Cockatrice

The Garden of Eden, Anon., c.1410-1420

February A.S. 52

Contents

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From the Editor

Greetings, and welcome to the February edition of Cockatrice!

My name is Gwen verch David, and I'm taking up the mantle of Cockatrice editor now that the marvellous Elisabetta Foscari is stepping down. Three cheers for her amazing work!

And three cheers as well to everyone who responded to my call for submissions, particularly those who went looking through their archives when I extended the deadline because I didn't have enough. Thanks to your generosity, we have a wonderful collection of articles for all of us to enjoy.

I'd like to encourage all Cockatrice readers to consider submitting something for a future edition. You don't have to be an experienced writer; you just have to have something to share. The next submission deadline is April 7th, between Congregatus Australis and Rowany Festival, so if you're working on a project or a class for either of those events, consider submitting your documentation or handout if you think it will fit the style.

Thanks to a survey which many of you completed, we're also working on plans to review the way our website is organised, and make it easier for casual readers to browse our archives for articles in their area of interest. If you have comments about the website or ideas for potential changes, you're welcome to get in touch with me.

Enjoy the issue!

Yours in Service,

Lady Gwen verch David

Cockatrice Calendar AS 52 (2018)

May 53 Edition	Submissions due	7 April
	Published	1 May
August 53 Edition	Submissions due	1 July
	Published	1 August

Eggplant Manta

Master Drake Morgan

Time: 1330
Place: Imperial Yuan China
Author: Hu Szu-Hui
Source: Yin-Shan Cheng-Yao (Proper and Essential things for the Emperor's Food and Drink)
Modern Source: *A Soup for the Qan*, Paul Buell and Eugene Anderson (2000)
Redaction By: Master Drake Morgan (Craig Jones) & Mistress Acacia de Navarre (Chris d'Aquino)
Redaction Date: 6 December 2011

Original Recipe

Mutton, sheep's fat, sheep's tail, onion, prepared mandarin orange peel (cut up each finely), "tender eggplant" (remove the pith).

[For] combine ingredients with meats into a stuffing. But [instead of making a dough covering] put it inside the eggplant [skin] and steam. Add garlic, cream [or yoghurt etc.], finely ground basil. Eat.

Ingredients (Manta)

- 5 Finger Eggplants
- 250g Fatty Lamb Mince
- 3 French Shallots - finely chopped (should be about 3/4 cup)
- 1/2 teaspoons of Fresh Mandarin Peel, finely grated (about 1 Mandarin)[1]
- Light Pinch of Flaky Sea Salt

Ingredients (Sauce)

- 4 Cloves of Garlic, finely minced.
- 125g Low Fat Greek Yoghurt (can use full fat).
- Pinch of Black Pepper.
- 2 generous pinches of Flaky Sea Salt.
- Handful of Basil Leaves (1/4 cup), finely chopped.

