



# The Cactus Wren-dition



VOLUME LXXIII NO. 2

SUMMER – 2020



Elegant Trogon  
by Samantha Starr

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Elegant Trogon  
by Samantha Starr  
Taken with a Nikon D500  
with the Sigma 150-600mm  
Sports lens.

# PRESIDENT'S MESSAGE



Mark W. Larson

It is Spring in the Sonoran Desert—days are warming, flowers are blooming, birds are returning from the tropics, and the Governor of Arizona has announced a Stay-at-Home Order due to the COVID-19 coronavirus pandemic in the United States. Patience, forbearance, taking precautions, self-quarantines, imposed isolation, lack of social activity, cancellations, handwashing, social distancing—these are some of the terms of the day. And here are just a few of the results:

- All Spring Maricopa Audubon Society field trips—cancelled.
- The April Maricopa Audubon Society meeting of the membership—cancelled.
- The 2020 Maricopa Audubon Society Annual Election of Officers—postponed.
- The 2020 Maricopa Audubon Society Annual Banquet—cancelled.
- A first-of-its-kind cooperative meeting of Arizona and New Mexico Audubon Chapters—cancelled.
- Health effects on Audubon members—not yet known.
- Long-term impact on the Maricopa Audubon Society—not yet known.

Across this country people are getting sick and people are dying from this insidious disease. At this point, no one can predict how long this scourge will last or what damage it will do, either to our health or to our economy, but what I can assure you is that the Maricopa Audubon Society will endure. We will endure because our mission is too important, too critical, and too vital for future generations.

Looking through this 'fog of war' we can see other challenges ahead. We are cooperating with the Center for Biological Diversity on a lawsuit to prevent the loss of one of Arizona's great environmental treasures: the San Pedro River. We've known for some years that growth in the San Pedro Valley is drawing down the water table jeopardizing the priceless riparian gallery forest along the river. That forest supports endangered species of plants, provides essential habitat for resident species of birds and other wildlife, and is a critical migration corridor for millions of Neotropical birds.

This is just one example of the work of your Maricopa Audubon Society. Help us keep going, no matter how long the virus rages and no matter its effects. 🐦

*Mark W. Larson*  
President

# LETTER FROM THE EDITOR



David Chorlton

The doors to the outside world may be closed but our windows are open. While we can't enjoy field trips, we can still keep track of our backyard birds where we are lucky enough to have them to watch. We had a brief visit from a Hooded Oriole to indicate the changing season, and White-winged Doves are showing up as the White-crowned Sparrows move along. I had intended to make this a colorful issue, featuring Arizona's flash of brilliance, the Elegant Trogon, and as our situation became clear I hoped to lighten the collective mood with a bright selection of photographs, from Arizona and Costa Rica.

Elegant Trogons come to us from the tropics, and that region is familiar to our President, Mark Larson, who writes here about some of his experiences in Costa Rica. Roberta and I also loved being in Costa Rica and at Rara Avis some years ago we met a couple from Germany who became good friends. Peter Bartsch is an expert on frogs and conveys his knowledge to school classes in Bochum. We met up again in 2013 at Selva Verde Lodge, where Peter took photographs shown here.

Closer to home, Richard Cachor Taylor wrote a book that is a fine reference for the Elegant Trogon and some pages here give an introduction. Many of you will be familiar with the bird's unique call heard along certain trails in Madera Canyon or the Chiricahuas, a sound we look forward to following again. A trip to the Chiricahuas might include a visit to the George Walker House in Paradise, once and briefly a lively mining town and now is more tranquil. The miners are long gone, but birds abound.

We have more advice on what to do should you find a bird in need of help from Fallen Feathers, and art by Alexandra Bowers. Whatever avenues are closed to us, we have our memories and imaginations, those close allies of art.

We shall return to our favorite trails. Field trips will happen again. Our monthly meetings will give us chance to be in the company of other MAS members, and the business of conservation and studying birds and other wildlife continues. You will find information on membership inside the back cover. Show a friend the Wren\*dition and encourage more participation once we open our doors again and put on our hiking boots. Meanwhile, stay safe, and don't let the little flame of imagination be extinguished. 🐦

David Chorlton  
Editor



Maricopa Audubon Society is now registered on Amazon as a charitable organization. Go to the MAS Facebook page for details or use the following AmazonSmile link for Maricopa Audubon Society: <https://smile.amazon.com/ch/86-6040458>

Log onto your Amazon account and a percentage of your purchase will go to MAS!

## Committees/Support

**Arizona Audubon Council Rep**  
Position Open

**Bookstore**  
Sochetra Ly  
503 860-0370

**Poet Laureate**  
David Chorlton  
480 705-3227

**Maricopa Audubon Website**  
<http://www.maricopaaudubon.org>

**The Earth has received the embrace of the sun and we shall see the results of that love.**

*Sitting Bull*

## An Investment in the Future

Bequests are an important source of support for the Maricopa Audubon Society. Your chapter has dedicated itself to the protection of the natural world through public education and advocacy for the wiser use and preservation of our land, water, air and other irreplaceable natural resources.

You can invest in the future of our natural world by making a bequest in your will to the Maricopa Audubon Society. Talk to your attorney for more information on how this can be accomplished.



### Sign up for the e-newsletter!

To receive updates and supplements to *The Cactus Wren\*dition*, sign up for the monthly (September to May) e-newsletter. No membership required. It includes meeting and field trip reminders, special events, and citizen science projects.

To subscribe, email: [laurienessel@gmail.com](mailto:laurienessel@gmail.com)

Note: We do not use the email list for anything other than the described purpose.



Arizona Sister, *Adelpha eulalia*

# CONSERVATION UPDATE

THE LATEST ON ISSUES AFFECTING OUR ECOSYSTEMS

by Mark Horlings

## EPA Suspends Enforcement

Acting on the truism that every crisis contains an opportunity, Andrew Wheeler, head of the Environmental Protection Agency, announced on March 27, 2020 that EPA would suspend civil enforcement of environmental laws and regulations for the duration of the Coronavirus crisis. EPA normally enforces the Clean Water Act, Safe Drinking Water Act, the Resource Conservation and Recovery Act (RCRA), the Oil Pollution Act and Superfund. Perhaps most important at a time when Covid-19 threatens people's ability to breathe, EPA also enforces the Clean Air Act. The EPA cited industry's lack of staff and inability to get results from laboratories as reasons for the suspension. Criminal enforcement will continue although, with reporting requirements suspended, it is not clear how criminal violations would become known. EPA did not announce when the enforcement suspension would end.

