

Saving Devon's Native Crayfish



WILDWOOD
DEVON

James Maben - Wildwood Trust

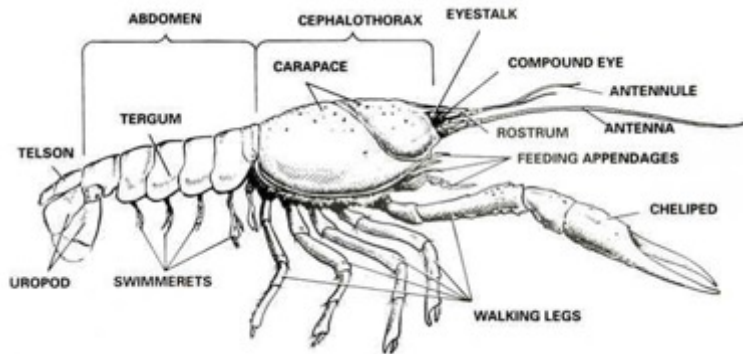


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Brief introduction to crayfish...

- Decapod crustaceans
- est. 650 species globally.
- Five species native to Europe
- The white-clawed crayfish (WCC) is the UK's only native freshwater crayfish.



Tasmanian Giant - 7kg



White-clawed crayfish (*Austropotamobius pallipes*)

- Found in clean, alkaline waters
- Average size: 6-15cm
- Can live up to 15 years
- Female produces 20-80 eggs
- Omnivorous
- Shed or 'moult' their exoskeleton
- Females carrying eggs are called 'berried'



Species decline of over 70% in the South West in the last 50 years:

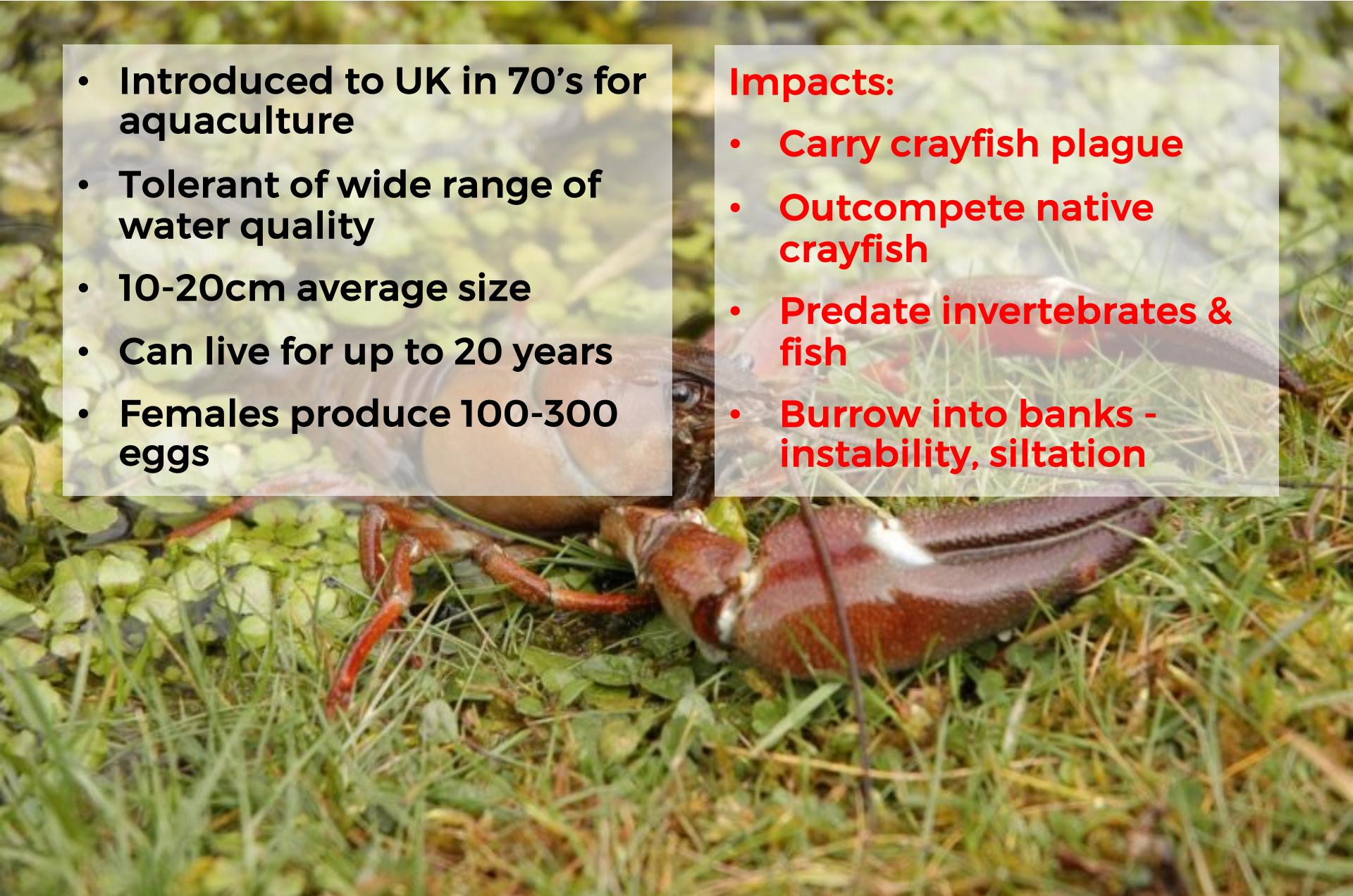
- Declining water quality
- Invasive American signal crayfish

