

A global view of alkaline rocks and carbonatites

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Building on the alkaline rocks and carbonatites monographs [1,2,3,4] we have digitised and created an online catalogue and interactive website for the research and exploration community. The data from these monographs have been collated and plotted to create a map showing the global distribution of alkaline rocks and carbonatites (figure 1).

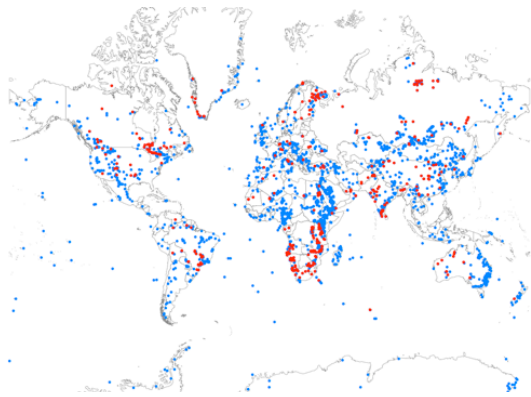


Figure 1. The global distribution of carbonatites and alkaline rocks. Alkaline rocks – blue dots; occurrences including carbonatite – red dots

In total there are >2500 occurrences of alkaline silicate rocks and >500 occurrences of carbonatites (plus/minus alkaline rocks). We discuss the potential biases and caveats associated with the distribution of the data on figure 1. In general, alkaline rocks and carbonatites show a spatial association with features such as cratons, rifts, domes, LIPs and intraplate oceanic islands.

We will present age data from the literature on the most representative ages for alkaline rocks and carbonatites spatially associated with LIPs and some orogenic belts to compare the temporal relationships between large-scale geodynamic events and small-scale alkaline magmatism, akin to Ernst & Bell [5].

[1] Woolley, A.R. (1987) *BM(NH)*, *UoT Press*, [2] Kogarko et al., (1995), *Chapman & Hall*, [3] Woolley, A.R. (2001), *GSL/NHM*; [4] Woolley, A.R. (in press), *GSL/NHM*, [5] Ernst & Bell, (2010), *Miner Petrol*, **98**, 55-76.