

over the large orange-colored, chisel-like teeth. The short thick legs terminate in small horny-soled feet armed with long black claws well adapted for climbing. The limbs and the stout body, with the exception of the middle of the back, are clothed with long fine, almost woolly hair. Intermixed with this along the sides and over the nape is a wide band of stiff, coarse, grey-tipped hair about six inches long, and the forehead bears a short tuft of grey bristles. Along the middle of the back and out to the end of the short tail grows a dense mass of erectile quills, mixed with a few long black hairs. The quills are of all lengths from less than an inch to three and a half or four inches long. In addition to this principal mass, there is a scattered growth of short but stout quills concealed in the hair all along the sides and over the head, extending low down on the forehead and above the eyes. Only the underparts of the animal are entirely free from the spines.

I have never come across the young of the porcupine myself, but I am informed by Mr. C. W. Nash that they are born in May, two to four in a litter, and are at birth extremely large in proportion to the size of the adults. They are covered with long black hair interspersed with quills about half an inch in length.

The quills of the adult are white at the base, shading towards the top into yellow and dark brown to black. The largest of them are $3\frac{1}{2}$ inches to 4 inches long (approximately, 90 mm. to 100 mm.) and about $1/16$ inch (approximately 2 mm.) in diameter at the thickest part. They are clearly only modified hairs, and various types may be found on the same animal, ranging from plain stiff bristles through slender smooth-pointed spines up to stout needle-sharp barbed quills. The quills are loosely held in the soft fat skin by a conical root with a rounded shoulder, and they appear to come out at the slightest touch. Indeed, before trying some experiments I could not understand why they did not all fall out in the ordinary stress of daily life; and I formulated a theory, that when the quills were in their normal depressed position, they were held in the skin more firmly than when they were erected to stand off an enemy. Herbert Spencer's friends said that the philosopher's sole idea of a tragedy was a beautiful theory killed by a devilish little fact. In my case the little fact was that the quills were *not* held more firmly in one position than in another. Admittedly, the porcupine, I experimented with was a dead one, but I cannot see that there would be any difference in the result in life. The truth is that it requires a pull of a quarter of a pound or so to free the quills from their sockets, and no ordinary friction to which they are subjected is sufficient to remove them. But when once the point of the quill is caught in the flesh of an enemy, the barbs hold it so firmly that it readily pulls out of the porcupine's skin.