

Triffids in our woods?
Rhododendron ponticum and
other invasive plants in Wales'
Celtic Rainforests.

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WALES



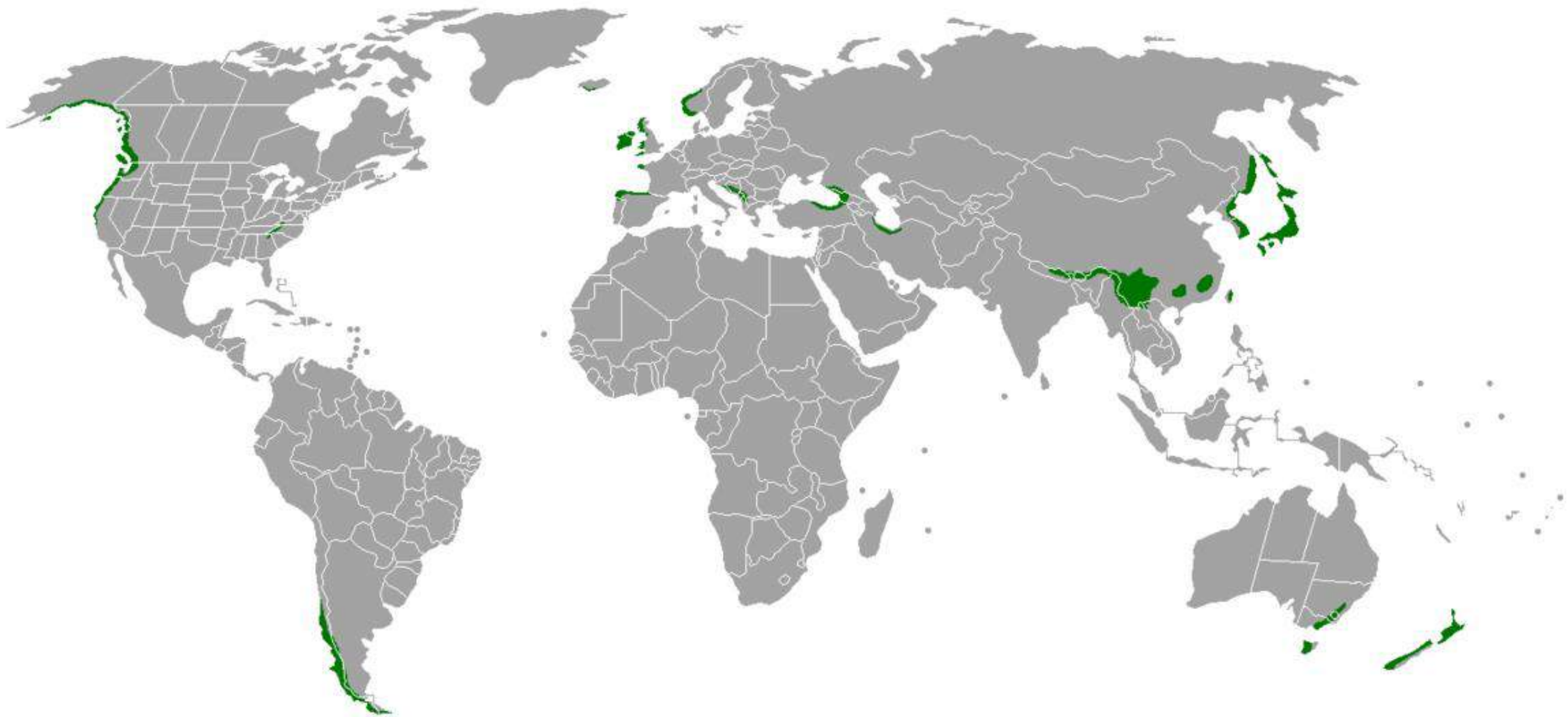
- 
- The features and value of Wales' temperate rainforests;