## Auto Emission Standards Cancelled

In 2012, the Obama Administration negotiated auto emission and efficiency standards with car makers. The Obama standards were designed to cut emissions and increase fuel efficiency by about 5 percent per year from 2021 to 2025. The new rules were mandatory and were recognized as the largest single enforceable step any country had taken to check climate change.

On March 31, 2020, the Administration cancelled the Obama standards and announced its own. The goal to cut emissions dropped from 5% per year to 1.5%. The new standards would allow about 1.5 billion more tons of pollutants in the atmosphere during the life of the cars produced under the new standard.

Last year the Administration revoked California's authority to set its own air and emissions standards. California's tougher standards, and its huge market, drove improvements in air quality throughout the country since carmakers wanted to offer all their models in California. Taken together, these changes suggest the federal government, not the states, will dictate air pollution policy, and that this Administration will favor the auto makers over the public.

## Endangered Species Studies Conducted on Private Land to be Confidential

On March 10, Governor Ducey signed House Bill 2749, requiring State agencies to keep any information they obtain on private land about endangered, threatened, or potentially endangered or threatened species confidential. Under the new law, a state agency which collects endangered species information on private land cannot reveal it to federal authorities, or to other state agencies. House Bill 2749 requires the prior permission of landowners for surveys on private land and imposes a \$25,000 civil penalty per violation.

## San Pedro River Lawsuit

On March 18, three environmental groups, including MAS, sued under the ESA, seeking to preserve the flow of the San Pedro. Litigation seeking to reduce the Fort's water use and groundwater pumping in Sierra Vista has gone on since the 1990s. Courts have repeatedly found the U.S. Fish and Wildlife's Biological Opinions flawed. The latest suit alleges that the U.S. Fish and Wildlife's 2014 Biological Opinion was inadequate because it relied on water savings from recharge projects that have not worked, credited Fort Huachuca for water savings realized years earlier, failed to consider climate change, and failed to look far enough into the future.

## Be Social!

### Find MAS on Facebook

[facebook.com/MaricopaAudubonSociety](https://facebook.com/MaricopaAudubonSociety)

# ANNOUNCEMENTS

## 2020 Elections & Nominating Committee

MAS elections are usually held at our April meeting with the newly elected officers installed at the annual May banquet. MAS Articles of Incorporation dictate that our elections and annual meetings should be held as close to the second Tuesday in May as is practicable. At this time, the Board of Directors has determined the annual banquet, elections and installation of newly elected officers will likely take place in September 2020, after the summer hiatus. Because these are uncertain times, that date could change. As we get closer to September, you will be informed via this newsletter when a final decision on the exact date has been made.

In the meantime, please send in any suggestions of members for Board positions to our nominating committee. You can even nominate yourself! Make a nomination by contacting the one of the following:

### *Nominating Committee*

Tim Flood (chair) [tjflood@att.net](mailto:tjflood@att.net)  
Mel Bramley [melbramley@cox.net](mailto:melbramley@cox.net)  
Joy Bell [joyabell\\_az@yahoo.com](mailto:joyabell_az@yahoo.com)

### **Wanted: Christmas Bird Count co-ordinator.**

If you are interested in compiling the Salt-Verde Christmas Bird Count, please contact Mark Larson at [larsonwarren@gmail.com](mailto:larsonwarren@gmail.com)

### **Western Field Ornithologists 2020 High School Student Essay Contest**

The Western Field Ornithologists is holding an essay contest in 2020 for students in grades 9 through 12. Applicants must be a current WFO member or they may join at the \$10 annual student rate when the essay is submitted.

The theme of the essay contest is the impact of climate change on bird populations. Climate change is adversely affecting western bird populations now and these impacts will likely be more severe and widespread in the near future. Your essay should focus on climate change, its causes and consequences, and the effect of these environmental changes on bird populations today and likely in the future. Your essay may consider climate change broadly or it may explore a narrow or specific aspect of climate change.

Full guidelines at: [https://www.westernfieldornithologists.org/docs/2020/WFO\\_2020\\_HS\\_Student\\_Essay\\_Contest.pdf](https://www.westernfieldornithologists.org/docs/2020/WFO_2020_HS_Student_Essay_Contest.pdf)

# TRAJECTORIES #14

by David Chorlton

Pelicans down  
from the desert sky  
meet their wind-ruffled reflections  
on a pond reclaimed from waste. Above it  
an osprey slants his wings  
through silver-grey light.  
The mudflats shine  
while trees along the banks keep  
secrets in their roots and tangles  
and the foot soldiers of leisure stroll  
beside them. Watching the water  
is work to the yellowlegs,  
avocets and Canada geese, all  
of whom leave  
signature prints in the shallows  
although the sources of the latest  
political alarm remain  
anonymous. Warnings fly  
with vagrant species across  
the country on its day of Thanks.  
It's a laid back, slow step  
kind of morning; stop and stare  
into the winter branches to get a better  
look at a kinglet, to feel  
the warning's shadow brush  
against your face the moment  
you look up to better see the passing heron  
imprinted as a watermark  
on the low lying clouds.



Gilbert Riparian  
by David Chorlton



*T*HE MOST ELEGANT  
BIRD IN NORTH AMERICA

by Richard Cachor Taylor

Elegant Trogon  
by Shirley Ramaley

Trogon belongs to a pan-tropical family of birds encompassing 41 members distinguished by their richly colored, iridescent plumage. Taxonomically, the trogons exhibit two characters shared by no other groups. Like parrots and most woodpeckers, trogons have two of their four toes pointing backward; but, in the trogons, it is the first and second digits—instead of the first and fourth, a condition known as heterodactyl. And North American trogons, excluding the Resplendent Quetzal and Eared Trogon, have a serrated edge on the upper mandible. *Trogonurus*, a Greek root, translates to “the one who gnaws,” and commemorates their saw-tooth bill.

