Invasives affecting Protected Areas in the UK

WORKSHOP n° 17
“working for Biodiversity”

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SNOWDONIA NATIONAL PARK AUTHORITY

WORKSHOP n° 17 “invasive species"

- Invasives affecting Protected Areas in the UK.
- Potential impacts of some invasives on the Protected Areas.
- Climate change and effect of invasives.
- Case study - Rhododendron Ponticum (Snowdonia)
- Development of strategies for invasive species.
- Inter-relationship of invasives with environmental land management schemes.
- Potential considerations of how to address invasives in Protected Areas.

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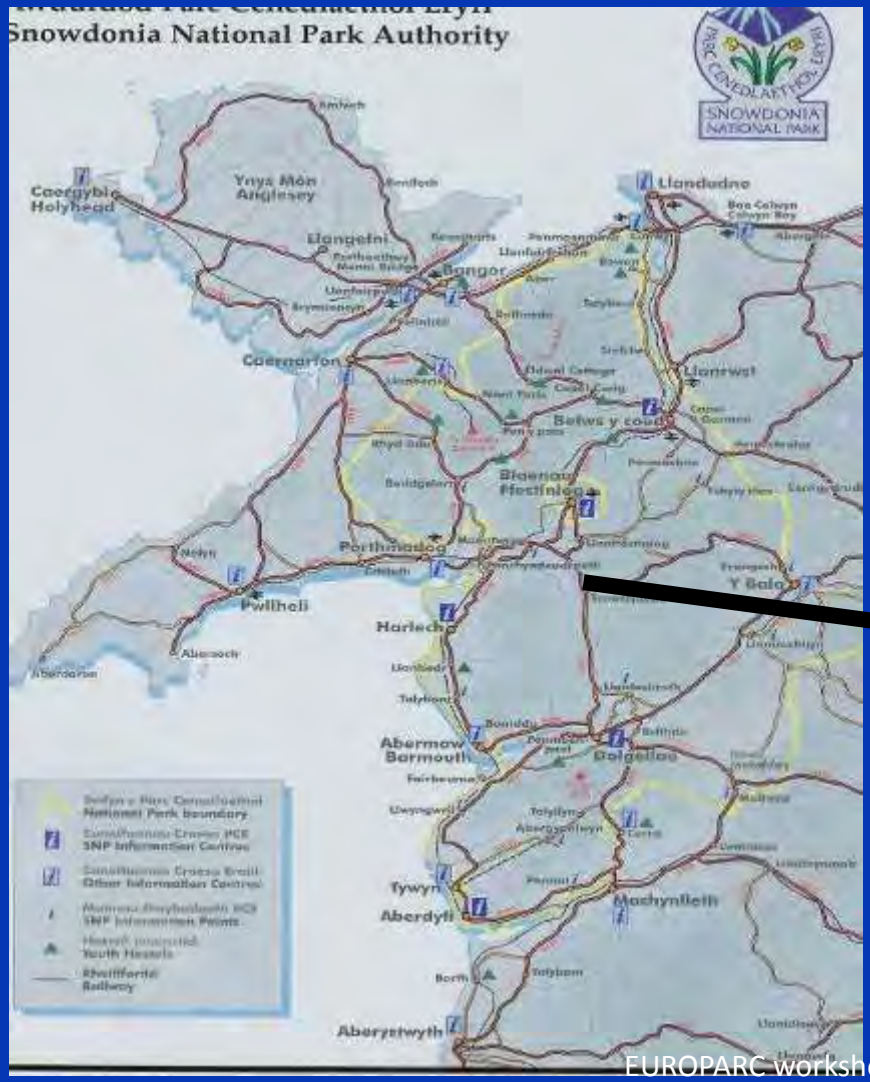
Snowdonia National Park



Invasives affecting Protected Areas in the UK

Invasives affecting Protected Areas in the UK

Types of invasives:

- Terrestrial plants
- Aquatic plants
- Mammals
- Birds
- Invertebrates

Potential impacts of some invasives on the PA

Potential impacts of invasives on the Protected Areas

- Biodiversity
- Economic
- Landscape
- Access & Recreation

Potential impacts of invasives on the Protectd Areas

Rhododendron

Affects:

- Dominant
- Changes vegetation
- Loss of priority habitats
- Economic loss (agriculture and forestry)
- Past tourist attraction
- Loss of access opportunities
- Host for “sudden oak death”
- Red data book species in Bulgaria