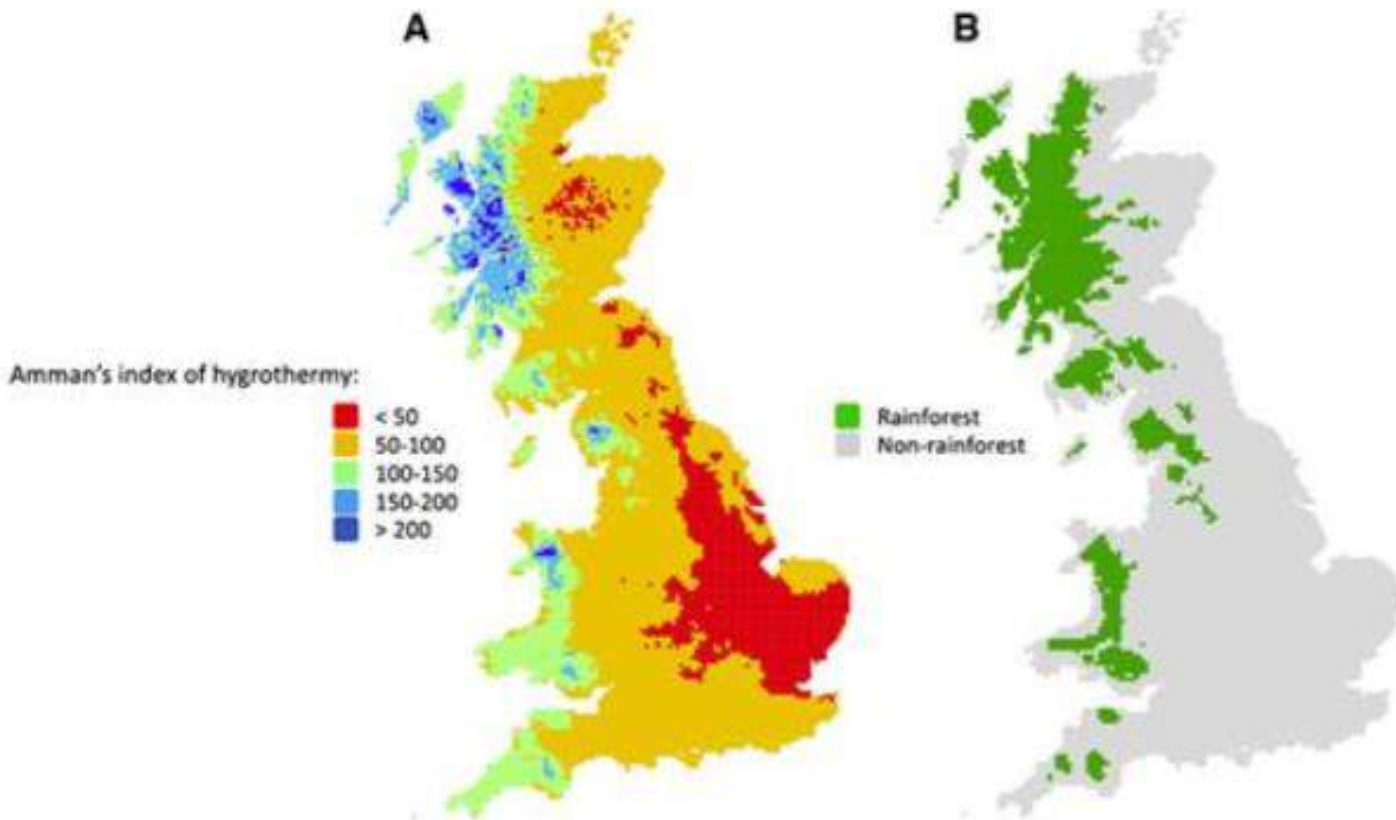
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- The features and value of Wales' temperate rainforests;
- History and impact of *Rhododendron ponticum* (Rp) and other invasive alien species in the British Isles;
- Managing Rp through LIFE Celtic Rainforest Project: recommended methodologies for surveying, planning, and treating.

The image shows a close-up of a forest floor. In the foreground, a log is covered in vibrant green moss. To the right, there are various green plants and ferns. The background is filled with the dense canopy of a forest, with sunlight filtering through the leaves. A large, dark green circular graphic is overlaid on the left side of the image, containing white text.

The features and value of Wales' temperate rainforests





Found in western parts of the British Isles

Areas with medium to high mean annual rainfall (over 2,000mm per annum)

Generally speaking, areas with good levels of air quality.

Areas traditionally associated with Celtic culture - hence the name.