The ancestral family line can be traced back 30 to 40 million years to *Archaeotrogon* in the humid forests of what is present-day France. Of all the living species, ranging from the 14-inch-long Resplendent Quetzal with its magnificent three-foot-long tail coverts to the diminutive eight-inch-long Violaceous Trogon, Arizona’s representative falls within the medium-size class. Elegant Trogons are 11 to 12 inches in overall length and weigh 65 to 75 grams—or about as much as a man’s wristwatch. Although the sexes overlap in size, females tend to be slightly larger than their mates, perhaps half an inch on the average. Males generally have bigger bills—a single millimeter bigger.

Arizona trogons belong to the subspecies *ambiguous*, a northern, migratory form in which the wing chord, tail length, and overall dimensions are typically one-half to one inch greater than for resident populations of *Trogon elegans* from Sinaloa, Mexico to Guanacaste, Costa Rica. Based on size and subtle plumage distinctions, the Coppery-tailed Trogon was regarded as a separate species from 1835 to 1956, when it was “lumped” with the southern Elegant Trogon.

In 1983, the name Coppery-tailed Trogon was officially changed to Elegant Trogon by the American Ornithological Society. Frequently the modifier “Elegant” fails to describe the bird. Trogons assume a pigeon-like posture at rest that I refer to in my notes as “hump-backed.” Relaxing Eared Quetzals and even Resplendent Quetzals adopt the exact same pose, which can really only be described as awkward-looking.

All trogons, regardless of species, can be elegant, just as they are all beautiful, all gorgeous, and possibly all

hump-backed when resting. “Coppery-tailed” denoted a physical trait peculiar to this species alone, one shared by no other member of the trogon tribe. With a dutiful nod to the Law of Priority that, at least in theory, guided the A.O.U. Checklist naming committee, it’s a shame that the descriptive name Coppery-tailed was changed in favor of a purely subjective adjective.

An Elegant Trogon truly is an elegant bird. I believe the adult male is both the most beautiful and the most elegant of all the birds of North America. Aesthetics, however, are a matter of personal taste, and I know others who value the size, flight, or song of another species above the color and form of the Elegant Trogon.

#### *Habitat: How to Find an Elegant Trogon*

The Elegant Trogon’s chosen habitat in Arizona is Madrean pine-oak woodland. This vegetative association covers over 25 percent of neighboring Mexico, but, in Arizona, pine-oak woodland is sandwiched between desert floor and forested highlands just north of the Sonora line. Here, five small mountain islands—the Atascosa, Santa Rita, Huachuca, Patagonia and Chiricahua ranges—harbor the entire breeding population found within all the United States.

Moreover, Arizona trogons are confined to major stream corridors that cut through the pine-oak formation. The combination of waters flowing down from the peaks and daily influxes of heat rising off the desert creates a rich, almost tropically luxuriant, gallery forest in the canyon zone where trogons live.

Because Elegant Trogons are canyon dwellers, they are physically protected from many climate extremes. High ridge walls afford shady relief from the Arizona sun and a shield against desiccating summer winds. Canyons promote good cold air drainage. Drought has little effect on the large watersheds because subsurface flow keeps the trees and understory alive and healthy. The double-decker, dense vegetation, in turn, offers yet another buffer of protection against sun, wind, and cold, as well as maintaining a humidity level unusually high for Arizona. 🌿

*Excerpted from the book, Trogons of the Arizona Borderlands, by Richard Cachor Taylor, Treasure Chest Publications, Inc., 1994. Richard lives in the Chiricahua Mountains.*

# A Year in PARADISE

BY JACKIE LEWIS

**W**elcome to Paradise! Join me on the yard benches as we watch the seasons change with the birds. By the middle of February, I am ready for the additional color that is brought by the migrating species. But, I have to wait until the end of March when the year-round and wintering species are joined by colorful migrant breeding birds.

First to arrive are Rivoli's, Black-chinned & Broad-billed Hummingbirds. The Broad-tailed, Rufous and occasional Calliope come in and most continue north. We do have a breeding population of Broad-tailed in the Chiricahuas. The Blue-throated Mountain Gem is a breeder that prefers the riparian areas of the mountains but often graces me with its presence.

Scott's Orioles with their beautiful song arrive before the Hooded and Bullock's Orioles. By mid-April we will have Black-headed Grosbeak; Summer, Hepatic and Western Tanagers. The yellows and oranges stand out against the new green leaves. Once in a while we have a "lost" Rose-breasted Grosbeak or Lewis's Woodpecker.

The kaleidoscope of colors increases late April with the arrival of the blues. Lazuli Bunting are typically here less than 2 weeks. Blue Grosbeak and Indigo Bunting breed here as well

as farther north. Watching the agave stalk that has oranges, peanut butter and jelly is like watching a blinking Christmas tree as the different species trade places. Acorn and Arizona Woodpeckers join the yellow, orange, red and blue.

Other species in the area may not come to the feeders in the yard but can often be seen through the foliage and heard at dawn. Brown-crested, Dusky-capped and Dusky Flycatchers; Western and Cassin's Kingbirds; Black & Say's Phoebe; Greater Roadrunner; Canyon, Bewick's and House Wrens; occasional Spotted, Canyon and Green-tailed Towhees.

On a good morning we can see forty to fifty species in two hours. We may need to refill the tea, coffee, or water but the show goes on. My yard list includes approximately 210 species. 150 or so show up every year. We're lucky when the Juniper Titmouse and Montezuma Quail come into the yard.

Once you've had your fill in the yard, you will find additional species around the Chiricahuas. Painted Redstarts, Olive, Grace's, Lucy's, Virginia's, Red-faced and Black-throated Gray Warblers; and Elegant Trogon are fairly easy to see by the first part of May. We have to wait until late May for the Sulphur-bellied Flycatcher. A day trip from Willow Tank to the top of the mountain can yield at least 120 species in one day during spring and summer.



