

AMERICAN SKUNK CABBAGE (*Lysichiton americanus*)

Species Identification

Herbaceous perennial plant that can be terrestrial, semi aquatic or aquatic

- Height:** <1m, usually <0.5m
Width: Individual plant can grow <1m². Stem generally <4cm
Rhizomes: Underground rhizomes are fleshy measuring 2.5-3cm in diameter and up to 30cm in length.
Leaf: Large tobacco-like, leathery green leaves measuring 0.4-1m in length. Leaves have a light sheen and thick veins and wrap around each other at the base, forming a basal rosette. Immature leaves scroll at edges.
Flower: Flower can reach up to 4.5cm in height and consists of a bright yellow long-oval spathe (like a petal) which encompasses a stalked spadix (spike) which bears small green flowers and can measure up to 2.5cm. Each plant will bear one or two flowers which smell of skunk/carrion/garlic. Similar in appearance to Cuckoo pint.
Fruits: 150-350 green berries develop along the spadix. Each berry usually carries 2 grey-brown red-brown seeds (5-11mm).



Ecology

Habitat Description: American skunk cabbage will grow in swamps, wet woodlands, along streams and rivers, lakesides, ponds, boggy and other wet areas from 0-1400m altitude. It can grow in most soils as long as they are wet. It can tolerate fluctuating water levels, shade or full sunlight and temperatures as low as -15°C.

Reproduction & Life Cycle: A perennial plant that produces leaves early in the spring. Flowers are produced by plants over 2-3 years old between March and May. Plants grow slowly but densely and can survive for up to 80 years. Male, female and sometimes hermaphrodite flowers occur in the same inflorescence and a pungent smell attracts flies, midges and beetles as pollinators. Seeds are readily produced after flowering, which are thought to remain viable in the soil for at least 8 years.

Dispersal and Spread: American skunk cabbage spreads naturally over several tens of metres from the parent plant. Natural dispersal occurs by the transportation of berries and seeds by birds and mammals and by water when plants occur on the edges of water bodies. The plant can also reproduce from rhizome and stems which can be transported naturally or unintentionally by machinery and by fly tipping of garden waste.

Impact

Native Habitats: American skunk cabbage, after a few years of growth, can build a dense layer excluding light from native species causing species displacement and a reduction in overall biodiversity. It can become particularly problematic in damp woodlands where rarer mosses and lichens are out-competed for light. Populations have been documented to clog ponds and ditches in Scotland.

Human Health Effects: American skunk cabbage contains calcium oxalate raphides which are mildly harmful if eaten. The roots are used for medicinal purposes.

Economic and Societal Effects: There have been no social impacts resulting from infestations of American skunk cabbage reported in the UK. Economic losses relate to the control of the invasion in protected habitats and flood control systems and irrigation channels.

Legislation

American skunk cabbage is **not** currently listed under Schedule 9 of the Wildlife and Countryside Act in England and Wales (2010) as an offence to plant or otherwise cause to grow in the wild.

Management Approaches

Prevention Methods - Early detection and rapid response

1. Map the distribution of all extant populations
2. Identify areas that are 'at risk' to new invasions:
 - Within downstream flood zone of invaded watercourses
 - Wetlands connected to infested sites by public access routes
 - Sites adjacent to garden centres/nurseries and ponds where American skunk cabbage is grown
 - Wet woodlands / wetlands in close proximity (within 100m) of infested areas and urban areas
3. Use GIS to map 'at risk' areas utilising land use spatial layers to improve predictability
4. Implement a management plan to prevent further spread of the plant including:
 - Adding American skunk-cabbage onto Schedule 9 of the Wildlife and Countryside Act
 - Restricting the sale of American skunk cabbage at retail outlets
 - Gaining cooperation from the nursery industry through implementing a code of conduct.
 - Avoiding unintentional transportation of plant material by:
 - Increasing public awareness at infested sites
 - Ensuring recreational (boats, boots, angling) and mechanical equipment is drained and cleaned before leaving any infested water body
 - Managing extant stands along waterways and transport corridors to prevent dispersal
 - Monitoring 'at risk' sites to enable fast eradication if invasion occurs

Eradication, Control and monitoring effects

Successful eradication of American skunk cabbage is possible within a few years but monitoring sites biannually for up to 8 years is highly recommended. **Treatment in the early stages is recommended.**

Method	Description	Time of Year	Limitations
Manual Removal	Plants can be dug out using a sharp spade	Early summer to weaken the remaining rhizomes Repeat in late summer/autumn if required	Labour intensive but highly effective.
Mechanical Removal	Digging out the plant and its rhizomes which should then be removed from site and disposed of at suitable waste sites.	Early summer to weaken the remaining rhizomes Repeat in late summer/autumn and for at least 2 years	Expensive but effective. Make sure that machinery is cleaned thoroughly before using on other sites.
Pesticides	Apply Glyphosate + Topfilm to leaves	June to October	It is not recommended to use pesticides on this plant due to the sensitive habitats in which it occurs

References

- EPPO** (2005) *Lysichiton americanus* (Araceae - American skunk cabbage Quarantine Alert Information Sheet. Available online at: www.eppo.org/QUARANTINE/Alert.../Lysichiton_americanus.doc;
- Klingenstein F. & Alberternst, B.** (2010): NOBANIS - Invasive Alien Species Fact Sheet - *Lysichiton americanus*. Available online at www.nobanis.org;
- NNSS** (2011) American Skunk-cabbage, *Lysichiton americanus*. Available online at: <https://secure.fera.defra.gov.uk/nonnativespecies/factsheet/downloadFactsheet.cfm?speciesId=2110>;
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