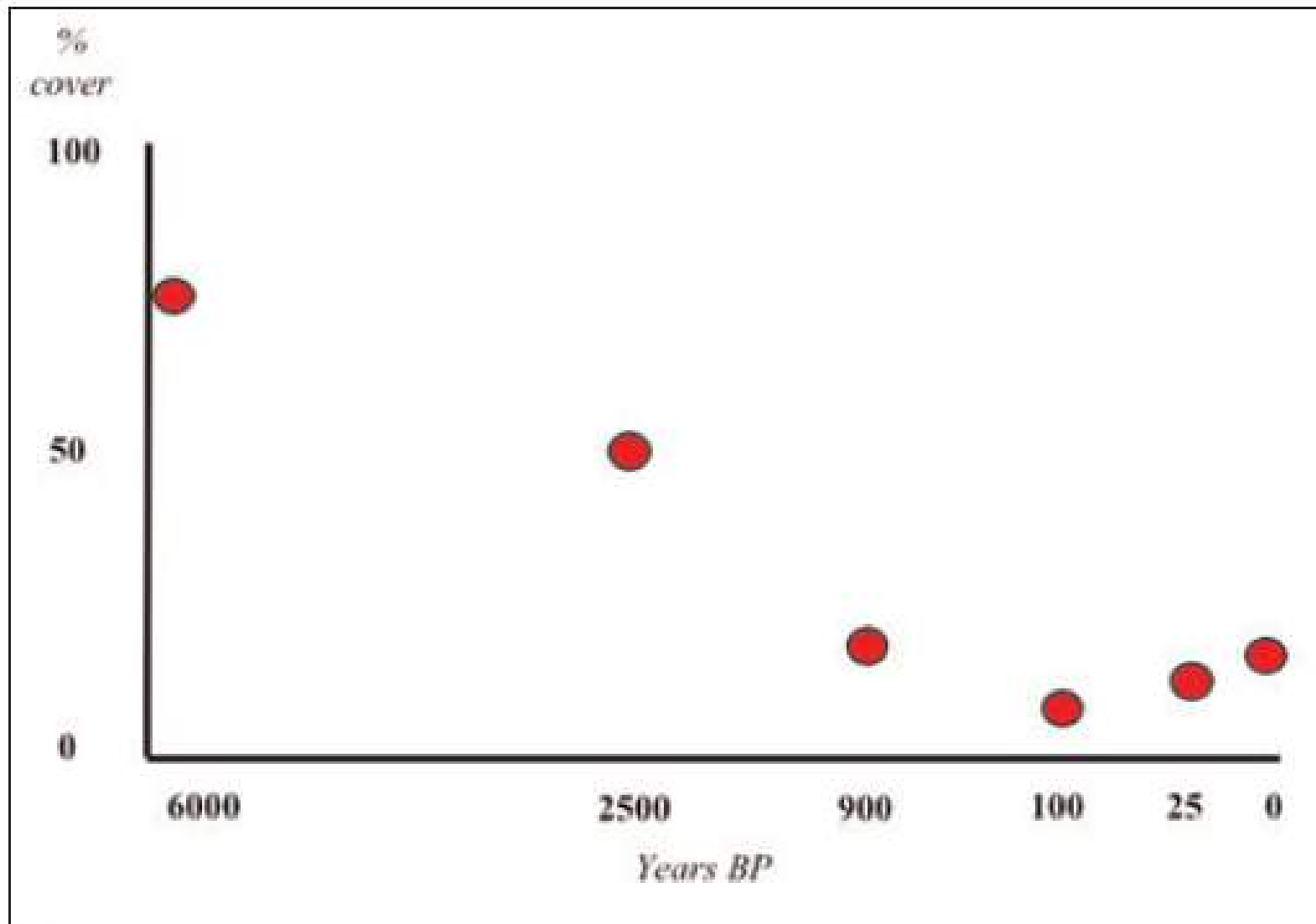
