



Adventure #10 – UK Motorsports

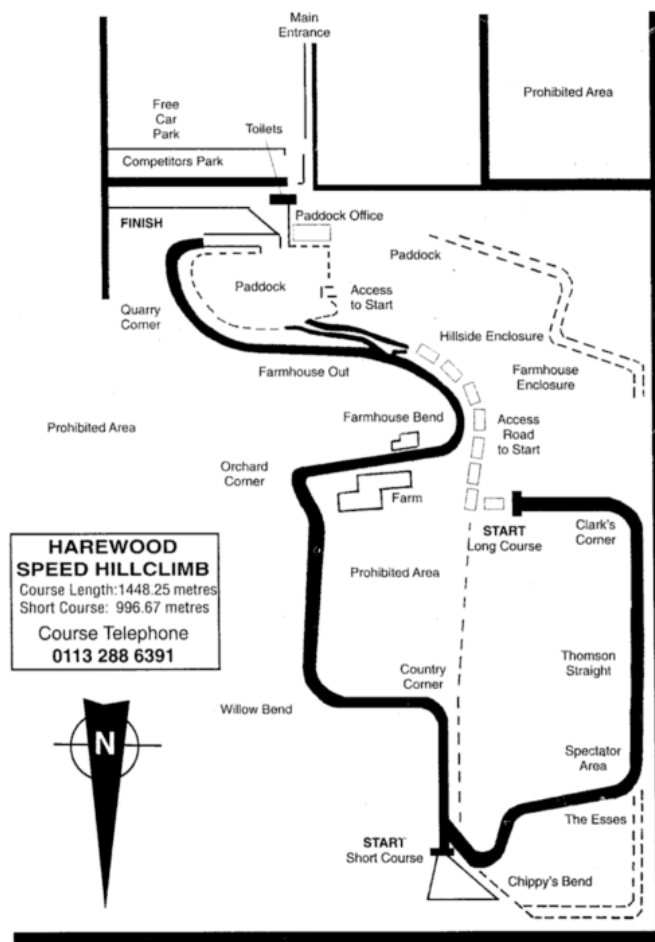
When I was Archivist for the Sports Car Club of America (SCCA), I enjoyed reading through the old racing magazines from the fifties and sixties. Back in those days the British racing events were widely covered. I remember reading about a hillclimb event that began in 1962 near the village of Harewood. Well, the British Auto Racing Club (BARC), which is the UK equivalent of the SCCA, still sanctions events at Harewood. So we took a jaunt over to Yorkshire to see the event. The course is nine-tenths of a mile (1,448 m), making it the longest British hillclimb event.

Then, while Wendy was back in Indiana for three weeks, I went to Aintree, the site of the British Formula One Grand Prix in the late fifties and early sixties. Interestingly, Aintree is also the site of the Grand National horse race (a steeplechase) which is such a big deal that on the day of the event it seems that every pub in the whole country has its TVs tuned in. Back in the days of the Grand Prix races at Aintree, the same grandstands used to be used for both car and horse races. Today, the car racing circuit is still used, but only for single car time trials, and that is what I attended. Here are some photos from Harewood followed by some from Aintree.

First is the view from the top of the hill. The time trials are held on the private drive through this old farm.



Next is a track map of the Harewood Hillclimb course.



This event had a collection of pre-WWII Austin 7's competing. These little sporty cars had tiny 750cc engines. I think Wendy's sewing machine has more power. Some were in original trim (left) and some were modified as all-out racers (right).



This next car truly was a pure racer, and looked a bit like an Indianapolis 500 racer from the thirties. It had a supercharged version of that same 750cc engine.



Next is a blue TVR Vixen. This is the car I wanted to own when I was back in high school, but they were very rare (and pricey) in the US. The red one is a Volkswagen GTI (supercharged) of a vintage similar to my old racecar back home. Wendy keeps pointing out that if I do retire over here I could bring Thumper along and race here. Hmmmm....don't give the old man expensive ideas.



Old Lotus Super 7s, and more modern look-alike kit cars were extremely popular because of their light weight and good handling.



Here are some shots from the "twisty-bits" (a thoroughly British expression)



The original Harewood circuit had wooden guardrails, that look more like farm fences (left). Now it is steel guardrail, gravel traps and tire walls.



