MONTE DORE & SANCY AUVERGNE FIELD EXPEDITION MAY 31 2012

Roches Sanadoire & Tuilliere.

Our second day started with a visit to a quarry at Varennes to examine the lava and granite basement.

The middle section of the quarry displayed fine grained rock. This was the basaltic basement of the Massif Central. Another black shattered area was where a dyke had intruded and cooled rapidly. There was a lighter rock from an earlier phase of crystallisation where we were able to identify phenocrysts of mica and plagioclase feldspar. We found that we quickly became adept at spotting and identifying these. We saw some strange irregular white inclusions in the rock. These were amygdales which form when vesicles in volcanic rocks fill with a lighter coloured mineral such as calcite.

We then went on to a viewpoint enabled the party to look down between the Roches Sanadoire and Tuilliere. These are two volcanic plugs of phonelite i.e. relatively high in silica. The former name comes from local dialect that translates as 'that which rings', the

Rocks of Varennes Quarry [below].
(2) Granite (3) lava flow (4) intrusion

Lac Servières.

latter derives its name from an anthropogenic use of the rock: tile making. The columnar jointing could be seen clearly. The U shaped valley is a result of the later glaciations.

Nearby is Lac de Servières. This shallow circular lake is a maar formed 10 kya when the water of a stream and an eruption of basaltic magma combined to form a phreatic explosion. Around the edge of the lake a rim of pyroclastic material can be seen.

Massif du Sancy

After a brief stop for lunch we headed for Sancy. The Puy de Sancy is a stratovolcano, of leucotrachyandesite composition, 1886m high, oval in shape and built up over 7 million years. Pulses of volcanic activity continued with the extrusion of dykes, the last pulse being about 10 kya. The origin, as with the other volcanic activity in the region, is thought to be as a result of rifting earlier in the Alpine orogeny. We took the cable car up where you can either climb 860 steps to the summit, or climb about 400 steps and stop at a viewpoint. Numerous dykes can be seen radiating out from the summit. As in other areas of this region, glaciation has also left its mark on the geomorphology.

The opportunity to enjoy the profusion of Alpine flowers was an added bonus.

filed by

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Dyke intrusions on Sancy.

Wild gentians.

leucotrachyandesite