Baby Ringtail by Jackie Lewis





Mexican Chickadee by Jackie Lewis

Scott's Oriole by David Chorlton

In late summer we start to see the arrival of migrants traveling to winter grounds. Many of those species pass through while others stay for the winter. By the middle of October we are seeing very few of the brightly colored birds. And I need to get through a dreary winter once again – longing for spring. 🐦

*Jackie Lewis lives next door to, and manages, the George Walker House in Paradise in the Chiricahua Mountains. The yard is open year-round for day birders, and the Walker House is available as a B & B. To find out more, go to <http://thegeorgewalkerhouse.com>*



Visitors at the Walker House by David Chorlton

## Help MAS with an EMPLOYER MATCHING GIFT



Many Maricopa Audubon members aren't aware that their employers may include a matching gift program in their benefits package. Programs vary from business to business, but they generally offer a dollar-for-dollar match when an employee makes a personal gift to a nonprofit organization like Maricopa Audubon Society.

Please visit your human resources department or charitable giving department to see if this opportunity is available to you. You usually have to fill out and submit a form, which is sometimes done online. If you have already made a donation to MAS in the past year, you may be able to get a matching gift after the fact from your employer for up to 12 months later.



# EMERGENCY CARE for Injured Birds

BY KAYLA BRADLEY

PHOTOS BY PAUL HALESWORTH



House Finch nestlings



Barn Owl hatchling



Baby mockingbirds

## HOW DO I KNOW IF A BIRD NEEDS HELP?

Try to assess from a distance. If you see the bird caught by a cat or dog, limping, dragging a wing, missing a body part, or bleeding, this bird needs your help. Capture and contain it. If you think your bird may be a bird of prey (owl, hawk, falcon, etc.), do not attempt to capture it. Contact a local rehab. Once you have it contained, you may offer the bird food. Under certain conditions you may offer it water. Never drop water into a bird's mouth.

## WHEN A BABY BIRD IS ON THE GROUND, IT MAY NOT NEED HELP.

If the bird is a fledgling (has patchy feathering), it is likely being cared for by its parents. Most birds leave the nest two weeks before they can fly. This teaches them how to survive with the assistance of their parents. Observe the surroundings to see if the parents are nearby, possibly guarding their baby from a tree. If you don't see them, watch this baby for at least an hour. The parents may have left to collect food for the baby. If they don't return to the area within an hour, this fledgling needs help. Once you have determined this bird needs help, you will want to bring it to a bird rehab. Do not attempt to rehabilitate this bird yourself. The sooner it is brought to a rescue, the better chance it has to recover and be released back into the wild.

## HOW DO I PROVIDE TEMPORARY CARE?

Birds have a higher body temperature than humans at about 100°F. If you have a heating pad, place it on a low to medium setting. The pad should be warmer than your hand, but not hot to the touch.

**Babies:** If you have a baby bird, make sure it is warmer than your hand. If it is opening its mouth for food, don't give it a bowl of water or food. Instead, take dry dog or cat food and soak it in water. When it becomes spongy, break it up into small pieces. Make sure the pieces are not dripping water, and squeeze a little out if needed. You can now place a few small pieces in the baby bird's mouth. It will provide the necessary nutrition and water. If your baby bird doesn't open its mouth for food and it has a long thin beak, it may be a pigeon or a dove. These babies need to be tube fed. Do not attempt this. Keep them warm and bring them to your local bird rehab.

**Adults:** If the bird is fully feathered, you may provide it with food. Before giving water, assess the bird's behavior. If it has trouble keeping its head up or is acting lethargic (sleepy), do not give this bird water. Instead, follow the same steps to make food for baby birds and give them a bowl of spongy cat or dog food. Never drop water in a bird's mouth. The airway is located under the tongue.

## WHERE DO I GET HELP?

Certain bird rescues only provide aid for specific types of birds. You can visit our website to see a list of local rescues to find whomever is closest to you. 🐦

*Kayla Bradley works with Fallen Feathers, which operates on the west side of the Valley in Peoria. <https://fallenfeathers.org>*



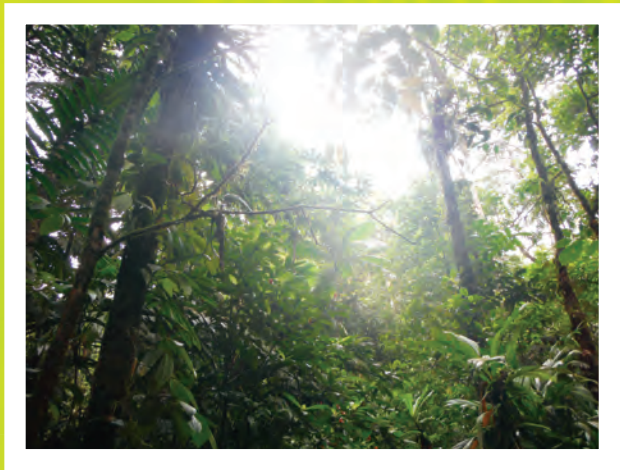
## MISSION

We help orphaned, lost, and injured wild birds all over Arizona with the goal of rehabilitating them back to health and releasing them back into the wild. We also assist in locating the homes of lost, domesticated exotic birds.

# FROM COSTA RICA



A



B



C



D



E



F

## LEGEND

- A. Elegant Euphonia at Savegre Lodge by Mark W. Larson
- B. Forest at Selva Verde Lodge by David Chorlton
- C. Magnificent Owl Butterfly at Selva Verde Lodge by David Chorlton
- D. Lesser Violetear by Mark W. Larson
- E. White-throated Mountain Gem at Savegre Lodge by Mark W. Larson
- F. Acorn Woodpecker at Savegre Lodge by Mark W. Larson  
The Acorn Woodpecker in Costa Rica only occurs in cloud forests that are dominated by Costa Rican oaks, *Quercus costaricensis*. Usually, these cloud forests are above 6,000 feet of elevation.