Here is a bright yellow, brand new MG-3. This is one of the new products from the recently rejuvenated MG Car Company, now owned by a Chinese firm, but making new cars in Britain. I drove one of these recently at an MG car dealership. Nice. Solid and powerful (not traditional MG traits) and it handled well. Very reminiscent of an early VW GTI.



Next is a picture of a piece of the Harewood course in 1962.



Some things haven't changed much.



Here are some of the Austin 7s on track.



For all of you fans of the Top Gear television show, I got to have lunch with James May, after he visited our race car lab and sat in last year's racecar, surrounded by my team of students.

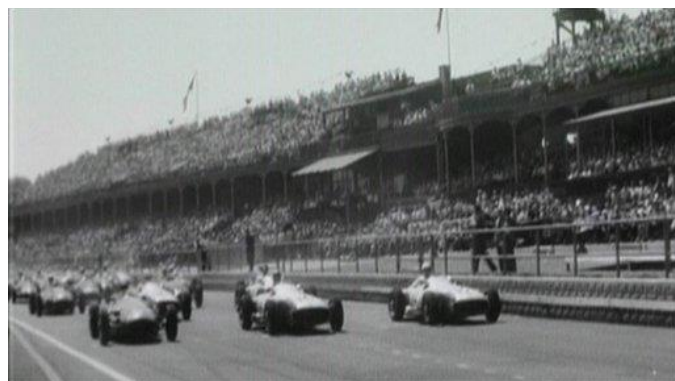
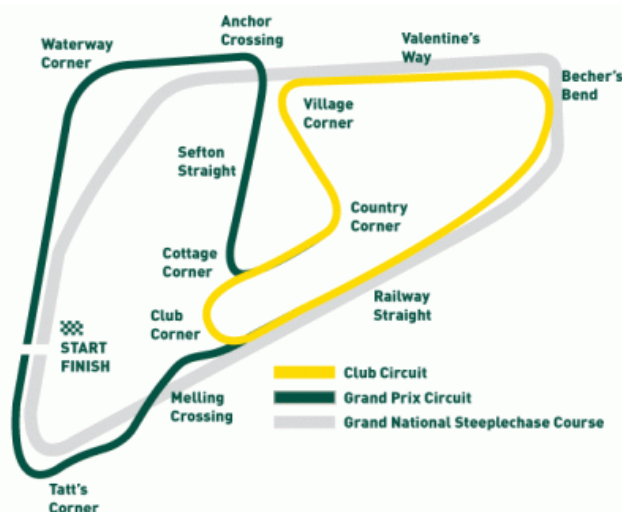


Here are some of the interesting old classics from Harewood, like a Sylva Phoenix, a Mini Jem Mk3, a Ford Capri, an Anglia, a Renault 3 Turbo, and a suped-up mini.



The Aintree racing track was first used in 1954. It was 3 miles in length, but the current circuit only uses 1.5 miles of that. When it was built, there were few well-developed racing facilities in Europe. Aintree had the advantage of sharing the grandstands with the horse racecourse (still home of the British Grand National – the UK's biggest horse race). As a result, the car track quickly rose to prominence in post-war Britain. It was picked to host the British Grand Prix in 1955, a memorable race as Stirling Moss beat his Mercedes-Benz teammate Juan-Manuel Fangio. Tony Brooks recorded a popular win there driving a Vanwall, the first win ever for a British-built car in the World Championship. Other winners included Wolfgang von Trips in a Ferrari, Jim Clark in a Lotus, and Sir Jack Brabham in a car of his own design, before the British GP moved to other venues.

Here is a map of Aintree, and some 1950s photos.



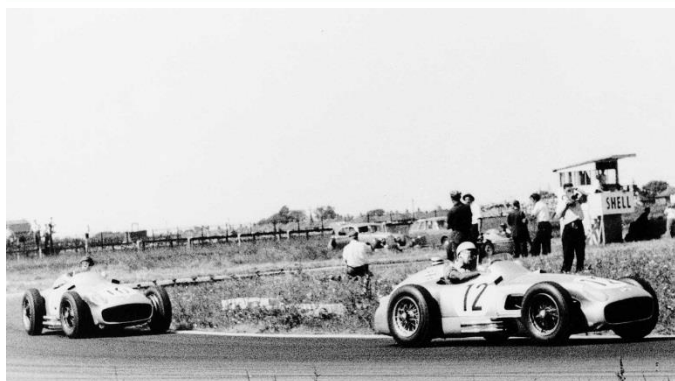
I attended a Time Trial (one car on course at a time, racing against the clock) at Aintree. You can see the horse race grandstands in the background behind the starting line.



