

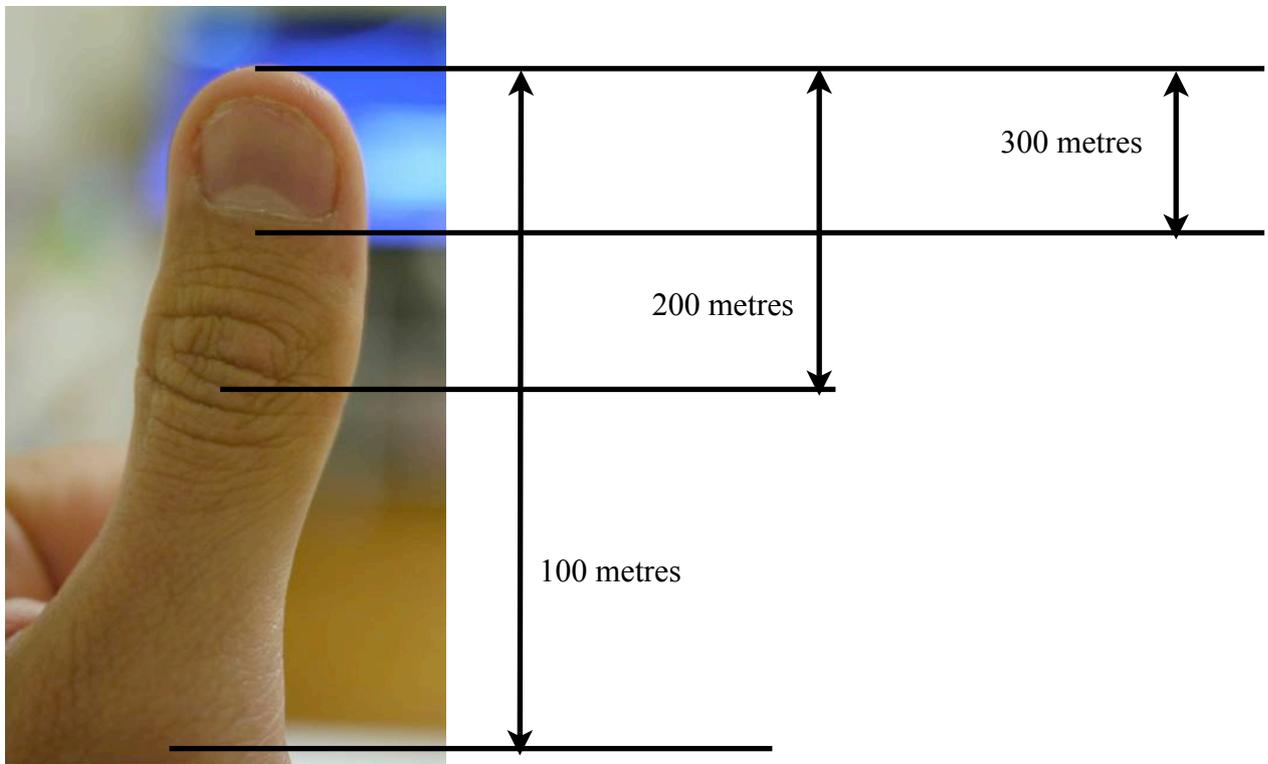
## Scale, Dyes and Miniatures...

For those of us who collect, paint and 'game with miniature figures there are as many styles and techniques of painting as there are painters...

The vast majority of us spend an inordinate amount of time researching the correct colours for uniforms, flags and equipment before committing brush to metal (or plastic), a process which, if like me you choose obscure periods or theatres, can be very frustrating due to lack of information...

Once we have sufficient information do we stop to assess how the perspective of scale, or the types of materials and dyes could affect these descriptions?

My weapons instructor taught us to estimate distance to a human target by holding your thumb out at arms length. An average man seen at 100 m would be approximately the size of your whole thumb, at 200 metres, the top joint and at 300metres the size of your thumbnail.





100 m (approx. 65mm)



200 m (approx. 28mm)



300 m ( approx. 15mm)

Photo from 'Friends of Aldershot Military Museum',  
<http://www.friendsamm.hampshire.org.uk/spev.htm>

Our popular figures sizes of 28mm & 15mm are the equivalent of 200 and 300 metres distant respectively.

Last year I saw a beautifully painted French Napoleonic mounted unit entered in a painting competition which was so precise and gloss varnished that to my eyes it appeared as glazed porcelain, not as a wargames unit.

The descriptions we read of uniforms, and from where we take our information, are based on a full size uniform held close to the writer. For our models to look authentic on the wargames table we should adjust the shading of each colour to reflect the effective distance at which it is being viewed.

As the distance increases colours become less distinct and more neutral, e.g. blacks becoming greys and whites losing their brilliance while details lose their definition.

A lot of time is spent by some on debating the exact colour of buttons, etc, when in reality the very existence of buttons would be indistinguishable at distance.

Even on the photograph above representing 100 m distance facial features are indistinct, while at 200 m buckles and buttons cannot be distinguished.

It also seems common to treat stated colours as modern materials, i.e. all clothing manufactured would be to a repeatable, consistent, colourfast shade.

It should be remembered that synthetic dyes are a modern invention, the first appearing in the 1850's but taking time to become accepted practice in industry, and also to cover a reasonable range of colours and shades.

For most wargames periods, up to and including the American Civil War, we are looking at natural dyes, on natural materials, which give highly variable results between batches.

Take a familiar, and highly researched article such as the Napoleonic British soldier's 'scarlet' jacket... I fully accept that the Colonel's uniform may well have been a brilliant scarlet, but those of the lower ranks would have varied from a dull brownish-red through crimson to scarlet - and that's just when the uniform was freshly issued before any wear and tear.



Typical natural dyes  
palette

As can be seen from the above samples natural dyes tend not to give the bright, vibrant colours we are used to seeing around us in modern life.

Protein fibres such as wool and silk are the easiest to colour with plant-based dyes, plant based fibres like cotton and linen are much more difficult.

Dyes are referred to as being 'fast', relatively slow to fade, or 'fugitive', faster to fade.

Whatever fibre is used dyeing is a craft, requiring skilled process, a knowledge of which plants can be used to produce the best colours and which can be combined to create additional shades.

Many dyes require the use of a 'mordant', a material which improves the ability of the fibre to accept the dyestuff.

Just as the dyes were not of the same quality as modern alternatives, neither were the materials being dyed. Wools, linens, cottons would not have undergone nearly such industrial and chemical processing before being presented for colouring.

All the plant dyes would fade over time, assisted by UV light from sunshine and remember that most of the military campaigning was conducted in the spring / summer / autumn months.

Indigo, the blue dye used in denim material, is the same whether sourced from plants (woad or indigo) or created synthetically in the chemical lab.

This is a relatively 'fast' dye, but we all know how denim material fades on creases and where it rubs...

Uniforms of our period tended to be paid for by the colonel, so would be unlikely to have been of the highest quality available at the time.



Additionally it should be remembered that various items of clothing would wear out at varying rates so breeches / trousers, stockings, coats, neck cloths, knapsacks, etc. could all vary in colour within a unit which has been in the field for any time.