Sleat 2:

Sìthean Mòr, Tarskavaig

Sìthean Mòr viewed towards the west, a psammite-dominated hill of Late Proterozoic Moine Supergroup metasedimentary strata flanked on its east side by superb and easily accessed mylonites on the east side of the Caradal synform.

Aspects covered: Mylonites; sedimentary structures in psammites of the Late Proterozoic Moine Supergroup.

Route: A simple traverse from the public road north of Sìthean Mòr to its summit.

Distance: 2 kilometres (1 mile).

Time: 3 hours.

General comments: A superb belt of mylonites that are easily accessed. Parking is limited. Excellent views west towards Strathaird, and the Cuillin Hills, beyond.

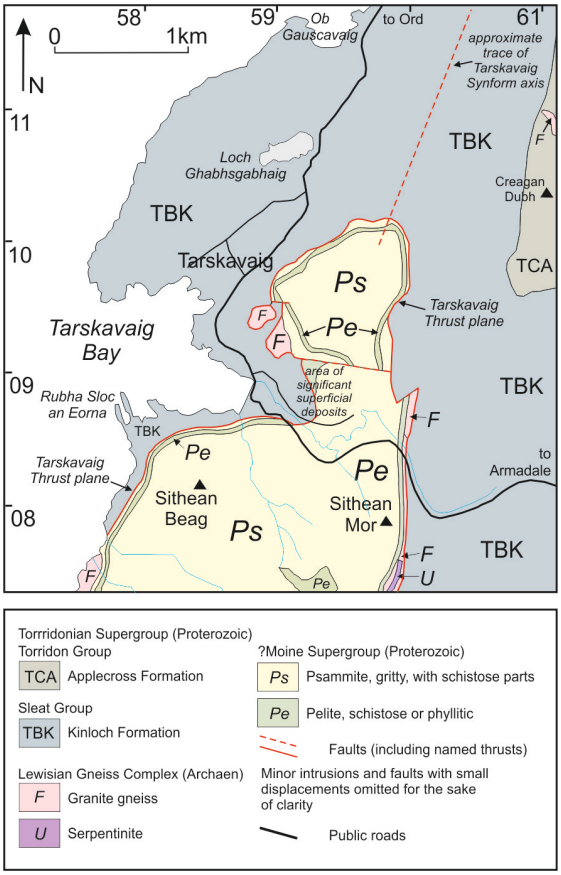

Figure Sleat 2.1: Simplified geological map of the Tarskavaig area.

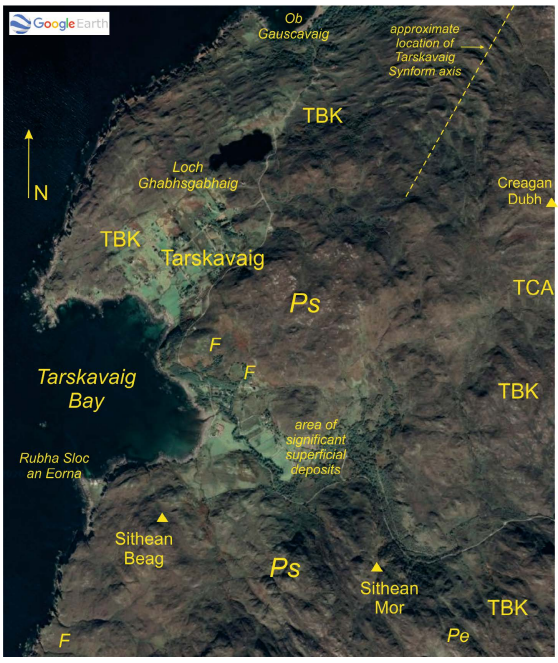

Figure Sleat 2.2: Annotated Google Earth® image of the Tarskavaig area.

Figure Sleat 2.3: Annotated oblique Google Earth® image of the Tarskavaig area.

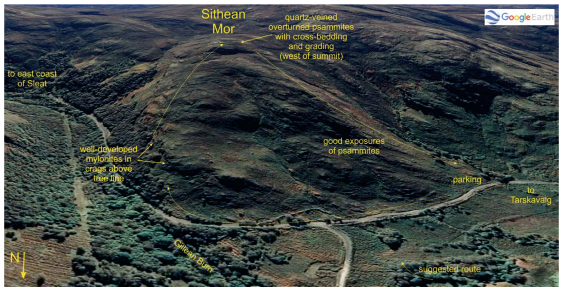

Figure Sleat 2.4: Annotated oblique Google Earth® image of the Sìthean Mòr area and suggested route of excursion.

