

A Guide to Birds on the Brink

by Ken Gilliland

"Only after the last tree has been cut down, only after the last river has been poisoned, only after the last fish has been caught, only then will you find that money cannot be eaten."

-Cree Indian Prophesy

"When one tugs at a single thing in nature, he finds it attached to the rest of the world"

-John Muir (Author and Naturalist)

"Threatened, Endangered, Extinct" is an additional resource for the The Songbird ReMix model and series which was created by B.L. Render and Ken Gilliland, based upon Anton Kisiel's Songbird Model for Poser. The imagery within this booklet was created by Ken Gilliland using Poser 5 and Painter 8. The views expressed within this booklet are solely the authors' viewpoints and may not be shared by the publisher. "Threatened, Endangered, Extinct" Copyrighted by Ken Gilliland c2004

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OVERVIEW

"Threatened, Endangered, Extinct" is a collection of bird characters and their texture maps for use with the Songbird ReMix packages. This particular package has a twofold purpose; one, to provide high-quality digital birds for the purpose of animation and still imagery and two; to raise awareness for these and other species plights and in doing so, help to turn the tables on possible extinctions. In using these digital birds it is the author's hope that the users will also help to create awareness through their art.

RED & BLUE Lists

The United States Endangered Species Act lists threatened species into 2 categories. The RED list refers to species in immediate threat of extinction. The BLUE list refers to species of concern, but not in immediate threat of extinction. The progression of a species to these lists is not simply a matter of endangerment; it is a long and tedious journey through red tape and politics. There are many species that are just as threatened or endangered that have failed to make the list for various reasons. In this package, the federally listed "Red list" birds appear under the heading "Endangered" and the Blue listed birds appear under the heading "Threatened". The "Vulnerable" heading are birds that appear in the Audubon Society's watch list and/or the book "Birds in Jeopardy" by Ehrlich, Dobkin and Wheye.

CAROLINA PARAKEET

Conuropsis carolinesis

EXTINCT SINCE 1914

The Carolina Parakeet once had a range from Eastern Nebraska and Southeastern Wisconsin all the way to the East Coast, from New York to Florida. They nested in riparian and deciduous forests and cypress swamps. It is believed they nested in tree cavities made by woodpeckers and up to 50 nests would be in a single tree. The parakeets loved fruit, nuts and grain. Before widespread agriculture took hold in the area, it lived on seeds from grasses and trees. As the areas became developed the parakeet developed tastes for apples, oranges, grapes, dogwood flowers and mulberries. Unfortunately for the bird, most of these tasty treats were found in farms and gardens. Being a member of the parrot family, this parakeet was highly gregarious and traveled commonly in flocks of 30 individuals. Farmers and gardeners began to shoot the parakeets as crops pests. Hunters began to shoot them for "sport" and their feathers. Parakeets being very social birds, would flock around shot and injured members to help them, making them easy targets and adding to the carnage.

By 1900, the Carolina Parakeet was extinct in the wild. A breeding program at the Cincinnati Zoo, kept the parakeet from complete extinction until 1914 when the last individual died.



PASSENGER PIGEON

Ectopistes migartorus

EXTINCT SINCE 1914



I don't know what's harder to believe, the written accounts given by those who actually saw the Passenger Pigeon flocks or the fact that within 60 years the most populous bird in the world would be extinct. Beech tree limbs sagged as the colony crowded on slender branches. The largest colony that nested in Wisconsin as said to have at least 135 million adults and covered over 850 square miles. When the flock took off, the day would turn to night with a black cloud of birds, two to three miles across and forty miles long flew to it's next destination. For food, they fed on acorns, various types of nuts, some fruits, berries, grain and small insects. They spent their springs and summers in the great deciduous forests of Montana, Southern Ontario and Nova Scotia and migrated to the deep South (United States) in the winter. Their decline to extinction was brought on by the hunters who sold the meat to markets.

Eventually, the taste of Passenger Pigeon became passe and the commercial hunting operations ceased. The pigeon went into final decline because their flocks, weakened in numbers, were easy meals for other predators and factors such as habitat loss. The last Passenger Pigeon, "Martha", died at the Cincinnati Zoo in 1914.

