



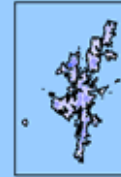
# Wild Origin Seed

Giles Laverack

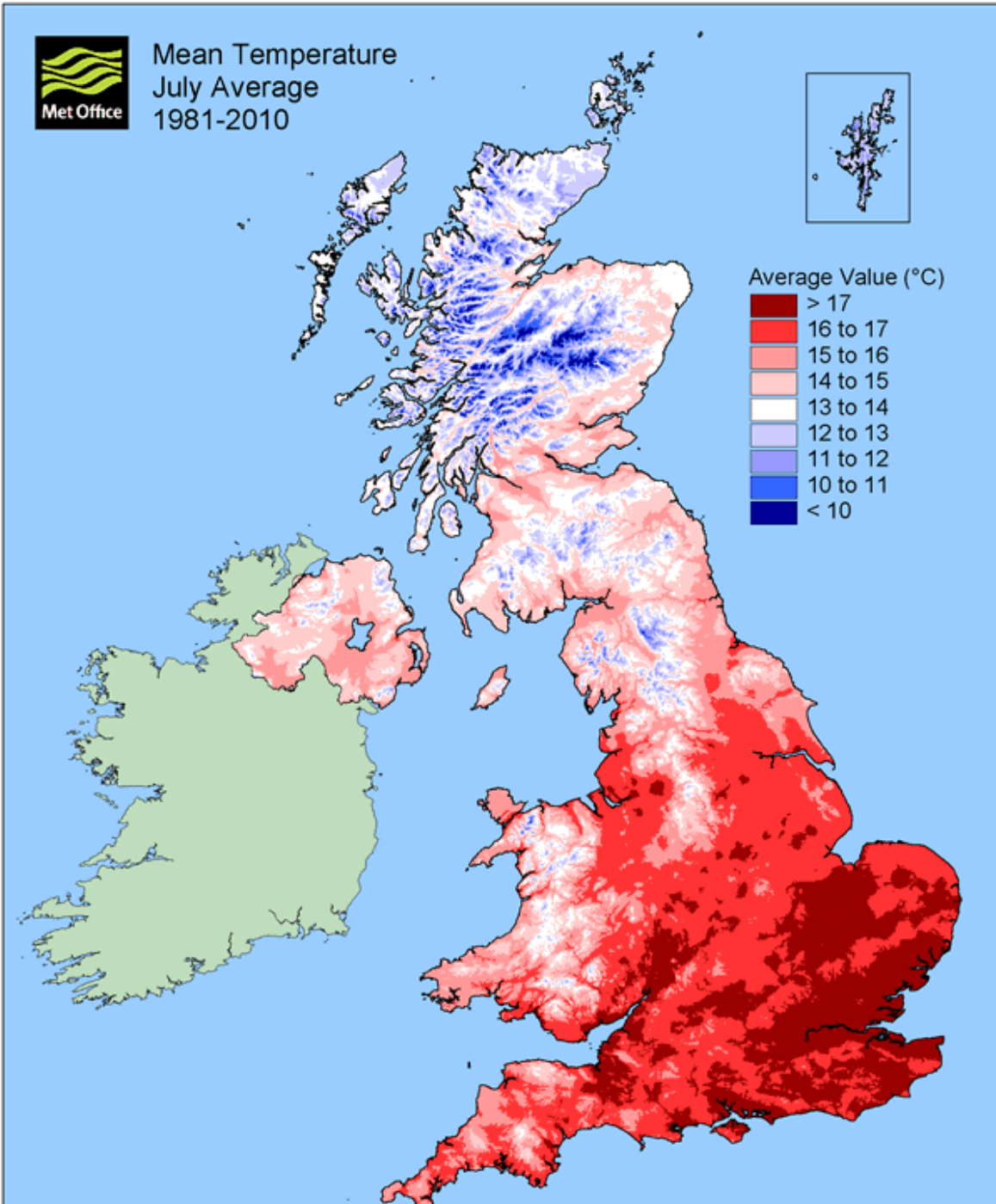
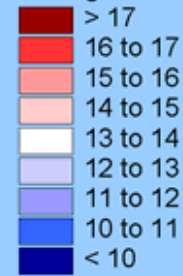
**Scotia Seeds**