Proceed *c.* 3km SE of Tarskavaig, to the north side of Sìthean Mòr. Tarskavaig is located on the minor loop road through Ord and Tarskavaig on the west side of the Sleat Peninsula, off the Broadford-Armadale (A851) road. Limited parking is available on the south side of the road. Proceed east on foot along the public road past exposures of quartz-veined psammite.

Figure Sleat 2.5: Quartz-veined psammites of the Moine Supergroup on the south side of the road, west of the Gillean Burn, Tarskavaig. Pole *c.* 1m long.

Figure Sleat 2.6: Detail of quartz-veined psammites of the Moine Supergroup on the south side of the road, west of the Gillean Burn, Tarskavaig. Coin *c.* 24mm across.

Continue east and head uphill, above and parallel to the treeline. This break-in-slope defines the location of the boundary between Late Proterozoic Torridon Group (Kinloch Formation) strata (part of the Kishorn Thrust Sheet) to the east (downhill) and a thin interval of mylonite to the west (uphill). The crags at this break-in-slope are composed of mylonite.

Locality 1 [NG 5980 0827]:

Figure Sleat 2.7: Vertical planar fabric of the mylonite. Pole *c.* 1m long.

Key features (of these mylonites) are:

1. An intense N-S-oriented vertical planar fabric within these quartz (and feldspar) -dominated mylonites;
2. Local deformation of the mylonite fabric by minor folds;
3. The presence of a southward plunging lineation on faces parallel to the planar fabric;
4. Small orange feldspar porphyroclasts;
5. The striped character of the mylonites due to grain-size variation and not due to differences in mineralogy.

Based upon the mineralogy of the mylonites, it is likely that the precursor lithology was either granitic material of the Lewisian Gneiss Complex or arkosic psammite of the Moine Supergroup sequence. To the west, the Moine Supergroup psammites and pelites crop out (see below).

The mylonites with the feldspar porphyroclasts suggest a gneiss component, whereas the light- and dark-striped mylonites suggest a Moine Supergroup component. It is difficult, based upon field observations, to identify boundaries between these two types.

Figure Sleat 2.8: Mylonite formed from granitic material, with orange feldspar porphyroclasts. Pole *c.* 1m long.

Figure Sleat 2.9: Detail of mylonite formed from granitic material, with orange feldspar porphyroclasts. Coin *c.* 24mm across.

Figure Sleat 2.10: Orientation (indicated by yellow line) of lineation due to mineral alignment, indicating the stretching direction during mylonite development. Pole *c.* 1m long.

Figure Sleat 2.11: Mylonite with local deformation of the fabric by minor folds. Pole *c.* 1m long.

Figure Sleat 2.12: Detail of mylonite with local deformation of the fabric by minor folds. Coin *c.* 24mm across.

Figure Sleat 2.13: Dark- and light-striped mylonite formed from material (psammite) of the Moine Supergroup sequence (and which crops out as far uphill as immediately west of the summit of Sìthean Mòr). Pole *c.* 1m long.

Figure Sleat 2.14: Detail of dark- and light-striped mylonite formed from material (psammite) of the Moine Supergroup sequence (which crops out to the west at the summit of Sìthean Mòr). Coin *c.* 24mm across.

Continue uphill, to the WSW, to the summit of Sìthean Mòr, through scattered exposures of the mylonite.

Locality 2 [NG 5972 0779]:

From the summit Sìthean Mòr, westwards, the mylonite fabric is absent, and the original sedimentary characteristics of the psammites are evident, with features such as cross-stratification and grading. Immediately west of the summit, cross-stratification indicates that these strata are overturned.

Figure Sleat 2.15: Overturned cross-stratification within psammites west of the summit of Sìthean Mòr. Coin *c.* 24mm across.

Figure Sleat 2.16: Grading within psammites west of the summit of Sìthean Mòr. Pole *c.* 1m long.

Figure Sleat 2.17: Detail of grading within psammites west of the summit of Sìthean Mòr. Coin *c.* 24mm across.

Return to the parking place NNW down a minor valley over excellent exposures of the psammites.

End of excursion.