Potential impacts of invasives on the Protectd Areas

Feral Goats

Affects:

- Unmanaged
- Selective grazers
- Prevent natural regeneration of woodlands
- Threat to Atlantic Oakwoods
- Tourist attraction

Potential impacts of invasives on the Protectd Areas

Himalayan Balsam

Affects:

- River and stream corridors
- Very dense – excludes other species
- Access to riverbank very difficult
- Rod fishing difficult

Potential impacts of invasives on the Protectd Areas

Crassula

Affects:

- Dominates
- Excludes other species
- Covers open water
- Makes navigation difficult

Potential impacts of invasives on the Protectd Areas

American mink

Affects:

- Demise of water voles
- Demise of water birds
- Economic – poultry farmers
- Fishermen concerns

Potential impacts of invasives on the Protectd Areas

Coypu

Affects:

- Successfully eradicated from Norfolk broads in 1980's
- Damage agricultural crops
- Undermine river banks
- Biodiversity loss - grazing

Climate change and the effect of invasives

Climate change and the effect of invasives

- Climate change puts native species under stress.
- Invasives may be a tipping point for such species .
- Alien species not always invasive – until climate change creates the conditions to be invasive.
- Potential for more "domestic species" to be invasives in the future

Climate change and the effect of invasives

- Alien/invasive plants may be more tolerant to climatic factors e.g. Flooding.
- Climate change will favour some species.
- Alien species have evolved under different climatic conditions to native species.
- Current non-invasive alien species may become invasive given different climatic conditions.

Case study - Rhododendron Ponticum (Snowdonia)

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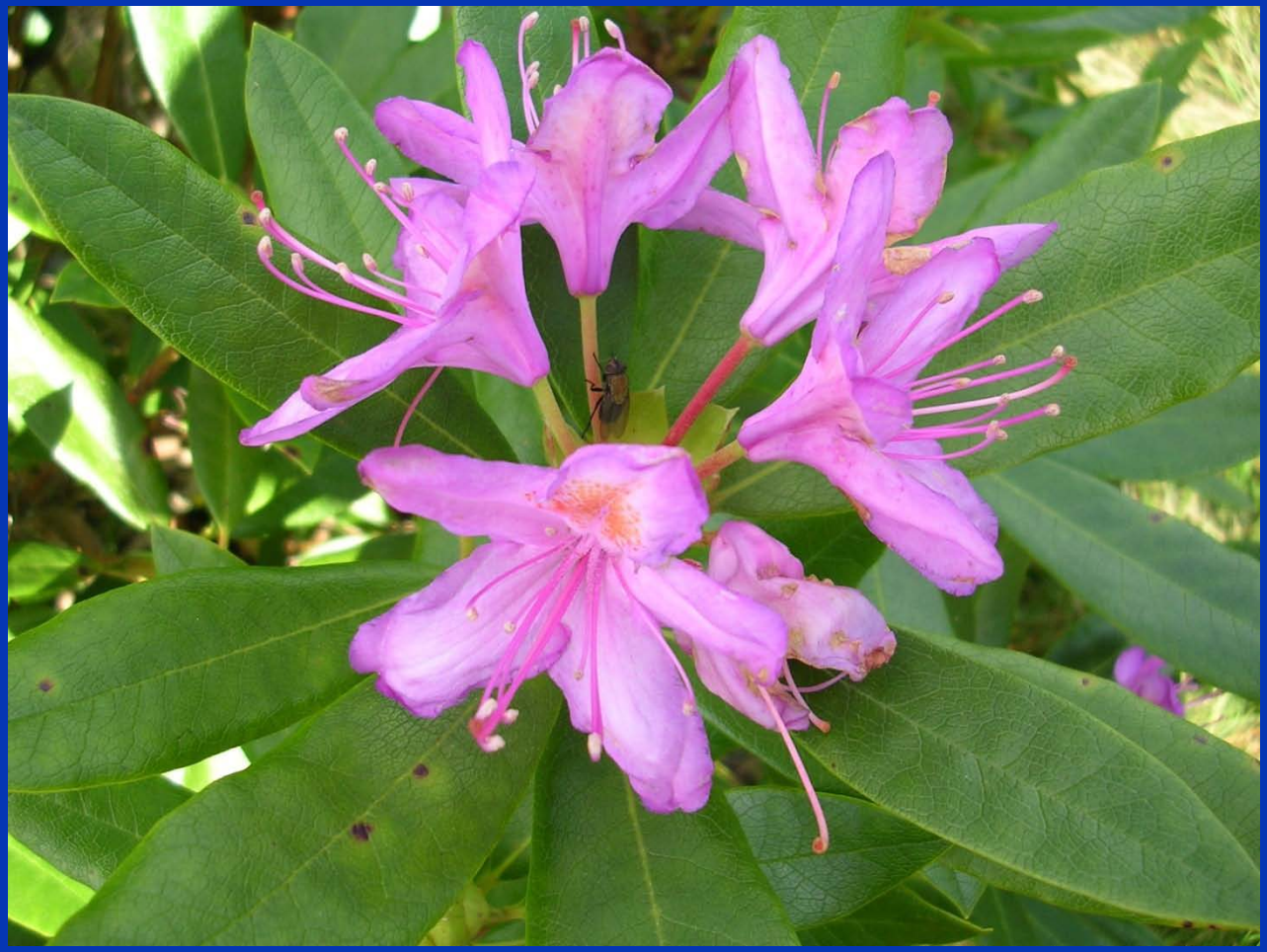


