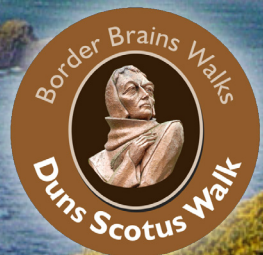
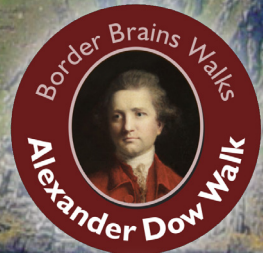
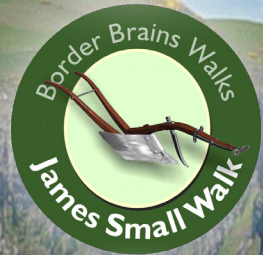
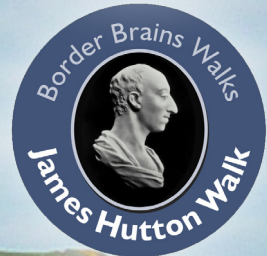
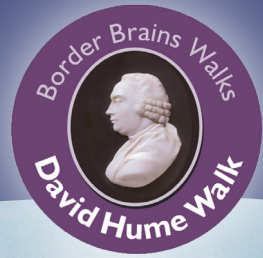
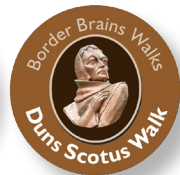
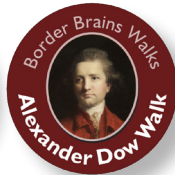
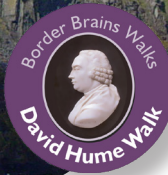


Border Brains Walks Berwickshire



Border Brains Walks Introduction



Welcome to Border Brains Walks: your free guide to exploring the lives and ideas of the Berwickshire geniuses David Hume, James Hutton, Duns Scotus, James Small and Alexander Dow, in the beautiful landscape that gave them birth.

The world's great minds have given us many good reasons to step outside for a walk and a think. Walking was William Hazlitt's university: "Give me the clear blue sky over my head, and the green turf beneath my feet, a winding road before me, and a three hours' march to dinner – and then to thinking!" wrote the essayist in *On Going a Journey*.

Berwickshire's own David Hume, the philosopher, successfully petitioned Edinburgh Town Council to create on Calton Hill Britain's first recreational walk, entirely dedicated to the public's healthy pursuits and living. "A circulatory foot road," he argued, "would present strangers with the most advantageous views of the city ... and contribute not only to the pleasure and amusement, but also to the health of the inhabitants of this crowded city."

In this urgent age, we must work hard to find spaces of time to walk or ride a horse or bicycle, to gather our wits and sense our passage over the earth. According to an Arab proverb, the human soul can only travel as fast as a camel can trot.

"Modern travelling is not travelling at all," thought the poet and artist John Ruskin: "it is merely being sent to a place, and very little different from becoming a parcel. Sooner or later we must realise there is no station, no one place to arrive at once and for all. The true joy of life is the trip."

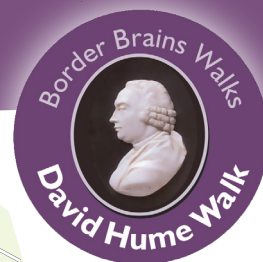
"They change their sky, not their souls, those who run across the sea" believed Rilke, and Seneca was surely right to say that however far we go, it is only to meet ourselves at the journey's end. "The road is life," agreed US poet Jack Kerouac. If at the end you're still unsure, take consolation in the words of Albert Einstein: "I think and think for months and years. Ninety nine times, the conclusion is false. The hundredth time I am right."

"In travelling," mused Dr Johnson, "man must carry knowledge with him." The true traveller is more than a spectator: he is a student who goes to look and see, to be taught by, sympathise with and understand the people and land he is within. Travel can broaden the mind in a foreign country, but also at home too, as you venture into the undiscovered on your doorstep.

So, whatever your reasons to go out for a walk or a think today, here for you to ponder are the world's great ideas first spoken in a Berwickshire brogue.

David Hume 1711-1776

Philosopher and Historian



David Hume grew up on his family's farm at Ninewells near Chirnside, and became the most important philosopher to write in the English language. Monty Python even praised him in their Philosopher's Song: "David Hume could out-consume Schopenhauer and Hegel."

