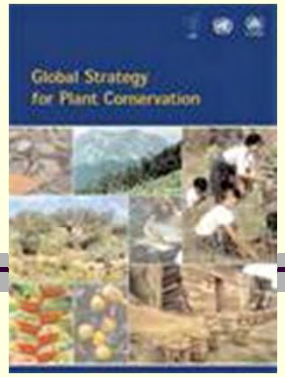
BGCI

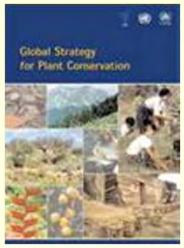
Plants for the Planet



Ecological Restoration and the Global Strategy for Plant Conservation

- GSPC relevant targets
- Ecological Restoration Alliance
- Examples from botanic gardens worldwide
- Essential link to education, awareness and communications

MISSOURI BOTANICAL GARDEN



Global Strategy for Plant Conservation

Objective II: Plant diversity is urgently and effectively conserved

- **Target 4: At least 15 per cent of each ecological region or vegetation type secured through effective management and/or restoration.**
- **Target 5: At least 75 per cent of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity.**
- **Target 6: At least 75 per cent of production lands in each sector managed sustainably, consistent with the conservation of plant diversity.**
- **Target 7: At least 75 per cent of known threatened plant species conserved in situ.**
- **Target 8: At least 75 per cent of threatened plant species in ex situ collections, preferably in the country of origin, and at least 20 per cent available for recovery and restoration programmes.**
- **Target 9: 70 per cent of the genetic diversity of crops including their wild relatives and other socio-economically valuable plant species conserved, while respecting, preserving and maintaining associated indigenous and local knowledge.**
- **Target 10: Effective management plans in place to prevent new biological invasions and to manage important areas for plant diversity that are invaded.**

Ecological Restoration Alliance

Restore 100 damaged, degraded or destroyed ecosystems.

- Royal Botanic Gardens, Kew, UK
- Royal Botanic Garden Edinburgh, UK
- Missouri Botanical Garden, USA
- Brackenhurst Botanic Garden, Kenya
- Kings Park and Botanic Garden, Australia
- National Tropical Botanical Garden, USA
- Rio de Janeiro Botanic Garden, Brazil
- Instituto de Ecología, A.C. “Francisco Javier Clavijero Botanic Garden”, Mexico
- Royal Botanical Gardens, Canada
- The Eden Project, UK

Restoration projects on six continents, drawing on the proven restoration knowledge, capacity and experience of the allied botanic gardens, arboreta and seed banks.

Targeted areas- tropical forests, prairies, wild places within cities, wetlands and coastal sites – ecosystems that are under threat and are no longer able to provide essential services and resources for sustaining human livelihoods and biodiversity.

Missouri Botanical Garden

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a division of the Missouri Botanical Garden

Map showing geographical relationship between MBG and SNR.

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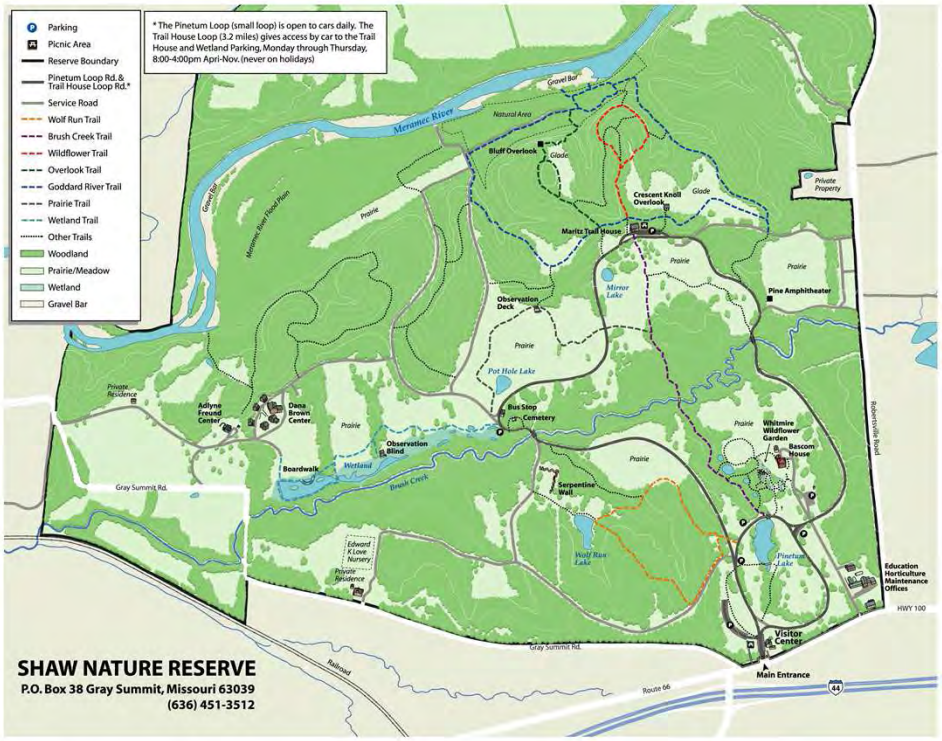

