

plant from some distant shore, of which not one of its ever so remote ancestry could have had any knowledge, is brought within its range of wing; its flight is unhesitatingly directed to it, and its precious burden of eggs, without a shadow of mistrust, is at once committed to its leaves. Such knowledge has never been attained by our most distinguished botanists, and it is beyond the scope of human intellect. We have called its displays instinct—a word conveniently framed to cover manifestations in other classes of animated beings, which we are utterly unable to explain. As a partial explanation of these wonders, it has been suggested that to the insect world may have been given senses differing in number and in kind from those which we possess. But all the wonderful phenomena attendant upon insect oviposition by selection is readily explained under the supposition that it is guided and controlled by the sense of smell. We know the value of this important sense to us, how greatly it may minister to our pleasure, and what service it may render in guarding us from deleterious exhalations and from improper food. It is capable of cultivation to the extent of rendering us still greater service. I have been told of a chemist in one of our colleges who can make quite a correct qualitative analysis of a patent nostrum by applying it to his nose, and picking out one after another of the ingredients, first naming those which are simply added as covers. It is related of a blind person that he acquired the faculty of recognizing his acquaintances by the sense of smell. There are negroes in Africa who will follow their masters by scent. A fish dealer in Albany claims the ability of naming each species of fish offered in the market, when presented to him blindfolded, by the odor peculiar to each. The illustra-

tions given us of the acuteness of this sense, in some of our domestic animals, are so numerous as not to need citation. We will quote a single instance of this almost miraculous acuteness, related upon undoubted authority:—“A person, to make trial whether a young blood-hound was well trained, caused one of his servants to walk to a town four miles distant, and then to a market-town three miles further. The dog, without having seen the man he was to pursue, followed him by the scent to the above mentioned places, notwithstanding the multitude of market people that went along the same way, and of travellers that had occasion to cross it; and when the blood-hound came to the chief market-town, he passed through the streets without taking any notice of any of the people there, and left not till he had gone to the house where the man he sought rested himself, and found him in an upper room, to the wonder of those that followed him.”

That insects are controlled by this same sense may seem a bold supposition to those of you who may happen to know, or who may learn now from the confession that I am compelled to make, that notwithstanding the laborious investigations in insect structure, conducted through a century by some of our most distinguished scientists, we are utterly unable to point out with positive certainty the precise location and nature of the organs of smell. Naturalists have differed, and still differ, in their views in regard to their location. Cuvier, Audouin, Dumeril and Burmeister, have regarded the spiracles or breathing pores as discharging this office. Reaumer, Lyonnet, Latreille, and others, have referred it to the antennæ. Others have believed that the palpi were the true smelling organs, and others that the sense belonged to certain cavities in the front part of the