Hailed as Britain's greatest and most loved philosopher, this genial genius influenced the novelist Sir Walter Scott, the scientists Charles Darwin and Albert Einstein, and the economist Adam Smith, who described his friend as "approaching as nearly to the idea of a perfectly wise and virtuous man as perhaps the nature of human frailty will admit."

Hume was a popular historian in his lifetime too, a Simon Schama of the 1700s, whose best-selling, six volume History of England was in continuous print for 100 years, making him a very rich man. David Hume is exceptional as being both a most influential philosopher and a masterful historian. Hume wrote history as a story, which the first historical novelist Sir Walter Scott learned from him. A brilliant mind and a brilliant writer too, Hume sits beside Burns and Scott among Scotland's great men of letters.

Hume wrote in an elegant, everyday language everyone could understand, describing himself as "an ambassador from the dominions of learning to those of conversation." In the words of his literary models, Addison and Steele, he "brought Philosophy out of Closets and Libraries, Schools and Colleges, to dwell in Clubs and Assemblies, at Tea-tables, and in Coffee-houses."

At the mere age of 28, Hume published his masterpiece A Treatise of Human Nature: an ambitious project to establish a Science of Man. Hume argued what makes us the creatures we are is not our rationality, but our emotions, that: 'reason is, and ought only to be, a slave to the passions'. Besides influencing Darwin's views on animal reasoning and adaptation, Hume's ideas on how scientific concepts work was a key philosophical influence acknowledged by Einstein, and he is also seen as a major influence on nineteenth century advances in sociology and psychology.

Hume's challenges to God's existence, miracles and institutional Christianity remain the most cogent today, and a reference point for religious debate. Hume's voice was always moderate, calm and peacable, deploying wit instead of

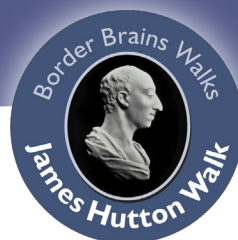


anger, and wary of the intolerance, prejudice and violence that religion inspires. The enthusiasms and extremes of the killing times of Scotland's religious wars were still within Borderers' living memory. Hume's ideas on trade, luxury, taxes, interest, money and credit show he understood earlier than anyone else essential economic truths, influencing Adam Smith 'the father of modern economics'. In April 2011, Chirnside celebrated the 300th anniversary of Hume's birth by hosting a Philosophy Festival for villagers and visitors, and by dedicating a new plaque and information panel to their world famous son: the one-man Enlightenment.



James Hutton 1726-1797

Father of Geological Science



What Sir Isaac Newton did for our understanding of space, the Berwickshire farmer and doctor James Hutton did for our understanding of the planet and the immensity of time. Before Hutton's investigations into the rocks and strata at Siccar Point, the Earth was assumed to be only 6,000 years old, but he proved this figure almost a million times too small. Scientists today think the Earth is 4.5 billion years old.

To short-lived creatures like us, the Earth seems inert: we are blind to the unrelenting erosion and renewal over hundreds of millions of years. Archbishop James Ussher began his *Annals of the World* in 1658: "In the beginning God created Heaven and Earth. Which beginning of time fell upon the entrance of the night preceding the twenty-third day of Octob. in the year 4004." Even Shakespeare writing *As You Like It* in 1600 had Rosalind exclaim: "The poor world is almost six thousand years old."

The Greek historian and traveller Herodotus (c.484-425BC) realised Nile sediments record past events, and concluded Egypt had formed from river deposits, but sadly the lesson was lost until Hutton's rediscovery 2,000 years later.

The best geologist, it is said, is the one who has seen the most rocks. In thirty years of field observation, the curious James Hutton had examined every ditch and riverbed he found travelling Britain. As a doctor, Hutton had written about circulation of the blood, but now he

was demonstrating the circulation of the physical world: new rocks recycled from the debris of older rocks. "Let us, therefore, open the book of nature, and read her records," Hutton wrote in his *Theory of the Earth*.

Exposed on the coast at Siccar Point, and on the banks of the Jed Water in Jedburgh, Hutton observed 'unconformities': junctions of rocks of different types, formed at different epochs. These rare windows into geological time evinced Hutton's theory that our seemingly constant landscapes are in endless transformation by titanic forces over immense time. "From the top of the mountain to the shore of the sea, everything is in a state of change," he wrote.

By testing his conjectures in field observation, Hutton laid the foundations of the science of geology, and so consulted the mute testimony of rocks. Hutton's discovery of 'deep time' was a necessary forerunner of Darwin's theory of evolution; we have come to know living creatures evolve, and also that continents drift, and that stars are born and die. James Hutton opened our minds to these possibilities.