[1] Note: Used blood orange peel – mandarin was out of season

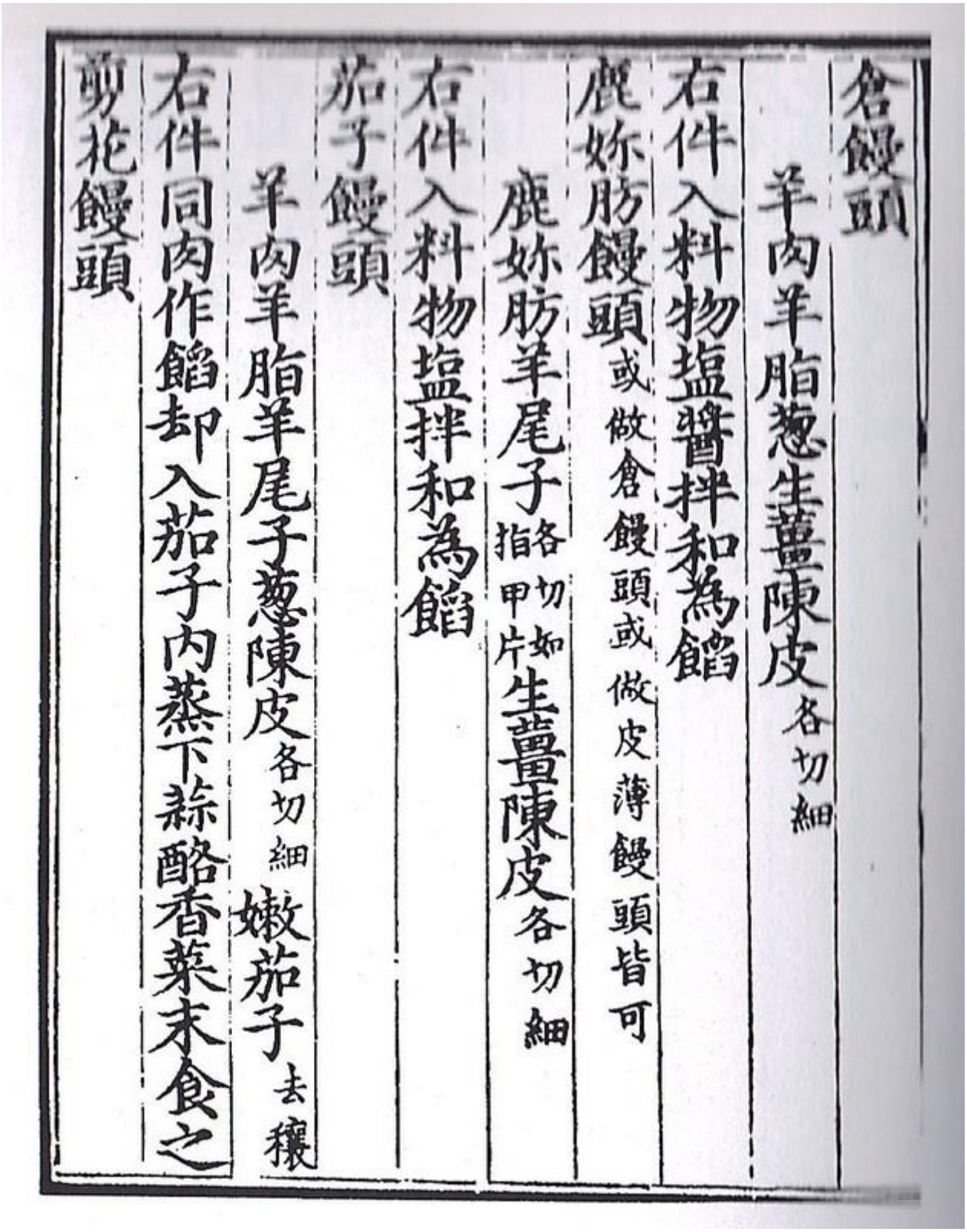
Collected Ingredients

Method

- Slice top end of the finger eggplant off, core out the eggplant with an apple corer and a knife.
- Finely dice shallots and sweat with a tiny bit of oil (or melted lamb fat) off. Add lamb and fry until brown. Fully cooking the lamb is not required.
- One minute before lamb is done, add orange peel and pinch of salt.
- Let mixture cool
- Setup Bamboo Steamers
- Stuff meat mixture into eggplant, use the back end of a wooden spoon to tamp the mixture in.
- Steam the Manta for 15-20 minutes. Eggplant should be tender but not falling apart.
- Whilst eggplant is steaming, finely mince garlic and fry in saucepan with a drop of oil.
- When garlic is soft, add salt, pepper and yoghurt, turn down to very low and gently simmer. Just before serving add sauce.
- Serve the eggplant, pouring the sauce over the top.

The stuffed manta gently steaming away

The finished manta with sauce. The left manta has been cut open. Not the most appealing dish, but exceptionally tasty.



倉饅頭

羊肉羊脂葱生薑陳皮各切細

右件入料物塩醬拌和為餡

麂妳肪饅頭或做倉饅頭或做皮薄饅頭皆可

麂妳肪羊尾子各切如指甲片生薑陳皮各切細

右件入料物塩拌和為餡

茄子饅頭

羊肉羊脂羊尾子葱陳皮各切細嫩茄子去穰

右件同肉作餡却入茄子内蒸下蒜酪香菜末食之

剪花饅頭

The original recipe as published in A Soup for the Qan

Speaking and Weaving: An Ancient Greek Project

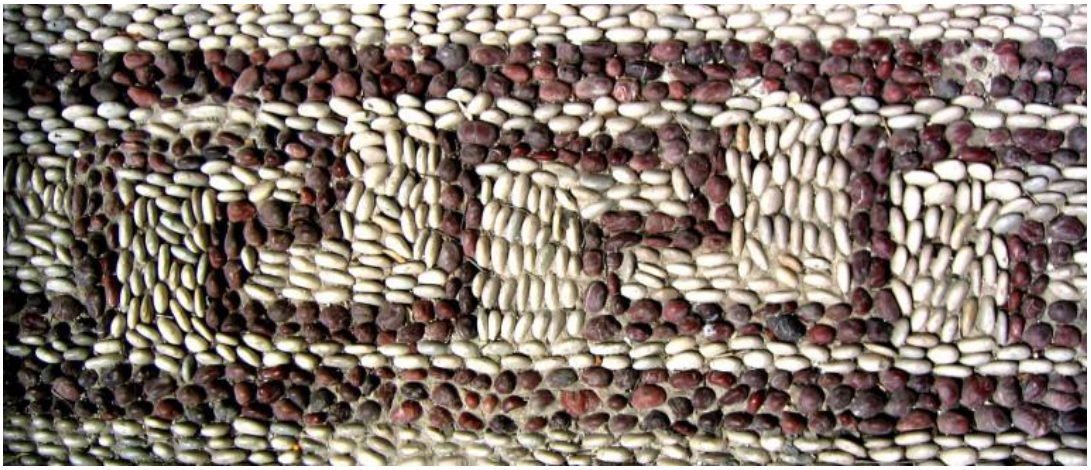
Lord Bjorn Bassason

After both receiving my Award of Arms and heralding a Royal Court for the first time during the reign of Ariston and Lilivati, I wanted to do something special for one of their last events as Crown, so I put both my weaving and linguistic skills to use, creating a Greek key-style tablet weave in the colours of orange and purple, which Ariston and Lilivati wore so much through their reign, and presenting the woven band in a speech in Ancient Greek.

Weaving

The pattern I used was adapted from a pattern found on pinterest.[1]