TEXAS HENSLOW'S SPARROW

Ammodrammus henslowii houstonensis

EXTINCT SINCE 1983

The Texas Henslow's Sparrow has been extinct since 1983. It was found only on a 105 acre field near Houston, Texas. It nested in weedy fields or pastures, preferring moist areas. It built it's nest in tall grass, often with a partial roof, which offers some seclusion. It lived primarily on insects, including slugs and spiders and seeds from grasses and sedges. It found most of it's food sources while foraging on the ground.

Preservation of the species was complicated by the dispute on whether it was a "true" subspecies of the Henslow's Sparrow found 750 miles away in the southern Missouri in 1973. While the debate continued the subspecies fell into extinction, it's habitat encroached upon and was finally declared a "true" subspecies in 1983 and "Federally Endangered—presumed extinct". The question whether the Texas Henslow's Sparrow is a true subspecies is still somewhat controversial because of the difference in distinguishing characteristics between the sub and parent species. Today, the Henslow's Sparrow is approaching the endangered list and hopefully more care will be given in saving the parent species.



'AKIAPOLA'AU

Hemignathus munroi

ENDANGERED 2002 Population: 1163



The 'Akiapola'au is found around the base of Mauna Kea, Hawaii. It lives in ancient Koa tree forests where it's primary nesting areas and food sources are found. Older Koa trees are excavated for nesting cavity. Insects and beetle larvae are the main food source for the bird as creeps down tree limbs in the forest canopy. It has an usual bill. The lower bill is shorter than the top— it's a specialized beak than allows the bird to hammer and drill into the wood with the lower "woodpecker-like" bill and then spear insects with the top portion of the beak.

The 'Akiapola'au was also known as Nukupu'u in early Hawaiian literature. It's declines started in 1900 with the development of Hawaii. It also suffers from the fate of many native Hawaiian birds; no resistance to avian malaria. Mosquitoes are an introduced insect to the Hawaiian Islands and now virtually none of the native Hawaiian birds live below the 1500' level (the mosquito line).

Preservation efforts have helped slow the rapid decline of this bird. In 1992, the population was estimated at 1500 and has since then dropped below 1200. The Hakalau National Forest Preserve was established to help protect this and other endangered Hawaiian birds.

BACHMAN'S WARBLER

Vermivora bachmanii

ENDANGERED PRESUMED EXTINCT



Bachman's Warbler is one of the smallest warblers measuring under $4\frac{1}{2}$ inches long and is considered the rarest bird in the United States. The reason for its rarity is that it has not been seen in more than ten years. Unfortunately, it will probably soon be added to the extinct list.

The Bachman's Warbler is a migratory bird that lives in the southeastern United States and winters in western Cuba. Like most warblers, the Bachman's warbler fed on insects such as caterpillars and ants. In 1891, the warbler was observed in Florida feeding in the dead clustered leaves of hackberry and ends of other tree branches. The feeding appeared slow and deliberate, and with the birds sometimes hanging with the upside down while feeding. Records show that the warbler nested in low, wet forested areas where a constant supply of water was available.

The population declines started around 1900 and large drops by 1950. There have been no confirmed nest sightings since the 1960's although a few sightings were reported in Cuba in the mid-90's. The cause for the possible extinct is unknown, however, the loss of habitat both in the United States and Cuba is strongly suspected.

LEAST BELL'S VIREO

Vireo Bellii Pusillus

ENDANGERED 2002 Population: <6000

Least Bell's Vireo, found in California and Baja Mexico was Red-listed in 1986. It's preferred habitat is dense willow forests in riparian areas with lush understory vegetation. The least Bell's vireo is predominately an insect eater. The birds will forage in high and low shrubs and along riparian areas. During nesting season, most of the foraging occurs in the vicinity of the nest site which is predominately in willow trees. A dense shrub layer is considered essential for nesting. Nests are constructed about three feet off the ground and are usually made from willows. The most common plant species used for foraging and nesting are the California wild rose and the coastal live oak. Most nest sites are located near the edges of thickets and males often reuse the nest in succeeding years.

There was an estimated 385 pairs in 1992 and it is threatened because it's critical riparian habitat is quickly vanishing to make way for off-road recreation (vegetation destruction/disturbed areas) and golf courses (herbicides/pesticides/loss of natural vegetation). In addition, periodic flooding of riparian areas are essential to the health of these areas. Water control projects hamper and halt this natural cycle. Cowbirds (see Southwestern Willow Flycatcher) are also threats to the nesting cycle.



