ing at the Marine Biological Laboratory, Woods Hole, Mass., late in August.

THE thirty-sixth annual meeting of the Medical Library Association was held in Baltimore, Md., from May 21 to 24, under the presidency of Miss Marcia C. Noyes, librarian of the Medical and Chirurgical Faculty of the State of Maryland. The following officers were elected for 1934–35: *President,* Mr. Charles Frankenberger, librarian, Medical Society of the County of Kings and Academy of Medicine of Brooklyn, N. Y.; *Vice-president,* Miss Louise Ophüls, librarian, Lane Medical Library, San Francisco, Cal.; *Secretary,* Miss Frances N. A. Whitman, librarian, Harvard University Schools of Medicine and Public Health; *Treasurer,* Miss Mary Louise Marshall, librarian, Tulane University Medical School; *Chairman, Executive Committee,* Miss Marjorie J. Darrach, librarian, Medical Science Department, Detroit Public Library; *Editor of the "Bulletin,"* Mr. J. C. Harding, librarian, Cleveland Medical Library Association; *Manager of Exchange,* Miss Ella B. Lawrence, librarian, Washington University School of Medicine. The next annual meeting will be held in Rochester, N. Y., in June, 1935.

A CONFERENCE on tree ring studies was held on June 11 and 12, 1934, at the Museum of Northern Arizona at Flagstaff, under the chairmanship of Dr. A. E. Douglass, of the University of Arizona. The following institutions interested in dendro-chronology were represented: The Carnegie Institution of Washington, the University of Arizona, Gila Pueblo, Laboratory of Anthropology and the Museum of Northern Arizona. The representative from the University of New Mexico was unable to attend. Among the problems of the science discussed was the need of a journal in which to publish the original data on which climatological conclusions and prehistoric dates are based. It was, therefore, decided to publish a quarterly called the *Tree Ring Bulletin.* Dr. A. E. Douglass will be editor-in-chief; Dr. Waldo S. Glock, assistant editor; Dr. Harold S. Colton, managing editor, and Mr. John C. McGregor, assistant managing editor. Plans call for a July number to appear in a few weeks. While the publication will be of immediate interest to archeologists, it will also deal with problems of climatology and other subjects to which tree-ring studies are related.

WHILE the State Geological Survey of West Virginia is theoretically also a biological survey little or no biological work has been done. At its last annual meeting the West Virginia Academy of Science voted to organize and sponsor a biological survey of the state, and the biological section of the academy appointed a committee made up of H. W. Shawhan, state forester; A. B. Brooks, Oglebay Park naturalist, and a biologist from each college in the state to work out details and have charge of the work. Representatives of the colleges are: Marshall, Frank Gilbert; West Virginia Wesleyan, J. E. Judson; Davis and Elkins, S. Benton Talbot; Salem, H. D. Bond; Bethany, B. R. Weimer; Fairmont, C. M. Roberts; Glenville, E. R. Grose; Concord, E. Meade McNeill; University, L. M. Peairs; Potomac State, R. C. Patterson; Shepherd, G. H. Bretnall; Morris Harvey, C. L. Shilliday; West Liberty, J. E. Drummond; W. Va. State College, A. P. Hamblin, and New River State, E. W. Seyster. Dr. Albert M. Reese, of the University of West Virginia, has been appointed chairman. For the present the academy will be the agent of publication. After the work gets well under way it is hoped that adequate appropriations may be secured from the state. The University of West Virginia will be the repository for all collections and publications relating to the survey. The Bureau of Biological Survey of the U. S. Department of Agriculture has promised to cooperate. All those having material of value to the survey are urged to communicate with the chairman or some other member of the committee, and any one wishing to make use of the material that may be brought to Morgantown is invited to do so.

THREE bird sanctuaries are to be established on the shores of the Central Park, New York City, lakes, which it is expected that thrushes, warblers, nuthatches and other small birds will use as a resting place in their spring and fall migrations. In addition, a number of lakes in the other four boroughs will be stocked next year with fish hatched in the park. The largest of the bird sanctuaries will be on the Harlem Mere at the north end of Central Park. A 1500-foot log boom will keep boats, still to be allowed on the lake, away from the shore of the peninsula there. This retreat will be reserved especially for pheasants and migratory birds.

DISCUSSION

HOW SOME BIRDS SATISFY THIRST

IN the March 24, 1934, issue of the English journal *Nature,* Seton Gordon has remarked upon the drinking habits of the birds. This is a subject of much interest. While birds in humid well-watered regions probably find sufficient water at hand for their needs, in very arid regions and in periods of extreme winter cold, water may not be readily available.

