
PLANTS CAN BITE!

We have had a few comments from residents using our Estates greenspaces about hawthorn and spiny plants that might cause injury. It seems that very few people today have a knowledge of botany and do not realise that a great number of plants have evolved chemical and physical defences over the millennia in order to protect themselves from insult and harm by browsing and grazing animals (including insects). This information note attempts to explain the variety of defences plants which you may come across on our greenspaces have evolved, the risks they pose (none if you are “botany-aware”) and the perspective of this topic in relation to the countryside and green spaces.

Please note that we do not exclude plants from our sites because they prick, sting or contain poison. Many such plants are of immense importance to biodiversity and optimal ecosystem function, and they are around you everywhere in the countryside and greenspace.

Please also be clear that it is parents’/guardians’ responsibility to teach children about plants and those which can pose a hazard. If your botany is weak, we hope this information note helps you, but it is no substitute for studying and making yourself adequately aware so that you keep yourself and your children safe. Remember:

- **If it isn’t a food, don’t eat it.**
- **Teach your children not to play with growing plants, and not to put them near their eyes or in their mouth.**
- **Use thorn-proof gloves and wear eye protection when pruning or weeding, and keep skin covered from the sun.**

I have divided the main hazards that might be presented by vegetation in the context of this note into three broad categories. These are: plants with spines, thorns and strong prickles; plants that sting or cause skin/mucous membrane inflammation; plants that are toxic if ingested. Please note that this is not an exhaustive list and several books covering the topic extensively can easily be found by searching on line. Please bear in mind that some plants may have multiple hazards,

1. Plants with spines, thorns and strong or penetrating prickles

Please take care around these plants which are all capable of inflicting painful mechanical damage to human bodies: roses, blackberry bushes/brambles, holly, gooseberry, hawthorns, blackthorn, crab apple, gorses and whins, thistles, sea buckthorn (coastal but may be planted inland), barberry (introduced but widespread and often planted), Oregon-grape (introduced but widespread and often planted)

and many garden plants such as Chinese quince, yucca and firethorns. Some are illustrated below.



Two examples of thorny roses.



Bramble/blackberry *Rubus fruticosus* agg.



Holly *Ilex aquifolium*



Gooseberry *Ribes uva-crispa*



Hawthorn *Crataegus monogyna* and sloe *Prunus spinosa*



Common gorse *Ulex europaeus*



Spear thistle *Cirsium vulgare*



Barberry *Berberis* sp.



Firethorn *Pyracantha* sp.

2. Plants that sting or cause skin/mucous membrane inflammation

Stinging nettle and small nettle cause painful rashes as many of us know only too well. I was once pushed over-boisterously into a patch of stinging nettles when I was a small boy - an experience I have never forgotten! (Dock leaves won't work – sluice stings with cold water.)





Stinging nettle *Urtica dioica* (above) and small nettle *Urtica urens*

Potentially much more serious are the skin blisters and lesions that can be caused by the contents of milky latex ducts or sap of plants such as giant hogweed and spurges. These plants are phototoxic and sunlight reacts with their sap to photosensitise the skin and can cause painful welts and blisters. Giant hogweed is particularly dangerous in this respect and in the eyes can even cause blindness. The sap of other members of the **Apiaceae** (carrots, parsley, parsnips, *etc.*) as well as some of the **Hypericaceae** (St John's-worts) **Rutaceae** (rues), **Moraceae** (figs), **Anacardiaceae** (sumacs) and **Polygonaceae** (knotweeds) can also cause photodermatitis/dermatitis.



Giant hogweed *Heracleum mantegazzianum* (left) and two typical examples of *Euphorbia* (spurge)

Many other plants, especially those with glandular hairs, can cause various allergic reactions in some people. As always, but particularly with those plants containing inflammation agents, pay very great care to protecting the eyes.

3. Plants that are toxic if ingested.

I have listed below some of the ones that are, or may well be, present in our greenspaces, whether native, naturalised or likely garden escapes, but there are many more; remember their relatives, varieties and cultivars are likely to contain toxins, too. Please be aware that, even though some are the basis of medicines, they can be very dangerous if eaten. Illustrations of a few of them follow, but do please take the time to acquire good botanical identification books and learn how to identify the plants in the vegetation around you confidently. (Please remember that many houseplants contain toxic chemicals, too – *Caladium*, *Philodendron*, *Dieffenbachia*, *Zantedeschia*, *Kalanchoe*, *Datura* and *Oleander* are examples.)

