

New Diving Bell May Reach 20,000 Foot Depth—Dr. Nelles

Dr. Maurice Nelles, director of the engineering experiment station at the College, has predicted that a depth of 20,000 feet will be reached in new underwater research.

With the aid of a new benthoscope that he is helping to design, Dr. Nelles believes that man could reach a new and challenging world. The present depth record is 4500 feet, set by Otis Barton, deep sea zoologist and explorer, on Aug. 16, 1949.

Record Breaking Dive

Dr. Nelles and Dr. Hancock, of Santa Maria, Calif., set the stage for the record-breaking dive. Dr. Nelles handled the communication lines and controls, while Dr. Hancock assisted him. Their under water experimenting had actually begun in 1945.

The Marine Laboratory ship, the *Velero IV*, which was designed by Dr. Nelles and Dr. Hancock, several years ago, is complete with chemical laboratories, an electronics laboratory, a botanical laboratory, and has biological specimens. This ship serves as the platform from which the benthoscope is lowered.

The *Velero II* is capable of carrying oil and food for a trip half way around the world. It is equipped with all the latest navigational instruments, including radar. It also has a device that can remove a 50-foot core from the bottom of the sea for experimental purposes.

There is equipment on board that enables scientists to plot the bottom of the sea to a depth of 24,000 feet.

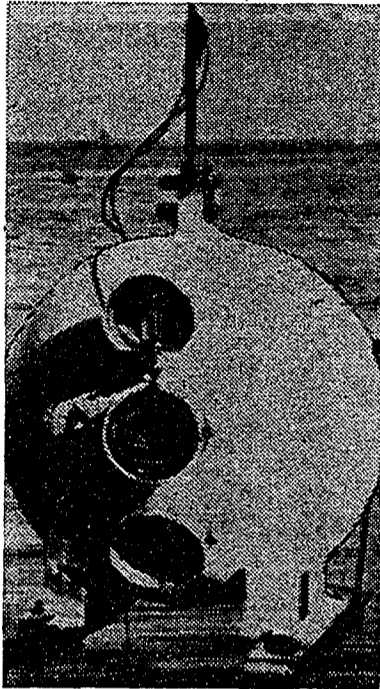
New Fish Traps

Drs. Nelles and Hancock devised new fish traps to catch specimens of deep sea life. The traps work by high speed which is extremely important, because Dr. Nelles said, only the stupid fish were caught in the slow speed traps.

Drs. Nelles and Hancock, with the aid of Barton, worked at great length on new features for the benthoscope. The bell which set the depth record was designed by Barton, and it included cables for communication and electricity extending from the platform to the bell. It is a five-foot steel sphere with a steel walls one and three-quarters inches thick.

Deep Sea Creatures

Dr. Nelles, in planning his new benthoscope, is working on a method of photographing the as yet unknown deep sea creatures. He said Barton found that these fish had their own light below a depth of 1000 feet, and he plans to utilize their light in photographing them, if possible. "The intensity of this light is about the same as that from a



DR. MAURICE NELLES, at left, is shown beneath a porthole in the record-breaking benthoscope. He handled the communication and control apparatus during the 4500-foot dive. Shown above is the five-foot steel sphere in which Otis Barton reported strangely lighted fish and icy temperatures. Equipped with strong lights and quartz-windows, the sphere successfully withstood the unknown.

luminous clock dial in a dark room," Dr. Nelles said, "while the exact nature of this light is not known, it is believed to be caused by luminous bacteria."

Quartz Windows

He is also planning to use quartz windows because they were quite successful in Barton's bell. He said the major changes in his new model would be its cylindrical shape and the material used in its make-up. He plans to use aluminum instead of steel. It is expected to weigh only 200 pounds in the water.

Dr. Nelles discussed the proceedings of the record dive in 1949. He said Barton went down in the bell while he remained on the platform to maintain contact with the bell and give instruction. The dive was an extremely dangerous one, he said, because the apparatus was being used for the first time and there was fear of freezing temperatures at the lower depths.

No Light

He said Barton reported that at 300 feet below the surface sunlight and plant life began to disappear, and at 600 feet only movement could be seen. At 1000

General Authority Calls For 4 Bids

Bids on four new projects in the \$10,000,000 building program at the College have been called for by the General State authority.

Bids will be received for construction of a new million-dollar chemistry laboratory which will include facilities for 2100 undergraduate students and 150 graduate students each week. Bids will also be received for an addition to Pond laboratory and for a fourth floor which will be constructed on the Main Engineering building to provide designing rooms, studios, and storage for architecture classes.

A chemical storage building also will be constructed at an isolated site on campus.

feet there was absolutely no light.

Barton told him of fish with luminous outlines, some had "headlights" where their eyes should be, and some had a curtain that could be drawn over the light for protective purposes.

