

WORLDWIDE, WE'RE ALL IN THIS TOGETHER

With the rapid spreading of the COVID-19 facing us all worldwide, it has in many ways, disrupted and turned our lives as we know it, upside down.

While many of us will not be affected directly with the virus itself, we are already seeing tragedy spreading worldwide as well. As a consequence to our everyday lives, this current pandemic report is to the many businesses, activities and entertainment plans concerning the name of Turnbull that have had to readjust, hopefully as a temporary measure.

Not all of us may have recognised that part of what we're feeling is grief associated with not being able to do the things we would usually do, including the losses to our autonomy and personal freedom. However, there are already signs that those of the Turnbull name are facing up well to these unforeseen new challenges. They are able to display that we, as Turnbulls are able to adapt both in serious matters as well as in humorous ways. The following are just two examples . . . More on Page 3.

INNOVATIONS . . . '6' BACK' BADGES

Kim Turnbull and her husband Greg deliver meals to his 94-year-old mother about three times a week.

Now, with the COVID-19 pandemic, they're taking precautions to keep everyone safe, but they were concerned that not everyone seemed to be taking social distancing suggestions seriously. "We found going to the grocery store people were not staying six feet away," said Turnbull.

So the couple came up with a solution: creating social distancing badges and stickers.

They based their design on a stop sign, and inside it reads 6' BACK social distancing. "You'll notice when you do wear them, people notice them and it's like they do, they stop and they back up," said Turnbull. She continued saying already the reception has been positive. While wearing a sticker at a grocery store in Moncton, an employee noticed the sticker. "The guy working at the counter said, 'that's really cool. I'd love to have one of those because I'm tired of telling people to stand back and some people get mad,'" she said.

She said the profit margins for the six feet back products aren't much, but right now, this project is something that can keep my employees busy and employed. However, the main goal of the project is to make people aware, and remind them of the importance of maintaining distance from each other.



TURNBULLS SHOWING THE WAY . . .



Michael Turnbull, a former star in the Bachelorette TV personality series in Australia, now in his Real Estate business, has taken precautions amid the COVID-19 pandemic. With private inspections, he has mounted a welcome sign and donned a face mask. A potential homeowner customer's hands are also being sprayed with sanitiser.

2020 Reivers Festival in Hawick

-- CANCELLED --



Due to the current COVID-19 situation and Scottish Government advice, we reluctantly took the decision to cancel all events at Hawick Reivers Festival 2020.

Details on ticket refunds and further arrangements have been posted on our website and Facebook Page.

The Festival Committee would like to say a big thank you to everyone who has offered their support since we announced the cancellation of the 2020 Festival.

As you will appreciate it was not an easy decision to take but a very necessary one in the current situation. There is a lot of work goes in to organising the Festival and very many clubs, societies, local businesses and individuals all play their part - again we say thank you to you all.

We have been gratified to realise that the Festival means so much to so many people, both in the town and much further afield.

Rest assured we are already looking forward to 2021 and will keep you all updated with plans as they evolve.

Hawick Reivers Committee

Authors Corner

Ann Turnbull



Born in Hertford in 1943, Ann Turnbull was brought up in south-east London and has been writing stories since she was six years old. However, she was in her 30s at the time of her first publication. In her early years, she worked as a secretary before becoming a full-time writer.

Ann's first novel, *The Frightened Forest* was published in 1974 and this has since been followed by many books for children and young people, some set in Shropshire where she lives and many with a historical setting. Ann has a particular interest in historical fiction, and many of her books are set in past eras.

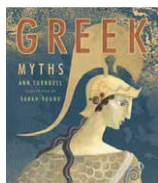


Her output of more than 30 books includes picture books for very young children, novels for children in the 8-12-year age range and, more recently, Young Adult fiction.

Her best known novels are *Pigeon Summer* (1992), *No Friend of Mine* (1994) and *Room for a Stranger* (1996) each with a different story of the Dyer family. The series are set in a Shropshire mining town during the Great Depression of the 1930s. *Pigeon Summer* was nominated for the Nestle Smarties Book Prize and *No Shame, No Fear* was also nominated for both the Guardian Book Award and the Whitbread Book Award.