Signal Crayfish (*Pacifastacus lenisculus*)

- Introduced to UK in 70's for aquaculture
- Tolerant of wide range of water quality
- 10-20cm average size
- Can live for up to 20 years
- Females produce 100-300 eggs

Impacts:

- Carry crayfish plague
- Outcompete native crayfish
- Predate invertebrates & fish
- Burrow into banks - instability, siltation



Why is white-clawed crayfish conservation important?

Keystone Species: play a crucial role in maintaining biodiversity by occupying a specific niche in freshwater ecosystems.

Indicator Species: their presence or absence can indicate the overall health of a freshwater habitat.

Recognized as globally Endangered (IUCN)

Legal Protection: protected species in the UK under the Wildlife and Countryside Act 1981. due to their declining populations.



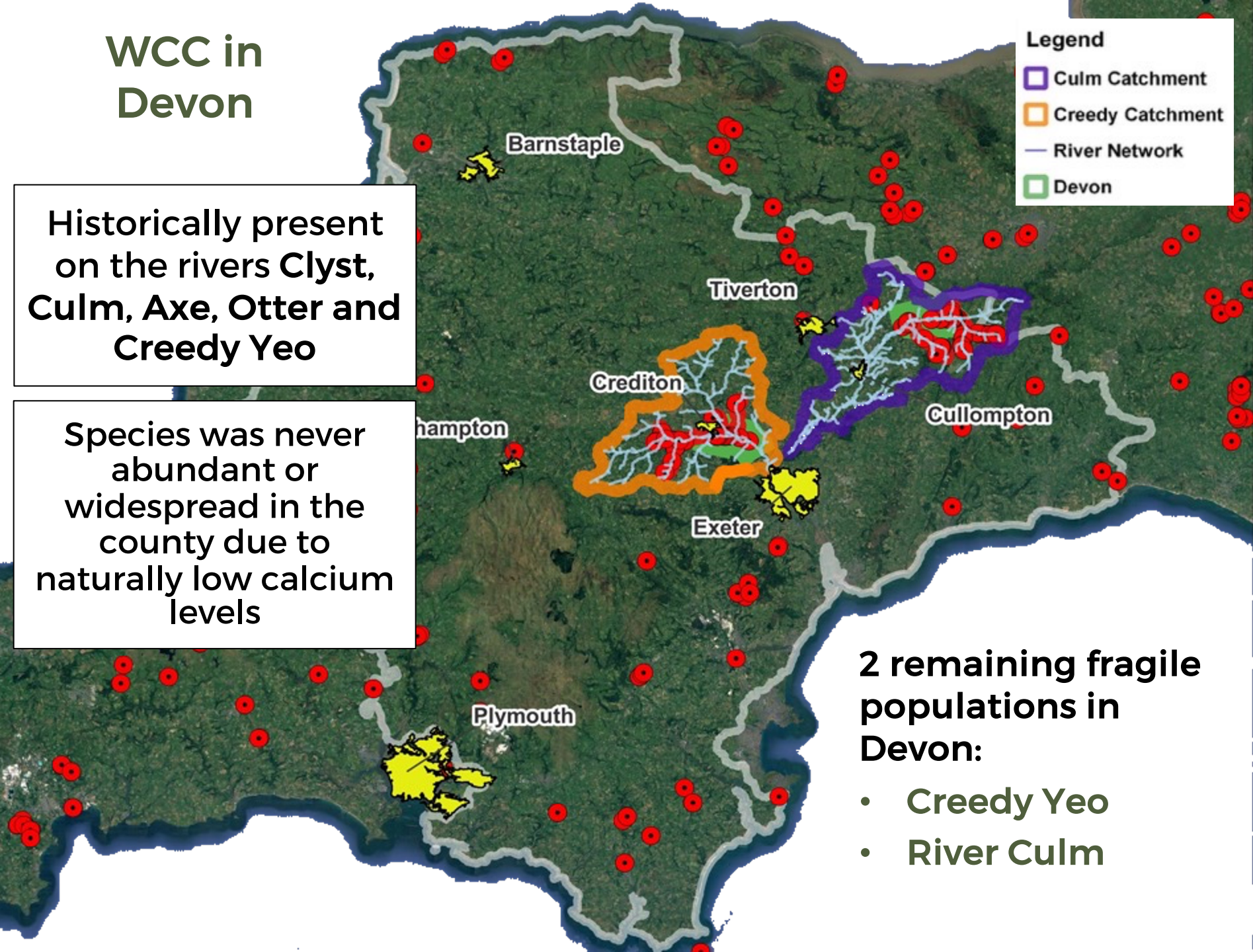
WCC in Devon

Historically present on the rivers Clyst, Culm, Axe, Otter and Creedy Yeo

Species was never abundant or widespread in the county due to naturally low calcium levels

