

teries exhibit true electric phenomena is shown by their currents behaving in exactly the same way as those produced artificially; thus, says Gunther, "they render the needle magnetic, decompose chemical compounds, and emit the spark." To receive a shock, it is necessary in the one apparatus, as in the other, that contact should be made at two points in order to complete the circuit. The various species of electrically-armed fishes are not, as might have been expected from the common possession of so unique a weapon, by any means all closely related. They belong to three widely different groups—namely, rays, eels and sheathfishes—which would seem to indicate that electric organs have originated independently in each group. The electric eel of South American waters is the most powerful of these creatures, growing to a length of six feet, and provided with a pair of batteries containing some hundreds of minute cells copiously supplied with nerves.

SOME USES OF LICHENS.—

"The living stains, which Nature's hand alone,
Profuse of life, pours forth upon the stone;
For ever growing, where the common eye
Can but the bare and rocky bed descry,
There science loves to trace her tribes minute,
The juiceless foliage and the tasteless fruit,
There she perceives them round the surface creep,
And while they meet their due distinctions keep,
Mixed, but not blended, each its name retains,
And these are Nature's ever-during stains."—*Crabbe*.

The first plant to secure a hold on the smooth surface of a rocky cliff or mountain side is the lichen. Its fine, powdery spores are wafted by the wind and adhere to the surface of the most polished flint. On this the growing plant paints its thin crustaceous thallus firmly, and the spreading stain chemically etches its adamantine foundation, making a rough surface which catches the dust specks floating in air. Thus a small patch of soil is formed which can support a larger lichen or a moss, which in like manner accumulates more material until a plot of ground takes its place, supporting