Ann has written a number of picture books, but the best known is *The Sand Horse*. Currently the 'Greek Myths' publication is her best seller. It embraces the readers with a collection of classic Greek myths for all ages, into a legendary world where anything is possible.

Ann's website link: www.annturnbull.com



TCA TENT HOSTING FOR 2020

The COVID-19 virus ...

Due to the coronavirus (COVID-19) event information may be out of date. Confirm details with event organisers. The following events have currently been changed:

Upcoming 2020 Highland Games representing Turnbull Clans:

1st Annual New Smyrna Beach Heritage Day Breakfast in New Smyrna Beach, Florida, due to be held on the 4th April

THIS EVENT WAS CANCELLED.

The Menorcan Cultural Society. The Dunedin Highlands Games - Dunedin, Florida and hosted by Walter and Brittany Turnbull on the 4th April. HAS BEEN POSTPONED. Additional details will soon be available. <http://dunedinhighlandgames.com>



Despite these two attraction setbacks, watch this space for any up-coming events for Tent Hosting to be held later in the year. twoscots1217@earthlink.net

.. and in Ontario, Canada



Borders Tales and Trails

Rated: ★★★★★

Illustrated with colour photographs and maps



Available in paperback, the book is divided into two sections.

The first, Tales, tackles the early history and stories of Scotland and the Borders.

The second section, Trails, outlines places to visit in the Borders, with a particular influence of notable Turnbull sights, battlegrounds, and castles. Included with the description are directions and what's there.

It is not intended to be a complete history or guide book, but a book about the Borders as seen through the eyes of one clan.

Amazon USA: <http://a.co/d/5S3dI3I>

Amazon UK: <http://amzn.eu/d/6sdBPsp>

Amazon AU: <https://amzn.to/2oSLsvo>

BULLSEYE

The Bullseye, is the Turnbull Clan Association Worldwide (TCA) newsletter published six times a year at: 5216 Tahoe Dr. Durham, NC 27713 U.S.A.

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Founders: John F. Turnbull, Scotland • Dorothy Berk, USA

SIGNS OF THE TIMES

NOW A 'VIRTUAL TOURS' SERVICE

A variation to the way business is currently being conducted, is the innovation of a Dundee family in Scotland. They have introduced an online remote survey for their Fire Surround Centres business to support their customers.

Brothers Gary and Graeme Turnbull in conjunction with Alex Mitchell, have launched this service where they can do a virtual tour of a customers home in preparation for a new fireplace or stove despite the lockdown. Most people at present are spending more time in the home, so design, technical implications and suitability are an alternative solution to improve the efficiencies of their business during the COVID-19 crisis.



SOME HAPPENINGS IN THE MONTH OF APRIL

On the 6th April 1320, the monks of Arbroath Abbey drew up the the 'Declaration of Arbroath': *'For we fight not for glory nor for riches nor for honour, but only and alone for freedom, which no good man surrenders but with his life'*.

The first of April in Scotland is traditionally 'Hunt the Gowk' which is the equivalent of April Fool's Day.

Did you know Turnbull Clan Association is on Amazon Smile?



Amazon Smile donates 1/2 percent of every purchase to the non-profit organization of your choice. You can choose the Turnbull Clan Association! It is free; you don't pay a penny more than you normally would! To participate, do your shopping at smile.amazon.com instead of the normal Amazon site, and choose Turnbull Clan Association as your charity!

EMERGENCY CHILD CARE AMALGAMATION



The Turnbull Child Development Center in Iowa, USA is working with three local agencies including Shenandoah School District and the Shenandoah Medical Center to establish a temporary Child Care service to meet the child care needs of individuals who are providing important services during the COVID-19 crisis.



Turnbull Clan Members

Your membership in the Turnbull Clan is a free birthright, but we do need your financial support of the clan organisation and its activities on behalf of our members.

Please consider becoming a supporting member with your voluntary dues of \$24 annually from the date of your first contribution.