# GREEN IGUANA by Peter Bartsch

*Photographed on the grounds of Selva Verde Lodge, Sarapiquí, Costa Rica*



 **ADVENTURES IN  
COSTA RICA**   
By Mark W. Larson  
Photos by Peter Bartsch  
(Photographs were taken with a single lens reflex camera)

Three-wattled Bellbird  
Photographed at the  
Children's Rainforest,  
Monteverde, Costa Rica



Red-eyed tree frog  
Photographed on the grounds of  
Selva Verde Lodge, Sarapiquí,  
Costa Rica

I began travelling to Costa Rica in 1998 because I wanted to experience more of what I had found in the rain forests of southern Mexico as a graduate student many years earlier. At Palenque, a Mayan ruin in the state of Chiapas, I had seen my first toucan, my first tropical tanager, and my first oropendolas. There were parrots, too, and as I sat on top of a temple, a dazzling White Hawk helicoptered down into a clearing in the nearby forest. The Neotropical rain forest seemed magical then, and it still does.

Sometime in the 1990s, a friend recommended that I read a book by an American who had lived most of his life in Costa Rica, Alexander F. Skutch, PhD. The book was *A Naturalist on a Tropical Farm* and it changed my life. Dr. Skutch had completed his PhD in botany at Johns Hopkins University in Baltimore in the 1930s and was hired to study bananas on a plantation in Panama. He soon became enthralled by tropical birds and went on to become the most accomplished ornithologist of his time in Latin America.

I read some more books by Dr. Skutch and decided that I needed to visit Costa Rica to experience life there for myself. My first trip was in the spring of 1998 and now, after fifteen more trips, I can say that I certainly got more than I bargained for, but always in a beautiful way.

My visits have taken me to most of that small, incredibly diverse country, and each one has been enjoyable with great birds, butterflies and other wildlife, friendly people, and stunning landscapes. Most fun have been some unexpected experiences: On my first trip I watched through my guide's scope as a striking male Three-wattled Bellbird opened his large mouth to utter his echoing "BONK!" call. There have been many other memorable moments such as helping a tamandua (an arboreal anteater) to safely cross a busy highway, or watching a troop of spider monkeys glide effortlessly through the treetops, or having the sacred bird of the Maya, the Resplendent Quetzal, fly at and then past me with a lizard draped across his bill as if he was a roadrunner.

It seems that I make more friends and see more astonishing Nature on each trip to that small country. Christopher Columbus was right when he called it *Costa Rica!* 🦜



Great Green Macaws,  
Photographed near the  
Sarapiquí River, Costa Rica



Emerald Basilisk  
Photographed on the  
grounds of Selva Verde  
Lodge, Sarapiquí,  
Costa Rica

# BIRDING IN PANAMA

Gail Walton (as told to Vicki Hire)

Photos by Gail Walton



Camp Canopy Tent

# M

My Panama trip was my first expedition to neo-tropical birding, and a fantastic experience. I added about 150 new species to my life list. I saw many more birds, but I'm not that great of a photographer, and sometimes you just get a glimpse, or the birds are hiding among the foliage or appear as specks in the sky.

The people are friendly, and most of them do speak some English because Americans leased the Panama Canal for 100 years. We stayed at the Canopy Lodge, just west of Panama City. It is an ecolodge and has feeders set up. That is where I saw the Rufous Motmot, among others. The Canopy Lodge works with Cornell Ornithology and has cameras set up for research.

Then I spent another week at the Darien Canopy Camp at the end of the Trans

American highway. There are no roads beyond this, just pristine jungle all the way to Colombia. We stayed in an African-style safari tent. My bathroom, with flush toilet, had an open-air shower. When I went in there to use the toilet, a bat would fly out from underneath the sink, fly past my nose as I was captive on the toilet, and fly out through the shower. Flying fun!

One day, we traveled to the river where we took a five-mile trip to a farmhouse (with chickens inside the house), and then a five-mile horseback trip through the jungle. Next, leaving the horses tied up, we went on a hike uphill for about two miles, to the site of a Harpy Eagle nest, where we saw the mother and her chick in the nest! Incredible sight. So glad I went. It was a very exhausting and hot trip but so worth it.

I'm glad I'm still able physically to go on these types of trips. Next year in July 2021, I'm going to Brazil (hopefully the pandemic will be over by then!) to see jaguars and birds, too. Here are some pictures of my tent and the Harpy Eagle. They are not colorful, but awesome birds nonetheless. 🦅

*In addition to being a Master Naturalist, Gail has a BS in Biology, an MBA, is certified to teach grades 6-12, and is a certified taxidermist.*



Rufous Motmot



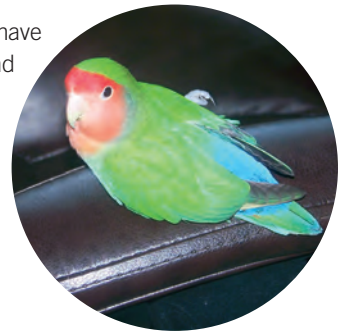
Harpy Eagle



# Wren•dition REVISITED



Looking back through issues of our newsletter I have kept beginning with the summer of 1999, I find several features that make interesting reading a second time around. For instance, this piece by Jim Burns in the Spring of 2006 takes us back to when the Peach-faced Lovebird was new to the Valley. Now, of course, we know it as the Rosy-faced Lovebird, but it is still a bright presence.



az's special species

## AZ's Special Species—Peach-faced Lovebird

Jim Burns

**W**hat? You've never heard of Peach-faced Lovebird? Or you instantly recognized that it must be an introduced exotic and you wouldn't walk across the street to see one? What if there were no traffic on the street? What if it were a tiny, bright, multi-hued social parrot with soft pastel colors and a fascinating life history? Do you have European Starling or House Sparrow on any of your lists?

No matter how you answered these questions, no matter that Peach-faced Lovebird is an SKP (escapee) not ABA countable—yet, I think if you love birds you will want to seek out and enjoy *Agapornis roseicollis*.

One of the most interesting questions about the Peach-faced Lovebird in Phoenix is why here? The answer apparently lies in the origins of this particular lovebird species. What Phoenix shares with other exotic strongholds like south Texas and south Florida, which don't have Peach-faced, is mild year-round temperatures and a plethora of non-native vegetation. What it has that they lack is a dry climate.

Peach-faced Lovebirds are native to the deserts of southwest Africa where the preferred habitat is savanna, a term used to describe ecological transition zones of poor soil and scattered trees which lie between forest and grassland. Though they have evolved for life in the desert, as Troy Corman points out in the *Arizona Breeding Bird Atlas*, "these lovebirds are highly dependent on water sources." Because of its canal systems, Phoenix is an "ecomoron," a desert with an abundance of water.