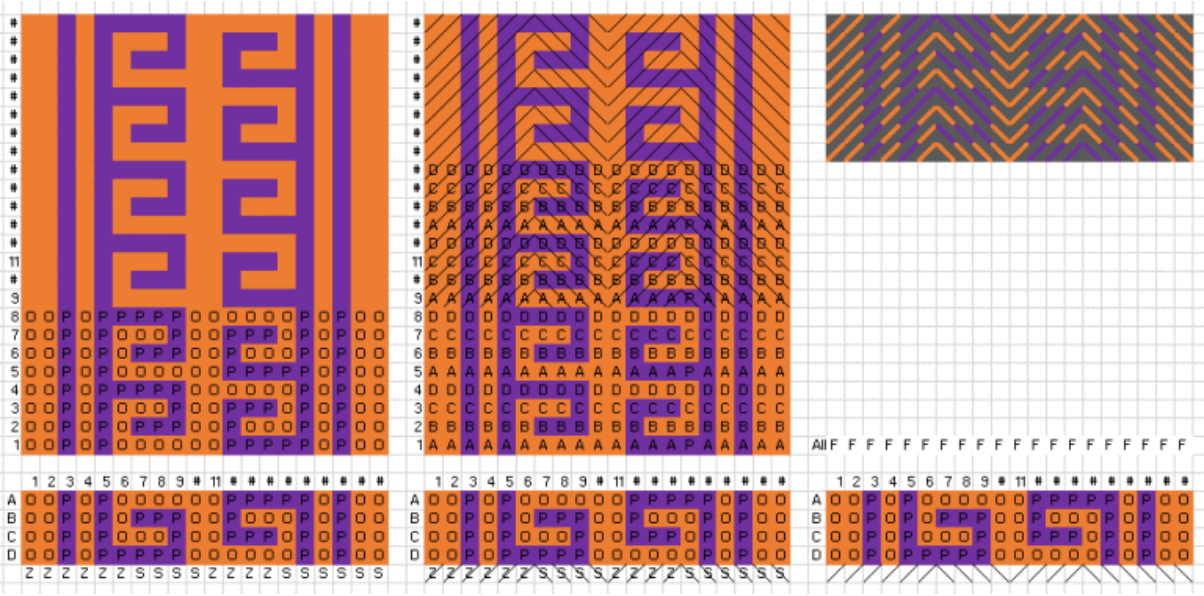
Simply put, this combination of two basic Greek key patterns running in opposite directions is very akin to the 'meander' pattern found on this street in Rhodes[2]:



[1] https://www.pinterest.com.au/pin/374361787756958770/

[2] https://commons.wikimedia.org/wiki/File:Rhodes_meander_hg.jpg

So with all of that, I went about designing the pattern I would use, and simulated it in Excel, noting the position of the cards at each point throughout the pattern, the twist of each card of the piece and the resulting turning pattern.



I decided to take this opportunity to learn how to warp up on an inkle loom (especially as I've been holding on to Dáiin's (alt. Ludwig) one for many months, intending to use it), and Kolfinna generously agreed to teach me.

And here's a photo of the finished weave:

Speaking

Meanwhile, I wanted to present this in a funky way so I put out a post on Facebook asking for anyone who studies Ancient Greek that could translate some text for me. Ironically, Ariston himself put me onto now Lady Salbiorg Viss who has been studying Ancient Greek for six years. I gave her the following text to translate:

> *I now speak your ancestral tongue to show the strong bond with the crown/kingdom in these lands. I present to you a gift of my own hands/making. Wool woven in a Greek key pattern and dyed in the colours made from purpura shell and bark of the alder tree. Colours we see so much shining forth from your excellencies' forms. I hope this gesture demonstrates the strong bonds between the barony and the crown/[broader kingdom]*

She got back to me with the following:

Greek text

> *Ταύτη ὡρα ομιλώ την των προγόνων σου γλώσσαν, ως απόδειξη δεσμού εμού τε και του της γης ταύτης στέμματος. Παρουσιάζω δε εις εσέ δώρον, γενόμενον εκ τας χείρας μου. Μαίανδρον υφασμένω εν μάλλω, βαπτόμενον εν τοις χρώμασι πορφύρας τε και ώχρας εκ φλοιό ελάτης. Χρώματα ειδομένα πολλακις εν ταις βασιλικές μορφαίς υμών. Ελπίζων δε αι πράξεις τοιαύτες επιδεικνύουσι δεσμώ κράτιστω βαρωνείας τε και βασιλείου.*

The Greek text in all-caps as it would be written in period

> *ΤΑΥΤΗ ΩΡΑ ΟΜΙΛΩ ΤΗΝ ΤΩΝ ΠΡΟΓΟΝΩΝ ΣΟΥ ΓΛΩΣΣΑΝ ΩΣ ΑΠΟΔΕΙΞΗ ΔΕΣΜΟΥ ΕΜΟΥ ΤΕ ΚΑΙ ΤΟΥ ΤΗΣ ΓΗΣ ΤΑΥΤΗΣ ΣΤΕΜΜΑΤΟΣ. ΠΑΡΟΥΣΙΑΖΩ ΔΕ ΕΙΣ ΕΣΕ ΔΩΡΟΝ ΓΕΝΟΜΕΝΟΝ ΕΚ ΤΑΣ ΧΕΙΡΑΣ ΜΟΥ. ΜΑΙΑΝΔΡΟΝ ΥΦΑΣΜΕΝΩ ΕΝ ΜΑΛΛΩ ΒΑΠΤΟΜΕΝΟΝ ΕΝ ΤΟΙΣ ΧΡΩΜΑΣΙ ΠΟΡΦΥΡΑΣ ΤΕ ΚΑΙ ΩΧΡΑΣ ΕΚ ΦΛΟΙΟ ΕΛΑΤΗΣ. ΧΡΩΜΑΤΑ ΕΙΔΟΜΕΝΑ ΠΟΛΛΑΚΙΣ ΕΝ ΤΑΙΣ ΒΑΣΙΛΙΚΕΣ ΜΟΡΦΑΙΣ ΥΜΩΝ. ΕΛΠΙΖΩΝ ΔΕ ΑΙ ΠΡΑΞΕΙΣ ΤΟΙΑΥΤΕΣ ΕΠΙΔΕΙΚΝΥΟΥΣΙ ΔΕΣΜΩ ΚΡΑΤΙΣΤΩ ΒΑΡΩΝΕΙΑΣ ΤΕ ΚΑΙ ΒΑΣΙΛΕΙΟΥ.*

'Greeklish'

> *Táfti óra omiló tin ton progónon sou glóssan os apódixi desmoú emoú te kai tou tis gis táftis stèmmatos. Parousiázo de eis esé dóron genómenon ek tas heiras mou. Méandron yfasméno en mállo vaptómenon en tois hrómasi porfyras te kai óhras ek floio elátis. Hrata êidoména pollákis en tes vassilikés morfés ymón. Elpízon de e práxeis toiaftes epideiknyousi desmó krátisto varoneías te ke vassileíou.*

And a recording of her reciting the text.