Additional contributions to provide clan tents at Highland Games are also needed and very welcome.

Contributions are tax-deductible and are used only to support clan activities. Support your clan at: www.turnbullclan.com website.

Nova Scotia - Women's hockey



At the age of 10 Blayne Turnbull saw the first women's world hockey championship played in her home province of Nova Scotia in 2004. Her chance to follow in those players' footsteps was denied when the International Ice Hockey Federation cancelled this year's women's championship, scheduled for 31st March to 10th April in Halifax and Truro, Nova Scotia, because of the novel COVID-19 outbreak. "To host world championships for next year, adds a lot of motivation for me to make sure I'm on the roster for next year again." Turnbull said.

Scotland – Wireless charging



Richard Turnbull is joining the management team of Electric vehicle (EV) charging infrastructure company, 'Connected Kerb'. He has been appointed as head of wireless charging solutions when an intended rollout will see induction chargers in inductive pads, sunk beneath the ground and fitted around the country. Older vehicles can also be fitted, to enable them to charge wirelessly.

USA - Red Cross Medical Heroine's unusual case



Dr. Carrie Turnbull's work is all about saving lives of the four-legged kind. But last New Year's Eve that all changed. "My receptionist for the day, Meagan, came back and said there's somebody collapsed on the floor!"

Turnbull said. A client, not a patient had collapsed in the Staunton River Veterinary Clinic's waiting room and was unresponsive, convulsing and gasping for air. So Carrie sprang into action. "She did what Carrie does in any stressful situation, remaining calm then delegated tasks to everybody who was available," said the Veterinary Assistant. Successfully revived, Carrie commented "It's very nice as a veterinarian sometimes to get a thank you."



by Kenneth Turnbull - Editor

New Zealand - The unexpected foods we should stock up



The COVID-19 virus sweeping the globe, panic is setting in, people are beginning to realise they should have some food in the pantry. Claire Turnbull is the Nutritionist for Healthy Food Guide Magazine in New Zealand and has some well-founded advice for all. She has been educating and motivating people to eat well, keep active and create healthy happy lives. This is the time where she sees people gravitating to large amounts of one type of food - starchy carbohydrates with a long shelf life. "I'm seeing people buy lots of one type of food, with no variety." Turnbull recommends that people should diversify their supermarket selection and stock up on some more nutritious options.

UK - National Equine Forum on 'Strangles' disease

A Yorkshire couple Andrew and Abigail Turnbull who own the Richmond Equestrian Centre, have been working hard to raise the awareness of the highly infectious bacterial disease 'Strangles'. Recently they gave



a short talk at a National event in front of industry experts, headed by HRH Princess Anne. They outlined their own experiences with a recent outbreak of this bacteria. We had a livery horse on box rest and he just wasn't right," Mrs Turnbull said. "We called the vet to take a blood test never expecting it to be strangles." The horses were put onto a Red, Amber, Green (RAG) isolation system and given the all-clear less than eight weeks later. The horses affected all making a full recovery.

USA - New Public Works Director

A U.S. Navy Veteran, professional engineer and trained public administrator, Pat Turnbull will become the next public works director for Centerville, Ohio. He comes to the city from Montgomery County, where he served most recently as director of Environmental Services and has been at the helm of the community's water and sewer utility. Turnbull said. "I am excited to continue to serve the Centerville community in my new role."



UK - Athlete is inspiring people

Hartlepool triathlete Matt Turnbull has been hailed as a role model for his inspiring fitness challenges. He has ploughed his energy into encouraging people to get involved in the sport he loves. The 40-year-old from Seaton, has taken a step back from competing in order to mentor people of all ages in their own triathlon training. Turnbull picked up the Role Model of the Year Award at the Best of Hartlepool Awards last year, and has since seen a huge increase in the numbers of people taking part in the sport through the Tri-Life Tteam.