Peach-faced were first reported in the Phoenix area in 1987, yet

none were reported on the Arizona Breeding Bird Atlas survey blocks which were completed between 1993 and 1996. The calls of this diminutive parrot, which Troy so aptly characterizes as "shrill, metallic shrieks," are now being heard from such far-flung locations in the east Valley as Cave Creek in the north to Chandler in the south, suggesting that a "mini-explosion" may be taking place in the population.



Photo by Jim Burns

In their native land these lovebirds often nest colonially, commonly using niches in cliff faces or abandoned Social Weaver nests. In captivity females have been observed transporting nesting materials such as leaves, twigs, and grasses by securing them beneath their rump feathers. In Arizona, in addition to saguaro excavations, nests have been found in fan palms and under roof tiles, and palm fronds are a favored nesting material.

Nesting in Phoenix is observed in April and May, though there have been fledgling sightings in mid-winter which suggests that this species, like other introduced exotics elsewhere, may be taking advantage of the easy living conditions and reproducing throughout the calendar year.

Lovebirds have been found mostly in older Phoenix neighborhoods, presumably because of the presence there of taller shade trees and

mature palms. They have been observed feeding on cactus and palm fruit, and I have personally observed them at the Gilbert Riparian Area (GRA) stripping the seed heads from tall grasses and, like the one in the accompanying photo taken at GRA, chewing on mesquite pods to extract the beans.

No treatise of any introduced exotic can be complete without introducing the term "invader" into the discussion. We are all aware of the problems European Starlings have brought with them to our desert, outcompeting our native woodpeckers for saguaro cavities, then damaging the health of the saguaros themselves with their droppings. It is too early in this lovebird "invasion" for any environmental issues to have surfaced, but it is certainly possible that some will. In Africa where loosely associated colonies numbering in the hundreds sometimes gather at rich food sources, damage to grain crops has been well documented. In raw ecological terms, Peach-faced Lovebird in Phoenix is an invader species currently pioneering virgin territory—attractive and captivating, but scary nonetheless.

Because of its SKP status, Peach-faced Lovebird doesn't get much play on the bird alerts. In addition to the GRA southeast of Guadalupe and Greenfield Roads in Gilbert, lovebirds are also being reliably seen in the neighborhood of Doubletree and Tatum in Paradise Valley, around 104th and Fenimore in Apache Junction, and along the banks of the canal running westward from where it crosses 40th St. just north of Camelback Rd. in Phoenix.

You really should try to see this beautiful little invader before the drama plays out and it becomes either last century's Crested Mynah and disappears, or this century's Eurasian Collared-Dove, living as a pejorative epithet on the lips of ecologists throughout the southwest.

# Alexandra Bowers: Burning onto Wood

# Q&A



**CW:** You have chosen a seemingly intricate medium for your work. What drew you to wood burning, and how does the process function?

**AB:** I fell into wood burning during a fortuitous trip to Home Depot. The original intention for the trip was to purchase art supplies for art studio classes I was taking at Arizona State University at the time. I was randomly in an aisle with soldering irons, and an employee walked up behind me and said “You can wood burn with one of those.” So, it was a combination of right time, right place, and with a perspective of wanting to find unique ways of creating art, which ultimately led to my obsession with the medium. The process functions by first sketching out with pencil what I want my design to look like, then using different tip styles, I trace over the graphite with the soldering iron to burn the image into the wood. After the burning is complete, I erase back the graphite, and incorporate color elements using water color pencils and water-soluble wax pigment.

**CW:** What was the appeal in using wood rather than canvas or paper?

**AB:** I like the organic, raw aspect of using wood over canvas or paper. Also, utilizing wood coupled with my subject matter of flora and fauna feels like the perfect marriage of subject and materiality. Lastly, I want to drive home the concept of working with heat, and purposely choosing to highlight plants and animals that thrive in extreme environmental conditions creates a bridge between how my work is created and the subject matter.

**CW:** I like the fact that feathers and a nest are returned to a kind of symbolic forest when you render them on wood. What has recreating this aspect of nature done for your personal sense of nature?

**AB:** When I recreate elements of nature, I’m observing it in its most minute details. I think creating work in this capacity has helped me appreciate and view the environment in a perspective I would overlook or not take into consideration if my work wasn’t so detail oriented. Viewing the natural world through this lens has enabled me to emotionally connect with it, because I’m spending so much time with it while I’m constructing my work.

**CW:** Sphinx moths have long struck me as mysterious. Why do they interest you?

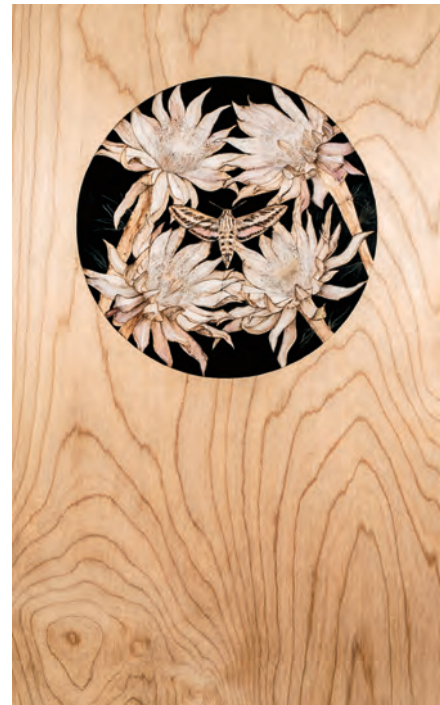
**AB:** Creatures of the night have long fascinated me. Mostly because of how mysterious their world is

due to the fact that we miss it because we are asleep. As of late, my work has revolved around Night Cereus or “Queen of the Night” night blooming flowers. After lots of research and observation, I’ve found many parallel connections with the flower and my romantic relationships. The Sphinx moth is an essential partner for the night bloomer, because it insures the pollination of the flower. Without the Sphinx, the flower is unable to survive.