I then transcribed that recording in to a kind of 'Greeklish' that is more akin to my personal dialect and how I tend to read Latin characters:

> *Ta'fti ora omilo tin ton progonon sou glossan, os apoðeixi ðesmou emu ute kai tou tis yis taftis stemmatos. Parousiazo ðe eis ese ðoron, genomenon ek tas hieiras mou. Meiandron uphasmeno en mallo, vaptomenon en tees ghromasi porfiras te kai ogras ek floio elatis. Meiandron uphasmeno en mallo, vaptomenon en tees ghromasi porfiras te kai ogras ek floio elatis. Khromata eidomena pollakis en tais vasilikes morthais imon. Elpizon ðe ai praxeis tiaftes epiðeiknuousi ðesmo kratisto varonias te kai vasileiou.*

I then phonemically transcribed it into IPA[3]:

> */tafti oɾa omɪlo tin ton pɾoχonon sou χlosan, os apoðeiksi ðesmou emu utɛ kai tou tɪs jɪs taftɪs stɛmatos. paɾousɪazo ðe ɛɪs ɛsɛ ðoron, χɛnomɛnon ɛk tas hɪɛiɾas mou. mɛɪandɾon ufasmɛno ɛn malo, vaptomɛnon ɛn teːs χɾomasi poɾfɪɾas tɛ kai oχɾas ɛk floio ɛlatɪs. xɾomata ɛɪðomɛna polakɪs ɛn taɪs vasɪlɪkɛs moɾθaɪs ɪmon. ɛlpɪzon ðɛ ai pɾaksɛɪs tɪaftɛs ɛpɪðɛɪknuousɪ ðɛsmo kɾatɪsto vaɾonias tɛ kai vasɪlɛiou./*

You can find a couple of recordings of my reading the speech on my blog.[4] Sofia and I met up at another event prior to the Midwinter Feast where we ironed out some of the small mistakes I was making, mostly in lenition and intonation. I also asked Torvald to assist me in the presentation by acting as a kind of interpreter, offering the English translation of each sentence after I spoke it.

At Mordenvale's Midwinter Feast I was lucky enough to be asked to run the royal court again, so when the time came and all other business had been concluded, in the same fashion that I as herald would call forth others to present themselves in court, I informed Ariston, "Your majesty, I have a presentation in your court." I then presented myself before him, called Torvald to assist me, and recited the speech, looking Ariston square in the eyes for almost the entire thing.

Unfortunately, nobody managed to record a video of the presentation, but Apoapsis Photography got a few gorgeous shots of the process.

[3] Please note, I am not a phonologist, so this is an approximation.
[4] https://thebeingaliveblog.wordpress.com/2017/10/14/speaking-and-weaving-an-ancient-greek-project/

Making the presentation to the Crown

Experimentation in Cured Meats: Curing and Smoking Red Meats Using a Method from Sabina Welserin's Cookbook (c.1553)

Lord Þorvaldr inn Suðreyski

In *Das Kochbuch der Sabina Welserin,* there is a recipe/method for dry curing beef, followed by smoking it. This was to preserve the meat. This preservation is twofold; Firstly, by drying out the meat with the salt, removing the moisture that microbes need, and secondly, by smoking, which inhibits the grown of microbes on the meat. This experiment explores the concept of using the same method to preserve other meats that are likely to be eaten at the same time and location as the author: Germany in the middle of the sixteenth century.

The idea to try this came from reading a book of the different cuisines across Europe. Melitta Weiss Adamson's book *Food in Medieval Times* explores the cuisines of many European cultures, drilling down to what grains, meats, and vegetables these cultures ate. In the discussions about the German diet, there are references to feasts where there is mention of various meats being consumed. Two red meats mentioned in this text are deer and mutton, both of which seem to be eaten relatively often.

This got me to thinking: if they sliced, smoked, and salted beef, then they were likely to do the same with other red meats.

Original Recipe

"59. Welt jr gút digen oxenflesch machen/
So last eúch zenterling machen, 3 mans zwerch finger dick, vnnd saltzens woll, das es weisß werd vor saltz, vnnd wen das saltz ergangen jst, so segen das herab vnnd giessent es wider dariber oder legen das vnnderst zú oberst, damit das saltz jberal dareingang/ vnnd wan es 4 tag jm saltz gelegen jst, so hencken es aúff vnnd rechen es mit wechhalderportzen ab, land es .3. tag hangen, wirt es fein rott."[5]

"59. If you would make good smoked beef
Then prepare the meat for smoking, as wide as three man's fingers, and salt it well so that it becomes white from the salt, and when the salt has dissolved, then skim it off and pour it over again or from the

[5] *Das Kochbuch der Sabina Welserin (c.1553)*, http://www.staff.uni-giessen.de/gloning/tx/sawe.htm

bottom to the top, so that the salt comes over it all. And when it has laid for four days in the salt, then hang it up and smoke it with juniper twigs. Let it hang for three days, then it is very red."[6]

My Method: Beef

I have used this method of preserving beef before. I take good beef cuts, such as topside, eye of round, or rump, and cut it so it is a long piece with a square cross section, approximately 75-100mm square. I rub the entire piece of meat in salt. This has to be un-iodised salt. Many modern charcuterie practitioners use kosher salt, as it is an un-iodised salt, and has a more uniform consistency. This meat is then put into a non-reactive container. This can be glass or plastic. I usually use the snaplock type plastic containers.

