

The Lost World of North Devon - Local Geology

Case Date: 380 Million Years Ago (The Devonian Period)

Location: The rugged cliffs between Ilfracombe and Combe Martin

1. The Scene of the Crime: A Tropical Paradise?

Believe it or not, North Devon wasn't always chilly and rainy! During the Devonian Period, this land was located south of the equator in a **warm, shallow sea**.

- **The Evidence:** We find "Combe Martin Slates" (Combe Martin Slates Member of the Ilfracombe Formation) filled with fossilised **corals** and **brachiopods**.
- **The Creatures:** Brachiopods look like clams but are actually "Lamp Shells" that anchor to the seafloor with a fleshy foot called a **pedicle**. Some of their relatives, like *Lingula*, are "living fossils" still alive today!
- **Discoveries:** You'll not look at the rocks at Combe Martin in the same way again!

2. The Great Continental Crash (The Variscan Orogeny)

The Earth's surface is like a giant puzzle, and 300 million years ago, two massive puzzle pieces (**Euramerica** and **Gondwana**) had a slow-motion car crash.

- **The Result:** This "Orogeny" (mountain building) squeezed soft seafloor mud into hard **slate**.
- **The Clues:** Look at the **Wild Pear Slates**. They are silvery-grey, "folded," and "cleaved"—meaning they were wrinkled and squashed by incredible tectonic pressure.

3. Hidden Treasures in the Rocks

The geology of the Ilfracombe Formation didn't just stay in the cliffs; it built the local community.

- **The Silver Secret:** Hidden inside the rocks was **galena**, a mineral and containing **silver** which is, surprisingly, an impurity. From the thirteenth-century to the nineteenth-century, miners tunnelled deep underground to find silver.
- **The Farmer's Friend:** Local limestone was cooked in giant ovens called **kilns** to create "lime," which acted like a super-vitamin for 19th-century farm soil.

4. Anatomy of a Cliff: The Four Members

Geologists divide the **Ilfracombe Formation** into four "Members" (chapters of a book).

Read more on Page 2.

Member	What to look for	What happened?
1. Kentisbury Slates	Striped layers of slate and sand	The sea level was rising and falling.
2. Combe Martin Slates	Hard limestone layers	A clear, tropical sea full of life.
3. Lester Slates	Thick, "cross-bedded" sandstones	Very fast, powerful underwater currents.
4. Wild Pear Slates	Shiny, silvery, folded rocks	The peak of the mountain-building squeeze.

Field Safety Briefing

Geology is exciting, but the coast is powerful and can be dangerous

- **Tide Watch:** The North Devon tide moves faster than you can walk! Always check a tide table.
- **Cliff Caution:** Rocks can fall without warning. Wear a helmet if you are near the cliff base and never climb unstable faces.
- **Official Word:** Always check with the **British Geological Survey (BGS)** for the most accurate maps.

Explore More:

Visit <https://www.devon.gov.uk/geology/devons-rocks-a-geological-guide/>