



Elizabeth A. Dauncey

Poisonous Plants

*A guide for parents
& childcare providers*



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Elizabeth A. Dauncey

Toxicity by Leonard Hawkins and Katherine Kennedy



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Glossary

Annual – grows from seed and dies within a year

Biennial – grows from seed in the first year, flowers and then dies in the second

Deciduous – shrub or tree that loses its leaves in the autumn and regrows them in the spring

Evergreen – shrub or tree that keeps its leaves through the winter

Herbaceous – annuals, biennials and perennials that die down in the winter

Ingestion – eating

Occupational – associated with a person's employment

Perennial – lives for several years

Stamen – the part of the plant that produces pollen

Synonym (or **Syn.**) – another name by which the plant or group of plants has been known

First aid and emergency advice from the Medical Toxicology Information Services

If you suspect that someone has:

Eaten a poisonous plant:

- Do not try to make them sick.
- A glass of water or milk may be helpful.
- A spoonful of ice cream may help to relieve irritation inside the mouth.

Skin contact with sap from an irritant or allergenic plant:

- Immediately wash the affected area with warm, soapy water.
- Cover the affected area with light clothing.

Eye contact with sap:

- Rinse it immediately with clean water for 10-15 minutes if there is irritation.

If symptoms develop, or you are at all concerned, seek medical advice or attention.

Make a note of the name of the plant and if possible collect a sample, including leaves, flowers and fruit if present, to take with you.

Introduction



Laburnum and *Rhododendron* provide splashes of colour next to nettles (*Urtica dioica*)

The main purpose of this book is to provide clear and authoritative information in order to reduce the anxiety surrounding the subject of poisonous plants, and to enable you to make an assessment of the risk that plants might pose to you and those you look after. It also offers practical suggestions to help you make your home and garden safe.

This book is the latest in a series of joint publications by the Royal Botanic Gardens, Kew and the Medical Toxicology Information Services (MTIS), Guy's and St Thomas' NHS Foundation Trust.

Kew is one of the world's leading botanical institutes. As well as being the home of beautifully presented gardens that are beloved by so many people for their ornamental merit, Kew undertakes ground-breaking research on the classification and conservation of plants and fungi from all the continents of the world. The MTIS was established as Guy's Poisons Unit in 1963. The service is staffed by scientists and doctors who are experts in the field of human toxicology, and it now includes a Veterinary Poisons Information Service and a Traditional Remedies Advisory Service.

Kew and the MTIS have worked together since 1991, addressing the unique problems associated with the prevention, diagnosis and management of poisoning by plants and fungi. This collaboration has resulted in several publications including, in 2000, a CD-ROM identification system for poisonous plants and fungi, which is widely used by hospitals, local authorities and many other interested groups. For details see 'Sources of further information' on page 168.

The Horticultural Trades Association (HTA) list of potentially harmful plants, published in 2000, is another product of the collaboration between Kew and the MTIS, working with Marion Cooper and Anthony Johnson, the leading experts on British poisonous plants. Representatives of the horticultural trade, and the Royal Horticultural Society, used in-depth toxicity reports produced by the Kew–MTIS team to decide which of the ornamental plants sold in Britain should have warning labels and to agree standard phrases to describe the possible harm they might cause. The horticultural trade recognises the need to warn customers about possible risks, and the scheme is used by most major garden centres, supermarkets and DIY stores.

This book is the first publication to illustrate and describe the toxicity of all the plants on the HTA's list of potentially harmful plants and includes the HTA's risk code for each plant.

The plants in this book

This book contains 132 plants that can be harmful to humans if eaten or, in some cases, touched. Of all plants found in Britain, these are the most likely to cause harm. They include all the 117 plants on the HTA list of potentially harmful plants, and another 15 plants that are either native to Britain but not sold, such as hemlock (*Conium maculatum*), or are vegetables. Some people may be surprised to see entries for asparagus, celery, parsnip, potato and rhubarb in a book on poisonous plants, and to discover that some parts of these plants can be poisonous under certain circumstances.

To keep the book to a manageable size, it does not include harmful plants that are not commonly found in Britain, plants that are poisonous to animals but unlikely to harm humans, or fungi, which can only safely be identified by experts.

ACTAEA section ACTAEA

baneberry, black cohosh, herb Christopher

Family

Ranunculaceae

Description

Shade-loving garden plants with divided leaves; *Actaea spicata* is a rare British plant. Heads of small, white flowers in late spring are followed in summer by attractive red, white or black berries (5–15 mm). A herbal preparation is made from *A. racemosa*.

Main toxin

Uncertain

Risk

Very few reported cases. Ingestion of small quantities may result in moderate poisoning.

Symptoms

Ingestion of all parts, especially roots and fruits, causes an intense pain in the mouth and throat followed by vomiting, diarrhoea and abdominal pain. In severe cases there may be dizziness, disturbed vision or perception and convulsions. Kidney damage may occur.

Contact with some species can cause skin irritation and blisters.