Some of the desert birds appear to be little worried by the absence of a ready supply of drinking water.

Dr. C. B. Ticehurst and Major R. E. Cheesman in their paper "The Birds of Jabrin, Jafura, and Hasa in Central and Eastern Arabia and of Bahrain Island, Persian Gulf," published in *Ibis,* 12th series, Vol. 1, No. 1, January, 1925, say of the lark *Alaemon alaudipes cinerea* (Zar.):

> It would seem to be one of those species which has solved the problem of life without drinking, for it was met with as much as seventy miles away from the nearest well, though it is possible that occasional morning mists and dew observed in the sand-dunes would enable it to take drops of moisture from the bushes; however, it must be able to exist for long periods without drinking, and it was never seen at wells or water-holes, a fact which one of us noted also in the Sind desert.

Nestling birds, obviously, are unable to get water, except as it comes to them. It is possible that showers may at times wet the rim of exposed nests sufficiently to allow them to secure water droplets.

Mr. Meade Waldo appears to have been the first to describe a unique method by which the young of the sand grouse *Pteracles* kept in his aviaries sometimes obtain water, publishing his observations in "The Zoologist" (1896, p. 299). His observations would indicate that water is actually conveyed to the young, and by the male alone. He says, "The male rubs his breast violently up and down on the ground—a motion quite distinct from dusting—and when his feathers are awry gets into his drinking water and saturates the feathers of his underparts. When soaked he goes through the motions of flying away, nodding his head, etc.; then, remembering his family is close by, he would run to the hen, make a demonstration, and when the young run out, get under him, and suck the water from his breast." He states that it appeared like a mammal suckling its young and "The young pass the feathers through their bills, and keep changing places until the supply becomes exhausted. Until the young can fly they take water in no other way, and the cock gives it to the young only."

Dr. Glover Allen in his book, "Birds and Their Attributes," has seen pine siskins in the far north eating snow, and he once watched a flock of cedar waxwings flying into the air to catch snowflakes as if they were insects.

I may state that the introduced starling, with its remarkable ability to meet most situations successfully, seems to worry little about the presence of water in winter-time. For several years I have had these birds nesting in a box close to my bedroom window, and on many occasions I have observed them eating snow heartily where it had lodged upon the top of their box which they frequented throughout the winter.

Several times, both at Clarendon, Va., and at Washington, D. C., I have seen them in numbers during snowstorms, flying back and forth engaged in catching snowflakes. However, I have seen them engaged in the same aerial activities in summer-time to catch ants and other insects swarming in the air. Whether the birds are actually catching the flying snowflakes because they are thirsty or whether they may have thought they were flying insects, I do not know. The habit of eating snow is surely to satisfy thirst or the needs of the body for water.

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SELENITE NOT A CERTAIN INDICATOR OF WIND EFFECT[1]

SCHOEWE and Bryan[2] have suggested that selenite fragments having etched surfaces could be used as criteria for wind action because selenite readily becomes frosted when treated with the sand blast in the laboratory.

In Eddy County, New Mexico, and in Reeves and Culberson Counties, Texas, the upper Permian formations are upturned and truncated, and massive anhydrite beds, exposed to weathering, are altered to gypsum, which covers wide expanses of territory. Although gypsum is one of the less common products of sedimentation, it has thus become the most conspicuous rock in this northwest sector of the Delaware Basin.

Anhydrite alters to various types of gypsum. Selenite, a variety of gypsum, occurs often as large crystals. It is most abundant in lake bed deposits or on playas, or along exposures in bluffs where crystals 1 to 2 feet in length are not uncommon. In the vicinity of Salt Draw, some twenty miles south of Carlsbad, New Mexico, a bed of selenite enclosed in redbeds crops out across the old highway and the railroad right of way. The excavation for the track was made in 1891, and the material thrown aside has remained virtually undisturbed since then. The writer has passed this outcrop many times in a period of ten years; and he has had opportunity to make numerous field observations. He was originally attracted to this outcrop by the brilliant scintillating reflections of sunlight from the shining surfaces of the selenite.

At this locality selenite crystals perched on small prominences and fully exposed to the wind have retained enough of their original brilliance to look as if they had new cleavage faces. Examination, however, shows their surfaces to be the product of natural weathering in a region where the average annual rain-

[1] Published by permission of the Director of the U. S. Geological Survey.

[2] W. H. Schoewe and Kirk Bryan, "Selenite Fragments or Crystals as Criteria for Wind Action," SCIENCE, 72: 1859, 169–70, August 15, 1930.