

breeding is a vital component in this equation. There are numerous instances of avicultural techniques serving as valuable conservation tools.

Furthermore, the breeding of birds in captivity, in general, does not represent end-stage usage as does commercial breeding of many other animal species for skins, pelts, etc. Onerous and over-zealous regulation of trade in legitimately produced captive bred birds may radically alter and negatively impact the role of the international avicultural community in serving the interest of the global conservation effort.

The keeping and breeding of birds in captivity is not a new concept and the practice of aviculture as a human endeavor has a lengthy established history.

Although seldom acknowledged, aviculture has, in many ways, had a tremendously positive impact...

Indirect Benefits to Conservation

Indirectly, aviculture benefits avian conservation efforts in providing an armory of technical support in an array of products and services that would not otherwise have been readily available, e.g., sexing techniques, incubation techniques, veterinary diagnostics and services, etc. In addition, a significant benefit that often totally overlooked or ignored is that captive bred exotic birds act as good will ambassadors for the cause of avian conservation. Individuals who have little or no exposure to wildlife or the wonders of the natural world, often have little understanding or concern about the urgent need for habitat preservation and wildlife conservation. Aviculture introduces avian species to many individuals who might otherwise fail to develop a conservation commitment and sense of caring and understanding. The keeping and breeding of birds in captivity, therefore, helps provide an opportunity to broaden the

base of support for the cause of avian conservation both in the wild and in captivity.

AFA's Mission Statement

The mission of the American Federation of Aviculture is to promote the advancement of aviculture through educational activities. These activities are developed specifically to increase avicultural knowledge, skills and awareness, and to support conservation and research projects that benefit avian species.

The American Federation of Aviculture supports the scientifically valid efforts of CITES in protecting and preserving threatened and endangered species. Good science is the best foundation upon which to build a body of regulations and controls that are truly beneficial to the subject species. The American Federation of Aviculture strongly advocates the use of valid scientific data in the formation of any proposed international trade restrictions issued through CITES.

The American Federation of Aviculture has participated as an NGO in the CITES conferences since the mid-eighties. This year the American Federation of Aviculture presented documents to COP 10 for consideration by the delegates regarding: (1) trade in captive bred specimens (2) DNA fingerprinting technology and (3) the facilitation of international shipments of animal tissues suspended in formalin for bio-medical evaluations and disease diagnostics.

The American Federation of Aviculture has provided this publication in the interest of improved understanding of our organization's support of and commitment to conservation issues and to better clarify the positive contributions that can be made by private sector participation in avian conservation efforts. The potentials of the private sector are enormous and should be acknowledged. More birds are bred in captivity each year by private aviculturists around the world than in all the zoos and research facilities combined. Many avian species adapt well to captivity and, in certain instances, the numbers bred in captivity each year are believed to be far greater than the total existing wild populations. ➔

The American Federation of Aviculture's Red Siskin Project

(AFA RSP)

by Yvonne Patterson, Kansas City, MO

The Red Siskin (*Carduelis cucullatus*) is an endangered finch from Venezuela. Its vermilion red and jet black coloration is the primary reason for its appeal and subsequent demise in the wild. This colorful finch has been commonly kept by local peoples for many years, in addition to being captured for export to Europe and the U.S. for cross breeding with the common canary to produce brighter colors in canaries.

In 1985 the Venezuelan Audubon Society's Conservation Committee sent a plea to the AFA for help in saving the Red Siskin. Since the late eighties, an AFA breeding consortium run solely by dedicated aviculturists, has worked to help save this endangered species. In order to be accepted into the AFA Red Siskin Project one must have previously worked successfully with some of the difficult to breed finches.

The participants in the AFA RSP come from a variety of professions: they include scientists, a physicist, certified public accountants, psychologists, and many others all of whom are dedicated aviculturists.