Apple <i>Malus domestica</i> (seeds)	Larkspur <i>Delphinium</i> spp
Bird cherry <i>Prunus padus</i>	Lilies <i>Lilium</i> spp
Bittersweet <i>Solanum dulcamara</i>	Lily-of-the-valley <i>Convallaria majalis</i>
Black nightshade <i>Solanum nigrum</i>	Lords-and-ladies <i>Arum maculatum</i>
Bleeding heart <i>Lamprocapnos spectabilis</i>	Lupins <i>Lupinus</i> spp
Bracken <i>Pteridium aquilinum</i>	Marsh marigold <i>Caltha palustris</i>
Broom <i>Cytisus scoparius</i>	Meadow saffron <i>Colchicum autumnale</i>
Castor oil plant <i>Ricinus communis</i>	Mistletoe <i>Viscum album</i>
Cherry laurel <i>Prunus laurocerasus</i>	Monk's-hood <i>Aconitum napellus</i>
Christmas rose <i>Helleborus niger</i>	Oak <i>Quercus</i> spp
Columbine <i>Aquilegia vulgaris</i>	Pasque flower <i>Pulsatilla cernua</i>
Cowbane <i>Cicuta virosa</i> (now very rare)	Pennyroyal <i>Mentha pulegium</i>
Daffodils <i>Narcissus</i> spp.	Potato, tomato <i>Solanum</i> spp (leaves)
<i>Daphne</i> spp (berries)	Privet <i>Ligustrum</i> spp.
Deadly nightshade <i>Atropa belladonna</i>	<i>Prunus</i> spp (leaves)
Elder <i>Sambucus niger</i> (except ripe berries cooked)	Ragwort <i>Senecio</i> spp
False acacia <i>Robinia pseudoacacia</i>	Rhododendrons
Foxglove <i>Digitalis purpurea</i>	Rhubarb <i>Rheum x hybridum</i> (leaves)
Hemlock <i>Conium maculatum</i>	Siberian iris <i>Iris sibirica</i>
Hemlock water-dropwort <i>Oenanthe crocata</i>	Snowdrop <i>Galanthus nivalis</i>
Henbane <i>Hyoscyamus niger</i>	Tulip bulbs
Herb-Paris <i>Paris quadrifolia</i>	<i>Veratrum</i> spp.
Holly <i>Ilex aquifolium</i> (berries)	Wallflower <i>Erysimum cheiri</i>
Horse-chestnut <i>Aesculus</i> spp	Wild carrot <i>Daucus carota</i>
Hyacinth bulbs	Wisterias
Hydrangeas	Wolf's-bane <i>Aconitum lycoctonum</i>
Ivy <i>Hedera helix</i>	Wood anemone <i>Anemone nemorosa</i>
Laburnum <i>anagyroides</i>	Yew <i>Taxus baccata</i>
Japanese andromeda <i>Pieris japonica</i>	

Some illustrations follow.

And don't forget to be very cautious about the kingdom of fungi which, though not plants, contain several very toxic and even deadly species, some of which look superficially innocuous. Do not eat them unless you are absolutely certain of identification and that they are comestible.



Bleeding heart *Lamprocapnos spectabilis*



Bracken *Pteridium aquilinum*



Cherry laurel *Prunus laurocerasus*



Christmas rose *Helleborus niger*



Red horse-chestnut *Aesculus x carnea*



Ivy *Hedera helix*



Foxglove *Digitalis purpurea*



Hemlock water-dropwort *Oenanthe crocata*



Herb-Paris *Paris quadrifolia*



Laburnum *anagyroides*



Lords-and-ladies *Arum maculatum*



Martagon lily *Lilium martagon*



Marsh marigold *Caltha palustris*



Meadow saffron *Colchicum autumnale*



Mistletoe *Viscum album*



Pasque flower *Pulsatilla cernua*



Privet *Ligustrum vulgare*



Common ragwort *Jacobaea vulgaris*



Rhubarb leaves *Rheum x hybridum*



Snowdrop *Galanthus nivalis*



Wallflower *Erysimum cheiri s.l.*



Wild carrot *Daucus carota*



Wisteria *floribunda*



Wood anemone *Anemone nemorosa*

What to do in case of a plant-related injury or poisoning

Establish the facts. If ingested, what plant is it (find someone who knows such as a botanist, gardener, pharmacist if you don't), what parts were eaten and how much, how long ago, physical signs such as vomiting. If a physical injury, how deep, what body part(s), is the wound clean, any bleeding, degree and duration of pain, any inflammation (photo may be useful).

Apply first aid. Remove thorns with sterilized tweezers (may be easier after bathing the area in warm water for a few minutes).

If you suspect ingested poison or have any concerns at all, call your doctor, local medical centre or the emergency services at once.

At Betts we have advanced botanists and vegetation scientists on our staff. We will always be happy to answer questions through the help desk at www.bettsestates.com/help. The outdoors certainly has its dangers but it is fascinating and wonderful. Be wise: become botany-aware and educate children.

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