After a day or so, I check the meat, and add more salt if there isn't a crust of salt on the meat.

After a week or so, I check the firmness of the meat. The firmness gives you an idea of how cured the meat is. If it appears to be cured enough, I move on to the smoking. The firmness of the meat is very important, as an indication of how cured the meat is. Typically, fresh meat is not very firm at all. Cured meat, on the other hand, need to be firm, but not hard. If you can push your finger into it, and it has a little give, but no more than a couple of millimetres give in the meat, then the firmness is about right.

Prior to smoking the meat, some of the salt needs to be washed off. This allows the pellicle to develop. The pellicle is a tacky felling to the surface of the meat. It is the pellicle that the smoke sticks to. Once I've left the meat for 6-12 hours uncovered in the refrigerator, and the pellicle has developed, I put it in my cold smoker. In the original method, Sabina Welserin speaks about smoking it for three days over juniper. The fact that she is leaving it so long in smoke leads me to think that it is likely to be cold smoked, rather than hot smoked. If you were to hot smoke the meat for three days, it would be cooked beyond recognition, whereas hanging the meat high above smouldering twigs would make sense, as it would impart the smoke flavours, as well as the preservative chemicals, onto the meat without altering the texture and proteins of the meat.

Sabina Welserin also says to smoke the beef over juniper twigs. I have not been able to find any around my locale. I can, however, purchase smoking wood chips, in various

[6] *The Cookbook of Sabina Welserin*, trans. Valoise Armstrong, 1998, http://www.daviddfriedman.com/Medieval/Cookbooks/Sabrina_Welserin.html

flavours. For this experiment, I used a mixture that complemented red meat: apple, oak and cherry.

I then leave the meat in the cold smokers for 2-4 days, depending on the quantity, and how the meat is colouring up. Once the meat is done cold smoking, I store it in the refrigerator for a few days, to allow the flavours to stabilise. This meat can be stored in a cool place, and will survive well. (We have used it for camping before, with no refrigeration, and it has survived very well).

The Experiment: Venison and Lamb

I wanted to give this method of preservation a go with deer and lamb, two red meats being eaten in German about the same time as the beef recipe was published. With the lamb, I seam-boned out a leg of lamb: that is to say, I removed the leg bones, and separated out the major muscles, being the topside, knuckle, and silverside/eye of round. With the venison, I had obtained some boneless shoulders, so cut these into chucks with a width of about 75mm. After preparing the meat for the salting, I followed all the same processes as with the beef.

The curing took about the same amount of time as the beef, which allowed me to smoke all three types of meats at once.

The Results

The three meats all smoked up nicely, with the wild-ish taste of New Zealand farmed venison taking on the flavour of the salt very well, and the lamb taking on the smoke nicely. On the whole, I believe the experiment to be a success, and believe there is a possibility of this being done during the time of Sabina Welserin, i.e. there is a possibility they smoked more than just beef using this method in Germany in the middle of the sixteenth century.

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'Make From Them Two Fold-Hurdles': A Preliminary Look at Traditional Woodland Management

Baroness Adelindis filia Gotefridi

> "William Clark holds one virgate of arable… he has to cut one cartload of underwood for one work, but not to cart it. And he has to cut rods and collect them and make from them two fold-hurdles for one work, or three hurdles if he finds the rods ready…
> *- Hayley Wood, Cambridgeshire, in the Ely Coucher Book, 1251*[1]

In medieval England, woodland was a tightly managed agricultural resource, a producer of timber for building and wood (also referred to as roundwood) for specialised purposes, such as the fold-hurdles mentioned above, and energy. In his seminal work *The History of the Countryside*, Oliver Rackham notes that in the context of woodland management, the two words, *timber* and *wood*, have distinct meanings which persist even today:

> "The trees of a wood are divided into *timber* trees (a minority) and *underwood*… The wood therefore yields two products, *timber* from the trunks of the timber trees, and *wood*, from coppice stools or suckers (plus the branches of felled timber trees). ***Timber and wood had different uses and are not to be confused*** [emphasis in original]; we still talk about 'timber' buildings and 'wood' fires. Wood is rods, poles, and logs, used for fencing, wattle-work, and many specialised purposes but in large quantities for fuel. Timber is the stuff of beams and planks and is too valuable (and too big) to burn. Underwood is normally the more important product; woods were traditionally regarded as sources of energy."[2]

(Wood-pasture, in which trees co-existed with grazing animals and were subject to continual harvesting rotations, is similar in terms of sustainable management principles to woodland, however it will not be the main focus of this article). In this article I look briefly at the history of woodmanship – the term coined by Oliver Rackham for the ancient body of knowledge and practice which comprises traditional woodland management – in England, as a background to my own initial forays into wattle-work,

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[1] quoted in Rackham, *The History of the Countryside*, London, 2001, p. 62.
[2] *ibid.* p. 67.

and my exploration of the potential to manage some part of my own land under similarly sustainable principles to those of my medieval forebears.

A Brief History of Woodland Management

Before woodland, there was wildwood, which colonised the United Kingdom after the retreat of the last Ice Age, and which began to be lost in England with the introduction of Neolithic agriculture - directly through land clearance for tillage and pasturage, and indirectly through the domestication of native tree species to produce continual harvests. Britain's original wildwoods are thought to have been almost completely converted to managed woodland and wood-pasture by the Middle Ages, if not earlier.

