh team one of the finest in several seasons.

Several members of the squad will participate in a development meet this weekend in Beverly Hills. Intercollegiate competition will begin Feb. 15 when Tech meets El Camino and FCC at FCC. The squad will have its first chance to appraise league competition during the Conference relays on March 2.

Charmack the Magician

P. O. Box 118
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Lasers

(Continued from page 4)

pected at any desired speed, slow-
ing such events as high velocity
explosions, shock waves and the
collapse of cavitation bubbles so
that they may be studied and
analyzed.

Ellis' immediate objective in
modifying the laser is to develop
a system that can film the life
cycle of cavitation bubbles. Their
damage to ship propellers and
pumps, a major problem for
years, is becoming more acute
with the pressure of
recently introduced jet engines.
The jet engines are
enough. The cavitation processes
are not well understood.
Ellis said. There is much
research here on the problem.
Ellis and his former graduate
student, Dr. Chend Naide, have
developed a theory that the dam-
age is caused by a jet of water
that pierces the bubble opposite
to where it is in contact with a
metal surface. The jet of water
with great velocity as the
bubble collapses around it.
With a multi-million-frame-per-
second camera he devised previ-
ously, Ellis has obtained
photographs of the jet in bubbles
generated in still water.

Travel Story

(Continued from page 5)

they showed an active interest
in both Russian and American
foreign aid for their homelands,
as well as a projected future fear
of segregation, were they to visit
the United States. I'd like to talk
to them now, after the infamous
Mississippi-Meredith Mess. So go
the Blues in the Night and Day

Who knows water better than a fish?
The fish we employ as water experts are tiny Stickle-
backs. We pay them liberally in brine-shrimp, no
salary deductions.
The fish we employ as water experts are tiny
Sticklebacks. We pay them liberally in brine-shrimp, no
salary deductions.

As an ultimate safeguard, we let our Sticklebacks
test the water, before it is released.

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