James Small c.1740-1793

Ingenius Ploughwright



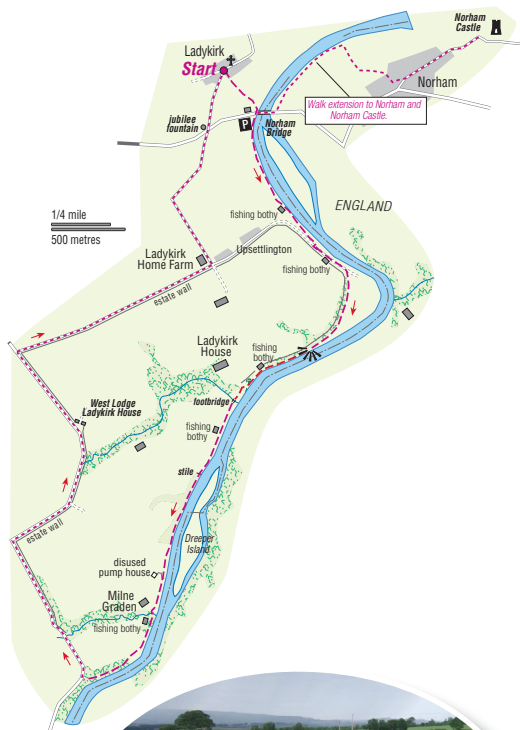
James Small's monument lies in the fields all around his birthplace at Upsettlington near Ladykirk. For this farmer's son, and later apprentice carpenter and blacksmith at nearby Hutton, invented a plough that revolutionised farming across Britain and abroad.

Fields feed populations, and farmers cultivate landscapes of bog, moor and bareness by ploughing, which cuts and turns the soil to take new seed, and buries any weeds to mulch as fertiliser. The perfect furrow, farmers say, must be 'straight, black and equal'. In the days of abundant cheap labour, the design faults of the old 'Scotch' plough needed to change little over the centuries, with a huge, heavy, wooden wedge to carve the earth, and causing great friction in all soil types. A new economy of management changed all that, and James Small, a modest, simple man with an observant and open mind, epitomised the spirit of improvement of the age.

Experimenting by trial and error while ploughwright at Blackadder Mount, Small scientifically analysed the mechanical forces at work in ploughing. He reduced to paper the natural curves of earth movement, casting his original design of iron mouldboard, which lessened the friction in elevating and turning the furrow-slice – in soils for every part of the world.

A chain enabled the plough to go deep or shallow, and, as a swing plough, there were no wheels to clag with earth and create resistance. Arable farmers saved on every plough: lighter and causing less friction, fewer draught animals were required to pull it, rendering a driver unnecessary, and so saving expense on labour. Small's design gave revolutionary economy, reducing ploughing from a three man, four ox and two horse operation to just one man and two horses – while diminishing the time to complete a given area of land.

True to his public spirit and service to society, Small did not patent his design, but wrote a manual called 'A Treatise on Ploughs and Wheel Carriages' to "give directions by which any sensible workman may be enabled to make a plough on my principles". Blacksmiths turned ploughwrights made Small's ploughs as freely as they wished. Even Robert Burns

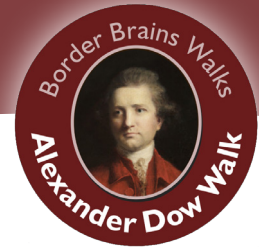


treasured his own copy, marking 'Robert Burns, Poet' on the title page.

As a consequence, Small lost money rather than gained it, and he died in debt in 1793. "The consolation," writes Michael Robson in his brief biography of James Small 'An Ingenious Mechanic of Scotland', "lies in the achievement, in the satisfaction it brought, and the respect which his unselfish character earned."

Alexander Dow 1736-1779

Historian



Alexander Dow wrote the first English language history of India: the three volume "History of Hindostan", published in 1768 and 1772. Based on a Persian text, but incorporating Dow's own thoughts and opinions, it remained the standard history for some fifty years.

Today Dow is still recognised, in India as well as in the UK, as one of the pioneers of the European understanding of the history and culture of India.

He was born near Comrie in Perthshire in 1736. In the early 1750s he came to Eyemouth, where he became Clerk to John and David Nisbet of Gunsgreen House, whose main business was smuggling.

