



amphibian and reptile  
**conservation**



*PondNet*

## Identifying amphibians

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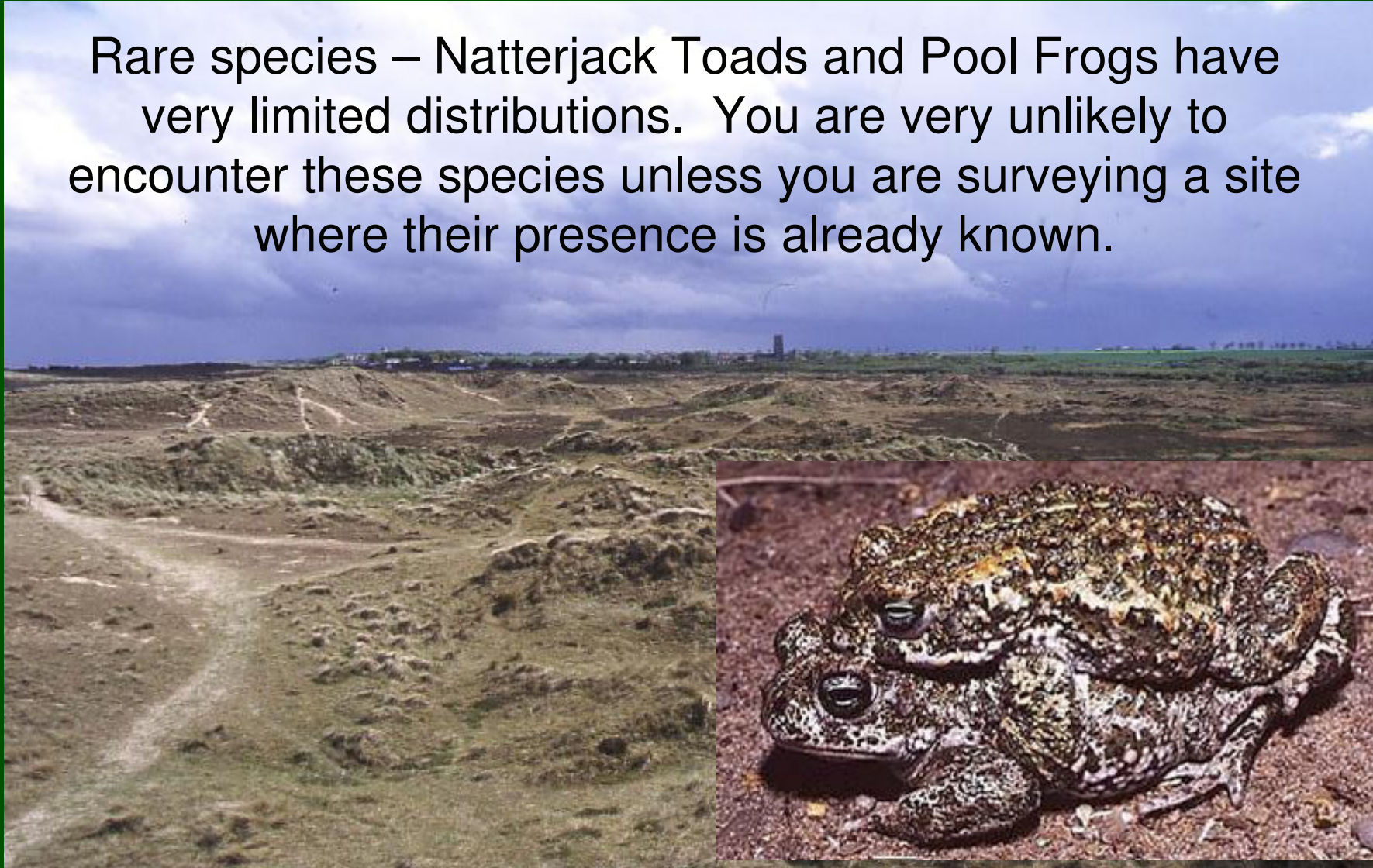
# Which species are we looking for?

- Great Crested Newt
- Palmate Newt
- Smooth Newt
  
- Common Frog
- Common Toad



# Rare species

Rare species – Natterjack Toads and Pool Frogs have very limited distributions. You are very unlikely to encounter these species unless you are surveying a site where their presence is already known.



# Non native species



- Non-native plant species are widely spread. The Lowland Pond Survey found non-native plants in one in every six ponds.
- The situation for non-native animals is different. These are still relatively uncommon and isolated.
- But they do occur and it's worth keeping an eye out for anything unusual.



