

# PondNet Surveying for pond mud snail

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# What do we know about ponds?

Any permanent or seasonal waterbody between 1m<sup>2</sup> and 2 ha in surface area (1 ha=100x100 m) – very broad!

Ponds can be very variable – e.g. deep, permanent and moderate size



**Field pond Loddington (Leicestershire)**

Ponds can be very variable – e.g. shallow, temporary and moderate size



**Winterton Dunes, Norfolk – breeding habitat for Natterjack Toads (*Epidaleia calamita*)**

Ponds can be very variable – e.g. shallow, permanent and small size



**Turf pond Redgrave and Lopham Fen (Suffolk) –  
hunting ground for Fen Raft Spider  
*Dolomedes plantarius***

# PondNet aims:

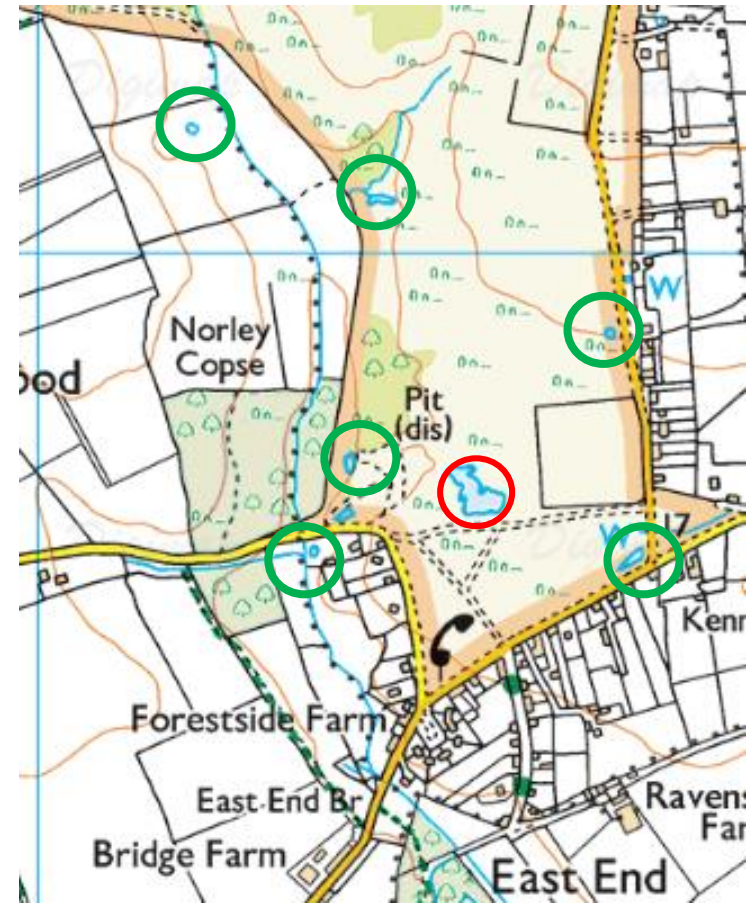
- To provide data to identify trends in pond quality and uncommon plant and animal species.
- Record environmental data; to explain the reasons for changes in biological quality.
- To use these data to protect and manage our freshwater resource.



Working with local specialists and volunteers to gather pond data

# What do volunteers do?

- Volunteers are allocated one (or more) focal ponds where we know the species has occurred (in the last 25 years)
- Visit the pond and assess the abundance of the species using the set methodology
- Look in adjacent ponds to determine presence/ absence to assess the stability of the population



We have randomly selected 50 ponds for each uncommon plant and animal species

Focal pond for abundance monitoring



Other ponds to search



# Objective

To measure change over time:

- Number of continually occupied ponds at national level
- Change in abundance at each known pond
- Strength of each population – monitoring presence/absence in adjacent ponds



Pillwort  
*Pilularia globulifera*



Coral necklace  
*Illecebrum verticillatum*



Pond mud snail  
*Omphiscola glabra*

# Pond Mud Snail

## *Omphiscola glabra*





# What is their habitat type?

- Typically found in sites with very clean water (naturally low nutrients) “with few other aquatic animals or plants”.
- These include freshwater marshes, small ditches, temporary pools or seepages that dry up or significantly diminish in summer.
- When pools recede or dry out in summer the snails burrow into the soft mud – down to 6cm.