2002 Population: <5500

The Palila lives the big Island of Hawaii. It nests and eats the seeds of the Mamane tree which is found on the dormant volcano, Mauna Kea, above the 6,000 foot line. The Palila is the largest of the Hawaiian honeycreepers and is probably the most studied. Although the Palila has been known to eat some insects and naio berries, it's primary diet comes from the Mamane tree. It eats seeds from it's green pods, the flower petals and even the young leaves. The population numbers for the Palila are in direct proportion with the success of the Mamane's blooming season.

It is endangered because it's main source of food, the Mamane tree is also threatened. Cattle from nearby ranches trample the root systems of the trees and thereby, killing them. Encroaching development also plays a role. In the mid-90's the remaining Palila population was moved to the base of Mauna Kea where a 100 acre grove of Mamane trees still remained and was fenced off from cattle grazing. Unfortunately, the entire area is surrounded by invasive weeds and extremely flammable fountain grass. One wildfire could bring this bird to extinction. Recently, numerous cigarettes butts were found scattered in the brush.



SOUTHWEST WILLOW FLYCATCHER

Empidonax traillii extimus

ENDANGERED 2003 Population: <800



The Southwestern Willow Flycatcher was red-listed in 1996. It closely resembles the parent species, Willow flycatcher. The easiest way to distinguish this flycatcher from other flycatcher species is surprisingly not to rely upon its appearance, but from its distinct "fitzbew" song. The flycatcher, as it's name suggests live off flying insects. It breeds and nests in dense riparian habitats along rivers, streams, or other wetlands. The most likely areas are amongst thick groves of willows and seepwillow. Almost all flycatcher breeding areas are within close proximity of water.

It's primary threat to existence comes from cattle ranching. The cattle trampled and graze the riparian woodlands that the flycatcher lives in. The cattle also are accompanied by the dreaded "Cowbird". The cowbirds knock out a few of the flycatchers eggs, lay their own eggs in the flycatcher's nest and take off,... leaving the flycatcher to raise it's nestlings (children). The cowbird nestlings are larger and hungrier and cut down the survival rate of the flycatcher's true offspring. You'd think the flycatchers would be able to distinguish their offspring from cowbirds, but they don't.

FLORIDA GRASSHOPPER SPARROW

Ammodramus savannarum floridanus

ENDANGERED 2003 Population: 17

The Florida Grasshopper Sparrow is a subspecies of the Grasshopper Sparrow and can be identified by it's darker, almost black, streaks of its head and darker tail feathers. The sparrow builds it's nest on the ground with a canopy of grass and leaves. It lays four to five eggs in the spring. It lives primarily on spiders, grasshoppers, crickets, weevils, moth larvae and sedge seeds.

It was once widespread in Florida however the conversion of it's native habitat to pasture lands has had devastating effects. It's nests are often inadvertently mowed down when machinery clears fields. The sparrow, left with no cover, is vulnerable to predators. The population counts tell the story: 1997 Population: 298, 2002 Population: 162 and the 2003 Population: 17.

The majority of remaining sparrows live on a 5,000 acre (not used) parcel on the Avon Park United States Air Force bombing range.



CALIFORNIA COASTAL GNATCATCHER

Polioptila californica

THREATENED 2002 Population: <6000



It was in 1988, that the California Gnatcatcher was found to be a different species than the Black-tailed Gnatcatcher. The California Gnatcatcher lives in lowland costal sage shrubs from Baja California to Ventura County on the coast of California. It lives primarily on insects and spiders found on twigs and foliage. It builds its nest from plant material and makes a compact cup attached to branches of shrubs.

It was labeled a species of "special concern" in 1982 by the Audubon Society when it was still believed it was a subspecies of the Back-tailed Gnatcatcher. The northern California subspecies of the California Gnatcatcher was designated "Endangered" in 1991. The California Coastal Gnatcatcher is endangered because of urban sprawl and habitat fragmentation. The remaining birds live on coastal golf courses and housing tracts that haven't been developed yet. Although the population of this bird is less than many on the "Endangered" list and the threat of extinction is very real, it has failed to make the list because of intense and heated debate from real estate developers and government officials.

SAN CLEMENTE ISLAND SAGE SPARROW

Amphispiza belli clementeae

THREATENED

2002 Population: <750



The San Clemente Sage Sparrow lives on the Channel Islands (San Clemente Island) off the coast of California. The majority of the sparrows live on the western shore and northern end of the island. Unlike its mainland relatives which live in sagebrush habitats, the San Clemente Island sage sparrow has adapted to live in boxthorn, cactus, and saltbush. Nests are typically placed low to the ground in a boxthorn shrub and use grasses and leaf litter as a canopy. It, as all sparrows, eats insects, spiders and seed.