Australia - Don't change a thing

Wendy Turnbull was the last Australian woman to reach the women's singles final in Melbourne in

1978. The three-time major finalist says she's constantly impressed by Ashleigh Barty's "cool, calm and collected" approach and her fellow Queenslander shouldn't change a thing as Barty edges closer to ending Australia's 42-year drought of producing a home-grown Australian Open winner. "It's very exciting actually. It's a great win for Ash, a great win for Australia and a great win for Queensland," said Turnbull.

Australia - Special wins to remember

For Abbey any win is appreciated by young harness racing drivers, but Goulburn Valley reins woman Abbey Turnbull took out a race recently that she says will always have a special place in her heart. The talented concession driver, based at Tatura in Victoria, won the second division of the Tiffany Murray Memorial at Echuca with the six-year-old gelding Mangochililime. Aged just 22, Tiffany Murray was diagnosed with multiple brain tumours. She fought a short but brave battle before her death in 2011.



'THE TWELVE TOWERS OF RULE'

REFLECTIONS FROM OUR PAST . . .

Can you help the professor . . .?



Photo: Roger Curtis

The Campaign for a Scottish Borders National Park and Archaeology Scotland is currently working away here on the Twelve Towers of Rule story. About half a dozen of the more experienced historical researchers in the area are studying the extensive on-line Scottish and UK historical archives, although not much has turned up so far.

One of our number has been doing drone surveys of some of the towers as well as some sites just outside the valley. Another keen antiquarian is looking at the aerial and land photographs and doing some reconstructions of sites, using some of the amazing software that is available nowadays. However we are still struggling to get information from the Scots side. We would love to have more input from the Turnbull families, not only about the 1545 event, but about the periods before and after, to get a better understanding of their experience.

Very little is known about the deeds of the Earl of Hertford and his destruction of 12 of the many towers around the Valley of Rule Water. What is known at this stage is that in one day in September of 1545, he with an army of 12000 foot soldiers and 4000 horsemen, devastated the Valley of Rule Water, burning the twelve Towers and much else. However, it is not clear which of the more than twelve in the Valley were burnt.

We do know the burning of the Twelve Towers of Rule in 1545 was mentioned in an article by Catriona Findlay on the Turnbull website around 25 years ago, with a quotation about the hardships visited on the community. The Professor, Jane Bower, needs to find the source of this quotation. Can you help?

She had been planned to visit the 'Reivers' Festival' in March, but with its cancellation through the COVID-19 lockdown, it has been a little frustrating to say the least. It is hoped to develop some good walks, drives and rides around the area with accompanying information about these and other important events.

So, if any members out there have any or more information, please contact the following: editor@turnbullclan.com

STIRLING'S 4 GENERATIONS OF TURNBULLS



Four generations of the Turnbull clan in their Turnbull Hunting Modern tartan. From the left, William Turnbull (71), Greg Turnbull (32), Lochlan Turnbull (2) and Russel Turnbull (96 in July). All were born and raised in the heart of Scotland . . . Stirling.

AN IMPORTANT SITE FOR THE TURNBULLS . . .



Cavers Castle (House) has recently been purchased and the locals are now seeing it become more exposed through the felling of the surrounding trees from the old ruin. Once owned by the very prominent and powerful and noble Douglas family from the borders. The Heads of the House, held the title as Earl Douglas (Black Douglas) and later the Earl of Douglas (Red Douglas).

** For the Turnbulls link, refer to Pages 6 and 7.*

It's your Newsletter, so . . .

If you have a birth announcement, or any specific family event (eg. Tartan Day) that you'd like to share with the 2,500+ Turnbull Clan readers, please let us know.

Send photos and information or stories of your adventures to the editor@turnbullclan.com



REFLECTIONS FROM OUR PAST . . .

BEDRULE KIRK: A HOTBED OF HISTORY

By Alistair Redpath with permission granted to re-print this article.

Bedrule is an idyllic hamlet in the Rule Valley, just over 8 miles (13 km) north-east of Hawick. A high number of enclosures, crop marks, and over eighty earthworks have been identified in the area, pointing to an ancient but largely unknown history. Artefacts such as flints, a beaker, and Roman coins have also been recovered through the years and donated to local museums.