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What was….

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Mesic savanna
(white oak–dominated, with black oak
and shagbark hickory)

What happened….

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The goal of ecological restoration
at Shaw Nature Reserve
is the creation or rehabilitation
of habitats that
can support conservation
of the rich diversity of Midwest plants and animals,
while at the same time
acting as a model for science-based
ecological restoration, research and
practical applications elsewhere.

Management Strategies

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Control aggressive natives and exotic species

- Mechanical Elimination
- Prescribed Burns
- Application of Herbicides
- Periodic Mowing
- Reintroduction of native plants

Mechanical Removal

of Aggressive Natives

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Eastern Red Cedar Removal

Prescribed Burning

of grasslands and wooded habitats

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- Fire is an important management tool in grassland and wooded habitats.
- Fire removes vegetation residue, rapidly recycles nutrients and warms soil directly and indirectly.

Judicious Use of

Herbicides

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Sericea Lespedeza

Bush Honeysuckle

Crown Vetch

Control of Exotic Species

Reintroduce

Native Species

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Periodic

Mowing

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Glade Restoration

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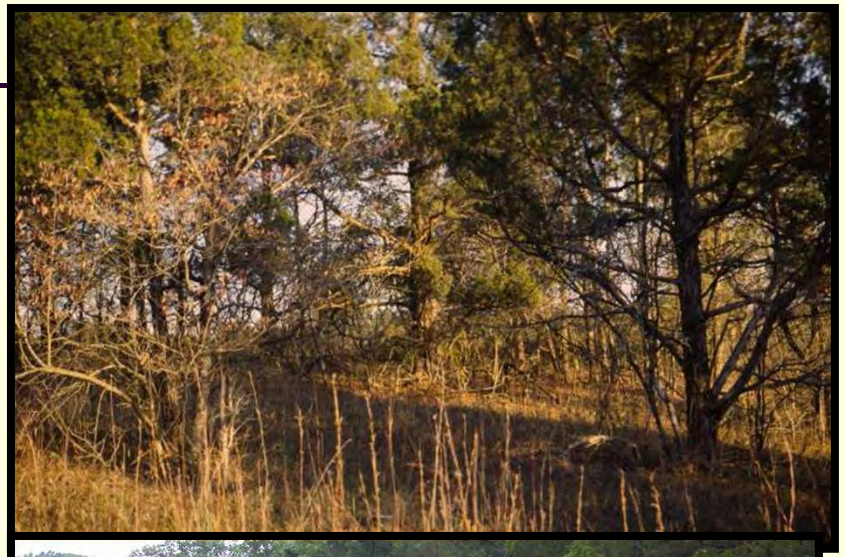
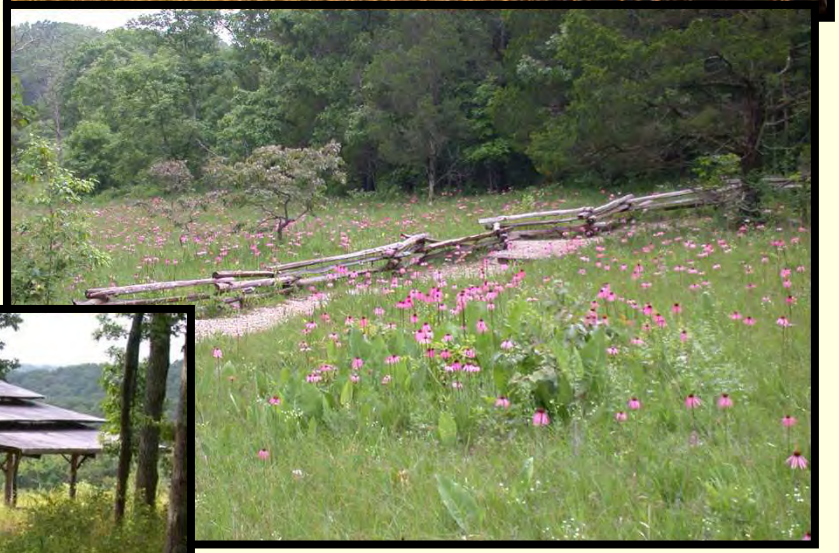
- Glades are the only native grassland type naturally occurring at Shaw Nature Reserve
- Approximately 50 acres of naturally occurring dolomite glades on the south and west slopes of Shaw Nature Reserve have been restored by cedar removal
- The portions in good condition are serving as natural sources of native plant and pollinator species for both glade and prairie restorations.





