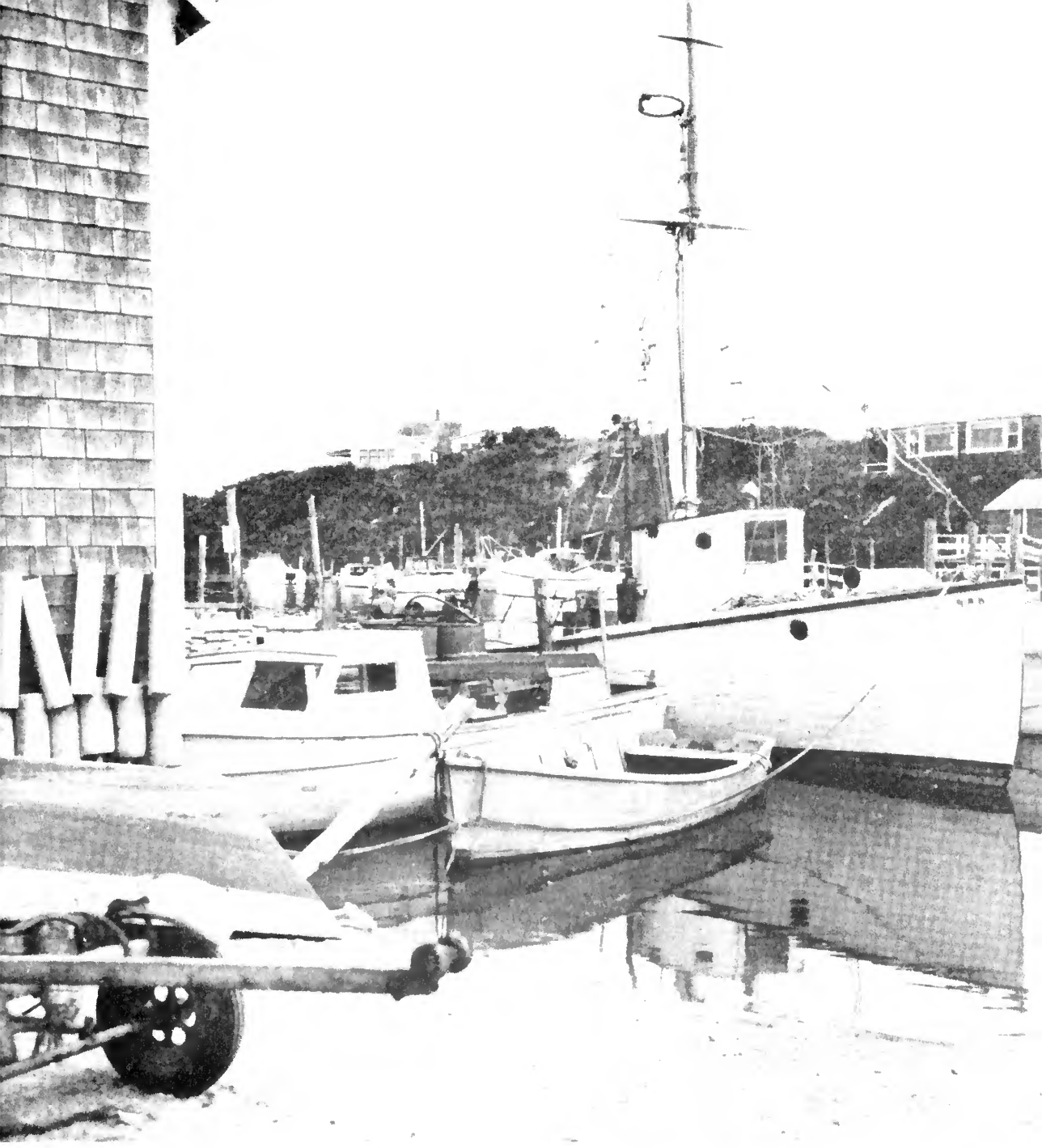

VOLUME XVI DECEMBER 1972

OCEANUS

Editor of **Oceanus** since its inception in 1952, Jan Hahn had nearly completed this issue at the time of his death in July 1972. It was appropriate then that his feature article was actually historical in nature.

In retrospect: While living on Martha's Vineyard, Jan Hahn met a neighbor, Columbus Iselin, a meeting which changed the whole course of Jan's life.

Cover Photo: Menemsha, Martha's Vineyard by jl

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OCEANUS™

Volume XVI, December, 1972

THE WOODS HOLE OCEANOGRAPHIC INSTITUTION

Woods Hole, Massachusetts

OF the many honors that can be bestowed upon mankind, few are everlasting. Military or civil orders — the Légion d'Honneur for instance, in both categories only last a lifespan. Nobel prize winners will always be remembered. Rightly however, there are few. But to have a biological organism or a geographical feature named after one will be a reminder of one's existence and work forever, (except if the organism is declared a synonym, i. e. an incorrect systematic name, or the Board of Geographic Names changes its mind). The honor is not lightly bestowed and indicates that the receiver is counted foremost among his peers.

This issue has been delayed for several reasons, one of them being the fact that we did not publish the information fifteen years ago, when we first had the idea to describe the beasties named for people at this Institution. At that time it would have been easy, but by 1971 it had become rather a formidable task.

This publication forms an exciting as well as historical record of the work and the acknowledgements of our staff.

SOME of our readers may wish to consult the original papers on which the extracts in this issue were based. We have used the acceptable abbreviations for journals, followed by volume (number) and page numbers.

Since the journals are not always available and the annual "Collected Reprints" of the Woods Hole Oceanographic Institution are accessible in many libraries in many countries, we have simplified the notation: "Contribution number 0000 of (from) the Woods Hole Oceanographic Institution." For instance: CR 35, 1934 refers to Contribution number 35, included in the Collected Reprints for 1934. We suggest that the future issues of the Collected Reprints follow this system. How does one go about finding Contribution Number 508 without knowing in which year it was included in the Collected Reprints?*

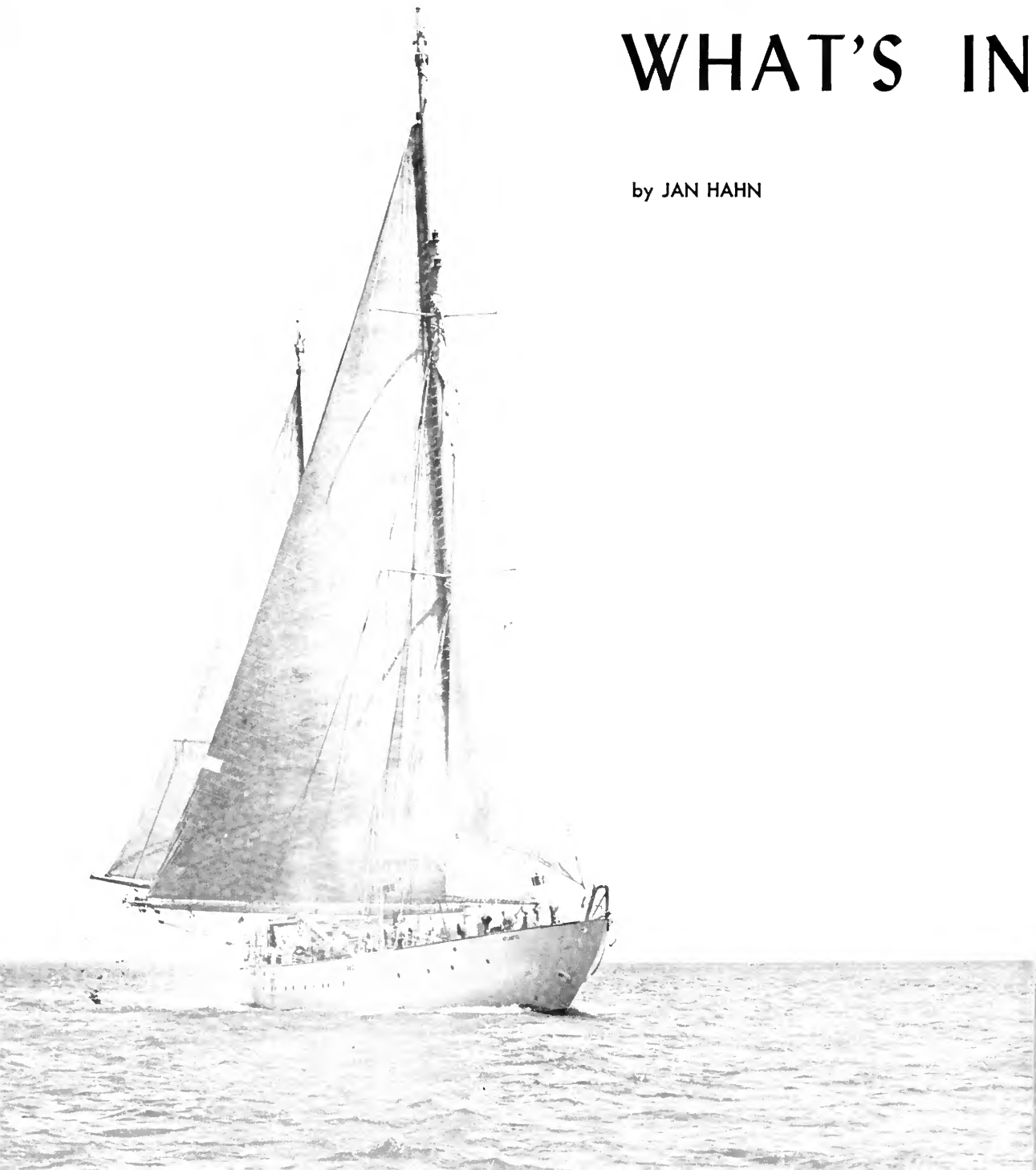
UNDOUBTEDLY, we have missed some animal, vegetable or mineral items that ought to have been included in this issue. Not being the Ruler of Neptune's Realm we beg forgiveness for any omissions or commissions.

Ed.