Case study - Rhododendron Ponticum (Snowdonia)

Development of a strategy needed understanding of:

- It’s impact.
- It’s ecology
- It’s distribution
- Techniques and costs of control

Case study - Rhododendron Ponticum (Snowdonia)

IMPACT

- Native plants and animal communities.
- Farming, forestry and tourism.
- Spread of “sudden oak death” - phytophthora

Case study - Rhododendron Ponticum (Snowdonia)

ECOLOGY OF THE PLANT

- Origin & distribution.
- What makes it invasive.
- Limiting factors to invasion.
- Dispersal.
- Soil moisture.
- Seed viability.
- Grazing.

Case study - Rhododendron Ponticum (Snowdonia)

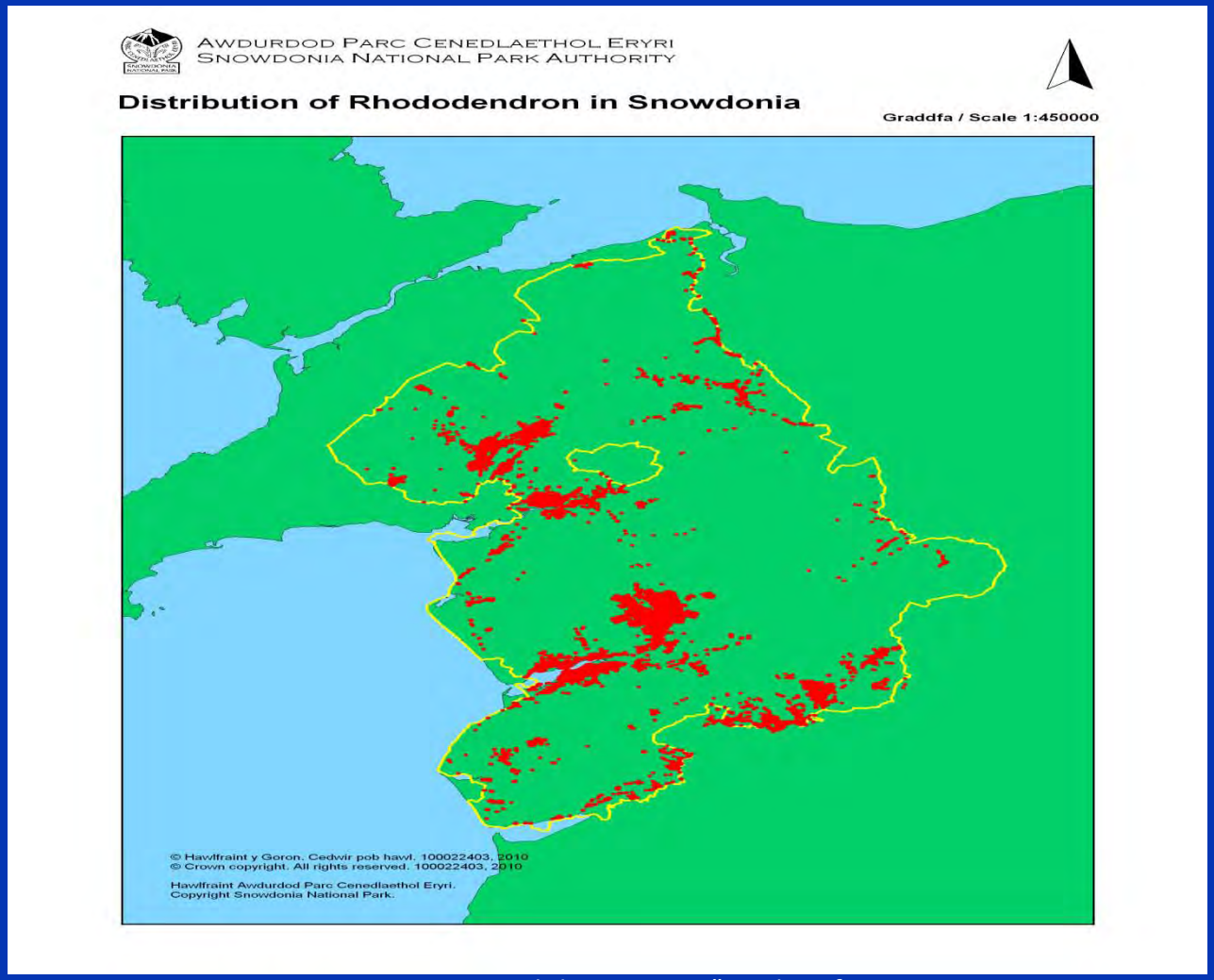
Land abandonment & no grazing

Case study - Rhododendron Ponticum (Snowdonia)

DISTRIBUTION.

- Survey data.
- Geographical distribution.
- Changes in distribution (20 years).

Case study - Rhododendron Ponticum (Snowdonia)



Case study - Rhododendron Ponticum (Snowdonia)

TECHNIQUES AND COST OF CONTROL

- Physical removal.
- Foliar spray.
- Cutting.
- Stump treatment.
- Stem injection.
- Mechanical flailing.

Case study - Rhododendron Ponticum (Snowdonia)

Physical removal

Foliar spray

Case study - Rhododendron Ponticum (Snowdonia)

Cutting

Stump treatment

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Stem injection

Mechanical flailing

Case study - Rhododendron Ponticum (Snowdonia)

DEVELOPMENT OF A STRATEGY:

- Partner and stakeholder involvement.
- Understanding the issues.
- Sharing data.
- Agreeing to work together.
- Agreeing on actions.

Case study - Rhododendron Ponticum (Snowdonia)

<u>Rhododendron strategy - recommendations:</u>

- Partnership to monitor, promote & co-ordinate.
- Long-term aim of controlling rhododendron.
- Resource permitting – employ an officer.
- Maintain & share GIS information.
- Consolidation of areas already invested in.
