

fording an extensive surface of attachment for the large pectoral muscles, from which the limb derives its principal force. The head terminates in front by a pointed nose, which is armed at its extremity with a small bone, intended to assist in penetrating through the ground.

While all this attention has been paid to the development of the anterior part of the body to which these instruments specially contrived for burrowing are affixed, the hinder part is comparatively feeble, and appears stunted in its growth, and curtailed of its fair proportions. The pelvis is exceedingly diminutive, being reduced to a slender sacrum; and it is thrown far back from the abdomen, to which it could give no effectual protection. Hence the animal, when above ground, walks very awkwardly, and is unable to advance but by an irregular and vacillating pace.*

We have seen that there is a tribe of fishes armed externally with sharp spines, which they are capable of erecting when in danger of attack. The *Porcupine* and the *Hedgehog*, which belong to the family of insectivorous quadrupeds, are furnished with a similar kind of defensive armour. For the purpose of erecting these bristles, when the animal is irritated or alarmed, there is provided a peculiar set of muscular bands, which forms part of the usual subcutaneous layer, termed the *panniculus carnosus*. In the hedgehog these muscles are very complicated, and give the animal the power of rolling itself into a ball. A minute description of these muscles has been given by Cuvier, who found that the whole body is enveloped in a large muscular bag, or mantle, lying immediately under the integuments; and capable, by the contraction of different portions of its fibres, of carrying the skin over a great extent of surface. In the usual state of the animal, this broad muscle appears on the

* The only quadrupeds which resemble the mole in the perfect adaptation of their structure to the purposes of burrowing, are the *Wombat* and the *Koala*, which are among the many extraordinary animals inhabiting the continent of Australia. Their hind legs are constructed in a manner very much resembling the human fore-arm. (See Home, Lectures, &c. i. 134.)