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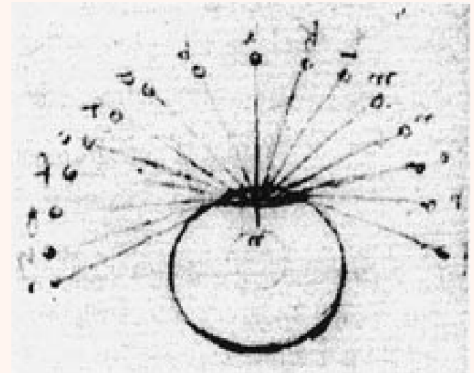
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## HISTORY OF THE VISUAL FIELD BEFORE PERIMETRY

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The first record of a visual field defect is found in Hippocrates description of a hemianopia from the late fifth century B.C. Ptolemy (150 B.C.) first attempted to quantify the visual field and noted its circular form. According to Lloyd, Galen was the first physician "to record a recognition of Extramacular fields." He suggests the first illustration of the visual field was published in an article by Ulmus of Padua in 1602.



Thomas Young

Early in the sixteenth century (about 1510) Leonardo da Vinci recognized that temporally the visual field reaches around more than 90 degrees from fixation. He said (Manuscript D. folio 8 verso), "the eye sees those objects behind it that are placed in lateral areas." He suggested that the cornea and the aqueous served to bend the light rays into the eye. (from Robert F. Heitz, *The History of Contact Lenses*. Vol 1, p 50. Oostende, Belgium: J.P. Wayenborgh, 2003).

The physiologic blind spot was reported by Mariotte in 1668; he had the insight to realize it related to the optic disc. Thomas Young, of color vision fame, made the first exact measurement of the visual field in 1801. "The visual axis being fixed in any direction, I can at the same time see a luminous object placed laterally at a considerable distance from it, but in various directions the angle is very different. Upwards it extends to 50 degrees, inwards to 60 degrees, downwards to 70 degrees and outwards to 90 degrees."

Purkinje in 1825 refined Young's work and noted the lateral limits to be 100 degrees, the nasal 60 degrees, upper 60 degrees and lower 80 degrees. Boerhaave is credited with describing scotomas in 1708. He was followed in 1817 by Joesph Georg Beer of Vienna who used terms such as 'central scotoma' and 'paracentral scotomata', 'concentric contraction of the visual field', and 'half field loss'; in 1842, Karl Himley of Göttingen wrote of 'amaurosis periphica' as opposed to 'amaurosis centralis'; and Desmarres, in 1847, in Paris, described a characteristic loss of the upper field in retinal detachment. So the field loss could be mapped and was being mapped in a rough way before von Graefe, but until Helmholtz' Augenspiegel, there was no visible proof of a retinal lesion to match the scotoma.