Although many of the cars in attendance could turn quite high speeds, safety issues were less prominent than they would be in the US. Here a car flies past a clump of unprotected trees only a few feet off the course.



The Indianapolis Motor Speedway may claim to be the only racetrack in the world with a golf course in the infield.....but someone neglected to tell Aintree. In addition to the car and horse tracks, there is a golf course in the infield. In this photo you can see the well-trimmed greens in the





background and a souvenir that I found in the grass alongside the track.



A car at speed in the “twisty bits.”



And down the short straight.



In my lectures on the history of motorsports, I talk about how many of the early American races were run on fairground horse tracks, and I often

show old black and white photos of the cars racing past the guardrails that were designed for the horses, not for automobiles. In these next photos you will clearly see that if the driver were to leave the course to the left side, he or she would be destined to hit.....yes, that's right,.....a horse racing barrier. Safety precautions on UK racing circuits definitely seem to lag behind what we consider normal in the US today.



Now for some of the interesting cars. Here is a classic Mini Cooper.....and one that has been “hotted-up” (another British term).





The old and the new.....an antique Gemini, powered by an American V-8 engine, next to a modern Formula Atlantic.



MGs, old and new



A "hotted-up" old MG



Formula cars, old and new



Aston Martins, old and new.



Lotus, old and new.



Lotus 7s and their newer replicas, like the Caterham, are extremely popular, as one can tell from the long line of them waiting to compete.

Classics like an American Shelby Cobra and a British Healey 3000





A modern Radical sports racer and a pair of home-built specials.



And I will close with the car that carried the biggest “drool” factor for me, personally. It is a Mallock. I have only ever seen two before. One was 20-some years ago where it was running as a sports racer at an SCCA Club Race. More recently, I saw an early version at a vintage race.

The Mallock is a truly British phenomena. The first one was built over 50 years ago, but they are still being built and are extremely popular, having their own class in British club racing.

What is a Mallock? Well imagine that you mated an SCCA Formula Atlantic car with an Oswego Supermodified short track racer. You would end up with a front-engine, offset-chassis, aerodynamic, winged, formula racing car. You would end up with a Mallock...inspiration for many a man's mid-life racing crisis.





Adventure #11 – UK Historic Engineering

The age of the railroad was brought on by the practical improvements made to the steam engine by Scottish mechanical engineer James Watt. Scotland, England, and America all built railroads crossing their land as the industrial revolution took hold. In America, with all of its new steel mills, bridges were built with steel. But in Scotland and northern England, where stone is plentiful everywhere, it was the stone masons who built the bridges, and some were quite remarkable. No one was better at bridge design than Thomas Telford, a Scottish civil engineer, architect and stone mason. He is responsible for a tremendous number of bridges and churches in Scotland, as well as the Caledonian Canal. While not all of the bridges shown here are Telford's his style is evident in many of them.

This railroad viaduct that crosses a major valley in the Scottish Borders is built completely of stone block.



This stone viaduct, at Whalley in the north of England, is 5 stories tall and 48 arches long as it stretches across a valley.



Stone was used for a great many bridges, whether giant viaducts crossing deep valleys or small bridges carrying carriageways over small stream crossings like this next one.



Here is the 1864 railroad bridge across the River Tweed near Peebles in the Scottish Borders.



To see the effort and craftsmanship that the engineers and stone masons designed into their work, look closely, below, at one of the arches for that same bridge, and you will see that the stones of the arch are skewed, rather than simply stacked in a row. Look at how the lines of stone run at an angle on the underside of the arch. Also note the crosses designed into the supports. These are signs of craftsmanship, not necessity.





The next two pictures are of Old Manor Bridge, near Peebles, built in 1702. Note that the bridge actually has a curve built into it. It was also only one lane wide (typical of a great many Scottish bridges still in use on main roads).



To shore up and strengthen Old Manor Bridge, modern engineers have drilled holes through the stone and installed steel rods all the way through the center of the structure, with steel plates on either side of the bridge to help hold it together. This sort of effort, even on bridges like this which no longer carries an active roadway, demonstrates how serious the Scots are about preserving their history.



Below is the “new” (1883) Manor Bridge over the River Tweed near Peebles.