Prairie Reconstruction

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- Prairie restoration sites now comprise over 250 acres
- Home to authentic tallgrass prairie flora and fauna which, two centuries ago occupied perhaps 40% of Missouri, including much of the St. Louis region.

Woodland Restoration

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- Invasive species control and prescribed burns have been applied to the woodlands.
- Eastern red cedar and other fire-sensitive tree species to allow more light and air-flow, and to increase herbaceous plant diversity.

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Wetland Restoration

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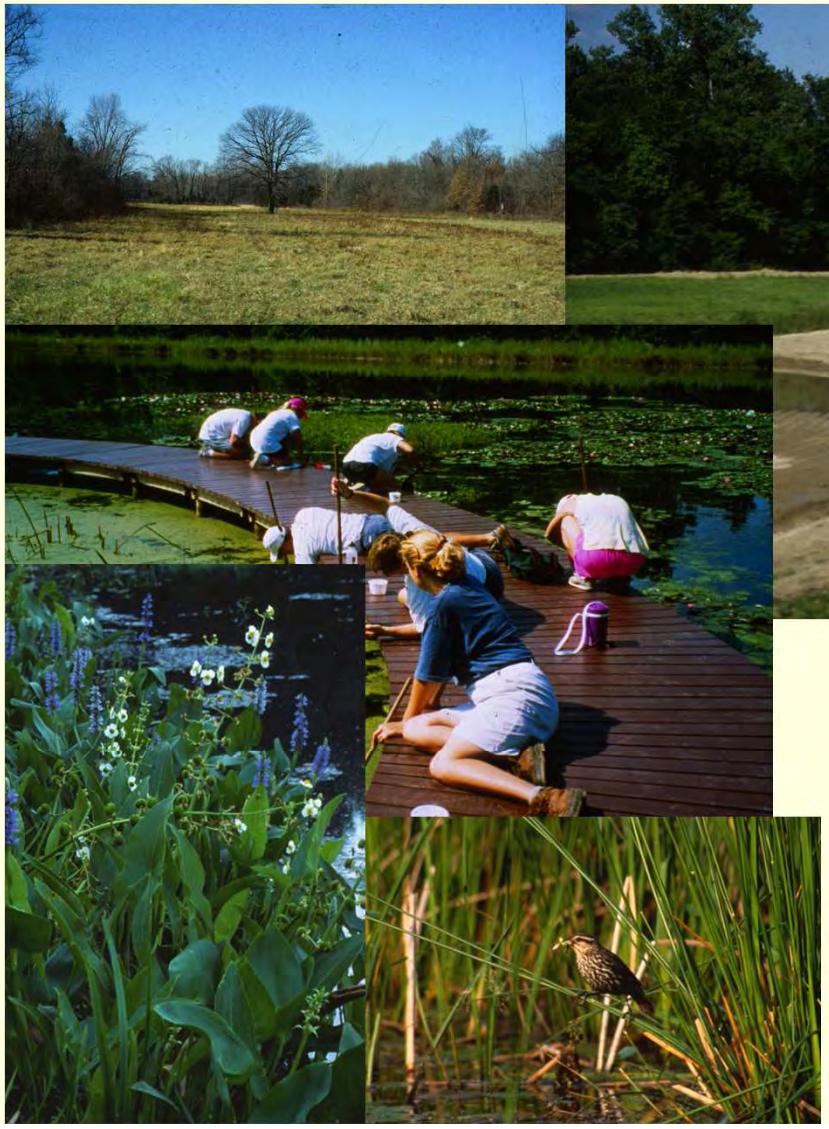

- Wetlands are considered the most biologically diverse of all ecosystems, serving as home to a wide range of plant and animal life.
- They are great spots for fishing, canoeing, hiking, and bird-watching, and they make wonderful outdoor classrooms for people of all ages.

