

Creating ponds for Tubular Water-dropwort



A 50-YEAR PROJECT TO CREATE A NETWORK OF CLEAN WATER PONDS FOR FRESHWATER WILDLIFE

1. Tubular Water-dropwort

Tubular Water-dropwort (*Oenanthe fistulosa*) is a medium-sized perennial (up to 80cm tall) with clusters of white flowers held in umbels at the end of long stalks from late June to September. It has hollow stems and leaf stalks. It occurs in ponds but also in a very wide range of other wetland habitats including wet meadows.

Tubular Water-dropwort has declined since 1950s in the UK because of drainage, eutrophication, weed control and conversion from pasture to arable land. It is still relatively widespread in southern England and in places on the coast of Wales. Tubular Water-dropwort is classed as Vulnerable in the UK and it is a Priority Species for conservation in both Wales and England.

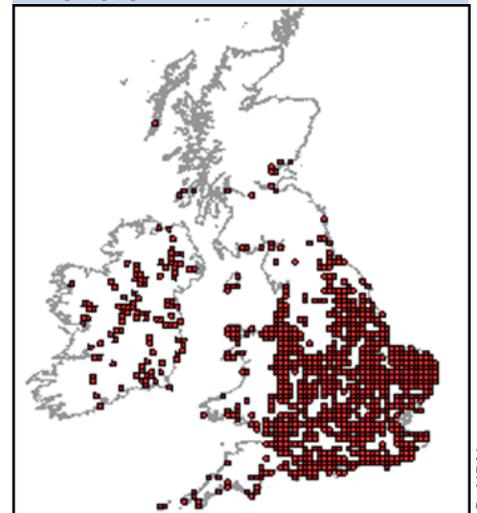


© Richard Lansdown

Tubular Water-dropwort and fruiting head (inset)

Key messages

- Locate ponds at sites which currently support Tubular Water-dropwort or have done so in the past
- Create clean water ponds and fluctuating water levels
- Create ponds with shallow margins and wide drawdown zones
- Create ponds in areas free from nutrient enrichment. Although this species can tolerate relatively high nutrient levels, it is readily outcompeted by other marginal vegetation
- Maintain open, unshaded habitats by low intensity grazing or cutting
- Monitor pond establishment and remove invasive species as soon as they occur. Once established they are usually difficult to remove



Distribution of Tubular Water-dropwort in the UK

© NBN

2. Habitat and reproduction

Tubular Water-dropwort is a lowland plant which grows in a wide range of wetland habitats, including damp ground on the edges of ponds and other water bodies including rivers, streams, canals, ditches and lakes as well as in dense wetland vegetation in meadows, marshes, fens and pasture on river floodplains and occasionally in deep water in permanent ditches. It appears most frequently in ancient habitats, where there is a long history of stable landuse, such as traditionally managed pasture and meadows.

Tubular Water-dropwort forms long-lived, persistent populations and is most often encountered amongst dense vegetation. It does however require some kind of disturbance to create openings to establish new populations. It is also able to survive as very low-growing plants in mown grassland and even on seasonally inundated tracks, although these plants rarely flower. It reproduces by seeds, which may be transported by flood water, and by spreading stolons (these resemble stems which creep along or through the ground).

Tubular Water-dropwort requires clean water with little or no nutrient pollution from intensive agriculture and prefers sites with fluctuating water levels which provide damp ground because seasonal inundations help eliminate competing terrestrial plants. It is intolerant of shading from trees and scrub but it can grow among other tall emergent plants and is often associated with sedges and rushes.

3. Pond designs for Tubular Water-dropwort

Making new ponds can help reverse the decline of Tubular Water-dropwort by creating new habitat for this species, replacing ponds which have become shaded or where management has become unsuitable. Create ponds in dense rush pasture near existing populations or in sites with past records where it no longer occurs.

Locating ponds

Create ponds in tall marshy vegetation but make sure that there will be some occasional grazing or disturbance to open up these habitats and enable Tubular Water-dropwort to spread and colonise new areas.

