sheets is supposed to have forced the cyclonic storms to skirt the ice rather than cross its central parts. Our knowledge on this point is very limited, but since boulders were transported by the European ice sheets from near the center of glaciation out to the terminal moraines in central Europe, the expansion of the ice sheet to a large degree must have been controlled by precipitation in its central parts. Recently Simpson[4] has given a seemingly very good explanation of the snowfall in the Antarctic anticyclone. The precipitation, according to his view, is brought about by the low temperature of the lower strata of the air. This air is raised and cooled still further during blizzards and hence gives up the small amount of moisture which it contains.

The opinion that evaporation during the glaciation was greater than normally[5] perhaps is open to doubt, but that there was a considerable transport of moisture from low to high latitudes seems to be certain.[6]

The discussion of the causes of the disappearance of the ice sheets is not quite consistent.[7] It starts with correctly setting forth rise of temperature and diminution of precipitation as the chief general causes, but ends with largely attributing the vanishing of the different sheets of land ice to more local conditions. Most studies of the disappearance of the North European and the Labradorean ice sheets seem to show that during the ice retreat the temperature was relatively high and the precipitation slight.

Again, topographic conditions *can* readily explain many climatic problems, but their actual rôle seems sometimes to have been overestimated. So, the supposed good example of close relationship between high elevation of land and continental climate, and low elevation and maritime climate in northwest Europe during late-glacial and post-glacial time, maintained by C. E. P. Brooks, is partly unfounded, as it is based upon an incorrect interpretation of the changes of level. Even the moderate view taken in "Climatic Changes," pp. 215–222, goes too far. During the transition between the late-glacial and post-glacial periods, that is in Ancylus or boreal time, there was no extensive elevation, no continental phase as far as the land is concerned; and recently Lennart von Post seems to prove that the climate instead of being continental as supposed was maritime with dry summers and winters rich in precipitation.

In the discussion of the origin of glacial loess, which is supposed to have been accumulated mainly during the retreat of the ice, the undersigned misses references to B. Shimek, A. Jentzsch, and P. Tutkowski, who have expressed similar ideas.

A very strong side of "Climatic Changes" is that it really faces the difficulties, and takes up the problems which call for discussion, even if our present imperfect knowledge does not permit a satisfactory explanation of all of them. The solar cyclonic hypothesis seems more competent than any other existing hypothesis to explain the complexity and the rapid and heterogeneous changes of the Pleistocene climate, which are now beginning to be fairly well known, especially thorough studies in Sweden. Our present knowledge of the Pleistocene climate eliminates most and perhaps all the hypotheses which seek the causes of climatic variations in terrestrial conditions only. It seems as if Huntington has found a very important, perhaps the chief, cause of climatic changes.

ERNST ANTEVS

[4] G. C. Simpson, "Meteorology," Vol. I.—British Antarctic Expedition, 1910–1913. Calcutta, 1919. Reference on pp. 256–269.

[5] Pp. 113 ,114.

[6] P. 118.

[7] P. 128.

COLOR HEARING

I HAVE been interested for a long time in color hearing, and therefore read eagerly the article by Professor Horace B. English, of Antioch College, in SCIENCE of April 13, "And a little child shall lead them." The deductions of the three-year-old were charming.

I add my personal experience. Having met a friend in town some years ago, we fell into conversation on the possibilities of color hearing, which had been characterized as absurd. Going to my home, I said to my mother, without any preliminaries, "Mother, what color is my voice?" Without hesitation and as if I had asked her the color of a ribbon or a book-cover, she replied, "Dove-color."

I expressed my surprise that she should hear color. "Why," said she, "I have always heard color. When I went to school, there was a little girl whom I disliked very much, because she had such a yellow voice." But in all her long life (she was then over eighty) color hearing had never been spoken of. I then asked her the color of the voices of various friends, which she gave with perfect readiness. She characterized the voice of Louis Prang as having the colors of the rainbow.

Some days after this conversation, I went to New York on my way to Brooklyn to speak before an educational gathering on "Color." As I walked along Broadway, I noticed in a shop window, in which Oriental rugs were displayed, a placard which said, "A noted East Indian will tell fortunes, will read the hand and will tell the color of the voice." Feeling that I might get material appropriate to the address I was to give, I went in and was shown to a tent-like booth, in which was seated a fine-looking Hindu in full Oriental costume.