The name first appears as 'Bethocs-Rule' in 1150, and was likely named in honour of Lady Bethoc, daughter of Donald III of Scotland. Her second husband Radulf of Nithsdale (sometimes given as Randolph or Rudolph) was the first baron of Bedrule, and their daughter Hextilda married Richard Comyn, Justiciar of Lothian. The Comyns held the lands for several generations, from about 1160 until 1306.

In that year John the 'Red' Comyn, an important figure in the First War of Scottish Independence and Guardian of Scotland, was branded a traitor and brutally slain by Robert the Bruce and others at Greyfriars Kirk in Dumfries. Bruce then granted Comyn's lands to his trusted ally Sir James Douglas, who in turn installed a Turnbull as tenant, and for centuries thereafter it was the centre of Turnbull country.

However, in about 1528 part was sold to the Kers of Ferniehirst. Also in 1528 Sir Walter Scott of Branhholme paid fees to the King for 'non-entry' of the lands and the right to arrange the marriage of the heir to the lairdship.

The area was burned by the Earl of Hertford's men in 1545 and again by the English in 1571 when Bedrule House was destroyed. The entire estate and barony passed to the Kers of Cavers Carre around 1623, and then passed through various owners. The barony was sold in 1801 to William Elliot of Wells and then in 1894 sold along with Wells to John Usher of Norton.

The oldest and largest stronghold in the Rule Valley was Bedrule Castle, built sometime in the late 13th century for the Comyns. Situated in a prominent position overlooking the Rule Water, it was visited by Edward I in 1298, and was later granted to Sir James Douglas in c.1320 following the forfeiture of Comyn's lands. In the following century it belonged to the Turnbells, with whom it remained throughout the Stewart reigns.

Some of the Turnbull family left Bedrule during the 15th century to be soldiers and mercenaries in Prussia and France, leaving unusual surname variations in their wake, such as Tournebulle, Turnebu, and Tourneboeuf!

Bedrule Castle was destroyed by English forces in 1545. Its grass-covered remains can be seen between the churchyard and the river. From the air there are clear outlines of an oval wall, about 60m by 40m, a gatehouse and three towers, although the north-eastern part has been obliterated by cultivation. The interior contains a cross-wall, as well as signs of two other buildings. The gatehouse was reached by a road that wound up from the river on the west. It is



said that some stones in Bedrule churchyard, bearing carved bulls heads, were salvaged from the ruins.

Interestingly, there was a second, older castle just 700 yards west, atop a motte known as Castle Knowe. Fast Castle likely dated to the late 12th century and could well have been a similar design to the Norman fortifications at Hawick and Castleton. In 1837, Reverend Archibald Craig, parish minister, wrote "...Fast Castle seems to have been an outwork to the main building. It is of considerable height and compass, and must have been once surrounded with water, and, as its name imports, must have been very strong."

Bedrule's most famous son is arguably William Turnbull, son of the laird of Bedrule Castle, whose mother was a Stewart from Minto. He was born in c.1400 and baptised in Bedrule, and had his earliest religious instruction at Jedburgh Abbey.

By the age of 20, William received a licentiate from the University of St Andrews, and thereafter studied canon law at the University of Leuven in Flanders, and earned a doctorate from the University of Pavia in Italy. In 1431 he was appointed Rector of Hawick and Canon of Glasgow and Aberdeen – all at the same time - likely serving his Borders duties in absentia.

William befriended James II and became Keeper of the Privy Seal (1440-48) and Royal Secretary (1441-42). In 1447 he was appointed Bishop of Dunkeld, then a year later Bishop of Glasgow – a position he held until his death (whilst on a pilgrimage to Rome) in September 1454. In his final years he persuaded the King to raise Glasgow's status to that of a burgh of regality.

His lasting legacy, however, was to establish the University of Glasgow via a 'Stadium Generale' or papal bull, issued by Pope Nicholas V on January 7, 1451. The bull decreed that "reverend brother, William, bishop of Glasgow, and his successors for the time being, bishops of Glasgow, may be rectors, named chancellors..." and the institution was funded by William from its base in Glasgow Cathedral. Two years later he successfully requested the fledgling college be provided an exemption from taxes and duties.

