Meadowsweet – histor

Gareth Evans offers the back story of meadowsweet and explains how this ancient herb has its place in modern herbal developments.

Sweetly scented thy wreath, Meadow-sweet of the cairns! In round brindled clusters, and softly fringed tresses, beautiful, tall and graceful ...

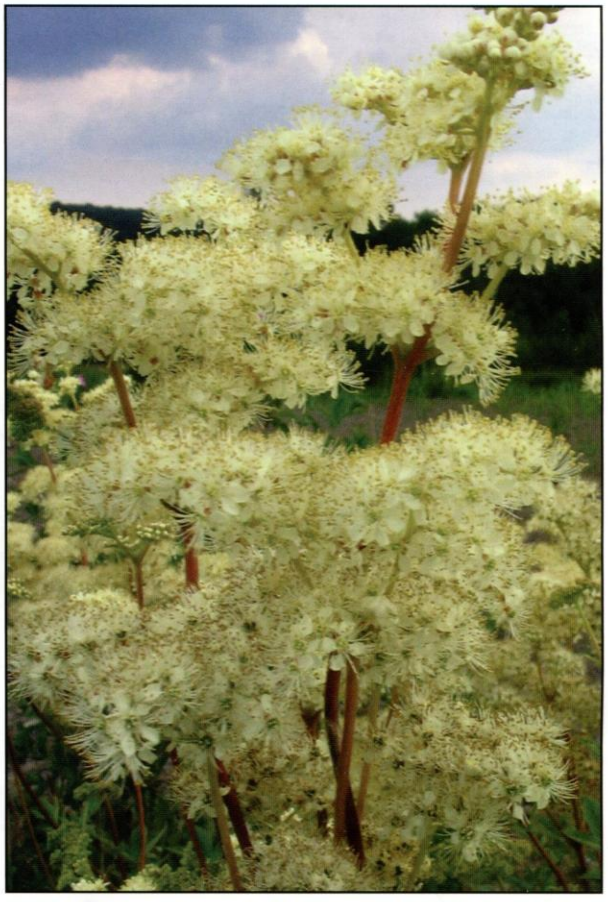
from the Gaelic of Alasdair Mac Mhaighstir Alasdair c1698-c1770

Earlier this year the restaurant columnist of a weekend magazine described a herbal epiphany he experienced while tasting a meadowsweet and bee pollen ice cream. Meadowsweet (queen of the meadow) had cast her spell as she has done so many times before. Its feminine qualities astonishingly transport the seen-it-all critic as the frenetic restaurant around him falls away and he calmly contemplates the coming spring, almost sensing its presence.

Meadowsweet (*Filipendula ulmaria*) is not the weediest of herbs, but neither is it the most glamorous. Individually it can be inconspicuous yet large stands of its frothy blooms create a dazzling sea of reflected light. Fairly recent findings show that it was clearly a flower of importance for our ancestors, the most concrete evidence is preserved in literature and archaeology.

By any other name ...

The species name 'ulmaria' refers to the elm-like leaves of the plant that, unlike the flower, have a pungent aroma; does this explain the Welsh formulation 'Arthur's sweat'? A Russian name 'for forty ailments' neatly covers its anti-inflammatory properties that could relieve the symptoms from colds and flu to



Meadowsweet is the core ingredient of 'Meadsweet' mead, a simply made alcoholic drink of water and honey that has an ancient history.

in a pudding bowl

rheumatism. The rather poetic 'meadowsweet' appears in fact to be derived from mead production; the 15th-century 'meadsweet' links to Old English medowyrt or meadwort, a named reflected in many modern European languages.