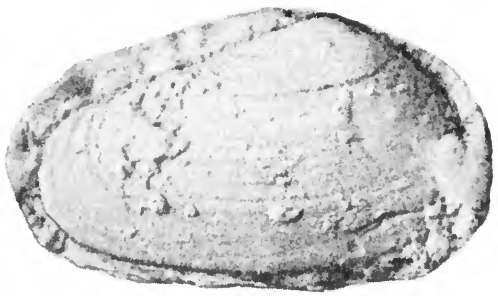
*By looking at the list in the back of the volume (or second volume since 1964) of Collected Reprints. —M.S.

WHAT'S IN

by JAN HAHN



A NAME ?...



Donax (?) atlantis, n.sp. R.V. 'Atlantis'

IN August 1934, the famed 'Atlantis' in the third year of her long career dredged some fossils from one of the then newly charted canyons off New England.* The new species, named for the ship, was dredged off Georges Bank at depths from 480 to 596 meters. "Although there is good reason for regarding this species as belonging to an undescribed genus, the material is hardly sufficiently complete or well enough preserved to warrant making the species the type of a new genus," declared L. Wm. Stephenson who had been given the collection for identification and description. The report was published as: "Geology and Paleontology of the Georges Bank Canyons. Part II. Upper Cretaceous Fossils from Georges Bank". **Bull. Geol. Soc. Am.** 47: 367-410, 31 March 1936.

CR 81, 1936.
Holotype: MCZ 15114.

*See: **Hardouiania (?) stetsoni,** page 4 of this issue.

Among other species named for the Ketch **'Atlantis'** were echinoderms, decapods, molluscs, fish and foraminiferans:

Calliostoma (Calliostoma) atlantis Clench and Aguayo 1938 (CR 198)

Columbarium atlantis Clench and Aguayo 1938 (CR 198)

Anomalina atlantis Bermudez 1939 (CR 243)

Paracyclois atlantis Chace 1939 (CR 199)

Solenocera atlantidis Burkenroad 1939 (CR 203)

Caryometra atlantidis A.H. Clark 1940 (CR 255)

Pythonaster atlantidis A.H. Clark 1948 (CR 410)

Cruriraja atlantis Bigelow and Schroeder 1948 (CR 447)

Hetereroteuthis (Stephanoteuthis) atlantis Voss 1955 (CR 750)

Ingolfiellidea atlantisis Mills 1967. Can. J. Zool. 45: 347-355. (Actually caught aboard 'Chain'.)

Priapulus atlantisi Sanders and Hessler 1962 (CR 1268)

Nothria atlantisa Hartman 1965. (CR 1588)

Globigerina atlantisae Cifelli and Smith 1970 (CR 2370)
(This is probably named for 'Atlantis II' as the material was obtained on an 'Atlantis II' cruise!)

Other vessel have been remembered too:

Xanthocalanus alvini Grice and Hülsemann 1970 (CR 2144)

Chiridiella chaini Grice 1969 (CR 2057)

Styela chaini Monniot and Monniot 1970 (CR 2301)

Myriowenia gosnoldi Hartman 1965 (CR 1588) —M.S.

H. (?) stetsoni, a fossil dredged by 'Atlantis'

Henry C. Stetson, one of the first to be appointed to the Institution staff, started his investigations in submarine geology from his own sloop, while a student.

Hardouiania (?) stetsoni, n. sp.
H. C.Stetson

THE late H. C. Stetson* was a pioneer marine geologist who started ocean bottom studies from his own Friendship sloop the 'Neva.' He came to the Institution in 1930 and died on board the 'Atlantis' off Antofagasta, Chile, on December 3, 1955.

The new species of a fossil echinoderm was dredged by him in August 1934 from the side of Oceanographer Canyon on Georges Bank off Cape Cod at depths of 480 to 596 meters and was indicated to be of Cretaceous age. L. Wm. Stephenson who described the fossils** wrote: "The securing of identifiable fossils as old as upper Cretaceous (65-100 million years ago), from deeply submerged rock in place on the seabottom, is a fact unique in the annals of fossil collecting and evidences the ingenuity and resourcefulness of the collector."

The canyons dredged by the 'Atlantis' were still called "gorges" and were newly charted by a sonic survey made in 1930-1932 by the U.S. Coast and Geodetic Survey. Although some were known from wire soundings, many new ones were discovered and for the first time showed the true dimensions of the canyons. Two of the newly charted features aptly were named Hydrographer Canyon and Oceanographer Canyon.

Although fragments of fossil rock had often been found in otter trawls in the area they had never before been taken in place.

Bull. Geol. Soc. Am. 47: 367-410. CR 81, 1936.
Holotype: MCZ 3516.

See also: **Stetsonia minuta** Parker 1954. **Bull. Mus. Comp. Zool.** 111:451-588.
—M.S.

*See: Henry Crosby Stetson, In Memorial, **Oceanus**, Vol. IV, No. 2. Winter 1956.

See: **Donax atlantis, page 3 of this issue for title of paper.

The tides of Woods Hole and the salt marsh at Barnstoble have aroused the scientific curiosity of Alfred C. Redfield for many years. In 1972 his beautifully illustrated report on the marsh appeared in *Ecological Monographs* (CR 2513).

Abralia redfieldi, n.sp. A. C. Redfield

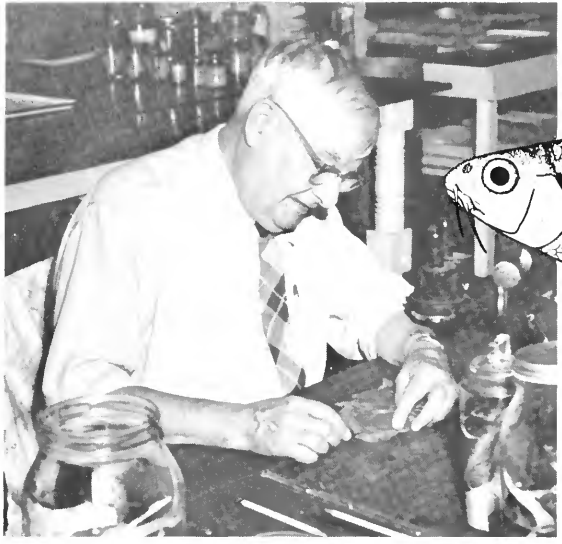
THERE is an interesting story connected with the discovery of this new species of squid named for Dr. Redfield, retired Associate Director who was on our staff from 1930 to 1956. During the winters of 1938-1939 the R.V. 'Atlantis' made two successful cruises around Cuba known as the Harvard-Havana Expedition. Several of the many new forms of life found during those cruises are mentioned in this issue. The collection of squids were deposited in the Museum of Comparative Zoology at Harvard, awaiting someone with interest and competence to study them. World War II intervened but in 1950 G. L. Voss, a student at the University of Miami was recommended by Dr. Redfield for a fellowship from Woods Hole Oceanographic Institution to enable him to spend a summer in Cambridge to examine the collection. The award carried the princely stipend of $600.00. The professional reward far outweighed the value of the fellowship. Voss found new genera and new species in the collection.

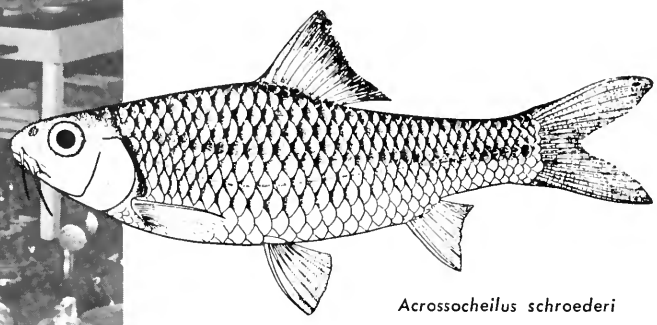
The squid named for Dr. Redfield was taken off Cuba at a depth of 510 m in May 1939. Described as being liberally covered by light organs on the body, arms, head, and eyes, the squid was in poor condition. By a happy coincidence another one in perfect condition was taken in December 1953 at the sea surface of Gun Cay, in the Bahamas, as Dr. Voss was writing his paper.

The collection was described in: **Bull. Marine Sciences of the Gulf and Caribbean** 5, (2): pp. 81-115, June 1955. Also: CR 750, 1955.
Holotype MCZ 203980
Paratype MCZ 203980

Probably alone among those mentioned in this issue, Dr. Redfield is not the first to lend his name to an animal or plant. A genus of grass, **Redfieldia**, was named by Vasey for his grandfather, John Howard Redfield, a botanist connected with the Philadelphia Academy of Science. The plant is found on sandy plains from South Dakota to Arizona.

Some half dozen genera of fossil fish and mollusks were named for Dr. Redfield's great grandfather, William C. Redfield who lived at a time when undescribed species were easier to come by. He was the first President of the American Association for the Advancement of Science (A.A.A.S.) founded in 1848. A self-taught scientist, W. C. Redfield made contributions on fossil fish, but is better known as a pioneer meteorologist who established the circular nature of tropical hurricanes.





Acrossocheilus schroederi

Despite the increasing burden as the Institution's first Business Manager, Wm. C. Schroeder continued to collaborate with Dr. Bigelow. From 1927 until 1968, there were thirty-nine reports on fish, particularly sharks, rays and skates: three exceeded 500 pages in length.

Munida schroederi, n.sp.

Wm. C. Schroeder

CRUSTACEANS have been called the insects of the sea because there are so many of them, spread over all ocean areas and depths.

A new decapod (decapods are prawns, lobsters, and crabs) was found eight miles off Great Island, north of the Bimini group in the Bahamas, at a depth of 155 fathoms.

A total of 250 specimens of these were taken during the expedition, leaving no doubt as to its identification. Holotype: MCZ 10216.

See: Chace, F. A. Jr. "Reports on the scientific results of the first 'Atlantis' expedition to the West Indies (etc., etc.) Preliminary discussion of one new genus and seventeen new species of decapod and stomatopod Crustacea." **Mem. Soc. Cubana Hist. Nat.,** Vol. 13(1): 31-54, 1939. Also CR, 199, 1939.