Create ponds close to existing populations, either within the same grazing unit or along stream and river floodplains downstream of existing populations. Tubular Water-dropwort is thought to spread by seeds to new sites, probably on the feet of grazing animals or by floodwater, but it is also likely that populations are able to colonise through spread of roots and stolon fragments. Creating ponds where populations were formerly known and where there is suitable management may help to reinstate populations.

Create clean water ponds. Tubular Water-dropwort is found in traditionally managed meadows which have not been enriched by nutrients and where herbicides are not applied so make sure the landuse is appropriate and is likely to remain so in the long-term. Floodwater from streams and rivers may carry nutrients or other forms of pollution, but seasonal drying – which reduces the accumulation of nutrients - can help maintain suitable conditions for Tubular Water-dropwort.

Most substrates including clays, gravels and peat are suitable for Tubular Water-dropwort.

Add ponds to existing sites to make a complex of ponds. Single ponds will support Tubular Water-dropwort but by increasing the area of suitable habitat, the population will be more robust in the long term. Look at existing ponds on the site to find areas where ponds hold water and create more. Ideally don't create all ponds in one go, but add one or two each year so that there will always be some open habitat suitable for new populations to colonise.

Management needs to be right and ideally include relatively low grazing pressure but Tubular Water-dropwort can also thrive in cut grassland and where there is only occasional disturbance by grazing animals, such as in marshes and fens.

Don't create ponds in grassland with high plant diversity, or with archaeological heritage such as ridge and furrow. Make sure you carry out the right checks before going ahead with your pond creation schemes – for more information on pre-site checks consult Pond Creation Toolkit [Sheet 6](#).



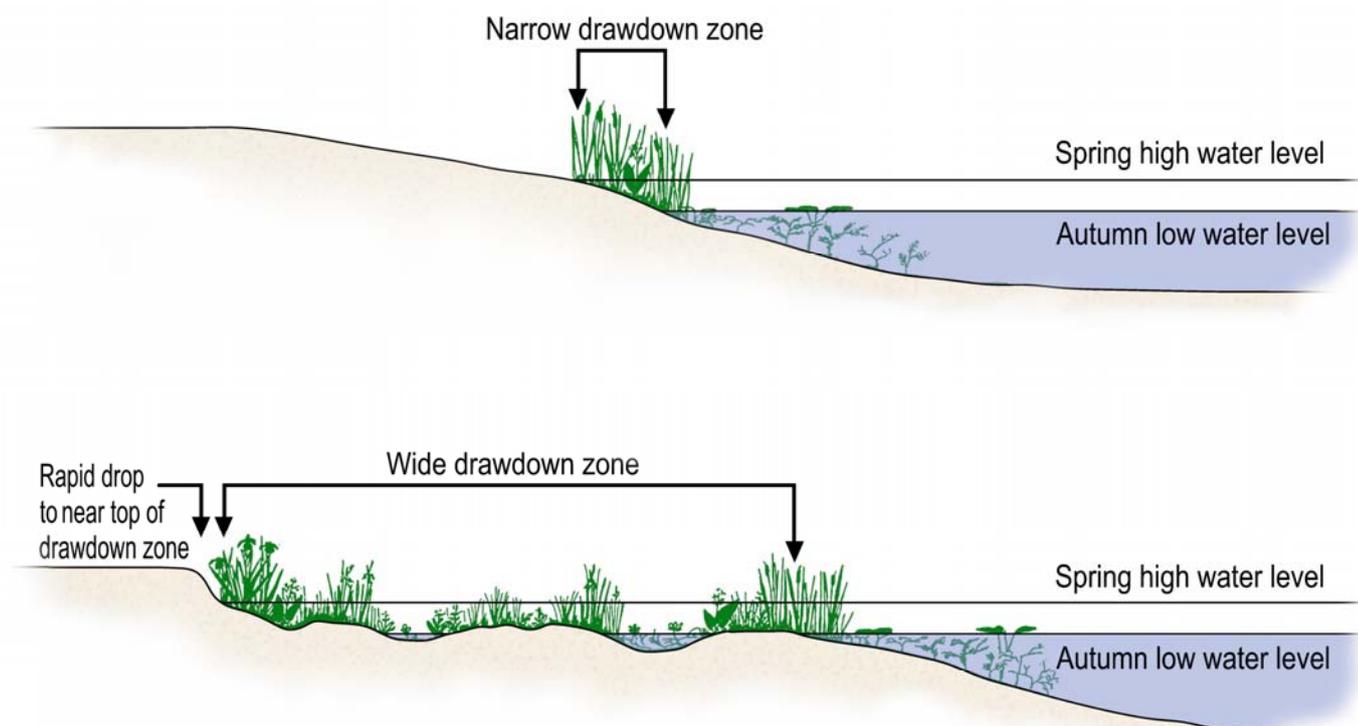
At the RSPB's Malltraeth Marsh in Anglesey, Tubular Water-dropwort occurs in a range of habitats including marsh with dense vegetation, new ponds (above left) and ditches (above right) as well as heavily mown grassland (below left) and grazed grassland (below right). (All Photo credits except top left: Richard Lansdown)

