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# A Guide to Floating Pennywort Riddance

## A Volunteer Led Approach

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**Andy Gee in Action**  
**(Picture Credits – Neil Heath)**

# Some Key Facts

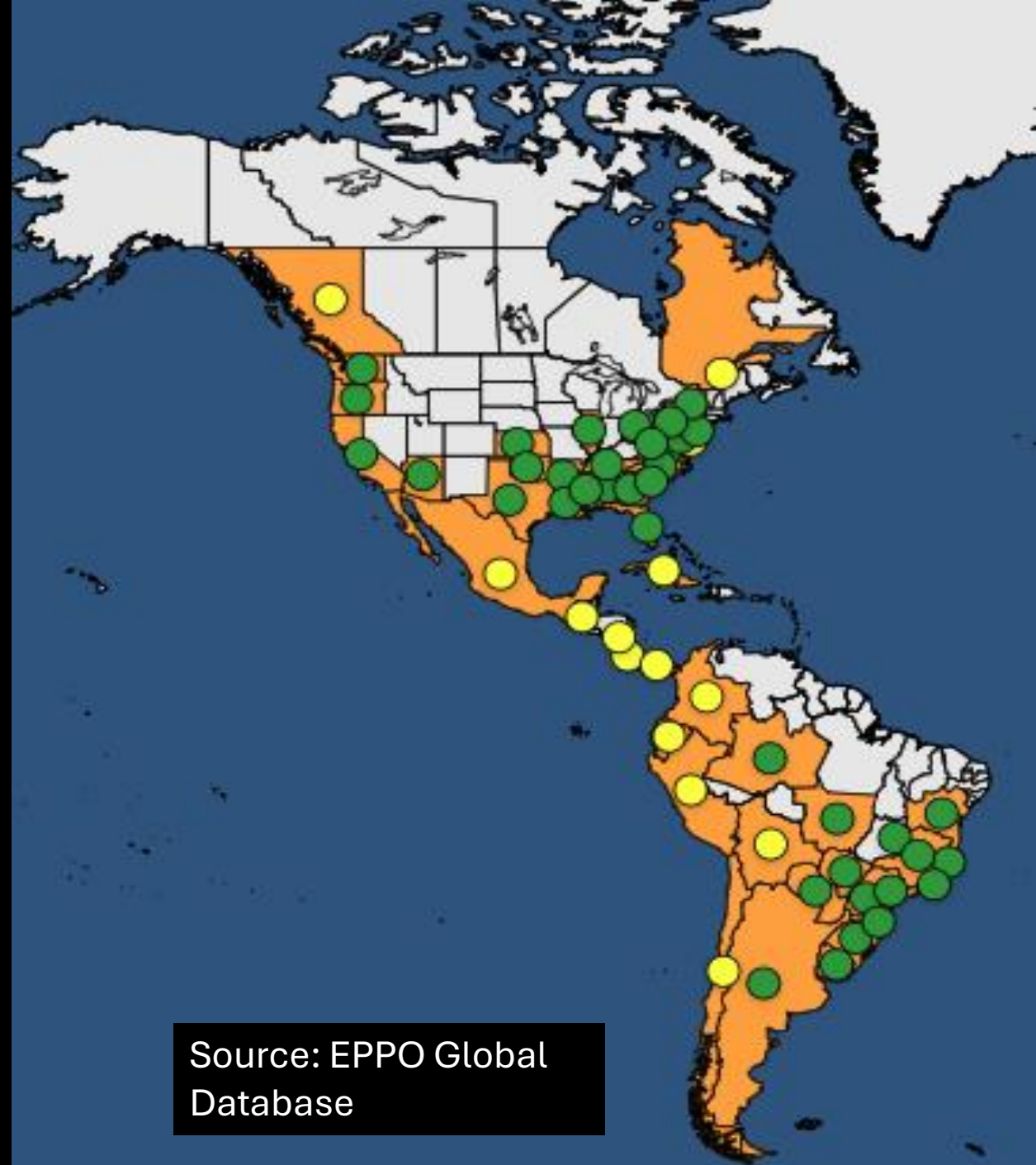
Scientific Name: *Hydrocolyle ranunculoides*

Native range (yellow dots):  
Argentina, from where it has spread.

Considered invasive to a range of countries, including the UK.

Listed on the Alien Invasive Species Order (2019).

This prohibits its import, use, transportation, sale, cultivation, or release into the environment.



