

ical factors at present operative, is not easily established, but observation points strongly toward the latter as controlling forces.

J. C. BLUMER

TUCSON, ARIZONA

DIKES IN THE HAMILTON SHALE NEAR CLINTONVILLE, ONONDAGA COUNTY, NEW YORK

THE presence of a few igneous intrusions in the almost undisturbed Paleozoic strata of central New York has long been known to geologists. Their extreme rarity, however, has always invested them with a peculiar interest.

Excluding the Manheim Dike near Little Falls, which lies about seventy-five miles east of Syracuse and which cuts Ordovician strata, we find that these igneous rocks may be grouped geographically into (1) those occurring in the vicinity of Ithaca and Ludlowville and (2) those occurring in the vicinity of Syracuse. In both regions the intrusions are peridotite and are mostly true dikes cutting in the first case such Upper Devonian formations as the Genesee shale and the Portage and Ithaca shales and sandstones, and in the second case cutting the Salina beds of Silurian age.

As far as the writer has been able to learn, the geologically intermediate Hamilton shale has, until now, yielded no dikes and the recent discovery of two in this formation at a locality about twelve miles southwest of Syracuse and about forty miles northeasterly from Ithaca is believed to be a matter of interest.

The dikes in question are exposed on the south wall of the Clintonville Ravine at a point approximately fifty feet above the level of the Marietta road. The more western is a fine-grained porphyritic rock resembling peridotite. What appear to be serpentine grains, produced by the alteration of olivine, protrude from the weathered surface and have the appearance of small pebbles. Another conspicuous feature is furnished by large scales of a bronzy mica. This dike has a uniform width of from seven to eight inches and is displayed for about twelve feet on the south bank of the ravine. On the north side it is obscured by talus. Its plane is vertical, while its direction

is north and south, agreeing in this latter respect with the Ithaca dikes. Wherever examined it presents a very uniform texture, is apparently free from fragments of the sedimentary rocks through which it passed, and has produced little contact metamorphism.

The second dike discovered by the writer lies about two feet and four inches to the east of the first and was not observed until the wall at this point had been cleaned. It has a width of about eight inches. Like the first dike, it is vertical and north and south in direction. It differs, however, from the first dike in being much weathered in places and in containing many shale fragments some of which have a long diameter of three inches or more.

BURNETT SMITH

DEPARTMENT OF GEOLOGY,
SYRACUSE UNIVERSITY

GUINEA PIG GRAFT-HYBRIDS

IN May, 1907, I published results demonstrating, (1) that iso-engrafted ovaries in fowls subsequently exhibit a reproductive function; and (2) that such resulting offspring give evidence of a "soma" or "foster mother" influence.¹ The same year, Professor Wilhelm Magnus, of the University of Christiania, obtained similar results on a rabbit.²

The purpose of this note is to record results obtained on a guinea pig. November 6, 1908, the ovaries of a young guinea pig were removed and in the former site of the right ovary, the left ovary from a sister guinea pig was engrafted. The guinea pig was bred and in the latter part of July or the early part of August, 1909, gave birth to two young.³ As all the animals were mongrels it is obvious that no conclusion regarding foster mother influence is possible.

In SCIENCE,⁴ September 3, 1909, Professor Castle reports the birth of two guinea pigs from a spayed white mother carrying en-

¹ Proceedings of the society, *American Journal of Physiology*, Vol. XIX., pp. xvi-xvii, July, 1907.

² *Norsk magazin for laegevidenskaben*, No. 9, 1907.

³ November 12, the operated animal gave premature birth to two more young.

⁴ N. S., Vol. XXX., No. 766, pp. 312-313.

grafted ovaries from a black guinea pig and bred to a white male. He states that no evidence of foster mother influence was exhibited. Indeed no such evidence was to be expected, for (1) the markings of such hybrids are not uniform, and (2) the mating was not suitable for bringing out such influence. Had the operated pig been bred to a male of the same strain as the pig from which the engrafted ovary was obtained, then in view of my own results on fowls,⁵ and Magnus's results on a rabbit,⁶ characteristics in the offspring indicative of such influence might have been obtained.

C. C. GUTHRIE

PHYSIOLOGICAL LABORATORY,
UNIVERSITY OF PITTSBURGH,
October 9, 1909

ASTRONOMICAL AND ASTROPHYSICAL SOCIETY OF AMERICA

THE American Astronomical and Astrophysical Society held its tenth annual meeting at the Yerkes Observatory, Williams Bay, Wis., on August 19, 20 and 21. The meeting was remarkable for the large attendance and for the number and character of the papers presented. Besides a number of guests there were present Miss Calvert, Miss Bigelow, Mrs. Fleming, Miss Furness, Miss Leavitt, Miss Young, Messrs. Adams, Aitken, Barnard, Barrett, Brown, Buchanan, Burnham, Cogshall, Comstock, Curtiss, Eichelberger, Fisher, Fox, Flint, Frost, Gaertner, Hamilton, Hammond, Humphreys, Hussey, Jordan, Laves, Lee, Mac-Millan, Mellish, Morehouse, Moulton, Parkhurst, Payne, Peters, E. C. Pickering, Petittidier, Petrakis, Plaskett, J. Poor, Roe, Schlesinger, Slocum, Stebbins, Stetson, St. John, Stone, Thaw, Updegraff, D. T. Wilson and H. C. Wilson.

President Pickering, after welcoming the society to Williams Bay, referred to the loss during the last year of two of its oldest members. He said in part: "Professor Newcomb, president of our society for six years, always took the greatest interest in its growth and welfare. It rarely happens that a man is really distinguished in more than one department of science. We all know his preeminence in astronomy. He used to say, 'I am not a mathematician,' yet the Mathematical Society in the strongest terms proclaimed

him as their most eminent member. Our attitude should not be that of grief at his loss, but rather rejoicing that he enjoyed many years of usefulness after the age when most men's work is done; he lived to see the great works he had undertaken completed, and he is now saved from the suffering which at the end rendered life a burden to him.

"Professor Hough's activity in science extended over many years. We remember, even at our last meeting, his interest in our work and plans. His observations with the Evanston telescope, at one time the largest in the world, were maintained for nearly thirty years."

The president then discussed the present needs of astronomy and expressed the hope that the society might take active part in supplying them. One of the greatest needs is a number of small grants, not exceeding a thousand dollars each, which could be used with the sole object of securing the greatest scientific return. If made to the larger observatories, careful organization and system would permit a large amount of routine work to be secured. If made to a small observatory, or to an amateur, the skill and experience of an expert in his own specialty might be secured, with results far beyond those which could be obtained by another astronomer, however skilful in other lines of work. The only way to supply such needs is to make them known. President Pickering invited the members of the society to send him examples of such researches. For instance: Professor Bailey is now studying the climate of South Africa, perhaps the best in the world for an astronomical observatory, and will return shortly. He is making visual and photometric observations with a ten-inch telescope, and photographing the Milky Way with a Cook anastigmat, using long exposures. A grant of one thousand dollars would permit this work to be continued for another year by his assistant, thus doubling the results obtained, at a small additional expense.

After the address by the president the following papers were read:

Some Results with a Selenium Photometer: JOEL STEBBINS.

This paper is a report of progress in the method of using selenium for the electrical measurement of starlight. It has been found that the best results are obtained by keeping the selenium at a constant low temperature in an ice pack. During the past summer, the accuracy of the method has been so increased that it is now possible to measure first-magnitude stars with a probable error of less than 0.01 magnitude.

⁵ *Journal of Experimental Zoology*, Vol. 5, p. 563, June, 1908.

⁶ *Loc. cit.*