

# 'Heavy Water' Now Available To Chemistry

## Price of New Substance Takes Drop

### Experiments to Produce Valuable Health Aid Being Tried

"D20" or deuterium oxide, as "heavy water" is now known, can now be purchased commercially for use in laboratory experiments, and because the price is not out of reach for many institutions and research organizations, interest in this extremely interesting chemical is expected to be higher than ever, it was declared yesterday by O. F. Stafford, professor of chemistry. Professor Stafford recently won national attention with his research project here which involved the concentrating down to heavy water of 10,000 gallons of ordinary water. His concentrate, about 50 gallons, was sent to the bureau of standards at Washington for final processing.

The use of heavy water in research is steadily increasing, Professor Stafford says. One of the most recent is an experiment that involves using the heart of the heavy water, or deuterium oxide, atom to bombard atoms of sodium and other salts in an effort to import artificial radio-activity. There is some hope that in this way a radio-active sodium can be produced which can be used in human therapy, and diseases may be treated by injections of this fluid into portions of the body.

When Professor Stafford began his project nearly two years ago "heavy water" had recently been discovered, and its value at that time was placed at about \$150,000 per quart. A year ago it was still valued at about \$70,000 and difficult to obtain commercially. Announcements received here within the past few days, however, quote the fluid at \$20 per gram for 100 per cent concentration and much cheaper for lesser concentrations.

Recently Dr. Harold Clayton Urey, professor of chemistry at Columbia university, New York, was awarded the Nobel prize for the work he has done in research on heavy water. With others Dr. Urey in 1932 discovered heavy hydrogen "mass 2" which is just twice as heavy as the common "mass 1" water. Since water is composed of 16 weight units of oxygen to two of hydrogen, the "heavy water" actually weighs more, as the ratio then becomes 16 to 4.

The "heavy" water is obtained by treating ordinary water by electrolysis, and it exists about one part heavy water 5,000 parts of ordinary water. In designating the new fluid, the symbol "D" is used. Thus water is known as "H2O" and heavy water as "D2O."

## Critique

(Continued From page 2)

coming back and thrust up like an iron dike through the solid layers of the sane and understood. The moment of self-searching, of standing under the oaks at night and asking—What? Who? What am I? . . .

Deeply philosophical, and finally at the conclusion reaching a bitter pessimism:

"We have no reason to hope or believe, but do because we must, receiving peace in its sparse moments of surrender, and beauty in all its twisted forms, not pure, unadulterated, but mixed always with sour potato-peelings or an August sun."

"Now in November I can see our years as a whole." —A. L. R.

**THE HOUSE BY THE SEA** by JOHAN BOJER; published by D. Appleton-Century Co., reviewed by Velma E. McIntyre.

A war book that pictures the "sideline" nations—those who superficially sympathized with the warring countries, but who held their breath in fear that the combat which they secretly cheered would cease—is the Norwegian author, Johan Bojer's. "The House and The Sea. The title is the key to Bojer's idea of huge mansions being erected with money won by speculation on the ships that were exploding at sea.

It is a combination of a philosophical novel and a satire, that reveals the war spirit of neutral peoples during the world war. It shows how they went 'wild' over possibilities of speculation, furnishing boats and ammunition that aided in keeping the struggle alive, and at the same time individually cringed inwardly at thought of the price the world was paying for their increasing wealth.

This is Bojer's latest book, published in 1934, and is his eleventh contribution to contemporary literature. He is author of "The Last of the Vikings," "The Emigrants," and "The Great Hunger," published in 1919, the book which established his name in America. The author was born at Orkedalsoren, near Trandhjem, Norway, and his extensive travels throughout Europe have been responsible for his acute understanding of European peoples and conditions.—Velma McIntyre.

**QUEEN MARIE MAY VISIT U.S.** (Copyright, 1934, by the Associated Press).

BELGRADE, Yugoslavia, Nov. 20.—Dowager Queen Marie of Rumania hopes to visit the United States again some time soon, bringing her grandson, young King Peter of Yugoslavia, with her.