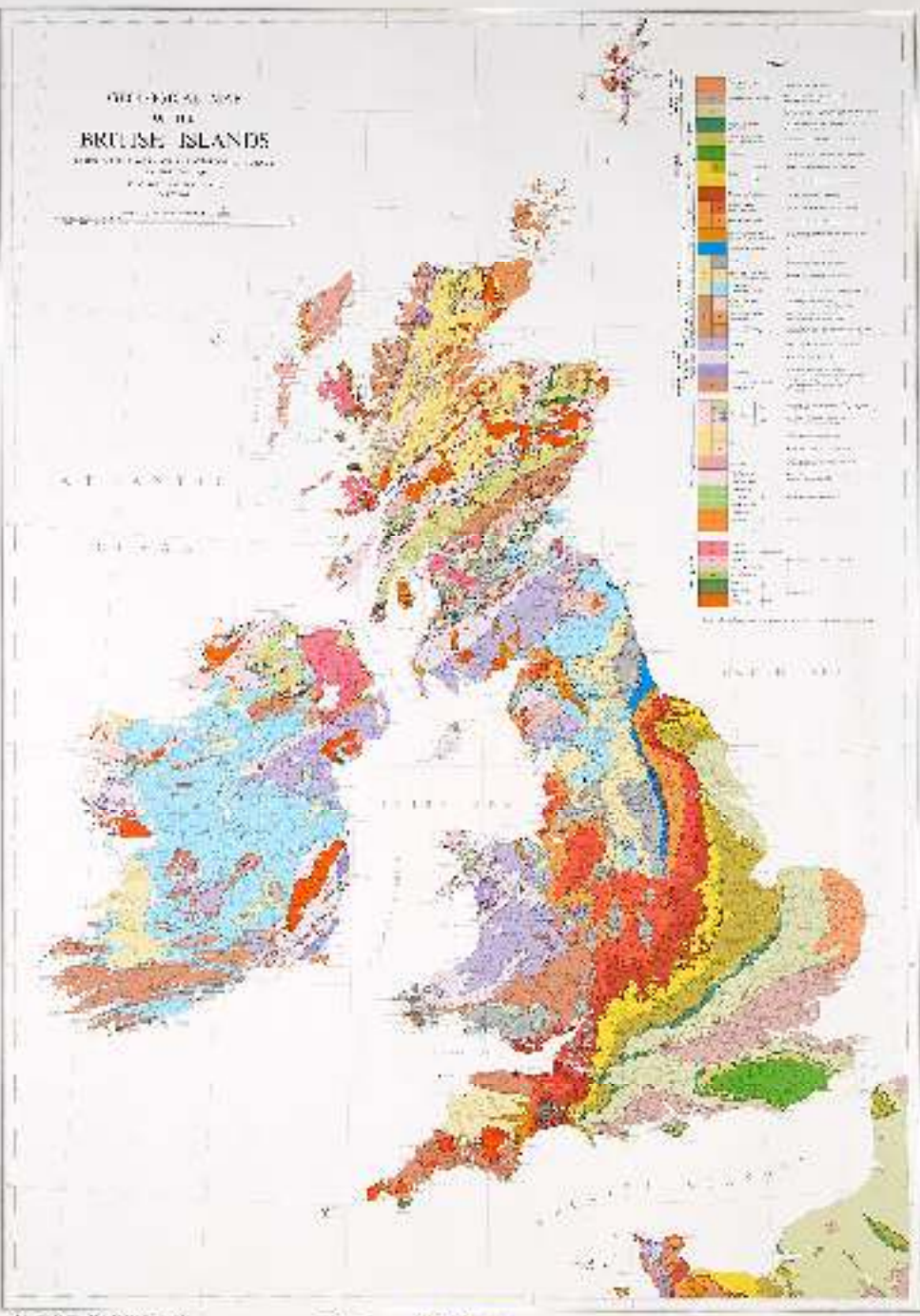
Mean Temperature  
July Average  
1981-2010



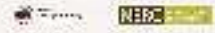
Average Value (°C)

