



UNIVERSITY OF
ABERDEEN

The Rowett Institute

Nature-Based Food Solutions:

The potential role of Scotland's wild edible species
to contribute towards a sustainable food system



Thinking Beyond Mainstream Agriculture

Scotland's future landscape will look very different having to accommodate increased urban spread as well as larger areas of afforestation and peatland restoration. There is also an immediate necessity to produce our food in the most efficient and environmentally friendly way possible, as well as being mindful that we restore and enhance important habitats for our precious and unique biota. Mainstream agriculture will have to quickly adapt to contribute towards meeting Scotland's climate, biodiversity and health targets, but we must also identify opportunities for nature-based food solutions as they could be pivotal in mitigating and adapting to climate change whilst restoring nature.



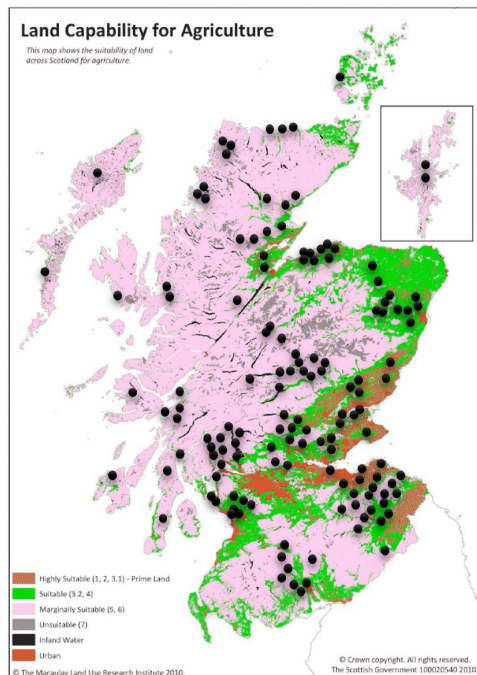
Potential Benefits of Wild Edible Species

- naturally resilient to pests
- rich in phytochemicals
- resilient to climate fluctuation
- ability to grow on marginal lands
- thrive in poorer soil
- lower water and energy requirements
- lower nutrient and pesticide demands
- species grow within wildlife habitats
- cultivation achievable across much of Scotland
- amendable to scale
- opportunities for small producers
- wide range of species
- opportunities for unique locations
- supports both rural and urban communities
- supplement nutritional requirements
- increase dietary diversity
- contribute to food security
- increase biodiversity

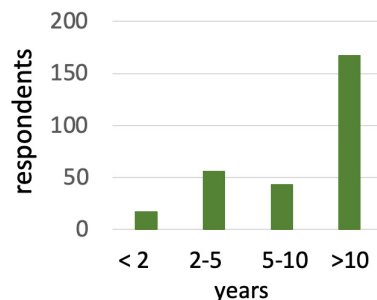
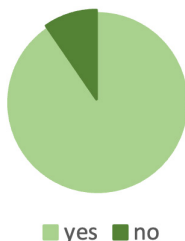


Current Use and Need of Wild Edible Species

Survey Conducted (2022)
to identify the current use
and need of Scotland's
wild edible plants, fungi
and algae. There were 313
individual respondents as
shown on the map of land
capability for agriculture by
four-digit postcode(•).



Response to the
question; have you
ever foraged for
wild plants, fungi
or algae and if so,
for how long?



Top Answers to Selected Survey Questions Below

What do you do with the material you forage?

I eat it as a food

How far do you travel from your home to forage?

I walk from home

If you forage for wild food who eats the food that you have picked?

I use it in my own household

Have you ever purchased wild plants, fungi or algae?

Yes (203/313 participants)

How do you process the plants, fungi or algae that you collect?

I cook it from fresh and use straight away

What motivates you to purchase?

Taste

How did you learn about foraging?

I learned from books

Are the historical/cultural aspects of foraging important to you?

Yes (167/210 participants)

What type of material have you foraged for?

Berries/fruit

Are there any issues that have stopped you from foraging?

Lack of knowledge

What motivates you to forage for wild plants, fungi or algae?

