



Centre for
Ecology & Hydrology

NATURAL ENVIRONMENT RESEARCH COUNCIL

Centre for Aquatic Plant Management

Information Sheet: 31 Hemlock Water Dropwort (*Oenanthe crocata*)

The generic name, *Oenanthe*, is derived from the Greek *ainos* (wine) and *anthos* (a flower), from the wine-like scent of the flowers. It is the most toxic plant in Britain to both humans and animals. The leaves smell characteristically of celery or parsley. The roots are the most toxic part of the plant. The roots are pale yellow and composed of 5 or more fleshy tubers (hence the name Dead Man's Fingers)

and exude a yellowish liquid when cut that stains the skin. Roots are exposed by ditching operations, or by scouring of flood water overwinter, where they become accessible to livestock.

It is perennial with tuberous roots (the most poisonous part) and leaves that remain green during winter. The leaves are somewhat celery-like in form. The lower leaves are large and spreading, reaching more than 30 cm in length, and are broadly triangular. The upper leaves are much smaller, nearly stalkless, the segments narrower and acute. The small, white or pale pink flowers, which are 5 to 10 cm in diameter and made up of 15 to 30 rayed compound umbels appear in June and July. It grows in shallow water in streams, on the banks of rivers, lakes, ponds, canals, marshes, wet woodland and in crevices in waterside masonry. It is distributed in the south and west of the country, with scattered distribution in the north east and is one of the few macrophytes that will grow in small rocky coastal streams. It is essentially a lowland species, almost always growing below 300 m.

Toxicity

It is most toxic in the late winter and early spring. The toxic principle is oenathetoxin, a polyunsaturated higher alcohol. It is a convulsant poison that is not affected by drying or storage (therefore remains toxic after cutting and chemical control). Very small amounts are sufficient to cause death. Poisoning of farm stock usually occurs with out any warning signs. Horses and Cattle show salivation, dilated pupils, respiratory distress and spasmodic convulsions; they usually die in convulsion. Animals that do not die may develop diarrhoea for two days, then slowly return to normal. Humans have been poisoned when leaves have been mistaken for those of celery, or the tuberous roots for parsnips.

Mechanical Control

It can be dug out, dried and burnt. It remains toxic after digging so livestock should be excluded from areas where the plant is collected. Care should be taken when handling the plant.

Chemical Control

It can be controlled by herbicides containing glyphosate or 2,4-D amine, best applied in May or June.

Reference: Wilson, AL, Johnston, WG, McCusker, HB, Bannatyne, CC (1958) Hemlock Water Dropwort (*Oenanthe crocata*) poisoning in cattle. Vet Record 70:587-590

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