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## North Elgol Coast, Isle of Skye

[NG 520 165]–[NG 517 180], [NG 516 150]

K.N. Page

### Introduction

The most complete Callovian sections on the Strathaird Peninsula in south-west Skye are on the coast between 2.5 km and 4 km north of Elgol (c. [NG 520 165]–[NG 517 180]) (see (Figure 6.15)). A little farther south, other sections occur in the cliff at Carn Mor [NG 516 150] (Hudson, 1962; Turner, 1966; Sykes, 1975). The correlation of the sections in this area, which represent an unusual sandy equivalent of the predominantly muddy succession seen in northern Skye (see Staffin GCR site report, this volume), was briefly reviewed by Duff (1980). The site overlaps with, and continues northwards, the Bathonian GCR site known as 'Elgol–Glen Scaladal' (see GCR site report, this volume), and includes the type section of the Carn Mor Sandstone Member.

### Description

The following record of the Callovian succession (comprising the Staffin Bay Formation and lowest part of the Staffin Shale Formation) is based mainly on Sykes (1975), with some additional information from Morton and Hudson (1995).

The Carn Mor Sandstone Member was named by Hudson (1962) based on cliff exposures [NG 516 150] at Carn Mor, although Sykes (1975) considered a better type section to be in the low cliff south of the point known as 'Rubha na h'Airigh Baine' [NG 516 172]. It comprises 9 m of coarse-grained, dark, calcareous, bioturbated sandstone with scattered quartz pebbles up to 0.03 m in diameter. The top 0.45 m is packed with belemnites (*Cylindroteuthis*) reduced to moulds by a combination of metamorphism and leaching (Morton and Hudson, 1995). Metamorphism has affected the whole of the Strathaird Peninsula, which is traversed by a dyke swarm associated with the Cuillin plutonic centre; all of the rocks are somewhat hardened (Hudson, 1962). 'Nests' of rhynchonellid brachiopods (*Thurmanella acuticosta* Childs) are locally conspicuous and rare ammonites (*Keplerites* and *Proplanulites*) also occur. The base of the member is abrupt, with *Thalassinoides* burrows extending down into the mudstones of the Skudiburgh Formation (Great Estuarine Group) below.

The overlying Staffin Shale Formation is much coarser grained in Strathaird than Trotternish in northern Skye (see Staffin GCR site report, this volume) and, although Sykes (1975) retained the same formational name for the two areas, he proposed several new members for the succession in Strathaird of which only the lowest, the Tobar Ceann Siltstone, includes strata of Callovian age. These consist of c. 6 m of predominantly silty, poorly fossiliferous clays with scattered bivalves and rare ammonites (*Kosmoceras*). The principal exposures are along the foreshore north of Rubha na h'Airigh Baine although the type locality of this member is an inland gully section at [NG 565 196].

### Interpretation

The Staffin Bay Formation marks the transgression of the Callovian sea over the alluvium of the Skudiburgh Formation (Great Estuarine Group) (see Elgol–Glen Scaladal GCR site report, this volume). According to Morton and Hudson (1995), the gentle lagoonal transgression recorded in Trotternish, northern Skye (see Staffin Bay and Staffin GCR site reports, this volume) is replaced in Strathaird by an abrupt disconformity, with the coarse-grained, fully marine Carn Mor Sandstone Member as the only representative of the Staffin Bay Formation (Figure 6.23).