Peebles' town emblem is a salmon, because the Tweed is a historical salmon run. Note the intricate fish shaped lamp-posts that grace the main bridge over the Tweed in the center of town, and are still used, over 200 years after they were installed.



Roads often pass through medieval walls, or gate houses, like this one in Whalley.





Scottish engineers and stone masons have created some pretty impressive erections in the Highlands. But Scots road builders also have to deal with unusual traffic flow issues.



Getting back to James Watt and the steam engine.....on my way back from the races at Aintree, I stopped at a Steam Fair, where a number of old steam engines were on display. Small ones....



And big ones.....





And even musical ones, like this steam calliope



On one outing I stopped at the Stott Bobbin Mill, a heritage site that preserves an old factory that made thread bobbins during the early years of the industrial revolution.



The mill was originally built in 1835 and was powered by a waterwheel utilizing a stream flowing down the mountainside. In the early 1900s one of James Watt's steam engines was brought in to provide the power.

The Cumbrian hills were once the center of the English textiles industry. Cotton bales from the American south were brought by ship to the west coast of England where they were processed into cotton thread in Cumbria, then shipped to York where the thread was turned into cloth. To ship the thread, they would wind it onto spools, called bobbins. Since Cumbria had forests for the wood and mountain streams to supply the power, the bobbin mills sprang up alongside the thread mills. At one point there were 70 bobbin mills in Cumbria. Some of these mills could produce nearly 10 million bobbins per year, usually with about 30 workers working 12 hours a day, 6 days a week, with two holidays per year.

On Bank Holiday weekends, the heritage folks fire up the old steam engines and actually run the antique machinery. Naturally, I picked one of those weekends and it was impressive to see all that old equipment in operation. The trees were cut down and smaller branches were taken as bobbin stock (see photo), with the larger pieces used to fire the boilers. The tree was allowed to shoot up new growth, which, in about a dozen years, were the right diameter to harvest again for bobbin stock.



Here is the steam engine that powers the mill.



And this is Watt's centrifugal speed controller, which made it possible to control the output speed, regardless of steam pressure.



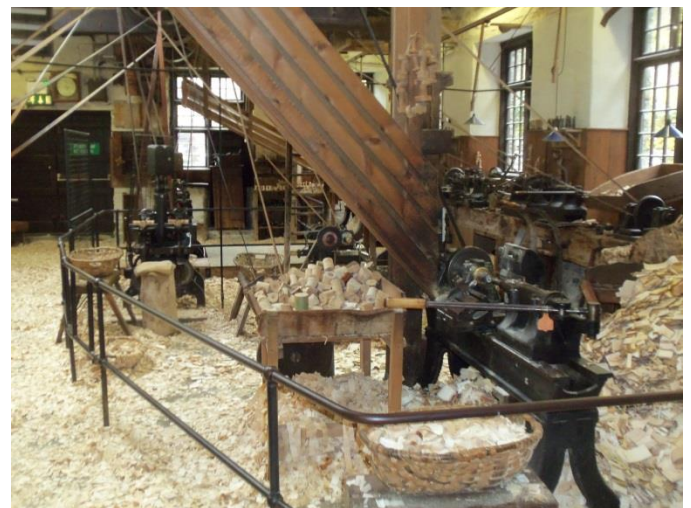
The engine drove a shaft that went all the way across the top of the mill, turning multiple belts that drove the individual machines.



It was necessary to oil all the bearings on that shaft frequently, so skinny little walkways were built alongside the shaft, and small boys, called "grease monkeys" scampered along this walkway, continually oiling the bearings. So now you know where that old term comes from.



The mill floor was crowded with equipment, most of which produced a lot of dust. So the windows were kept open all day every day to help clear the dust. It gets pretty cold in Cumbria in winter, so the wood chips were allowed to pile up to waist height, and shoveled out only to make a path to the machines. That helped insulate the workers from the cold.