Also:

Acrossocheilus schroederi, H.M. Smith, 1945. **Bull. U.S. Nat. Mus.** 188: 203.

Lyengraulis schroederi, Hildebrand, 1943. **Bull. Bingham Oceanogr. Coll.** 8: Fig. 70.

Potomatrygon schroederi, Yepes, 1960. **Bol. Mus. Cienc. Nat. Caracas:** 7-11.

Bathyclupea schroederi, Dick 1962. **Breviora, M.C.Z.** 167: 4 pp.

Schroederichthys maculata Springer 1966. **Fish. Bull. U.S. Fish. Wildl. Serv.** 65(3): 581-624.

—M.S.

Pristiophorus schroederi, n.sp.

38.3, 64.5 and 80.5 cm long

Wm. C. Schroeder

MOST sharks go back into ancient history, they survived for millions of years with little change or evolution. One family of great antiquity is the sawshark Pristiophoridae. This is a poorly known family, very similar to the sawfish. The sawfish, however, is ray-like, swims in shallow tropical and subtropical waters, and may reach a length of twenty feet.

Sawsharks were known only from the eastern hemisphere and South Africa until 1958-59 when three were brought up in trawls in the Bahamas. One was caught at 350 fathoms in Santaren Channel and the others in 500-520 fathoms north of Little Bahamas Bank. Named for our Mr. Schroeder in recognition of his work on sharks, the new species was described by S. Springer and H. R. Bullis, Jr. "A new species of sawshark from the Bahamas". **B. Mar. Sci. Gulf Carib.** 10(2) : 241-254, 1960. Holotype USNM 185946. Not in CR.

Schroederichthys maculatus

As first Director, Henry B. Bigelow made the "rounds" each morning to make certain that everyone was "happy". No work behind closed doors. Here he chats with Frederick S. McMurray, Master of 'Atlantis' and a gifted raconteur.

Calliostoma (Astele) bigelowi, n.sp.

Calliostoma schroederi, n.sp.

Calliostoma atlantis, n.sp.

H. B. Bigelow
Wm. C. Schroeder
R/V 'Atlantis'

IN 1938 and 1939 the R/V 'Atlantis' made two successful cruises dredging bottom life around Cuba. As a result quite a few new genera and new species of mollusks were discovered. Some of these were named for Dr. Bigelow, Director of the Institution and in overall charge, and for Mr. Schroeder who was in charge of the dredging on board the ship. Since mollusks are second to the insects in number of species it is not too surprising that so many new ones were found in an area not well covered prior to the time.

Each of the species mentioned above is a pretty little thing that would find favor in any shell collection. They are quite small about 25-33 mm in diameter. **C. bigelowi** was found in Bahia Cochinos, Cuba at 205 fathoms on February 25, 1938. The holotype is MCZ 135003. The last one possibly was named for the ship but the authors do not mention this. It was taken off Mariel, Pinar de Rio Province, on March 23, 1939 in 330 fathoms. Holotype MCZ 135164.

The first two new species can be found in: Clench, W. J. and C. G. Aguayo. "Notes and descriptions of new species of **Calliostoma, Gaza** and **Columbarium** (Mollusca), obtained by the Harvard-Havana Expedition off the coast of Cuba. **Mem. Soc. Cubana Hist. Nat., 12(5):** 375-384. (In those days authors made certain that you knew what you were getting by reading the headlines). Also: CR 198, 1939.

The 'Atlantis' shell was described in a paper by the same authors "Notes and descriptions of new deep-water Mollusca, etc., etc. III". In the same journal Vol. 14 (1): 77-94. CR 250-1940.

From the same expedition came a 25 cm sea cucumber **Bathyplotes bigelowi** n.sp. dredged in 220-320 fathoms near Bahia de Cochinos Sta. Clara Province, determined by Elizabeth Deichmann and also published in the same journal Vol. 14(3): 183-240. "Report on the holothurians (etc., etc.) with a revision of the **Molpadonia** of the Atlantic Ocean". Also: CR 248, 1940. The holotype is in the MCZ but no number was given in the text.

Pontosphaera bigelowi, n.sp.

H. B. Bigelow

16 microns

IN the early 1930's two distinguished Norwegian scientists visited Woods Hole and proceeded to make a study of the Gulf of Maine and the Bay of Fundy. On most of the oceanic stations in the Gulf they found a new species of coccolith. It was so abundant that up to 680 cells were found per liter of seawater.

Coccoliths* are esthetically pleasing microscopic plant cells protected by tiny plates of calcium carbonate. The little plates rain down to the seabottom and are used to study the past history of the oceans and as indicators in the search for petroleum. The modern electron microscope has done much to reveal their intricate shapes. This new species, found almost 40 years ago, was described as forming a regular pentagon-dodeka-hedron!

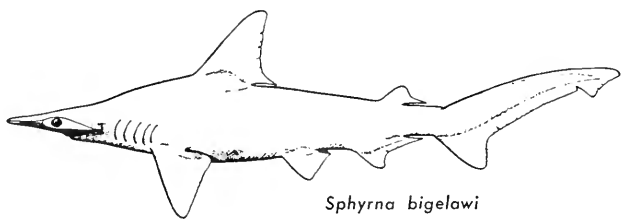
Typical of those more relaxed years is the long, fine paper which resulted from the study. Gran, H. H. and T. Braarud. "A quantitative study of the phytoplankton in the Bay of Fundy and the Gulf of Maine (including observations on hydrography, chemistry and turbidity). **J. Biol. Bd. Canada,** 1(5): 279-467. 1935. Also: CR 69, 1935

Braarudosphaera bigelowi

H. B. Bigelow

In 1947 it was decided that this coccolith was named in error, and that it actually formed a new family. It was renamed and in the generic name also honored Professor T. Braarud, University of Oslo.

Deflandre G. and C. Fert. "Type d'une famille nouvelle de Coccolithophoridés actuel et éléments composites" **C.R. Acad. Sci. (Paris),** vol. 225: 439-441.

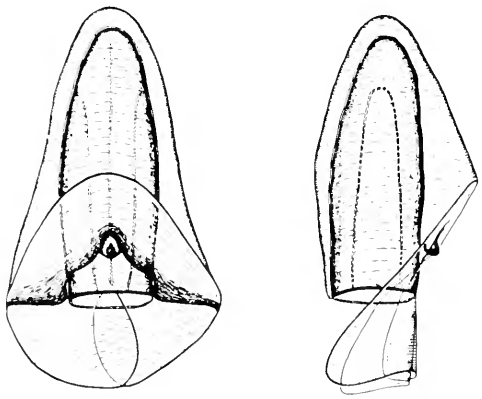


Sphyrna bigelowi

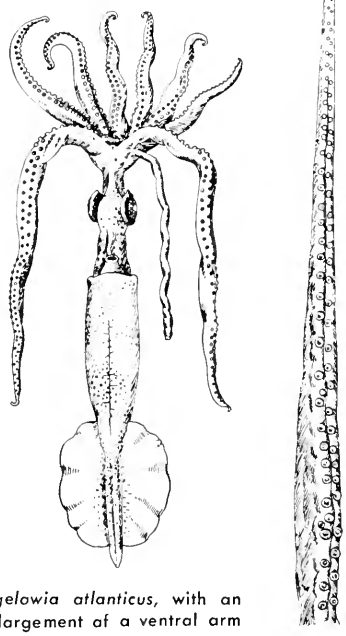
*See: "Coccolith intrusion in the Black Sea since the Ice Age", by D. Bukry. **Oceanus,** Vol. XV, No. 4, July 1970.

Lucaya bigelowi, n.sp. H. B. Bigelow

DECAPODS are an important order of the crustaceans. Included are the shrimps and prawns, the lobsters and the proliferate krill on which whales feed. This prawn found east of Great Abaco Island in the Bahamas at a depth of 5200 meters was named for Dr. Bigelow "whose efforts were instrumental in the success of the present expedition."



Galetta bigelowi



Bigelowia atlanticus, with an enlargement of a ventral arm

Holotype MCZ 10239, described in: Chace, F. A. Jr. "Reports of the scientific results of the first 'Atlantis' Expedition to the West Indies, under the joint auspices of the University of Havana and Harvard University. Preliminary descriptions of one new genus and seventeen new species of decapods and stomatopod Crustacea." **Mem. Soc. Cubana Hist., Nat.,** 13(1): 31-54. 1939. Also CR 199, 1939.

There are some shrimp of peculiar interest, For instance the cleaning shrimp takes care of certain fishes and the Sargassum shrimp looks like a piece of weed.

Euphysora bigelowi H. B. Bigelow
Bell is 4-13 mm high.

SCIENTISTS were having a field day in the late 1800's and in the early part of this century, by naming tiny medusae. Most of these jellyfish acquired a long list of synonyms which were sorted out by P. L. Kramp in "Synopsis of the Medusae of the World." **J. Mar. Biol Assoc.,** 40, 1961.

Euphysora bigelowi, a synonym for **Steenstrupia bigelowi.** Being quite common in the Malay Archipelago, the medusa was found in 1899 and described by Maas in: **Siboga Expedition, Monogr.** 10, Livre 26, 1905.

Octophialucium bigelowi, from Acapulco Harbor in Mexico. This 10 mm high and 8 mm wide medusa has very thick jelly. This was a new name given by Kramp in 1955 for **O. polynema,** named by Dr. Bigelow in 1909.

Calycopsis bigelowi. Found in the Gulf of Aden on the Valdivia Expedition (1898-1899). 16 mm high and wide, this medusa has numerous small tentacles.

Haliscera bigelowi, from the eastern tropical Pacific. 15-17 mm wide, 9-10 mm high. Named by Kramp in 1947. It is found also off West Africa.