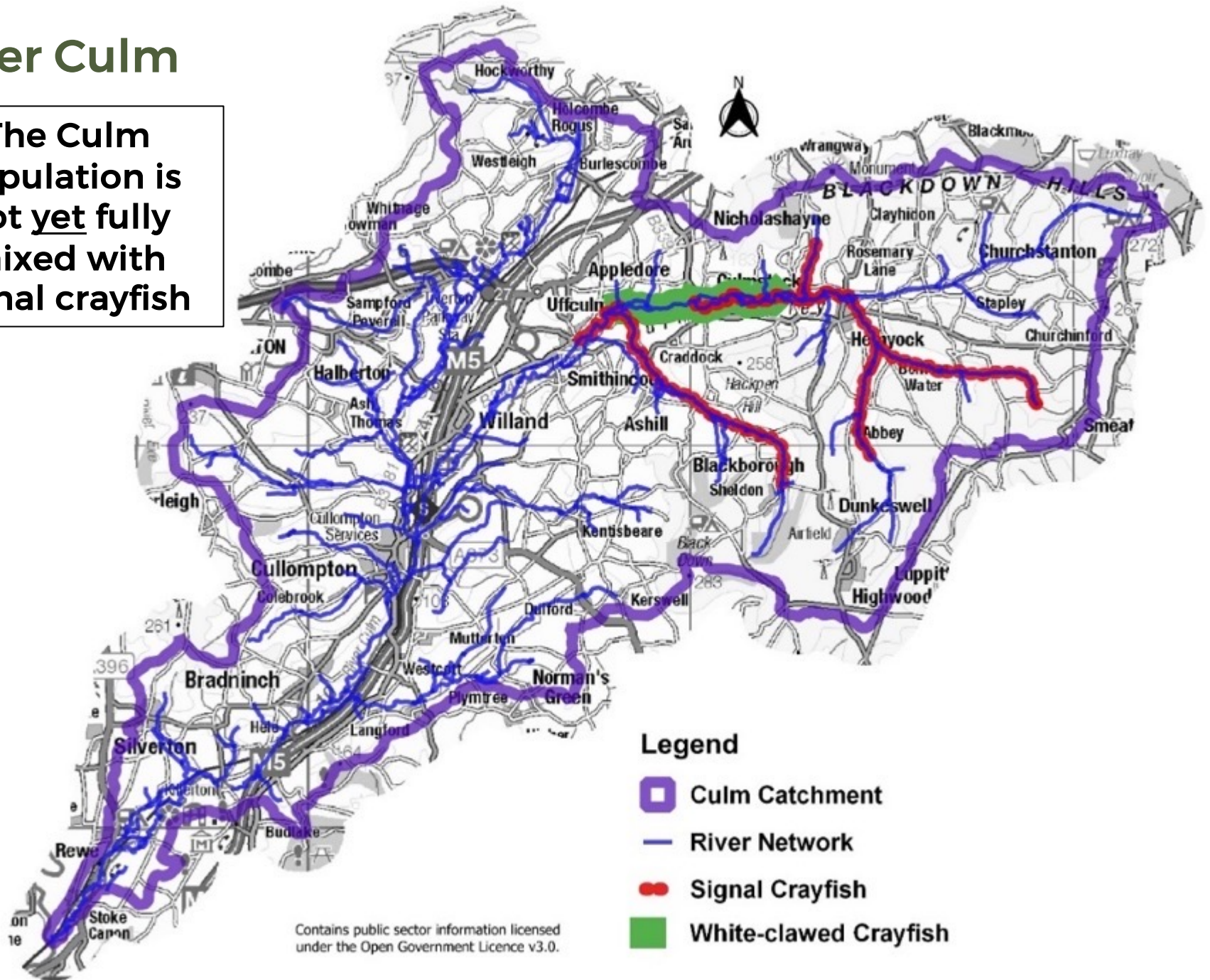
2 remaining fragile populations in Devon:

- Creedy Yeo
- River Culm



River Culm

The Culm population is not yet fully mixed with signal crayfish



Can Devon's native crayfish be saved?

- **Without intervention it's likely that WCC will become extinct in Devon within the next 10 years**
- **Unlikely existing natural river populations will survive**
- At present there is no way of eradicating the invasive American signal crayfish or effectively reducing their numbers in our rivers

The good news:

- Considerable research taking place on invasive crayfish control
- Some plague resistant populations of WCC in Europe
- Effort focused on ensuring WCC do not become extinct...



Saving Devon's Native Crayfish Project

Led by the Wildwood Trust:

- **£160k Natural England Species Recovery Programme grant**
- **Additional funding:**
 - **South West Water**
 - **Devon Environment Foundation**



1. **New crayfish hatchery**
2. **Crayfish rescues**
3. **Bespoke ark site pond**
4. **Public display**



Wildwood Devon Hatchery

Series of 8 tanks housing Creedy and Culm WCC:

- Capacity for up to 500 crayfish
- Crayfish brought in from rivers:
 - captive breeding
 - berried females
- Crayfish moved to ark sites at 18 months
- Creedy Yeo crayfish successfully mated in hatchery
- Only 3 male WCC found in Culm in 2023...



Credit: Natura/
England Paul
Glendell



River Rescues

- Targeting Culm and Creedy hot spots
- Using 'ART' refuge traps and baited traps
- Targeting berried females in spring
- All crayfish caught taken to hatchery



