light. In his experiments he used a mercury arc surrounded with black glass, which transmitted mainly the 366 lines of mercury. When this radiation fell into the eye it caused fluorescence of the materials of the eye, with the result that the observer saw a violet haze, which, being in the eye, was not useful for seeing anything. The effect corresponds exactly with the last sentence above quoted from Beebe.

The color of the eye fluorescence is somewhat uncertain. Wood spoke of it as a "violet" haze. W. de Groot[1] arranged an experiment in which various people looked at ultra-violet lines, and presented the results thus: "For 3650, 3345 and 3261 the description which the persons gave of the color was remarkable. They described it as a clear blue whereas the Hg line 4047 and Zn line 4057 were described as violet. It seemed to them as if the succession in the spectrum was reversed. To myself the color appeared more greyish, although with a hue distinctly bluer than that of the recognized 'violet' lines."

It must be remembered that Dr. Beebe was observing the phenomenon on a grander scale than has been produced in the laboratory. The entire scene which he saw through the quartz window of the bathysphere was lighted with the shorter wave-lengths of the daylight spectrum.

To work out the effects quantitatively will require more exact data than are available at present on the absorption coefficients of sea water for visible and near-ultra-violet light and on the visibility curve of the eye extended into the ultra-violet region of the spectrum.

On the basis of the foregoing explanation one is led to wonder about the fluorescence of the eyes of fish. The fluorescence would be troublesome for undersea daylight vision at these depths, and its absence from the eyes of creatures in such an environment would appear to be a favorable adaptation.

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UNUSUAL SKY APPEARANCE

A CORRESPONDENT from Vienna, Va., writes that on either January 22 or 23, about 8 o'clock in the evening, she saw a light flashing in the southwest something like lightning. It would flare up several times, then die down. As she watched it, it became very vivid till it seemed to come from a great blazing light, almost a ball of fire. All this time it was moving around the horizon from the southwest until it had almost reached the starting point. She thought it perhaps more vivid when in the north, and that it seemed to be dying away in the southeast. It appeared to be very low, just showing above the foothills.

I myself was driving along Wisconsin Avenue in Washington on the evening in question, with my wife, and we were startled by what was probably the same appearance. It resembled what is called "heat lightning," only that it seemed to be very near indeed and not associated with any noise. The night, as I recall it, was very cold and dry, and I believe on the turn between two contrasting types of weather.

I would appreciate it if any of your readers will suggest to me an explanation.

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BOOKS AND LITERATURE

THE MICROPHYSIOLOGY OF NERVE

The Microphysiology of Nerve. By GENICHI KATO. 139 pp., 1934. The Maruzen Company, Ltd., Tokyo, Japan.

IN this concisely written monograph, Professor Kato has presented the results of a series of experiments utilizing his technique for isolating single nerve or muscle fibers in the Japanese toad. Using preparations in which either a single nerve or muscle fiber or both have been dissected free, Kato and his co-workers have abundantly demonstrated that the nerve impulse completely recovers after passing through a narcotized region. The magnitude of the conducted response of a single muscle fiber stimulated through a single nerve fiber is always the same at any strength of stimulus above threshold. Graded, non-conducted muscle fiber contractions localized at the site of small stimulating electrodes are obtainable only with weak stimuli and are unaccompanied by action potentials. Kato compares these responses to peculiar localized contractions occurring as a result of stimulation of a completely narcotized region of a muscle. Both of these types of contraction are found only under restricted conditions as a result of artificial stimuli and are entirely different from the conducted contractions in which there is no deviation from the all-or-none principle.

In observing spinal reflexes, Kato has shown that ipsilateral afferent stimuli are inhibitory to a crossed-extensor reflex (frog) at certain moderate current strengths, while with greatly increased strength of stimulation of the same nerve trunk the effect is summation with the crossed stimulation. This summation is a function of fibers which originate from free nerve endings in the epidermis, whereas the inhibitory effects

[1] *Nature*, September 29, 1934.