220 μ below the extreme tip, with a peculiar small cell (x) partly embedded in the dermatogen. The cell illustrated is not an isolated one, but is a member of a file about 330 μ long, commencing at about 150 μ from the tip and containing about thirty cells similar to the one photographed.

Presumably a single dermatogen cell divided periclinally, and subsequent transverse divisions have resulted in the file observed (five cell generations = 32 cells). At both ends of the file the last cells have become separated from the rest and have also sunk into the dermatogen layer as though they have been accommodated by the adjustment of the neighbouring cells. At three points down the file, the cells on each side have divided periclinally where primordia are being initiated, but in no case are there periclinal walls in the cells of the file.

It would seem, therefore, that even in Angiosperms, isolated dermatogen cells may occasionally divide periclinally, and that the example described above represents one stage which may follow such a division, an example of which was previously seen in a single cell in maize.

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The Highland Border Series in Bute

DURING a recent examination of a disused quarry situated 750 yards west 10° south of Rothesay Pier, and 1,200 yards north 15° west of the north end of the Kirk Dam, a band of limestone was observed on the north side of a broad east-west Permo-Carboniferous quartz-dolerite dyke. The limestone was recorded by Gunn in 1884 on a 6-inch to the mile manuscript map of the Geological Survey, but it is not shown on the published 1-inch to the mile map (Sheet 29, 1892). It does not appear to have been described in geological literature, although it may have been seen by Nicol[1], who made a passing reference to limestone in this part of the island.

The limestone, a fine-grained greyish-black type, occurs in a band 7 feet thick, dipping south-south-east at 55°. It is associated with grey and black, sometimes graphitic, cleaved shales containing further thinner beds of limestone. These shales form part of a band which has been traced for at least three miles to the south-south-west, parallel to and about half a mile west-north-west of the Highland Boundary Fault.

To the north-west the shales are bounded by a wide outcrop of grits which can be correlated with the Leny Grits of the Dalradian succession of Perthshire. On the evidence of graded bedding the grits can be demonstrated, at numerous localities, to present their younger side to the shales, with which they appear to be interbedded; but this last point requires further investigation.

In the ground to the north-west the grits are followed by a belt of phyllites which cross the island from Kames Bay to Etterick Bay. These form the south-westerly continuation of the Dunoon phyllites and like the latter contain thin beds of limestone. They can be shown by means of graded bedding, as has been pointed out by Dr. W. J. McCallien[2], to be older than the grits to the south-east. They would seem, therefore, to lie on a different horizon from the Rothesay limestone and shales, from which, moreover, they differ considerably in character. Recent work suggests that the Kames Bay phyllites are also older than grits to the north-west and that they consequently occupy the core of an anticline.

On the basis of associated rocks, stratigraphical and structural position, the Rothesay limestone is regarded by the writer as equivalent to the Leny limestone at Callander, in which Dr. J. Pringle, who has since examined the Rothesay exposures and concurs in this view, has discovered fossils of Middle Cambrian age[3]. The Leny limestone has been correlated with the well-known Margie limestone forming part of the Highland Border Series of Angus and Kincardine[4]. This series includes rocks of both Cambrian and Ordovician age, and occupies a number of lenticular outcrops near the Highland Boundary Fault from Stonehaven to Arran. The Rothesay limestone and shales are considered to form a hitherto unrecorded example of one of these lenticles. When an opportunity for further search offers, it is hoped that they will yield, like the Callander rocks, fossils of Cambrian age.

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Sulphur Springs of Cyprus

THE presence of sulphur springs in the island of Cyprus is a well-established fact, and several, such as the springs of Kalopanayotis and Ayoi Anargyroi, are widely used for treatment of internal and external diseases. It is therefore somewhat surprising that apart from casual samples sent for analysis abroad, no systematic survey has been undertaken so far. The handbook of R. Storrs and B. J. O'Brien, where a page on mineral springs has been reprinted without alteration from the earlier work of H. C. Luke and Jardine, contains but a few rather misleading data.

Some time ago I had the opportunity of investigating, on behalf of the Geophysical Institute of Cyprus, eight sulphur springs located at widely separated points of the island. These springs are only a part of the total occurrence, and the survey cannot, therefore, be regarded as exhaustive. It is nevertheless possible to draw certain conclusions inasmuch as the investigations covered the main sulphur spring localities of the island. They reveal the existence of two types of sulphur springs with distinctly different chemical composition, originating in different geological formations.

The springs of one group emanate from the igneous rocks of the Troodos range, mainly along the andesitic pillow lava zone. The springs of the second group have their source in the miocene Idalian formation, with their massive gypsum deposits.

The waters of the first group are characterized by their strong alkalinity and comparatively moderate