Continued on Page 7

BEDRULE KIRK: A HOTBED OF HISTORY

Continued from Page 6



The Fast Castle mound remains at Bedrule

Turnbull High School in Bishopbriggs is named after him, as is Turnbull Hall, the Catholic chaplaincy at the University of Glasgow. The Turnbull coat-of-arms sits proudly at the main doorway of the university, and William sits side by side with James II on the memorial gates at its front entrance.

When the university was celebrating its 500th anniversary in 1951, a thread of fire symbolising the torch of learning was carried by a relay of twelve runners from Bedrule to Glasgow, overseen by Colonel Bruce Turnbull.

Another notable native of Bedrule was Sir Thomas Turnbull, a powerful laird who is recorded in numerous charters and court cases. He held disputes with the Kers of Ferniehirst, was present at wedding of Lord Darnley and Mary, Queen of Scots, fought against then supported the Regent Morton, and also had a feud with 'Kinmont Willie'!

Easily the hamlet's most prominent surviving building is the Category B listed Bedrule Kirk. The original chapel, long since demolished, was built in the 13th century and belonged to the Canons of Jedburgh. The present church dates to 1803-04, was largely rebuilt in 1876-77, and again in 1914-15 by Fairley and Leadbetter (funded by Sir Robert Usher), at which time sections were added to create a cruciform plan.

The church was linked with Denholm and had a common minister from 1963; it was also linked with Minto in 1976. In 2003 the church was connected with Minto and Denholm into a wider region known as Ruberslaw, and this was extended to include Hobkirk and Southdean the following year. Free Church members in Bedrule were served by the Free Kirk in nearby Denholm.

In addition to a number of interesting 17th-19th century grave-stones outside the church, inside are two fragments of hog-backed stones with shingle patterns – usually synonymous with Scandinavian settlers – as well as another old stone with a carving of a robed figure and a sword. The east window was commissioned by Sir Robert and Lady Usher as a memorial to those who died in the Great War, and incorporates stylised scenes from the conflict. There are also panels bearing the arms of local families (Douglas, Elliot, Ogilvie, Oliver, Rutherford, Turnbull and Usher), and stained-glass windows from 1922.

Bedrule Kirk's best-kept secret is a memorial plaque to Anthony Fasson, a native of Lanton and 1st Lieutenant of HMS Petard, who received a posthumous George Cross for retrieving vital Enigma codebooks from a sinking German U-Boat in October 1942.

Alongside fellow sailor Colin Grazier, he voluntarily dove into the pitch-black waters of the Mediterranean and board the sinking vessel, handing the books to canteen-assistant Tommy Brown on the



surface. As water continued to pour into the submarine, Brown shouted a warning, but before Fasson and Grazier were able to escape, U-559 sank down into the depths, taking the two men with her. Fasson was 29 years old, and Grazier (who also received a George Cross) was just 22. Brown was awarded the George Medal. He survived the war but tragically died trying to save his sister from a house fire in 1945 – a hero to the end.

The papers the three men rescued, a Short Weather Cipher (Wetterkurzschlussel) and Short Signal Book (Kurzsignalsheft), were sent to Bletchley Park and provided the vital clue required to crack the new German codes. Their contribution helped change the course of the World War II, saving an estimated 1.25 million tons of shipping in just two months, and paved the way for D-Day in 1944.

Bedrule Manse was built in 1794, replacing an earlier building. Sir David James Hamilton Dickson (1780-1850), was born there when his father George was minister of the parish. He studied medicine in Aberdeen and was licensed by the Royal College of Surgeons of Edinburgh in 1798, later serving in Holland and Egypt as a Navy surgeon during the Napoleonic Wars.

In 1806 he became a MD and was appointed physician and inspector of ships and hospitals on the Leeward Islands in the Caribbean. In 1813 he became superintending physician of the Russian Fleet in the Medway (for which the Czar awarded him the Order of St. Vladimir), whilst also being official physician to the British Mediterranean Fleet. In 1814 William moved to Nova Scotia and looked after the British forces during the Battle of New Orleans.