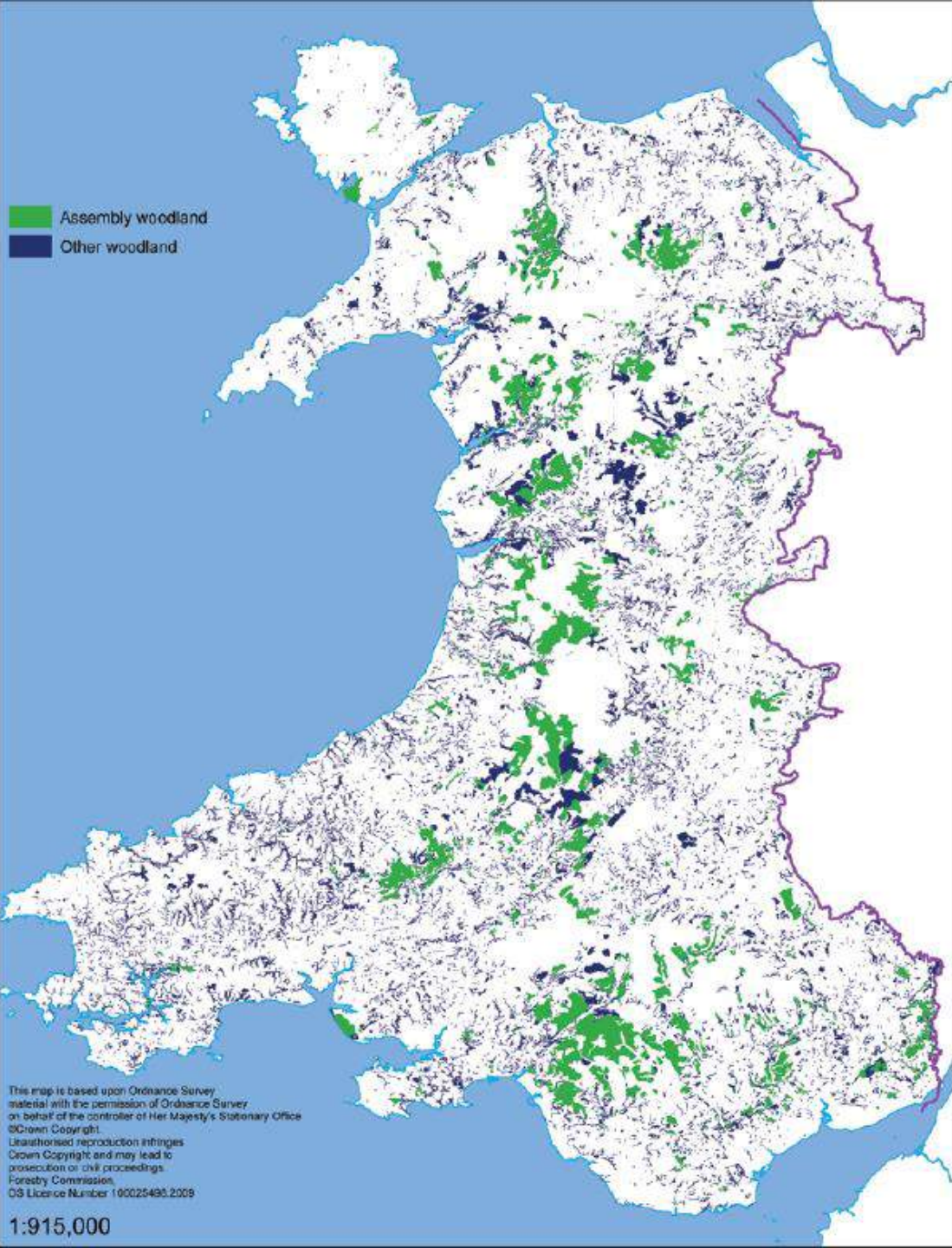


