

# KERRY

**AREA OF COUNTY:** 4,746 square kilometres or 1,832 square miles or 1,159,356 acres

**COUNTY TOWN:** Tralee

**OTHER TOWNS:** Caherciveen, Castleisland, Dingle, Kenmare, Killarney, Listowel, Sneem

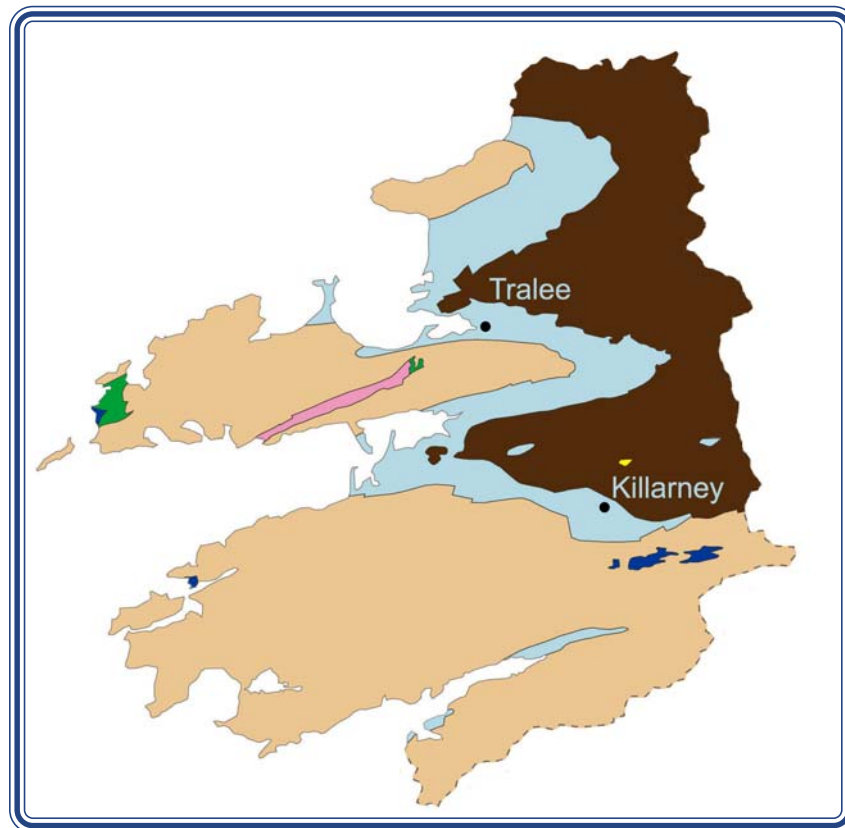
**GEOLOGY HIGHLIGHTS:** Amphibian trackway, volcanic lavas, Silurian fossils, Killarney chalk, glacial deposits

**AGE OF ROCKS:** Ordovician to Carboniferous; Cretaceous



## **Storm Beach at Kilmurry Bay, Dingle Peninsula**

Here boulders of Old Red sandstone from the Devonian have been piled together by the force of the waves and rounded as they bang off each other.

