

acridians, while the non-protected were much more consistently eaten.

All experiments point to but one general conclusion—concealing coloration protects acridians against bird predators.

The details of these experiments will be published elsewhere.

F. B. ISELY

TRINITY UNIVERSITY
WAXAHACHIE, TEXAS

COLUMNAR STRUCTURE IN EXTRUSIVE BASALTS

IN two recent texts on geology the impression is given that columnar structure in basalt is a characteristic of intrusive flows. In one text the lower canyon of Yellowstone River, near Tower Fall, is pictured on a plate entitled "Intrusions," with the caption: "Sills lie parallel to surrounding structures." Since the lower basalt at that point rests upon the "Tower Fall Conglomerate," a distinctive stream-gravel, there is no doubt that the bed represents a surface flow. At Overhanging Cliff a child of 14 can recognize the sand and gravel beneath the basalt and understand the porous and ashy contact of the lava on the stream bed. A more diagrammatic section of a lava flow could not be invented.

North of Tower Fall Ranger Station one can look across the river and see where the basaltic lava flowed northward onto the little valleys at the foot of the Precambrian Buffalo Plateau. The river has cut

across these valleys and the intermediate ridges, showing in section the V-shaped valleys, all filled to the same level with columnar basalt. Certainly this was a surface flow. It appears to be a part of the flow at the canyon.¹

Another text pictures Giant's Causeway as an example of intrusive basalt. Now if you stand on the Causeway and look east, you see a high cliff with two horizontal bands of red material lying between layers of columns. The red layers are ferruginous soils developed on the basalts between eruptions. What we really have at the Causeway is a series of successive surface flows of basalt, all of them hardening with columnar structure. To complete the story, near Portrush I collected charred pine wood—a log of it—and a perfect charred cone of the *Strobus* type between two layers of basalt. In the face of these statements the author of the book writes me that "the basalts of Giant's Causeway look like intrusives." These strata are well described and explained in a "Guide to Belfast . . . prepared for the British Association" (1892), and in other publications. Professor Charlesworth, of Queen's University, Belfast, in a letter recently received, restates the extrusive origin of the Giant's Causeway basalts. (*Cf.* *Proc. London Geologists' Assoc.*, 1935.)

Columnar basalts, to be sure, often are intrusive. But care is needed in showing examples of such.

HENRY S. CONARD

GRINNELL COLLEGE

SOCIETIES AND MEETINGS

THE TENNESSEE ACADEMY OF SCIENCE

THE Tennessee Academy of Science, like the American Association for the Advancement of Science, was initiated by geologists. It was projected by Dr. George H. Ashley, now state geologist of Pennsylvania, promoted at Knoxville by Dr. C. H. Gordon, then professor of geology, University of Tennessee, at Nashville by Dr. L. C. Glenn, professor of geology, Vanderbilt University, and its first secretary was Wilbur A. Nelson, then assistant in the Tennessee Geological Survey, now professor of geology, University of Virginia. Botanists have taken the lead in recent years and were first to organize a section. At the meeting on November 26 and 27, 1937, at George Peabody College, sections in geology and physics were organized, and the three sections had sessions on Friday afternoon, with Dr. Jesse M. Shaver, chairman for botany, Dr. L. C. Glenn, for geology, and Professor Slack, for physics. At the general sessions of the academy, President Louis J. Bircher, of Vanderbilt University, presided on Friday morning and

Vice-President Peyton N. Rhodes, of Southwestern University, on Saturday morning.

The two organizations affiliated with the academy, Tennessee Ornithological Society and the Barnard Astronomical Society, were represented on the program, Albert F. Ganier of the former discussing the subject, "Mid-winter Birds of the Nashville Area," and Mrs. Roberta Lyne, president of the Barnard Club, superintending an exhibit of Barnard manuscripts and the showing of a "McMath-Hulbert Observatory" motion picture film. Five papers by representatives of the federal and state departments of conservation indicated the interest of these organizations in the work of the academy.

Dr. C. H. Gordon, in his address, as the first president in 1912, urged the establishment of a "State Conservation Commission whose functions shall be to provide for the conservation of the material and human interests of the State including the waterpowers, forests, minerals and other resources and conditions affect-

¹ *Cf.* U. S. Geol. Surv. Folio 30, 1899.