Laodicea bigelowi. With a worldwide distribution this jellyfish is up to 37 mm wide and has 400-600 tentacles. First named by Forbes and Goodsir in 1853 this medusa has dozens of synonyms, including **L. undulata.**

Neoturris bigelowi, from Ceylon with an umbrella higher than wide, up to 21 mm in diameter and has about 120 tentacles. Named by Kramp in 1959.

Also:

Hypoprion bigelowi Cadenat, 1956. **Bull. Inst. Fran. Afr.** No. 18A.

Bigelowia atlanticus, McDonald & Clench, 1934. **Occ. Pap. Boston Soc. Nat. Hist.** 8: 145.

Sphyrna bigelowi, Springer, 1944. **J. Wash. Acad. Sci. 34: 274.**

Galetta bigelowi Sears 1953 (CR 602)

—M.S.

Mysidopsis bigelowi, n.sp. H. B. Bigelow
7 mm

THE opossum shrimp **(Mysidacea)** is another interesting crustacean. The common name derives from a brood pouch located under the thorax of the female. They are common in coastal waters but are found also at mid-depths in the deep ocean where one particular mysid is bright red and emits a luminescent cloud to avoid capture.

M. bigelowi was found in a collection made by the steamer 'Bache' off Chesapeake Bay on January 20, 1914. The U.S. Coast Survey steamer was named after Benjamin Franklin's great grandson Alexander D. Bache, founder and first president of the National Academy of Sciences.

Holotype USNMS 59115. Tattersall, W.M. "Crustaceans of the order Euphausiacea and Mysidacea from the western North Atlantic". **Proc. U.S. Nat. Mus.,** vol. 69, art 8; 1926.

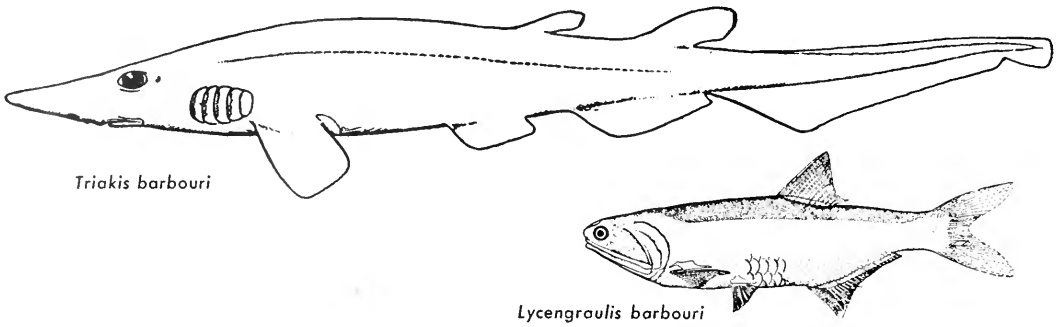
Hydrolagus alberti Bigelow and Schroeder 1951 (CR 555)

"Named for Albert E. Parr in recognition of his many contributions to ichthyolology". Dr. Parr was a Research Associate in Oceanography from 1 February 1933 to 31 August 1945, a Member of the Corporation since 1938 and a Trustee from 1938-1966.

See also:

Cetomimoides parri Koefoed (CR 2109, p. 331)

—M.S.



Triakis barbouri

Lycengraulis barbouri

Triakis barbouri, n.sp.
255-388 mm long T. Barbour

THERE are many small sharks in the ocean which live at various depths, all the way to the bottom. In 1938 and 1939 the R.V. 'Atlantis' collected thirty-eight small sharks in the Cuban region in trawls fishing at 470 to 670 meters on six stations. However, since these trawls could not be closed on the way up, the sharks may have been swimming at mid-depths. All thirty-eight were taken off the northeast coast of Cuba, off Santa Clara Province and were tolerably plentiful.

The famed team of Bigelow and Schroeder stated: "These little sharks of deep water, are known from very few specimens - - - Until the present (1944) this genus is known only from the Indian and Pacific oceans. The 38 specimens collected, fall clearly in this genus but separated from all previous known members. - - - This find is of great interest from the zoogeographical standpoint, for it adds one more to the list, already considerable, of animals that occur both on the Pacific coast of America on the one hand, and in the Caribbean-West Indian region on the other, but are not known elsewhere in the Atlantic. We name this shark **barbouri** after our friend and colleague, Thomas Barbour, in recognition of constant assistance he has given us in our labor on the sharks of the Western North Atlantic."

In an amusing aside, the authors stated that a striking difference in the sharks would demand the institution of a new genus but that the source material "is not available at present, being presumably at Berlin". This was in the middle of World War II.

The Holotype is MCZ 36099.

See: "New sharks from the western north Atlantic", by H. B. Bigelow and W. C. Schroeder. **Proc. New England Zoology Club,** XXIII: 21-36, Aug. 1944. Also: CR 333, 1944.

Molpadia barbouri Deichmann 1940 (CR 248)
Psalidopus barbouri Chace 1939 (CR 199)
Oocorys barbouri Clench and Aguayo 1939 (CR 224)
Barbourina atlantica Bermudez 1939 (CR 218) —M.S.

On the "back steps" for their mid-morning smoke at the M.C.Z. — Henry B. Bigelow (right), Thomas Barbour (center), Wm. M. Wheeler (left), an entomologist who listed the copepods of the Woods Hole region in 1899. Dr. Barbour, like Dr. Bigelow, was among the first permanent incorporators of the Institution.

Latirus mcmurrayi, n.sp... F. S. McMurray

THE pretty little mollusk, named for Captain Frederick S. McMurray, skipper of the R.V. 'Atlantis' from 1932 to 1942, was dredged from a depth of 380 meters off Matanzas, Cuba, during the Harvard-Havana Expedition. Quite a few new marine animals were collected during two cruises made in the winters of 1938 and 1939. The shipboard work was in charge of Mr. Wm. C. Schroeder and Dr. L. Howell Rivero, both of whom were honored by having new species named for them.

The mollusk was described by Drs. W. J. Clench and C. G. Aguayo in: "Notes and descriptions of new deep water Mollusca, obtained by the Harvard-Havana Expedition off the coast of Cuba: Part IV(1)." **Mem. Soc. Cubana Hist.** Nat., 15(2): 177-180. 1941: Also: CR 289, 1941. (The illustrations are wrongly bound at the end of Contribution No. 288, in the 1941 Collected Reprints.)

Holotype: MCZ 135285
CR 288, 1941

Among the other mollusks found, there were many that were known from the Pacific coast of central America but had not been previously found in the Atlantic-Caribbean area.

Derichthys iselini, n.sp. C. O'D. Iselin

A bathypelagic fish was named for Columbus Iselin by Dr. N. A. Borodin of the Museum of Comparative Zoology. In 1928, Columbus, together with 8 other young men, took the schooner 'Atlantis' on an oceanographic cruise from New York via the Azores to England and back. "He succeeded in collecting and preserving in excellent condition many deep sea fishes, some of them of comparatively large size. — 6 species were new to science and many others rare — " stated Dr. Borodin, in **Proc. New Engl. Zoolog. Club.** X:110, 1929.

Alas and alack, the record did not stand long. In 1934 Dr. Albert E. Parr disputed the new species and stated that the fish was synonymous with **Derichthys serpentinus,** described by Gill in 1887.*

The cruise of the schooner 'Atlantis' was not an easy one, causing Columbus to write in his journal: "—it is really a shame the way I lure these fellows out here with stories of the beautiful ocean. They come in high hopes expecting an exciting

*Parr, A. E. "Report on Use of a Triangular Trawl for Bathypelagic Collecting." **Bull. Bingham Oceanogr. Coll.** IV(1): 32-34. 1934. Also: CR 35, 1934.

and pleasant passage. It never turns out to be pleasant for more than five minutes at a time and the excitement lasts for even shorter periods and generally consists of getting all but swept overboard — but never for one moment does anyone suggest that I am a damn liar." Saturday, August 25th, 1928.

And not even one little fish to show for it!

Also: **Lampanyctus iselinoides** Bussing 1965. **Antarct. Res. Ser.** 5:185-227 **Lampanyctus iselini** Parr 1934. **Bull. Mus. Comp. Zool.** 11:60 (Now a synonym of **L. crocodilus,** see: R. Bolin 1959, **Rept. Scient. Res. 'Michael' Sars Deep-Sea. Exped. 1910,** Vol. 4, Pt. 2, No. 7.)

—M.S.

Scopelengys whoi, n.sp.
155 mm long Woods Hole Oceanographic Institution

THIS new species of a near relative of the lantern fishes was found by Dr. G. W. Mead on 'Chain' cruise 26 in May 1962, just north of the Cariaco Trench off Venezuela. The trench water does not contain oxygen below a depth of about 375 meters, and has been described in former issues of **Oceanus** (see Index). **Scopelengys** was known from only two species found in the Arabian Sea in 1890 by H. M. Survey Steamer 'Investigator' and described in 1939 in the Scientific Reports of the John Murray Expedition, 7(1): 166. Later these fishes were found common off the Pacific coasts of Mexico, Central and South America. The new species mentioned here was the first record of the genus from the Atlantic Ocean.

Dr. Mead stated that: "The name **whoi** should be considered an arbitrary combination of letters". Somewhat earlier an animal had been named **sio** for Scripps Institution of Oceanography and, I believe, there is a **bufish** for the Bureau of Commercial Fisheries. This naming led to some acrimonious correspondence in **Science** by zoologists who did not care for this type of nomenclature.

The finding was reported in "Observations on fishes caught over the anoxic waters of the Cariaco Trench, Venezuela", by G. W. Mead. **Deep-Sea Research,** 10(1-2); 251-257. Also CR: 1310, 1963.

See also:
Whoia n. gen. Hessler (CR 2255)

—M.S.

Seriola carpenteri, n.sp.
437 mm long W. K. Carpenter

THIS new species of amberjack from the eastern Atlantic previously was misidentified under three other species. In a lengthy paper, F. J. Mather III of our staff described the measurements made on one of the amberjacks bought in a fish-market in Angola and on some fifty specimens taken on various oceanographic cruises, including the Guinean Trawling Survey.