Meadowsweet myths

The fresh elusive flavour of meadowsweet leads us, as it did the captivated restaurant reviewer, to the open air. Áine is a figure from the most ancient levels of Irish mythology, her name is said to be associated with meanings of 'radiance' and 'heat'. As befits a long-term resident of Irish culture her character is complex and features in conflicting tales: here as daughter of 'the man of yew', there as the wife of a sun deity. The most lasting association of Áine is within County Limerick where she is described as 'a water spirit, and has been seen, half raised out of the water, combing her hair. She was a beautiful and gracious spirit, the best-natured of women, and is crowned with the meadowsweet, to which she gave its sweet smell.' Up to the 19th century at the barrow of Cnoc Áine (Knockainey) men annually circled in procession with flaming bunches of hay and straw to then visit 'the tillage and meadows to bring luck to the crops and cattle'.

As with Áine, we are told that the flower maiden Blodeuedd exists in the more ancient part of Welsh myth collection known as the Four Branches of the Mabinogi. In 'an everyday story' of violence, self-gratification and discarded off-spring, Blodeuedd (see box) is conjured up for a wifeless man from three specific wildflowers - meadowsweet, broom and oak, to create 'the fairest and most graceful maiden that man ever saw'. The story's imagery has inspired many writers and artists up to this day.

Pollen past

The sensational meadowsweet pudding also contained bee pollen that like other products of the hive, such as honey and propolis, can have a complex composition. Collected by bees to feed the hive, bee pollen can be the combined loot of many different flowers. What the exact source flowers are alters the somewhat bittersweet flavour of the bee pollen but, as with honey, it would be possible to identify them by the technique of pollen analysis. More accurately it is the identification of the remarkably resilient pollen cases that have such unique forms that a plant family and even genus can be inferred. Much used in forensic science, pollen analysis also can help to unlock the distant past.

Meadowsweet regularly appears on lists of anciently revered plants that are regularly reproduced in books and articles. More interestingly, however, the relatively recent application of pollen analysis to samples from archaeological digs of Bronze Age interments has given us physical evidence of how important meadowsweet was to our ancient ancestors. Far from being a local phenomenon the finds so far cover a geographically wide range, but discerning the exact relationship of the flower to the barrow builders has been a quietly rumbling controversy.

In 1963 several stone-lined graves were uncovered within a site at Ashgrove, Fife, Scotland. One grave, that also contained a dagger, held a deposit of plant material that proved to be mostly meadowsweet pollen. This was the first of several finds of meadowsweet in similar sites in Denmark and Germany. The latter was quickly claimed to be the first evidence of brewing in Europe, but regardless the pollen remains still caused much speculation. The relative amounts of individual pollen apparently eliminated the possibility of meadowsweet honey.

Spiraea ulmaria '... these blooms are not indifferent to our organism'

Johannes Andreas Buchner (1783-1852)

Others asserted that the evidence could equally indicate the remains of a floral tribute, the argument splitting one husband and wife team. This debate was intensified in 1978-9 by the discovery of a 'black greasy material' inside a beaker with the skeleton of a young woman buried around 1540 BC excavated at North Mains, Strathallan. The presence of cereal pollen with the meadowsweet suggested to some that it was the remains of a glutinous frumenty, or cereal-based, flavoured porridge.

Interested archaeologists, however, experimented with a home brew based on the simple ingredients found at the site: barley, water and meadowsweet. They reported that with the addition of yeast a palatable mead resulted that looked good and tasted good but, most importantly, stored longer when meadowsweet was added to the brew than without it. This is not a mystery to us today, as the salicylates that we now know meadowsweet contains, have a well-known preservative action. A phenomenon was possibly as magical to our ancestors as the transforming process of brewing itself.

Blodeuedd

Blodeuedd ('Flowers') finds herself conjured up to marry Lleu Llaw Gyffes in order to get around his reticent mother's curse that he may not have a human wife. Her new husband was fair and skilful, but soon she and another princeling fall in love with each other at first sight. They plot for the length of a year to dispose of Lleu although he is an indestructible hero, his only vulnerability involves a particular sequence of events. Nevertheless under the guise of concern and regardless of calls of 'don't listen to her' from the reader, Lleu yields to Blodeuedd's requests and willingly demonstrates the bizarre scenario that involves a bathtub and a billy goat.

