

the tail. The thick lateral muscles present no unusual features and the electro-motive property is purely superficial, being confined to a glandular layer in the skin and best developed in the caudal region. *Mormyrus*, it may be added, is allied to the herring and pike families, and belongs to the same order as *Gymnarchus niloticus* which exhibits like *Mormyrus*, rather feeble electric powers.

Some researches recently conducted in Scotland by Dr. E. Waymouth Reid have yielded the remarkable discovery that a series of scattered cutaneous glands in the common eel, *Anguilla*, constitutes an electric organ of great interest. Eel-skin has long been an old wives' remedy for sprains and rheumatic affections, and carefully devised experiments have quite recently shown how an electric discharge (the electro-motive force of the tissue's "current of rest") results from the activity of the gland cells in the integument by which the body of the eel is enveloped. We have in this remarkable discovery another illustration of the fact that the commonest of common objects may yield scientific results of rare interest and profound importance. The French-Canadian peasant who wrapped around his sprained wrist a piece of eel-skin had little notion that the dried tissue of the fish really possessed some of the most marvellous and mysterious properties exhibited by the finny tribes.

That activity in the skin-glands of the eel is associated with an electric discharge of appreciable power is a fact which considerably enlarges our ideas as to the nature of electric organs. In the electric organs of the Torpedo, the Skate and *Gymnotus* there is full evidence that we have examples of transformed muscular tissue. The organs may differ in situation, arrangement and general anatomical features, but they have this in common that they have a direct nerve supply from the central spinal system and are under the immediate control of the animal. We know that in many lowly animals, tissues are found which are neither muscle nor nerve, but a union of both. The neuro-muscle cells of the jelly fishes (Medusæ) are an example. These cells are so primitive in structure and function that they