"This species is named for my friend, William K. Carpenter, an outstanding big game fisherman who has long been the President of the International Game Fish Association. His dedicated support of marine science* includes generous financial contributions and outstanding personal participation in research activities," wrote Mr. Mather in: **"Seriola carpenteri,** a new species of amberjack (Pisces: Carangidae) from tropical western Africa". **Proc. Biol. Soc. Wash.,** 84(22): 177-188, 1971. Also: CR 2559, 1971.

The Holotype is USNM 205000; formerly Tropical Atlantic Biological Laboratory (T.A.B.L.) 103725. Paratypes at USNM, T.A.B.L. and in the Musée National d'Histoire Naturelle, Paris.

*Mr. Carpenter has long been an Associate of the Institution. See: "Associate Associates", **Oceanus,** VIII(2), Dec. 1961.

Professor Johs. Schmidt og hans Hustru, Ingeborg Schmidt.

Amarsipus carlsbergi, n.sp.
56.2 mm long
Carlsberg brewery

OF course, the Carlsberg brewery is not a member of this Institution but we could not help wanting to mention this name — described as a new species of a new genus in a new family, Amarsipidae. This peculiar, near translucent, fish was named **carlsbergi** "in honor of the Danish house of Carlsberg, patron of oceanic ichthyology for over half a century and brewer of a very fine beer".

So far it has been found only in the Indian and Pacific oceans along the Equator.

R. L. Haedrich. "A new family of aberrant stromateoid fishes from the Equatorial Indian Pacific. **Dana Report** No. 76, 1969. CR 2062, 1969.

Holotype: DANA 3947(2)

The Institution's relationship with the Carlsberg Brewery was close in the 1930s. The Danish oceanographer, Johannes Schmidt, was a good friend of Dr. Bigelow's. He was Director of the Carlsberg Laboratories. "An American flag, was presented to us by Mrs. Johannes Schmidt, - - - was hoisted over her ['Atlantis']." (Ann. Rept. 1930-1932, p. 19.)

See also:
Abyla schmidti Sears1953 (CR 602),
Abyla ingeborgae Sears 1953 (CR 602)
—M.S.

Bostwick H. Ketchum, a member of the scientific staff since 1940, is an Editor of *Estuarine and Coastal Marine Science*. Vol. 1, No. 1 will appear shortly.

James M. Moulton, Bowdoin College, has been affiliated with the ichthyologists at the Institution on a number of cruises.

pons moultoni J. M. Moulton

"MOULTON'S BRIDGE" is not a new species, but a **feature** named after Dr. J. M. Moulton, of Bowdoin College, who discovered this bridge over the inner ear of stromateoid fishes.

The bridge was investigated and named by our Dr. R. L. Haedrich: ". . . paying tribute to Moulton's great curiosity about, knowledge of, and overwhelming enthusiasm for the inner ear of fishes."*

Haedrich argues that the bridge can be used as a tracer in an evolutionary line linking specialized perch-like fishes with a generalized beryciform; one which lived in Mesozoic times. See: "The pons moultoni, a significant character", by R. L. Haedrich, **Copeia,** 1971, No. 1: 167-169.) Also: CR 2422-197.

Scorpoena moultoni, n.sp. J. M. Moulton

1⅞ inches long

SAID to have been rosy red when alive, this little scorpion fish was found in a red coral head dredged up from a depth of about 16 meters north of Wilson Island, Capricorn group, Queensland, on October 19, 1960.

The fish was named after Professor J. M. Moulton "who came to Queensland in 1960-61 to study underwater noises made by animals." The holotype is in the Australian Museum, Sydney. No.IB 5062.

Found and presented by Dr. Moulton, the fish was described in: "A new scorpion fish from Queensland," by G. P. Whitley. **North Queensland Naturalist,** 29(127): 9-10, 1961. Not in CR.

*We can testify to this. During one cruise when many of us were scrimshawing whale's teeth in the old patterns, Moulton scrimshawed a fish's inner ear on his whale's tooth! (ed.)

Candacia ketchumi, n.sp. B. H. Ketchum

1.75 mm long

SINCE the late 1950's our biologists have been making periodic biological and hydrographic observations along a line of 15 fixed stations between Montauk Point on Long Island, N. Y., and Bermuda. Among other observations we have collected the plankton from the upper 200 meters at each of the stations.

Back at Woods Hole, the zooplankton collections are sorted into the major taxonomic categories such as copepods, chaetognaths, euphausiids, etc. The quantity of each group, as measured by displacement volume, is determined, as well as the number of animals in each group. The species comprising each group also are identified. All this data is being used in studies of the distribution, abundance and seasonal occurrence of zooplankton in this area.

An unusual looking female copepod—unusual in the sense it was different from other species previously encountered—was found in a tow made on one of the Sargasso Sea stations on R/V 'Crawford' cruise 35 in December 1959. The copepod clearly belonged to the genus **Candacia.** A check of the descriptions of all 26 described species of **Candacia** revealed that it was not like any of them. However, the specimen was put away until such time as additional specimens might appear, since it is usually inadvisable to describe a new species on but a single specimen.

Only a few months later, in March 1960 during 'Crawford' cruise 38, in a Sargasso Sea sample another female, identical to the first one, as well as a male was taken in the plankton tow. The three copepods thus formed the basis of the description of a new species of **Candacia** (the 27th) and the type material was deposited in the U.S. National Museum, numbered, 10526, 10527 and 10528.

The new species was named for Dr. B. H. Ketchum then Senior Oceanographer and today Associate Director of the Institution. See: Grice, G. D. **"Candacia ketchumi,** a new calanoid copepod from the northwestern part of the Sargasso Sea." **Crustaceana** 2 (2): 126-131 1961. Also: CR 1127, 1961.

Howard L. Sanders, on the scientific staff since 1955, has furthered our understanding of the benthos at depths where many of the inhabitants prove to be new to science.

Gasterascidia sandersi, n.g., n.sp.

2-5 mm long H. L. Sanders

THE investigations of our Dr. Sanders during the last twelve or more years certainly have shown that there is a far greater abundance of animal life in the deep sea than had been believed. For over one hundred years the deep bottom was considered to be sparsely inhabited. Sanders' interest in studying the animal life which lives in the upper layers of the bottom sediment has changed this idea. Being generous in his distributions of collections to many specialists, it is no wonder that Dr. Sanders has had six species new to science named for him, four of which also are new genera.

In a surprising haul, no less than 113 adult specimens of this new genus of tunicate were brought up from a depth of 4680 meters on station 70 of 'Atlantis II' cruise No. 12, at 36°23′N and 67°58′W. Tunicates are best known to sailors as salps, the beautiful transparent globs of life found all over the ocean. Ascidians also are tunicates but live attached to the bottom. Yet, this new genus was described as "certainly moving on the bottom, cap-

turing foraminifera, copepods and small amphipods by its buccal aperture used as a trunk." This was startling, possibly the first tunicate that is carnivorous instead of being a filter feeder.

"**G. sandersi** has the most peculiar shape and is the most specialized of all the Tunicata," stated C. Monniot and F. Monniot in: "Les Ascidies de grandes profondeurs récoltées par le navire océanographique américain 'Atlantis II'." **Bull. Inst. Océanogr. Monaco.,** 67(1379): 48 pp., 1968.

Also: CR 2029, 1968.

The globular body of this tunicate was covered with grains ('de sable') and foraminifera tests. The husband and wife team of biologists,—not so rare in biology, we also know of one such team in meteorology and, of course, one can never forget the Curies—, were most enthusiastic about the collection in a Gallic way, and compared this one cruise of the 'Atlantis II' in importance with the Swedish Deep Sea Expedition, the cruise of the (Danish) 'Galathea', the German South Polar Expedition and the Deutsche Tiefsee Expedition. The authors stated that in this rich collection there were six species new to science proving that there is a great variety of ascidians at great depths of which we only know a small number.

Also:
Sandersiella Shiino 1965. **Crustaceana** 8: 181-191.
Crassibrachia sandersi Southward 1968. **Bull. mar. Sci.** 18(1): 182-190.
Spinacopia sandersi Kornicker 1969. **Smithson. Contrib. Zool.** 8: 1-50.
Hulingsina sandersi Puri 1958. **Trans. Gulf Ass. Geol. Soc.** 8.
Several are "in press".

—M.S.

Mastogloia guillardi, n.sp.
12-16 micron long R. R. L. Guillard

GENERALLY, we think of diatoms, the grass of the sea, as single-celled plants floating on or near the sea surface. Some, however, are known to stick to inshore seaweeds or fresh water weeds. These are called epiphytes, meaning they are plants growing on other plants, without deriving nutrition from the host. The most widely known example in the U.S. is Spanish moss growing on trees in southern states.

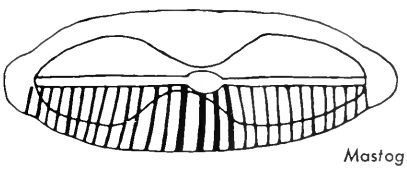
Mastogloia guillardi

Robert R. L. Guillard, is himself concerned with various phases of the physiology and culture of marine diatoms.

E. J. Carpenter of this Institution found 13 species of diatoms, 2 of them new to science, growing in dense profusion on **Sargassum.** The number of species however, was low compared to those on inshore plants, where as many as 57 species of diatoms belonging to 19 genera have been reported in a single location. Previous to Carpenter's investigations only one species of diatom had been reported from Sargasso weed.

The weed was collected by dipnet over a distance of 2000 km between Woods Hole and the Virgin Islands in February 1970 during cruise 56 of the 'Atlantis II'. See: E. J. Carpenter: "Diatoms attached to floating **Sargassum** in the western Sargasso Sea": **Phycologia,** 9 (3/4): 269-274. Also: CR 2536, 1970.

In coastal waters or on the high seas, Edward M. Hulburt examines the limiting effects of the environment on the phytoplankton.