Figure 1. Changes in woodland cover over time in the British landscape – adapted from Rackham (1986) and Peterken (1993).

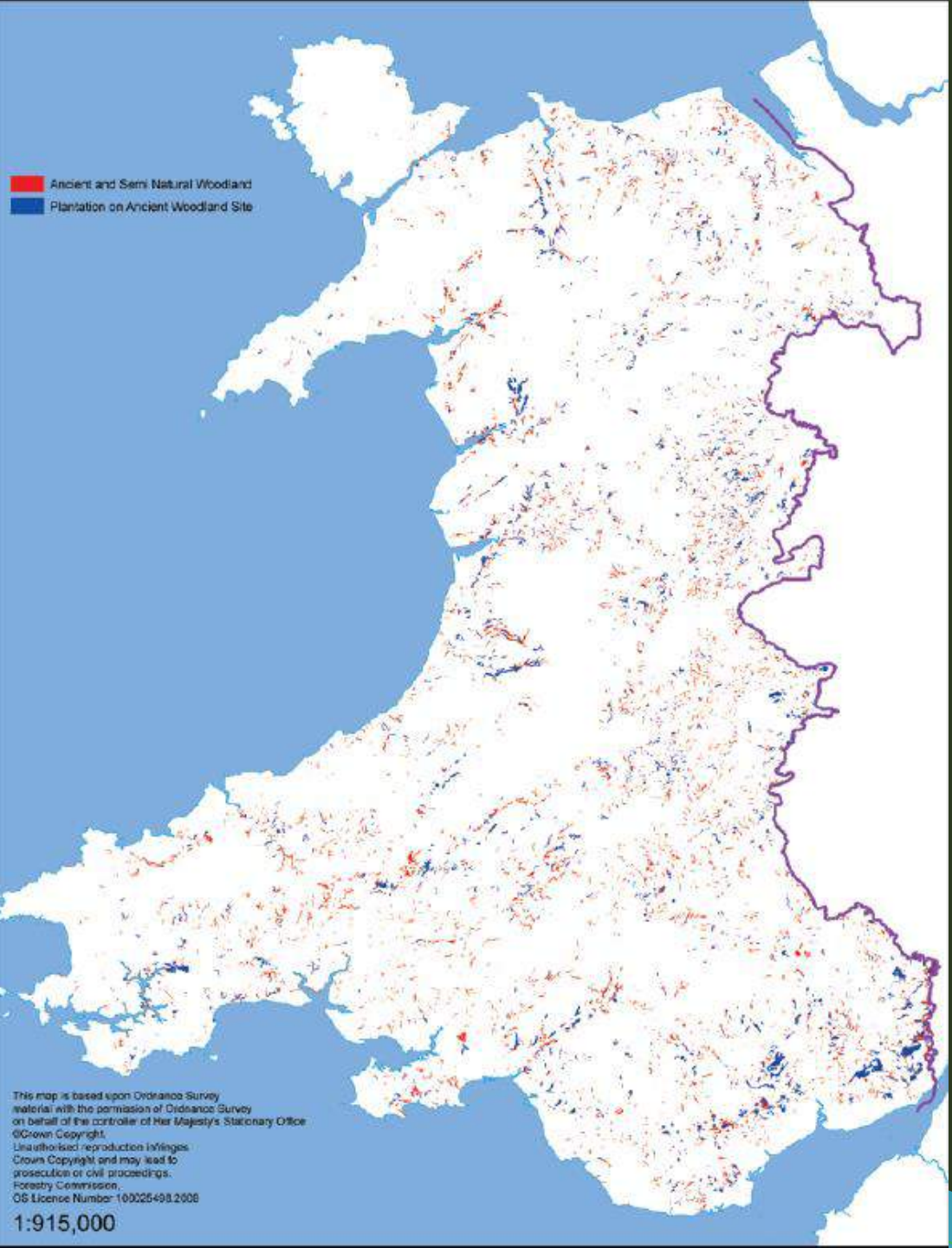


Assembly woodland
Other woodland

This map shows the distribution of woodland types across the United Kingdom. Assembly woodlands are shown in green, and other woodlands are shown in dark blue. The map is overlaid on a topographic background. A purple outline indicates the coastlines of the UK.

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Ancient and Semi-Natural Woodland
Plantation on Ancient Woodland Site

This map shows the distribution of Ancient and Semi-Natural Woodland (ASNW) and Plantations on Ancient Woodland Sites (PAWS) across the United Kingdom. ASNW is shown in red, and PAWS are shown in dark blue. The map is overlaid on a topographic background. A purple outline indicates the coastlines of the UK.

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Target Habitats



- H91A0: Old sessile oak woods with *Ilex* and *Blechnum*
- H9180: *Tilio-Acerion* forests of slopes, screes and ravines

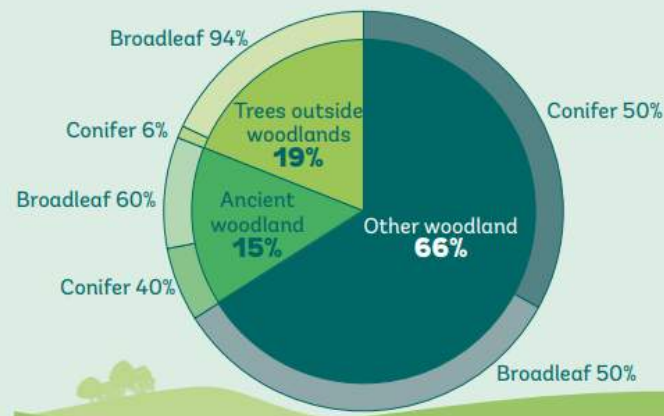
Key feature:
internationally
important lower
plant
assemblages



