
Chapter 27 Sheets exclusive of cone-sheets: elsewhere in Mull and neighbourhood

Introduction

The previous four chapters have been devoted to the sills of south-western Mull. Attention will now be given to certain sills and sheets occurring in other parts of the island and its neighbourhood. A minor field of basic and intermediate sill-intrusion is encountered on the two sides of Loch Aline in Morven (Sheet 44). The sills here are lettered D on the one-inch Map, except that two intermediate examples are lettered F. Tertiary tholeiite-sheets (D) are occasionally met with in Lismore, and in Lorne, south of Oban (Sheet 44).

A quite distinct field of the same type includes the north coast of Mull between Caliach Point and Ardmore Point (Sheet 51). In this case, the sills (D) belong, on account of their position, rather to the Ardnamurchan than the Mull centre.

It is thought that the sheets, or sills, mentioned above, may be ascribed to intervals in Late Basic Cone-Sheet time (Chapters 28–32). Of earlier date, probably, than of some part of Early Basic Cone-Sheet time (Chapters 21–22), is a sheet-complex of rather exceptional character. It constitutes much of the more westerly Creag na h-Iolair, north of Ben Buie, and its component rocks are lettered eD on the one-inch Map. They are not cone-sheets, and their field-relations, and early date, separate them from most of the other sills or sheets of Mull. They are, however, dealt with in this chapter because they do not furnish material enough for separate treatment.

A final section is devoted to a couple of thoroughly early dolerite-sills (D)—earlier than the Early Basic Cone-Sheets. They are considered last, in spite of their age, because the Loch Aline sills have much in common with most of the sills of South-West Mull, described in the immediately preceding chapters.

A few trachyte-sills, lettered O, have already been discussed along with bostonites and syenite in Chapter 14. E.B.B.

Loch Aline district (Sheet 44)

A few sills have been shown on the one-inch Map on both sides of Loch Aline, and some of very minor importance have been omitted. West of Loch Aline, the bay east of Eilean na Beitheiche supplies an interesting section of a tuff-filled vent, cut through and veined by a basalt-sill. Two other sills, 10 and 2 ft. thick respectively, descend to the shore a little east of Savary Glen. All these three are seen cut by basalt-dykes. On approaching Loch Aline village, the reverse relation of a sill cutting a dyke is encountered, as shown on the one-inch Map.

On the east side of Loch Aline, the most noteworthy sills are those near Glais Bheinn summit, and in the valley of Allt na Sanmachain. Here, the rock-types [\(S14961\)](#) [NM 7238 4360], [\(S14964\)](#) [NM 7220 4381], [\(S14954\)](#) [NM 7084 4523] are such as can be matched among the porphyritic Central Lavas. Another sill [\(S15808\)](#) [NM 7395 4707]–[\(S15809\)](#) [NM 7372 4666], lettered D on the one-inch-Map, west of Loch Teknail, is a rather basic leidleite (p. 281). Leidleite is so met with in the cliff above Rudha an t-Sasunnaich, but in this case is lettered F [\(S14967\)](#) [NM 7053 4287]. Another sill (or dyke) of leidleite [\(S15794\)](#) [NM 7680 4590], lettered. F, stretches for a couple of miles east from the angle of Allt Dubh Dhoire Theàrnait. Near the place where glacial striae are shown on the one-inch Map, this leidleite cuts an unmapped north-north-west tholeiite-dyke of Salon Type [\(S15783\)](#) [NM 7680 4590].

Inninmorite (p. 282) is found on the shores of Inninmore Bay beneath the keeper's cottage [\(S14948\)](#) [NM 7257 4165]. The rock occurs here as a sheet dipping north, and is lettered D on the one-inch Map. From this point, inninmorite has been traced northwards and north-westwards, interruptedly, as one or more thin dykes, to the head of Coire Slabhaig [\(S14947\)](#) [NM 7286 4204], [\(S14965\)](#) [NM 7272 4368], [\(S14960\)](#) [NM 7258 4422]. A little unmapped sill in the Trias, east of the fault which descends the cliff into this corrie, is interesting for having hypersthene as well as uniaxial augite among its phenocrysts [\(S14959\)](#) [NM 7266 4418]. On passing west, one finds a southwardly inclined sheet or dyke (lettered M) passing up the cliff westwards on its way from Coire Slabhaig [\(S14958\)](#) [NM 7208 4426]. For a mile, it continues in this

direction, and then turns abruptly (the exact turn is concealed) into a north and south dyke which runs out to sea at Rudha an t-Sasunnaich ([S14955](#)) [NM 7093 4404], ([S14966](#)) [NM 7053 4287]. It seems that the quadrilateral, outlined in the above statement, is bounded by sheet and dyke manifestations of a single intrusion. Some of the material is very suitable for slicing, for instance from the cliff above Rudha an t-Sasunnaich, or at the 1135 ft. level shown on the map west of Glais Bheinn. The district is of course the name-place of the type (p. 281).