The sparrow was listed as threatened in 1977 because of its limited distribution and habitat destruction by introduced goats and pigs. In addition, feral cats preyed upon the birds and fuel-modification to prevent fires destroyed their habitat. It was also found that human disturbance played a big role in nesting success. The more disturbed the area, the smaller the number of sparrows.

Provisions taken to protect nesting areas as well as the removal of pigs, goats and cats have resulted in a stabilization of the current populations.

PURPLE MARTIN

Progne subis

VULNERABLE Population: unknown

The Purple Martin is the largest swallow found in the Americas. It was at one time found throughout the United States, but now is now rarely found on the west coast. It spends summers in North America and winters in South America. It nests in open country-- rural areas and especially around water. It builds it's nest from leaves, grass, feathers and mud in small cavities and tree snags. It also favors man-made "Martin Houses" on the Eastern portion of it's range.

It eats insects primarily in the air, though has been known to eat ants on the ground. Some towns have actually installed "Martin Houses" as their insect control measures.

Its decline has been due to forestry policies of eliminating standing dead trees (which provide nesting areas). Also, there is competition for nesting sites from two introduced birds, the House Sparrow and the European Starling. Starlings have been especially aggressive. The solution have been "Martin Houses" which are too small for the starlings to enter, allowing the Purple martin to stage a comeback.



GOLDEN-WINGED WARBLER

Vermivora chrysoptera

VULNERABLE 2002 Population: <4.600

The Golden-winged Warbler is found throughout the Northeastern United States in the summers and winters in the Yucatan Peninsula to the northern portions of South America. It nests in clumps of grass or at the base of trees, making a rough-looking cup of bark and grasses. It eats insects and spiders it finds among the foliage and dead leaves.

Due to the expansion of the Blue-winged Warbler territory, which competes for the same resources as the Golden-winged Warbler, its numbers have declined. Breeding between the species has created a hybridized warbler known as the Brewster's or Lawrence's Warbler". The habitat of the Golden-winged warbler is threatened by development and deforestation. There is current pressure from certain sectors and Federal level to open it's remaining habitat to surface mines and clear-cut programs. This will ensure that this bird becomes extinct in the next few decades.



LOGGERHEAD SHRIKE

Lanius Iudovicianus

VULNERABLEPopulation: unknown



The Loggerhead Shrike is found throughout North America. Its nest is constructed of woven twigs and strips of bark by both the male and female Shrikes into a cup shape. The nest is found on a large branch of a tree or shrub from three to thirty feet off the ground with an average of five to six eggs.

The Shrike's diet consists mostly of large insects, but can include small birds and mice. It makes it's kills by a sharp blow from its beak. This unusual form of attack is because it lacks the sharp talons found on raptors. The food is then cached on barbed wire or thorned shrubs, earning the shrike the nickname "butcher bird".

Its decline is attributable to habitat destruction and pesticides. It is "Blue Listed" on the Channel Islands and in California. There have been appreciable drops in population east of the Mississippi River as well. It became "Threatened" in Canada in 1986 and "Endangered" in 1991. It is currently under evaluation of listing in the United States.

What you can do

Most scientists believe that the songbird populations are a bell-weather of the health of our planet. Populations of songbirds are decreasing at alarming rates. In other words, that canary in the coal isn't singing so well anymore... is anybody listening? A few are, but not nearly enough. With habitat destruction happening worldwide and species vanishing at alarming rates it's hard not to feel overwhelmed. You're probably not the leader of a country or the head of a corporation had can make policy decisions. You probably don't have unlimited wealth to buy huge tracts of land to protect them, either. So what can you really do? The solution is simple. Do things in which you can make a difference. Granted, it may be a **small** difference, but if the difference you make can **touch** or **affect others**, there will be a snowball effect. Here are some suggestions...

Do great art. You have some tools with the "Threatened, Endangered, Extinct" Songbird ReMix package. Use them and make a difference. Post your artwork featuring the endangered birds and tell of their plights. I guarantee you someone will be moved, and perhaps, moved enough to also make a difference.

Heal the earth one garden at a time. One of the primary causes for endangerment and extinction is habitat loss, so here's your opportunity to give back to the planet.

