I will talk about how observations of resolved stellar populations are being used to study the ancient fossil record of the formation and evolution of stars and the resulting chemical element production in nearby galaxies. This can only be done nearby, as it requires accurate colours, variability, chemical abundances and kinematic measurements of large samples of individual low mass stars from deep imaging and spectroscopy surveys. These studies provide detailed insights into galaxy evolution going back to the early Universe. I will concentrate on what we can learn from the smallest and simplest of galaxies, the so-called dwarf galaxies, but I will also make the link to our increasingly detailed understanding of our home galaxy, the Milky Way, and the role that chemical elements play in disentangling the story of all galaxies.