Inninmorite occurs elsewhere in the district as a sill, marked D, above Doire Daraich on the south-east coast ([S15805](#)) [NM 7451 4105]; in another sill ([S15820](#)) [NM 7387 4448], north-east of the Table of Lorne; and in a west-north-west dyke (not mapped, but occurring at the head of the stream draining into Loch Aline, south of Allt Leacach). E.B.B., G.W.L.

Lismore and Lorne (Sheet 44)

A Tertiary sheet allied to leidleite ([S13751](#)) [NM 8558 4191] crosses Lismore at the south end of Loch Bàile a' Ghobhainn with a southerly inclination. Near the loch, it cuts a basic dyke which runs slightly north of west. Contacts with other dykes are not exposed.

Two more sheets, with southerly inclinations, occur, one at the south end of the island, the other on Eilean Musdile. Their relations to dykes are not exposed. (H.B.M)

In the Oban district of Lorne, thin Tertiary tholeiite sills are met with in two main localities where they cut Old Red Sandstone sediments and lavas. The more northerly is about Gleann Sheileach, where good exposures are afforded on Druim Mòr, and also near the base of the Old Red Sandstone, along the south side of the glen. The sills are about 5 ft. thick, and of the Salen Type of tholeiite (p. 285), though with rather less olivine than is often the case ([S19042](#)) [NM 8606 2833], ([S19046](#)) [NM 8455 2836]. The more southerly sills crop out on the high ground north and east of Lerags House, towards Loch Feochan. Wherever they occur, they are conspicuously cut by the northwesterly faults of the district, but their behaviour with reference to the north-east faults is less certain. E.B.B.

Northern Mull (Sheet 51)

A minor field of thin tholeiitic sheets extends inland for a couple of miles between Caliach Point and Ardmore Point. The sheets may be described as irregular sills with a marked transgressive tendency. They dip, throughout most of the area, towards the south-west; but, at Caliach Point, they incline in the opposite direction, towards the east or north-east. Sir Archibald Geikie, in his *Ancient Volcanoes* (Vol. II., p. 158), has figured an example, from Caliach Point, cut through by a north-west dyke.

Only one specimen has been sliced. It comes from the west side of Ardmore Bay, and is thoroughly fine-grained, suggesting a rapidly cooled rock of tholeiitic composition. G.V.W.

Creag na h' Iolaire sheets (Sheet 44)

The southern slopes of the more westerly Creag na h' Iolaire, north of Ben Buie, consist largely of a complex of dolerite and basalt sheets, which are too irregularly disposed to be referable to any of the cone-sheet assemblages. Some of the sheets are porphyritic, others non-porphyritic. A sliced specimen ([S17194](#)) [NM 6023 2905] proved to be an olivine-dolerite, of a type familiar among the Early Basic Cone-Sheets of Chapter 21.

So far as can be judged, the intrusions, referred to this complex, are later than the intrusive felsite of Chapter 17, as well as the neighbouring lavas. Their relationship to the many small outcrops of breccia, or agglomerate, that occur along with them, varies greatly. Sometimes sheets cut agglomerate, sometimes agglomerate cuts sheets. The Late Basic Cone-Sheets of Talaidh Type (Chapter 28) clearly traverse the Creag na h' Iolaire Complex. (C.T.C.)

Two early sills, Mull (Sheet 44)