If you have planting space, use it and plant **native plants**. You know, the ones that actually belong there. If you're not aware of what's native to your area, contact your local native plant society or do internet searches. Provide water sources on your property. Whether it's a bird bath, a pond or stream, a water source is probably the most important feature you can put on your property for birds. Feeder, nesting boxes, or secluded cover (trees, shrubs, thickets) is also important. Don't rake away all the leaves. For many birds this is their forage area. The National Wildlife Federation (www.nwf.org) has a "Backyard Wildlife Habitat" program. If you have native plants, shelter, food sources and water for wildlife you can be certified as a "Backyard Wildlife Habitat" and for a small fee even get a placard to display out in your yard or on your fence saying so. If neighbors pass by and look at your garden, wondering why it looks a little different (native plants), tell them why. That too, has the snowball effect.

Shop environmentally. This is easy to do. If you drink coffee, buy shade grown coffee. Buy organically grown products. Yes, there a little more expensive, but they're generally better for you. If your city has a recycling service, use it. Also, many power companies offer "green power" options, sign up and if they don't have one, ask why. When car shopping, consider less polluting vehicles or hybrids. If you dabble in the stock market, consider a "green" mutual fund.

Be aware what goes on in your community. Of all the government layers, the local levels are the most accessible to you. Hearings regarding important decisions in your community happen all the time. Attend some, and make a difference. I attended a hearing regarding the re-landscaping of a local park. Now they're going to be planting native plants in the park. My wife, neighbors and I commented on a housing project asking for radical zoning changes on an area, which is currently wilderness. Now the city has to serious consider whether it wants to rubber stamp the developer's vision or face the wrath of the community. Let your community leaders know you want smart growth and expect them to obey their own zoning laws.

Vote Smart. When deciding whom to vote for, don't trust the mailers or the candidate's lip service. Check their records. How did they really vote? The internet is great for that. The League of Women Voters (www.lwv.org) even has environmental score cards. The National Audubon Society (www.audubon.org) has an "Advisory" newsletter it emails out that states what going on in the Capital and even provides links to your elected officials along with editable form letters to express your concerns.

Yes, you can make a difference, if you want to...

"If you're not part of the solution, you may be part of the problem"

-Randy Heffner (Biologist)

Resources

'Akiapola'au (US Fish & Wildlife)
Bachman's Warbler (US Fish & Wildlife)
California Coastal Gnatcatcher (US Fish & Wildlife)
Carolina Parakeet (Cornell Labs of Orthinology)
Florida Grasshopper Sparrow (US Fish & Wildlife)
Golden-winged Warbler (Cornell Labs of Orthinology)
Least Bell's Vireo (US Fish & Wildlife)
Loggerhead Shrike (Cornell Labs of Orthinology)
Palila (US Fish and Wildlife)
Passenger Pigeon (The Passenger Pigeon Society)
Purple Martin (Purple Martin Conversation Association)
San Clemente Sage Sparrow (Institute for Wild-life studies)
Southwestern Willow Flycatcher (North Arizona University)
Texas Henslow's Sparrow (Extinct Birds)

Avibase: Worldwide Bird Database
Birdlife International
BirdNet Endangered Species List
Cornell Labs of Orthinology
R-E-D List
US Fish & Wildlife Endangered Species Program

http://pacificislands.fws.gov/wesa/aki.html http://endangered.fws.gov/i/b/sab0z.html http://endangered.fws.gov/i/b6w.html

http://birds.cornell.edu/programs/AllAboutBirds/Conservation/CAPA.html

http://www.iws.org/sparrow.htm http://birds.cornell.edu/gowap/

http://endangered.fws.gov/i/b/sab6c.html

http://birds.cornell.edu/birdsofna/excerpts/lshrike.html

http://pacificislands.fws.gov/wesa/palila.html

http://www.passengerpigeon.org

http://www.purplemartin.org/main/mgt.html

https://ecos.fws.gov/species_profile/SpeciesProfile?spcode=B067

http://www.usgs.nau.edu/swwf/index.html

http://www.uwsp.edu/geo/faculty/heywood/geog358/extinctb/

TXHenSpa.htm

http://www.bsc-eoc.org/avibase/avibase.jsp?pg=checklist®ion=NA1

http://www.birdlife.net/

http://www.nmnh.si.edu/BIRDNET/CHECKLISTS/Endsp.html

http://www.cornell.edu http://www.redlist.org http://endangered.fws.gov/