According to Rackham, the oldest archaeological evidence for the practice of woodmanship in England is the Somerset Levels, dating from 4000BCE. These trackways show evidence of using the products of carefully managed woodlands to provide uniform materials for construction. The Sweet Track, part of the Levels dating from 3000BCE, provides the earliest evidence of the use of wattle-work, in the woven hazel hurdles used to provide footing.[3]

Wattle-work, and the associated management techniques, became centrally important in Iron Age Britain. "Remains have been found, although seldom adequately recorded, in innumerable excavations. As the reconstructions at Butser Hill (Hants) show, Iron Age round-houses were no mere 'huts made of the branches of trees' ...but engineered structures – they could be greater in span than a cathedral – made of poles and rods of various sizes for particular functions."[4] Underwood was also enormously important through the Roman occupation in providing fuel for metallurgy and other industry, although archaeological evidence for Roman-era roundwood construction is scarce.[5] In contrast, Goodburn writes, "We have clear evidence for the Roman harvesting of huge wildwood oaks, alongside clear evidence for the use of oak from different forms of treeland, such as old oak coppice, and trees growing in open pasture or arable land".[6] The

[3] *ibid.* p. 73.

[4] *ibid.* p. 73.

[5] *ibid.* p. 73.

Goodburn, D. M., "The Death of the Wildwood and the Birth of Woodmanship in Southeast England", in Bernick, Kathryn, *Hidden Dimensions: The Cultural Significance of Wetland Archaeology*, 2011, p. 136.

[6] *ibid.* p. 136.

Romans also introduced sweet chestnut to southern Britain, where it naturalised and was adopted by woodland managers and crafters.[7]

By Anglo-Saxon times, the distribution of remaining woodland in Britain was uneven, with some areas having a high proportion and others none. "...the Anglo-Saxon charters describe a state of affairs in which not every community possessed woodland, and some communities had woods located 10km or more distant across other people's territory."[8] There are frequent mentions of woods and woodland products in Anglo-Saxon charters, for example:

> "Pasture for 70 pigs in that wooded common...which the country-folk call Wulfferdinleh [Wolverley, Worcs] and 5 wagons full of good rods (virgis) and every year one oak for building...and wood...for the fire as necessary. - Grant by Burgred, King of Mercia, 866"[9]

By the Middle Ages, timber and underwood were an even more economically essential resource, as the Neolithic project of taming England's great wildwoods to human use neared its conclusion. In contrast to the abundance of evidence of the use of wildwood oaks surviving from the Roman period, it appears from the archaeological evidence that by 1300 CE, mature (200-300 year old) oaks, with the distinctive characteristics of those grown in tall, dense, unmanaged wildwood, were becoming rare in England.

> "Oak trees with these characteristics are extinct in Britain today, and were apparently rare by about AD 1300, when it may be fair to say that the last large tracts of native English wildwood had been felled. Boards cleft from large wildwood oaks are found alongside different types of timber and small roundwood deriving from managed woodland, which shows that the contemporary treeland was a complex mosaic of types."[10]

Rackham writes, "By 1250 woods covered only a few percent of England. More than half the Bishop of Ely's estates, scattered from Norfolk to the Thames, had none. Woods had definite names, boundaries, and acreages, were private property, were intensively

[7] *ibid.* p. 136.

[8] Rackham, Oliver, "Trees and Woodland in a Crowded Landscape – the Cultural Landscape of the British Isles", in Hilary H. Birks (ed.), *The Cultural Landscape: Past, Present and Future,* Cambridge, 1988, p. 62.

[9] quoted in Rackham, *The History of the Countryside*, p. 81.

[10] Goodburn, *The Death of the Wildwood*, p. 133.

managed, and were permanent."[11] Intensive and skilled management allowed the small amount of woodland to produce a very considerable return:

> "In well-wooded Hampshire the account book of Beaulieu Abbey in 1269-70 specifies the logs, faggots, stakes and charcoal to be got from an acre of twenty-year old underwood... It expects a return of *2s 1 ½ d.* per acre per year of growth, much greater than from arable and little less than from meadow. Woodland provided income and capital, and unlike modern forestry it cost almost nothing."[12]

In comparison to the 6000+ year history of woodland management in England, modern (largely monoculture) plantation forestry, where mature trees are killed by felling and replaced with seedlings, is a relatively recent practice, and was rare before the seventeenth century.[13] Goodburn sums up the difference thus: "Woodmanship practices are primarily concerned with the production of fuel and small structural materials on a sustainable basis, whereas forestry was primarily developed in Britain to produce larger timber for naval and other constructional purposes."[14]

Principles of Sustainable Woodland Management

Woodland management makes use of the ability of many European tree species to regenerate after severe cutting back of the main trunk which would kill many other tree species.

> "Ash and wych-elm, for instance, *coppice*: the stump sends up shoots and becomes a stool from which an indefinite succession of crops of poles can be cut at intervals of years (figure 5.1). Aspen, cherry and most elms *sucker*: the stump normally dies but the root system remains alive indefinitely and sends up successive crops of poles, forming a patch of genetically identical trees called a *clone*.
>
> Coppicing and suckering are efficient and reliable ways of getting a new crop. Sallow can grow at 2 inches a day, reaching 11 feet high in the first season after felling; even oak can stand 7 feet high and an inch thick after one summer's growth."[15]

[11] Rackham, *The History of the Countryside,* p. 85.
[12] *ibid.* p. 89.
[13] Goodburn, *The Death of the Wildwood,* p. 136.
[14] *ibid.* p. 130.
[15] Rackham, *The History of the Countryside,* pp. 66-7.

