

Teaching Ophthalmology Through Model Figures



Louis Auzoux - master of anatomical modelling

The teaching of ophthalmology has evolved from exquisitely detailed paintings of the eye to complex models and optical devices. Modelling by moulage-wax models progressed to the modern advances of plastination producing transparent preservation and the use of high-tech surgical simulators.

Among early modellers of both humans and animals was Louis Auzoux, a French anatomist and naturalist.

In 1827, he set up a workshop making paper mâché human and veterinary anatomical models in his birthplace of Saint Aubin-d Ecrosville.

He constructed paper mâché models in paper-lined moulds with multiple layers of different coloured papers that represented anatomical areas often filled with paste of flour glue, shredded paper, oakum chalk and cork powder.

Fine details of blood vessels and nerves were made from fabric-covered metal wires.

Auzoux founded a workshop and by 1868, employed over 80 staff. His classic anatomical models became famous internationally and he established a branch in Paris. By 1980, the firm began making cheaper models of resin before finally closing. The works are remembered in the Musée de l'Ecorché d'Anatomie, France.

Moulage wax models of disease and trauma were made initially by Gaetano Zumma (1656-1701) in Italy and Paris. Jules Baretta (1834-1923) produced over 2,000 wax models at the Hôpital Saint-Louis in Paris.

The direct castings with applied pigments produced accurate three-dimensional reproductions of anatomy, particularly surface disease. Modern adaptations are made with latex.

Teaching ocular anatomy often employed retinal models, which could be viewed with an ophthalmoscope. Stereoscopic atlases of anatomy were viewed through a stereoscope revealing enhanced images.

Descriptions of the items can be found by searching 'RANZCO Eye Museum'.

The Museum Virtual Gallery is being enhanced with further displays, as a preview will be shown for the forthcoming Brisbane 2022 Congress.

David Kaufman
Curator, RANZCO Museum



Auzoux-articulated model of eye and orbital contents - RANZCO Eye Museum



Schematic eye for funduscopy training - RANZCO Eye Museum



Fig. 31. Entropion and Trichiasis through scar-tissue.
Painted wax moulage of the effects of trachoma