Nettles - an unlikely munition of war – By Simon Wilson

I imagine we are all familiar with the Stinging Nettle, or *Urtica dioica* as the botanists call it. They certainly form a significant part of my memories of childhood misadventures. The word Urtica is derived from a Latin word for sting, or burn, which is an accurate way of describing the feeling of being stung. They are a good source of food for caterpillars, make a nutritious soup, and have a number of uses in traditional medicine. The newspapers of both World Wars are full of people talking about eating nettles, but none of that, as you may have spotted, qualifies them for inclusion in the website of a Military History Group.

Nettles (left), do crop up in the Great War. British POWs, captured on 21 March 1918 were held in poorly organised camps because the Germans were surprised by the number of prisoners, some of them, according to the *Birmingham Daily Gazette* (15 October 1918), being reduced to collecting nettles to eat. Even British troops who weren't prisoners were told to add nettles to their stew to prevent scurvy.

Just to get the stings out of the way – they are easily deactivated by cooking or simply by cutting the nettle down. They inject the poison using a pressurised system, and if you cut them, they wilt, lose pressure and stop stinging. You can eat the leaves raw without getting stung once this happens. I'm not recommending it, just telling you it can be done. (Nettle soup below).

So, how about tales of Roman soldiers using them? All Romans used them for food and medicine, but there are references to legionaries in the German campaigns whipping themselves with nettles (known as urtication), which kept them awake on sentry duty, made them feel warmer and, possibly, reduced pain in sore joints. Native American traditional medicine also uses nettles in a similar way, with modern research seeming to support the idea that stings help with the pain of arthritis.

The stories that the Romans introduced nettles to this country are unreliable, and probably untrue. We had plenty of our own long before the Romans arrived. There are reports in newspapers in WW1 that refer to three types of nettles – the Great Nettle, the Small Nettle and the Roman Nettle, but the story linking the Romans to the Roman nettle dates from the 16th century and they are now extinct in the UK.

One source of knowledge about the early use of nettles is the Bronze Age site at Must Farm, near Peterborough. A half-eaten bowl of nettle soup was found, as were a number of textile samples showing that the inhabitants had used linen, nettle and tree bark fibres for various purposes a

thousand years before the Romans arrived. Linen and nettles were used for producing cloth (the process of extracting the fibres is similar for the two types of plant) and the tree bark fibre was used for fishing nets. It seems surprising that cloth made from wild plants would still be needed when they could grow flax and produce fine linen, but despite our instinctive thoughts about rough nettle fabric, it actually makes a soft, high-quality cloth.

Foraging for nettles and other useful plants

Cotton started to appear in Europe in the 16th century but nettle cloth was commonly used in Scandinavia and Scotland, where it was known as “Scotch cloth” until the 19th century. It was mainly used for tablecloths and bedding.

Britain's cotton industry probably hit its peak in 1912, when competition from Indian and Japanese mills started to bite, but by 1914 Britain still controlled the majority of the world cotton trade, with America controlling most of the rest. America, of course, objected strongly to the Naval blockade in the early years of the war as it interfered with its ability to profit from it. When America joined the allies even that supply of cotton was cut off. It was also difficult for them to source wool, another raw material they had imported in peacetime, though it was possible to source wool by land routes. In the Austro-Hungarian Empire fibre production had declined since the middle of the 19th century and by 1914 was only able to provide one third of the nation's flax requirements. Wool production had declined by about a third and wool was mainly imported from Argentina and Australia. Cotton was imported from India and the USA.

The shortfall had to be made up from somewhere, and civilian clothing was made from a variety of substitute materials, including paper and reclaimed wool. This wasn't sheets of paper; it was clothing woven by using specially produced thread from chemically treated wood pulp. In 1916 the German Government took over the clothing industry. The private sale of second-hand clothes was banned and they also regulated things like the length of dresses, and requisitioned many types of textiles, including old blankets, and linen-backed maps. Reports indicate that scarecrows in Germany were stripped of their clothes to provide material for recycling, though this has a whiff of propaganda about it. After all, reports in 1914 indicated that Berliners had eaten the elephants from Berlin Zoo due to a lack of food. They hadn't. They were in service as draught animals, which is a whole new article.

However, uniforms did have a hard life and the high command recognised that it was false economy to produce poor quality kit, so these methods were mainly used for civilian clothes. The answer for the military, looking for high quality cloth, was nettles. They weren't the first army to use nettle cloth, a century earlier Napoleon had also been blockaded, and had been forced to look for alternatives.

That was where “natural silk” came in. As the need for a cotton substitute became pressing, a researcher called Gottfried Richter, drew the attention of the authorities to the traditional uses of nettle fabric and large quantities of nettles that were readily available. The cloth produced from nettles is easily comparable to cotton, linen or even silk and has a number of advantages over wool or cotton, such as being hard wearing, resistant to shrinking and having natural anti-bacterial properties.

A report in the *Evening Despatch* (28 February 1916) reports that Germany has access to large amounts of land in Belgium and Russian Poland where they will be able, in time, to grow flax and hemp. Jute stocks are nearly exhausted and there will be no more until after the war (most of the world's supply being grown in Bengal). The article also reports that the Austrians have planted large amounts of nettles, and "nesseltuch" (nettle cloth) is widely advertised in the newspapers.