In harnessing their rejuvenating ability, coppicing allows trees to live far longer than their natural lifespans. Some of the oldest living things in Britain are ash stools – estimated to be at least a thousand years old – in the Bradfield Woods, which has been documented as a managed woodland back to at least 1252. Ash normally lives around two hundred years, but these huge old stools still reliably produce a regular crop of poles, which continue to be used for many traditional purposes.[16] Because of the range of species and ages throughout a traditionally managed woodland, biodiversity is high.

Woodlands are cut in winter, when the trees are dormant, and the stools or root systems sprout again in spring. They are often cut in coupes, so that there is a range of different ages and rotations in the woodlot, meaning that a regular harvest is possible from year to year. Products and felling rotations depend on the species being managed, and can range from faggots for firewood produced in three to four years, to timber cut on a fifty-year rotation. Depending on species and intended purpose, the regrowth can be managed to produce many shoots, or thinned to a single strong trunk.

Hoffman writes:

> To accomplish these valued uses of woodland required know-how. Someone had to be familiar with the habits of trees and apply skill to their growth and harvest. That body of traditional ecological knowledge is called woodmanship – the knowledge and techniques for managing trees, whether by cutting them or by otherwise using them and still keeping the woodland going. Most traditional woodmanship was very much directed towards what is now called sustainable use. Woodmanship was always applied for specific purposes and oriented to particular tree varieties. Managers and workers in medieval woodlands handled different types of wood differently and for different results.[17]

My interest in this subject comes from owning a property on which grow many specimens of European tree species suitable for coppicing, particularly willow; and having an interest in permaculture, which looks to work with the natural characteristics of the land, and to sustainably utilise on-site resources where possible. A lot of our land is waterlogged and unsuitable for grazing or tillage; the presence of willows (while they are categorised as invasive weeds) stabilises the creek banks and prevents soil loss and erosion around drainage channels on our sloping land, and through traditional woodland management practices, offers the potential for deriving a useful crop from land which

[16] *ibid.* p. 102.

[17] Hoffmann, Richard, *An Environmental History of Medieval Europe*, Cambridge, 2014, p. 184.

would otherwise be unusable without extensive drainage work and mechanical eradication/poisoning of the trees.

Coppicing suitable specimens of existing willow trees offers the ability to immediately integrate the production of firewood and garden materials with a longer-term plan for planting other species also suitable to the wettest parts of our site, like alder, to be managed for a range of purposes. We use wood for heating and cooking, which is currently sourced locally but unsustainably from forestry waste, so securing a renewable source of wood on site is attractive – alder is a traditional firewood species, but seasoned willow, while less long-burning, is still usable, and more immediately available. There has been research into Australian native tree species suitable for coppicing, however given the effects of climate change, there is a lot to be said for the use of more fire-resistant European trees as part of an overall fire hazard reduction strategy.

Using Woodland Products – Fencing

I am currently in the process of enclosing an area for an orchard with wattle fencing. My brief was to keep rabbits, pademelons and wallabies out, and geese in, while making the greatest possible use of on-site resources. To that end, wattle fencing is a lot more labour intensive and potentially less durable than modern post-and-wire fencing, but has the advantage of being almost entirely free when made with on-site materials (the only cost so far has been a new saw blade).

There are two main kinds of wattle-work fences: movable (hurdles) and fixed. While, as noted, there are a wealth of artistic depictions of fixed wattle fences, most modern discussion of wattle fencing tends to focus on the production of hurdles, which are more complex to make. As Tabor says,

> "By the Middle Ages wattle fencing was common, frequently being illustrated in manuscripts and paintings... It was managing the millions of sheep upon which England's early wealth was built, that gave rise to the classic wattle hurdle. Made as a portable fencing panel light enough for a man to shoulder four at a time, it was perfect for folding sheep to control them when grazing, being dipped, or being sheared."[18]

A fold-hurdle is made with poles for the uprights, and thinner rods for weaving. The uprights are pointed at the bottom for anchoring, and can be tied together at the corners. In order for the panel to be robust and stand up to being carried from site to site, the

[18] Tabor, Raymond, *Traditional Woodland Crafts: a practical guide*, London, 1994, p. 132.

fold-hurdle needs to be woven in a specific pattern at bottom and top to secure the uprights and prevent the woven elements simply falling out the bottom.[19] Producing a uniform and durable product therefore takes some knowledge and skill, and is made easier by uniform materials. Modernly, some of the rods are split lengthwise before weaving, but archaeological evidence suggests this may be a post-medieval practice.[20] Hazel is traditionally the favoured wood for wattle-work in southern England, although willow is popular in Europe.[21]

As can be inferred from the quote at the start of this article, the production of fold-hurdles was valued labour from a tenant. "William Clark holds one virgate of arable… he has to cut one cartload of underwood for one work, but not to cart it. And he has to cut rods and collect them and make from them two fold-hurdles for one work, or three hurdles if he finds the rods ready…" (Rackham notes: "A 'work' is a unit of labour-service, to be done by way of rent").[22] According to Tabor, the basic hurdle is six feet long and three and a half feet high. While we don't know the relative quantities of underwood involved, we can deduce that a skill and time premium applied to their manufacture: making three hurdles from already-cut rods was equivalent in labour-rent to cutting a cartload of underwood; and the making of one hurdle was equivalent to the cutting and collecting of rods for two.

