Sleat 1:

## **Point of Sleat**



The Point of Sleat in SE Skye, with its distinctive 2003 lighthouse, is composed of psammites of the Aruisg Psammite Group (Late Proterozoic Moine Supergroup) within the Tarskavaig Thrust Sheet at the southernmost extent of the Moine Thrust Zone. Superb coastal exposures of these low grade regional metamorphic rocks reveal excellent examples of folds, yet original characteristics of the sedimentary rocks, such as grainsize grading and cross stratification, are preserved.

Aspects covered: Folded low-grade regional metamorphic rocks of the Aruisg Psammite Group (Late Proterozoic Moine Supergroup) within the Tarskavaig Thrust Sheet; sedimentary features within these strata; Paleocene dykes of the Skye Regional Dyke Swarm; back-to-back storm beaches/tombolo.

Route: <u>Aird</u> - <u>Sgurran Seilich</u> - <u>Camas Daraich</u> - <u>Point of</u> <u>Sleat</u> (- return <u>Aird</u>).

Distance: 13 kilometres (8 miles).

Time: 5/6 hours.

**General comments:** This excursion starts from the end of the public road at <u>Aird</u>, 7km (4.5 miles) south of <u>Armadale</u>. Limited parking is available. The route to the <u>Point of Sleat</u> uses a good track over moderately undulating ground. From the parking area (an area adjacent to a farmyard) use the wooden gate to access the track. Follow the track west for *c*. 2.5km to a wooden bridge, then take the signposted rough path south to <u>Camas Daraich</u>. To reach the <u>Point of Sleat</u>, retrace the path north to join the main path at [NM 5671 9999], then proceed SW to <u>Point of Sleat</u>. A set of concrete steps makes one of the descents easier and some crude stepping-stones avoids getting wet feet. Eventually the lighthouse at the <u>Point of Sleat</u> comes into view.



Figure Sleat 1.1: Oblique annotated Google Earth<sup>®</sup> image indicating final section of path (arrowed) to Point of Sleat.



Figure Sleat 1.2: Simplified geological map and crosssection of the Point of Sleat.



Figure Sleat 1.3: Line of Cross-section on a Google Earth® image.



**Figure Sleat 1.4:** Annotated Google Earth<sup>®</sup> images of the Point of Sleat. A, Aruisg Psammite Group; LnG, Laidhe na Greine Group; C, Capistal Psammite Group (see key to Figure Sleat 1.2).

Locality 1 [NM 5669 9975]: At <u>Camas Daraich</u>, clean continuous exposures of psammites and minor pelites of the Aruisg Psammite Group can be examined in detail on both the wave-cut platform and in small cliff sections at the back of the beach. Key features include folds, cleavage-bedding relationships, faults, and sedimentary structures within the sequence. Examples are illustrated, below.



Figure Sleat 1.5: Camas Daraich viewed towards the east, with the crags of Creag Mhòr on the far side of the bay.



**Figure Sleat 1.6:** The NE face of gully on the SW side of Camas Daraich, illustrating the interbedded nature of the sequence, with dominant psammites and thin beds of pelite. Note the thick pelite layer towards the top of the section. Pole *c.* 1m long.



**Figure Sleat 1.7:** Detail of the NE face of gully on the SW side of Camas Daraich, illustrating the interbedded nature of the sequence, with dominant psammites and thin beds of pelite. Note that certain beds cannot be traced across the section. Pole *c*. 1m long.



**Figure Sleat 1.8**: Detail of the NE face of gully on the SW side of Camas Daraich, illustrating cross-stratified psammites with an erosion surface (centre of image), indicating the sequence is right-way-up. Coin *c.* 24mm across.



**Figure Sleat 1.9:** Detail of the NE face of gully on the SW side of Camas Daraich illustrating discordant beddingcleavage relationship (in area around coin scale). Coin *c.* 24mm across.



**Figure Sleat 1.10:** Open synform with a shallow plunge towards the north (defined by orientation of pole) on the foreshore of Camas Daraich. Pole *c*. 1m long.



**Figure Sleat 1.11:** Fault within the foreshore section of Camas Daraich. Pole (*c.* 1m long) is located on the fault plane.

To reach the <u>Point of Sleat</u>, retrace the path to join the <u>main path</u> at [NM 5671 9999], then proceed SW to <u>Point</u> <u>of Sleat</u>. Cross the back-to-back storm beaches (almost a <u>tombolo</u>) to the <u>lighthouse</u> headland.

The <u>Point of Sleat</u> provides a superb panorama, south, towards Rum and Eigg, two of the Small Isles.



**Figure Sleat 1.12:** Oblique Google Earth® image towards the islands of Rum (right) and Eigg (left) from the Point of Sleat.

Rum is dominated by a Paleocene intrusive complex, emplaced into Late Proterozoic Torridonian Supergroup strata. Younger (Paleocene) lavas overlie the NW part of the intrusive complex at Bloodstone Hill. Eigg is composed of Paleocene lavas overlying Jurassic sedimentary rocks. The distinctive ridge in the south (far) side of the island is a remnant of a Paleocene (valley-fill) ignimbrite.

## Locality 2 [NM 5623 9907]:

The area around and north of the <u>lighthouse</u> reveals the complex folded character of the psammites. Three locations worthy of examination are indicated (a, b & c) in Figure Sleat 1.13. Care should be exercised on steep and potentially slippery surfaces.



**Figure Sleat 1.13:** Oblique aerial image of the Point of Sleat, towards the west, indicating the location of the folds illustrated in Figures 1.14 - 1.18.



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**Figure Sleat 1.14:** Antiform, with parasitic folds within hinge zone, defined by dominant psammites, NW of the lighthouse. *Location* **a** in Figure Sleat 1.13. Iain Allison for scale.



**Figure Sleat 1.15:** Detail of antiform, with parasitic folds within hinge zone, defined by dominant psammites, NW of the lighthouse (in Figure Sleat 1.14).



**Figure Sleat 1.16:** Near-horizontal asymmetric tight folds on grassy platform, west of concrete path to lighthouse. *Location b* in Figure Sleat 1.13. Pole *c*. 1m long.



**Figure Sleat 1.17:** Near-horizontal symmetric tight synform on grassy platform, west of concrete path to lighthouse. *Location* **b** in Figure Sleat 1.13. Pole *c*. 1m long.



**Figure Sleat 1.18:** Detail of minor folds illustrated in Figure Sleat 1.17 (on limb of synform on grassy platform, west of concrete path to lighthouse). Coin *c*. 24mm across.



**Figure Sleat 1.19:** Paleocene dolerite dyke of the Skye NW-SE -trending regional swarm within folded psammites. *Location c* in Figure Sleat 1.13.

Return to Aird.

End of excursion.