Free food and drink



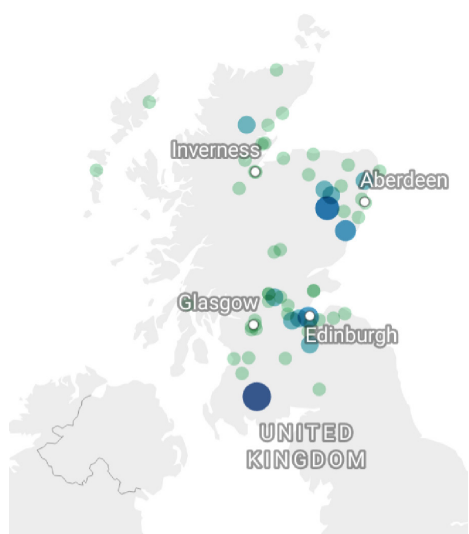
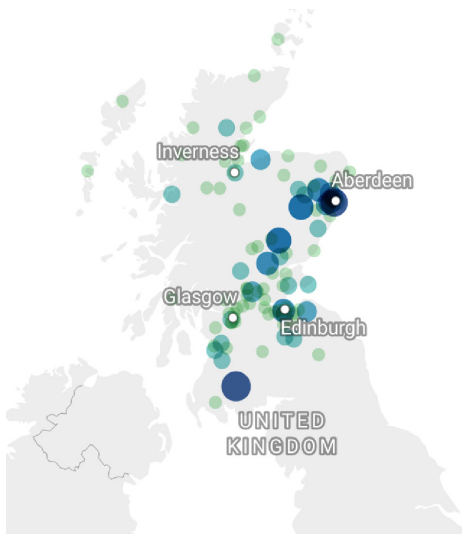
Top Foraged Products

Rubus fruticosus
blackberry, bramble, dris



Image by Siala from Pixabay

Rubus idaeus
raspberry, hindberry, sùbh-craoibh

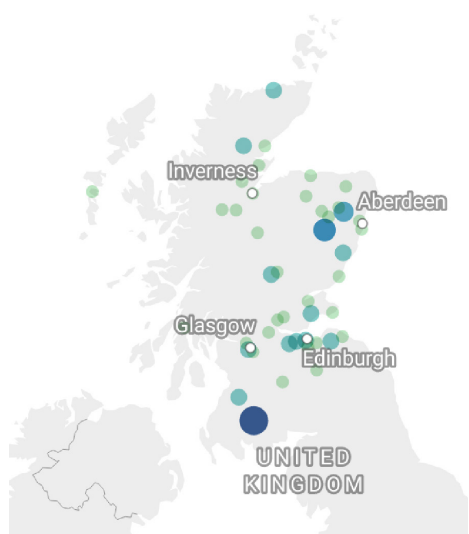
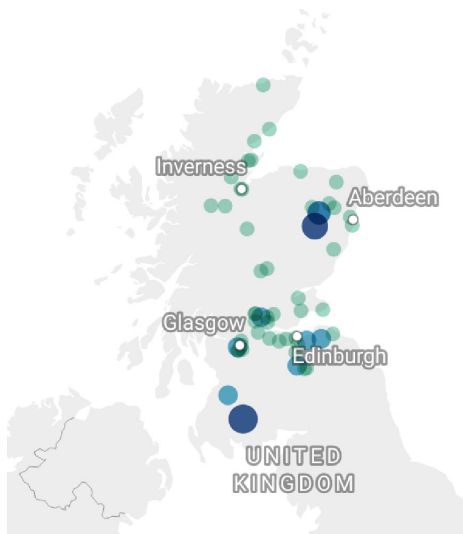




