

the slope. At one place I found that the crest of a ripple mark was cut by a small transverse channel draining the basin above the mark into the one below. Such a small channel must have been formed by an antecedent stream, that is, one in operation and maintaining its course across the rising fold as it emerged from the ocean. Such a river is the Green River described by Powell.

In a word we seem to have in these small ripple mark basins that I have described an epitome of the destruction of continents, of the formation of the continental shelf and the evolution of geographic form as brought about by subaerial denudation. The erosive work was particularly similar to that of an ordinary river because the water running down the slope was very slight in amount. The rills were not formed, as are ordinary rills, by the flowing back to the ocean of the water held in a considerable hollow of the beach. They were formed by the small amount of water held in the spongy material of the ripple marks and pulled down toward the hollows as the level of the water under the surface lowered with the receding tide. The amount of water thus being less than usual in the formation of rill marks, the process was slower and the result more delicate and more similar to ordinary subaerial erosion.

It was interesting to note that the erosion took place only on the seaward side of the ripple marks and the shoreward sides were left undissected. The reason for this seems to be that the water held in the sands was pulled vertically down by gravitative action and hence was drawn through between the particles of the beach deposit toward the next hollow on the seaward side. In this respect only, as far as I could see, did these small streams differ from the streams on a similar constructional slope in the more consolidated rocks of the continents.

It would seem from this instance and others that have been called to my attention from time to time that nowhere do we have such a chance to study dynamical geology in operation on a small scale as at the sea shore. Apart from the work of the ocean itself there are a large number of things similar to what I have mentioned above that are worthy of careful attention, even though they be small. One thing especially that can be studied to great profit at this time of the year is the shore work of frost and ice. I feel that our ocean shores have not been studied in sufficient detail in the past, and I am sure that no better place can be found to show erosive processes in their entirety than the sea shore at low tide.

LETTERS TO THE EDITOR.

* * * Correspondents are requested to be as brief as possible. The writer's name is in all cases required as a proof of good faith.

On request in advance, one hundred copies of the number containing his communication will be furnished free to any correspondent.

The editor will be glad to publish any queries consonant with the character of the journal.

ANOTHER ROPE OF MAGGOTS.

THE note by Mr. Lynds Jones in *Science* of December 29 recalls a similar observation by myself. I was hastening to a train and observed a rope of maggots, such as is described by Mr. Jones, crossing my path, which I at first took to be the skin of a snake. It was on what is called the Gully Road in Newark, N. J., and the maggots were crossing the path from the gully of the road. I kicked it and noticed that the maggots appeared to be clinging to each other, so that they

separated in flakes. I had not time to look, but I presumed that they were moving away from a carcass which had been exhausted. A year later along the same road I noticed in the gully the body of a dog which was being consumed by maggots, but I observed, when the food was exhausted, that they moved down the rocky gully not in a rope, but one by one, and scattered along, slender and emaciated, for a distance of perhaps fifty feet.

WILLIAM HAYES WARD.

New York, Jan. 12, 1894.

SECRET LANGUAGE OF CHILDREN.

MR. OSCAR CHRISMAN's article in *Science* of Dec. 1, 1893, recalls to my mind the "Hog Latin" that I and my school-boy companions used to use, and by means of which we were able to carry on conversations which were altogether unintelligible to our parents and teachers.

Our "Hog Latin" was formed by transferring the first consonant sound of a word to the end of the word, and then adding long *a*, as in the words doubt = oubt-da, book = ook-ba, house = ouse-ha.

Long words were sometimes split up into syllables, and these syllables treated as shorter words, as: Language = angla-agegwa, suspect = us-sa-ect-spa. This language was defective in that it did not sufficiently disguise those words which begin with a vowel, as: Are = are-a, either = either-a, any = any-a. We used to get around that by avoiding the word I; using *me* instead, or by placing the accent in the wrong place, as: Either-a, calling it *ee-thra*.

I remember that I learned to use the language in a day or two, and after a short time did not have to stop to think how to make a new word, but was guided by the sound entirely.