Source: EPPO Global Database

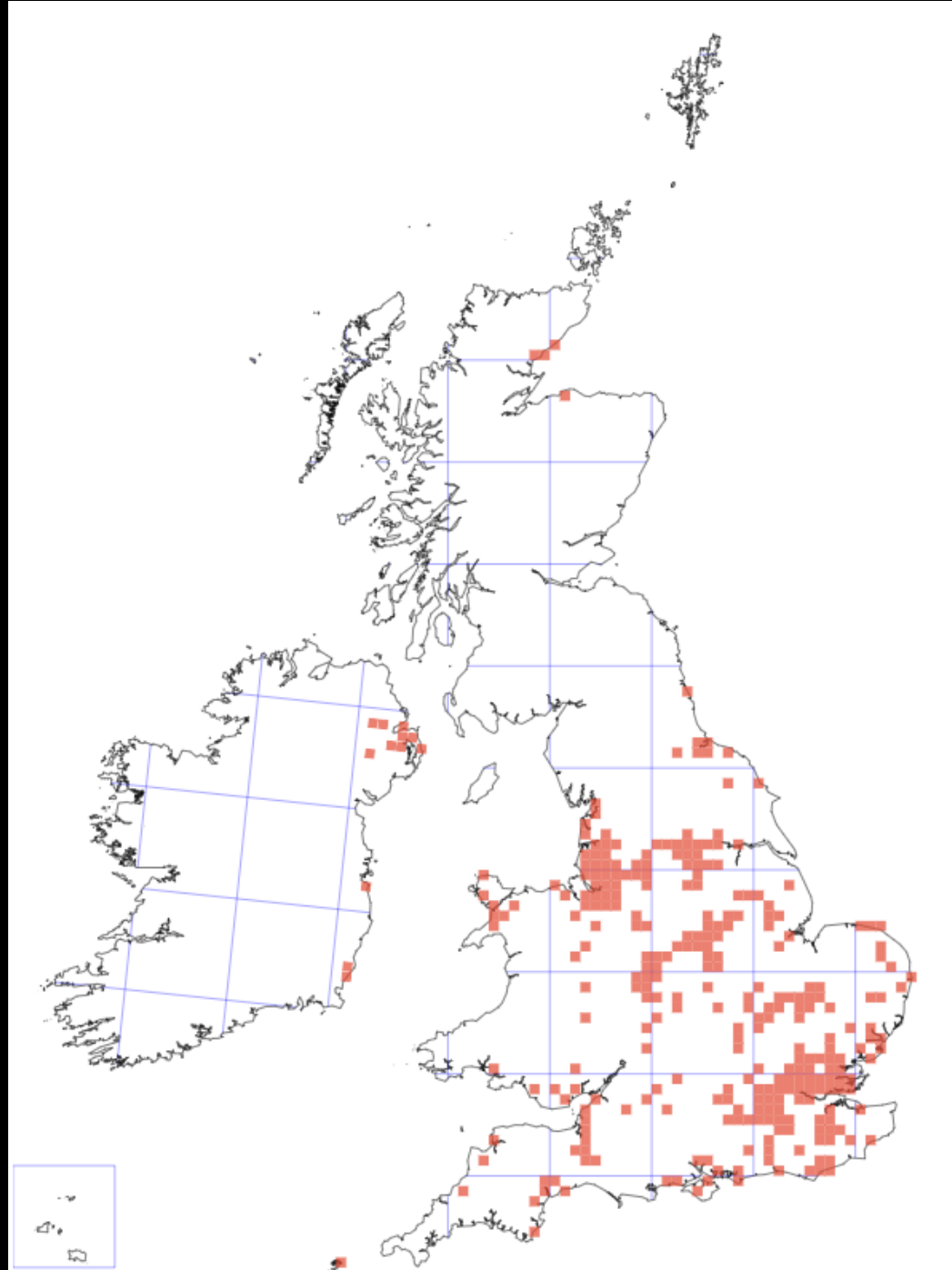
# National Picture

Floating Pennywort was first recorded in Essex, in 1990.

Pathway: introduced into GB as an ornamental plant for garden ponds and aquaria from which it spread to natural habitats.

Now banned from sale, but still spreading rapidly!

Mainly carried downstream along waterways, but prevailing winds can blow it upstream or when attached to boats.



# Biology

The main growing season is early May to the end of October.

Floating Pennywort will grow in the winter, albeit very slowly, if the temperature is above 6 degrees Celsius.

