Nettle Paper, 21/06/20

Over this lockdown time I have become quite addicted to buying cheap, second hand books on the internet. I like them arriving in their different packaging, yellowed and just about holding together, smelling of damp and different places. Worryingly, I've started to understand why people spend lots on first editions; there's something other than words on the page, a papery link to the author's era.

A recent favourite purchase is Thomas Hennell's 'Change on the Farm' published in 1936. It's a rebound old library copy and it contains the author's accumulated research that he gathered whilst travelling around farms between the wars. In his later 1943 book, 'British Craftsmen', published two years before he was killed whilst working as a war artist, I read the sentence:

In the seventeenth century a kind of paper was made from nettles; and also a sort of hemp from stalks of nettle and agrimony.¹

With the yellowed and foxed books amassing around me in the flat and much of the previous two years working with paper as my main surface in the studio, I really wanted to try making paper from nettles. I eyed up a patch of nettles metres from my flat which were then strimmed just before I needed them. Luckily as a material they are not hard to come by! I've always liked how patches of nettles in woodland can be a sign of an old human settlement.

I found many good process videos online, from primary schools to professionals, and from these I learnt the basics. What I go on to describe is my first attempt.



1. Collecting the nettles

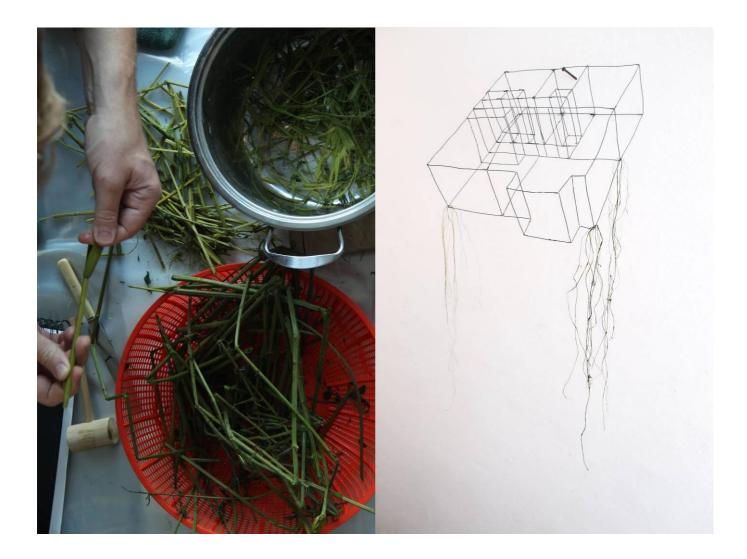
It's the stalks of the nettle that are needed, so I stripped the leaves as I picked. I gathered a large handful which amounted to 140g of eventual pulp – just enough to make one thin A3 sheet. Next time I shall gather double.

2a. Stripping the stalks for paper

It's the bast fibre, the thin outside skin of the nettle stalk that is needed for paper and textile production. I followed two methods for stripping the nettle. I simmered the majority of the stalks in water for 30 minutes and then was able to easily remove the outer skin, discarding the interior woody part of the stalk.

2b. Stripping the stalks for fibre lengths alone

I also tried an alternative method and processed the stalks uncooked just by giving them a light bash along their lengths and peeling away the outer skin. I processed this uncooked nettle skin further by splitting it into thinner strands and then scraping away the green matter with a flat blade table knife to reveal the whiter strands of fibre. I put these lengths of processed fibre aside to dry and work with separately. In the picture below the fibres are hung on a wire scale model of my flat. The fibres on the left (bedroom) have been scraped more than those on the right (the room where I am writing this). The fibres processed in this way could be used to make cord or textile.



3. Processing the paper fibre

The part-cooked and peeled nettle skins need to be broken down further before they can be used for paper. One method is to ret them, leaving them soaking in water for a week or so. Next time I make the paper I shall try this (I like the idea of a tub of slimy nettles processing slowly in the corner) but this time I went for the quick method and simmered them in water for an hour with a small amount of caustic soda. I read that you can also use soda crystals, the aim being to lower the pH of the water to aid the breakdown.

Per 100g of nettles, I used 6g of caustic soda in 5 litres of water.

I used a large stainless steel pot for this; it's important that you use a metal that won't react with the caustic soda (don't use aluminium for example). The instructional videos that I watched urged caution at this point, and to protect your skin and eyes.

4. Further processing

After an hour on the hob the nettle skins look quite like seaweed and still need further work. I rinsed them and then set to work bashing them around on an old chopping board with a wooden rolling pin. The idea is to work the fibres loose, separating them so you end up with a slimy pulp rather than a woolly, clumpy tangle. This took a fair amount of time but was quite fun. An alternative is to give them a spell in a blender but I didn't do this as I wanted to keep my fibres as long as possible.



5. Pulling the sheets

This involves the usual paper making equipment: a mould and deckle, either bought or made with a wooden frame and wire mesh. I filled up a large plastic storage box with water and then added the nettle fibre. Bringing the frame up through the water and seeing the fibre settle on the mesh is very satisfying; it reminded me a bit of potion making in the garden as a child.

I had anticipated that I'd have more fibre but I only had enough to make one thing. I decided to use it to 'repair' a missing corner from an unfinished work I had in the flat. On top of several pieces of cotton (to facilitate moving and drying later on), I sandwiched the edges of the missing corner between multiple layers of nettle fibres, ultimately forming a sheet of sufficient density.

6. Pressing and drying

I placed another cotton sheet on top of the finished paper and laid a piece of plywood on top of that. I then piled books on top as a makeshift press and left it there for an hour or so. I then removed the books and left the sheet on its cotton backing to dry overnight. The next morning it was dry and peeled away from the sheet easily. It wasn't so green any more, rather quite pale porridge in colour. It was strong and had grafted itself nicely to the ripped piece of BFK Rives paper.

I look forward to making it again and trying more variations.





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¹ Hennel, Thomas (1943) *British Craftsmen*, London: William Collins, p20