

are able to draw water from the sucker, which the experiment shows to be done, and, as a contrary function, to provide it with sufficient nourishment from the parent tree to make a healthy growth.

It is a fact worthy of note, that this plant takes unusual care to provide for its propagation. Most of the roots examined showed evidence of buds already formed for another year, and wherever the suckers had been cut down in previous seasons, two or more buds had taken their place. In one instance where worms were injuring the root, the expiring tissues redoubled their exertions, and eight shoots and twelve buds were produced in 4 inches of root. Such a state of affairs renders it exceedingly difficult to eradicate the undergrowth of the Robinia.

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### III. ANCIENT INSECTS AND SCORPIONS.

Fossil scorpions have been known for some time as far down in the geological series as the Carboniferous, in which formation about twenty-five species of scorpions and spiders have been discovered, but until last year no discovery of this kind had been announced in any older rocks. In November last, Dr. Lindström of Stockholm, announced the discovery of a well-preserved specimen of a true scorpion, which he named *Palæophoneus nuncius*, in the Upper Silurian of Sweden; and in December of the same year, a similar discovery in Scotland was announced by Dr. Hunter. In July of this year, Prof. Whitfield of New York described and figured a third species in the Lower Helderberg series of the State of New York. Thus this form of life has been at one bound, and in three different localities, carried back from the Carboniferous to the Silurian, a remarkable instance of the nearly simultaneous discovery of new facts, in different places and by different observers. It is also of interest that the crustaceans of the genus *Eurypterus*, which have been called aquatic scorpions, appear in the same formations in which the scorpions have now been found, so that it would appear that the aquatic and aerial animals of this type of structure originated together, or were at least contemporaneous in the Silurian period. The Eurypterids, however, early became extinct, while the scorpions survive.