thought that by placing them in different positions the orientation would be altered if indeed vision is an important factor.

Large goldfish (*Carassius auratus*) were chosen for the work because of their ready availability and unusual vigor. These animals were in excellent condition throughout the experiments.

An artificial orbit was made for the left eye in the top of the cranium just to the left of the midline by the use of a large dental drill. A narrow canal was cut through the bone connecting it with the natural orbit through which the nervous and vascular connections passed when the eye was slipped into its new orbit. In this way the eye may be readily dislocated within a few minutes without obvious injury to it or its connections.

No detectable abnormalities in the animal's behavior could be noticed. Its orientation and locomotion were unchanged. The right eye was removed a week later. We were thus able to produce a real experimental cyclops. For the first week its behavior was quite as before. After about the tenth day, however, the animal was observed to orient itself tilted a little toward the left side whether swimming or at rest. The tilting increased constantly during the next four weeks after which time it assumed a position with its dorsoventral axis 45° to the left of the vertical. The vision of the animal was regularly tested during this period and found to be very good. If a small rod was slowly moved toward the eye the animal quickly turned aside and avoided it constantly.

A photograph was taken of the animal at this time and the eye replaced in its own orbit. The following day the fish was swimming quite vertical without any observable tendency to tilt toward either side. Its vision and orientation were observed the following two weeks and no abnormalities observed. At no time during the experiment did the animal show any abnormalities other than the tilting; circus movements, etc. being entirely absent.

We feel justified, therefore, in concluding that the visual function is an important element in the normal orientation of this species, visual impulses being apparently able to counteract the controlling influence of the labyrinth.

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THE DECOMPOSITION OF SALICYLIC ALDEHYDE BY SOIL ORGANISMS[1]

THIS aldehyde was obtained from several plants, *e.g.*, *Spirea ulmaria* and other species of Spirea by Pagenstecher[2] in 1835. It was reported in *Crepis foetida* by Wieke in 1856. It is formed by the oxidation of salicon which occurs in willow (Salix) and bridal-wreath (Spirea).

Salicylic aldehyde was first isolated by Shorey[3] from the garden soils of the Mount Vernon estate, and later found in widely separated soils by Schreiner and Skinner.[4] They found that this aldehyde is injurious to wheat plants. Ten parts per million in solution cultures caused a reduction of growth of 31 per cent. in the first six days. The plants were killed in solutions containing 50 parts per million. Other crops were affected similarly, though in some instances higher concentrations were necessary to cause injury. In soil cultures 25 parts per million of salicylic aldehyde was injurious to wheat seedlings.

In order to determine the ability of soil organisms to decompose salicylic aldehyde 27 pairs of cultures were prepared with the usual precautions. After incubating at room temperature for two weeks observations and tests were made. These showed a slight growth of bacteria in five different cultures, but decomposition of salicylic aldehyde in none of them.

Sub-cultures were made from each soil culture to make sure that there had been no mistake in observation. None of these yielded growth of bacteria, and none showed decomposition of salicylic aldehyde. In the growth of the bacteria in the few soil cultures mentioned above the bacteria doubtless used organic matter contained in the soils instead of salicylic aldehyde as the source of carbon.

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[1] Published with the permission of the director of the Alabama Experiment Station.

[2] Pagenstecher, Report, *Pharm.*, 49, 337, 51, 364.

[3] Shorey, E. C., "Some organic soil constituents," Bulletin 88, 13 pp., *Bureau of Soils*, 1913.

[4] Schreiner, O., and J. J. Skinner, "Occurrences of aldehydes in garden and field soils," *Journal Franklin Institute*, 329–343, September, 1914.

THE AMERICAN CHEMICAL SOCIETY

SECTION OF HISTORY OF CHEMISTRY

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The one hundred and fiftieth anniversary of the discovery of oxygen: EDGAR F. SMITH. (Note: Dr. Smith was unavoidably absent. The secretary read Priestley's account of the discovery of oxygen from an original copy of "Experiments and Observations on Air," Vol. II, pages 33–35, and emphasized the importance of this discovery to American chemistry by reading an ex-