Pond mud snail habitat on the edge of woodland, on clay – naturally low nutrients, slightly alkaline, seasonally low



Pond mud snail habitat in heathland, on mixture of sand and clay – naturally low nutrients, slightly acid, temporary



Pond mud snail habitat in woodland,  
on clay – naturally low nutrients,  
slightly alkaline, temporary



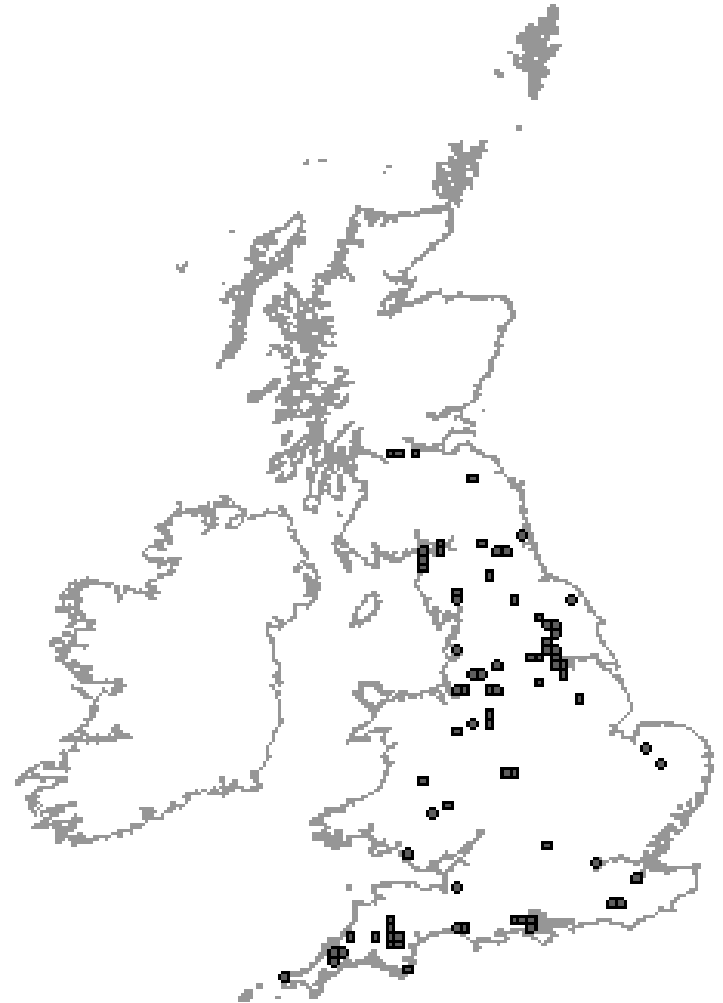
Variable pond mud snail habitats: on heathland (top), in a tree fall pond (bottom) and in diverse woodland ditch (right)



Pond mud snail habitat during summer

# Why are mud snails priority species?

- Once widespread in the UK, mud snails have declined significantly in the last 25 years
- Yorkshire, Cheshire, the New Forest and the West Country are the among the few remaining strongholds
- Declines in water quality, habitat loss and scrub encroachment are the principle reasons for a decline



# How to survey for mud snail

- Mud snails live in shallow water. A plastic kitchen sieve is usually adequate, though a standard biologist's long handled net with a 0.5mm mesh, is useful for slightly deeper areas.
- Spend 1 minute (net in the water time) sampling at each pond. Divide the time equally between the number of different edge and shallow habitats you see in the pond (e.g. grassy pond margin, shaded areas) and spend the same amount of sampling time in each. e.g. for 3 habitats, sample each for 20 seconds.
- You need to sample one habitat at a time, and divide the time up into c.5 second sweeps.



# How to survey for mud snails

- Fill up your tray or bucket with some pond water (before you disturb the water)
- Disturb the sediment (but don't dig up lots of mud)
- Put sample in your tray and agitate to knock snails off vegetation
- Tip the water slowly back into the pond – any snails will have settled in the bottom (like panning for gold)
- Count the number of mud snail and record on your form
- Repeat in other ponds – but only to confirm presence/absence

# What if all the water has gone!



Search under logs and make abundance estimates



# Snails which are definitely not mud snail?



Freshwater limpet -  
Acroloxidae



Ram's-horn snails -  
Planorbidae

# Snails which are definitely not mud snail?



River snails – Viviparidae  
30mm

## Snails with an operculum



Faucet snails – Bithyniidae  
17mm



Valve snails – Valvatidae  
15mm



Jenkin's spire snail – Hydrobiidae  
6mm

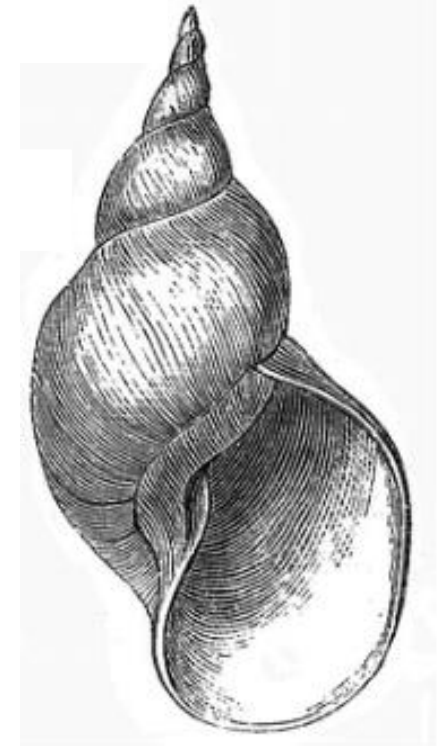
# What else could it be?

