

SCIENCE

VOL. 87

FRIDAY, MARCH 4, 1938

No. 2253

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SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKEEN CATTELL and published every Friday by

THE SCIENCE PRESS

New York City: Grand Central Terminal
Lancaster, Pa. Garrison, N. Y.
Annual Subscription, \$6.00 Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

THE MARCH OF MEDICINE¹

By RAY LYMAN WILBUR, M.D.

PRESIDENT OF STANFORD UNIVERSITY

WHAT is it that happens that brings about the development of hospitals, and eventually medical schools, in most of our larger communities? Communities have personality, ambitions and vision. How interesting it would be if we could have been in Geneva in 1834 when the parent institution of the College of Medicine of Syracuse University was established; or could have attended the meetings that led up to its transfer to Syracuse under its present title in 1872. Something stirs in our communities that leads to the birth of institutions where medical students can be trained. The idea generates among the forward-looking physicians and spreads to others. As we look over the United States we find that this form of community expression has been a very significant factor in medical education. In the days when a group of

physicians could get together and organize a medical school that could be supported by the student fees too many such institutions appeared; but even now, with all the expense—and it is very considerable—of developing a medical teaching center, we find that most of the larger centers of population in the United States give strong financial support to training institutions for doctors of medicine. Communities, like persons, want to see the tangible results of their efforts. They show themselves at their very best in the public or government buildings which they erect and support—whether these are churches, schools, hospitals, medical schools, court houses—or even jails.

Medicine moves forward so rapidly that its day-to-day activities are necessarily educational. It is in no way *finished*. It is imperative that the young doctor and the nurse be brought into the immediate care of the sick. In no other way can medicine keep up with

¹ Address at the dedication of the Syracuse University College of Medicine building, November 22, 1937.

summer maximum of Central Atlantic water is 27° C. or 28° C. north of Bermuda, and the annual range is fully eight degrees.

The water temperature record of the Boston-Bermuda route between August 28 and August 30, 1937, is illustrated in Fig. 1. Imposed upon this is the water

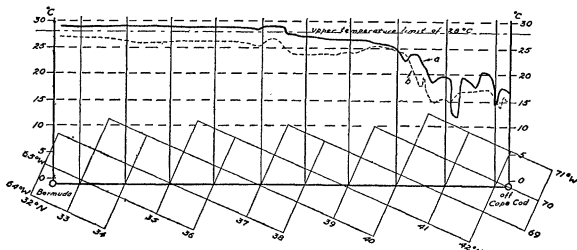


FIG. 1. Distribution of surface water temperature between Boston and Bermuda—(a) August 28 to August 30, 1937, and (b) September 24 to September 26, 1937.

temperature record on the same route between September 24 and September 26, which indicates that the northern edge of the Gulf Stream is in Latitude $40^{\circ} 10'$ N. In August, it is evident that "detached warm masses" extended even north of Latitude $41^{\circ} 00'$ N.

Central Atlantic water, south of Latitude $37^{\circ} 50'$ N., in the latter part of August exhibits surface temperatures which are more than one degree higher than the upper temperature limit of 27° C. or 28° C., set by Church and Iselin. Gulf Stream temperatures (vicinity of Latitude $40^{\circ} 00'$ N.) are at least two degrees lower than the accepted summer maximum of 28° C. or 29° C. Further, in the interval between late August and late September, the surface water temperatures south of Latitude $39^{\circ} 00'$ N. were lowered as much as three degrees, which is more than one third of the total annual temperature range of Central Atlantic water of these latitudes. This large decrease in temperature took place at a time when ocean surface temperatures are, in general, comparatively stationary. It is suggested herein that such a temperature change is, in part, associated with a "pulsation"³ of the whole North Atlantic eddy. The nature of the suggested "pulsation," of considerable interest to oceanographers on both sides of the Atlantic, awaits elucidation from the five year cooperative program of the Woods Hole Oceanographic Institution and the Bermuda Biological Station.