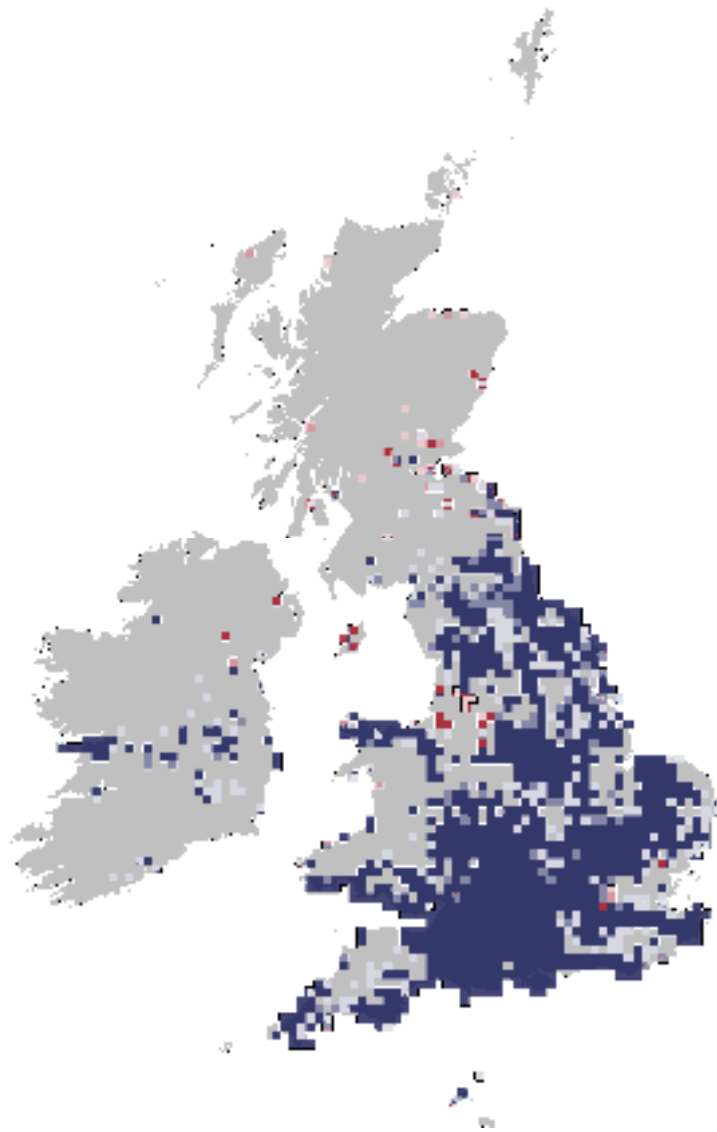


THE GREAT BRITAIN  
AND IRELAND  
**BRUISE ISLANDS**  
A SERIES OF 1:250,000 SCALE MAPS  
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Salad Burnet *Sanguisorba minor*

Native distribution

New Atlas of the British and Irish Flora

Blue = native

Red = alien



**Seed imports**



English

Bluebell *Hyacinthoides non-scripta*

Scottish

Photos: Forestart

## Genetic differentiation and regional adaptation among seed origins used for grassland restoration: lessons from a multispecies transplant experiment

Anna Bucharova<sup>1,\*</sup>, Stefan Michalski<sup>2</sup>, Julia-Maria Hermann<sup>3</sup>, Karola Heveling<sup>4</sup>,  
Walter Durka<sup>2,5</sup>, Norbert Hölzel<sup>4</sup>, Johannes Kollmann<sup>3</sup> and Oliver Bossdorf<sup>1</sup>

<sup>1</sup>Plant Evolutionary Ecology, Institute of Evolution & Ecology, University of Tübingen, Auf der Morgenstelle 5, 72076 Tübingen, Germany; <sup>2</sup>Department of Community Ecology (BZF), Helmholtz Centre for Environmental Research – UFZ, Theodor-Lieser-Str. 4, 06120 Halle, Germany; <sup>3</sup>Restoration Ecology, Department of Ecology & Ecosystem Management, Technical University Munich, Emil-Ramann-Str. 6, 85354 Freising, Germany; <sup>4</sup>Biodiversity and Ecosystem Research Group, Institute of Landscape Ecology, University of Münster, Heisenbergstr. 2, 48149 Münster, Germany; and <sup>5</sup>German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, Deutscher Platz 5e, 04103 Leipzig, Germany