- spire snails without an operculum



*Radix balthica*  
Very large aperture  
12-20mm

## FAMILY LYMNAEIDAE



*Lymnaea stagnalis*  
Very large + pointed spire  
35-50mm



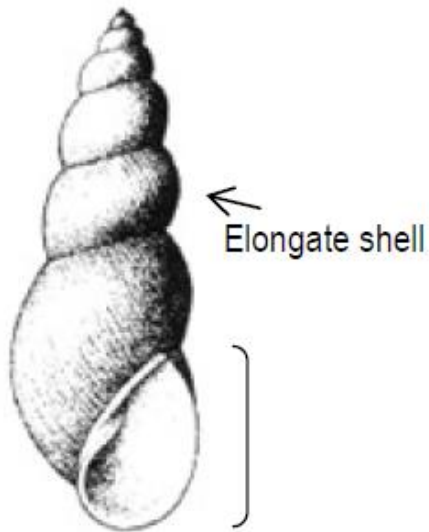
Saxifraga-Kees Marijnissen

# What else could it be?

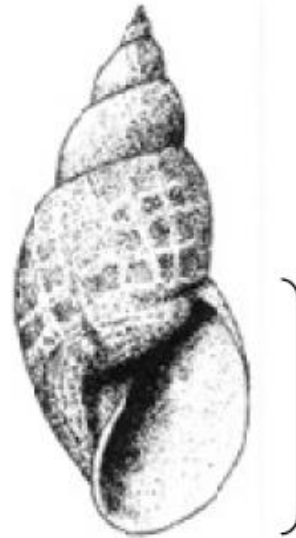
<http://www.conchsoc.org>

## - spire snails without an operculum

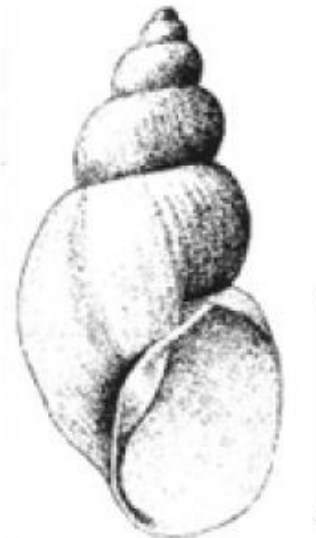
*Omphiscola glabra*  
(Mud Snail)



*Lymnaea palustris*  
(Marsh snail)