Allium ursinum
wild garlic, ramsons,
wild leek, ramps, creamh



Cantharellus cibarius
chanterelle, girolle



Top Foraged Products

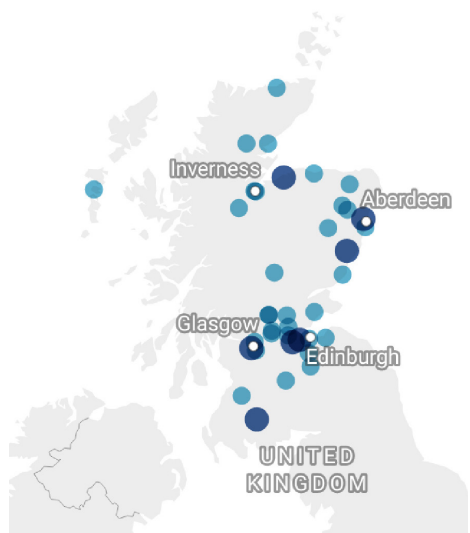
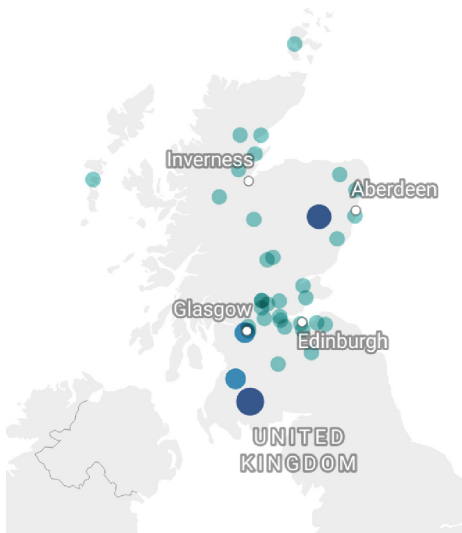
Prunus spinosa
sloe, slae, bulister,
preas nan àirneag



Sambucus nigra
elderberry



Photo by Noemi Ducza on Unsplash





Urtica dioica
nettle, heg-beg,
deanntag

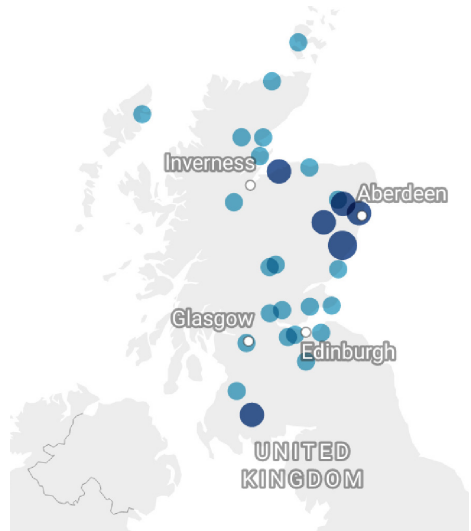
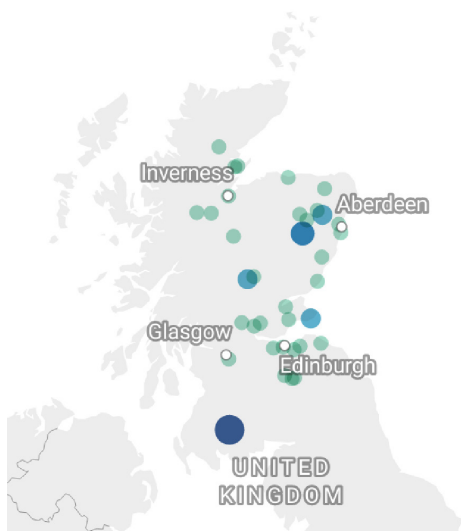


Photo by Paul Morley on Unsplash

Taraxacum officinale
dandelion, bitter aks,
bearnan bride



Photo by Viridi Green on Unsplash



Summary

More than 85% of respondents who forage do it to supply their home, friends and family. Main processing methods include cooked fresh, eaten raw and preserved. Knowledge of foraging comes mainly from books, followed by parents, on-line, friends and courses. Main material foraged are berries and fruit, followed by fungi, leaves and nuts. Foragers are mostly motivated by provision of free food, taste, being in nature, improved health and being outdoors. The biggest barrier by far is lack of knowledge and concerns regarding toxicity and contamination, with fungi being the most desired and most commonly purchased products.

There is a need to provide education with regard to wild edible species, as well as a route to provide consumers with safe products, especially fungi. There also appears to be an increase in the use of wild species in food and beverage products, as well as in restaurants sourcing local produce. This might suggest opportunities for farmers and landowners to consider the cultivation of wild edible species, which could support afforestation and other nature-based food solutions.



Project Partners

- Wendy Russell; Rowett Institute
- Marian Bruce; Highland Boundary
- Greg Kenicer; Royal Botanic Garden Edinburgh
- Gordon McDougall; The James Hutton Institute
- Steven Thomson; Scotland's Rural College
- Charles Bestwick; SEFARI Gateway
- Mark Williams; Galloway Wild Foods
- Rebecca Knowles; Stockfree Farming
- Rosemary Anfield; Scottish Government
- Isabel Foy; Opportunity North East
- Isabella Guerrini de Claire; Aurora Sustainability Group
- Becky Shaw; NatureScot



SEFARI

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