Blodeuedd's lover spears Lleu who disappears after being transformed into a screaming eagle. Blodeuedd and her lover rule both their lands but revenge is at hand. The magician that created Blodeuedd for Lleu finds the suffering eagle he has been transformed into. Restored, Lleu musters help and captures the couple. The lover is impaled at the spot that he smote Lleu and is killed. Blodeuedd's life is spared but she is transformed into an owl, a bird shunned by all other birds, and becomes known as 'flower-face' or owl.

Meadowsweet's habitat is along rivers, streams and ditches.

The 70km line of broken escarpments that runs East-West along the Brecon Beacons National Park rise out of the surrounding farming country like whales shouldering the waves. Fan Foel at 781m is topped with a low Bronze Age barrow that would have been visible from the homesteads that are thought to have been scattered around the area. With the tree line about 330m above present day levels the farming culture of the time had to cut and burn their own living space from the all-surrounding mixture of oak woodland filled with wildflowers, red deer, boar, hare and wild oxen. In 2004 two graves of cremated remains were excavated and found to contain meadowsweet pollen, the later one (c.1840 BC) contained the remains of an adult and a child. The significance of this discovery lay in the quality of the pollen and the disposition on the floor of the grave at Fan Foel was best explained as the remains of a floral tribute.

Clearly no single meadowsweet theory is mutually exclusive of the others, and the exact form of the tribute may have depended on such factors as the season of the burial. Now archaeologists know what to look for, further informative finds may yet come to light. In 2009 harder evidence for the existences of floral tributes was found in the form of remarkably preserved meadowsweet flowers (as opposed to the pollen) preserved in a peaty layer in a Bronze Age grave excavated at Forteviot, Strathearn.

Meadowsweet is not the only wildflower to have a significant presence in Bronze Age graves but it is by far the most frequent. We may never know its exact significance to our ancestors, however clearly the blooming flower and the products made from it were central to their death, if not their life.

The molecular age

Willow is often featured as the plant that triggered the development of aspirin – the most popular drug of the 20th century. Meadowsweet was almost equally as important in its development. The development of this now ubiquitous pill was a tortuous process that took up a large portion of the 19th century, a time when its given botanical name was *Spiraea ulmaria*. In the Bernese Oberland a Swiss pharmacist named Johann Pagenstecher was inspired by the popularity of the meadowsweet flower tea among his customers to give some attention to it. During the 1830s, doing what apothecaries do, he aimed to make a more refined, 'value-added' product.

His distillate was probably too indigestible to sell to the public, nevertheless he wrote up the experiment in a Nuremberg pharmaceutical paper that helped propel scientific workers down a maze of laboratory experimentation. For most of the century it seems that they knew what they were aiming for, but had no sure way of knowing if they had achieved it. Meandering developments eventually lead to the reliable isolation of salicylic acid and at the turn of the 19th century, the effective, readily made and palatable acetylsalicylic acid was produced. This was marketed under the name 'aspirin', perhaps to associate it with the slightly kinder salicylate products that had been produced from meadowsweet (*Spiraea*), compared to harsher ones that were then associated with the willow (*Salix*).

The story of aspirin featured many 20th-century concepts: copyright protection, scientific precedence, mass production, global marketing, world war and reparations. But what of the 21st century? The widespread use of low-dose aspirin as a prophylactic against cardiovascular disease has now been established for some time. Earlier this year yet another study was announced that low-dose aspirin might have a similar protective role against cancer. Recently the eminent scientist whose life's work was largely to get prophylactic aspirin established, commented that nature is maybe telling us something: we should just eat more fresh food that contains salicylates. A simple solution, unfortunately a portion of meadowsweet ice cream may not be that life-extending but it may make life worth living.

Gareth Evans is a freelance writer and researcher specialising in the history of botany and medicine. He has worked in and with botanic gardens for 16 years, and was a co-ordinator for the Welsh programme 'Plants & Medicine' of the Smithsonian Folklife Festival 2009, Washington DC. His website is Medicinal Worlds – about People, Plants and Medicine (http://plantsandpeople.weebly.com).