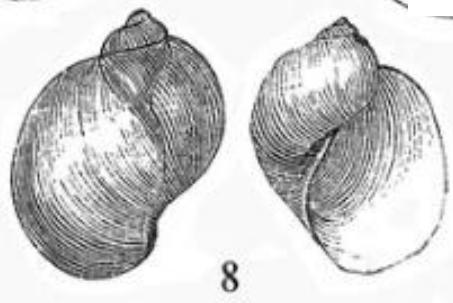
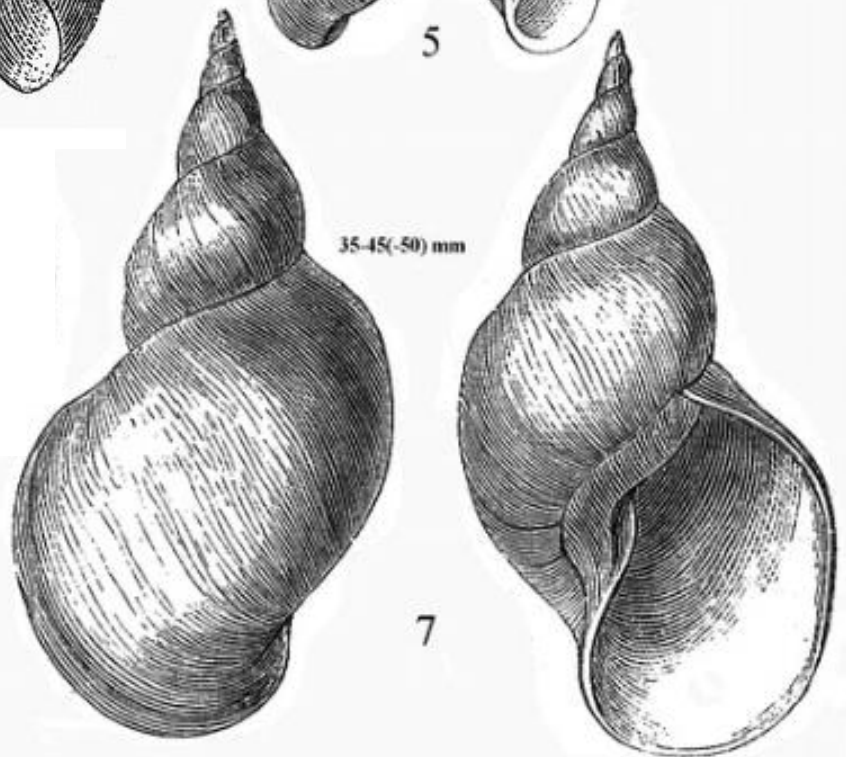
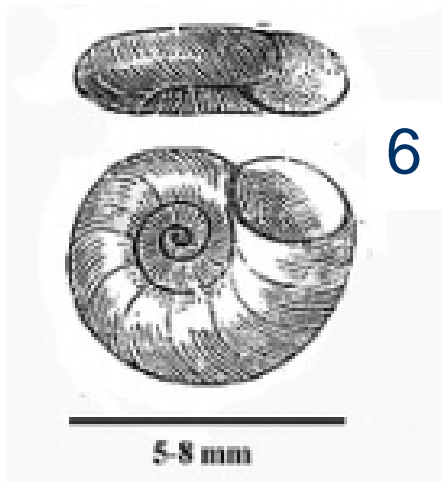
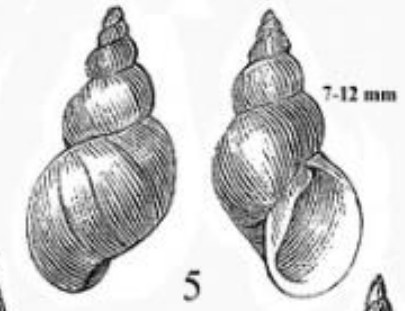
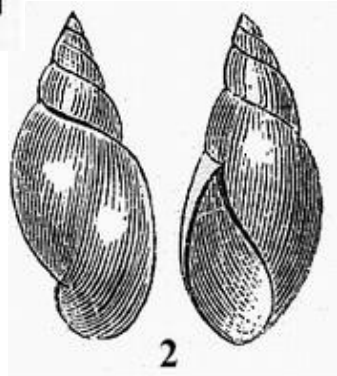
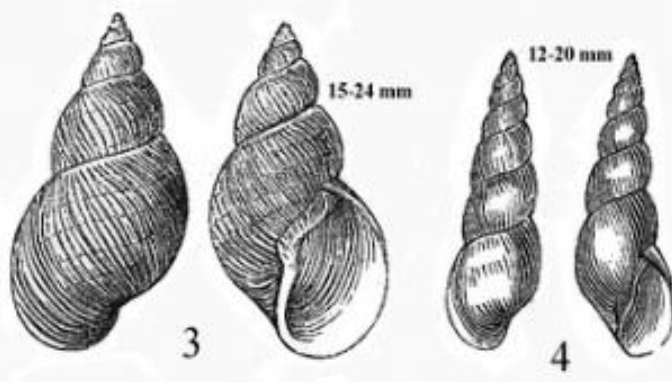
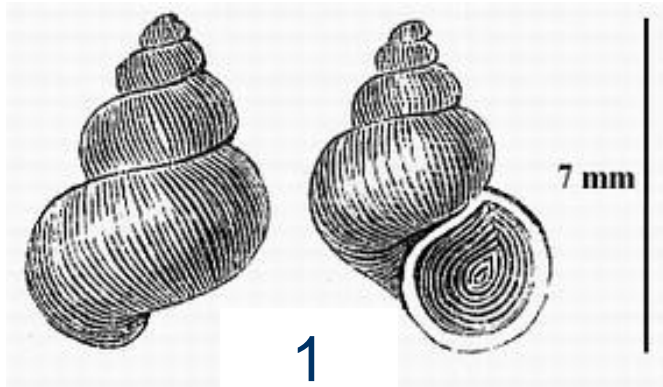


*Galba truncatula*  
(Dwarf pond snail)



*Aplexa hypnorum*  
(Moss bladder snail)





# More information

## Buglife

Species management sheet

Pond mud snail (*Omphiscola glabra*)

[www.buglife.org.uk/sites/default/files/Pond%20mud%20snail.pdf](http://www.buglife.org.uk/sites/default/files/Pond%20mud%20snail.pdf)

## Conchological Society

Helping to understand, identify, record, and conserve molluscs

[www.conchsoc.org/pages/about-us.php](http://www.conchsoc.org/pages/about-us.php)

## Freshwater Habitats Trust

PondNet recording forms and mud snail information sheet

[www.freshwaterhabitats.org.uk/projects/pondnet/](http://www.freshwaterhabitats.org.uk/projects/pondnet/)



Pond mud snail habitat in the New Forest from the Buglife species management sheet