

## **Day Excursions**

**Saturday 3<sup>rd</sup> June 2017**

### **Dunbeg, Kilewnan Burn and Dunmore from Fintry**

The Glasgow contingent arrived by coach at the Fintry Sports Club which provides all facilities, which included coffees for some of us while we waited for the Edinburgh members to arrive.

Con Gillen was to be our leader. He and Mike Browne produced the recent Guide to the Geology of the Stirling Area, which includes this excursion. In addition we were privileged to be joined by Peter Craig – no one knows the area better! In 2011 he made a major contribution to the Campsie Fells Strategic Review – 37 suggested sites and 7 geo-trails. Perhaps one of these days the Review will be actioned.....

Today we were to follow a trail above Fintry and study vents, pipes, plugs, sills and the relationship of the base of the volcanic sequence to the underlying Ballagan Beds.

By taking the old quarry road south of the village through the Fintry woods we came to our first exposure. (But the last in the Guide - it is a late phase in the Linear Vent System). The ringing tone when the rock was hammered gave the clue. This is phonolite trachyte, a late stage evolution in the Clyde Plateau Volcanic Formation, extruded through sediments laid down in tropical conditions. It is rare, but can also be seen at Dumbarton Rock. Trapairn Law is true phonolite.

Once through the woods we walked East along the wall to Dunbeg, a volcanic plug intruded through the Clyde Sandstone Formation which is exposed just south of the wall. The vent was infilled with breccia formed by explosive gases. After these had escaped there were mini 'squirts' of lava through the sandstone.

We then climbed gently south west in the direction of Dunmore and got a good view of the lavas on the North side of the Campsies. They gently dip to the east and are separated by large ash flows giving the classic stepped profile. These step/trap lava flows could have been up to 1000 years apart therefore laterite could form.

## Trap formation



Dunmore is part of this major vent system which includes Dumbarton Rock, Garnock, the Gavachan system, perhaps also Endrick. (Dumgoyne, Dunfoyne etc. form the later and last of the linear vent systems.) Further up towards the main lavas is supposed to be a Covenanters' meeting place, "Covenanters' Hole". The 'hole' was formed by one of many landslips along this face.

So far so good for weather. However, the forecast had NOT been great, and with spits of rain forming we decided to huddle amongst some gorse bushes for lunch before donning the necessary wet weather gear and clambering down towards, and sometimes into, the Kilewnan Burn.

Here we discovered some good exposures of Ballagan Formation – dolostone and cementstone.



**Ballagan  
Beds**

These formed in a period of evaporation in shallow salty water therefore little evidence of life. We would appear to be at the top of the Formation which shows red/green weathering. Peter Craig's work on this section shows that this is conformable with the younger Clyde Sandstone Formation –which we discovered further upstream.

The next exposure was another volcanic vent. Here the tuffs and agglomerate contain charcoal, evidence of plant life on the contemporary land surface.

### **Photovent in Kilewnan Burn**



At this point the excursion continued uphill towards Dunmore and I decided to bail out – mainly because it looked as though the weather forecast had been correct....

This photograph of the columnar basalt at the top is courtesy of Will Frampton, one of the folk who braved the full-on thunder, lightning and torrential rain. The change in orientation of the columns shows the trumpet-

like nature of the intrusion. Vertical in the middle and sloping towards the edges.



**columnar jointed basalt**

The members of the Group who had avoided the hill climb and storm had to put up with having tea and cake in the Fintry Sports Club while awaiting the arrival of their VERY wet friends! The Club's facilities and friendly staff ensured that everyone was soon comfortably seated for a very pleasant high tea. At each table there was much chat and sharing of past geological experiences – and promises of meeting up at the next Joint Excursion. Con and Peter were warmly thanked for their generous sharing of expertise, with the hope of more discoveries to come. Once again Roy had organised us all in his calm and efficient way!