Mastogloia hulburti

Mastogloia hulburti, n.sp. E. M. Hulburt

ANOTHER new species of pennate diatoms living on floating **Sargassum.** This and the preceding species appeared to be widespread, having been found on five of seven stations over a distance of 2000 km.

An additional interesting fact is that, seen under the microscope, whole areas of **Sargassum** were covered by diatoms, yet the Sargasso Sea is relatively low in nutrients for plant growth. A recent study showed that phosphate concentrations in a patch of **Sargassum** were two to three times greater than in the surrounding water, this enrichment may be due to diffusion of phosphate from the Sargasso weed or from the excretions of the animal population of **Sargassum.***

See: E. J. Carpenter: "Diatoms attached to floating **Sargassum** in the Western Sargasso Sea": **Phycologia,** 9(3/4): 269-274. Also: CR 2536, 1970.

Also: **Umbilicosphaera hulburtiana** Gaarder 1970. Nytt Mag. Bot. 17(2):113-126 —M.S.

*See 'Chain' Cruise — 85. **Oceanus,** XV(1). May 1969.

Nanymphon grasslei, n.g., n.sp.

J. F. Grassle

SEA spiders (pycnogonids) are intriguing bottom dwellers, all legs and little body. One of them became fairly famous in the late 1940's and early 50's. Photographed at a depth of 1800 meters in one of the early deep-sea photography studies by D. M. Owen of this Institution, the picture was published in hundreds of newspapers, periodicals, books and other publications. Biologists also know of a delightful spoof on scientific papers, featuring pycnogonids and written by Dr. Joel W. Hedgpeth.

The new genus and new species, named for our Dr. J. F. Grassle, was collected by him in March 1965 during a quantitative investigation of a mud-sand interface community in Raleigh Bay, N.C., at a depth of 37 meters. Four other new species of sea spiders were collected off North Carolina by workers on board the R.V. 'Eastward' of the Duke University Marine Laboratory, proving once again that much remains to be learned, even of inshore marine life.

The description of the new species was given in: "New and little known benthic pycnogonids from North Carolina", by L. R. McCloskey. **J.nat. Hist.,** 1967, 1: 119-134.

The holotype is USNM 113821.

Recently, J. Frederick Grassle has joined the group investigating the benthos beyond the continental shelf.

Psammonsella nobskae, n.g., n.sp.

Nobska Beach

About 0.35 mm long

NOBSKA BEACH is a quartz sand beach, situated southwest of Woods Hole. Generations of marine scientists and their families have swum there, while hundreds of them, including the pupils of the Woods Hole Children's School of Science have collected animal and plant life along the beach and its rocks.

It is, therefore, a bit surprising that a new genus and species of life would be found there. In 1964, the Institution provided a Fellowship for Mrs. Jeelani Haq of Jamai College, Pakistan, who spent the summer collecting mites at the intertidal level of Nobska Beach. She collected some 200 specimens, belonging to several families, including 5 genera of the family Rhodacaridae, one of which was new to science and which she named for the lovely beach.

Most, if not all, of the other mites she found had been described only from other countries, i.e. Germany, Ireland and South America.

For the interest of our local friends, Mrs. Haq stated: "Samples were collected from the mid-region of the intertidal zone. After removing the top two inches of sand, samples were taken to a depth of 12 inches. The sand was collected in a pail and swirled with seawater to put the interstitial organism into suspension. The water was then filtered through a fine sieve of 0.074 mm mesh. The residue from the sieve was examined in fresh condition, and animals were collected, sorted out and preserved in 70% alcohol."

Anyone wanting to go mite hunting at Nobska may also try to find a male **Isobactrus setosus.**

Mrs. Haq stated that the male of this species is exceedingly rare, there was not a single one in the 34 specimens she collected.

Holotype: USNM 3-1-2-7.

"Records of some interstitial mites from Nobska Beach together with a description of the new genus and species **Psammonsella nobskae** of the Family Rhodacaridae," by Jeelani Haq. **Acarologia,** t. VII, fasc. 3, 1965. Also: CR 1583, 1965, part 2.

The salt pond outlet (foreground) serves as a mark for the site where *P. nobskae* is found on Nobska Beach.

While George R. Hampson works on the deep benthos, he is also one of those alarmed by the effects of local oil spills.

A view of the cliffs at Gay Head, Martha's Vineyard.

Other individuals at the Institution have also been honored:

Prochelator hampsoni Hessler 1970 **Bull. Scripps. Oceanogr.** 15:143.

Undinella hampsoni Grice 1970 (CR 2144)

Abyla brownia Sears 1953 (CR 602) named for Joan Brown Hulburt (Mrs. E.M.)

Undinella gricei Wheeler 1970 **Smithson. Contrib. Zool.** 55.

Postligate schalki Stephenson 1936 (CR 81)

Scottocalanus backusi Grice 1969 (CR 2057)

Wallodinium glaessneri (Cookson and Eisenack) Loeblich and Loeblich 1968 **J. Paleontol.** 42(1): 210-213.

Tuberculodinium walli Drugg 1970 **Proc. Biol. Soc. Washington** 83(9): 115-122.

Maresearsia praeclara Totton 1954 **Discovery Rept.** 27: 1-162.

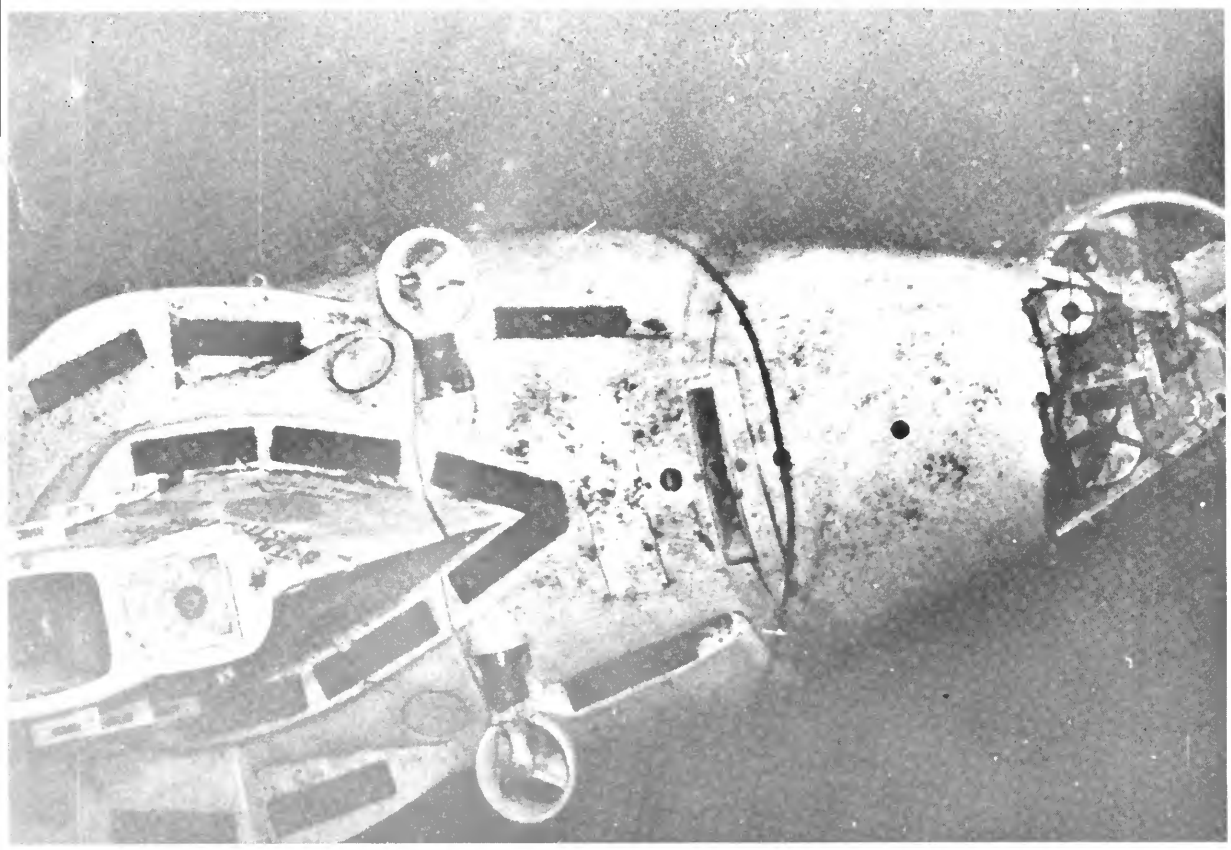
Places in the Woods Hole region have also been designated, among them:

Ninoe gayheadi Hartman 1965 (CR 1588)

Chaetozone gayheadi Hartman 1965 (CR 1588)

Neopodarka woodsholea Hartman 1965 (CR 1588)

Nonion tisburyensis Butcher 1958 (CR 401) —M.S.

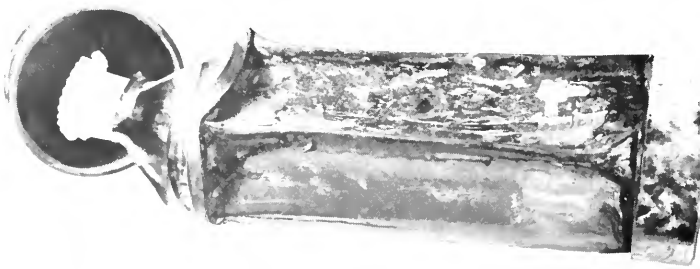


'Alvin', the involuntary experimental vessel for a study on biodegradation in 5000 feet of water with an open hatch as photographed by USNS 'Mizar' in June 1969.

'Alvin' and the Sandwich

While lost for one year in the deep sea, the 'Alvin' managed to carry out a study in food preservation.

by H. W. JANNASCH and C. O. WIRSEN



One of the two thermos bottles containing broth. The aluminum jacket is crushed by pressure. The plastic plug on the inner undamaged stainless steel cylinder is cracked but in place. A small amount of seawater had mixed with the contents.