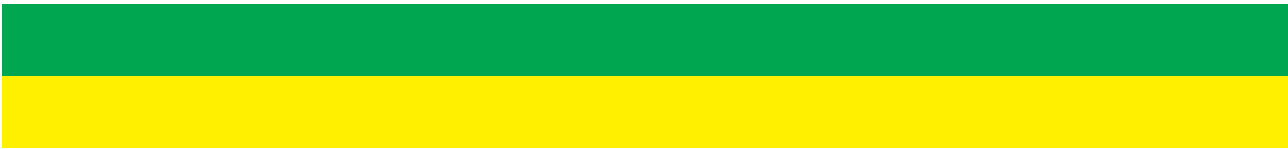


**Geological Map of County Kerry**

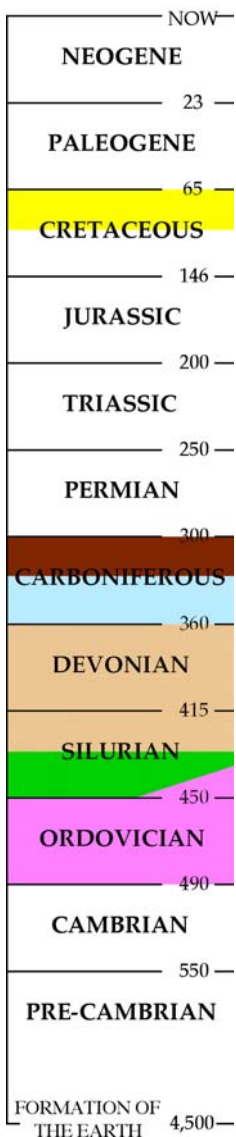
**Pink:** Ordovician & Silurian; **Green:** Silurian; **Dark blue:** volcanic rocks of various age; **Beige:** Silurian & Devonian sandstones and conglomerates; **Light blue:** Lower Carboniferous limestone; **Brown:** Upper Carboniferous shales; **Yellow:** Cretaceous chalk.

### **Geological history**

During the Ordovician period (488-444 million years ago [Ma]) Ireland was south of the equator, and the area that now makes up Kerry was under an ocean that separated two continents. This ocean closed and as it did so mud and sand was deposited into it and these eventually became the mudstones seen near Annascaul. Later during the Silurian period (430 Ma) small volcanic islands that grew above a shall sea erupted lavas and ash in the Clogher Head area. The muddy sediments deposited in the Silurian sea trapped many animals now seen as fossils near Dunquin and in Derrymore Glen, and the sandy sediments formed sandstone near Dingle and Sleah Head. Eventually by the beginning of Devonian (416 Ma) the ocean closed completely and a large continent had formed which was largely desert. The Kerry area contained large areas of sanddunes which formed much of the sandy Old Red Sandstone which makes up much of the Iveragh Peninsula, and in between the



**Trackway made by a tetrapod (inset) at Valentia Island**



dunes occasionally flowed rivers or flash floods. These produced pebbly coarser rocks called conglomerates which may contain white quartz or red jasper. A good example of a conglomerate is found at Inch. By the end of the Devonian the land in Kerry was flooded by warm shall tropical seas in which corals, crinoids, brachiopods, squids, and even sharks lived and these are now found as fossils in the Carboniferous limestones (350 Ma). Later the ocean became deeper and muds were carried into it by rivers from the east and north and these became the shales now found in east Kerry and the Stacks Mountains (310 Ma). Much later during the Cretaceous (146-65 Ma) the whole area was covered by water and chalk, and a pure limestone was deposited. A small patch of chalk can be found near Killarney.

During parts of the last million years Ireland has been covered in ice when glaciers formed on mountainsides and in valleys and spread over the lowlands. In Kerry many corries were formed when ice collected on the mountainsides and these now often contain lakes such as Mangerton Lake near Killarney and Pedler's Lake near the Connor Pass. When the ice melted it left behind boulder clay containing many different rock types. Good examples can be seen at Fenit near Tralee.

**Geological timescale showing age of rocks in Kerry.**

## Kerry fossils

The oldest fossils from Kerry are those found on the Dingle Peninsula near Annascaul. Some geologists think these are Ordovician in age while others argue that they are Silurian. Silurian brachiopods (pictured right), trilobites, corals and other marine animals are found at Ferriter's Cove near Dunquin. Fossil fish of Devonian age are present on the Iveragh Peninsula, and an important trackway of one of the first land-animals, a salamander-like animal also from the Devonian was discovered on Valentia Island in 1992. Early plants from the Devonian-Carboniferous are found in sandstones near Ballyheigue. During the Carboniferous the sea contained many animals and fossils of these are plentiful in limestones in the Tralee and Fenit districts.



## Mining & Building Stones

Copper was used by early settlers in Ireland to make bronze weapons. Kerry was an important site for copper mining during the Bronze Age 4000 years ago, and mines were opened at Ross Island near Killarney and at Coad Mountain near Caherdaniel. Between 1650 and 1900 these mines reopened at times as well as at Ardtully near Kenmare.

Various rock types have been used for building. Devonian Old Red Sandstone was used to build Staige Fort near Sneem and Rattoo Round Tower in north Kerry. Carboniferous limestone (which often contains fossils) was used for many ancient churches such as Ardfert Cathedral and for some eighteenth century buildings. Slate from Valentia was exported across the world for use on roofs, for shelves and snooker tables



**Rattoo Round Tower**

## Suggested reading

- Patrick Wyse Jackson: *The Geology of Kerry* (1994) Kerry County Museum, Trinity College, Dublin & ENFO.
- Matthew Parkes: *Valentia Trackway* (2002) Geological Survey of Ireland.

Text by Patrick Wyse Jackson