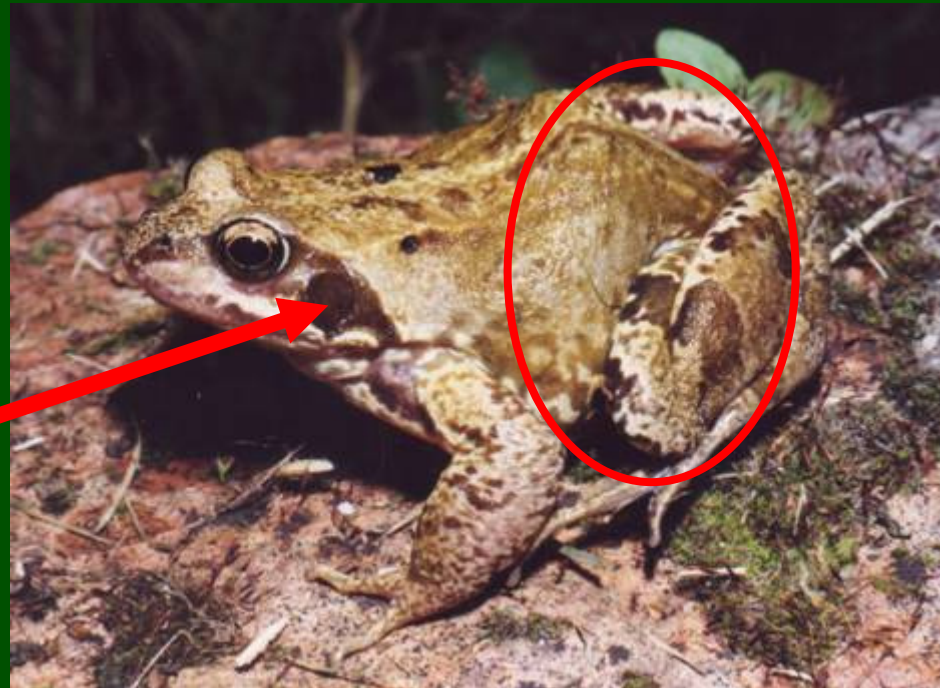
North American Bullfrog  
*Lithobates catesbeiana*

# Common Frog

## *Rana temporaria*

- Frogs have smooth skins and are relatively athletic, for example leaping about if netted.

Dark patch usually present behind eye.



# Variable coloration and markings



# Common Frog



- Occasional large aggregations in excess of 2000 individuals but usually much less
- Often lays spawn in ephemeral ponds which dry up during summer
- Wide range of pond pH recorded 4.5 – 8.5

# Green (water) frogs



- Most likely non native species.
- Also variable in coloration.
- No dark patch behind eye.
- Bask in and around pond.
- Call loudly from late spring to summer.
- Difficult to approach.



## Marsh Frog *Pelophylax ridibundus*

# Common Toad *Bufo bufo*

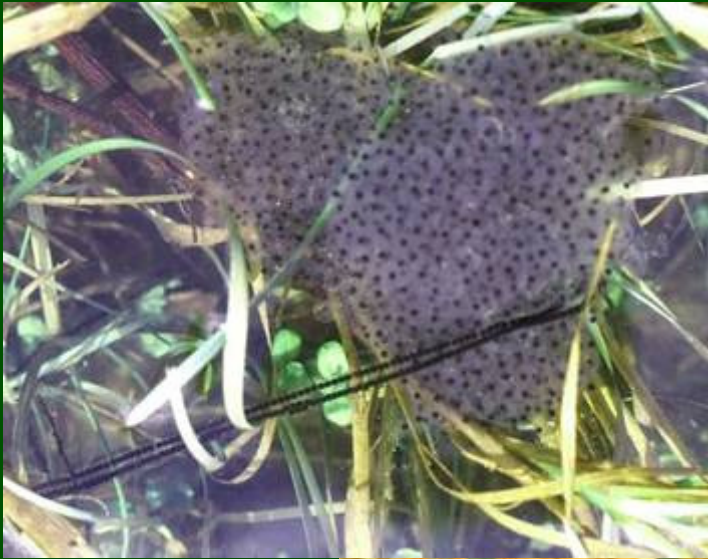
- Toads have rough, warty skins, so are readily identifiable from common frogs.





# Toad spawn

- Toad spawn is deposited in long gelatinous strings, wound around water plants. It is usually produced a little after frogspawn. It is harder to spot than the more familiar frogspawn – but it may be revealed during netting.