Pond shape, depth and size

Ponds created for Tubular Water-dropwort don't need complicated designs. If the pond has a very gentle profile and fluctuating water levels – which will create a wide drawdown zone (Figure 1) - it will be suitable. The pond doesn't need to hold water all year round to support Tubular Water-dropwort, so you can also create temporary ponds, particularly in areas where there may be nutrient enrichment from flood water from rivers or streams.

Look at the other ponds which support this species in your area and try and re-create similar characteristics. Getting advice on your pond scheme from local or national experts at an early stage is always a good idea.

Figure 1: Designing the drawdown zone



4. Pond colonisation

Leave new ponds to colonise naturally and never plant up ponds which have been created for Tubular Water-dropwort. New ponds can look uninviting and devoid of life but this early stage is beneficial for both plants and invertebrates adapted to this pioneer stage. Colonisation can be very rapid in areas with many wetlands nearby, or on river floodplains, and tends to be slower in more isolated ponds away from sources of seeds, where chance will play on a big part on what becomes established. New ponds should be monitored and if invasive species are found they must be removed before they become established.

Tubular Water-dropwort may take many years before colonisation takes place. At a new pond complex in Oxfordshire on the floodplain of the River Cherwell, Tubular Water-dropwort – which occurs on other meadows in the catchment - was recorded in one of the new temporary pond and a semi-temporary pond 10 years after creation.



© Richard Lansdown



© Richard Lansdown

Tubular Water-dropwort grows in a variety of forms depending on local conditions and management practices. Flowering plants are easy to identify but seedling or non-flowering plants can be tricky, and are easily confused with other dropwort species, these images show a range of leaf shapes typical of this species

Useful contacts



Freshwater Habitats Trust: **an evidence-based conservation organisation working to protect and enhance the diversity of freshwater landscapes.**

For more information and contact details go to www.freshwaterhabitats.org.uk



Pondnet: **a volunteer network to monitor uncommon plant and animal species.**

For more information and contact details go to www.freshwaterhabitats.org.uk/projects/pondnet/



The Botanic Society of Britain and Ireland: **works to advance the study and enjoyment of wild plants and support their conservation in Britain and Ireland.**

For more information and contact details go to www.BSBI.org.uk

Further reading

Stewart A., Pearman DA. and Preston CD. (1994) Scarce plants in Britain. JNCC, Peterborough.

This factsheet was written with advice from Richard Lansdown, an independent specialist in the identification and conservation of wetland plants.

© v2 (2015) Freshwater Habitats Trust

For further information about the Million Ponds Project and to consult other factsheets in the Pond Creation Toolkit, please visit

www.freshwaterhabitats.org.uk/projects/million-ponds

or email enquiries to info@freshwaterhabitats.org.uk

Bioamrywiaeth Cymru
Biodiversity Wales



PARTNERIAETH BIOAMRYWIAETH CYMRU
WALES BIODIVERSITY PARTNERSHIP



**Cyfoeth
Naturiol**
Cymru
**Natural
Resources**
Wales



Ariennir gan
Lywodraeth Cymru
Funded by
Welsh Government