He became a Fellow of the Royal College of Surgeons of Edinburgh in 1816 and of London in 1822. In 1824 he was appointed physician to the Royal Naval Hospital at Plymouth and in 1840 was appointed Inspector of Hospitals. He was knighted by William IV in 1834, and upon retiral from the Royal Navy in c.1841 he became a physician in Bristol, later retiring to Plymouth where many of his naval friends and colleagues remained.

Bedrule Village Hall was built in 1922 by Sir Robert Usher, and since then has been used for a wide variety of community functions. The local Women's Guild was one of the oldest women's Christian organisations in Scotland, being founded in 1892 by Lady Eliott of Wells, later merging with Denholm and Minto Guilds around 1999; a stained-glass window in the Kirk commemorates their centenary.

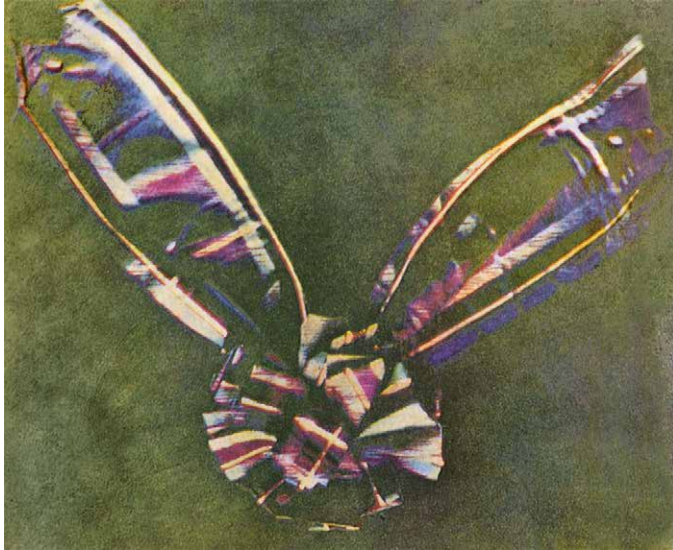
Credit: A Hawick Word Book (2018 ed.), Professor Douglas Scott; Companion to Hawick and District (4th ed.), R.E.Scott (2010); Hawick Archaeological Society Transactions (1917, 1928, 1976, 2009), Alex Inglis, Provost Mathieson of Innerleithen, R.E. Scott, George B. Turnbull; Rulewater and Its People, George Tancred (1907); National Museums of Scotland.

This article was first published in the 3rd May, 2019 edition of The Hawick Paper, and was written by Alastair M. Redpath. George B. Turnbull; Rulewater and Its People, George Tancred (1907); National Museums of Scotland.

SCOTTISH INVENTIONS – MICROWAVES & COLOUR PHOTOGRAPHY

Compiled by Kenneth Turnbull

We owe the existence of what we take for granted in our lives today such as the microwave, the mobile phone (cellphone) the wireless, even colour photography. It was a Scottish born Scientist James Maxwell, who is regarded as the greatest physicist yet known to man and whose inventions even foreshadowed Albert Einstein's contributions to the world.



Tartan Ribbon phoyograph by James C. Maxwell in 1861. Regarded as the first durable photographic as a three colour image method.

James Maxwell (nicknamed at the Edinburgh Academy as Dafty) discovered of the nature of electromagnetic radiation, where all magnetic energy is emitted in waves at the speed of light, approximately 186 miles (300.000 kilometres) a second. He discovered that these wavelengths could emit at different frequencies, light being just one of these frequencies. Other scientists expanded upon his theories and discovered that these frequencies operated at low or high levels.

For example, with a long low wave frequency, this can be used as radio reception and cellphones. At the other end of the spectrum, shorter high frequency waves are now used effectively in microwave ovens. Through his academic achievements, he also gained an understanding of colour and optics. Naturally, his first demonstration of colour photography was with a piece of tartan ribbon.



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