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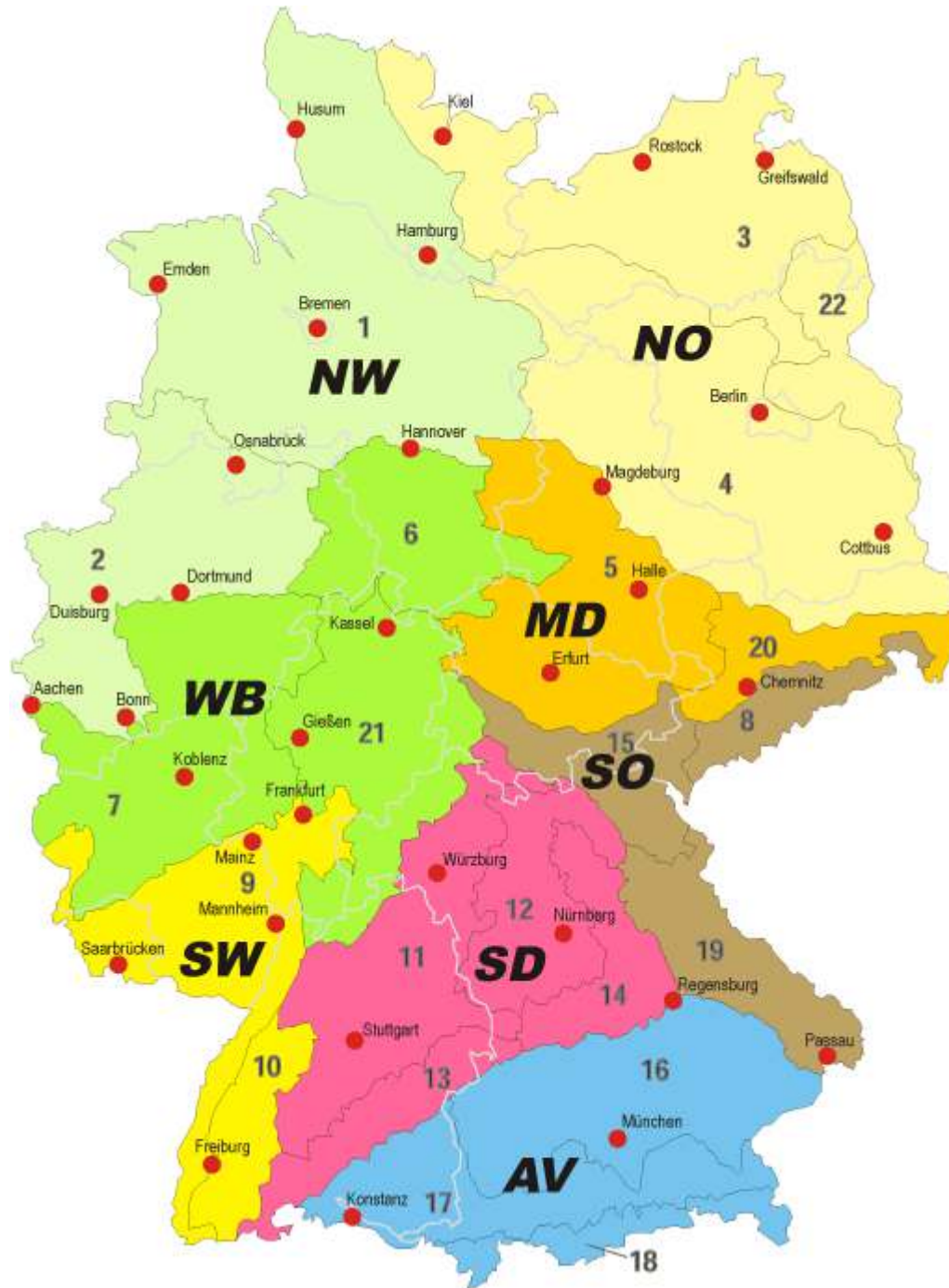
### Summary

1. One of the key questions in ecosystem restoration is the choice of seed material for restoring plant communities. More and more scientists and practitioners are currently advocating the use of regional seed sources, based on the argument that plants are often adapted to local or regional environmental conditions, and thus, regional seed sources should provide the best restoration success. However, there is still substantial debate about this approach, partly because of a lack of solid empirical data.

2. We conducted a multispecies transplant experiment in which we compared the performance of eight seed origins of seven plant species frequently used in grassland restoration in four common gardens across Germany.