BERKELEY, Nov. 14.—(AP)—Three hundred million stars are going to have their pictures taken, some of them perhaps for the first time as the result of a \$65,000 gift to the University of California today.

## Associated Press Column Popular Among Students

"Resume of Today's News," by Associated Press, leads the list of Emerald columns read most by upper-division students, according to a recent vote taken in Dean Allen's classes. Hitchcock's "Day's Parade" ranks second, only eight points below. "Editorials From Other Colleges" and Professor Dunn's "Old Times," following closely, tie for third place, with "On the Bandwagon" and "Duck Tracks," only one point apart, taking fourth place.

A survey, covering the freshman classes of other professors, shows an entirely different vote. Professor Turnbull stated that the freshmen who were asked to vote on these issues bofer they had acquired the Emerald reading habit, picked the lighter columns rather than those of heavier content.

Professor Hulten remarked that the upper-division vote might coincide with any general vote of the University, the most probable changes being made due to the fact that journalism students might be susceptible to partiality concerning those reporters whom they contact and know.

## Emerald of Air

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lives of the Barbours. The time element is continued one month after the closing of the last book.

A brand new song penned especially for him will be sung from manuscript by Cliff Nazarro during his fifteen minute program tonight at 7:00. "Honey, Here's to You" is the title. In addition Nazarro will present a selection of the outstanding hit tunes of the month.

At 5:00 Mary Pickford and her stock company will present another dramatic bit in the series starring Miss Pickford. John Charles Thomas, baritone, sings at 6:30. Lanny Ross at 8:30, and the Town Hall program with Fred Allen, Lennie Hayton's orchestra, James Melton, tenor and the Songsmiths quartet will be released at 9:00. All these programs over NBC tonight.

**RELEASE OF MOONEY ASKED** NEW YORK, Nov. 20.—(AP)—Raymond Moley, in open letter to Governor Frank Merriam of California, recommends a pardon for Tom Mooney "before the Supreme court is compelled to enter upon the task of establishing the legal justification for a review of the case."

**RELATIVE VISITS ALLENS** Louis F. Elliott, brother-in-law of Dean Allen of the journalism school, came by airplane Sunday night from New York City to see his mother, Mrs. Charles F. Elliott, who is ill. He is staying with Dean Allen and Mrs. Allen, his sister.

## Rosson Will Distribute Free Tickets for Grid Game With St. Mary's

FREE tickets to the St. Mary's-Oregon Thanksgiving day grid game are to be given to all ASUO members who make the trip to San Francisco.

They are asked to present their student body cards to Hugh Rosson, graduate manager, who will be at the Cliff hotel in the bay city before the annual contest.

## Phi Beta Elects Lowell Head of Pledge Group

Formal pledging and the election of pledge officers were the matters of chief importance taken up at yesterday's meeting of Phi Beta, national music and drama honorary.

The new officers of the pledges are: Metty Lowell, president; Gayle Buchanan, vice-president; Roberta Bennett, secretary; Rhoda Armstrong, treasurer; and Phyllis Adams, historian. Miss Armstrong was the new member to be formally pledged.

New members are planning a tea on December 6 for active Phi Betas and associates. No definite plans have been made as yet, however.

A short social program was included in the meeting. Berthe Sheppard sang "A Winter Lullaby." She was accompanied by Edythe Far at the piano.

## PROSECUTION SCORED

CHICAGO, Nov. 20.—(AP)—Assailing the prosecutors for producing only "absurd theories," defense attorney Charles S. Lounsbury told the Insull mail fraud jury today that Samuel Insull and his aides had proved their innocence by their own losses.

Lounsbury, opening the final defense plea in the hundred million dollar financial trial, dismissed all that the government charges as "only one theory of accounting."

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## Five Members of Staff Win Theater Passes

Signe Rasmussen, Emerald reporter, who wrote the most news stories last week, received a pass to the Colonial theater at the meeting of reporters yesterday afternoon. Dorothy Walker, received one for second place in reporting. Wayne Harbert and Dorothy Walker tied for first place in head-writing. Darrell Ellis received two passes for previous awards in headwriting.