The project participants cover the costs of cages, food, disinfectants, electricity and all other expenses, with the exception only of necropsies and shipping fees, which are reimbursed by the project. At eight to nine days of age all siskin chicks are closed banded. The

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project breeders are meticulous about the timing of this procedure because birds at an older age have feet too large to be pulled through the metal

band. Bands are inscribed with the identity of each RSP participant, the year of hatch and the individual bird's number. Complete records of all consortium birds, including unusual characteristics, are reported on an annual basis to Dr. Orland Baker, the RSP Studbook Keeper.

In the past, much hybridizing of the Red Siskin has occurred through pairing with other siskin species and with canaries. The AFA RSP holds the goal for the future of performing isoenzyme analyses on the siskins in the project.

*We are working to keep
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population of Red Siskins
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With DNA "fingerprinting," we would hope to determine whether or not there are any hybrids in the consortium birds and remove them from the program. At present the RSP uses the S.P.A.R.K.S. (Small Population Analysis and Record-keeping Systems), which is a proven computerized program used to determine inbreeding coefficients, and which helps us to properly manage the siskin program to maintain the best possible genetic diversity within the captive population.

Chuck Seigel, AFA RSP Director and also Curator of Birds at the Dallas Zoo, in Texas, encourages keeping Red Siskins separate from other birds in order to avoid possible disease transmission. The AFA RSP project participants feel that two years of quarantine helps to prevent isolated problems from reaching our other birds or the siskins. Although a few birds have been donated by breeders from around the U.S., most siskins in the project were raised by participants at project facilities.

AFA RSP participants are highly motivated. It is rewarding to work with this species and to try to give something back to nature. All of the participants in the Project take pride in their efforts to make a positive difference for the future of the Red Siskin in the wild and in captivity. We are working to keep a genetically viable population of Red Siskins alive and reproducing. ➔

The Role of Private Aviculture in Bird Reintroduction Programs

*by Alan Lieberman,
The Peregrine Fund,
Hawaii Endangered Species Program*

It is the rare opportunity that we as individuals, as members of private bird clubs or as representatives of conservation organizations can personally take part in an effort that can make the difference between the extinction or survival of a species. It is my intent in these few paragraphs to review the re-introduction of endangered species as a conservation strategy, and to explore the role of the avicultural community in furthering the goals of conservation.

Today, the conservation of wild animal populations includes such strategies as translocation, the movement of a wild animal population from one area to another; introduction, release of wild or captive animals into an area that was never inhabited by that species before; and re-introduction, the release of captive animals into a habitat that had or may still have that species.

Each of these strategies has had criticism. Of the thousands of vertebrate species kept in zoos and private collections today, only a small proportion will ever be used for reintroduction, and this represents an even smaller proportion of the number of animals that will go extinct over the next 200 years. However, for many species of birds, captive propagation with the intent of eventual release may be the only hedge against extinction.

The costs are high, and the effort can be monumental. Among the many considerations are the risk of introducing pathogens to an already perturbed habitat, the genetic heterogeneity of the released birds, the appropriate behavior of the released birds that will ensure survival, the genealogy of the released animals in relation to the wild population, the removal of the cause of the initial decline of the wild population, and the stability of the habitat into which animals are being released.

Critics of release programs claim that the cost of such programs would be better spent on protecting habitat to prevent future extinctions. Fair enough. But often times the resources generated for such habitat protection are raised from a public whose sensitivities were touched by a release program that featured a real animal, and not an abstraction of "vegetation community" or "ecological habitat" that often can be difficult for a non-scientist to comprehend. This is especially true in developing countries where the local community is often more receptive to the concept of species conservation.

Overlooked are the benefits of mega-vertebrate releases into the native endangered habitats. Since the

*No other group of private
animal enterprise has con-
tributed so much to the state of
the art of animal keeping as the
aviculturists. These same tech-
niques are currently being used by
zoos and private propagators to
produce candidates for release
programs around the world as
well as in our own country.*

large animal species are usually the first to suffer from habitat loss, the release of these species and the subsequent protection of their habitat is actually preserving not only just the species released, but all the organisms found in that habitat as well.

Some conservationists are supporting the concept of "mega-populations" of animals—captive and wild populations that are managed as one, with regular exchanges of individuals helping to support the genetic integrity of the world population. This strategy