**CW:** Is your interest in nature based on aesthetics or do you have certain places that inspire you?

**AB:** I would say both aesthetics and certain places inspire me. The desert in general fascinates me. I grew up in Phoenix, so it’s an environment I’m used to, while also continuously amazed by it. Because I’ve grown up with such a close connection to it, I think it’s become easier to draw personal life analogies to it. The intention behind the work I create is to highlight the natural world for my audience to feel as deeply connected to it as I do. 🐦

*Alexandra Bowers is a Phoenix based artist who received her BFA in 2012 from Arizona State University. Inspired by the natural surrounding environment Bowers utilizes data collected while exploring to produce wood burned studies of flora and fauna she finds along the way. <https://alexandrabowersart.com>*



**THE QUEEN IS BLOOMING**  
**A Thank You to All my Failed Relationships**  
Wood Burning and Wax Pigment 15 x 24 inches  
2019



**THE FRUITS OF MY LABOR, THE FRUIT OF MY LOINS**  
Wood Burning and Wax Pigment 15 x 24 inches  
2019



**SALVAGED NEST**  
Wood Burning and Watercolor 20 inch  
Diameter 2017



**TO ALL MY LOVERS PAST AND NEW, I MADE  
THIS FOR YOU**  
Wood Burning and Wax Pigment 15 x 24 inches 2019



**FOUND FEATHERS, PART II**  
Wood Burning and Watercolor 6 x 36 inches 2017



**FOUND FEATHERS, PART III**  
Wood Burning and Watercolor 8 x 72 inches 2018



# True Colors are Shining Through!

BY VICKI HIRE

## CHEMISTRY OR PHYSICS?

**Did you know** the colors in a bird's feathers are formed in different ways, either through physics or chemistry? The structure of a feather creates certain colors. This is physics. Non-iridescent blue, violet and white colored plumages (feathers) are created from light refraction. In other words, these colors occur when light bounces off precisely spaced microscopic layers within the feathers.<sup>1</sup> Bluebirds, Indigo Buntings, and Blue Jays are some of the species whose plumage colors result from the structure of their feathers.

**Did you know** the best example of iridescent color produced by the structure of a feather is in the hummingbird? The iridescent colors of a hummingbird's gorget (throat feathers) are the result of refraction of light off the barbules or branches of a feather. In a new study, scientists discovered the special pancake-shape of melanosomes within hummingbirds' cell structures, which enable them to reflect a rainbow of light.<sup>2</sup>

**Did you know** some colors are created by pigments, which absorb certain wavelengths of light? This is chemistry. Chemical pigments are colored substances found in plants and animals. The coloration created by pigments is separate and is not related to the physical structure of the feather. Pigment colorization in birds comes from three different groups: carotenoids, melanins, and porphyrines.<sup>3</sup>

**Did you know** the carotenoid pigment is produced by plants and is responsible for mainly yellow, orange and red? Six hundred types of carotenoids exist. Birds acquire carotenoids by eating a plant or by eating something that has eaten a plant. Pumpkins, carrots, and tomatoes all contain carotenoid pigments, resulting in the orange and red colors. Pink Flamingos, Northern Cardinals, Goldfinches, and Yellow Warblers are examples of birds with carotenoid pigments in their feathers.

**Did you know** while most birds get the carotenoid pigments from their diets, parrots are different? Parrots biochemically manufacture their own colorful plumage pigments. In parrots, these molecules are chromophores known as "psittacofulvin pigment" because parrots are the only animals that make them.

**Did you know** the melanin pigment is produced inside specialized cells of a bird and can produce colors ranging from black to the reddish browns and pale yellows? It is the only plumage coloring that is genetically encoded. Feathers that contain melanin are stronger and more resistant to wear than feathers without melanin. Many otherwise all white birds, such as albatrosses and petrels, have black feathers on their wings or black wingtips because these flight feathers are the ones that get the most wear and tear.<sup>3</sup> The Golden Eagle owes its coloration to melanin. Melanin is the same substance that provides color to human skin and hair.

**Did you know** a group of pigments called porphyrins are produced from modified amino acids and are responsible for vibrant pinks, reds, and brilliant greens? Porphyrins are found in a handful of species such as peacocks, pigeons, turkeys, and pheasants. Unlike most birds, peacocks do not derive their colors purely from pigments, but from a combination of pigments and photonic crystals, which reflect different wavelengths of light depending upon the angle of the light and the spacing of the crystals. This is what causes the iridescent shades of blue, green, brown, and yellow commonly found in a peacock's train.<sup>4</sup>

**Did you know** color is important to birds? Birds rely on their feathers and colors to communicate with other birds, especially during mating season. A substance called "preen wax" is secreted by a gland near the base of every bird's tail and when the bird preens itself using this substance, its feathers gain a deeper color as well as becoming water-repellent. Much research has shown that male birds with well-maintained plumage are healthier, more socially dominant, preferred by more females, and have higher reproductive success than their more haggard counterparts.<sup>5</sup>

<sup>1</sup> <https://www.forbes.com/sites/grriscientist/2018/07/06/parrots-use-chemistry-and-physics-to-create-brilliantly-colorful-plumage/#4d67b881757>

<sup>2</sup> <https://www.sciencedaily.com/releases/2020/0/200110110909.htm>

<sup>3</sup> <https://academy.allaboutbirds.org/how-birds-make-colorful-feathers>

<sup>4</sup> <https://www.quora.com/How-do-peacocks-get-their-color>

<sup>5</sup> <https://www.audubon.org/news/what-makes-bird-feathers-so-colorfully-fabulous>