These pictures show typical early growth, from a single stolon (shoot). In the lower picture, the FP is growing out of the silt.



# Riddance Methodology

(pioneered on the River Stort, Thames Catchment)

## Four Main Stages:

1. Survey / Mapping
2. 'Cut and Float'
3. Forensic Search
4. Pennywort Patrols

'Winning the Pound'



# 1. Survey / Mapping

You must find your upstream limit! Record your FP locations on a suitable database, e.g. INNS Mapper. All surveys and subsequent removal of FP then need to be from the **headwaters down**.



## 2. 'Cut and Float'

This technique involves the cutting of rafts of pennywort with boats. These rafts are then floated to the bank to be removed.

The rafts can be cut by hand or using a paddle. By hand is faster as you have more control. This approach is also better at locating any twigs and branches that might be snagging the pennywort raft.

In these pictures three well established rafts were floated to the extraction point circa 200 m downstream.



*(Picture Credits – Drew Chadwick)*



*(Picture Credits – Drew Chadwick)*

### 3. 'Forensic Search'

When pennywort rafts are removed, there is a risk that some fragments escape. These can find their way into the margins and begin to grow.

A forensic finger-tip search of the pound is therefore needed a few days later to remove all visible growth.

A longer delay runs the risk of fragments travelling downstream, over weirs and locks.



*(Picture Credits – Drew Chadwick)*

## 4. 'Pennywort Patrols'

Follow up your initial good work with 'Pennywort Patrols' every two to three weeks.

The patrol must be undertaken slowly - every leaf or fragment of stolon needs to be removed. Pulling it gently can help get the whole stolon out if it is being held by reeds or rushes.

These patrols must continue through the whole year, not just the summer months.



Typically, you can expect to cover 1km in 20-30 minutes. Any faster and you are in danger of missing regrowth.

On canals with vertical walls paddling can be much quicker, as there is nothing for the pennywort to anchor onto, unless vegetation is present.

Two paddlers (one on each bank) can generally cover 5-6 km on a patrol, depending what weed is found.

One trick is if you get too far in front of your buddy, mark your position and then go to the other bank and paddle towards them.



## **‘Winning the Pound’**

A ‘Won Pound’ is the key to Pennywort Riddance.

All visible FP fragments have been removed in the initial Forensic Search and subsequent Pennywort Patrols.

In reality, some fragments may still be hiding in the reeds & rushes. But you are now close to riddance!



# Types of Boat

## Kayaks



- Most versatile boat – Close to the water for 'Cut and Float' – Bow can take two bucketfuls of FP
- Fast and manoeuvrable for patrols
- Can go into shallower water than a canoe
- Best boat for going deep into reeds/rushes

## Canoes



*(Picture Credits – Stuart Gee)*

- Can be loaded with large amounts of FP
- Able to push FP mats easier than a kayak when there is little flow
- Can take more equipment e.g. if you are undertaking tasks such as pruning

# Inflatable Dinghy



*(Picture Credits – Fergus Eakin)*

- Able to cover very long distances
- Fast to get back to base using outboard motor – Not as tiring as paddling
- Can take more equipment than a kayak
- Not able to get into the reeds and rushes as easily as a kayak or canoe