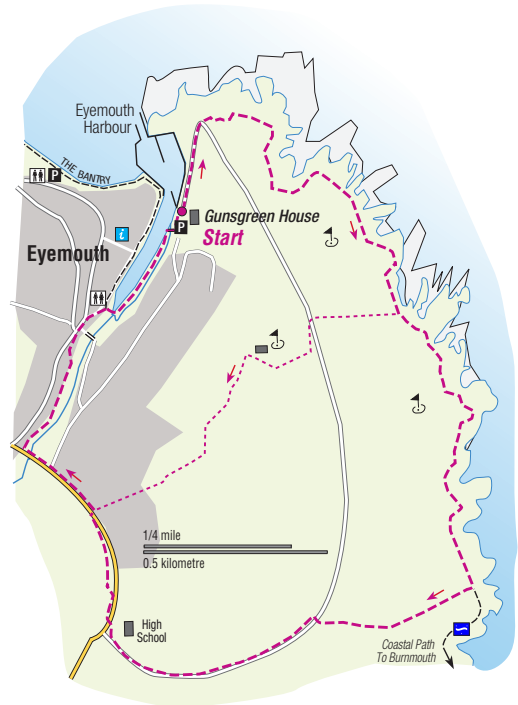
In 1757, Dow left Eyemouth in a hurry, eventually travelling to the Far East, ending up in Calcutta, where he joined the army of the East India Company, who ran trading stations in India. He rose quickly through the ranks, eventually becoming a Colonel. Before he had left Britain, he had made his will, leaving everything to David Nisbet.

Back in London in 1768, Dow not only oversaw the publication of the "History", but had his play "Zingis" put on by David Garrick. He got to know influential Scots in London, notably David Hume, and fathered a child, called Daniel.

Dow returned to India in 1769, was back in London in 1772, when he had his portrait painted, then returned to India again in 1773. He died in Bengal in 1779, aged just 43.

He left £10,000 – approaching a million pounds today – and it should all have gone to David Nisbet. He now had influential friends and greedy relatives, however, so the will was placed in Chancery – a very slow legal process – not coming out until 1796, after both John and David Nisbet had died.

Throughout his successful career, Dow had kept in touch with the Nisbets – he lent John £1,500 in 1771 and – in return – John channelled money to Dow's relations and kept an eye on his son Daniel.

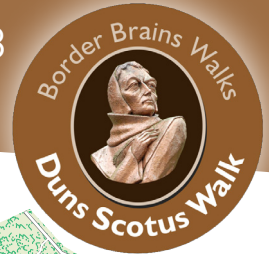


John Nisbet's Gunsgreen House is open to the public from 1 April to 31 October, Thursday – Monday, 11.00am – 5.00pm. There is an admission charge.



© James Baxter

Duns Scotus 'The Subtle Doctor' 1266-1308 Theologian and Philosopher



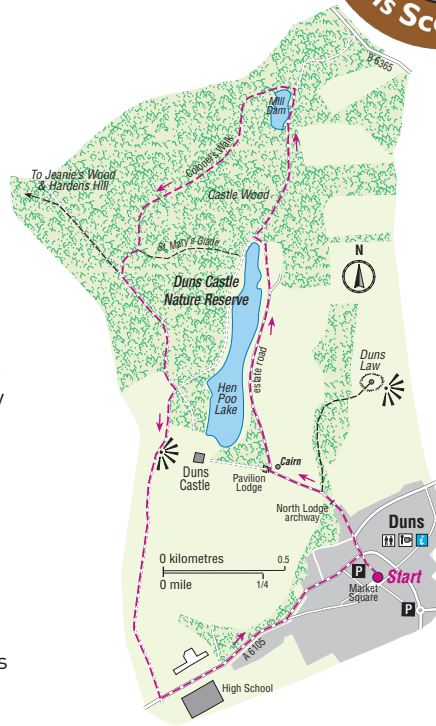
Berwickshire can boast two great philosophers: David Hume from Chirnside, and John of Duns, born in the grounds of Duns Castle in 1266, and known to history as Duns Scotus. A boy genius discovered by Franciscan friars while tending his father's cows, this medieval 'lad o' pairs' joined the Franciscan Order in Dumfries before studying and then teaching philosophy and theology at the Universities of Oxford and Paris.

Described by his brothers as a holy, prayerful man concerned to be poor with the poor, Scotus' barefoot lectures in Oxford drew 30,000 scholars to hear him speak in the days before the invention of printing. Then as now Scotus is a difficult thinker – "*Of really the rarest-veined unraveller; a not rivalled insight, be rival Italy or Greece,*" wrote the Victorian poet Gerard Manley Hopkins in his homage *Duns Scotus' Oxford*.