He received me in a dignified manner, read my

hand and told my fortune. I asked the color of my voice. He asked me to count to twenty and to say the alphabet. I did so. He looked thoughtful, pondered a moment, and said, "You will think it strange, perhaps—your voice is blue-violet—an intellectual voice."

It has seemed to me that the color hearing was, in the case of my mother and of the Hindu, virtually the same—dove-color and blue-violet—the elements of the colors being alike.

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A HISTORICAL NOTE ON SEX DETERMINATION IN PIGEONS

IN connection with papers on sex determination in pigeons, setting forth the observations of C. O. Whitman and O. Riddle, it is interesting to find that an old French book records a part of the tradition of bird-fanciers regarding the tendency of some eggs to develop into males.

Riddle has summarized the extensive researches of Whitman and of himself as follows: "In the pigeons the first egg is smaller and is a male, the second is larger and usually a female, while as the season advances the smaller ones also are female-producers."[1]

In the reprint collection of the U. S. Fisheries Laboratory at Woods Hole, Mass., the writer recently came upon a small booklet by Jules Gautier entitled "La Fécondation artificielle," Troisème edition, Paris, 1881, which has on page 21 the following footnote:

> Chose remarquable! c'est que les oiseaux qui n'ont que deux oeufs par couvée (pigeons, colombes) en produisent un pour chaque sexe. Le premier pondu est toujours affecté au mâle, et celui-ci éclôt ordinairement avant la femelle.

The shrewd observations of breeders of horses, cattle and dogs are also deserving of consideration in planning investigations on the physiological basis of sex determination, and have already been shown to be worth nearly as much as certain clinical records.

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ZOOLOGICAL NOMENCLATURE

NOMENCLATURE: Notice to the zoological profession that suspension of the rules has been asked in the case of *Spirifer* Sow, 1816, and *Syringothyris* Winchell, 1863.

In accordance with prescribed routine, the secretary of the International Commission of Zoological Nomenclature has the honor herewith to notify the members of the zoological profession that Miss Helen M. Muir Wood, of the British Museum of Natural History, has submitted the generic names *Spirifer* Sow, 1816, and *Syringothyris* Winchell, 1863, to the International Commission, for suspension of rules, with a view to retaining *Anomia striata* Martin as genotype of *Spirifer* and *Syringothyris typa* (s. *Spirifer carteri* Hall) as genotype of *Syringothyris*.

The argument is presented: (1) that under the rules *Anomia cuspidata* Martin is type of *Spirifer* and *Syringothyris* is synonym of *Spirifer;* (2) but for 70 years practically all authors have, in conscious opposition to the rules, taken *A. striata* as type of *Spirifer* and *Spirifer carteri* s. *Sy. typa* as type of *Syringothyris;* (3) so many species are involved in this instance that the application of the rules would present greater confusion than uniformity.

The secretary will postpone vote on this case for one year and invites expression of opinion for or against suspension in the premises.

C. W. STILES,
Secretary

HYGIENIC LABORATORY,
WASHINGTON, D. C.

QUOTATIONS

RECOGNITION OF SCIENTIFIC WORK

L. H. BAEKELAND, just returned from an extensive trip with renewed appreciation for the opportunities and privileges of the United States, recently brought to our attention the desirability of having Congress recognize in some specific and definite way the triumphs of our men of science, particularly those in department circles. Then in the editorial section of the *New York World* for September 2, Ellwood Hendrick discussed the same sentiments and made a plea for such recognition by Congress. We wish to add our voice and urge that something be done in a proper way to have our law-makers realize that "the United States is the only civilized country in the world that does not recognize distingiushed service by civilians. In the British Empire they make them lords or knights —and we can not do that. In France, Italy, Spain, Belgium, Portugal, China, Japan, and even in Soviet Russia, they give decorations. We do not give decorations to civilians. Moreover, the insignia of decorations have been preempted by so many private organizations in this country that a button in the lapel of a man's coat is without its significance elsewhere."

But there are other ways in which this Nation can express its thanks. Perhaps some day we may go as far as our neighbor Canada and grant a substantial annuity to a man who has made a scientific discovery of great importance to the public. There seems no

[1] Riddle, O., "The determination of sex and its experimental control," *Bull.* Am. Ac. Med., Vol. 15, No. 5, October, 1914.