# Fossorial Water Voles

in Glasgow's

East End











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### Water vole in traditional wetland habitat



### Water vole wetland habitat in Glasgow



### Glasgow's Local Biodiversity Action (LBAP)



### Water Vole



### Scientific Name: Arvicola ferrestris

### Current factors causing loss or decline

The water volv is under threat from many sources. These include:

- Insensitive riser engineering, basis protection and maintenance works.
- Littensiation of floodylans leading to direct habitat line through containment of the riser element.
- Heavy Involves propular that may make size underable for Water Video by pusching and transforing the faints.
- Reduction or outtry of antenside prostution.
- Psyclation (regression)
- Plactications in under levels effecting fund, cover and formacs.
- Prodution by American Minii (Musici), chara) appears to be accelerated by poor riporus, hubitus.
- Prisoring by extenticides either shreely or indirectly when used for Brown flat spectral.
- The stak programed by rate either acting as a conspetition or must up a problator to priving scales.

### Current action

The Water Vole is treducted to Schedule 5 of the Wildfile and Countrypide Act, it is an offence to demage, destroy or obstruct access to any place which Water Voles use for shelter or protection and to disturb them, while they are untry such a place.

National surveys have been carried out by the Vincent Welldle Trust. In the Glasgow same the SWT and GCC-LS are currently carrying out surveys, and SNH and BW are co-building a survey of the Forth & Chole Canal.

### LOCAL SPECIES ACTION PLAN

### Corrent atatus

The Water Vale was farmedy contrasts along the hards of rivers, streams, carefs, disches, thins, lokes and ponds throughout matrixed Bettein However theiring the 1980's there has been an occidented loss of sites and this appears to leave continued into the 90's.

Water Voles are the largest British vole species, frequently existation for a sat. They are productivestily herbooteus Insueling to consume up to 80% of their body weight daily) primarily feeding on took underside vageletion of gasses, sedges, rushes and node. In the winter results noots and lark of shrifts and hows from an important part of the dail together with ritionnes, bulbs and note of herbooness species.

Water Voles are found in meat finishester habitats in Scotland, ranging from slow finishing fundand disches to beadstreams at up to 620m in allitude. Becard worth has shown them to be more numerous in upland and postland habitats than formerly thought. Water Moles show no morphological adaptation for aquatic life and some communities may live a terrestrial Me, burnoading in the soil, on occurs over much of their range in Europe and Russia.

In waterside populations each vote affines a series of burrown dug into the strenbank where the soil permits; sites encountedy shaded by shades or trees are less ferocend. The humans include not characters, into conventing turnels with many entences, and beltholes consisting

of short tunnels ending in a single chember. Occasionally the entrad will weave a rest into the bases of sedges and reach. Sites that suffer total autoression during protected winter flooding are untenable but proculations are uposhed of mispation.

Breating occurs from April to October, and the females produce 2.5 litters intensilly, each of 5-6 young. Early-from young may knood that auturer, but most much sessue! maturity after their first winter. Exceptionally, Water Voles may survive those winders but mortality in thought to be very high serving dageming juversion.



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Registers of 60 demands

March 1971 demands

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Agents

### Objectives and targets

The UK Action Plan has the following objectives:

- To execut the stockine and maintain the current distribution and status of the Waser blue in British.
   To realize Mater Union to their former widespread distribution (see 1970s) by the year 2050.
- To amove resuggeneral of union coverage and contend habitate which self-materials residently propolations.

Supported transgement at uniting also and noticeston of solution more of equation negatiation are supported as the best mechanisms for presiding the mater value's decline and allowing supports.

Objective 1: To arest the decline and encourage Water Vola population increase throughout the City Target 1: increase the populations by 20% where detailed population counts exist.

Objective 2: To engrow the recognisent of underpureus and associate welland hubitan. Target 2: Enhance or relative the fringe negatalize of existing or new under courses.

## New Discovery 2008-Water vole non aquatic habitat in Glasgow



## Masters of Research







Scottish Natural Heritage Dualchas Nádair na h-Alba Atorivatus to alof Scotland



# The Fossorial Water Vole







# Field Signs









# Mark-recapture









# Grassland Habitat





### Water Vole Project Summary

'This population is exceptional and of national significance' Policy and Advice Officer (Mammals), SNH