The OED defines metaphysics as 'the science which investigates the first principles of nature and thought'. Scotus' investigation into the ultimate nature of reality was so subtle, his arguments earned him the epithet 'Doctor Subtilis' or 'the sharp-witted doctor'.

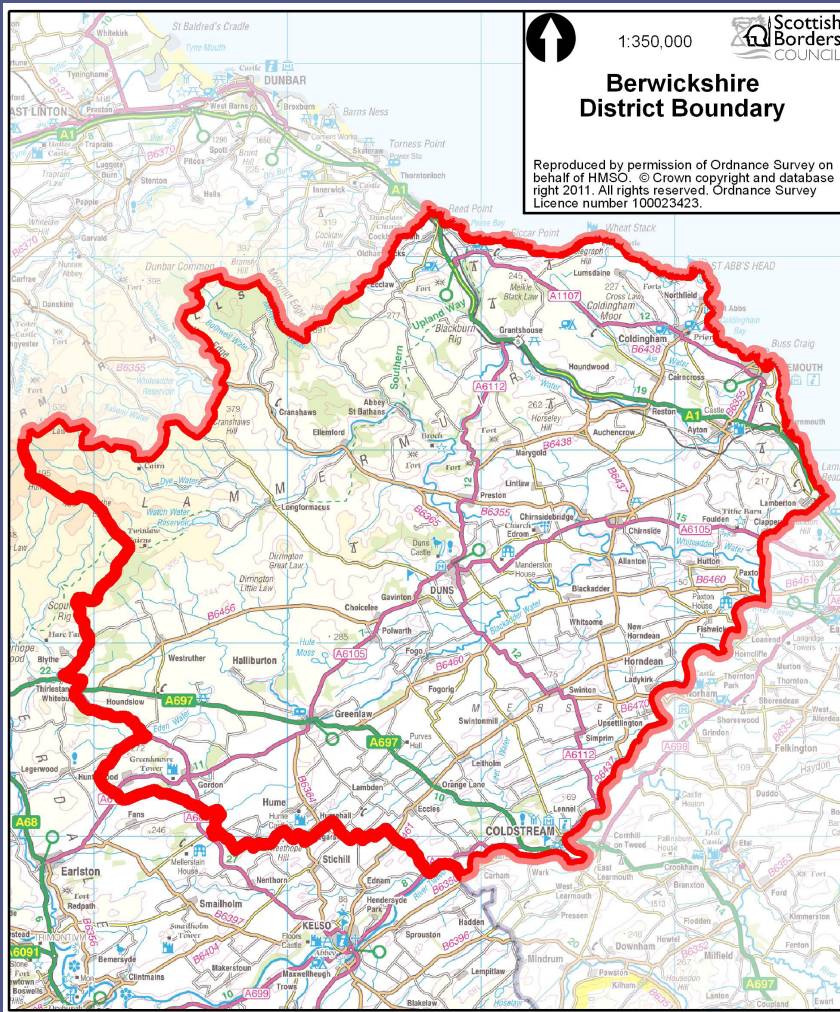
Yet after he died only 43 years old, Scotus' school of followers, known as Scotists, were less kindly called 'Dunces', meaning 'hair-splitting reasoners', by their Dominican opponents the Thomists, who followed the teaching of St Thomas Aquinas. Today the meaning of 'dunce' bequeathed to us is 'blockhead'. Death was unkind to Duns Scotus for a second reason. Sent to Cologne in 1308 to found a new university, Scotus was seized by a fit of apoplexy, and mistakenly buried alive, according to Paul Jovius, a witness to his exhumation.

The Blessed John Duns Scotus is venerated as a saint in the Minoritenkirche near Cologne Cathedral, where his grave's epitaph reads: *Scotia me genuit, Anglia suscepit, Gallia edocuit, Germani tenet* – 'Scotland bore me; England received me; France taught me; Germany holds me'. Truly a European citizen, this medieval academic's horizons were never limited by boundaries of country – much like his ideas today. Scotus is still famous in philosophy schools across the world for coining a concept called *haecceity*, or 'thisness', meaning a property that uniquely identifies an object. For example, Socrates has the individual essence of *being Socrates*.



In 1966, to mark the 700th anniversary of his birth, the town of Duns erected a statue of Duns Scotus gazing upward and beyond as if into the invisible. There in Duns Park, and on a cairn in the grounds of Duns Castle at the approximate place of Scotus' birth the inscription reads: "Wherever his distinguished name is uttered, he sheds lustre on Duns and Scotland, the town and land which bore him."





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