**Sketchmaster**

The management of Victoria’s forests has always relied on collecting and recording accurate information including the location of forest operations. In the early days roads, tramlines and logged areas were mapped using chain and compass surveys (see notes on chain and compass surveys) undertaken by foresters and forest overseers. Aerial photographs became available from the early 1940’s. The early photos were taken by the RAAF and later by contractors to the Lands Department using large format cameras (9inch x 9 inch – 23cm x 23cm). Later the Forests Commission commissioned photography projects from the Lands Department to assist in mapping timber stands in State Forests. In the late 1960’s forest staff began taking and processing their own aerial photographs using small format (35mm) or medium format (70mm) cameras (see notes on Hasselblad camera) in fixed wing aircraft.

These aerial photographs were used to accurately map roads, logging coupes, newly planted Pinus radiata sites and occasionally unlogged forest. During the 1960’s and 70’s when the Commonwealth was funding the expansion of the pine estate the Forests Commission was required to provide accurate figures on the area of new plantation so that Commonwealth government funding could continue.

Pairs of over-lapping photos were placed under a stereoscope (see stereoscope notes), an instrument that allowed the terrain to be viewed in three dimensions. Most foresters and many overseers became quite skilled at this allowing them to highlight the location of a road or boundary of a logging coupe on the photo using a chinagraph pencil, or ink pens on a clear acetate overlay to delineate different forest strata. The stereoscopic view aided identification of species and timber volumes using tree crown characteristics and some field calibration.

The drawn-up photo or overlay was then placed on the vertical plate of the sketchmaster while a map of the same area was located on the surface below. Measurements taken on both the photo and the map allowed calculation of the magnification ratio between the two. Using a table that came with the instruction manual for the sketchmaster the magnification ratio allowed the operator to select a pair of different magnification lens, one for the vertical and one for the horizontal view and to adjust the distance of the triangular lens from both the map and the photo. Now when the operator looked through the small eye-hole (Note the grubby marks from hours of sweaty foreheads pressed up against the view piece), fine adjustment of either the vertical or horizontal distance could be used to achieve a perfect same scale overlay of photo on map. Then a road alignment or boundary could be accurately marked onto the map. All this was much quicker and less arduous than the former chain and compass surveys, allowing the forester to map many areas in one day.