3. We found that, on average, plants of regional origins produced 10% more inflorescences and 7% more biomass than those of foreign origins. There were substantial differences among species in the strength of these effects, but in the majority of the study species fitness

# German seed zones





Seed from local origins:

Seed from local origins:

- grew better

## Seed from local origins:

- grew better
- produced more flowers

## Seed from local origins:

- grew better
- produced more flowers
- flowered at the right time for local insects

## Seed from local origins:

- grew better
- produced more flowers
- flowered at the right time for local insects

**in addition:**

## Seed from local origins:

- grew better
- produced more flowers
- flowered at the right time for local insects

## in addition:

- seeds from other zones never performed better

## Seed from local origins:

- grew better
- produced more flowers
- flowered at the right time for local insects

## in addition:

- seeds from other zones never performed better
- increasing distance reduced performance

Seed from local origins:

- grew better
- produced more flowers
- flowered at the right time for local insects

in addition:

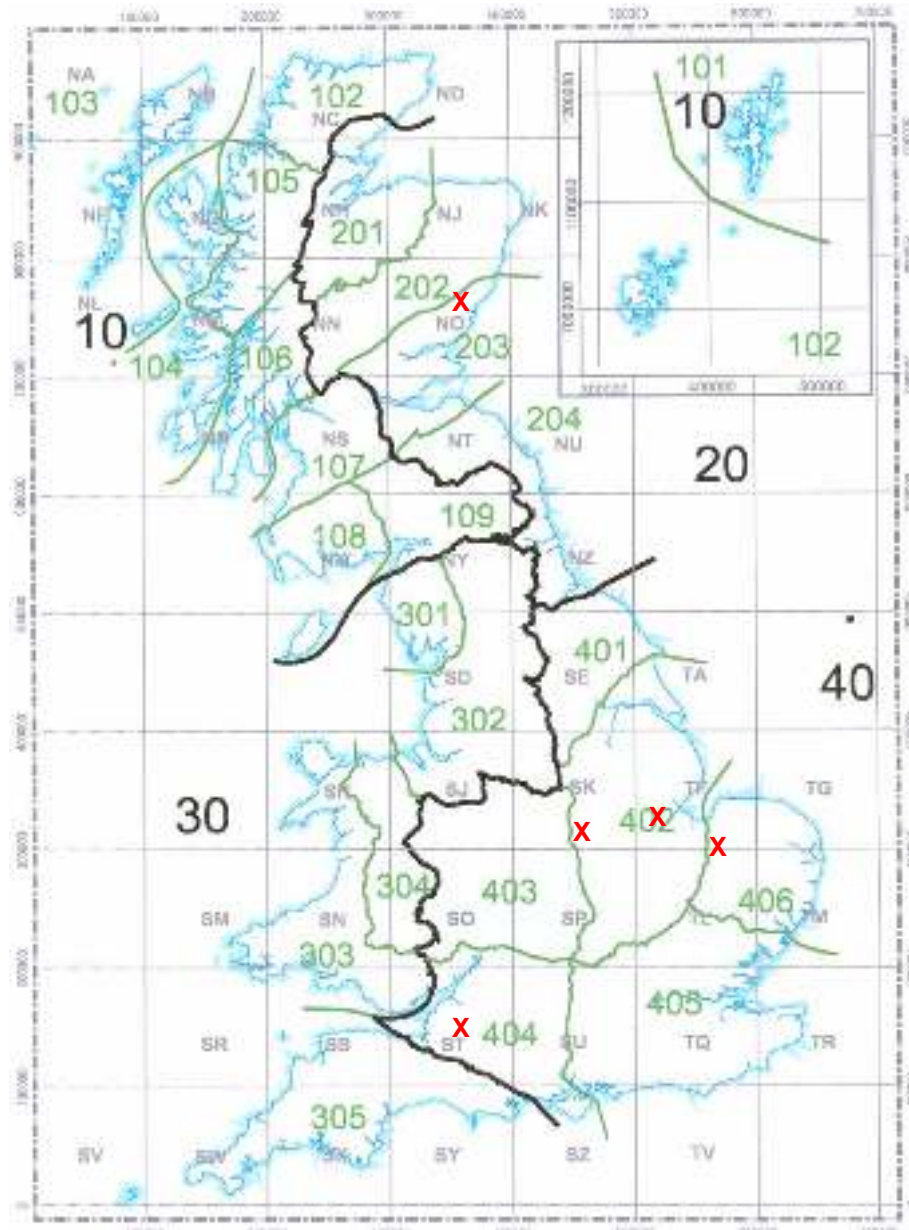
- seeds from other zones never performed better
- increasing distance reduced performance





**European countries with  
Seed Transfer Zones:**

- Austria
- Czech Republic
- France
- Germany
- Great Britain
- Norway
- Switzerland



# Seed Origin

# Seed Origin

- important for success of plants

# Seed Origin

- important for success of plants
- important for success of pollinators

# Seed Origin

- important for success of plants
- important for success of pollinators

**Know your origin!**