# Common Frog and Toad tadpoles

- On hatching both species are very dark. However, frog tadpoles become mottled with bronze spots.
- Toad tadpoles remain almost black.



# Toad tadpoles

- Sometimes form shoals



# African Clawed Frog

*Xenopus laevis*



# Midwife Toad

*Alytes obstetricans*



# Newts

Egg-laying – March-May



# Newt eggs



Unwrap to identify



Great crested newt



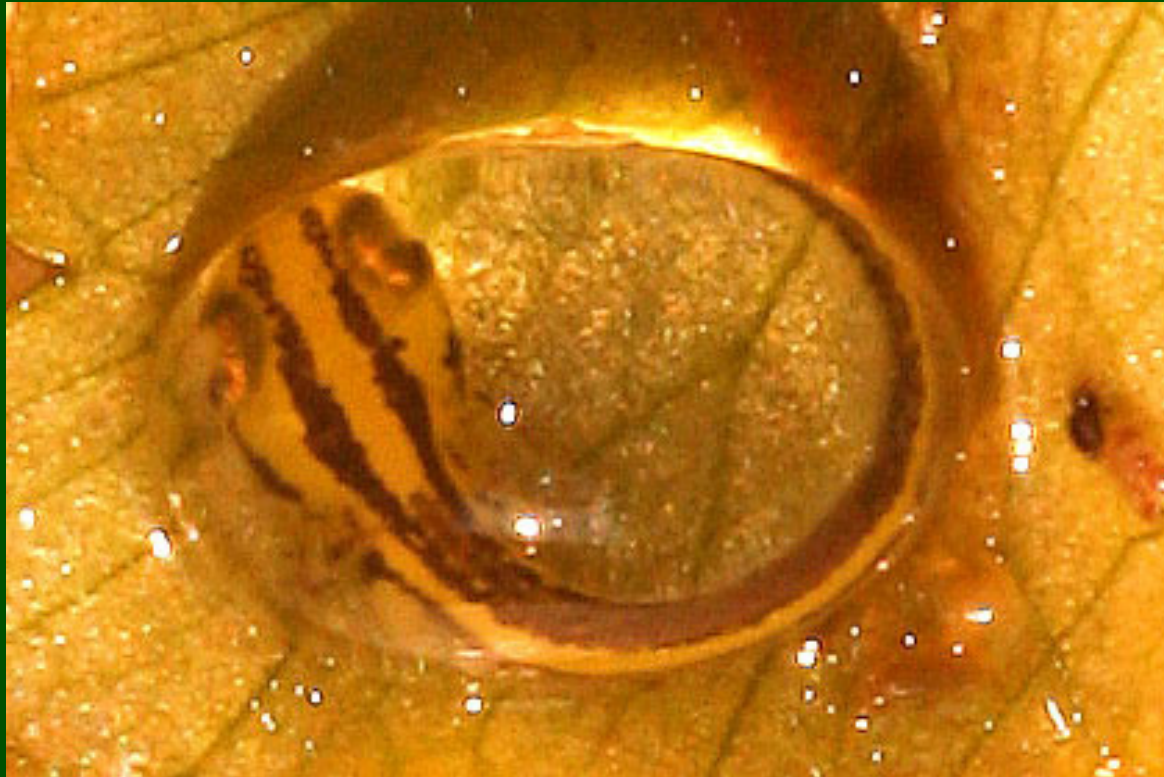
Smooth/palmate newt

# Great Crested Newt eggs on...



# Newt eggs

- Focus on newly-laid eggs



Harder to identify when larva developing

# Smooth Newt (male) *Lissotriton vulgaris*



# Great Crested Newt *Triturus cristatus*



Larger than smooth newt (to 16 cm)  
Male has break in crest at base of tail  
Silvery/white tail stripe on tail prominent.

# Palmate Newt (male) *Lissotriton helveticus*

- Male does not develop crest – but rather a low ridge running along the back.



# Palmate Newt (male)

- Male has tail filament



- And hind feet have black webbing

## But note Smooth Newt (male)

- Male smooth newts in peak condition can develop skin flaps around hind toes



- Male palmate

# Female Palmate vs. Smooth Newt



Can look very similar

# Smooth vs. Palmate (female)



Smooth



Smooth



Palmate

# Underside of foot of female Palmate Newt

Two pale  
tubercles/nodules





# Immature Great Crested Newts

Most immature newts remain in terrestrial habitat.



- However, this is not always the case in great crested newts.