UN Advisor To India To Give Forum Address

Prof. Amiya Chakravarty, advisor to the Indian delegation at the United Nations, will be the speaker at the India and the International Scene conference sponsored by the PSCA on Monday.

The conference under the auspices of the American Friends Service committee, will consist of a dinner at 5:30 p.m. in the Friends meeting house at 318 S. Atherton street and an address and forum at 8 p.m. in Schwab auditorium.

PSCA Votes Finance Power

The board of directors of the PSCA yesterday voted the finance committee power to approve all bills of the organization at least one month in advance.

This move was made in an attempt to alleviate the critical financial situation of the association. Dr. Henry S. Brunner, professor of agriculture education, made two proposals to raise money for the group.

He suggests that student members attempt to obtain the coat checking concession for all major College dances, and that the PSCA make another appeal for funds to faculty members of the College, since the Campus chest drive did not fully reach the faculty. Definite action was not taken by the directors on these suggestions.

The directors did not reach a decision concerning the Campus chest. Dr. Brunner said some people did not contribute to the drive because it was not a PSCA drive. The drive was \$1200 short of the goal for the PSCA.

Topic at the dinner will be "Gandhi's Message and the Modern World Crisis," while the subject of the Schwab address will be "India's Role in the East-West Conflict." Admission to the dinner, for which reservations must be made today, is 30 cents, while admission to the lecture is free.

Professor Chakravarty has taught English at Forman Christian college, Lahore, and at Calcutta university, both in India. He has also served on the Departments of English at Howard and Yale universities and has accepted an invitation to serve on the faculty of the Institute of Advanced studies at Princeton.

Local Friends Wire Truman

The State College Friends meeting has sent a telegram to President Harry S. Truman regarding the world situation, Marjorie Allen, clerk for the organization, announced this week.

The telegram read: "State College Friends meeting respectfully submits following suggestions as possible means of alleviating world anxiety and opening way toward solution of present crisis. One, clearcut refusal to use atomic bomb; two, top-level conference among major powers to explore all avenues of mediation; three, seating of Chinese delegation in United Nations; four, creation of neutral zone to prevent spread of violence; five, creation of United Nations peace observation mission. Our prayers for guidance and direction are with you and responsible leaders of all nations."

Collegian Fee Raise To Be Reviewed

The West dorm council will reconsider the proposed increase in the Daily Collegian assessment, Thomas Durek, president, said yesterday.

The council voted against the assessment last week, but subsequent discussion seemed to indicate that the council had been misinformed on certain facts.

Russell E. Clark, with whom the council severed relations last week following a disagreement over the return of ping pong tables, is scheduled to put in an appearance at the meeting, Durek said. Clark will probably explain his stand, Durek said.

Prosthodontist Lecture

Dr. Cloyd Harkins, one of the outstanding prosthodontists in the country, will give an illustrated lecture on "The Rehabilitation of the Cleft Palate Child". Sigma Alpha Eta, speech correction honorary, will sponsor the open meeting on Tuesday evening at 8 o'clock in 312 Sparks.

College To Be Host Of Deans Conference

Penn State is the host school for the second annual Deans of Men Conference, which will be held tomorrow afternoon.

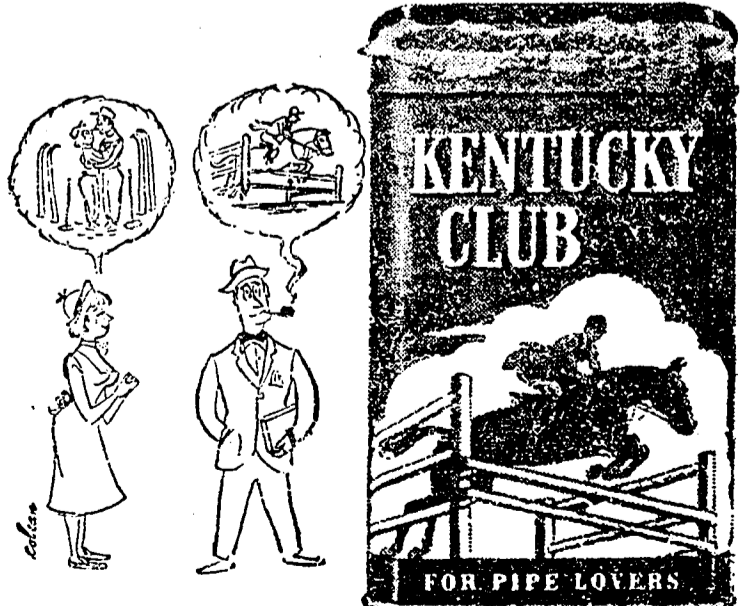
Twenty-three Pennsylvania colleges will be represented at the conference, which will begin with a luncheon at the Nittany Lion Inn at noon.

The conference will discuss problems pertinent to the field.

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