

time, that the *flowers* of *Drosera* and *Nepenthes* are carnivorous, and that the problem of cross-fertilization is 'normally insoluble.' Here, also, obsolete terminology is perpetuated in the expression 'fertilization of the stigma,' and obsolete interpretation in referring to the stigma as the 'female organ,' and to the stamens as the 'male organs' of the flower.

The fact, stated in the first article, that the Virginia creeper or the convolvulus will begin to twine about the handle of a rake, temporarily laid against a wall, does not seem, in the author's mind at least, at variance with the clear 'perspicacity,' 'intelligence' and 'prudence' with which plants in general are attributed elsewhere in the articles. One wonders, though, why the convolvulus did not 'set its thought to working,' as did the *Silene Italica*, mentioned a few lines farther on. But doubtless we have failed to enter into the spirit of the author, for later he implies intelligence to the mountains, the seas and the stars.

'The flowers,' we are told, 'came upon our earth before the insects.' This 'geologically incontestable fact' is, alone, 'enough to establish evolution'!

But the discoveries of recent science sadly pale in comparison with the root-intelligence described in a foot-note to the first article, and credited to Brandis. Thus:

This root, in penetrating into the earth, had come upon an old boot sole: in order to cross this obstacle, which, apparently, it was the first of its kind to find upon its road, it subdivided itself into as many parts as there were holes left by the stitching needle; then, when the obstacle was overcome, it came together again and reunited all its divided radicles into a single and homogeneous tap-root.

Of course no one could state, *a priori*, that such a marvelous feat was impossible, but it is the kind of tale to which one more readily gives credence if substantiated by photographic evidence. Without such evidence the event, as narrated, is absolutely incredible to

<sup>1</sup> That insects appeared in Silurian times, and that there is no certain evidence of angiosperms earlier than the Cretaceous, are facts of paleontology too well known to be dwelt upon here.

any botanist. But even if such an act were common for roots, by what stretch of the imagination could one infer that a root could have preconceived and reasoned out the plan so deftly executed?

There is much in these articles of interest, and of scientific accuracy, and the apparent appreciation, in the last one, of the value of the experimental study of variation is very gratifying.

"All that we observe within ourselves," says Maeterlinck, "is rightly open to suspicion; and we are too greatly interested in peopling our world with magnificent illusions and hopes." Perhaps this explains the impossible botany of the articles, but it can not excuse it.

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#### CONCERNING LEFT-HANDED ABORIGINES

A RECENT article in SCIENCE requested people in charge of Indians to find the proportion of left-handed aborigines to the right-handed ones. Acting upon that request, the writer has been investigating the subject among the Hoh and Quileute Indians, and, out of a population of 231, five left-handed people were found: How-withlup (male), Walothlu (male); Hick-sh (male), Thle-ba-tolch (male), Hi-yic-to-utl (female).

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#### UPLIFT INCREASES RAINFALL, DENUDATION DIMINISHES IT

It has long been known to students of geography that in most parts of the world more and more rain and snow is observed to fall as one examines greater and greater heights on the slopes of hills and mountains up to very considerable elevations. Hellmann's new rainfall map of Germany shows this to be true even of the very flat hills on the plains of northern Prussia. At any point on this plain the hills are a little wetter and the valleys drier than the ground about. Dr. Kassner has suggested in the February *Petermann* that in regions of subdued mountain form there must,