# Paddleboard (SUP)

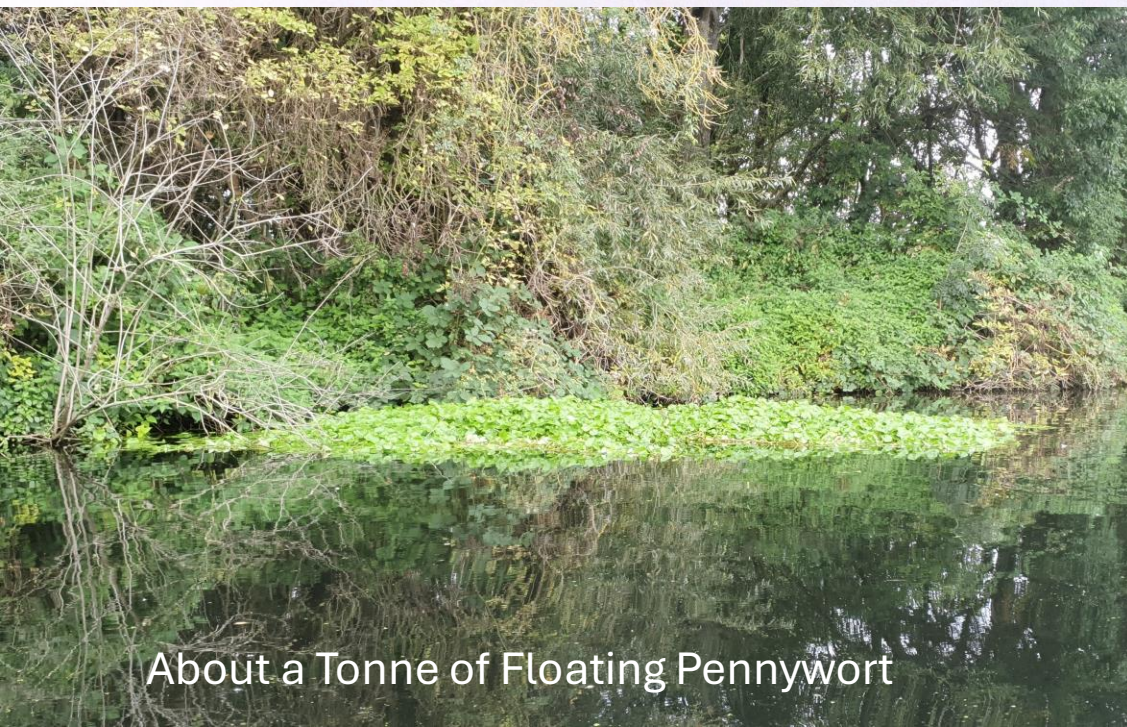


- Can access very shallow water
- Can get more weed on than a kayak
- Not so good as a kayak in the margins
- Risk of puncture in the trees and brambles

# Working the Autumn & Winter



At the height of the growing season FP can grow up to 20 cm in a day and double its biomass in 4-7 days. From May to October, the growth could therefore double six times: 1-2-4-8-16-32-64 by the end of the main growing season. **1 tonne in May could become 64 tonnes in October!**



About a Tonne of Floating Pennywort

This shows the importance of treating all year round. Removing small amounts of FP in the Autumn and Winter will significantly reduce your summer workloads. The approach is to 'Win Pounds' when the FP is dormant. The goal is to have no FP mats at the start of Spring, so you go straight into using Pennywort Patrols.

# Pruning

Identify any trees or brambles that are either getting in the way of FP removal, or are potential snag points for the weed itself.

Prune them during the 'Pennywort Patrols'.



# Floating Pennywort – Riddance Methodology

## A summary:

- Always remove Floating Pennywort from the headwaters-down.
- Remove all the FP Mats, using 'Cut and Float'.
- Undertake 'Forensic Searches'
- Undertake 'Pennywort Patrols' until it's GONE.
- 'Win the Pound'.
- Work the Autumn & Winter.

The success of this project on tributaries in the Thames has resulted in Yorkshire Area adopting our 'Pennywort Patrols' for the Calder Catchment (2024) and now also the Don Catchment (2025).

# Riddance Methodology – ‘Won Pounds’

| Waterways                          | Years Active     | Pounds Won                                      | Distance (km) |
|------------------------------------|------------------|-------------------------------------------------|---------------|
| River Stort                        | 1 year 7 months  | Twyford (Lock 2) to Burnt Mill (Lock 10)        | 10.8          |
| Mill & Weir Streams                | 1 year 7 months  |                                                 | 1.3           |
| River Lee Navigation               | 2 years 9 months | Feildes Weir (Lock 5) to Waltham Town (Lock 10) | 10.5          |
| River Lea (Dobbs Weir back stream) | 2 years 9 months |                                                 | 2.4           |
| River Lea (Broxbourne Rowing Club) | 2 years 1 month  |                                                 | 0.5           |
| River Lee Navigation               | 2 years 3 months | Waltham Town (Lock 10) to Enfield (Lock 12)     | 2.25          |
| Turkey Brook                       | 1 year 7 months  |                                                 | 0.7           |
| River Calder                       | 1 year           | Brighouse to Mirfield                           | 6.8           |
|                                    |                  | <b>Total</b>                                    | <b>35.25</b>  |

*(All Picture Credits Andy Gee – Except where stated)*



Canal & River Trust (CRT) receive the Green Flag Award for 2022/23. Pictured with the Waterside Bishop Stortford Group. Whoosh Explore Canoe Club in kayaks – Danny, Rob, Tim (on left). John, Andy, Stuart (left). Chris (not present) on holiday