HTA Category

C, Harmful if eaten; skin irritant



Red fruit of *Actaea rubra* ssp. *arguta*



White fruit of *Actaea pachypoda*



Actaea rubra f. *neglecta*, flowering



PASSIFLORA

passion flower, passion fruit

Family

Passifloraceae

Description

Climbing plants grown in gardens or conservatories. Leaves deeply divided, sometimes simple. Unusual, showy flowers have numerous petals, a ring of filaments and prominent stamens. Sometimes producing large, orange fruit (35–60 mm; seeds 4–7 mm). The edible fruits of some tender species are sold in Britain.

Main toxins

Possibly harman alkaloids and some species contain cyanogenic glycosides

Risk

Few reported cases. Severe poisoning is unlikely.

Symptoms

Ingestion may cause gastrointestinal upset. There is a possibility of cyanide poisoning but this is rare.

HTA Category

C, Harmful if eaten (as *Passiflora caerulea*)



Passiflora caerulea, flowering plant



Ripe fruit broken open to reveal fleshy pink seeds (© RBG, Kew)

Passiflora caerulea, fruiting plant (© Mark Jackson)





SOLANUM PSEUDOCAPSICUM

Christmas cherry, Jerusalem cherry, winter cherry

Synonyms

Solanum capsicastrum, *S. diflorum*

Family

Solanaceae

Description

Small shrubs grown as house or garden plants. Small white flowers in early summer are followed by green fruits (9–25 mm), that ripen to orange or red, occurring mainly from autumn through the winter, but may persist into the summer.

Main toxins

Steroidal alkaloids

Risk

Few reported cases. Ingestion may result in mild poisoning.

Symptoms

Ingestion may result in mild gastrointestinal upset, possibly abdominal pain, vomiting and diarrhoea. More serious effects are extremely unusual.

HTA Category

C, Harmful if eaten



Bushy plant with fruits and flowers



Various parts of a plant (© RBG, Kew)

AESCULUS

buckeye, conker tree, horse chestnut

Family

Sapindaceae (syn. Hippocastanaceae)

Description

Common, large trees and shrubs, widely grown, particularly in parks. Leaves large, hand-shaped. Upright heads of usually cream or pink flowers are followed in late summer and autumn by spherical, often spiny, capsules containing brown seeds (30–50 mm), known as conkers.

Main toxins

A coumarin glycoside (aesculin) and saponins (aescin)

Risk

Many reported cases. Ingestion of small quantities may result in mild poisoning.

Symptoms

Ingestion of the bitter seed may cause gastrointestinal upset with vomiting, abdominal pain and diarrhoea. Coma, hypertension and respiratory paralysis have been reported in a 4-year-old boy who repeatedly ingested seeds, but this is very unusual. Ingestion has also resulted in severe allergic reactions.

HTA Category

C, Harmful if eaten

Notes

The sweet chestnut (*Castanea sativa*), which produces edible seeds, is not included in this book.



Aesculus hippocastanum, fruiting branches



Flowering *Aesculus hippocastanum* tree



Conkers and spiny capsules (© RBG, Kew)



DIGITALIS

foxglove

Family

Plantaginaceae

Description

Common wild plant particularly on the edge of woods, also widely grown in gardens. Leaves simple, smooth or softly hairy (see page 22). Tall spires of tubular, purple, pink, white, yellow or orange flowers are produced in summer to early autumn. Fruit a dry capsule.

Main toxins

Cardiac glycosides

Risk

Many reported cases. Ingestion may result in severe poisoning.

Symptoms

Ingestion of flowers occasionally results in gastrointestinal effects. Ingestion of leaves can cause oral and abdominal pain, nausea, vomiting and diarrhoea. In severe cases, symptoms can include visual and perceptual disturbances and heart and kidney problems.

Contact with plant material can cause irritation.

HTA Category

B, CAUTION toxic if eaten



Typical purple flowers of *Digitalis purpurea*



Yellow-flowered *Digitalis grandiflora*

OPUNTIA MICRODASYYS

bunny ears

Family

Cactaceae

Description

Tender cactus grown as a houseplant. Stems flattened, oval to rounded oblong, branching, pale to mid-green, dotted with clusters of barbed bristles (glochids), which are usually yellow but may be white or reddish-brown. Flowers bright yellow, bowl-shaped.

Main toxin

None

Risk

Very few reported cases. Accidental contact can result in moderate effects.

Symptoms

Ingestion of significant quantities is unlikely due to the presence of barbed glochids (needle-shaped spines), which act as a deterrent.

Contact may result in skin discomfort, itching and a burning sensation, which may persist for up to a week. Small lesions can develop and usually clear within 2 weeks. Occasionally, the lesions may progress to inflammation, developing gradually up to 4 weeks post-exposure. Inflammation may persist for 2–8 months before resolving spontaneously. Eye exposure may result in inflammation, conjunctivitis, corneal erosion and inflammation of the cornea.

HTA Category

C, Skin irritant



Opuntia microdasys can grow into a large plant



Small plant of *Opuntia microdasys* f. *alba* with white glochids (© RBG, Kew)

