Meadowsweet *Filipendula ulmaria*

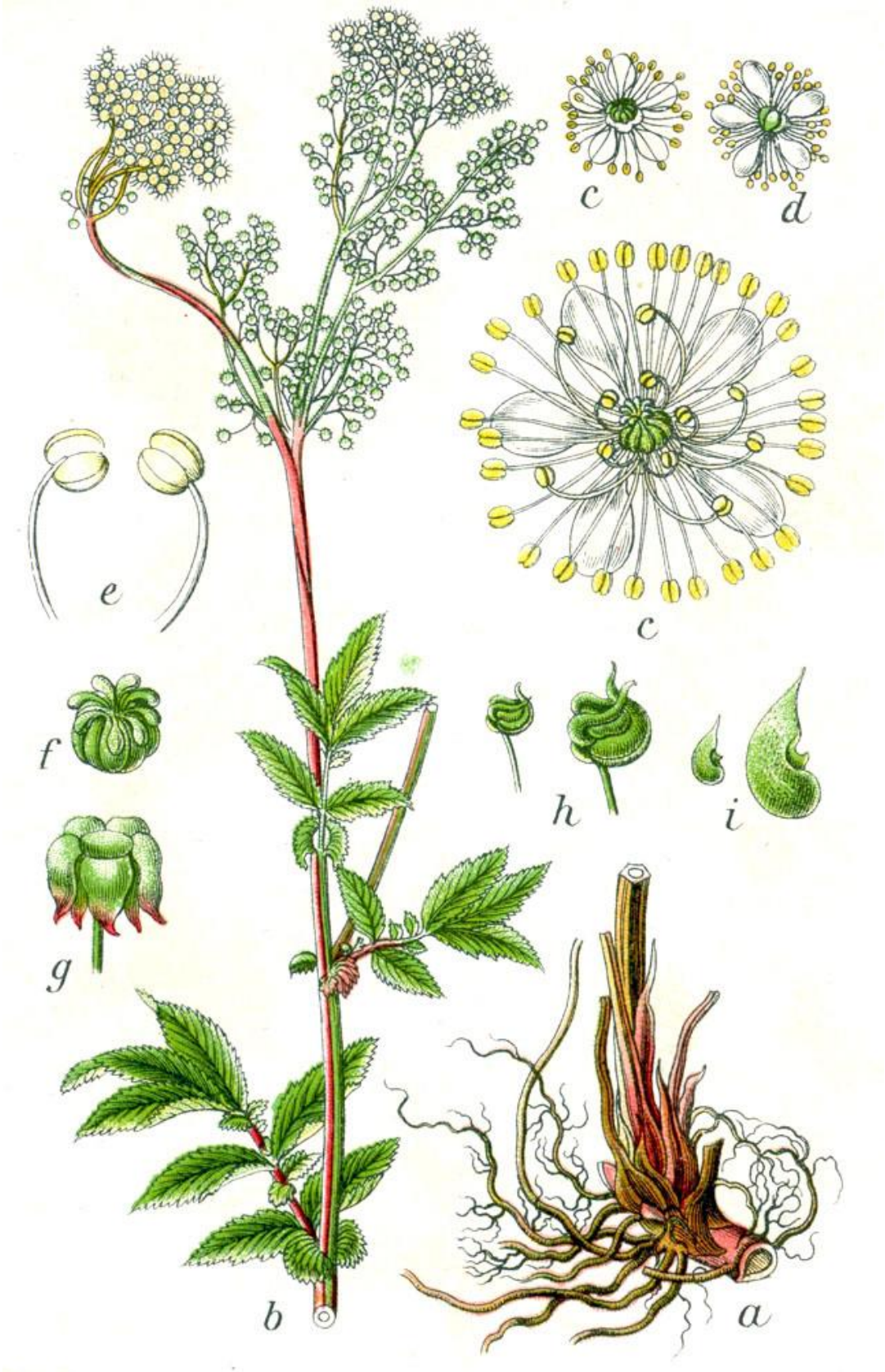
Typically a fen and marshland plant, Meadowsweet is one of the commoner wildflowers found on the road verges in much of Lincolnshire, particularly in those areas regarded as of poor biodiversity. It thrives in damper soils where high fertility encourages rank growth to the exclusion of smaller flowers. It is a tall-growing perennial with creeping rhizomes so can compete with nettles, docks, cow-parsley and hogweed.

Meadowsweet and Great Willow Herb
Paining by Mary Findell

Though now much neglected, meadowsweet is an edible plant and has a long history of use in herbal medicine. High levels of its pollen have been found in Scottish Bronze Age burial sites. Pollen analysis of honey in earthenware pots from the Georgian Kodiani burial mound (27th–25th centuries B.C.) showed the pollen of Meadowsweet dominating. The salicylic acid found in the roots was used by Felix Hoffman to derive a new drug, Aspirin, in 1897. A century on, his company, Bayer, is responsible for producing the neonicotinoid insecticides, Clothianidin and Imidaclorpid, implicated in insect decline.

The masses of small flowers give easy access for honeybees and also the short-tongued Buff-tailed Bumblebee, *Bombus terestris,* and White-tailed Bumblebee, *B.lucorum*. Meadowsweet is also pollinated by flower thrips of the *Thysanoptera* order and is frequently visited by flies that touch the anthers shaking the light pollen out in all directions, where it hits the stigma of the same flower or the neighbouring flowers. Insects are powdered with pollen and may pollinate other plants. Wind pollination is also important for Meadowsweet.

An example of coevolution is provided by Meadowsweet and the Strawberry-leaf Beetle, *Galerucella tenella*, which feeds on its leaves. On some islands in the Bothnian Sea that have emerged following post-glacial isostatic rebound, the Meadowsweet has evolved defence mechanisms. Leaf concentrations of tannins and phenolics were increase with island age as the plant evolved to cope with herbivore predation.



Filipendula ulmaria (L.) Maxim.

Figure from Deutschlands Flora, 1796, Johann Georg Sturm (Painter: Jacob Sturm)
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