

North American Native Fishes Association
Gerald C. Corcoran Education Grant

Project Title: Kids in the Creek

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Project Summary Statement

The Kids in the Creek program will support the objectives set forth in the NANFA mission statement by:

1. educating children (K — 5) on native fishes, their habitats, and ecology
2. promote the conservation of native fishes by allowing children to experience and explore stream habitat first-hand
3. advance the captive husbandry of native fishes by displaying an innovative aquarium to program participants and the general public

There is a new paradigm emerging in nature centers regarding how to foster appreciation and concern for conservation. Finch (2004) proposed a change in the thinking of nature educators from the heavily structured leave only footprints, take only memories rationale that nature centers have followed for decades. In doing so, he cited a study from Chawla (1998) that demonstrated the life experience that served as the greatest influence on adult conservationists was activity in natural areas as a child. It is not watching Discovery Channel or even parental influence. The single greatest influence was getting down and dirty and having fun in nature as a child. Kids in the Creek will allow children to get into the stream environment and attempt to collect native fishes

all while learning about the species and the ecosystem they encounter within an interpretive framework.

Educational Objectives

The educational objectives of Kids in the Creek are:

1. Teach children about native fishes and stream ecology.
2. Foster awareness of human impacts and conservation of native stream fishes and stream ecosystems.
3. Serve as a potential catalyst for future concern for conservation and the environment.
4. Display an innovative aquarium that fosters interest in the captive husbandry of native fishes.

Target Audience

Fullersburg Woods is the most recognized and popular nature center in DuPage County. Over 231,358 people visit Fullersburg Woods annually. 21,277 of these visitors are involved with our 707 naturalist-led programs. The primary focus of these programs is on elementary school children (K — 5) and families. Kids in the Creek will continue this tradition and focus on children in grades K — 5. In addition, the proposed exhibit will target children as well as adults that visit our visitor center.

Project Description

The Kids in the Creek program will focus on native stream fishes of Illinois and, more specifically, Salt Creek. The program will begin with a new Wet Lab exhibit in the Fullersburg Woods visitor center. This component will serve as a primer for the outdoor component of this program. The exhibit will include a 125-gallon aquarium with a simulated riffle-pool habitat, complete with interpretive signage. Species to be maintained initially in this exhibit include, but are not limited to, the *Etheostoma caeruleum*, *Noturus miurus*, *Fundulus notatus*, and young-of-the-year *Lepomis humilus*. These species will provide exposure to native stream species rarely seen by the general public and what habitats they prefer. In addition, young-of-the-year *Carassius auratus*,

which spawn in Salt Creek, will be added to illustrate the threat of introduced species and responsibility of aquarists. Eventually, an effort will be made to acquire proper permits to house a pair *Etheostoma exile*, which are listed as state-threatened in Illinois and recently re-discovered in Fullersburg Woods (Gutmann, 2005). When Kids in the Creek programs are not in progress, the aquarium will remain with interpretive signage to educate casual visitors and foster appreciation and interest in the captive husbandry of native fishes.

In addition to the 125-gallon riffle-pool tank, the Wet Lab will have dissecting microscopes set up to view live benthic macroinvertebrates collected from Salt Creek. This component will serve to reinforce the idea of food webs and the interconnectedness of the stream ecosystem. Benthic macroinvertebrates will be collected prior to the beginning of each program and released afterwards. During non-program periods, cultured *Daphnia* will be on display under the scopes for the general public.

Following the Wet Lab component of the program, participants will be led outside and into a shallow section of Salt Creek. Here, a naturalist will demonstrate the proper use of dip nets and small seines. Then, all children will be provided the opportunity to use both the seines and dip nets in an attempt to collect fishes. Prior to the program, naturalists will collect fish from a nearby portion of Salt Creek and set minnow traps at the program site to ensure program participants will be able to view fishes collected in Salt Creek. All fishes will be viewed in transparent containers. Species diversity will be recorded on data sheets as a group. The lead naturalist will guide participants in deducing the identity of each species captured. Data sheets will be simple in design and consist of photos of known species of fishes in Salt Creek with an adjacent checkbox to the left of each picture for participants to record the presence of each species in the day's collection. Below the abundance boxes will be an area to calculate the total number of species collected.

