

wer, grasses, bushes, and finally the giant of the forest itself. Everywhere the lowly lichen is at work endeavoring to clothe the barren spots of the earth, and preparing in the wilds of the rocky wilderness some place where man may find a place to dwell. So promptly do these dutiful vegetative creatures attend to this work that scarcely does the white hot lava of Vesuvius cool before they begin to take possession of it. So beautiful a description of this cryptogamic conquest is given by one of Nature's truest poets (Crabbe), that we must quote him again:

"Seeds, to our eyes invisible, will find  
On the rude rock the bed that fits their kind.  
There, in the rugged soil, they safely dwell  
Till showers and snows the subtle atoms swell  
And spread the enduring foliage; there we trace  
The freckled flower upon the flinty base.  
These all increase, till, in united years,  
The stony tower as grey with age appears  
With coats of vegetation thinly spread,  
Coat above coat, the living on the dead;  
These then dissolve to dust and make a way  
For bolder foliage, nursed by their decay;  
The long-enduring ferns in time will all  
Die and dispose their dust upon the wall,  
Where the winged seed may rest till many flower  
Shows Flora's triumph o'er the falling tower."

—*Prof. Mackay.*

MR. GEORGE J. ROMANES recently delivered a lecture in London on "The Darwinian Theory of Instinct," and gave an account of the most recent investigations which he has made. Instinctive actions he defined as actions of "a consciously adaptive character prior to individual experience, performed without necessary knowledge of the relation between means employed and ends attained, and similarly performed under similar appropriate circumstances by all individuals of the same species." Instinct, however, whenever fully formed, is not invariably fixed, as generally supposed, but, on the contrary, is highly plastic under the guiding hand of intelligence.