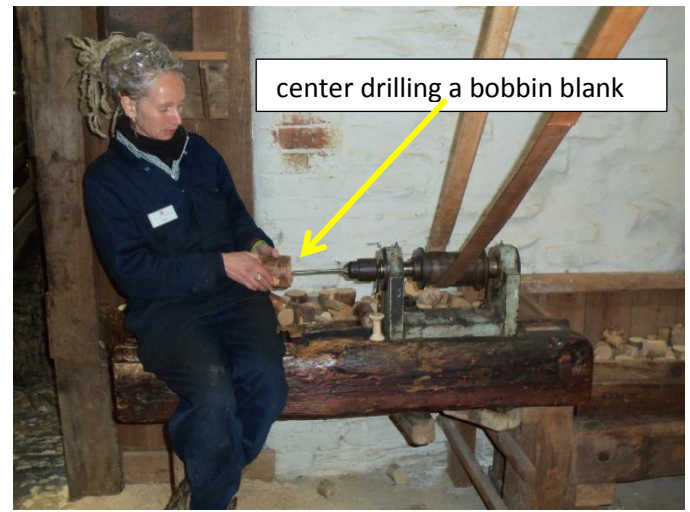
The first machine in the process was this saw that was used to cut the sticks to the right length for individual bobbins.



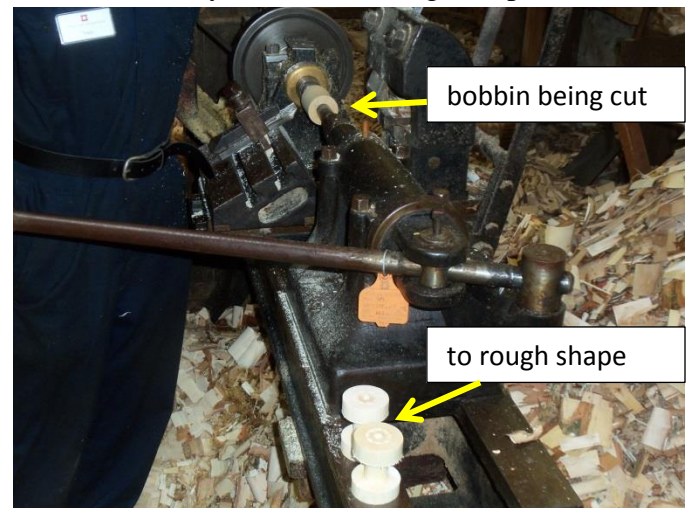
The newly cut piece of wood was moved to this circular cutter, which was used to bore blanks of the right diameter from those wood pieces.



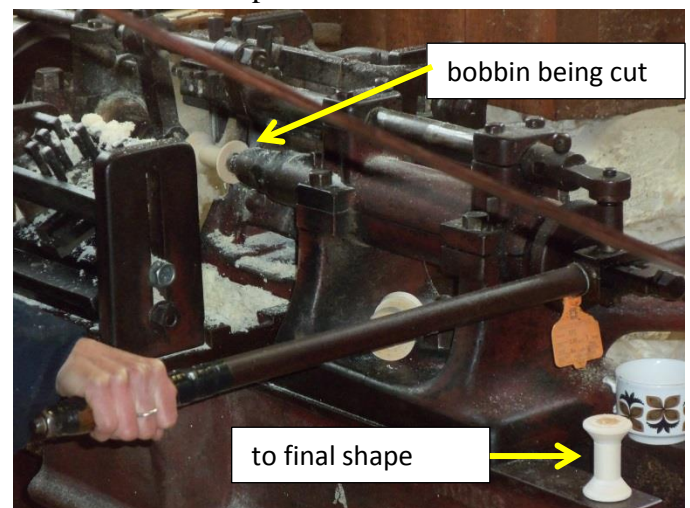
These cylinders of wood were then center drilled. Remember, all of these machines are powered by the belts from that shaft in the ceiling.



The bobbins were then moved to this first lathe where they were cut to rough shape.



This finishing lathe was then used to cut the bobbin to final shape.





A basket of bobbins was then dumped into this polishing rack, where they were rolled, by hand, on the rack to knock off loose wood chips and dust.



The bobbins were then dumped into this barrel filled with methylated spirits (denatured alcohol) and chunks of beeswax. This cleaned them, polished them, and coated them with a thin layer of wax so that the thread would not snag. The fumes from the methylated spirits could be pretty over-powering, so this process was only done during the last hour of the day so that it did not affect the workers. It seems the fumes would get them a wee bit “high.” From this came the term “happy hour” for the last working hour of the day.



The final product looked like this.



Or like any of these various sizes and shapes, depending on the cutting tools used in the process.



When the end of the 12 hour workday finally arrived, it was necessary to disengage all the machines from the drive shaft, because it would take some time for the steam engine, flywheel and shaft to slow down. This next device was used to knock the belt off the machine's drive wheel. And from this came the term “knock off” at the end of the work day.





