

carried towards the east by the westward current, were quietly deposited in the lee of Arthur Seat and the neighbouring eminences,—at that time a small group of islands. The only shells I ever detected in the brick-clay of Scotland occurred in a deposit in the neighbourhood of St. Andrews, of apparently the same age as the beds at Portobello.<sup>1</sup> They were in a bad state of keeping; but I succeeded in identifying one of the number as a deep-sea *Balanus*, still thrown ashore in considerable quantity among the rocks to the south of St. Andrews. In this St. Andrews deposit, too, I found the most modern nodules I have yet seen in Scotland, for they had evidently been hardened into stone during the recent period; but, though I laid them open by scores, I failed to detect in them anything organic. Similar nodules of the Drift period, not unfrequent in Canada and the United States, are remarkable for occasionally containing the only ichthyolite found by Agassiz among seventeen hundred species, which still continues to live, and that can be exhibited, in consequence, in duplicate specimens,—the one fit for the table in the character of a palatable viand,—the other for the shelves of a geological museum in the character of a curious ichthyolite. It is the *Mallotus villosus*, or Capelen (for such is its market-name), a little fish of the arctic and semi-arctic seas. ‘The *Mallotus* is abundant,’ says Mr. James Wilson, in his admirable *Treatise on Fishes*, ‘in the arctic seas, where it is taken in immense profusion when approaching the coasts to spawn, and it is used as the principal bait for cod. A few are cured and brought to this country in barrels, where they are sold, and used as a relish by the curious in wines.’

Let me next call your attention to the importance, in an economic point of view, of the great geologic events which gave to our country its subsoils, more especially the boulder-clay. This deposit varies in value, according to the nature

<sup>1</sup> See Note at the end of the Lectures.