Trail 3: Bressay

The torrents that spilled from the mountains west of Lerwick flowed south-eastwards as a large river with a wide floodplain on each side. Sometimes it formed a single meandering channel, sometimes a braided river: a network of channels separated by shifting islands and sand bars. On Bressay we can see rocks formed in these different environments and see the dramatic effects of later volcanic activity on the geology.

During floods, sediment-laden water spread horizontal layers of sand and silt across the floodplain. Shetland has no slate, but some flood-plain sandstones, laid down in thin beds, can easily be split into flat slabs and used for roofing. These flagstones were the basis of an important local industry in the past, and a track, known as "the Silver Valley" 1, was built to carry the stone to Lerwick. From it we can see a series of pits and spoil heaps following the flagstone beds north-eastwards to Aiths Ness. As well as depositing sediment, the floods spread the remains of primitive land plants torn from the river sides. Fossils of these plants can sometimes be found in the quarry spoil. Most are simple brown threads, but you might be lucky and find the broad, corrugated stems of the 'corduroy plant'.

Corduroy plant fossil

The strata north of the Noss jetty 2 record a wide river meandering across the flood plain. The beds, originally horizontal, have been tilted by earth movements, but in places we can see **cross bedding**: layers within the sequence that slope at a different angle. These formed as sandbanks on bends in the twisting channel, whilst occasional red **siltstone** beds mark

Noss Sound sandstone

out backwater channels and cut-off meanders, where slow-moving water deposited fine sediment, rich in iron minerals. South of the Iron Age broch 3, the strata reveal a more complex pattern of cross bedding with curved, sloping beds pointing in many directions. These reflect the shifting sand bars and channels in an earlier braided river.

At Muckle Hell 4 the orderly layering of sandstone beds is disrupted by a zone of breccia. It looks superficially like the scree breccia at Quarff, but here it is the result of volcanic activity. Superheated steam, produced by molten magma far below, tore the

Vent

sandstone beds apart as it forced its way up towards the surface. The shattered sandstone wasn't moved far from its original position and once the volcanic activity died down it was re-cemented as vent breccia. The magma also melted limestone in the strata beneath the sandstone, and some of this made its way towards the surface and can now be seen as orange-brown veins of carbonatite, a rare type of igneous rock, rich in carbonate minerals.

Carbonatite veins

Directions

By car / bike: Take the ferry from Lerwick to Bressay. Follow the main road, taking the second turning on the left, to Gunnista/Beosetter. Turn left at the top of the hill, following the road and parking sensibly after the cattle grid (HU49564244). Continue on foot approximately 50m, then take the track leading up the hill on the right.

Returning along the same road you have come, continue until the crossroads, taking the left turn, signposted to Uphouse/Noss. Continue until the end of the road, looking over the island of Noss, and park in the car park at the top of the track (HU52534088). Continue on foot to the bottom of the track.

Access

- Wheelchair access to Bressay Heritage Centre
- The coastal path and track may be wet/muddy in places

Interpretation

- On-site interpretation at 4
- Interpretive panel in Bressay Heritage Centre 5

Facilities

- Public toilets at Bressay ferry terminal
- Toilets at Bressay Heritage Centre

Glossary

Cross-bedding: beds of sedimentary rock, made up of sloping layers formed by sediment being deposited on sandbanks, ripples or dunes.

Siltstone: a sedimentary rock composed mainly of silt-sized particles (0.0039 to 0.0625 mm).