Reinhart Knudsen, recently appointed news editor, announced that every year the freshmen print one edition of the Emerald, electing the editor who appoints the staff. Knudsen gave a short talk to orientate reporters with parts and personages of the campus with whom they come in contact.

## Duck Tracks

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opened is that the Chi Psis did not make an immediate protest about the ineligible man but did so only after discussing the matter with certain Sigma Chi members, who said it was perfectly all right for them to do so, and that it would not be detracting any from their reputation as good sports.

Both groups agreed this was the sportsmanlike thing to do and so the Chi Psis filed their protest and John Lewis, Sigma Chi intramural manager, who had not been at the game, phoned the Emerald and acknowledged the forfeit.

Therefore any way you look at it the action was good sportsmanship between the two organizations and was truly exemplary of the manner in which other groups should handle any possible cases of dispute.

## COED SLUGGER FOUND

BOULDER, Colo., Nov. 20.—(AP)—Chief of Police R. C. Prater announced tonight an 18-year-old Boulder high school student, held in the city jail, has been named as the "phantom slugger" who attacked coeds of the University of Colorado here last month.

## Mermen Seek

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such teams as Stanford and U.S.C. for the coast crown.

The first meet of the tentative schedule is with Oregon State on February 2. For the remainder of this quarter, Hoyman will hold meets between two picked squads as a means of determining the strongest competitors for the Varsity squad, which will be named after the first of the year.

**Tentative Schedule Announced** Four meets are scheduled to be held here in Eugene, two in Seattle, and one open date remains on the tentative schedule given below:

- Feb. 2—O.S.C., here.
- Feb. 9—Multnomah club, here.
- Feb. 16—California, here.
- March 2—open.
- March 7—Washington, Seattle.
- March 9—Northwest meet, Seattle.

## Morse Calls Faculty Meet This Afternoon

Wayne L. Morse, dean of the law school, and president of the local chapter of American Association of University Professors, is calling a special meeting this afternoon at 3:30 in the faculty room of Friendly hall for the reading of an important committee report.

All members are urged to attend the meeting.

## McDONALD

12:45 CONTINUOUS 11:45

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## Student Recital Will Be Given This Afternoon

The music auditorium will again be the scene of a student rehearsal this afternoon at 5 o'clock when four music majors will present their numbers. The program is as follows:

1. Beethoven . . . . . Sonata, op. 31, No. 2 (first movement) Eyrle Ramp
2. Grieg . . . . . Nocturne Madelle Beidler
3. Handel . . . . . Hear Me, Ye Winds and Waves Aylward . . . . . Beloved, It Is Morn Don Carruth
4. Zecker . . . . . En Bateau Paderevski . . . . . Scherzino Dorothy Howell

## STEAMER IN DISTRESS

SAN FRANCISCO, Nov. 20.—(AP)—The Russian steamship Sverdlovsk was in distress and called for assistance 120 miles east of Cape Patience, Sakhalin Island, Japan, at 3:15 p. m. E.S.T. today, the steamship President Hoover reported in a message picked up by the Globe Wireless station here.

Send the Emerald to your friends.

## Earth, Sun

(Continued from Page One)

The most distant galaxy so far found is apparently rushing away from the earth at 24,000 miles per second, which means that it is 240 million light years away. The universe expands 100 miles per second faster for every million "light-years" out away from the earth. Prof. Shapley estimated the universe started expanding perhaps five billion years ago.

**JAPAN ADAMANT** (Copyright, 1934, by the Associated Press).

LONDON, Nov. 20.—Japan will decline to enter any separate agreement guaranteeing peace in the Pacific and the integrity of China if there is no new naval treaty, it was learned tonight.

**U. S. PLAN TO BE CONSIDERED** GENEVA, Nov. 20.—(AP)—A broad American plan designed to halt secret arming of nations and to prevent international terrorism—both of which are threatening Europe's peace—will be brought before committees of the disarmament conference in January.

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**THURSDAY** 9:00 P.M. E.S.T. 8:00 P.M. C.S.T. 7:30 P.M. M.S.T. 6:30 P.M. P.S.T.

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