State of Woods and Trees

The facts behind the story

UK woodland and tree cover



Woodland: 3.21 million ha
Trees: 0.74 million ha

Native woodlands in good ecological condition

7%



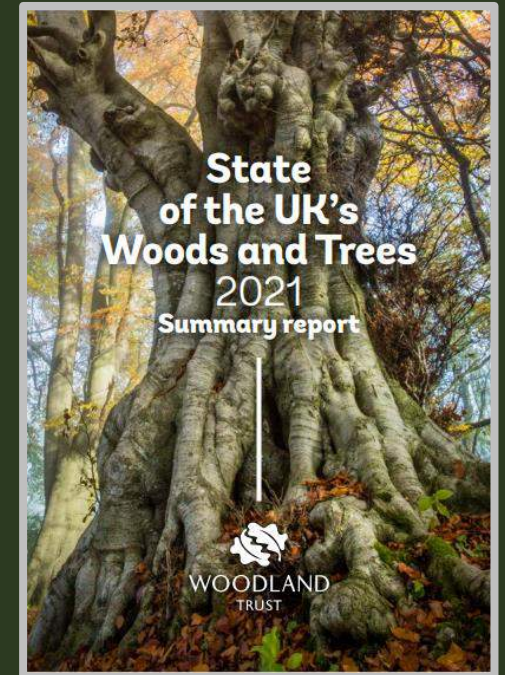
Woodland birds declined by **29%** since 1970

Woodland butterflies declined by **41%** since 1990

Woodland plants declined by **18%** since 2015



Woodland extent, condition and wildlife value



- Building on the evidence base provided by LIFE11 NAT/UK/385 (LIFE N2K Programme), the project will improve the conservation status of 3,001.2ha of H91A0 (14.85% of UK SAC resource and 68.78% of Welsh SAC resource) and 27.17ha of H9180 habitat (0.49% of UK SAC resource and 2.98% of Welsh SAC resource).
- Key threats to target habitats identified as:
 - Threat from Invasive Alien Species, namely *Rhododendron ponticum*
 - Over / under grazing
 - Inappropriate woodland management
 - Air pollution / atmospheric nitrogen

History and impact of
Rhododendron ponticum
(Rp) in the British Isles,
with reference to other
significant invasive non-
native species



Rhododendron ponticum (Rp): key facts

- Native to the Iberian peninsula and the Caucasus region of the middle east.
- Thought to have been first introduced to British Isles in 1763 as a garden plant.
- Popular amongst gardeners because of their attractive purple flowers.
- Likes acidic soil such as that found in the Celtic Rainforests.
- Their ability to form dense canopies does not allow room for native species to grow.

- Impact on native fauna – Batten (1976) and Becker (1988) found significant adverse impacts on bird breeding populations in Rp infested woodlands.
- Impact on flora self-evident. Dense canopies restricts any growth of native flora in the understorey to virtually nothing.
- Surveys of bryophytes (Newton 2004) and lichens (Orange 2003) in Eryri cite Rp a major threat to the internationally important assemblages that exist in the regions temperate rainforests.
- Economic cost – estimated economic cost of IAS to UK economy per annum = £4 billion.

Other IAS of concern

- Japanese knotweed *Fallopia japonica*
- Himalayan balsam *Impatiens glandulifera*
- American skunk cabbage *Lysichiton americanus*
- Western hemlock *Tsuga heterophylla*



Managing Rp through LIFE
Celtic Rainforest Project:
recommended
methodologies for
surveying, planning, and
treating.



Ascertain current situation

Site assessment





Density: over 75% cover

Dense, thick stands of Rp forming an almost wall to wall blanket of interwoven bushes that can grow up to several metres high.



Density: 50% - 75%

Still highly dense, but not quite the “wall-2-wall” Rp of the 75% plus category. Usually consists of dense clumps, often several metres high, with bare patches inbetween.



Density: 25% - 50%

Starting to become less dense than higher categories, with still with considerable areas of dense Rp amongst more open ground and younger, scattered plants.



Density: 10% - 25%

Becomes less dominant in the landscape, although still present in considerable amounts in patches. Size of Rp bushes may become smaller, although presence of large Rp bushes still likely.