**Biosecurity is
VERY
important**



Crayfish Ark Sites

Safe havens for WCC to establish breeding populations

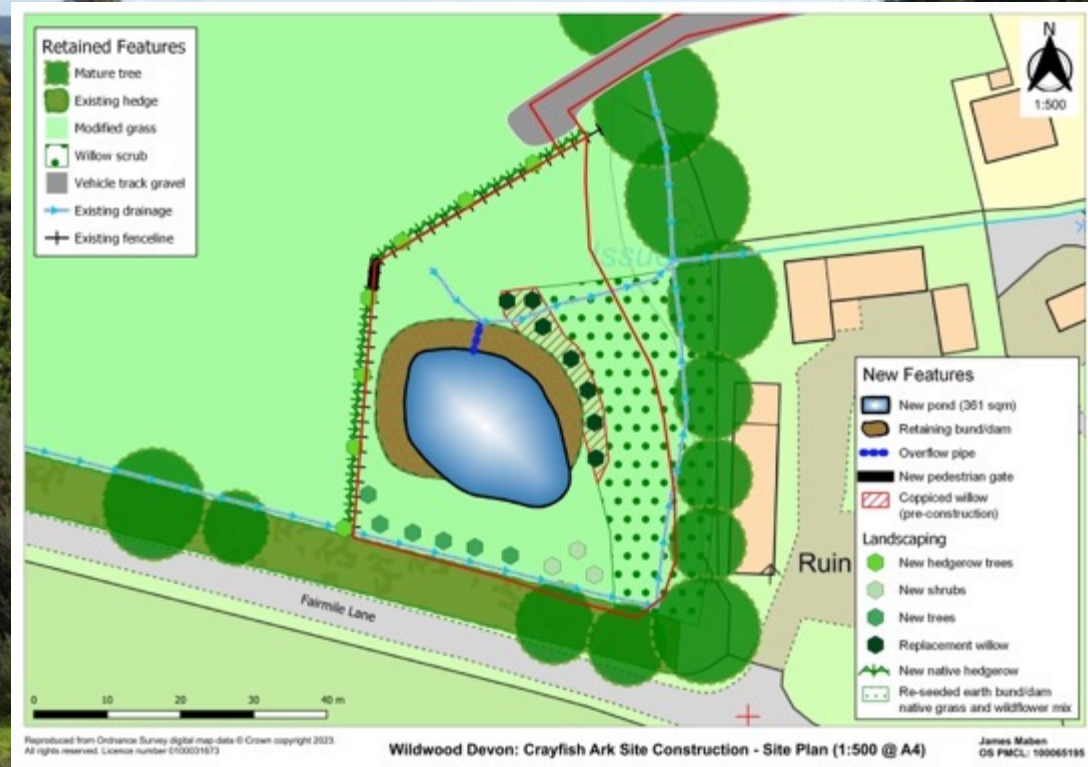
- Ponds, lakes or headwater streams
- Isolated from the threat of American signal crayfish
- Free of predatory fish and good water quality
- **Challenging to find suitable existing ponds and watercourses...**



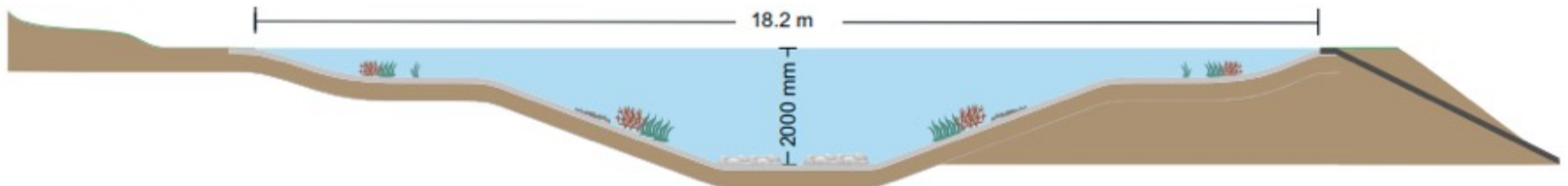
Wildwood Devon Ark Site

Construction summer 2024:

- 28x20m size
- 2.5m deep section
- Spring fed
- Solar aeration system
- Crayfish habitat
- Landscaping/planting



NE to SW Cross Section





Long term survival of Devon's native crayfish...

Rescue as many
WCC as possible



Maintain
Wildwood Devor
Hatchery



Construct more ark
site ponds



Investigate river
repopulation:
• Restoration
• Enhancement



Water quality
improvement
projects