# Newt larvae

- Newly-hatched great crested newt larva



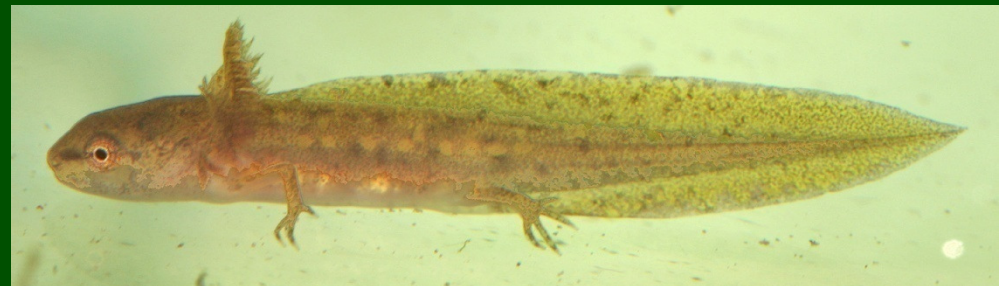
- During the early developmental stages, newt larvae can be difficult to differentiate.

# Newt larvae

- Great Crested Newt

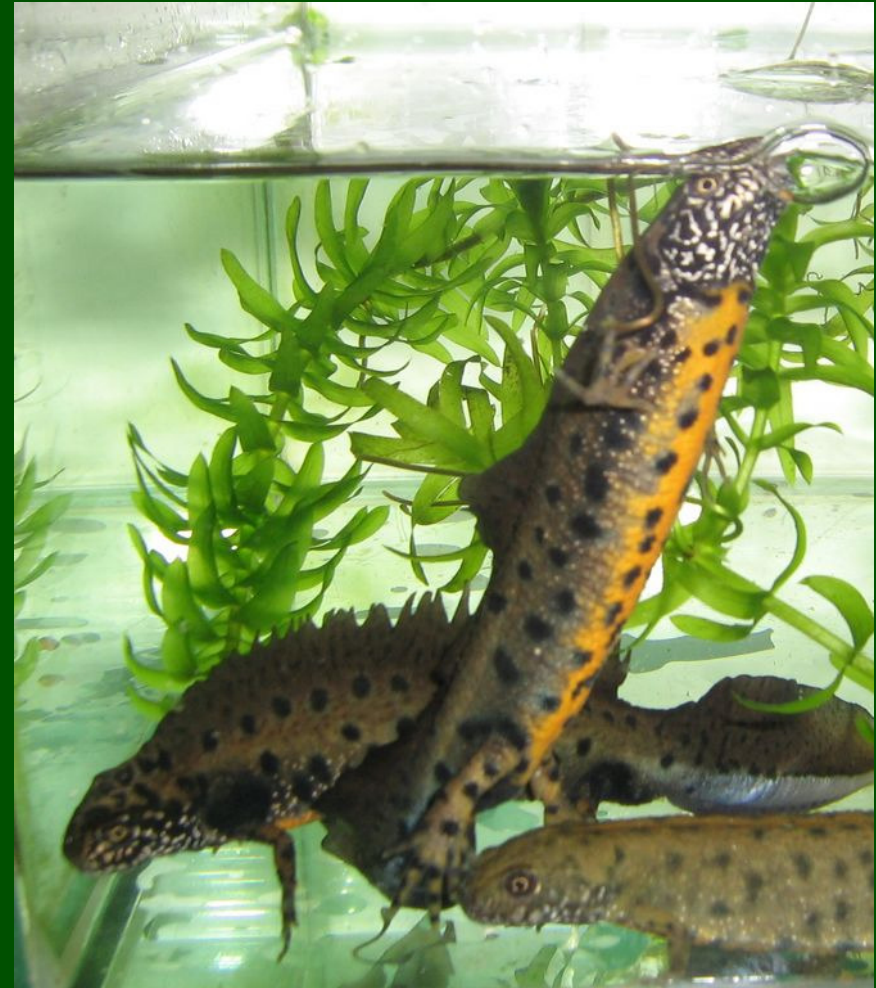


- Smooth / Palmate Newt



**Alpine Newts**  
*Mesotriton alpestris*

**Italian Crested Newts**  
*Triturus carnifex*



# Away from the pond









# Other species



Grass Snake

Terrapins



# Acknowledgements

- Freshwater Habitats Trust is grateful to ARC for the use of these slides as training material.
- We are also grateful to Surrey Amphibian and Reptile Group, New Forest Ecological Consultants, Fred Holmes and Phyl King for the use of their photographs in this presentation.
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