AT her accidental sinking in October 1968, the research submarine 'Alvin' managed to set up a splendid experiment. When she went down in 1500 meters of water, she took with her a collection of organic materials that could not have been selected with more ingenuity for a study on biodegradation in the deep-sea. There were carbohydrates in the form of starch and sugars, proteins in solid and liquid form, lipids and even packages of intact plant cells representing live membrane structures — in short: a box lunch containing bread with mayonnaise and ham, bouillon and fresh apples.

'Alvin' broke surface again in September 1969 after resting almost one year on the ocean floor. In the excitement over her successful recovery, the oceanographers almost overlooked the striking outcome of 'Alvin' degradation experiment: the food in the box lunch was practically untouched by decay, although containing the usual amount of bacteria.

The broth, although being the most perishable material, was perfectly palatable. Four of us are living proof of this fact. The apples exhibited a pickled appearance. But the way the salt water had penetrated into the fruit tissue indicated that the membrane functions were hardly affected. Enzymes were still active, and the acidity of the fruit juice was not different from that of a fresh apple. The bread and meat appeared almost fresh except for being soaked with seawater.

In conclusion, the food recovered from 'Alvin' after ten months of exposure to deep-sea conditions exhibited a degree of preservation that, in the case of fruit, equaled that of careful storage, and in the case of starches and proteins appeared to surpass by far that of normal refrigeration.

Yet, there were many questions. We did not know under exactly what conditions the food was exposed to seawater in the open pressure hull. Although it seemed to be out of the question that a preservative of any kind could have leached into the water, a repeat of 'Alvin' experiment under more defined conditions seemed to be necessary.

The proposal of sinking another submersible, the 'Seacliff', neatly filled with groceries, was met with little enthusiasm.

Except for being soaked with seawater, the sandwiches appeared unspoiled. The slices of baloney were still pink on the inside indicating little activity of the degradation processes that reduce nitrate as well. The latter is commercially added to meat for keeping it from decolorizing.

Furthermore, the buoy group of the Department of Physical Oceanography knew of more inexpensive ways of taking a round trip to the ocean floor. With the ready cooperation of R. H. Heinmiller and G. Volkmann, we have dropped in piggy-back fashion several containers with samples in over 5000 meters of water fastened to the mooring device of current-measuring buoys. During 1970 we recovered several of such "bio-packs" after exposure of 2 to 5 months.

The materials we studied in these experiments were, in essence, similar to those of the 'Alvin' demonstration, but as purified compounds and in a form that permitted quantitative analysis for the degree of degradation. The sample bottles were pre-inoculated with bacteria of a known type or mixed populations. Some of the bottles were provided with a device that permitted filling with seawater by pressure at a certain depth.

In order to measure the microbial consumption and production of dissolved gases, mainly oxygen and carbon dioxide, we put samples in large syringes that compress and decompress without loss of the material. All these devices were pressure-tested. Bottles and syringes were put in sturdy boxes made from household dish pans that were perforated for free access of the surrounding water. A set of controls was kept at 3°C. in the laboratory. When the buoys were retrieved by an acoustic

release mechanism, the samples of the bio-pack were fixed for immediate bio- and radio-chemical analysis.

The results of these experiments proved that the well-preserved state of the 'Alvin' lunch was no chance observation. In general, the degradation of the various materials proceeded about 100 times slower (600 times at the maximum) at deep-sea conditions than in the controls kept at the same temperature but at sea-level pressure.

DR. JANNASCH, a senior scientist at the Institution, obtained his doctoral degree at the University of Göttingen in 1955. Dr. Wirsen is a research associate.

Two points are of considerable interest: (1) an explanation of the observed phenomenon and (2) its implications.

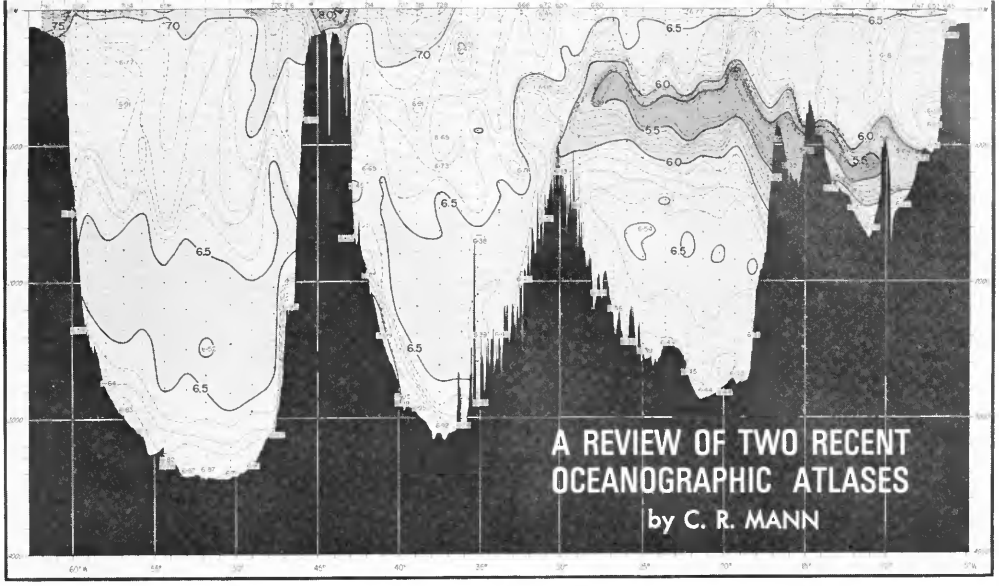
From earlier laboratory work on the effect of hydrostatic pressure on bacterial growth and enzymatic activities, pressure alone cannot be assumed to account for the preserving effect. From our present work on "psychrophilic" bacteria, we arrived at a working hypothesis proposing a combined pressure-temperature effect. Psychrophilism is the ability of some bacteria to grow relatively fast at low temperatures. If this phenomenon is pressure-related, low biochemical activities at deep-sea conditions become explainable.

The implications of the 'Alvin' lunch experiment are obvious. The deep-sea is not a suitable environment for dumping solid organic wastes. It appears that off-shore disposal would largely eliminate a quick microbial degradation and mineralization. Substantial amounts of waste materials might be trapped in the deep-sea, being removed from natural or technically enhanced recycling processes, and might accumulate in an uncontrollable fashion.

From more recent studies, using the re-built 'Alvin' again, we know now that a general slow-down of life processes in the deep-sea does apply not only to bacteria from the sea surface but also to the indigenous microflora and possibly to benthic animals as well.

After this needlessly dramatic initiation of deep-sea microbiology, work is continuing on a broad basis, and we hope for further cooperation by the remarkable 'Alvin'.

The apples showed a pickled appearance but had neither changed in consistency nor had they lost any of their fragrance. The 'bio-packs' consist of a variety of sample vessels that were carefully packed in boxes made from plastic household dish pans. The boxes were fastened to the mooring chain of deep-sea buoys and incubated for 5 months at a depth up to 17,000 feet.



A REVIEW OF TWO RECENT OCEANOGRAPHIC ATLASES

by C. R. MANN

ONE of the more time consuming tasks in oceanography is the construction from raw data, of charts of properties on an ocean scale. Until this is done much of the data collected by the research ships of the oceanographic community gets published piecemeal, and an up-to-date, comprehensive, description of the properties of an ocean is not available to marine scientists. Considering the number of marine laboratories peripheral to the North Atlantic one would have thought that the properties of the North Atlantic would be well displayed in various atlases, but this has not been the case. The work of L. V. Worthington and W. R. Wright in producing an atlas displaying the properties of the deep water of the North Atlantic, and the work of G. Dietrich* in compiling an atlas of the IGY data for the northern part of the North Atlantic is to be commended because both these atlases are badly needed.

The North Atlantic Ocean Atlas by L. V. Worthington and W. R. Wright, published by the Woods Hole Oceanographic Institution, consists of a set of charts and sections of the temperature and salinity of the deep waters of the North Atlantic, based on data collected during the period 1954-1962.

The first part of the Atlas consists of salinity at surfaces of potential temperature. The range of potential temperatures covered is from 1°C to 4°C in intervals of 0.2°C which effectively dissects the ocean from depths of about 1500 meters to the bottom. Along with each chart of salinity is a chart of the depth of the potential temperature surface at which the salinity is plotted; and a contour line showing the geographic limits of water of this temperature. The latter contour is also placed on the salinity charts and shows the geographical constraints on movement of abyssal water of a particular temperature. These are the first charts that demonstrate the existence of the overflows between Greenland and Iceland, and between Iceland and Scotland, and allow the influence of the overflows on the deep circulation to be assessed.

The second part of the Atlas is made up of sections of temperature, salinity, and oxygen in the Labrador Sea, constructed from data collected by 'Erika Dan' in the winter of 1962. These are a useful inclusion in the atlas because sections constructed from most of the data used to compile the charts are not available in other publications, e.g. Fuglister's Atlantic Ocean Atlas and it would have been unfortunate if the 'Erika Dan' data was not available in the form of sections.

The drafting and colouring of the Atlas is excellent. The reader does have to be careful in relating colours to different salinity ranges as the colour scheme changes from one page to the next due to the system of assigning colours.

The second atlas recently published is the Atlas of the Hydrography of the Northern North Atlantic, compiled by G. Dietrich, and published by the Conseil International pour l'Exploration de la Mer, Service Hydrographique. This atlas

*Professor Dietrich died suddenly and prematurely on 2 October 1972.

contains charts and sections of temperature, salinity, density, and oxygen, based on data collected during the IGY Polar Front Survey in 1958. Two sets of data have been selected; one consists of data collected during February, March, and April; the other consists of data collected during August, September, and October. From these two sets, charts and sections have been drawn to represent the physical oceanography of the northern North Atlantic in winter and summer, including the Norwegian Sea.