In addition to movable hurdles, woven fences were also made in situ. In a discussion of hedgerows, Rackham refers to these as "dead hedges":

> "There were also 'dead hedges' for temporary fencing, especially in connexion with open-fields. A common type consisted of stakes set about two feet apart and interwoven with long flexible rods called *ethers*, like a wattle hurdle made on the spot. Such fences often appeared in pictures and are sometimes heard of as late as the seventeenth century… The fencing material produced by coppice-woods (p.67) was probably used for dead-hedges. They presumably had a short life and were costly in labour and in top-quality underwood."[23]

[19] *ibid.* p.132.
[20] Goodburn, *The Death of the Wildwood.* p. 136.
[21] Tabor, *Traditional Woodland Crafts.* p. 135.
[22] Rackham, *The History of the Countryside.* p. 62.
[23] *ibid*, pp. 187-8.

Despite Rackham's conjecture about the need for top-quality underwood, archaeological evidence shows that a wide range of materials and level of skill could be employed to make these structures.

> Roundwood structures of early medieval date, such as wattle pit-linings, hurdles (portable woven panels) and fences are relatively common finds in London. The weaves and types of rods used for these structures varied considerably. Some structures have a home-made appearance with irregular rods of varied species and age; others are very neatly woven, with long regular rods such as can only be produced by pollarding or coppicing.
>
> Pilot analysis of this varied material has shown some interesting patterns. Some structures were clearly being made from casually collected local hedgerow or orchard thinnings, and others were produced from systematically coppiced woodland. For fine wattle-work, such as hurdles, the rods used were small and whole rather than cleft, as in recent English practice. This suggests that they were made from coppice cut on a short rotation.[24]

Fortunately, as the archaeological evidence also shows, making a usable dead-hedge, or fence, requires much less skill and experience than making a hurdle, and since the stability is provided by anchoring the poles permanently in the ground, it is much more forgiving of both lack of skill and lack of uniformity in materials. However, when working with wood products from an unmanaged woodland, it becomes very easy to see why those Neolithic farmers quickly learned to use British trees' regrowth characteristics to their advantage!

Practical Experiments

My first attempt at a fence used (very approximately) the two-foot spacing of uprights referred to by Rackham, but this turned out to be very difficult to use successfully without the uniform long straight rods which Rackham refers to as ethers and Tabor as ethering or heathering rods. The recommendation for hazel ethering rods in Tabor's book (intended for use in hedge-laying) is eight to fifteen feet, and my experience confirms that for the wider spacing, longer is definitely better. Once wound around four or more uprights, any natural curve in the longer rods was countered, so more irregular cuttings could be used. Shorter rods, however, would not work unless they were as straight as possible: if woven between fewer than four uprights, any natural curve asserted itself and the rod would not hold its place.

[24] Goodburn, *The Death of the Wildwood,* p. 136.

Shoots which grow vertically from branches or cut surfaces were more suitable than horizontally-growing branches, as they tend to have less of a curve, but most shoots I found were too young and short for this spacing. Branches of a suitable length, width and (relative) straightness were hard to find, hence the gathering took a lot longer than the weaving. My next attempt will space the uprights closer together, as this should allow me to better utilise the shorter pieces I have available to me in greater quantities, and hopefully cut down on time spent gathering. Looking at depictions of woven fences in medieval manuscripts, many of the fences shown look like they have a shorter distance between the uprights than Rackham's estimate, depending on the purpose (e.g. in a vegetable garden vs. livestock yards). Since I have no large livestock to be contained, robustness of materials is less of a priority.

In the spirit of using what I have on site, I used a mixture of different materials for the uprights, from metal rods to tomato stakes to seasoned black wattle saplings (one of these broke midway through the weaving and was successfully replaced by a star picket without needing to redo any of the weaving). For the weave, I experimented with black wattle and broom saplings or branches, plum and viburnum suckers, and photinia and willow shoots and branches. Overwhelmingly (and as expected) the willow was the easiest to work with, so comprises the majority of the fence past the first fifteen centimetres. I used mostly a mixture of dead and green willow shoots and branches pruned from my mature willows. Even when dry, willow rods retain a degree of flexibility which makes them usable.

In order to get a usable height of fence as quickly as possible, I chose to start by making a single, straight panel, about 5m long, instead of attempting to make the first part of the planned fence (15m) in one continuous length. This turned out to be fortunate as it allowed me to discover the drawbacks of my initial spacing and problems with my materials, without committing to using them for the entire project (eventually I plan to expand the enclosed area and add another 18m of fencing, so there is plenty of opportunity to improve). In traditional woodmanship, rods are harvested in winter when the trees are dormant: having finished the initial section, the rest of the gathering and construction will be postponed until winter. I am looking forward to applying the lessons learned as I continue this project.

5m x 1m of fencing – approximately 15-16 hours of work

The history of woodland management can be traced to the beginning of agriculture in Britain, and as we have seen, it evolved as a means of meeting the needs of an expanding population with an ever-shrinking amount of land devoted to trees. As a result, woodland management practices which have been perfected over the past millenium remain a significant body of knowledge which can be adopted by land managers looking for more sustainable ways to practice agriculture. Relearning the traditional ecological skills of landscape management, and the practical skills of utilising the products of the landscape, are an example where the skills of the past remain relevant to the concerns of today.

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Bjǫrn Bassason is a 10th century Norwegian Viking from Mordenvale. Bjǫrn earns his keep as a journeyman weaver, crafting for barons, princes, and kings alike. In his spare time, Bjǫrn enjoys long walks along the banks of the fjord and experimenting with different crafts and hobbies. He is known by many for his tantalising culinary delights and he breadth of his booming voice either in song or heraldry of voice. To see more of Bjǫrn's works, you can find his blog at thebeingaliveblog.wordpress.com

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