

Scottish Highlands.—This region consists mainly of crystalline schists with bosses of granite, porphyry, etc.,

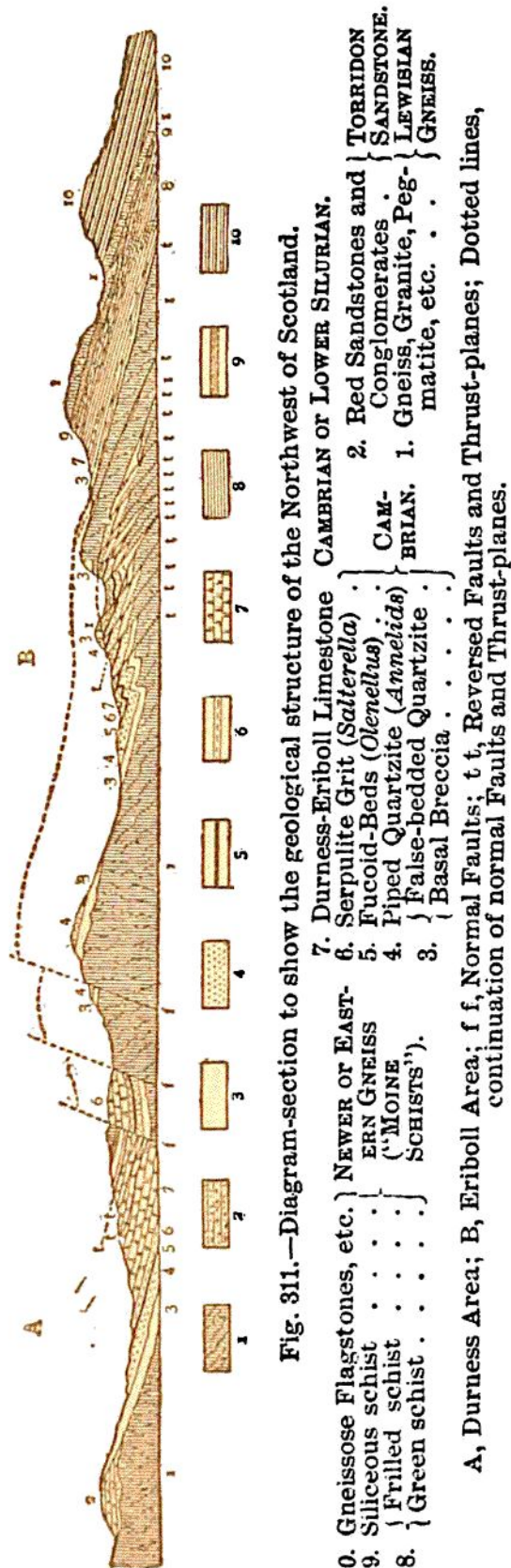


Fig. 311.—Diagram-section to show the geological structure of the Northwest of Scotland.

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| 10. Gneissose Flagstones, etc. | 7. Durness-Eriboll Limestone | CAMBRIAN OF LOWER SILURIAN. |
| 9. Siliceous schist | 6. Serpulite Grit (<i>Sallerella</i>) | |
| 8. { Frilled schist | 5. Fucoid-Beds (<i>Olenellus</i>) | CAMBRIAN. |
| { Green schist | 4. Piped Quartzite (<i>Annelide</i>) | |
| | 3. { False-bedded Quartzite | |
| | { Basal Breccia | TORRIDON SANDSTONE. |
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2. Red Sandstones and Conglomerates, Pegmatite, etc.
- A, Durness Area; B, Eriboll Area; f, Normal Faults; t, Reversed Faults and Thrust-planes; Dotted lines, continuation of normal Faults and Thrust-planes.

which, stretching through four degrees of latitude and four and a half of longitude, must cover an area of not less than 16,000 square miles at the surface. As, however, they sink beneath later formations, and are prolonged into Ireland, their total area must be still more extensive. The oldest rocks consist mainly of a remarkably coarse crystalline gneiss (Lewisian, 1 in Fig. 311), with abundant pegmatite veins, seen in Sutherland and Ross, the two north-westerly counties of Scotland. This gneiss, which will be described in the section on pre-Cambrian rocks in Book VI., is unconformably overlain by nearly flat brownish-red (Torridonian) sandstones, conglomerates and breccias (2), which in turn are surmounted unconformably by inclined beds of quartzite (3, 4), shales (5), calcareous grit (6), and limestones (7), the geological age of which is fixed by the occurrence of recognizable fossils in them. The quartzite is full of annelid-burrows; the shales contain *Olenellus*—the distinctive trilobite of the lowest Cambrian rocks; the limestone has yielded *Mac-lurea*, *Murchisonia*, *Ophileta*, *Pleurotomaria*, *Orthis*, *Orthoceras*, *Piloceras*, and many more forms, indicating Cambrian and possibly the very

lowest Silurian horizons. The strata are generally crowded with carbonaceous worm-casts (the so-called "fucoids").