A couple of sentences will suffice to explain the language:

Where are you going this morning? *Ere-wha are-a oo-ya oing-ga is-tha orning-ma?*

When this language is spoken rapidly it is difficult for those not in the secret to catch what is said. *En-wha is-tha ang-la-edge-gwa is-a oken-spa apid-ra-e-la it-a is-a iffi-da-ult-ca or-fa ose-tha ot-na in-a e-tha e-sa-et-cra oo-la atch-ca ot-wha is-a ed-sa.*

D. T. MARSHALL.

Metuchen, N. J.

NOTES ON WATER LILIES, ETC.

J. E. TODD in *Science*, No. 567, mentions a "miniature water lily." Another variety of a very small water lily grows at Hyannis Port, Mass., in a long abandoned mill pond. None other of the numerous ponds in that locality, where water lilies grow abundantly, possesses this small and beautiful variety. The blossom is an exact copy of *Nymphaea odorata*, and is but one-half inch in diameter; the leaves also, in shape, color and venation, are like those of *N. odorata*, and are but one and a half inch in full diameter. I did not look up the plant last summer, but had found it for several years before, and will search for it when I return to the shore.

Several notes on "coon-cats," etc., recalled to me a very large black and white tom cat, at Hyannis Port, a notable mouser, having the peculiarity of *double fore feet*. All the feet of this animal are particularly large and strong, and on the outer side of each fore foot grows a second paw more than half as large as the normal one. This cat was a vigorous digger; to effect entrance to a basement under my porch, he dug a large hole at an angle of 45° and about eighteen inches deep, passing under the boarding, and large enough for him to crawl

through, but smaller at the inner opening than the outer. Having entered by this means he seemed unable to increase the hole by digging from the inside upward and could not return as he came. When one hole was blocked up by stones, he dug from the outside another, but could never leave the basement unless the doors were opened for him.

In regard to "late blooming trees," I had a flowering almond which bloomed in April, then again in October, and again in April. It was a young shrub, and grew vigorously. I concluded that the October blooming was provoked by very mild, moist, showery, spring-like weather, which continued long enough to develop the flower buds, and then hasten the growth of the next set of embryo buds, to a point where they were ready for blooming on the return of good growing weather.

J. McNAIR WRIGHT.

BOOK-REVIEWS.

Handbook of Experiment Station Work. A Popular Digest of the Publications of the Agricultural Experiment Stations in the United States. Bulletin No. 15. Washington, D. C., Office of Experiment Stations, U. S. Department of Agriculture. 1893, 411 p.

As mentioned in its title, this bulletin is a popular digest of the work of the experiment stations of the United States. That such a publication is a useful one and serves a very useful purpose is manifest when it is known that there are fifty-four different stations in the country, some maintained entirely by the general Government, some by the several States. These stations had during the year 1892 no less than \$997,244 at their disposal, and of this sum \$689,542 was from the national treasury. That the stations have done some good work cannot be denied; but that there has been a large amount of duplication without sufficient justification,

and a large amount of useless expenditure also, cannot be denied. The Secretary of Agriculture in his last annual report very properly protests against the charging against the Department of Agriculture the sum of over \$700,000 annually when the Department has nothing whatever to say in regard to its disbursement. "No detailed account," he says, "as to how the money has been expended, to whom, or for what it has been paid out, is required. Current rumor in some of the States and Territories, so universal, pronounced, accentuated, and vehement as to have secured great credence, indicates that some of the moneys appropriated for experiment stations have been diverted from legitimate public purposes and turned to those of a personal and not patriotic character." He rightly thinks that if the Department is to be charged with the sum it should have the supervision of its expenditure. There are about 500 persons employed in the different stations, and during 1892 alone there were published fifty-five annual reports and 250 bulletins. With such a mass of literature as this to cope with the necessity of some digest is at once evident.

The first regularly organized station was at Wesleyan University, Middletown, Conn., in 1875; but as a result of the law passed by Congress in 1887, giving \$15,000 annually to every station organized, *now* every State and Territory except Montana and Alaska have stations, some States have two, and several have three sub-stations.

The volume under review was originally designed as a part of the exhibit of the World's Fair at Chicago, but it has only recently been issued. The various subjects are arranged alphabetically, and while not pretending to be a manual or encyclopedia of agriculture it will at the same time serve as a ready means of ascertaining what has been done upon many subjects of importance in agriculture. Under each heading there is given a brief notice of the subject and at the end refer-

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