Rosy-faced Lovebird by David Chorlton



Western Tanager by Vicki Hire



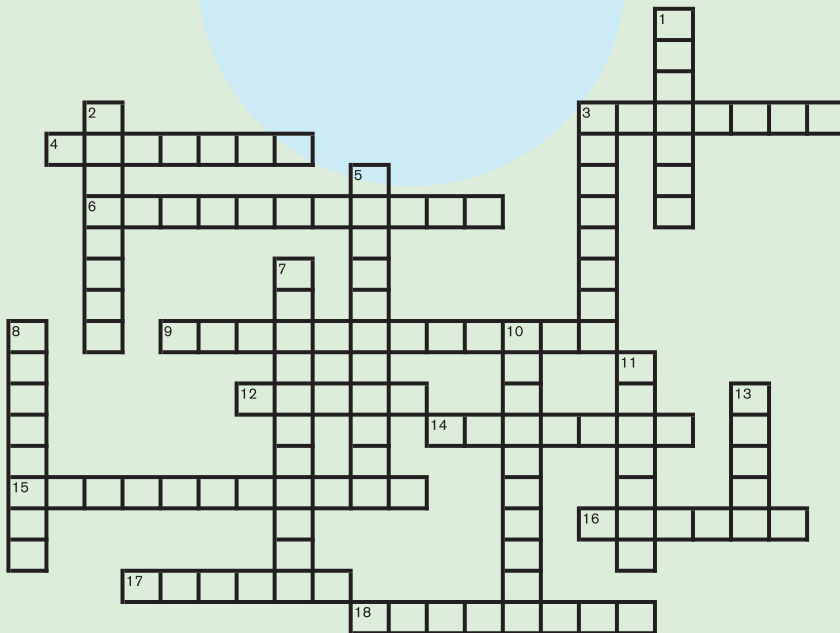
Melanin in feathers by Vicki Hire



Peacock feathers by Vicki Hire

# True Colors Crossword Puzzle

Answers on page 22



## ACROSS

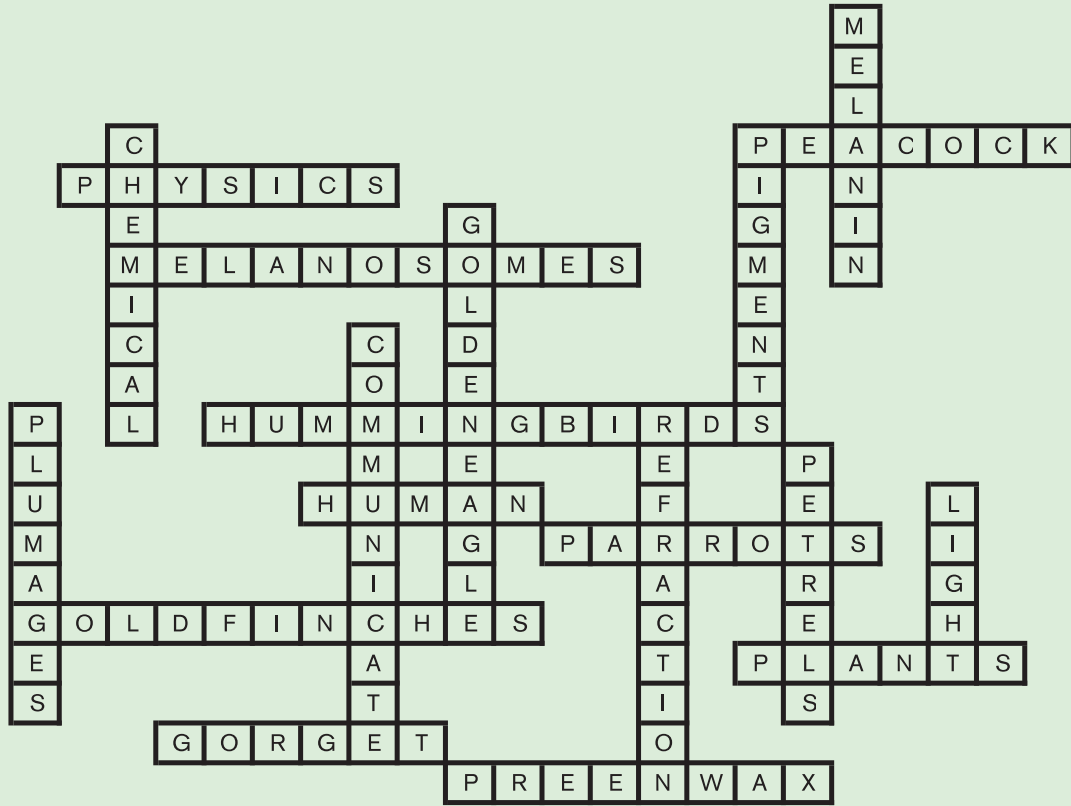
- 3 Porphyrins and photonic crystals cause the iridescent colors in a \_\_\_\_\_ train
- 4 The color in bird feathers are formed through \_\_\_\_\_ and or chemistry
- 6 Pancake-shaped \_\_\_\_\_ are contained within hummingbirds' cell structures
- 9 \_\_\_\_\_ are good examples of iridescent color produced by the structure of a bird's feathers
- 12 Melanin is the substance that provides color to \_\_\_\_\_ skin and hair
- 14 \_\_\_\_\_ are the only animals that make psittacofulvin pigment
- 15 Pink Flamingos, Northern Cardinals, and \_\_\_\_\_ have carotenoid pigments in their feathers
- 16 Carotenoid pigment is produced by \_\_\_\_\_
- 17 Another word for a hummingbird's throat feathers
- 18 A substance that is secreted by a gland near the base of every bird's tail

## DOWN

- 1 Feathers that contain \_\_\_\_\_ are stronger and more resistant to wear
- 2 \_\_\_\_\_ pigments are colored substances found in plants and animals
- 3 There are six hundred types of carotenoid \_\_\_\_\_ responsible for mainly yellow, orange and red colors
- 5 The \_\_\_\_\_ owes it's coloration to melanin
- 7 Birds rely on their feathers and colors to \_\_\_\_\_ during mating season
- 8 Another word for feathers
- 10 Non-Iridescent blue feathers in Blue Jays are created from light \_\_\_\_\_
- 11 Albatrosses and \_\_\_\_\_ have black feathers on their wings because these flight feathers get the most wear tear
- 13 Photonic crystals reflect different wavelengths of \_\_\_\_\_ depending on the spacing of the crystals



# True Colors Crossword Puzzle Answers



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There is more! You can contribute in the best way possible by lending your abilities to our board. Interested? Send an email to: [laronwarren@gmail.com](mailto:laronwarren@gmail.com)



Keel-billed Toucan by Peter Bartsch

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## OPINIONS

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