

nally adjusting the structures of parts to the circumstances in which they are to be placed at an after period, would of itself, were it a solitary instance, be well fitted to call forth our admiration. But as we study each department of the animal economy in detail, the proofs of design in the adaptation of organs to their respective purposes multiply upon us in such profusion, that we are apt to overlook individual instances, unless they are particularly brought before our notice. How often have we witnessed and profited by the rapid renewal of the cuticle, when by any accident it has been destroyed, without adverting to the nature of the process which it implies; or reflected that the vessels of the skin must, on all these occasions, supply the materials, out of which the new cuticle is to be formed, must effect their combination in the requisite proportions, and must deposite them in the precise situations in which they are wanted!

Different animals present remarkable differences in the thickness and texture of the cuticle, according to the element they are destined to inhabit, and the situations in which they are most frequently placed. Provision is in many cases made for preserving the cuticle from the injury it would receive from the long continued action of the air or water; for it is apt to become rigid, and to peel off, from exposure to a very dry atmosphere; and the constant action of water, on the contrary, renders it too soft and spongy. In order to guard against both these effects, the skin has been furnished, in various parts of its surface, with a secreting apparatus, which pours out unctuous or mucilaginous fluids: the oily secretions being more particularly employed as a defence against the action of the air, and the mucilaginous fluids as a protection against that of water.

The conditions on which the perfection of the sense of touch depends are, first, an abundant provision of soft papillæ supplied with numerous nerves; secondly, a certain degree of fineness in the cuticle; thirdly, a soft cushion of cellular substance beneath the skin; fourthly, a hard resisting basis, such as that which is provided in the nails of the