The charts display temperature, salinity, density and oxygen (% saturation), at standard depths from the surface to the bottom. In addition there are charts of dynamic topography of the sea surface and of bottom temperature. Because standard depths have been chosen as the surfaces on which to contour, the atlas is most suited for use in studies of the upper layers of the ocean. Features such as the Polar Front appear clearly. The percent saturation of oxygen is presented rather than the oxygen content. This is useful for some purposes but makes it difficult to compare the levels of dissolved oxygen in this set of data with the levels in other sets. The atlas also contains vertical sections of the properties in the charts, again in two sets, one for winter and one for summer, which may be used with the charts to gain a three-dimensional perspective of the property distributions.

Both atlases are welcome contributions to the oceanographic literature.

DR. CEDRIC R. MANN has a B.Sc from the University of New Zealand and a Ph.D. from the University of British Columbia. He is presently at the Bedford Institute in Dartmouth, Nova Scotia.

Dear Sir:

October 15, 1971

THE contributors to your June issue, dedicated to the memory of Columbus Iselin, seem to have overlooked Iselin Bank (now Iselin Seamount), a topographic feature in the Ross Sea near 71°S, 179°W. It was first described by S. Edward Roos in the **Geographical Review** for 1937 (27: 574-583). This account falls short of telling the full story, however, which I heard from Columbus many years later at the Lubec Oceanographic Centre.

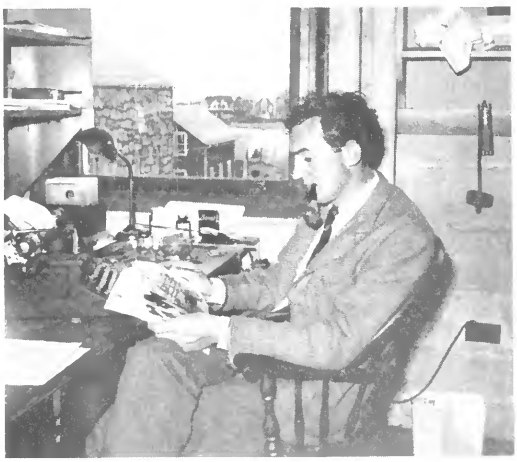
As Columbus told it, one of the deckhands on 'Atlantis' became in some way involved with a young lady in Falmouth and considered it expedient to change his home port. This was in 1933, and, perhaps with Columbus' encouragement, he made contact with the second Byrd Antarctic Expedition and was engaged as a deckhand on the 'Bear of Oakland.' Upon disclosing his former connection with the Oceanographic Institution, he was designated Oceanographer of the expedition and assigned the duty of taking a few cores and keeping track of the output of the echo-sounder. When the expedition returned to the United States in 1935, he was retained to prepare the sounding results for publication. Columbus, with the usual generosity of his time when a former shipmate was involved, helped him put the data in shape for the **Geographical Review,** and Iselin Bank was named in gratitude for the assistance.

Thus, although Columbus' own investigations were all carried out in the North Atlantic, his name has come to be permanently attached to a prominent ocean feature in the Pacific sector of the far Antarctic.

Sincerely yours,
John Lyman
Head, Office of Marine Sciences
University of North Carolina
Sea Grant Program.

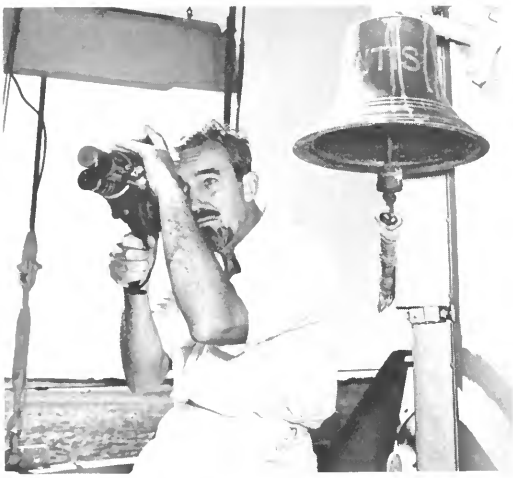
JAN HAHN APRIL 9, 1913 - JULY 8, 1972

Aficionado of Oceanography . . .



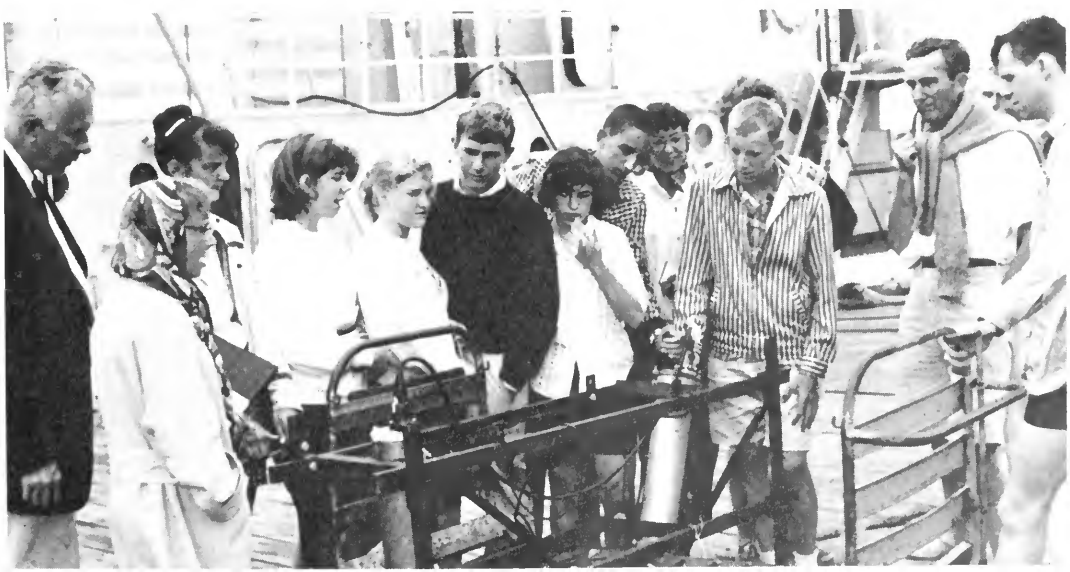
Editor . . .

Sailor . . .



Photographer . . .

An example of Jan's ability to transmit the fascination of oceanography to those about him, in this instance to a summer course from the Children's School of Science.



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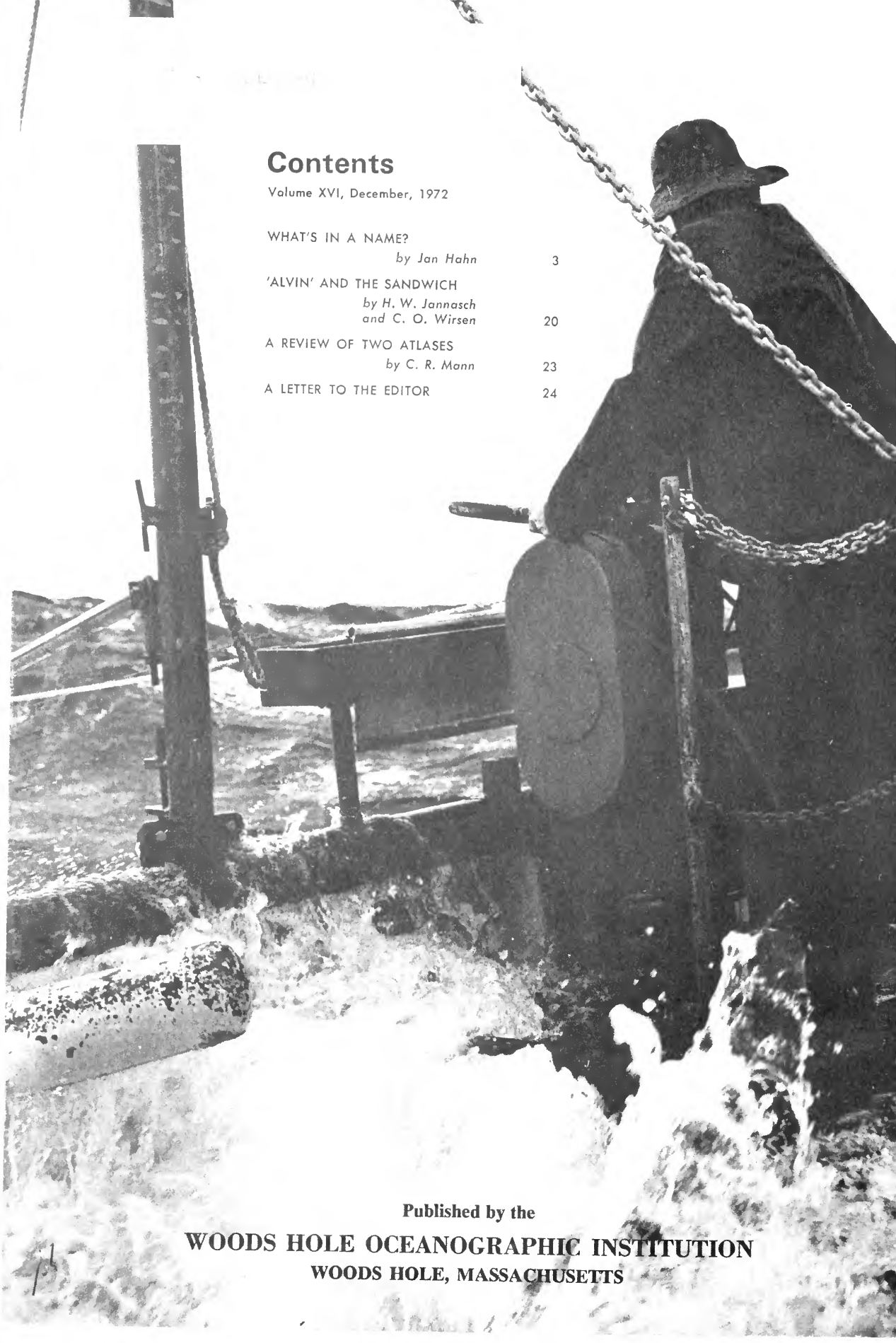

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