After the program has been complete, all children will be given a pin featuring a picture of an Iowa darter, the program title Kids in the Creek, and Fullersburg Woods.

Educational Format

As with all programs at Fullersburg Woods Nature Center, this program will be interpretative in nature. Information will not be spoon-fed to participants. Instead, participants will be allowed to discover knowledge for themselves through experiences in the Wet Lab exhibit and in collecting. Naturalists will facilitate this style of learning by asking pertinent questions and allowing participants to deduce answers themselves.

Planned Site

The wet lab exhibit for this program will be a permanent addition inside the visitor center at Fullersburg Woods. Fullersburg Woods visitor center is comprised of interactive exhibits that are kid-friendly and renowned throughout the county. The outdoor component of this program will be conducted in Salt Creek within the borders of Fullersburg Woods.

Project Lifespan

The exhibit and program will be permanent additions to the Fullersburg Woods Nature Center.

Expected Outcomes

1. Children will develop a new and/or heightened awareness what lies beneath the surface in the streams of Illinois.
2. Children will develop a connection with nature and, more specifically, native streams.
3. With regard to the wet lab exhibit, casual visitors will develop an awareness and appreciation for native stream fishes as well as captive husbandry of native fishes.

Methods of Evaluating Project Success

Success of this program will be evaluated by tracking the numbers of participants who enroll in this program. Initially, the program will begin as an Announced Nature Program for which families can make reservations to attend. Should interest escalate to the point where demand for the program exceeds program capacity, then Kids in the Creek will be reviewed for application as a school program. Should this occur, success of the program will be evaluated on annual basis examining teacher interest / class enrollment as well as teacher feedback.

Timeline

August 2005	Acquire materials for Wet Lab exhibit. Issue work order for cabinetry / lab table.
December 2005	Wet Lab exhibit completed and functioning in visitor center.
March 2006	Advertise Kids in the Creek announced nature program in Forest Preserve District of DuPage County s quarterly publication The Conservationist and Fullersburg Woods website.
June 2006	Perform first Kids in the Creek program.

Project Staff

Christopher Gutmann will over see the development of the exhibit and program. The actual program will be conducted by Christopher Gutmann and other interested naturalists from the Forest Preserve District of DuPage County.

Budget

Item	Description	Amount
125-gallon aquarium	Pre-drilled for drainage	\$650
Filter	Wet-dry	\$170
Return Pump	Quiet-One 3000	\$50
Powerheads (enhance current) x2	Penguin 660 (\$20ea.)	\$40
Aquarium stand & connecting lab table*		***
Aquarium canopy*		***
Aquarium lighting*		***
Dissecting microscopes		***
Interpretive signs*		***
Data sheets*		***
Seine nets x5	8 (\$5ea. + S&H)	\$35
Dip nets*		***
Transparent viewing containers*		***
Minnow traps x2	\$13ea. + S&H	\$36
Boots*		***

Petri dishes (for microscope viewing)*		***
Native fishes*	[will be collected by C. Gutmann]	***

	TOTAL	\$981

*Forest Preserve District of DuPage County will match funds up to the amount of \$1,000.

Works Cited

- Chawla, L. 1998. Significant life experience revisited: a review of research on sources of environmental sensitivity. *Journal of Environmental Education* 29(3): 11-21.
- Finch, K. 2004. Extinction of experience: a challenge to nature centers. *Directions: the Journal of the Association of the Association of Nature Center Administrators* (Special Edition): 1-7, 11.
- Gutmann, C. 2005. Treasure hunting in the suburbs: discovery of the state-endangered Iowa darter (*Etheostoma exile*) in DuPage County, Illinois. *American Currents* 31(1): 7-8.