

***Ex-Situ* Conservation at Scott Arboretum**

Public gardens and arboreta are more than just pretty places. They serve as an insurance policy for the future through their well managed *ex situ* collections. *Ex situ* conservation focuses on safeguarding species by keeping them in places such as seed banks or living collections. *In situ* means "on site", so *in situ* conservation is the conservation of species diversity within normal and natural habitats and ecosystems.

The Scott Arboretum is a member of Botanical Gardens Conservation International (BGCI), which works with botanic gardens around the world and other conservation partners to secure plant diversity for the benefit of people and the planet.

The aim of BGCI is to ensure that threatened species are secure in botanic garden collections as an insurance policy against loss in the wild. Their work encompasses supporting botanic garden development where this is needed and addressing capacity building needs. They support *ex situ* conservation for priority species, with a focus on linking *ex situ* conservation with species conservation in natural habitats and they work with botanic gardens on the development and implementation of habitat restoration and education projects.

BGCI uses the IUCN Red List of Threatened Species™ to identify the level of threat to plants. In-depth analyses of the data contained in the IUCN, the International Union for Conservation of Nature, Red List are published periodically (usually at least once every four years). The results from the analysis of the data contained in the 2008 update of the IUCN Red List are published in *The 2008 Review of the IUCN Red List of Threatened Species*; see www.iucn.org/redlist for further details.

Listed below are all the Red List plants preserved at the Scott Arboretum. You will find a definition of risk levels at the end of the plant list.

Red List Plants at the Scott Arboretum

As of Summer 2008

Plant Name	No. Found in Botanic Gardens Worldwide	IUCN Red List 2006	IUCN Red List 1997
<i>Abies cephalonica</i>	48	Lower Risk: Near Threatened	
<i>Abies concolor</i>	54	Lower Risk: Least Concern	
<i>Abies firma</i>	39	Lower Risk: Least Concern	
<i>Abies grandis</i>	60	Lower Risk: Least Concern	
<i>Abies holophylla</i>	38	Lower Risk: Least Concern	
<i>Abies homolepis</i>	50	Lower Risk: Least Concern	
<i>Abies koreana</i>	88	Lower Risk: Near Threatened	Rare
<i>Abies nordmanniana</i>	55	Lower Risk: Least Concern	

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Plant Name	No. Found in Botanic Gardens Worldwide	IUCN Red List 2006	IUCN Red List 1997
<i>Abies nordmanniana</i> subsp. <i>equi-trojani</i>	22	Lower Risk: Near Threatened	
<i>Abies pindrow</i>	14	Lower Risk: Least Concern	
<i>Abies pinsapo</i>	90	Lower Risk: Near Threatened	
<i>Abies veitchii</i>	48	Lower Risk: Least Concern	
<i>Actinidia pilosula</i>	7	Vulnerable	
<i>Alnus maritima</i>	17	Lower Risk: Near Threatened	Rare
<i>Amelanchier nantucketensis</i>	6	-	Rare
<i>Calocedrus decurrens</i>	67	Lower Risk: Least Concern	
<i>Calycanthus chinensis</i>	21	-	Vulnerable
<i>Cedrus atlantica</i>	50	Lower Risk: Least Concern	
<i>Cedrus deodara</i>	80	Lower Risk: Least Concern	
<i>Cedrus libani</i>	59	Lower Risk: Least Concern	
<i>Cephalotaxus fortunei</i>	59	Lower Risk: Least Concern	
<i>Cephalotaxus harringtonii</i>	6	Lower Risk: Least Concern	
<i>Cephalotaxus sinensis</i>	22	Lower Risk: Least Concern	
<i>Cercidiphyllum japonicum</i>	91	Lower Risk: Near Threatened	
<i>Cercis canadensis</i>	49	Lower Risk: Least Concern	
<i>Clematis socialis</i>	1	-	Endangered
<i>Corylopsis glabrescens</i>	40	-	Rare
<i>Corylopsis gotoana</i>	10	-	Rare
<i>Corylopsis pauciflora</i>	53	DD	
<i>Corylus chinensis</i>	44	Endangered	Vulnerable
<i>Croton alabamensis</i>	4	-	Rare
<i>Cryptomeria japonica</i>	80	Lower Risk: Near Threatened	
<i>Cunninghamia lanceolata</i>	73	Lower Risk: Least Concern	
<i>Cupressus arizonica</i>	35	Lower Risk: Least Concern	
<i>Cupressus funebris</i>	20	Lower Risk: Least Concern	
<i>Daphniphyllum humile</i>	8	-	Vulnerable
<i>Diervilla rivularis</i>	29	-	Rare
<i>Dipteronia sinensis</i>	56	Lower Risk: Near Threatened	Rare
<i>Emmenopterys henryi</i>	51	-	Rare
<i>Eucommia ulmoides</i>	101	Lower Risk: Near Threatened	Rare
<i>Fothergilla major</i>	58	-	Rare
<i>Franklinia alatamaha</i>	48	Extinct in the Wild	EX/E