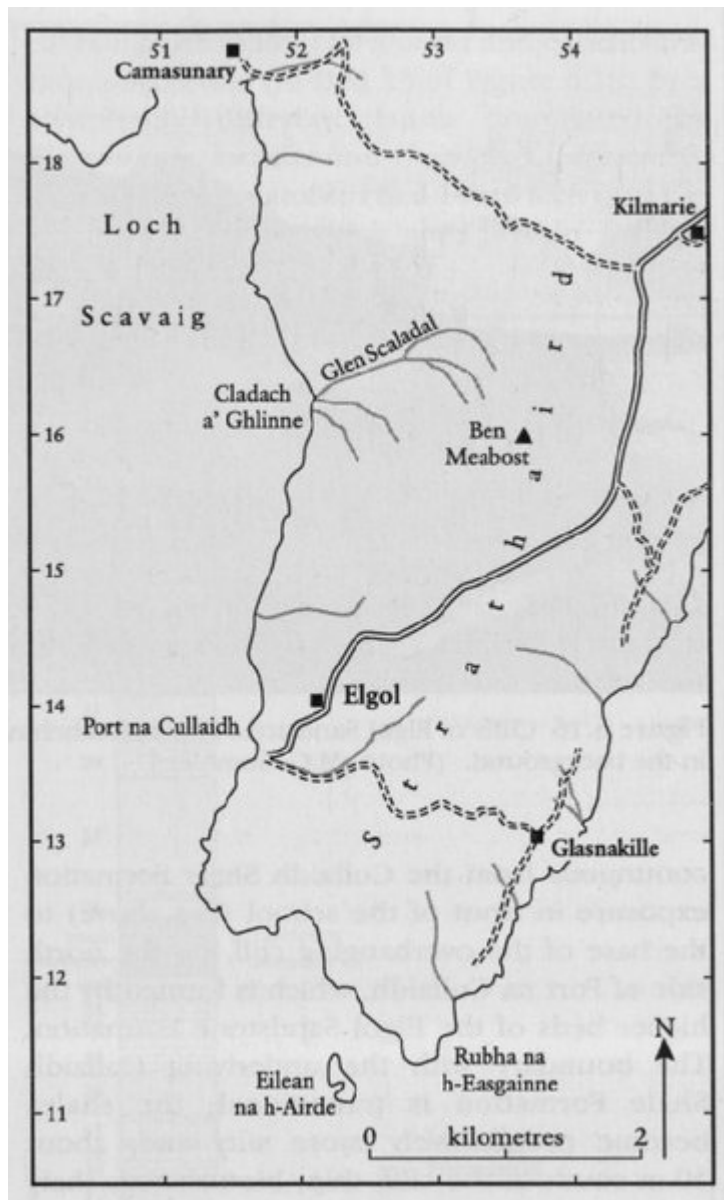
The *Keplerites* (*Gowericeras*) sp. (recorded as *K. (G.) gowerianus* by Sykes, 1975), from 2.7 m below the top of the Carn Mor Sandstone Member and associated with *Proplanulites* sp., indicates the (Lower Callovian) Koenigi Zone. The rare ammonites in the Tobar Ceann Siltstone Member include, near the base, *Kosmoceras* (*Zugokosmokeras*) *grossouvrei* R. Douvillé, which indicates the (Middle Callovian) Grossouvrei Subzone, Coronatum Zone; this suggests a significant non-sequence at the base of the member. From c. 3 m higher in the succession, nearby inland sections have

yielded *Quenstedtoceras* from a c. 3 m-thick bioturbated sandstone, with indeterminate *Kosmoceras* a little lower; these indicate the Upper Callovian Lamberti Zone (Sykes, 1975). Silts above this level have yielded ammonites indicative of the (Lower Oxfordian) Scarburgense Subzone, Mariae Zone and therefore the Callovian–Oxfordian stage boundary is indicated hereabouts.

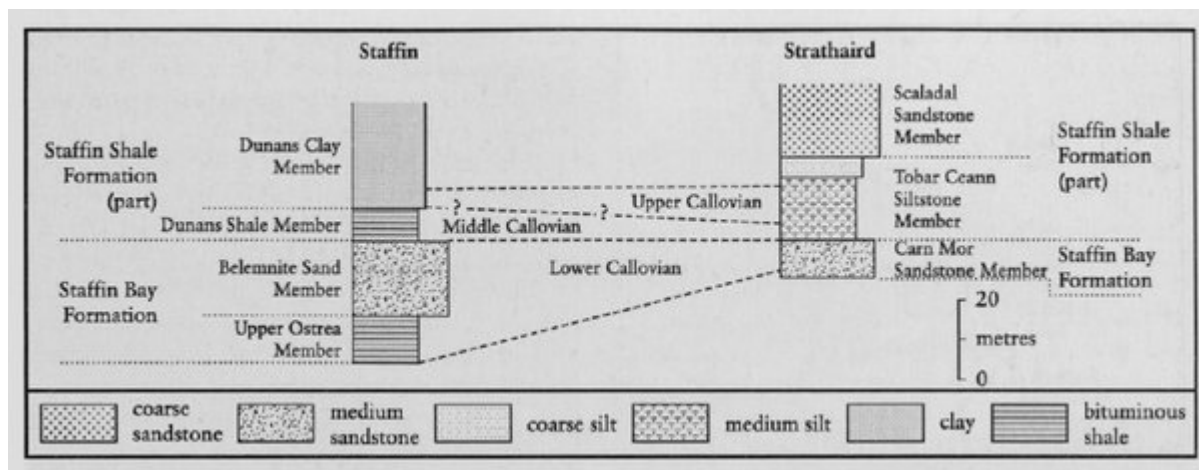
## Conclusions

The North Elgol Coast GCR site includes the type locality of the Carn Mor Sandstone Member of the Staffin Bay Formation. It is an important site for palaeogeographical studies of the late Mid Jurassic Epoch in the Hebrides Basin because the development of Callovian strata here is highly condensed compared with northern Skye (see Staffin GCR site report, this volume; (Figure 6.23)). It contains one or more significant non-sequences, and its coarser lithological and more proximal sedimentological character indicates a nearer shore environment.

## References



(Figure 6.15) Locality map for the Elgol–Glen Scaladal GCR site.)



(Figure 6.23) Correlation between the Callovian sections at North Elgol and Staffin. (After Sykes, 1975, fig. 7.)