Our observations have been concerned with a band of water, which, north of Bermuda, is approximately 500 miles in width. In dealing with water temperature departures from the normal, Church points out the possible influence of these in producing weather abnormalities along the eastern seaboard of the North

American continent. This band of water is associated with the source area for tropical Atlantic air masses, and in particular with the area of origin of North Atlantic tropical cyclones, which are features of late summer weather of the Atlantic seaboard. The abnormalities of temperature of Central Atlantic water, recorded herein, may therefore prove of interest also to students of marine meteorology.

H. B. HACHEY

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BOOKS RECEIVED

- Australasian Antarctic Expedition 1911-14, under the Leadership of Sir Douglas Mawson. Scientific Reports: Series C, Zoology and Botany.* Vol. II, Part 2, *Isopoda and Tanaidacea*; Pp. 45. 19 figures. 6s., 6d. Part 3, *Ticks (Ixodoidea)*; Pp. 19. 3s. Part 5, *Amphipoda Hyperideae*; Pp. 4. 1s., 6d. Vol. III, Part 4, *Rhabdopleura*; Pp. 8. 6 figures. 2s., 6d. Vol. X, Part 4, *Cestoda*; Pp. 74. 91 figures. 10s. Part 6, *Acarina*; Pp. 24. 2 figures. 11 plates. 6s. David Harold Paisley, Government Printer, Sydney, Australia.
- BELLAMY, H. S. *Moons, Myths and Man.* Pp. 351. 9 figures. Harper.
- Carnegie Foundation for the Advancement of Teaching; Thirty-second Annual Report, 1937.* Pp. 202. The Foundation, New York.
- Experiment Station Record; Volume 76, Index Number. January-June, 1937.* Pp. xviii + 898-1033. Superintendent of Documents, Washington. \$0.15.
- FROLOV, Y. P. *Pavlov and His School: The Theory of Conditional Reflexes.* Pp. xix + 291. 26 figures. Oxford University Press. \$4.00.
- GESELL, ARNOLD, HELEN THOMPSON and CATHERINE S. AMATRUDA. *The Psychology of Early Growth, Including Norms of Infant Behavior and Method of Genetic Analysis.* Pp. ix + 290. 30 figures. Macmillan. \$4.00.
- GOLDSCHMIDT, RICHARD. *Physiological Genetics.* Pp. ix + 375. 54 figures. McGraw-Hill. \$4.00.
- HARDY, G. H. *A Course of Pure Mathematics.* Seventh edition. Pp. xii + 498. 63 figures. Cambridge University Press, Macmillan. \$3.75.
- Japanese Journal of Geology and Geography; Transactions and Abstracts, Vol. XIV, Nos. 3 and 4, October, 1937.* Pp. v + 208 + 64 + (13). Illustrated. 17 plates. National Research Council of Japan, Tokyo.
- JUNG, CARL G. *Psychology and Religion.* Pp. 131. Yale University Press. \$2.00.
- PAULL, JAMES H. *Industrial Sheet Metal Drawing.* Pp. 153. 200 figures. Van Nostrand. \$1.50.
- Report of the Department (Great Britain) of Scientific and Industrial Research for 1936-37.* Pp. 190. 3s. *Index to the Literature of Food Investigation.* Vol. 9, No. 1, June, 1937. Pp. v + 103. 4s., 6d. The Department, London.
- RIDGWAY, JOHN L. *Scientific Illustration.* Pp. xiv + 173. Illustrated. Stanford University Press. \$4.00.
- ROSE, MARY S. *The Foundations of Nutrition.* Third edition. Pp. xi + 625. 116 figures. Macmillan. \$3.50.
- South African Journal of Science; Report, Vol. XXXIV, November, 1937.* Windhoek. Pp. xlv + 464. Illustrated. The South African Association for the Advancement of Science, Johannesburg. 30s.
- WHITE, BENJAMIN. *The Biology of Pneumococcus.* Pp. xiv + 799. Illustrated. The Commonwealth Fund, New York. \$4.50.
- YUNCKER, T. G. *A Contribution to the Flora of Honduras.* Field Museum of Natural History Botanical Series, Vol. XVII, No. 4. Pp. 289-407. 18 plates. The Museum, Chicago. \$1.00.

³ C. O'D. Iselin, *Papers in Physical Oceanography and Meteorology*, 4: 4, 37, 1936.

⁴ E. W. MacBride, *Nature*, 139: 3527, 948, 1937.

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