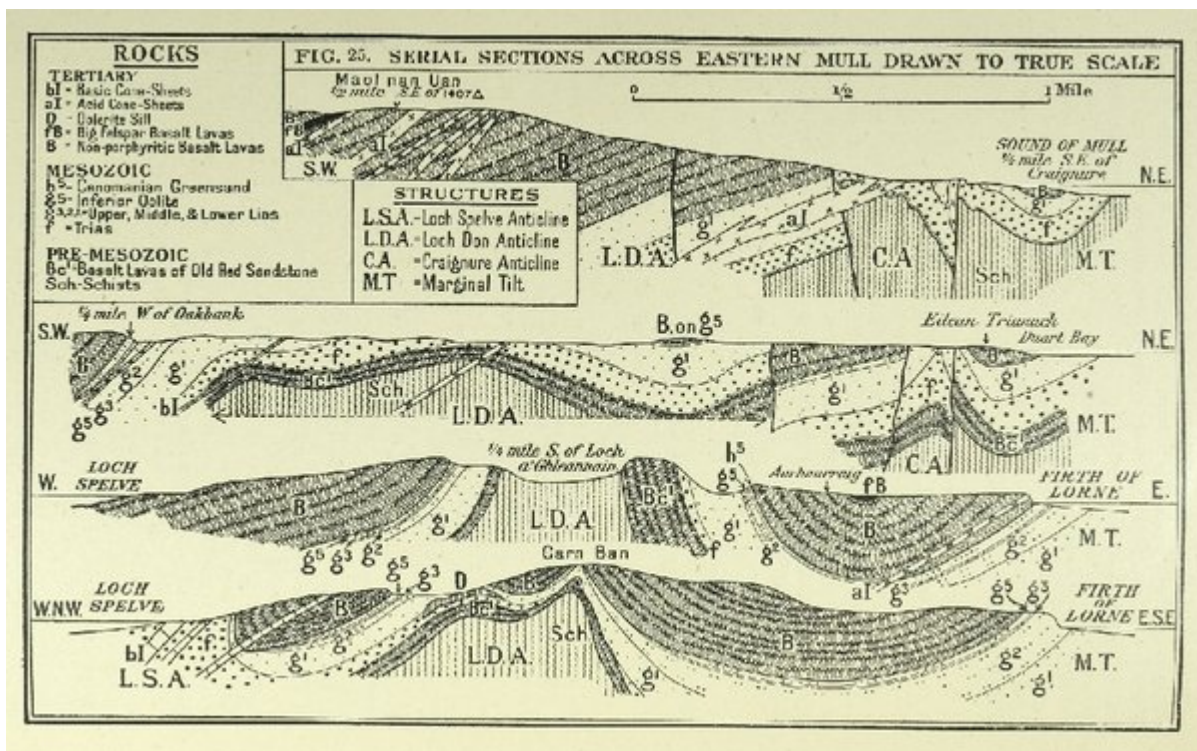
Probably the biggest basic sill in Mull is a coarse dolerite, with chilled margins, which lies somewhat transgressively among the lavas of Beinn Fhada, a couple of miles north of Loch Uisg. This dolerite gives rise to conspicuous crags, and it is easy to recognize that it has been folded, along with the lavas, into a syncline centring about Coir' Odhar (cf. one-inch Map and (Plate 5), p. 165). It is natural to regard the syncline as part of the early arcuate folding south-east of Mull: but more direct evidence of the early date of the Coir' Odhar sill is shown by the manner in which the intrusion is freely traversed by Early Basic Cone-Sheets of Chapter 21. The sill itself, under the microscope, proves to be an olivine-dolerite (S17099) [NM 6314 2885], (S17323) [NM 6345 2931], with somewhat purple augite as its main constituent, and a fairly well-defined ophimottled structure (p. 138). Its resemblance to some of the Plateau Basalts is an example of reversion; since the lavas, among which it is intruded, are definitely, of Central Types. E.B.B., G.V.W.

The olivine of the Coir' Odhar sill is entirely decomposed, as might be expected from the intrusion's position well within the Pneumatolysis Limit of (Plate 5).

The other sill, selected for notice in this paragraph, occurs intruded into the Lias and Trias of the anticlinal core, exposed north and west of Càrn Bàn (cf. one-inch Map and (Figure 25), p. 174). It has shared in the intense folding of the sediments with which it is associated, and has been correspondingly crushed and altered. Owing to its condition, it would never have attracted attention, as an intrusion, if its outcrop had been situated among the neighbouring basalt-lavas, instead of among Pre-Tertiary sediments; so that it is safe to assume that the apparent freedom from sill-intrusion of the Mull lavas, in many parts of Central Mull, is in some small measure deceptive. It would be unwise, however, to push this conclusion very far, since sills do not figure prominently in the Mesozoic sediments of the region. The Càrn Bàn sill is, like the Coir' Odhar sill, a very early intrusion, for the folding, which affects it, is definitely of earlier date than any cone-sheets still recognizable as such (cf. Chapter 13) E.B.B.



(Plate 5) Map showing calderas, major intrusions, and folds



(Figure 25). Serial sections across Eastern Mull drawn to true scale. Rocks, Tertiary: bl = Basic Cone-Sheets al = Acid Cone-Sheets D = Dolerite Sill fB = Big Felspar Basalt Lavas B = Non-porphyrific Basalt Lavas. Mesozoic: h⁵ = Ceitomanian Greensand g⁵ = Inferior Oolite g^{3,2,1} = Upper, Middle, & Lower Lias f = Trias. Pre-Mesozoic: Bc¹ = Basalt Lavas of Old Red Sandstone; Sch = Schists. Structures: L.S.A. = Loch Spelve Anticline. L.D.A. = Loch Don Anticline. C.A. = Craignure Anticline M.T. = Marginal Tilt.