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Plant Name	No. Found in Botanic Gardens Worldwide	IUCN Red List 2006	IUCN Red List 1997
<i>Ginkgo biloba</i>	160	Endangered	Rare
<i>Juniperus chinensis</i>	55	Lower Risk: Least Concern	
<i>Juniperus communis</i>	69	Lower Risk: Least Concern	
<i>Juniperus deppeana</i>	10	Lower Risk: Least Concern	
<i>Juniperus horizontalis</i>	34	Lower Risk: Least Concern	
<i>Juniperus rigida</i>	49	Lower Risk: Least Concern	
<i>Juniperus virginiana</i>	69	Lower Risk: Least Concern	
<i>Kolkwitzia amabilis</i>	105	-	Rare
<i>Lagerstroemia fauriei</i>	9	-	Rare
<i>Larix decidua</i>	64	Lower Risk: Least Concern	
<i>Larix kaempferi</i>	52	Lower Risk: Least Concern	
<i>Larix laricina</i>	47	Lower Risk: Least Concern	
<i>Leitneria floridana</i>	9	Lower Risk: Near Threatened	Rare
<i>Magnolia amoena</i>	26	Vulnerable	Vulnerable
<i>Magnolia ashei</i>	13	-	Rare
<i>Magnolia officinalis</i>	41	Lower Risk: Near Threatened	Vulnerable
<i>Magnolia tamaulipana</i>	1	-	Vulnerable
<i>Malus hupehensis</i>	39	DD	Endangered
<i>Metasequoia glyptostroboides</i>	152	Critically Endangered	Endangered
<i>Neviusia alabamensis</i>	43	-	Vulnerable
<i>Picea abies</i>	71	Lower Risk: Least Concern	
<i>Picea glauca</i>	52	Lower Risk: Least Concern	
<i>Picea koyamai</i>	27	-	
<i>Picea omorika</i>	116	Vulnerable	Vulnerable
<i>Picea orientalis</i>	58	Lower Risk: Least Concern	
<i>Picea pungens</i>	59	Lower Risk: Least Concern	
<i>Prunus takasagomontana</i>	1	-	Rare
<i>Quercus macrocarpa</i>	53	Lower Risk: Least Concern	
<i>Rhododendron amagianum</i>	11	-	Rare
<i>Rhododendron flammeum</i>	12	-	Rare
<i>Rhododendron vaseyi</i>	39	-	Rare
<i>Sciadopitys verticillata</i>	66	Vulnerable	Vulnerable
<i>Sequoia sempervirens</i>	66	Vulnerable	
<i>Sequoiadendron giganteum</i>	73	Vulnerable	Vulnerable

Plant Name	No. Found in Botanic Gardens Worldwide	IUCN Red List 2006	IUCN Red List 1997
<i>Sinojackia xylocarpa</i>	30	Vulnerable	Endangered
<i>Sinowilsonia henryi</i>	46	Lower Risk: Near Threatened	Rare
<i>Spiraea miyabei</i>	23	-	Rare
<i>Spiraea virginiana</i>	7	-	Vulnerable
<i>Taxus baccata</i>	93	Lower Risk: Least Concern	
<i>Taxus cuspidata</i>	72	Lower Risk: Least Concern	
<i>Thuja occidentalis</i>	69	Lower Risk: Least Concern	
<i>Thuja plicata</i>	73	Lower Risk: Least Concern	
<i>Thuja standishii</i>	43	Lower Risk: Least Concern	
<i>Thujopsis dolabrata</i>	48	Lower Risk: Least Concern	
<i>Wollemia nobilis</i>	18	Critically Endangered	
<i>Xanthocyparis nootkatensis</i>	9	Lower Risk: Least Concern	
<i>Zelkova carpinifolia</i>	45	Lower Risk: Near Threatened	

Explanation of IUCN Risk Levels

The IUCN Red List of Threatened Species™ provides taxonomic, conservation status and distribution information on plants and animals that have been globally evaluated using the [IUCN Red List Categories and Criteria](#). This system is designed to determine the relative risk of extinction, and the main purpose of the IUCN Red List is to catalogue and highlight those plants and animals that are facing a higher risk of global extinction (i.e. those listed as **Critically Endangered**, **Endangered** and **Vulnerable**). The IUCN Red List also includes information on plants and animals that are categorized as **Extinct** or **Extinct in the Wild**; on taxa that cannot be evaluated because of insufficient information (i.e., are **Data Deficient**); and on plants and animals that are either close to meeting the threatened thresholds or that would be threatened were it not for an ongoing taxon-specific conservation program (i.e., are **Near Threatened**).

Plants and animals that have been evaluated to have a low risk of extinction are classified as **Least Concern**. The Least Concern assessments did not appear on IUCN Red Lists produced before 2003 (except for a few that were listed in 1996) because the main focus of attention has been on threatened species. However, for the sake of transparency and to place threatened assessments in context, all Least Concern assessments are now included on the IUCN Red List. Thus, despite its title, The IUCN Red List of Threatened Species™ does not focus just on threatened species; it considers the status of all species across an increasing number of taxonomic groups. In the past, there has unfortunately been no formal reporting process to capture all the Least Concern assessments; hence the list of Least Concern species on the IUCN Red List is not comprehensive (i.e., many species have been assessed to be Least Concern, but as that information was never formally captured, the listings do not appear on the Red List).

Only a small number of the world's plant and animal species have been assessed. In addition to the many thousands of species which have not yet been assessed (i.e., are **Not Evaluated**), other species that are not included on the IUCN Red List are those that went extinct before 1500 AD and **Least Concern** species that have not yet been data based. The species groups that have been comprehensively assessed include the amphibians, birds, mammals, freshwater crabs, warm-water reef building corals, conifers and cycads.