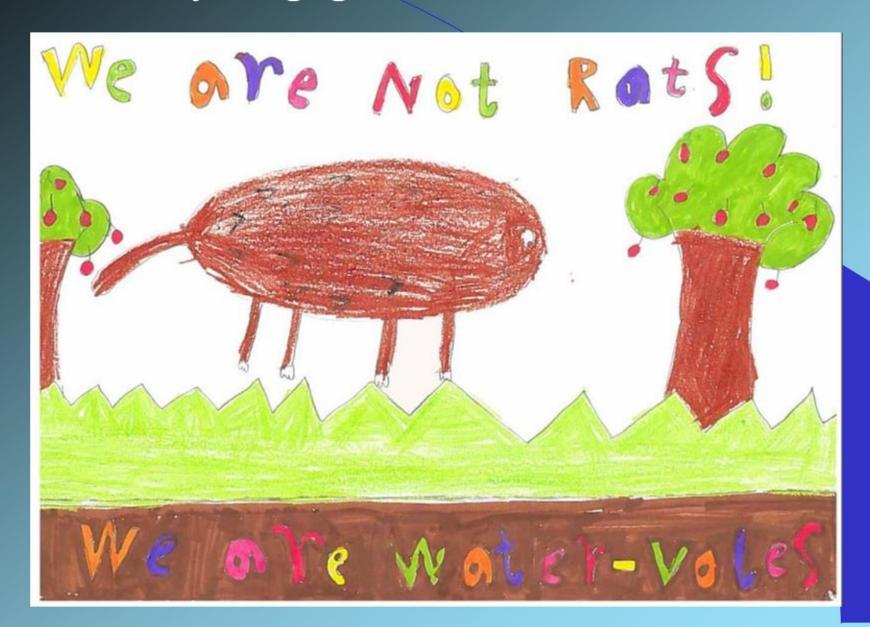






'Fragmented water vole populations are particularly vulnerable to extinction' Rushton et. al., 2000

### Community Engagement- with local schools

















### Water vole population highest in Easterhouse scheme



### JENNY KANE

red in one of Bustland's brughest brusing cabon

The creatures - epigmised by Ratty in Kenneth Grahame's pastoral disease Wind in the Williams - are "thriving" in Easterhouse in the east end of Glasgov.

A receasible from Glasgov University has been called in by the city council to get to the bottom of the mystery:

After trapping and tagging several of the Glassregian voles - using empty Pringles tubes - the researcher calculated there are up to 190 per hectare in the area, almost four times the average of their flusteric cousins.

How they got there remains a mystery. The Clyde is about two miles away at its closest point and the North Calder Harer about the same

Exemplaze is one one of Scotland's most deprived areas and is associated with high unemployment, drug dependency, and poor housing.

The water voles, a protected species, were discovered in 2009 when Eastwhouse residents corrolained about a rat infestation in the area.

Per cornol officers were shooted to discover the hast' were actually the dark. brown water voles, similar in appearance to guinea-pigs

Seven years on, Glasgow University researcher Robyn Sreviant is able to confirm the existence of a distinct, thriving population of urban voice.

The creatures live in the area's unrended grassland, other within a few metres. of roads and buildings. Some even exist by the side of the NS basif.

She said: "Orless followed them fid be industrimused. Water roles are considered a species for pristine wedged habitats

"What's remarkable for me is seeing wildlife and human beings can co-exist. They are actually thinking in an urban environment."

"It's the highest density ever recorded in Sittain to the best of my knowledge.

"You are actively trigging over them."

Robyn admired. "Oz to exactly how they got there I have no idea.

"There is a lot of liner and dumping going on. Water voles have dug under a dumped mamess using it as opver."

The researcher used trace baited with applies and canosi, tapping the voles with migraphics and documenting their numbers.

She added "In terms of their burrows and the setup of their burrowing system it is exactly the standard water vole behavior.

To heavy rain they black their humans."

Richard Heddle, membership secretary for the Glasgov Natural History Society, said the water value have been "adopted by the local residents"

### More Stories









- Aureur Mit Penners Callegifigher



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### D NEWSFYF













### IN THE FIELD

### WATER VOLES

Researcher Robyn Shwarn Discovery Glasgow has a thetetre



They are fossional - in other words. they live a more mole-like existence in grassland, away from water. They may have the M8 on one side and a shopping centre on the other. They're surprisingly robust creatures. And they're not just

## Media Interest

No.2 WILD CITY

# Glasgow

Wildlife garden festivals get the whole community involved.



network of green spaces make up over a fifth of Glasgow city's area, be probably the Clyde and Kelvin rivers, running through its heart, that lifeblood for the city's wildlife. They bring dippers and kingfishers, wh improvements to water quality in recent decades have led to Atlantic salmon recolonising the rivers.

Even more surprisingly, one of Scotland's largest populations of water volon the verge of a motorway in Easterhouse, where they don't even have acce-



water. Some can even be found school grounds of one of our p schools, part of the RSPB's Giv Nature a Home in Glasgow pro Glasgow hosts a popular wildl garden festival, and the RSPB

# Acknowledgements

Dr Dominic McCafferty, Dr Stewart White, Dr Simon Babayan, Glasgow Natural History Society, John Shelton (SNH), David Marshall (GCC), Chris Bailing (JDC Ecology), Stef Scott, Stephen Porch, Strathclyde Scottish Badgers Group, Glasgow Countryside Rangers, Cranhill Community Centre, Doreen Bell (Scottish Water), Geraldine O'Donnell (Avenue End Primary School), Ben Averis, Keith Watson, Roisin Campbell-Palmer, Derek Gow, Emma Bryce, Dr James Grecian, Craig Brownlie, Iain Malzer, John Laurie

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