

they had been made to fast a long time, they killed small fishes put into the tub. They acted from a distance; that is to say, their electrical shock passed through a very thick stratum of water. We need not be surprised that what was observed in Sweden, on a single gymnotus only, we could not perceive in a great number of individuals in their native country. The electric action of animals being a vital action, and subject to their will, it does not depend solely on their state of health and vigour. A gymnotus that has been kept a long time in captivity, accustoms itself to the imprisonment to which it is reduced; it resumes by degrees the same habits in the tub, which it had in the rivers and marshes. An electrical eel was brought to me at Calabozo: it had been taken in a net, and consequently having no wound. It ate meat, and terribly frightened the little tortoises and frogs which, not aware of their danger, placed themselves on its back. The frogs did not receive the stroke till the moment when they touched the body of the gymnotus. When they recovered, they leaped out of the tub; and when replaced near the fish, they were frightened at the mere sight of it. We then observed nothing that indicated an action at a distance; but our gymnotus, recently taken, was not yet sufficiently tame to attack and devour frogs. On approaching the finger, or the metallic points, very close to the electric organs, no shock was felt. Perhaps the animal did not perceive the proximity of a foreign body; or, if it did, we must suppose that in the commencement of its captivity, timidity prevented it from darting forth its energetic strokes except when strongly irritated by an immediate contact. The gymnotus being immersed in water, I placed my hand, both armed and unarmed with metal, within a very small distance from the electric organs; yet the strata of water transmitted no shock, while M. Bonpland irritated the animal strongly by an immediate contact, and

of water, more or less thick according to the distance, opposed to the electrical current. When very much pressed by hunger, it sometimes directed the shocks against the person who daily brought its food of boiled meat. Persons afflicted with rheumatism came to touch it in hopes of being cured. They took it at once by the neck and tail: the shocks were in this case stronger than when touched with one hand only. It almost entirely lost its electrical power a short time before its death.'