Greater New Orleans Iris Society

Framework for Louisiana Iris Conservation and Education Program

The mission of the Greater New Orleans Iris Society is exceptionally diverse. Beyond the typical "plant society" activity of educating members and the public about Louisiana irises, the organization holds a deep commitment to the preservation of Louisiana's legacy of wild, native irises. GNOIS is both an **education** and a **conservation** organization.

Wild iris populations in Louisiana have been shrinking in extent and diversity due to trends running for several hundred years. Primarily because of development and environmental changes, the damage has accelerated dramatically since the irises were "discovered" and recognized in horticulture in the 1920s. Time is running out to preserve the diversity of forms of wild Louisiana irises, and the time is now to reverse the destruction and help return these irises to their natural habitats.

Preservation and Propagation

The conservation activities of GNOIS rest on the twin pillars of **Preservation** and **Propagation.**

Preservation. To preserve our native iris heritage, the organization obtains, propagates, and protects the many forms of the five Louisiana iris species. Most are part of the Society for Louisiana Irises' **Species Preservation Project** (**SPP**) in which GNOIS participates as a major "steward." The GNOIS website displays a subset of these irises and information on the program at:

http://www.LouisianaIrisGNOIS.com/SpeciesPreservation/

Several other stewards participate in the program. The majority are in Louisiana, but stewards are also working in such states as Tennessee and Georgia. GNOIS maintains the most extensive species collection in the program.

Although most taxonomists currently recognize only five species, a surprising range of colors and forms exist within each. At its "nursery" in New Orleans City Park, GNOIS grows around 150 distinct, naturally-occurring forms of our wild irises. They exhibit many shades of blue, red, yellow, white, purple, and hard-to-describe "in-between" colors. The GNOIS collection is more extensive than those on the core "preservation list" of the SPP and includes natural hybrids between species found in the wild.[1]

Conservation

GNOIS has supported a variety of iris planting projects. Most have involved locations that are "natural" or "naturalistic" but not "wild." They include parks, nature preserves, rain gardens, and other urban plantings. A few but not most have been "restoration projects" that involve planting irises in "wild, natural areas."[2]

[1] GNOIS also grows human-developed hybrid Louisiana irises, which are used for beautification projects, incentives for volunteers and sales of irises to support the organization.

[2] GNOIS has developed a policy that governs the selection of planting sites in "wild, natural areas" as opposed to managed settings such as parks.

Greater New Orleans Iris Society

Conservation and Education Program

GNOIS Conservation and Education projects will be selected based upon the capacity of GNOIS to make a meaningful impact on both the landscape and public awareness of it. Projects should actively educate the public about the irises and the habitats in which they thrive. In all cases, we must work with the owners or managers of those places where irises are donated and planted. We should proceed with an awareness of our ability as an organization to follow through and fulfill commitments made.

It is not possible to turn back the clock and restore wild irises to the extent that they existed in the past. But restoration is achievable to a degree, and it is worth the effort. On the horizon, coastal restoration projects create "new" lands that may well be a natural habitat for the irises. The **Coastal Protection and Restoration Authority** and other entities are engaged in preserving and restoring forested wetlands, swamps, marshes, and other critical habitat needed for native irises and other plant species to survive. GNOIS is anxious to assist with these efforts. Also, institutions such as **Nicholls State University** and the **University of Louisiana, Lafayette**, have an especial interest in both native irises and coastal restoration. Where possible, GNOIS should work with partners, and it has initiated working relationships with these institutions in support of iris preservation and restoration projects.

Strategy

This document will outline a strategy that GNOIS will employ for producing irises needed for various planting projects, both in the wild and in managed areas. It will address:

- **Sources** of plants
- **Organization** within GNOIS
- **Resources** required
- **Planting** of the irises produced

Plant Sources

- The irises to be utilized in projects will be developed primarily in two ways: (1) propagation from seed, and (2) rhizome cuttings and division.

    - **Propagation from seed**. Louisiana irises produce seeds prolifically. A seed pod may contain from 20 to 80 seeds, and one bloom stalk might yield one to four or five pods. If half of the seeds collected germinate, one blooming iris might yield 75 to 100 new plants from a single season.[3] If these new irises are themselves harvested for seeds in subsequent years, the number of available plants can increase exponentially.

      Collected Seeds. Seeds can be readily collected in large numbers from wild populations in early summer. If only one species is growing in a particular area, the offspring will be authentic representatives of that species.

      Seeds from Controlled Crosses. Seeds can be produced by controlled crosses using the plants in the Louisiana Iris Species Preservation Project already growing in the GNOIS nursery in City Park. Since all five species and numerous colors and forms are represented – encompassing the approximately 150 different varieties – the total of individual plants is many times that number and increasing each year. It is necessary to cross-pollinate by hand to produce seedlings of a known species, because given the proximity of the plants in the nursery, bees will carry pollen randomly, and seedlings from the resulting pods will likely represent hybrid irises.

      On the other hand, if a GNOIS volunteer applies *fulva* pollen to another *fulva* or *giganticaerulea* pollen to a *giganticaerulea*, the resulting seedlings will be a pure member of the particular species. The process of making a cross is quick and easy once a volunteer sees it done, and it can produce large numbers of seeds with a small investment of time. It also is an educational and interesting process, does not involve heavy or messy work, and allows the volunteer to follow the progress of his or her iris seedlings from pollination to mature irises, or even to bloom.