Density: 2% - 10%

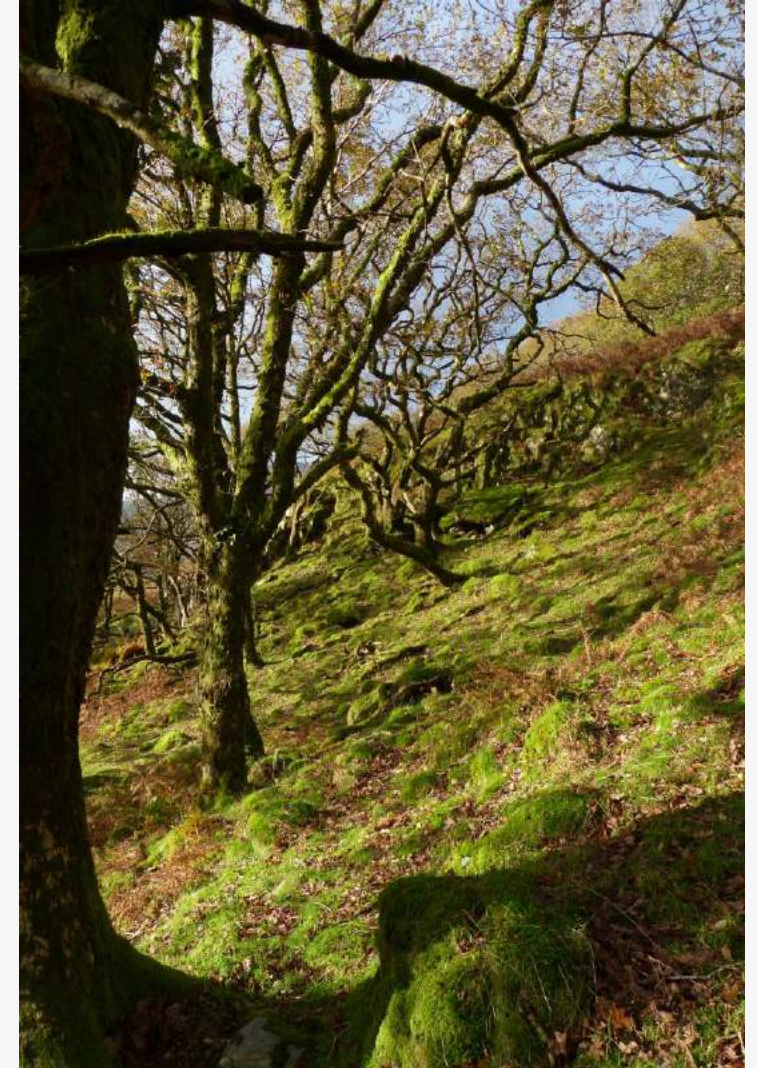
Rp now relatively scattered throughout the site, but may be patches where it is more dense. Plants likely to be smaller in size, typically >1.5m, and / or saplings.



Density: Scattered / Isolated

Usually consists of small bushes (<1.5m) highly scattered throughout site. Saplings can be prevalent in areas, and can often be missed amongst more established vegetation.

-
- When recording Rp, it's important to note both the density and height of the plant, and the type of bushes present. These will be the primary factors in determining the type of treatment required to achieve successful eradication.
 - This information will also allow for estimated costs to be calculated, for example, when developing a project or programme of works.
 - Additional factors to record include terrain, issues relating to access, nearby sources of water, other factors which may influence management including utilities or other infrastructure which may pose health and safety issues i.e. mine adits, or designations such as those relating to ecological and / or historical interests.
 - Further information can be in the [Celtic Rainforests Wales | Rhododendron Ponticum Toolkit](#)





Form programme of works

- Endorse 3-phase programme of management:
 - Phase 1: Attack phase (Yr 0)
 - Phase 2: Follow-on phase (Yr 1 / 2)
 - Phase 3: Mop-up phase (Yr 5)
- Method used will depend on several factors:
 - Primary factor – size and density of Rp present
 - Secondary factors:
 - Potential constraints i.e. utilities, water abstraction points, SAMs
 - Landowner preference
 - Budget

KPI	Target (ha)
Total Area of Rp Managed within SAC (north)	959.1
Total Area of Rp Managed outside of SAC (north)	6,697.90
Total Area of Rp Managed within SAC (south)	14.7
Total Area of Rp Managed outside of SAC (south)	289.5