Based on the measurements of 1063 flower reflection spectra, we show that flower colours fall into distinct clusters in the colour space of a bee. It is demonstrated that this clustering is caused by a limited variability in the floral spectral reflectance curves. There are as few as 10 distinct types of such curves, five of which constitute 85% of all measurements. UV reflections are less frequent and always lower in intensity than reflections in other parts of the spectrum. A further cluster of colour loci is formed in the centre of the colour space. It contains the colour loci of green leaves, several other background materials and only very few flowers. We propose a system to classify the reflection functions of flowers, and a set of colour names for bee colours.