Native Plant Horticulture

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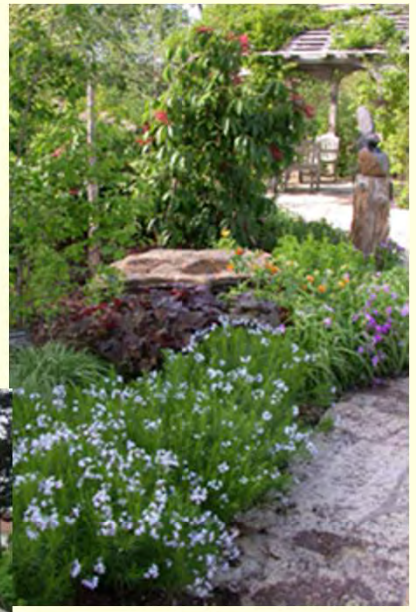
Whitmire Wildflower Garden



Benefits of Ecological Restoration

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Increased Biological Diversity

Ecological Restoration and Education

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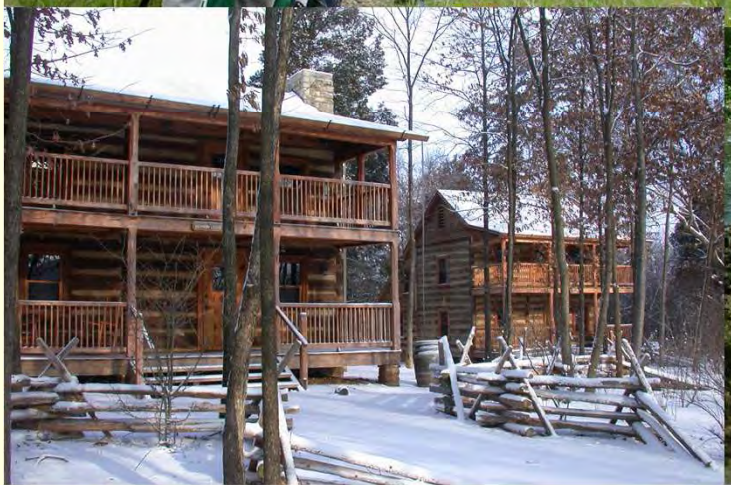

Ecological Restoration and Education

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Commercial
and Homeowner
Landscaping

NATIVE PLANT SCHOOL

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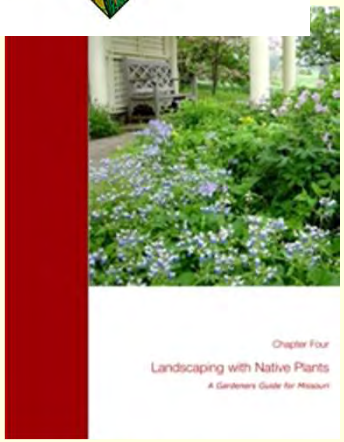
The Shaw Professional Landscape Series
at Alberici



Ecological Restoration and Education

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Highway Plantings

Ecological Restoration and Education

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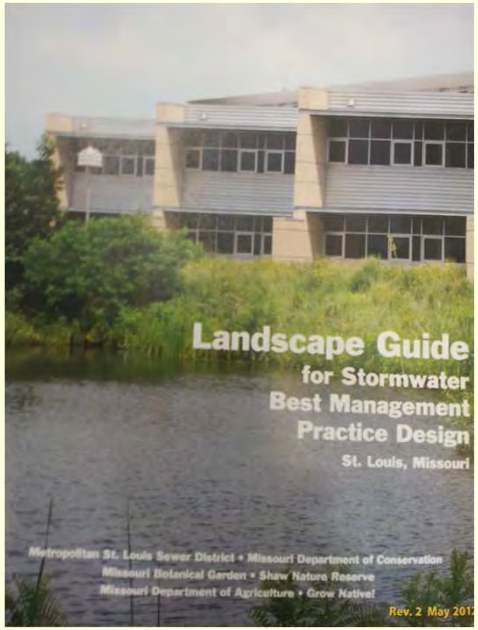

Storm Water Management

Ecological Restoration and Education

Objective IV: Education and awareness about plant diversity, its role in sustainable livelihoods and importance to all life on earth is promoted

Target 14: The importance of plant diversity and the need for its conservation incorporated into communication, education and public awareness programmes.

How are you using ecological restoration in your own gardens?