    - **Propagation from rhizome cuttings and division.** An iris rhizome blooms only once, and in subsequent generations, the several new plants it produces as "offsets" perpetuate the variety. Some irises produce 2-3 offsets, but others may generate 5-6. "Spent," or bloomed-out, rhizomes can be used to accelerate this process with many varieties. A spent rhizome can be cut into 2-3 inch sections and the parts planted in a moist, well-draining medium. In many cases, the pieces will produce offsets, increasing the number of new plants of the variety beyond its natural rate of multiplication. Each new plant produced by this method will be identical to the "mother" plant.

      This technique has the advantage of permitting the propagation of especially-useful or attractive varieties. For example, if one wanted additional plants of the white giganticaerulea 'Her Highness' or the yellow fulva 'Lottie Butterscotch', the spent rhizomes of that variety could be targeted for propagation. Or the target might be a variety that is especially vigorous or has other valuable characteristics worthy of transmitting to offspring.

      The Species Preservation Project collection in City Park positions GNOIS to develop a diverse array of Louisiana irises unmatched in the country. No other source exists for as many unique forms and colors of Louisiana iris species.

[3] Although it takes two years to produce a mature plant from seed, once in operation, the process will make new seedlings available annually on a continuous base.

The eventual distribution of excess irises from the collection is part of the vision of the SPP. For more vigorous clones, we are ready to move beyond saving and maintaining and to begin to use plants for conservation and education activities.

Alternative: Plant Rescues. To date, projects have generally drawn upon irises "rescued" from one location and replanted in another. Such opportunities arise occasionally, and it is entirely appropriate to take irises from a place where they are endangered and plant them elsewhere. While GNOIS should not ignore such opportunities, plant rescues are not proposed as the vehicle for the routine operation of the GNOIS Conservation Program in the future. For several reasons, propagation has advantages as the core strategy to produce irises for restoration:

Propagation	***Rescue***
Continuous and predictable after the initial ramp-up	Episodic and unpredictable
Involves light tasks in mostly shady conditions	Often involves hard work in inhospitable terrain in open, sunny, and wet locations
Work scalable to the volunteer capacity of the organization	Volunteer demands are dependent on the size of the iris population in need of rescue and the terrain in which located
Some work (rhizome cuttings) can be incorporated into routine weeding and maintenance	Each rescue project produces added work
Propagated plants easy to handle; can be available in pots or as plugs	Rescue involves handling and planting bare-root rhizomes
Irises in containers better for planting in water and at most times of the year	Bare-root rhizomes often do not transplant well directly into water or in the hot summer months
Can target desirable characteristics of the irises (rhizome cuttings)	Dependent on the source irises growing in a given location
More educational for volunteers as to reproduction processes	More educational for volunteers as to natural growing conditions

The objective of the propagation strategy is to add to the capacity of GNOIS members to effectively promote preservation and conservation of our native irises. It creates a new and sustainable approach rather than replacing other opportunities, such as rescues, that may arise. Propagation strategies, hopefully, can engage a more substantial proportion of our members in conservation efforts and bring them to the island nursery in regular, comfortable, and supporting roles.

Organization and Activities

Implementation of the Conservation and Education mandate of GNOIS will require two interacting parts. The hands-on work with the species iris collection and propagation of plants should rest with a Propagation Committee named by the president. The education component should be one function of a Public Relations Committee, also appointed by the president. The chair of the Propagation Committee should coordinate closely with the manager of the GNOIS Island Nursery, where the species collection is maintained, and propagation work should occur. Propagation activities require shady space, including for germination of seeds and multiplication by rhizome cutting.

The Propagation Committee chair should recruit regular volunteers for propagation work, including the maintenance of the plants produced. This chair should make known to external organizations and entities the availability of irises for planting as they are propagated and grow to a sufficient size.[4]

Resources and Materials

The overhead of the GNOIS nursery in City Park will supply many of the needs of the project. These include water, tools, and appropriate space.

Containers will be needed for propagating seeds and cuttings. Some of these may be specialized containers adapted to the stage of growth of the plants. The committee will investigate the best type of containers and provide a cost estimate. Some experimentation may be required. Soil, bleach, fertilizer, and plant labels will be needed.

Tables or other structures will be required to elevate the developing plants to protect them from rabbits and other critters, avoid occasional flooding, and create a work environment that accommodates the volunteers who will maintain the new irises as they grow to a size for planting out.

GNOIS should investigate the possibility of seeking grant funding for its Conservation and Education Program. It also should retain the option of asking entities utilizing irises produced to reimburse the organization for costs incurred.

Planting of Mature Irises

It should ***not*** be the function of the Propagation Committee of GNOIS to engage in actual planting of the mature irises, although committee members and others in the organization may choose to be involved. The mission of the committee focuses on increasing the availability of plants, not planting. It assumes that there will be a demand for Louisiana iris species for various locations, that GNOIS can uniquely provide them, and that the recipients can arrange for planting in their sites.

In donating plants, however, GNOIS should be mindful of the existing policy on selecting locations. The species donated should be appropriate for the site where they will be planted. The species are more particular about their specific habitat than most hybrids. *Brevicaulis* will not survive where *giganticaerulea* will thrive, for example. When an organization or other entity seeks the donation of plants from GNOIS, the Propagation Committee should determine that the plants are appropriate for the site.

As the project proceeds, the committee must match the volume of plants produced with the demand for them, and it must size the project to the capacity of GNOIS to marshal volunteers to manage the effort.

Any plant rescue opportunities that should arise outside the Propagation Committee process requires communication and cooperation among all members involved. Rescues generally are ad hoc projects, and the details are unpredictable.

[4] Where appropriate, the existing GNOIS policy "Procedures and Standards for Louisiana Iris Restoration Projects" should govern.