Neurological stamp

Antoni van Leeuwenhoek 1632–1723

Van Leeuwenhoek was born in Delft. He was an apprentice draper in Amsterdam but lived his adult life in Delft where he was also chamberlain to the sheriffs. This remarkable man with little formal education (his ignorance of Latin denied him access to scientific developments), made a tremendous contribution to science through his interest in the grinding of lenses and microscopy.

Microscopes were in existence half a century before Leeuwenhoek constructed his single lens microscopes. These were of high optical quality with magnification from 50 to nearly 300 times, allowing extraordinary detail to be seen. The best modern equipment is only four times more powerful.

Leeuwenhoek discovered bacteria and other types of microbes, laid many of the foundations of plant anatomy, studied crystals and insects, made the first descriptions of spermatozoa, yeast cells and was the first to describe red blood cells accurately. He also described the vascular supply of the cortical layer of the cerebral convolutions, the structure of the lens of the eye, discovered the rods of the retina, the connective tissue fibres and epithelium of the cornea, and the striated appearance of muscles. He cut his own material with a sharp shaving razor, but did not have the means to embed the tissue in a supportive medium, so the slices were not very fine. Leeuwenhoek had also noted that nervous tissue "consisted of diverse, very small threads or vessels lying by one another." In the cut ends of nerves he saw minute tubules, presumably myelin sheaths.

From the age of 40 he communicated his observations in more than 350 letters to the Royal Society of London, which elected him a fellow in 1680. He continued to do this until his death at the age of 90. He was honoured on a stamp issued by The Netherlands in 1937. (Stanley Gibbons No 472, Scott No B97).

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