We took this wee ferry from the Isle of Skye back to the mainland. Note how the deck rotates on the hull to align with the slip to let the cars on. The cars must be parked appropriately to balance the deck, because the two ferrymen rotate the entire thing by hand.



Ain't engineering grand!!!



Adventure # 12 – Spring in the UK

Spring is here - the yellow gorse is in bloom on the rocky hillsides and the purple heather is beginning to show up in protected locations.



I spent an afternoon at Carlisle Castle, which was having a St. George Festival the week of St. George's Day (April 23).



There was a mummers play, the likes of which the village people would have staged on a festival day in the 15th century. Naturally, St. George was the hero of the play, defeating the evil-doer in a sword fight.



Later in the afternoon, George saved the day by rescuing the village children from the threatening dragon. But in this play he did not slay the dragon (they are an endangered species, you know), but tamed it instead.





The most interesting part, for me, was a musical duo who played a wide variety of 15th century instruments, such as this French hurley-gurley and Moroccan long pipe



.....and a lute and a Celtic harp.



The next photo shows the bagpipes and the bells being played. I learned something about the bagpipes. It seems that the earliest sets were Arabic, made by attaching a snake charmer's pipe to a bag which was pumped to help blow air through it. The Arabic legions would play this as they marched into battle. The first Crusaders who fought to free the Holy Land brought the instrument back home, where it spread across all of Europe and was quite popular. However, in the 15th century, the violin was invented, and its growing popularity supplanted the bagpipe across Europe

everywhere except Scotland. That is why today we think of the bagpipe as Scottish, even though it originally was not.



The camp chef was cooking a pot of cabbage and leeks in butter, another of beef in red wine, and a pot of pasta....made by rolling wheat and egg dough very thin and cutting it into strips with a knife. Smelled good, but I was not invited to lunch.



The archers put on quite a display. The lass in the photo was the one who hit the bulls-eye. The last photo shows St. George training his new recruits on the use of the halberd in battle.

I also learned a lot about more than I knew before about the St. George legend. For starters, he was not the original patron saint of England.....



that was St. Edmund, King of East Anglia in Britain, who was a Christian martyr in the 9th century. Edmund was assassinated after refusing to recant his beliefs. At least he was actually from Britain.



St. George, on the other hand, was a Roman soldier from the area that we now call Palestine. He was also a Christian martyr who refused to recant his beliefs. But he certainly wasn't English. However, he was adopted as a patron by the English soldiers who went to Palestine to fight in the Crusades, because he had been a Christian warrior who fought in that part of the world. He became associated with the flag with a red cross on a white background, because that was the banner that the Pope gave to the Crusaders.

Apparently that whole dragon thing was a mistake. There was a medieval painting, which was supposed to be a picture of Michael, the warrior archangel, (wearing the red cross emblem to honor the pope, even though there is no evidence that

either Michael or George ever wore one) putting a sword through the devil. Lucifer is represented, in the painting, as the serpent from the Garden of Eden. The painting was widely copied in drawings, books, and tapestries. This image was misinterpreted in a 13th century book called the Golden Legend, as being St. George instead of Michael, and the serpent was taken to be a dragon. By the 15th century, this version of the story had taken root in England, and the story had evolved to the one we are more familiar with, of St. George slaying a dragon. King Henry elevated St. George to patron saint status, supplanting St. Edmund, because he preferred the image of a warrior. A giant case of mistaken identity becomes a legend. And, of course, it also became a pub



Lowther Castle is a ruin, but its 300 acres of gardens are under restoration, including the recent planting of over 160,000 daffodils, to line one of the paths leading to the castle.





Pete toured them thru Urquhart Castle, Eilean Donon Castle, Jedburgh Abbey, the Neolithic stone circle at Castlerigg, the Wallace Monument, the Falls of Foyers, and numerous other historic and scenic spots in the Highlands, Scottish Borders, Cumbria, Lancashire and Yorkshire.



Our pastor, Dave Buckner, and son Matt, joined us for a fortnight on holiday. They say they had a great time, but even pastors have a bad day every once in a while.





The Highlands are in bloom !!!



Last for this newsletter is Pete's favorite view of the Highlands. From this spot you can see the Cairngorm Mountains to the east, the Grampian Mountains to the west, the peak of Ben Nevis to the south, The Firth of Moray to the north, and Loch Ness below you.



Pete says you can spread his ashes here.