- Canvas/lobby to ensure that future environmental grants take account of rhododendron.

Case study - Rhododendron Ponticum (Snowdonia)

- Additional funding from National Government for protected areas.
- Each partner to have a clear policy on rhododendron.
- Encourage research on the effect of land management practices on the spread of rhododendron.
- Change in legislation to make rhododendron a notifiable plant??
- Provide publicity & education.
- Advice on planning applications.

Case study - Rhododendron Ponticum (Snowdonia)

- Prior to the strategy the estimated control costs were circa £50 Million.
- After detailed work the true costs were identified at circa £15 Million.

Development of strategies for alien invasives.

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PRINCIPLES SHOULD BE TRANSFERABLE

Main factors to incorporate are:

- Understand and know the alien
- Identify who are the stakeholders.
- Education and awareness.
- Identifying resources and agreeing priorities.
- Monitoring.
- Political support.

Inter-relationship of invasives with environmental land management schemes.

Inter-relationship of invasives with environmental land management schemes.

- Evidence that environmental management schemes allow aliens to spread.
- National environmental schemes not sensitive to the alien invasive agenda.
- Silo thinking on delivery of environmental schemes.

Potential considerations of how to address invasives in Protected Areas.

- Identification in MANAGEMENT PLANS.
- Biodiversity Action Plans.
- Strategies.
- Understanding ecology and ecosystems.
- Wider land management issues.
- Co-ordination of environmental schemes.
- Local delivery.
- Control Vs Eradication.
- Mainstreaming alien invasive control.
- EUROPEAN DIRECTIVE FOR ALIEN SPECIES MANAGEMENT IN PROTECTED AREAS.

DIOLCH AM WRANDO.