"Collect nettles for clothing and thread"

Just like the British, who sent people out to gather natural produce during both world wars, the Germans used to ask people to go out gathering nettles. They also cultivated nettles, and planted a large amount in the Danube valley. One article states that the German nettle harvesters were mainly school children and they harvested 10,000 tons of nettles to produce 1,500 tons of fibre. A shirt requires 45kg of nettles, and an area the size of 1½ football pitches can produce enough fibre for 100 shirts. The yield is a little over half the yield you would get from flax, but the cultivation, particularly as many of them grow wild, is a lot easier.

It wasn't just clothing that used nettle fibre, it was also used to make cordage, nets, sandbags, sailcloth, straps, harnesses and backpacks. The nettles aren't just a source of fibre, they are also a source of green and yellow dye.

By 1918 the *Tewkesbury Register* (07 December 1918) was able to report on "The Useful Nettle", telling us that captured German uniforms were found to be made from nettles and listing other uses, including being a substitute in early spring for spinach, the basis of a stout and serviceable paper and as a substitute for hemp in cloth and cordage.

In the Second World War. Germany was, as usual, resource poor and used nettles for textiles again, even making parachutes from nettle cloth. Nettles were also one of the wild foods gathered by the German people, who along with most European nations, suffered from severe food shortages during the war.

They didn't use as many nettles this time as they had plenty of rayon, a synthetic fibre produced from wood pulp treated with acid, which was easier to produce than nettle cloth. In pre-war uniforms the mix was 70% wool and 30% rayon with a linen lining. By the end of the war the linings were 100% rayon and the rayon/wool ratio (which by now used a lot of recycled wool) had shifted to just 30% being new wool.

The UK, on the other hand, despite being a major manufacturer of rayon (for parachutes in WW1, and for fabric and tyres in WW2). used nettles more than they had in the Great War. It was a simple equation – if you could produce something at home it saved space on a ship. We had to import the wood pulp used to make rayon so home-grown nettles saved shipping space.

At Kew Gardens, plant scientists began to examine new uses for plants. One of the things they looked at was paper. Paper was always short during the war, as much of our pre-war wood pulp had come from Norway and the Army used a lot of paper. We could have brought it in from Canada, but that would have taken precious shipping space. In 1940, newspapers were restricted to 60% of their pre-war production and by 1945 they were down to 25%. Paper was salvaged and recycled, wrapping paper disappeared and burning it or throwing it away, was made illegal in 1942. Fortunately, nettle fibre was suitable for paper making, which helped alleviate the problem, and so the paper drop tank was born, a construction of paper, glue and lacquer that held together just long enough to allow Mustangs to escort bombers to Berlin.

They are a fine example of the balance that was needed in any scheme during the war. Paper was short, but metal was even more precious. By using paper drop tanks they saved metal, and also, when they jettisoned the empty tanks, they weren't giving the Germans anything useful. Approximately 13,000 of these tanks were made, saving a lot of metal.

We also made fabric from nettles, and extracted fructose, a form of sugar from them. Chlorophyll had a number of medical uses, including being used on dressings. Nettles, along with alfalfa and spinach were one of the three best sources, and research at the time indicated that chlorophyll was effective in promoting the healing of burns and infected wounds (probably slightly better than penicillin), but when the two were used together the healing time shortened dramatically. It could also be used to produce a green dye, about 90 tons of nettles being used by the army in WW2 to dye camouflage nets.

Women of the W.I. collecting nettles in WWII

Initially they tried volunteer Boy Scouts to harvest nettles by hand (cutting with scythes had included too many other plants) but the lads were found to need a lot of supervision. Once that was sorted out, school children became the preferred harvesters of nettles and the newspapers reflect this, though local references are sparse. The *Northampton Mercury* (22 August 1941), which refers to the W.I. at Geddington and their activities in collecting medicinal herbs, which they sent to wholesale druggists, and nettles.

They were helped by local school children and teachers. Meanwhile, the W.I. at Earls Barton had a talk on Charles Dickens, and at Isham they were busy selling jam to raise £50 to buy a Bren gun.

At Donington, reported the *Spalding Guardian* (17 July 1942) Mrs Taylor (Women's Institute President) thanked all concerned in collecting 37lbs of nettles, including the scouts, who contributed 10lbs of leaves already stripped from the stalks – a lot of leaves.

The *Northampton Mercury and Herald* (4 August 1944) tells people that efforts are to be concentrated on collecting rose hips as there is a need for vitamin C. Forty schools were acting as collecting depots (paying children 2d a pound). In 1943 Northamptonshire collected 14 tons of rose hips.

The first record we have of nettle fibre being used is in Ancient Egypt in mummy bandages. It is still relevant today, as they use fewer resources and chemicals than cotton, and can be grown in Europe instead of being shipped in. Some exclusive fashion outlets use nettle fibre, but much of that is currently produced from Himalayan nettles, which isn't sustainable. Currently, De Montfort University has a research team working on nettles so you never know, we could all be wearing nettles in the near future.

And just one extra point, to show how nettles are still used today - the dye made from the chlorophyll of nettles is now used to colour food, and has its own E Number - E140.